

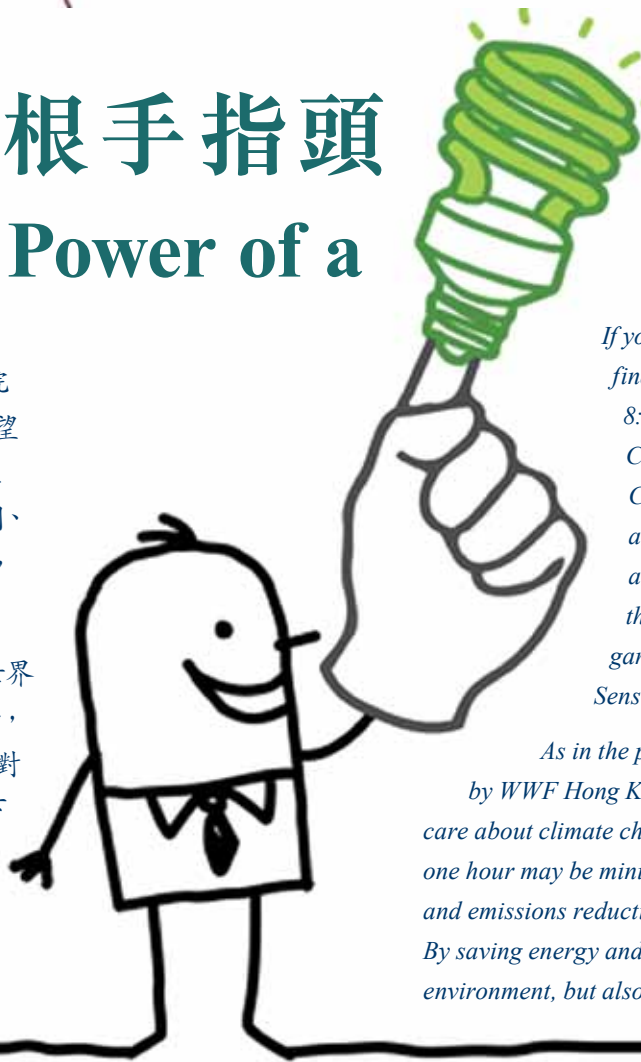


一根手指頭的力量

Power of a Finger

如果你在今年3月31日晚上8時半回到中大，會發現校園會比平常黝暗，崇基學院未圓湖曲橋和拱橋，新亞書院合一亭和水塔，聯合書院水塔和湯若望宿舍外草地，逸夫書院中草藥園和學生宿舍公用地方，以及李兆基樓戶外花園、衛星遙感地面接收站等地的裝飾照明，全都關掉。

和過去幾年一樣，中大今年繼續響應世界自然基金會發起的「地球一小時」活動，關掉非必要的照明，節省電力，以顯示對氣候變化危機的關注。熄燈一小時省下的能源也許微不足道，但除此之外，中大一直不遺餘力在校園推廣節能減碳，一方面善盡社會公民責任，另一方面也能減少能源成本支出。



If you visit CUHK in the evening of 31 March this year, you will find that the campