二零零四環境報告
ENVIRONMENTAL REPORT 2004

香港中文大學
THE CHINESE UNIVERSITY OF HONG KONG

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二零零四環境報告

ENVIRONMENTAL POLICY

The Chinese University of Hong Kong seeks continually to improve the environmental quality of the campus to provide a congenial environment for teaching, learning and scholastic activities.

The University is committed to ensuring that all activities run by the University are conducted in an environmentally responsible manner and has adopted the following guidelines in pursuance of this commitment:

* We endeavour to build a clean and green campus congenial to the fulfillment of the purposes of the University;
* We seek to comply with all applicable environmental legislation, standards and regulations;
* We avoid, reduce or control environmental pollution arising from our activities and to require our contractors to adopt and implement similar environmental measures;
* We seek continual improvement in the efficient use of energy and other natural resources;
* We raise environmental awareness among staff and students and set the University as a model in environmental education and environmental management;
* We ensure good management practices by reviewing them regularly and ensure that they are tuned to the changing internal and external circumstances.

環境政策

香港中文大學致力改善校園環境，未嘗稍懈，務求為教授、學習及其他學術活動提供一個理想環境。

我們力求本校所有活動都能顧及環保的責任。為了達到這個目標，本校制定了下列指導原則；

- 努力建設一個青葱整潔的校園，使員生能在愜意的環境之中履行大學使命；
- 恪遵所有現行的環保法例、標準和規則；
- 大學所有活動必須避免污染環境，或盡可能減少或控制污染。我們還會要求承辦商奉行同樣的環保措施；
- 力求善用能源及其他天然資源；
- 提高員生的環保意識，讓大學成為環保教育及環境管理的榜樣；
- 定期檢討管理方式，務求妥善，並配合校園內外情況的轉變。

ORGANISATION FOR ENVIRONMENT MANAGEMENT

The University's environmental management structure is organized into three tiers. For the first tier, major environmental policies and decisions are made by the University Council and other committees. University Steering Committee on Environment (USCE) is the environmental policy maker in CUHK. The members of USCE and its task forces include staff from administrative offices and academic departments, college representatives, student representatives to ensure the wide communication among different groups in the University. The second tier involves the actual execution of environmental tasks by various administrative units and academic departments. Regarding departments / units of the University whose work may be more directly related to the environment, the University Safety and Environment Office (USEO) co-ordinates the relevant offices such as the Estates Management Office, the Campus Development Office and the Transport Unit to assist USCE in implementing various environmental projects and plans. The Environmental Officer and other professionals such as Transport Officer and Canteen Service Officer oversee the daily operation of campus transport, canteens and restaurants, laboratories, etc. to maintain the University's hygiene, safety and environmental standards consistently above legally required levels. In addition, a Safety and Environmental Co-ordinator Scheme has been assigned in each department to promote and communicate the environmental issues such as waste reduction and energy management within the workplaces.

The last tier is the promotion of environmental awareness amongst students. Currently, there are different student organizations such as Green World, Green Post, Environmental Science Society and Geography Society to organize regular activities and publish bulletin for the students. College also plays an important role in organizing activities which promote environmental awareness. These activities are usually carried out by the College Student Affairs Section and the College Environmental Committee.

The USCE members regularly discuss and review the environmental issues within the University.
大學環境事務督導委員會定期舉行會議，討論校園的環保事項。

環境管理架構

本校的環境管理架構可以分為三個層次。首先是由大學校董會及其他委員會負責主要的環境政策及決定。大學環境事務督導委員會(環境督導會)掌管中文大學環境政策制定工作。環境督導會及其屬下專責委員會的成員，包括行政及教學人員、院校代表和學生代表，務求校內各方意見交流順暢。第二個層次，是各行政單位及教學部門切實執行環保工作。工作與環境關係較為密切的部門，由大學安全及環境事務處(環境事務處)負責協調，例如物業管理處、校園發展處、交通組等，以協助環境督導會執行各項環境計劃。環境事務主任、交通事務主任、飯堂事務主任等專業人員分工合作，監督校內交通、飯堂、餐廳、實驗室等的日常運作，確保本校的衛生、安全及環境水平維持在法例規定的標準之上。此外，各部門都有委任安全及環境統籌員，負責促進及闡述工作場所減少廢物及節約能源等環保事宜。

第三層次在於推動校內環保意識。目前，綠色天地、中大綠色報、環保科學系系會、地理學系系會等學生組織，會定期舉辦活動及出版通訊，鼓勵同學支持環保。此外，也經常籌辦活動，加強學生環保意識，貢獻良多。這些活動主要由各書院的學生事務部及環境委員會負責。

Green World is organized voluntarily by the students to promote environmental awareness among students.
綠色天地是學生志願組織的綠色團體，致力推動校內的環保意識。

Chung Chi College

To enable students to learn more about the environment and take action to conserve it, the College Campus Environment Committee organized several one-day training sessions for Chung Chi students with the support from the Environmental Protection Department and Environment Campaign Committee in February. Besides, the Chung Chi College Campus Environment Committee organized a Tea Session with Supporting Staff at the College Chapel so as to collect information on the College campus environment and to understand the problems encountered by them while carrying out their duties. Around 60 colleagues from different units attended the session and shared their valuable experiences.

The Chung Chi College Environmental Protection Cup 2004 was held from February to March 2004 with the aims of arousing students' general awareness on environmental protection and encouraging them to support environmental conservation through a series of inter-hostel competitions. The EP Cup 2004 includes Slogan Design & Presentation, Water Saving, Electricity Saving, Used Aluminum Cans Collection and Used Plastic Bottles Collection Competitions. It is hoped that residents would develop good environmental habits in daily lives and lead the trend in environmental lifestyles.

The Environmental Protection Week of Chung Chi College, with Board Exhibition and Friday Assembly on Environmental Protection, was held from February 27 to March 5, 2004 to enhance and foster the environmental protection awareness of students and staff. In April, the Chung Chi College Campus Environment Committee and Tang Ngan Leng Centre for General Science Education co-organized another Campus Tour "Flowers at Chung Chi College" guided by Professor Hu Shiu Ying, an eminent scholar in plant taxonomy to introduce the flowers on Chung Chi campus.

To further promote health education in the community, the Working Group on Medical and Health Services under the Health and Environment Committee of the Sha Tin District Council and the Chung Chi College Campus Environment Committee are co-organizing the Healthy Walk 2004 in November, 2004. After the walk, a talk on healthy diet was held and free healthy lunch and a gift was given to all participants.

Environmental tea session was organized at College Chapel Lower Loung for the staff.
崇基校園環境委員會教育小組於崇基禮拜堂樓下休息室舉辦環保職工茶聚。

崇基學院

為求學生多點了解環境，進而身體力行保護環境，崇基校園環境委員會獲環境保護署及環境保護運動委員會協助，今年二月為崇基學生舉辦了幾次為期一天的培訓。崇基校園環境委員會又曾在崇基禮拜堂舉行職工茶聚，了解他們對學院環境的意見，以及執行職務時遇到的困難。約六十位來自不同部門的職工出席茶聚，暢述寶貴的意見。

二零零四年二月至三月，崇基學院舉辦二零零四年崇基學院環保盃，以一系列宿舍間的比賽，提高學生的整體環保意識，鼓勵他們支持環保。二零零四年環保盃的比賽項目，包括口號創作及展覽、節約用水、節約用電、鋁罐回收、塑膠樽回收等，希望藉此培養宿生日常生活中的習慣，成為環保生活方式的先鋒。

Healthy Walk 2004
「識玩識食步行日2004」

二零零四年二月二十七日至三月五日，崇基學院舉辦環保週，有環保資料板展覽，星期五週會也以環保為題，務求提高學生及教職員的環保意識。四月，崇基學院校園環境委員會與鄧雁玲科學普及教育中心再度舉辦「崇基花卉」校園行，由著名植物分類學家胡秀英教授向參與者介紹崇基校園內各種花卉。

為了促進社區健康教育，沙田區議會衛生及環境委員會轄下的醫療及衛生服務工作小組和崇基校園環境委員會合作，二零零四年十一月舉辦二零零四年健康行。參與步行者其後出席健康飲食講座，並免費享用健康午餐及獲贈紀念品。

New Asia College

With the purpose of promoting a general awareness of the environmental protection in the campus, the Environmental Committee of New Asia College worked on various ways to achieve the above goals round the year. The highlight was the "Fifth Environmental Protection Week" held from mid-January to early February, 2004. In order to let the staff and students understand the concept and importance of environmental protection in a leisurely matter, a series of activities were carried out, namely, the Ecological Tour at Tsung Tsai Yuen led by Dr. Hu Shiu Ying, Visit to the Heritage Trail (Western District Route) including University Lodge, Environmental "Fai Choi" (Greetings for Chinese New Year) Slogan Design Competition at student hostels, Board Exhibition on Environmental Protection, Used Clothing Collection Campaign, Homepage Design Competition and Photo-taking Competition.

In order to let the staff and students enjoy the fun of farming and promote the concept of organic farming within the campus, Organic Farming Activity among resident students, non-resident students and staff was greatly encouraged. The harvest had been satisfactory and hence, they could know what organic farming was. Moreover, the information on electricity, water & gas consumption of every student hosts, current affairs on environmental protection and related news were posted up. It was hoped that students' view on environmental protection could be broadened and their understanding on this matter could be enriched.

Organic Farming Activity
有機種植活動

新亞書院

新亞書院環境委員會年內致力提高員生的整體環保意識。二零零四年一月中至二月初舉辦的「第五屆環保週」，是環保活動的高潮。為求員生在輕鬆氣氛下認識環保概念，明白環保重要，委員會舉辦了多項活動，計有胡秀英博士帶領的松仔園生態遊、參觀西區古物徑包括香港大學校長官邸、學生宿舍間的環保「發財」揮春創作比賽、環境保護資料板展覽、衣物回收計劃、環保網頁設計比賽、攝影比賽等。

新亞書院鼓勵員生參與書院內的有機種植活動，希望他們體驗耕種樂趣之餘，對有機種植也多點認識。去年收成豐富，耕耘者更明白有機耕種的意義。

此外，各學生宿舍的水、電、煤氣消耗量以及環保新聞，都張貼於報告板上，希望藉此擴闊學生的環保視野，加強他們對環保的認識。

Environmental "Fai Chun" Slogan Design Competition
環保揮春標語創作比賽

Shaw College

The Environment Enhancement Committee of Shaw College promotes general awareness of environment hygiene and campus ecology among students and students by organizing various environmental activities. In 2004, the Committee continued to organize eco-photography workshops to strengthen the knowledge of students and staff in ecology and environment protection by a series of theoretical and practical lessons. Meanwhile, the Committee also invited Hong Kong Bird Watching Society to provide a guide for bird watching in the University campus.

In connection with the guessing game of electricity consumption in the last academic year, the Energy Saving Competition, organized by the Committee and the two Resident Associations, is being held through the academic year of 2004/2005. Residents are encouraged to aware the importance of energy conservation through the monthly competition.

Bird watching guide trained the student watching birds on campus
觀鳥會帶領師生在校園觀賞雀鳥。

逸夫書院

逸夫書院環境促進委員會致力舉辦各式各樣環保活動，提高學生對環境衛生及校園生態的認識。二零零四年，環境促進委員會繼續開辦生態攝影工作坊，藉著一系列理論與實踐課，加深員生對生態及環保的了解。環境促進委員會還邀得香港觀鳥學會指導員生如何在校園觀鳥。

繼上學年舉行的「慳」電競猜遊戲，環境促進委員會再接再厲，聯同兩個宿生會，於二零零四／零五整個學年舉辦「宿舍節約能源大比拚」，並每月公佈比賽結果，以鼓勵宿生節約能源。

United College

The United College holds the inter-hostel Energy-Wise Award Scheme from February to April and from September to November every year. The scheme effectively raised hostel residents' awareness of the importance of energy conservation and united them in actions to economize electricity and water consumption in student hostels. The overall championship was the Adam Schall Residence in 2004. Dr Sarah Liao, Secretary for the Environment, Transport and Works, the Government of the Hong Kong Special Administrative Region, presented the "**Dr Sarah Liao Cup**" to the Adam Schall Residence at the College Assembly.

In October 2004, with the support of College Endowment Fund and the University, the College has installed a solar powered hot water supply system in the Gymnasium of the United College Physical Education Unit. 11 sets of solar panels have been installed on the roof of Cheung Chuk Shan Amenities Building. The system provides hot water supply to the male and female bathrooms of the Physical Education Unit. With a total hot water storage capacity of 1760 liters, the system can provide hot water for up to 150 users per day during summer months. This renewable energy initiative will significantly reduce the consumption of electricity, thus reinforcing United Colleges' mission of building an environmentally friendly campus. The estimated payback period of this system is five to seven years.

*Dr Sarah Liao presented the "**Dr Sarah Liao Cup**" to the Adam Schall Residence at the College Assembly held on 25 February 2005.*
二零零五年二月二十五日，廖秀冬博士在書院聚會上，向湯若望宿舍頒贈「廖秀冬盃」。

Besides, a series of activities such as Organic Farming Group, Recycled Paper Workshop and Plant sale for Produce Green Foundation, Eco Tour to Po Toi Island, Kadoorie Farm and Botanic Garden, 4R - Recycling Scheme in Hostels, Orientation Night and Exhibition has been organized on the United College campus to raise peoples' awareness of environmental protection.

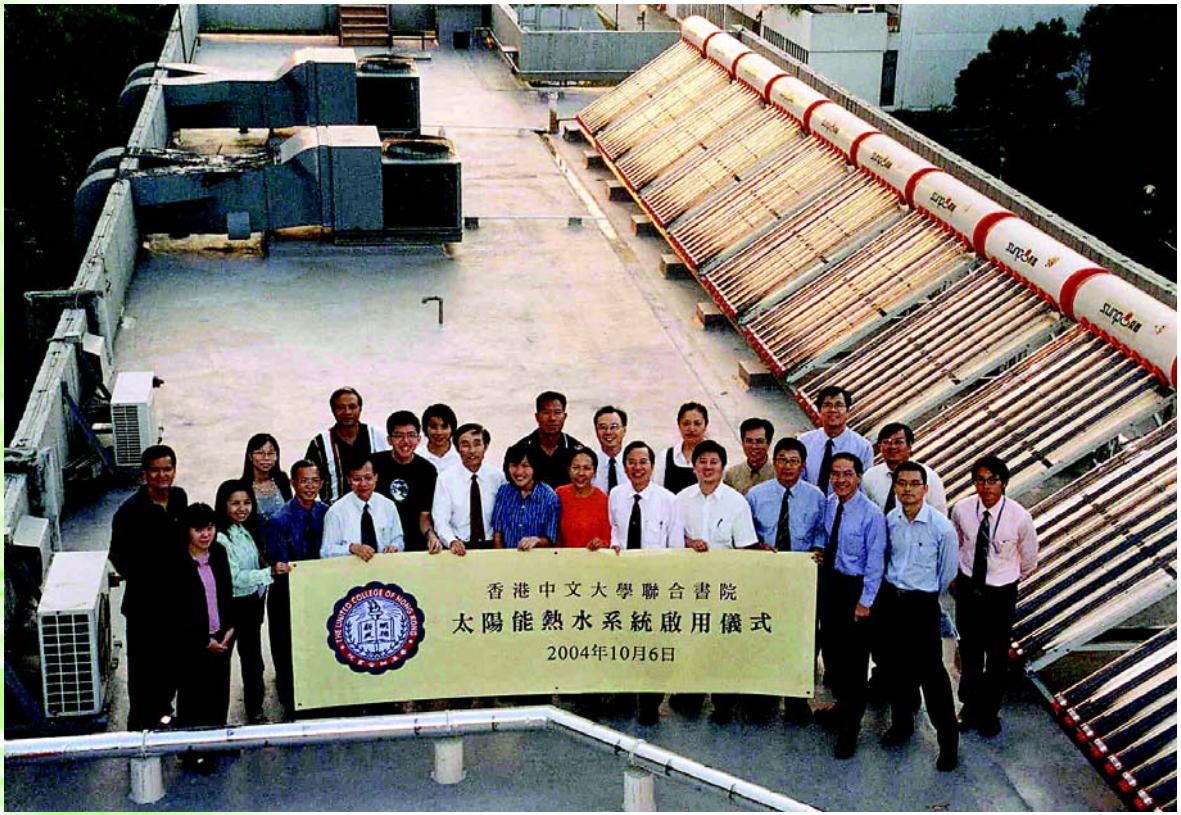
聯合書院

聯合書院每年二月至四月和九月至十一月，都會舉行「能源智叻星宿舍能源節省比賽」，大大增強了宿生的環保意識，使宿生節約用水用電。二零零四年的總冠軍由湯若望宿舍奪得，香港特別行政區環境運輸及工務局局長廖秀冬博士出席書院聚會，向湯若望宿舍頒贈「**廖秀冬盃**」。

二零零四年十月，聯合書院獲中文大學及聯合書院基金贊助，在書院體育部體育館安裝太陽能熱水供應系統。張祝珊師生康樂大樓天台裝設了十一組太陽能板，熱水供應系統可儲熱水共一千七百六十公升，夏季向體育館男女浴室供應熱水，每天足夠一百五十人使用。利用可再生能源，將可大幅減少書院耗電量，促進聯合書院建立環保校園的宗旨。熱水供應系統的回本期估計為五至七年。

此外，聯合書院還舉辦多種活動，提高員生環保意識，例如有機耕種小組、循環再造紙工作坊、綠田園基金義賣、生態旅遊(蒲苔島、嘉道理農場、植物公園)、宿舍4A紙回收大行動、迎新晚會、展覽等等。

Solar Panels on the roof of Cheung Chuk Shan Amenities Building.
張祝珊師生康樂大樓天台上的太陽能板。



CAMPUS PLANNING & DEVELOPMENT

Protecting the environment has never been solely about stopping pollution. Instead, problems from new developments need to be anticipated and prevented. Campus Planning Committee (CPC) is a committee of the University Council to take up the active role to advise the Vice-Chancellor on campus planning and deal with all matters including the environmental aspects relating to the campus master development plan, including proposal and programmes and utilization of space and facilities.

In delivering a new project, we go through the environmental impact assessment process so as to protect residents and other sensitive receivers from adverse environmental impacts that might arise from the proposed works. The process covers a wide range of environmental issues; such as noise, air and water quality, landscape and visual aspects, cultural heritage, as well as ecological and hazardous impacts during construction, and after the project is in operation. It identifies the impact sources, the elements of the community and the environment likely to be affected, and determines the severity of the impacts. If adverse impacts are found, we provide measures to avoid or to mitigate the impacts and reduce them to acceptable levels. Moreover, we implement the environmental monitoring and auditing procedures to ensure the effectiveness of the measures and compliance with regulatory requirements and policies. We pay particular attention to tree preservation by minimizing tree removal and tree compensation plan is normally included in the proposed landscape design. Where mature trees are to be affected, they are transplanted as far as possible. We also discuss with the related parties and experts on the proposed treatment of any rare or protected species that may have ecological, amenity, aesthetic or heritage value. The environmental findings and necessary mitigation measures are sent to the University Safety & Environment Office for vetting and agreement. If required, we also consult and seek approvals from the experts and the USCE committee on the appearance of structures.

Trees are identified and marked in the survey.
審評時樹木會加上標籤。

校園計劃及發展

要保護環境，單憑防止污染絕不足夠。我們必須未雨綢繆，估計新發展會造成的問題，及早預防。大學校董會屬下有校園計劃委員會，負責向校長提供校園規劃的意見，處理校園總發展計劃的一切事宜，包括環保事宜，例如發展建議、發展計劃，以及空間和設施的使用。

新項目施工之前，我們會評估對環境的影響，以免宿舍員生及其他易受環境影響人士被工程滋擾。環境影響評估範圍甚廣，研究施工期間及其後可能產生的惡果，包括聲音、空氣、水質、景觀、文化遺產、生態等。一切不良影響的源頭、可能受影響者及可能受影響的環境，都必須探索，並評估影響程度。假如有不良影響，就要設辦法消除，或減輕至不太嚴重的程度。此外，本校還有環境監督及審核措施，確保上述辦法奏效，並符合監管規則及政策。本校特別注重保護樹木，所以校園建設計劃會盡少砍伐，而且一般都會實施樹木補償計劃。大樹如受工程影響，將盡可能移植到其他地方。如工程影響到的稀有或受保護品種特具生態、遊樂、觀賞或文化傳統價值，本校會與有關人士及專家商量處理方法。環境評估結果及盡量減少破壞的措施，須呈交大學安全及環境事務處審批。如有必要，本校還會就建築物外貌，諮詢專家及環境督導會，並請求審批。

Trees are properly protected during in the works.
施工期間樹木會獲得適當保護。

GREENING OUR ENVIRONMENT

Greening the environment is one of our key objectives in developing the campus. Campus Development Office (CDO) and Estates Management Office (EMO) have incorporated landscaping works in both road and building projects at every opportunity to enhance the environment. The planting works and architectural designs completed in the past few years have improved the aesthetic appearance and quality of the campus environment. Apart from planting, tree compensation plan was implemented to preserve the trees such as native / rare species or with ecological value, mitigate the visual impacts to the environment, maximize greenery and enhance the local ecosystem.

In 2004, EMO Landscape Section planted 327 trees, 10,068 shrubs, 16,244 flower plants, 6,301 ground cover and lawn 6,271m² to green the environment under various building, road and slope projects and in our maintenance work.

Year 年份	Trees (No.) 喬木／(株)	Shrubs (No.) 灌木／(株)	Flowering Herbs (No.) 顯花植物／(株)	Ground Cover (No.) 地被植物／(株)	Lawn (m^2) 草地 (平方公尺)
2001	211	7,010	12,009	12,304	7,438
2002	430	11,606	6,487	3,899	2,826
2003	531	11,059	17,018	5,183	4,952
2004	327	10,068	16,244	6,301	6,271
Total	1,499	39,743	51,758	27,687	21,487

Shrubs and ground cover are planted everywhere to green the environment.
校園各處種有灌木和地被植物，綠化環境。

綠化環境

綠化環境，是校園發展的主要目標之一，校園發展處及物業管理處的道路及樓宇工程項目，都盡量加入園藝設計，以改善環境。過去幾年的栽種工作及建築設計，都令校園更為美觀，並改善了校園環境。除了栽種工作，本校還實施樹木補償計劃，務求保存土生土長或稀有品種或具有生態價值的樹木，減輕對環境的影響，使環境更青葱，並改善校園生態系統。

二零零四年物業管理處園藝組配合多項樓宇、道路、斜坡工程和維修工程，種植了三百二十七株喬木，一萬零六十八株灌木，一萬六千二百四十四株顯花植物，六千三百零一株做地被的小植物，以及六千二百七十一平方公尺草地。

Greening of Slopes

We are responsible for the maintenance of over 300 man-made slopes on campus which contributes a major part of CDO's working schedule. Depending on the nature of slopes, different greening landscape treatments are used to enhance the appearance of a slope, either by soft or hard landscaping works, or by a combination of both. For soft landscaping, methods to be used will include (i) hydro-seeding (or spraying grass seeds) with control mat to prevent soil erosion and protect seeds from birds, (ii) bio-engineering technology by transplanting long-root vegetation on steep slopes, (iii) laying of engineering fibre soil, and (iv) hydro-mulching by spraying of sticky reinforcing material with organic peat and grass seeds. On the other hand, hard landscaping is mainly used to provide hard surface for avoiding surface erosion. To reach this end, stone pitching or shotcreting with installation of planter holes will be adopted. To enhance the growth of vegetation, toe or berm planters will also be used. By applying these technologies, the University environment will be benefited both from campus greening and slope protection.

綠化斜坡

校園發展處的主要工作，是維修校園內三百多個人造斜坡，按斜坡的性質，採用不同的綠化方法，使斜坡較為美觀。這些方法或「軟」或「硬」，或兩者並用。所謂「軟」方法包括(i)水力噴草(噴灑草種子)並加上保護蓆，防止土壤侵蝕和雀鳥吃掉種子；(ii)採用生物工程技術，在陡峭斜坡種植根部較長植物；(iii)鋪上工程纖維泥土；(iv)採用沃土水力噴播技術，在斜坡噴上有機泥炭混和草種子的黏稠加固物料。至於「硬」方法，主要是建造堅硬的表面，防止表面土壤侵蝕。所用技術是在斜坡上噴灑青或混凝土，並設置栽種植物的小洞。同時在斜坡底部和斜水級栽種植物，以增加植物的覆蓋面積。以上技術既可以綠化校園，又可以保護斜坡，有利校園環境。

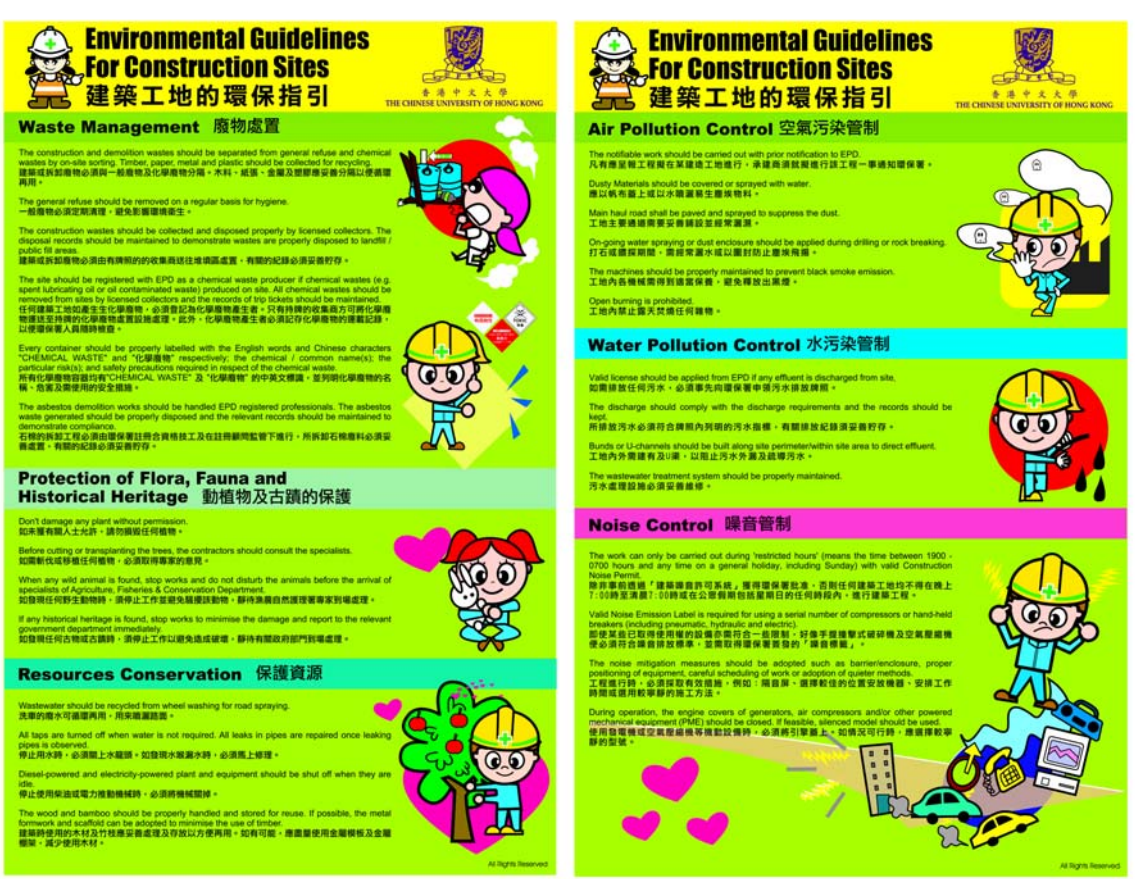
A steep slope has now been made more gentle and fixed by 1,000 soil nails, hydro-seeded and covered with an erosion control mat.
原本陡峭的斜坡，現已變為緩坡，固以千枚泥釘，草種和水撒播，並覆上保護蓆，防止土壤流失。

POLLUTION CONTROL & WASTE MANAGEMENT

Construction and renovation activities are identified as the main sources of pollution in the university campus. CUHK fully understands the importance of the co-operation of contractors, sub-contractors and vendors in the maintenance of a pollution-free campus. In 2002, an Environmental Guideline which includes the legal requirements and the University's in house rules was prepared by the University Safety & Environmental Office to help them conduct the works in environmental friendly ways. This guideline is attached in the tendering documents to suppliers and contractors for their compliance once they are appointed.

污染控制及廢物管理

中大校園的主要污染來源，是興建和翻新工程。本校明白，要防止校園污染，承辦商、分包商、供應商必須通力合作。二零零二年，大學安全及環境事務處編訂《環境指引》，列出法定守則及本校內部規例，旨在協助負責工程者遵從環保原則。本校的招標文件，都附有這份《環境指引》，備供應商和承辦商參考，以便他們獲聘後知所遵從。



The Environmental Guideline was posted in the construction sites.
施工地點張貼《環保指引》。

Air Pollution

To prevent dust nuisance and smoke emitted as a result of the construction and renovation activities, the contractors are instructed to take measures such as covering the construction materials properly and wetting, spraying and washing to suppress the dust emission. Besides, open burning is prohibited in the site.

In keeping with the university's climate change position, CUHK has begun taking steps to reduce emissions of Greenhouse gases that could contribute to climate change. All school shuttles are regularly maintained and installed with diesel oxidation catalytic converters. "Enginee Off, Wait Green" is being promoted to all drivers to raise the public awareness about green driving practice. Buildings, e.g. Mong Man Wai Building and Ho Sin Hang Engineering Building, have been designed with elevators to provide access to different topographical levels and trails have been built between Colleges and the main campus to reduce campus traffic.

Indoor air quality (IAQ) is also an important concern since poor indoor environment may lead to discomfort, ill health, absenteeism and low productivity. Therefore, the ventilation system of all academic and administrative buildings is properly maintained to ensure its effectiveness and indoor smoking control has been implemented. After the outbreak of SARS in 2002, we began to increase the fresh air intake rates to improve the indoor air quality. To further improve the IAQ quality, Campus Development Office hired external consultant in 2004 to carry out the Phase I works of Indoor Air Quality Measurement including physical parameters and microbial testing to find out the baseline data and severity of IAQ problem. It was found that the IAQ of CUHK offices and building is mainly classified as "Good" and "Excellent" level stated in "Guidance Notes for the Management of IAQ in Offices and Public Places".

Vehicle washing pool was set up at the entrance of construction sites to clean up the dust.
建築工地入口處設立洗濯池，洗去車輛灰塵。

Footbridge connecting William Mong Man Wai Engineering Building and Ho Sin Hang Engineering Building.
接連蒙民偉工程學大樓與何善衡工程學大樓的行人天橋。

空氣污染

為免興建和翻新工程產生大量塵埃、黑煙，承辦商必須依照指示，防止塵埃飄揚，方法包括蓋好建築材料、澆水、噴霧式灑水、清洗工地等，同時禁止在工地上露天焚燒雜物。

本校實行多項措施減少排放温室氣體，在防止氣候變化上務求盡一分力。校內穿梭巴士都有定期維修，並裝上柴油催化式淨化器。我們鼓勵所有司機「停車熄匙」，加強駕車者環保意識。蒙民偉樓、何善衡工程學大樓等建築物，全部按地形設計，升降機可到達校園高低不同的地面。各書院和大學本部之間，也開闢小徑，以減少校園的車輛交通量。

惡劣的室內環境，不但有損健康，令人不適，還會增加缺勤率，降低生產力。因此，室內空氣素質也必須關注。所有教學樓、行政樓的通風系統，都有妥善維修，確保有效運作，同時室內實行全面禁煙。二零零二年非典型肺炎爆發後，各樓宇都增加新鮮空氣抽入率，以改善室內空氣。為了進一步提高室內空氣素質，校園發展處二零零四年聘請校外顧問，展開第一期室內空氣素質量度工作，包括量度實際參數以及進行微生物測試，求取基線數據，看看室內空氣素質問題是否嚴重。結果發現本校辦公室和建築物室內空氣素質，大部分達到《辦公室及公眾地方室內空氣素質管理指引》所定的「良好」或「優良」水平。

Water quality of Wei Yuan Lake is regularly monitored by the Estates Management Office.
未圓湖的水質，由物業管理處定期監測。

Water Pollution

CUHK works to protect surrounding water bodies of the campus. Currently, there are two natural watercourses in the University: the eastern one originates from the village of Chek Lai Ping and the western one originates from the New Asia Campus, going into the Tolo Harbour via the Weiyuan Lake. A network of storm drains and sewers has also been built in the past three decades. The storm drains were built to collect the rain water and surface run-off from road surfaces and roof-tops, and to divert them into the natural watercourses. The contaminated wastewater generated from residences, student hostels, offices, laboratories, canteens, etc, are discharged to the sewers and channelled to the Shatin Treatment Works for disposal.

Moreover, grease trap is installed in each canteen to segregate the oily waste and wastewater to reduce the loading of treatment. The cleaners and workers are instructed not to discharge the wastewater or chemical wastes such as spent lube oil and paint into the storm drains. For the construction site with effluent, the contractor must apply discharge license from the Environmental Protection Department (EPD) and comply with license requirements such as installation of wastewater treatment facilities connected to the approved discharge point. To monitor the water quality, water sampling is regularly conducted at different locations.

水質污染

中文大學一直致力保護校園一帶的水域。本校目前有兩條天然水道：東面的一條源自赤泥坪村，西面的一條源自新亞校園，經未圓湖流入吐露港。過去三十年，本校還陸續建立了一個雨水渠、污水渠組成的排水系統。雨水渠把雨水和路面、屋頂的流水引入天然水道，污水渠則把教職員住宅、學生宿舍、辦公室、實驗室、飯堂等所產污水引往沙田污水處理廠。

此外，各飯堂安裝了隔油器，把油脂廢物和污水分隔，減輕污水處理的困難。清潔員工也獲得訓示，不得把污水或用過的潤滑油、油漆等化學廢料傾入雨水渠。建築工地如須排放污水，承辦商必須向環境保護署(環保署)申請排污牌照，並遵守發牌規定，例如在許可排放點安裝污水處理設施。本校定期在不同地點抽取水樣，監察水質。

Noise Control

Noise from construction and renovation activities can be a nuisance to residents and the community at large. In the campus of CUHK, construction work is not permitted during the period 7:00pm to 7:00am on weekdays and any time on Sundays or public holidays. All the major works on campus are scheduled in the summer months to avoid noise disturbance to academic and administrative activities. Besides, the sites are enclosed by the hoarding and all noisy equipment are equipped the sound-reducing measures and properly maintained. The renovation works of administration building would be scheduled to avoid undue disturbance to office operation.

We also take steps to minimize noise levels in the design stage wherever practicable. First of all, offsite prefabrication will be considered in the future project since using refabricated building elements such as precast facades and staircases can avoid and reduce noise in the construction and maintenance activities. Moreover, blocking out noise by barriers is an effective measure in reducing the noise nuisance. Planting trees on the roadside as natural noise barrier reduce has been adopted to reduce noise transmission affecting the future residents. Apart from that, we started to use the low noise surfacing to low speed roads in 2004. We resurfaced two low speed road sections with 550m² low noise surface.

噪音控制

建築和翻新工程產生的噪音，會困擾宿舍員生以至全體員生，因此，中文大學平日晚上七時至上午七時禁止施工，而星期天和公眾假期更是全日禁止。所有大型工程，都安排在暑期施工，以免聲浪影響教研和行政工作。此外，建築工地會用圍板隔開，發噪音工具也會裝上降低音量的裝置，並妥善維修。行政大樓翻新的施工日期，都有妥善安排，以免影響辦公室同事工作。

本校盡可能在工程設計階段制定措施，把噪音水平減至最低。首先，未來工程會考慮使用預製建築組件，例如預製外牆、樓梯等，可避免或減低建築以及維修工程的噪音。另外，屏障也可以阻隔噪音。本校採用了路旁植樹法，形成天然噪音屏障，以減少噪音對宿舍員生的滋擾。此外，由二零零四年開始，本校在低速路段使用低噪音鋪路物料。兩個低速路段已經重鋪，低噪音路面共有五百五十平方公尺。

Trees are planted on the roadside as natural noise barrier.
大學校園路旁遍植樹木，作為天然的噪音屏障。

Block Pavers

In the past few years, the environmentally friendly precast block pavers have been used as the preferred paving material for public footpaths. Block pavers of different colours and sizes can be arranged in a variety of patterns to enhance the aesthetics of our streets and to blend harmoniously with the surrounding environment and no noisy jackhammers are used during excavation of footpaths to access underground utilities. The inconvenience to the public can be also reduced since only pavers at the affected area need to be lifted up. Moreover, the removed pavers can be re-used in the footpath reinstatement works and the quantity of construction waste is significantly reduced. The use of block pavers are more economical in the long run since the higher material cost is offset by savings in long term maintenance. Approximately 4,000 m² of public footpaths were paved with precast paving blocks during 2004.

Block pavers are used for paving the footpaths
以鋪路磚鋪砌人行道。

鋪路磚

過去數年，本校選用環保的預製鋪路磚鋪砌人行道，鋪路磚有各種顏色、尺寸，可組合成不同圖案，使道路更為美觀，與附近環境更見和諧。此外，如須挖掘道路修建地下設施，工人也毋須使用嘈吵的風鑽，只須把受影響範圍內的鋪路磚撬起，對公眾的不便得以減少。撬起的鋪路磚，修復路面時可以再用，大大減少建築廢料。所以，鋪路磚雖然成本較高，但由於長遠而言可以節省維修費用，較符合經濟原則。二零零四年，約四千平方公尺的人行道都是用預製鋪路磚鋪設的。

Waste Management

Domestic Wastes

Hong Kong is facing a shortage of landfill space, and the EPD predicts that our landfill will be full within the next 7 to 11 years if waste disposal volumes continue at the present rate. Being a tertiary institution with about 5,000 staff and 17,000 students some of whom live on the campus, huge waste volume, generated daily by offices, laboratories, canteens, residences and student hostels, is a very difficult environmental problem to cope with. The University has made a concentrated effort to reduce hazardous waste through implementing 4 "R" Strategy of Reduce, Replace, Reuse and Recycle in the daily activities in the University.

Thousand of recycling facilities such as 3-color recycling bins and desk top recycling bins were placed nearby the staff and students to facilitate waste segregation and recycling on campus. Apart from the daily recycling activities, CUHK has been constantly working with other environmental protection units and charity organizations to conduct Recycling Charity Activities, such as collecting used books, old clothes and forwarding them to the charity organizations. In 2004, Charity Old Clothes Collection was held in Staff Quarters and main campus. It is highly appreciated that 2,200kg of clothes were collected. Besides, the Green World also organizes the Student Quarter Retreat Collection to collect the used items every summer vacation. Compared with 2000, the volume of refuse was reduced from 50,000 litres to 31,700 litres per day and the waste recover rate of papers and aluminum cans were successfully increased by 41.38% and 49.13% respectively.

3-Colour Recycle Bins are placed everywhere within campus to facilitate the segregation of wastes.
校園各處設置三色廢物回收箱，方便把廢物分類。

Cartridge Collection Bin
炭粉盒回收箱

Green World sold the items collected by the Student Quarter Retreat Collection Programme in the Flea Market.
綠色天地在跳蚤市場售賣退宿回收大行動收集到的物品。

廢物管理

家居廢物

香港堆填區短缺，據環保署預計，假如目前廢物棄置量不減，堆填區將於未來七至十一年全部填滿。本校共有五千名教職員、一萬七千名學生，部分寄宿校園。辦公室、實驗室、飯堂、教職員宿舍和學生宿舍每天都產生大量廢物，成為環保工作的一大難題。有鑑於此，本校一切日常活動都奉行四R政策，致力減少有害廢物。四R即減省(reduce)、取代(replace)、再用(reuse)以及循環再造(recycle)。

本校積極支持廢物分類、循環再造，校園內員生常到的地方都設有三色廢物回收箱，辦公室內也有個人廢物回收桶(desk side)，這類回收設施數目以千計。除了日常的回收活動，本校更定期和其他環保組織以及慈善團體合辦慈善回收活動，例如收集舊書、舊衣物，捐予慈善機構。二零零四年，教職員宿舍和大學本部舉行慈善舊衣回收，共收得二千二百公斤衣物，成績令人鼓舞。此外，綠色天地每年暑假都舉辦退宿回收大行動，收集宿生的舊物品。與二零零零年相比，廢物產量由每天五萬公升減至三萬一千七百公升，而紙張、鋁罐的回收率，更由百分之四十一點三八增至百分之四十九點一三，十分成功。

Winning Design of Collection Bin Design Competition of Shaw College
逸夫書院回收箱設計比賽得獎作品。

Deskside Integrated Recycle Bins for Office Use
辦公室用個人綜合廢物回收桶

Quantity of Recyclables Recovered 可再用廢物的回收數量	2000	2001	2002	2003	2004
Waste Paper (kg) 廢紙（公斤）	240,600	238,250	254,500	257,027	340,169
Plastic Bottles (kg) 塑膠樽（公斤）	865	1,090	1,290	960	760
Aluminum Cans (kg) 鋁罐（公斤）	595	670	849	901	887.3
Printer Cartridges (No.) 列印機炭粉盒（數目）	No Data 未有統計	357	427	277	337

University Staff Quarter Old Clothes Collection
大學職員宿舍舊衣收集處

Licensed collectors are employed to collect the chemical wastes and biological wastes for disposal.
化學及生物廢料由特聘的持牌收集商收集、處理。

Hazardous Wastes

CUHK recognizes the importance of hazardous wastes to the health and safety of the staff and students and the impact on the environment, the University Safety & Environment Office (USEO) is delegated to manage the disposal of biological and chemical wastes generated by the daily operation and academic purpose on campus. The waste disposal guidelines are prepared for the research staff of laboratories to properly dump the wastes generated by the laboratory activities. All these wastes are properly stored and then collected and transported by the licensed collectors. Moreover, radioactive waste store is managed by the Radiation Officer of USEO for radioactive wastes to decay.

危險廢料

本校深明危險廢料和員生健康、安全息息相關，對環境也有嚴重影響，特別委任大學安全及環境事務處(環境事務處)，負責處理校園日常運作以及教學時產生的生物和化學廢料。大學制訂了廢料棄置指引，指示實驗室研究人員妥善棄置實驗產生的廢料。危險廢料一律須妥善儲存，待持牌收集商收集運走。放射性廢料則儲存於衰變倉內，由環境事務處的輻射防護主任負責管理。

Year 年份	Chemical Wastes (kg) 化學廢物（公斤）	Biological Wastes (tons) 生物廢物（噸）
1998	19,224.0	No Data / 未有統計
1999	15,852.5	No Data / 未有統計
2000	24,241.1	17.0
2001	28,188.0	26.0
2002	34,661.0	14.0
2003	36,590.0	15.0
2004	37,676.0	15.0

Construction & Demolition Wastes

CUHK is facing a challenge to handle 11,800m³ of construction and demolition (C&D) waste materials generated from the building and geotechnical activities every year. To prevent waste accumulation from becoming a long-term environmental problem, CUHK is trying to find ways to reuse the C&D waste material. During the design, construction and demolition phases of building projects, CUHK has been implementing waste management schemes to reduce C&D wastes, and will continue to deliver green messages to our contractors and stakeholders to promote the 4R's.

We are fully aware that most timber used in the local construction industry comes from forests that are not managed for sustainability. As part of the effort to conserve resources and reduce C&D waste, we have adopted metal instead of hardwood for site hoardings. Where appropriate, metal is also used for concrete formwork. Metal hoarding and formwork can be reused a number of times and hence the generation of used timber works as C&D waste could be greatly reduced. In addition, we have been devising more strategies for reducing our use of timber, especially tropical hardwoods. We have already started modifying specifications in contracts and intend to explore alternative materials.

建築及拆卸廢料

本校的建築及土力工程，每年產生多達一萬一千八百立方公尺建築及拆卸廢料。為免廢料堆積而引起長遠的環境問題，本校積極研究對策，務求循環再用建築及拆卸廢料。我們在建築工程的設計、興建或拆卸階段，都奉行廢料管理計劃，減少建築及拆卸廢料，並致力向承辦商和有關人士講解四 R 政策，宣揚環保訊息。

本地建築業使用的木材，大多數都不是出自可持續發展的森林。為求保護資源，減少建築及拆卸廢料，本校建築工地採用金屬圍板取代木圍板，並盡可能以金屬作混凝土模板。金屬圍板、模板可以多次使用，大大減少建築及拆卸工程產生的木材廢料。此外，本校多方設法減少使用木材，特別是熱帶硬木，現已著手修訂工程合約的細則，計劃以新物料代替木材。

Metal hoarding replaces the wooden hoarding.
金屬圍板取代了木圍板。

ENVIRONMENTAL COMPLIANCES

Regarding the environmental performance of CUHK and its contractors during the year, there was no conviction due to environmental non-compliance. However, there were 15 environmental complaints received mainly complaining construction and renovation noise and all cases were properly handled.

恪守環境條例

論環境保護工作，本年度中文大學及其承辦商並沒有因違反環境條例而被定罪。不過，關乎環境的投訴則接到十五宗，主要涉及建築和翻新工程的噪音。所有投訴都獲妥善處理。

CONSERVATION OF ENVIRONMENT

Material Use and Recycling

CUHK has also found ways to minimize office paper use such as:

* all staff are encouraged to adopt double-sided printing and reuse the single-side used paper;
* email accounts and intranet are provided for all administrative staff and students for communication;
* mass email is used for internal communication to replace the notices and memos; and
* many forms and booking system have been converted to an electronic format.

Double-side Printing Feeder of Photocopier
安裝了雙面印刷供紙器的印影機。

保護環境

物料使用及循環再造

中文大學實行以下措施，盡量減少辦公室的紙張用量：

* 鼓勵全體教職員實行雙面印刷，並再用只用了一面的紙張；
* 為所有行政部門職員和學生設立電子郵箱以及內聯網，方便通信；
* 用集體電郵發出內部通信，取代張貼告示和通告；
* 不少表格和預約系統都改用了電子形式。

Energy Conservation

CUHK campus accommodating 38 blocks of staff residences, 27 blocks of student hostels as well as over 60 blocks of academic and administrative buildings, consumes apparently high electricity consumption with also an increasing trend. It is because CUHK grows in a tremendous rate with continuous development of campus and increasing number of staff and students. On average, the FTE (full-time equivalent) student recorded with ~4,400kWh annually since CUHK possesses the largest number of student hostels among the local institutions, over 4,000 postgraduates stay more than 12 hours daily in the university facilities such as classrooms, libraries, laboratories and other communal amenities. To curb the increasing trend in electricity consumption, the Energy Savings Task Force has conducted detailed studies and consolidate proper course of energy conservation actions in 2004 as follows:

節約能源

中文大學有三十八座教職員宿舍和二十七座學生宿舍，此外還有六十多座教學樓和行政樓。由於發展迅速，員生人數不斷上升，耗電量甚高，更有持續增加趨勢。中文大學學生宿舍數目，多於本港其他大專院校，而四千多名研究生在教室、圖書館、實驗室和其他公共設施逗留的時間，平均每天超過十二小時，所以，一名相等於全日制的學生，平均每年耗電量高達四千四百千瓦小時。為了遏止電力消耗不斷上升趨勢，節約能源工作小組於二零零四年詳細研究本校的能源消耗情況，制訂了節約能源的實際措施，詳情如下：

Campus-Wide Benchmarks of CUHK
中文大學全校能源指標

	Board Grant (BG) Charge of the CUHK Campus 中大校園每年費用				
Finanical Year 財政年度	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004
Gross Floor Area (GFA) for non-residential Area, (m^2) 非住宅用地的建築面積(平方公尺)	232,432	254,370	254,370	260,360	260,360
Benchmark, kWh/m^2 指標，千瓦小時 /每平方公尺	281	269	271	264	262
Unit Rate, $/kWh 單位收費，元 /千瓦小時	0.778	0.773	0.767	0.762	0.750

Energy Efficient Improvement by Replacement by water-cooled chiller in SFARSC

In Shanghai Fraternity Association Research Services Centre (SFARSC), there requires 100% fresh air for medical research and the A/C demand is relatively large. Two out of three air-cooled chillers were scheduled for replacement by water-cooled chiller in Sept 04 and one chiller was put into full operation at the end of Dec 04. The second water-cooled chiller was completed in April 05. The last remaining air-cooled chiller was installed with evaporated water cooling system. During four-month operation of the water-cooled chiller in winter, it contributed ~7% yearly saving in 2004 compared with last year benchmarks. The completed picture of the saving will be reviewed after completion of the installation in 2005 and we are keeping track of the meter reading to verify the saving.

Year 年份	Annual A/C Consumption in SFARSC, kWh 上海總會科研技術中心全年空調用電量(千瓦小時)	Benchmarks, kWh/m^2/month 指標，千瓦小時／平方公尺／每月	Remarks 備註
2002	1,811,400	33.48	-
2003	1,795,100	33.18	-
2004	1,670,450 (126,450 kWh Saving) (節省126,450千瓦小時)	30.87 (7% Saving) (節省7%)	Partial Completion of the Programme 工程尚未完工

提升能源效益：上海總會科研技術中心改用水冷式冷卻器

上海總會科研技術中心需要完全新鮮的空氣進行醫學研究，電力需求較大。該中心原有三部風冷式冷卻器，本校安排在二零零四年九月換去兩部，以水冷式冷卻器取代，其中一部於二零零四年十二月底全面運作，另一部則於二零零五年四月完成安裝。至於餘下一部風冷式冷卻器，也裝上蒸發式水冷系統。二零零四年冬季四個月內運作的水冷式冷卻器，有助上海總會科研技術中心節省用電，用電量與去年相比，下降百分之七。二零零五年所有安裝工程完成後，本校會檢討實際情況，評估整體節約能源成效，目前正定期記錄電錶讀數。

Evaporative Cooling System in SFARSC
上海總會科研技術中心的蒸發式水冷系統

Replacement by Water-Cooled Chillers in SFARSC
上海總會科研技術中心更換水冷式冷卻器

Decommissioning of Air-cooled Chiller System at John Fulton Centre (JFC)

John Fulton Centre (JFC) has intermittent occupancy which requires the central chiller system to operate after office hours. In order to meet this high fluctuation, but mainly light load profile, university decided to decommission the central system and only provide central chillers for the canteen operation. This decommissioning was completed in July 2004. After the decommissioning, air conditioning of Supermarket and Bookshop were operated subject to their demand and the air conditioning fee were charged in according to their usage. For staff restaurant and canteen, their air conditioning consumption is recorded through separated meter and this record is available for Business Office to review the electricity charging scheme.

關閉富爾敦樓的風冷式冷卻系統

富爾敦樓使用時間並無固定，因此，一般辦公時間之後，中央冷卻系統仍須運作。本校因應使用時間無定而用量有限的情況，決定關閉中央系統，只為飯堂提啟中央空調。中央系統已於二零零四年七月關閉，此後超級市場和書店的冷氣，由商戶按本身需要開啟，並按用量支付冷氣費用。職員餐廳和飯堂的冷氣使用量，會以獨立電錶記錄，方便事務處檢討收取電費的安排。

JFC Building Consumption 富爾敦樓用電量	Annual Building Consumption, kWh 大樓全年用電量，千瓦小時	Benchmarks, kWh/m²/month 指標，千瓦小時／平方公尺／每月	Remarks 備註
2003	933,690	22.42	-
2004	853,000 (80, 690 kWh Saving in half year operation) (半年節省80,690千瓦小時)	20.48 (8.6% Saving) (節省 8.6%)	Full completion in July 05 二零零五年七月全面完工

Building Energy Performance Index (EPI)

Monthly Building Performance Index of the target high consumption buildings are issued and distributed to the building representatives monthly. These notices are posted in the public areas to raise the public awareness. This index records the effort of user groups, housekeepers, system operators and associated installation. The total cost saving among the eight buildings was $2,545,742 in 2004.

EPI of Ho Sin Hang Engineering Building
何善衡工程學大樓的能源效益指數

樓宇能源效益指數

本校每月公佈高用電量樓宇的每月樓宇能源效益指數，分發給各樓宇的代表，並張貼在公眾地方，提高員生節約能源的意識。這個指數代表用戶、管理員、系統營運者以及相關設施的節約能源成效。二零零四年，本校八座大樓共節省二百五十四萬五千七百四十二元電費。

Building cover in the Building Energy Performance Index	Average Monthly Consumption, kWh/ month		%
樓宇能源效益指數涵蓋的樓宇	平均每月用電量，千瓦小時／每月		百分比
	2003	2004	
Science Centre (South, North, Central Block) 科學館(南座、北座、主樓)	893,358	801,184	90%
Ho Sin Hang Engineering Bldg. 何善衡工程學大樓	546,521	474,933	87%
Shanghai Fraternity Association Research Service Centre 上海總會科研技術中心	301,839	285,468	95%
Esther Lee Building & CC Administration Building 利黃瑤璧樓及崇基學院行政樓	299,690	247,310	83%
CCC Teaching Block 2, 3 & 4 (Wong Foo Yuan Building) 崇基學院教學樓第二、三、四座(王福元樓)	340,967	307,196	90%
Pi Chiu Building 碧秋樓	277,012	269,033	97%
John Fulton Centre 富爾敦樓	77,808	71,083	91%
Total 總計	2,737,195	2,456,207	90% (2,512,145 kWh)

Summary for Buildings with Building Energy Performance Index
八座大樓的樓宇能源效益指數概要

Lighting Retrofit Phase V

Replacement of 32W "2D" circular fluorescent luminaries with 14W T5 fluorescent luminaries in staircases of BMSB, Ester Lee Building, Wong Foo Yuen Building, Hoi Sin Hang Engineering Building, etc were completed. More than 40% of consumption was saved by this installation. For existing building, Electric Unit of Estates Management Office is going to make use of the occupancy sensors to unload lighting & A/C in classrooms, offices of Mong Man Wai Engineering Building II.

T5 14W Energy Saving Lamp in staircase of BMSB
基本醫學大樓梯間的T5 14W省電熒光燈

照明系統改裝工程第五期

基本醫學大樓、利黃瑤壁樓、王福元樓、何善衡工程學大樓等梯間已棄用32W平面圓形熒光燈，全部改用14W T5熒光燈，用電量節省超過百分之四十。物業管理處電力小組還會在蒙民偉工程學大樓第二座的教室、辦公室安裝感應器，可以察覺室內是否有人，自動關閉照明及冷氣。

Renewable Energy by using Evacuated Solar Collectors

CUHK is the first university in Hong Kong to employ Evacuated Solar Tube Collector for preheating of hot water supply. The large scale installation in Cheung Cheuk Shan Amenities Building was completed in Sept 2004 and the result is encouraging for further development of this sustainable energy application.

Solar Collectors in Cheung Cheuk Shan Amenities Building
張祝珊師生康樂大樓的太陽能收集器

可再生能源：使用真空管太陽能收集器

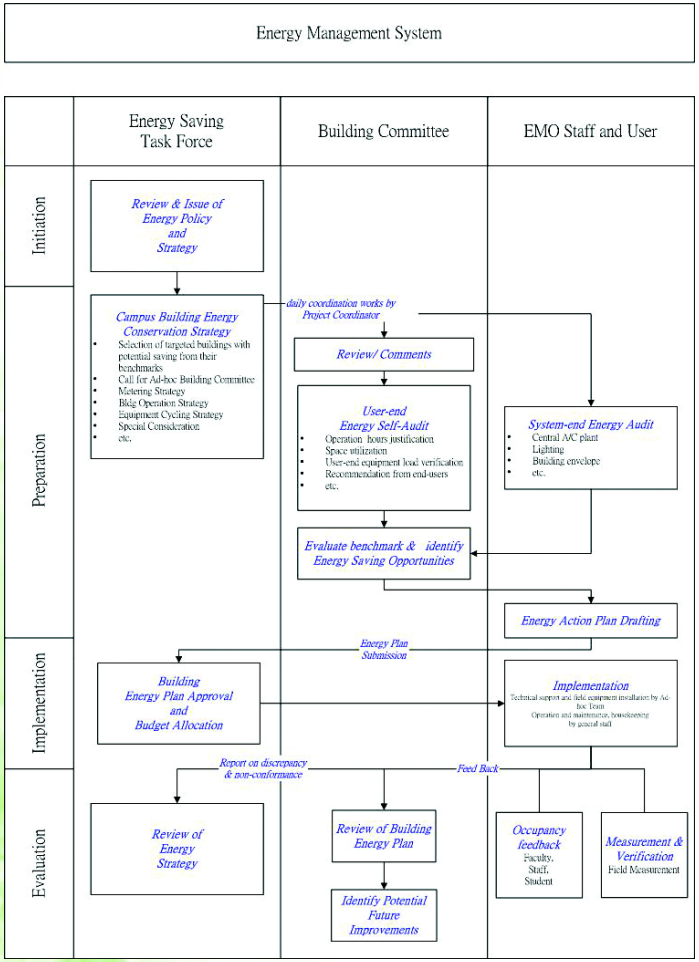
中文大學是全港第一家採用真空管太陽能收集器供應熱水的大學。張祝珊師生康樂大樓的大型太陽能收集裝置，於二零零四年九月安裝妥當，成效理想，本校當進一步推廣可持續發展能源的應用。

Formation of Energy Management System

Apart from Energy Policy and Guidelines were announced in 2003, Energy Management System was also formed in 2004 for more close monitoring and implementation of energy conservation measures.

設立能源管理系統

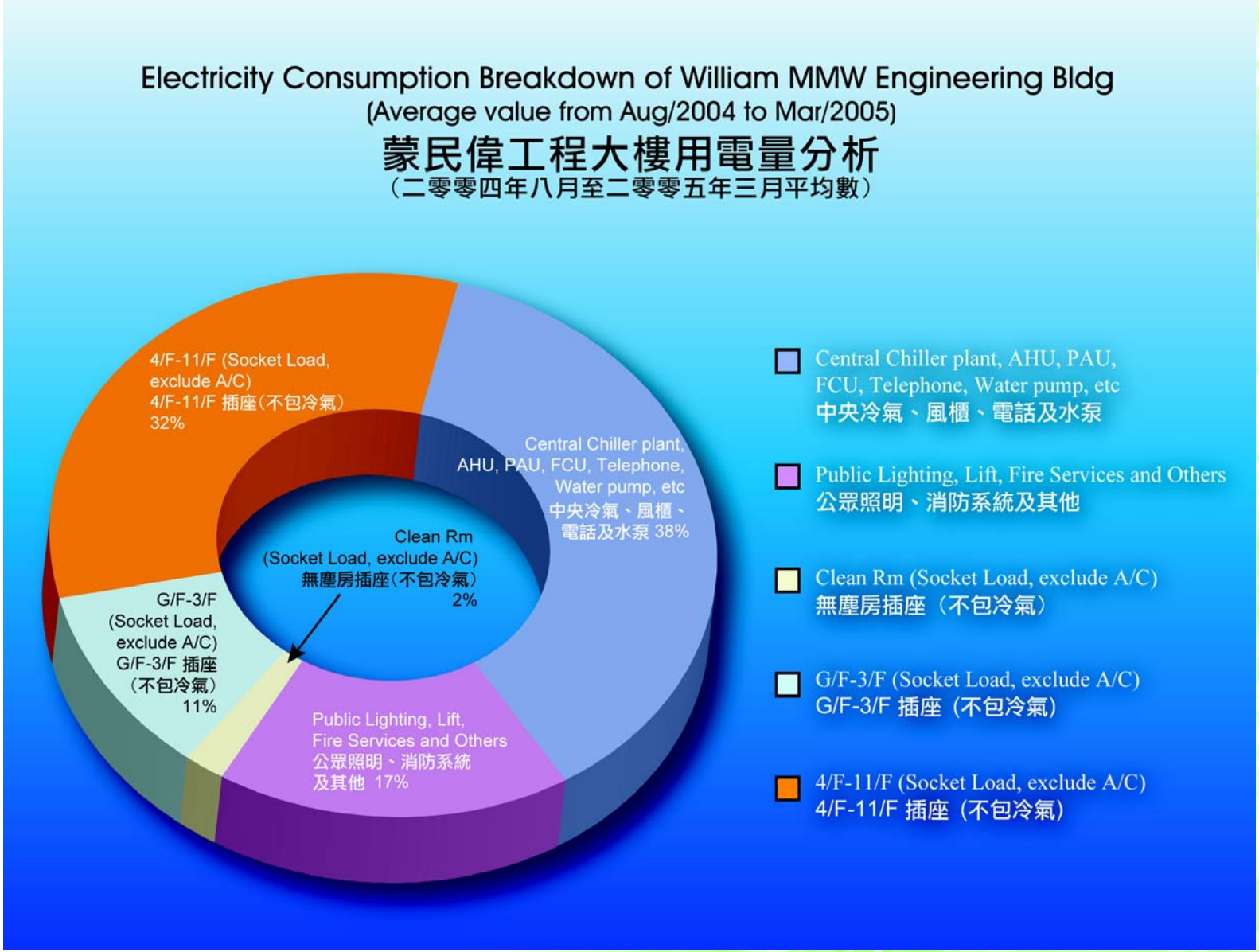
繼二零零三年公布能源政策及指引後，本校二零零四年設立能源管理系統，以便更有效監察和執行節約能源措施。



Energy Management System Flowchart

能源管理系統流程圖

Electricity Consumption Breakdown of William MMW Engineering Building (Average value only 2004)
蒙民偉工程學大樓用電量詳情(僅二零零四年的平均值)



Phase II BMS Programme

Six Buildings including : Shanghai Fraternity Association Research Services Centre, University Administration Building, Institute of Chinese Studies, Art Museum, Tin Ka Ping Building and University Library are selected and the installation is in progress. We expect this programme will be completed on the middle of 2005.

樓宇管理系統(BMS)計劃第二期

本期計劃挑選了六座大樓，即上海總會科研技術中心、大學行政樓、中國文化研究所、文物館、田家炳樓、大學圖書館。安裝工程現已展開，預期將於二零零五年年中完成。

Building Energy Conservation Committee of Engineering Building

Meeting for collaborative efforts with users in Engineering Faculty was carried out prior to commissioning of the new William Mong Man Wai Engineering Building and energy saving proposals were issued for their consideration and implementation. The University has a close monitoring on the breakdown consumption of William Mong Man Wai Engineering. Further energy saving measures will be carried out subject to funding availability and user acceptability.

工程學大樓樓宇節能委員會

新的蒙民偉工程學大樓動工之前，工程學大樓樓宇節能委員會已與工程學院員生開會，商討如何合力節約能源，更提出節約能源計劃書，以供參考、實施。本校一直密切監察蒙民偉工程學大樓的詳細用電情況。將來假如有所需資金，並得大樓使用者同意，將推行其他節約能源措施。

Energy Review of Building Design in New Buildings

Energy efficient design was proposed and being reviewed to new teaching block in design stage. Energy saving features such as water-cooled chiller, LED exit sign, T5 lamps, desiccant wheel, metering, etc will be considered in the new teaching block.

新樓宇藍圖中的節約能源計劃

新的教學大樓在設計階段，已提出節約能源計劃，供各方研究。大樓可能安裝的節約能源設備包括水冷式冷卻器、發光二極管出口標誌、T5電燈、抽濕輪、量度儀器等。

Water Conservation

Water is essential for life and so we always have a primary goal to protect and conserve water resources. In the past year, we continued our effort to reduce water wastage in our administrative and academic buildings. To minimise water consumption, an automatic watergate was installed in Wei Yuen Lake by the Estates Management Office to regulate the level of water storage. The lake provides up to 0.7 million litres of lake water for daily use at the University including irrigation, cooling of air-conditioning systems, and flushing. When flooding causes the water level to reach the warning mark, the watergate will open; similarly when the water drops to a certain level, the watergate will close. The lake's capacity has been increased by 2.6 million litres in the last two years as a result of the deepening of the lake by 300mm in the Chung Chi Lake Improvement Work.

Besides, automatic cut-off tap is being used in the washing room to prevent wastage of water. Posters and stickers are posted to remind users not to waste water during washing. Water reduction competition is also launched in the student hostels to encourage students to consume less water. Seminars and workshop about water conservation and energy conservation were regularly arranged to enhance the awareness of staff and students. In 2000, over 90,000m^3 water was consumed by CUHK per month.

With the mentioned measures, the monthly water consumption in 2004 was reduced significantly, 82,500m³ water was consumed by CUHK per month in average.

意識。二零零零年，本校每月用水超過九萬立方公尺。推行上述措施後，二零零四年的每月用水量大幅下降，降至平均每月八萬二千五百立方公尺。

珍惜用水

水是生命不可或缺的，本校向來都著意保護、節約。去年，我們繼續努力，務求行政樓和教學樓珍惜食水，減少浪費。為了節約用水，物業管理處在未圓湖安裝自動水閘，控制儲水量。未圓湖每天可為大學供應七十萬公升湖水，作澆灌花木、冷卻空調系統、沖廁等用途。一旦湖水泛濫，水位超越警戒線，水閘會自動開啟；而水位回落到某個水平的時候，水閘便會自動關閉。過去兩年，未圓湖進行改善工程，將湖床挖深三百毫米，令湖水容量增加二百六十萬公升。

此外，為免浪費食水，本校洗手間採用會自動關上的水龍頭，並張貼海報及貼紙，提醒員生節約用水。學生宿舍也舉辦節約用水比賽，鼓勵宿生減少用水。本校在珍惜食水及節約能源事宜上，定期舉辦研討會和工作坊，提高員生保護資源的

Automatic Watergate
自動水閘

Ozone-Depleting Substances

Ozone is a gas that protects the earth's surface from harmful ultraviolet radiation from the sun, and so helps to protect us from skin cancer. The existence of the ozone-hole in our atmosphere has therefore made society aware of the impact of ozone depleting compounds such as chlorofluorocarbons (CFCs) which have been used in aerosols and as cooling agents in refrigeration systems, chillers and air conditioners. To play an active role in protecting our world, CUHK has minimized the use of ozone-depleting chlorofluorocarbons (CFCs) throughout daily operations since 90s such as replacing ozone-depleting Halon / BCF fire extinguishers and ban of using ozone-depleting refrigerants in all air conditioning systems and replaced all affected chillers with CFC-free refrigerants.

損害臭氧層物質

臭氧層是覆蓋地球表面的一層氣體，能夠阻擋陽光中對人體有害的紫外線，減少患上皮膚癌的危險。大氣中臭氧層出現缺口之後，社會意識到損害臭氧層化合物的禍害，這些化合物包括噴霧劑常用的氯氟化碳，以及冷凍系統、冷卻器、冷氣機的製冷劑。本校一直致力保護地球環境，自九十年代起，日常運作已盡量少用氯氟化碳這種有損臭氧層的物質，例如棄用含有哈龍／BCF 等損害臭氧層物質的滅火器，以及禁止所有冷氣系統使用有損臭氧層的製冷劑，改用的製冷劑不含氯氟化碳。

CFC is replaced by non-ozone depleting HFC R134A into new chiller.
新式冷卻器採用無損臭氧層的 HFC R134A 製冷劑，取代氯氟化碳製冷劑。

COMMUNITY AWARENESS

To promote environmental awareness, CUHK has arranged many programmes for the staff, students and the public.

環保意識

中文大學為員生及市民安排多項活動，務求加強他們的環保意識。

"Enviro Trio 環保過三關"

Green Carnival 2004

The University hosted a booth in Green Carnival 2004 organised by Green Council in Wanchai Stadium in February 2004 to educate the general public by the game " Enviro Trio ". A pot-plant was given to the winner for encouragement.

環保嘉年華 2004

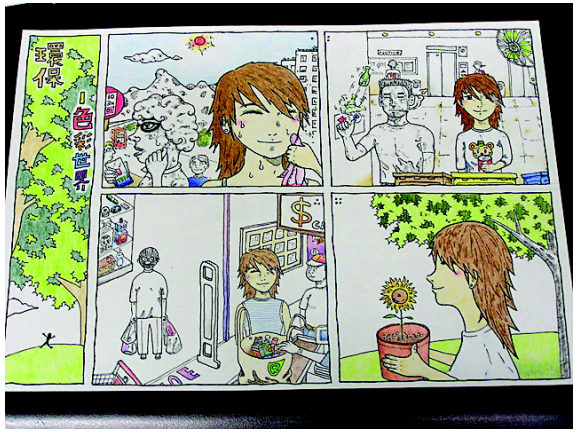
二零零四年二月，本校參與環保促進會於灣仔運動場舉行的「環保嘉年華2004」，設立攤位， 以「環保過三關」攤位遊戲向公眾宣揚環保訊息。遊戲得勝者獲贈一盆盆栽作獎勵。

Environmental Protection Week 2004

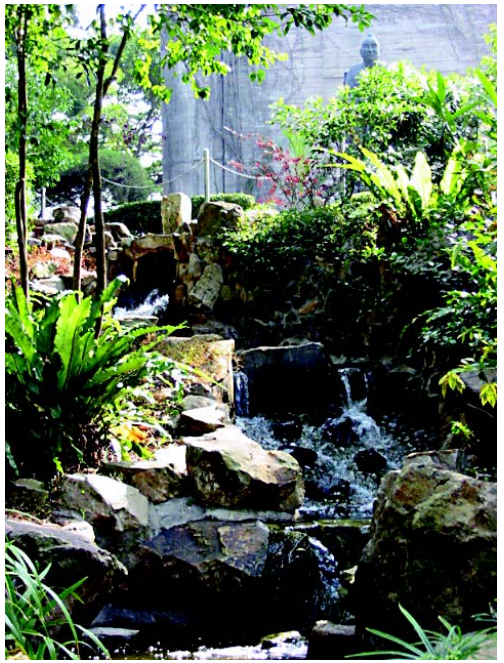
The University held its Environmental Protection Week in March 2004 to raise environmental awareness among members of the campus community. A wide range of activities such as green campus exhibition, energy consumption guessing game, comic competition, environmental photo contest, ecotours and waste reduction workshops were organized.

環保週 2004

本校二零零四年三月舉辦環保週，提高員生的環保意識。環保週活動多采多姿，包括綠色校園展覽、能源消耗量競猜遊戲、漫畫比賽、環保攝影比賽、生態旅遊、減廢工作坊等。



Environmental Comic competition
環保漫畫比賽



Environmental Photo Contest
環保攝影比賽

WORKSHOP

During the week, three workshops were conducted by guest speakers to deliver the message about local and global environmental protection:

* Dr. Lee Lok Sze, photographer and artist traveling both the South Pole and the North Pole many times, gave the talk on Latest News of South Pole to share her experience of living in the South Pole and to caution the enormous influence of the pollution and global warming can result in disaster for all on the Arctic and Antarctic circles;

* Ms. Christine Loh, the Chairperson of "Save Our Harbour" Campaign, gave the talk topiced on "Why Harbour Reclamation and Sustainable Development are intimately connected" to illustrate and discuss the Wanchi Reclamation Project and its adverse effect with the audiences;

Mrs. Mei Ng spoke on the topic "The Duties of Producer".
吳方笑薇女士主講「生產商的職責」

* Mrs. Mei Ng, the Director of Friends of the Earth, spoke on the topic "The Duties of Producer" describing the environmental impacts associated with modern production.

Ms. Christine Loh joined hands with the students to save our harbour.
陸恭蕙女士與在場學生攜手拯救維港

Ms. Li Lok Sze delivered talk on Global Warming and living on the SouthPole .
李樂詩女士在工作坊上講述全球氣溫上升問題以及南極見聞。

工作坊

環保週內舉行了三場工作坊，由嘉賓主講本地以至全球環保課題：

- 李樂詩博士是攝影師兼藝術家，多次遠征南北兩極，主講「南極的最新消息」，向聽眾講述南極生活見聞，並指出污染及全球氣温上升影響深遠，足以在北極圈和南極圈釀成大災難。

-「保護維港」運動主席陸恭蕙女士的講題是「填海與可持續發展為何息息相關」，向聽眾講述灣仔填海計劃，並探討填海工程對環境的危害。

- 地球之友總幹事吳方笑薇女士以「生產商的職責」為題，剖析現代生產方式對環境的影響。

ECOTOUR

Ecotours were arranged to the fishing village of Ma Shi Chau in Tai Po, the Sites of Special Scientific Interest (SSSI) of Tai Ho nearby Tung Chung and the southest island of H.K. - Po Toi Island to introduce students and staff to the rich flora and fauna and physical environment of Hong Kong. The tours were led by experienced guide of Footprint, which is an organization formed by a group of CUHK graduates.

生態旅遊

本校舉辦的生態旅遊，地點包括大埔馬屎洲漁村，以及東涌大蠔和香港南端蒲台島特具科學價值的地點，向員生介紹香港豐富的動植物資源及自然環境。導遊經驗豐富，是中大校友組織「自然足印」的成員。

The ecotours were led by experienced guides to introduce students and staff to the rich flora and fauna and physical environment of Hong Kong.

資深導遊帶領生態旅遊團，向員生介紹香港豐富的動植物資源及自然環境。

Student Ambassador Scheme

In the summer of 2004, about 50 students joined the Student Ambassador Scheme to participate a series of workshops, tours and gathering. Part of them attended the project launched by Agriculture Fisheries & Conservation Department (AFCD) to take part in the design and plan the ecotour; conduct research and collect information for the route; and prepare field notes and guiding material for the Wetland Park at Area 119, a restricted area for wetland conservation in Tin Shui Wai.

學生大使計劃

二零零四年暑假，約五十名學生加入學生大使計劃，參與一系列工作坊、旅遊及聚會。他們有些更參與漁農自然護理署(漁護署)舉辦的計劃，協助構思及策劃生態旅遊，研究及搜集路線資料，並前往天水圍濕地保育專區考察，製作濕地公園第一一九區的考察筆記及指引材料。

About Plants & Animals

The campus of CUHK is the home of many native bird species holding approximately 30% of the 448 species in Hong Kong. To help the public to know more about bird species in Hong Kong. Bird identification charts were placed in the trail of Wei Yuan Lake, observers are encouraged to identify and understand the bird species. Besides, an education-trail was designed by the students of the Department of Biology with labels hung on identified plants.

The external wall of the University Library is one of the biggest swift nesting sites in Hong Kong. CUHK endeavors to protect the swifts, their chicks and nests and care their living. In the summer of 2004, Radio Television Hong Kong with the assistance of USCE and EMO illustrated the living of swifts in CUHK campus in the documentary "**動物情緣**".

Prof. K.M. Chan was interviewed by RTHK in the documentary.
陳冠明教授在紀錄片中接受香港電台訪問。

The swifts nest on the external wall of the University Library.
褐雨燕在中大圖書館外牆築巢

動植物

中大校園是許多本地雀鳥棲身之所。香港有四百四十八種雀鳥，其中十分之三有在中大棲息。為了加深公眾對香港雀鳥品種的認識，未圓湖的小徑特別設置鳥類識別圖，方便觀鳥人士辨別及認識各種雀鳥。此外，生物系學生也設立了一條教育徑，為沿途植物掛上識別標籤。

大學圖書館外牆，是香港褐雨燕最重要的聚居地之一。本校致力保護褐雨燕和牠們的雛鳥、燕巢，並照顧褐雨燕生活。二零零四年夏季，香港電台在環境督導會和物業管理處協助下，拍攝紀錄片「動物情緣」，講述褐雨燕在中大校園的生活。

This environmental report represents The Chinese University's commitment to build a green campus and outlines the University's plans to seek continual improvement. We welcome your comments and suggestions on how the University can better achieve its objectives.

Please contact: ***University Safety & Environment Office***
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本報告代表了中文大學對建立一個綠色校園的承諾，對持續改善環境質素的要求。
如閣下對中文大學在環保工作方面有任何意見，歡迎聯絡: ***大學安全及環境事務處。***

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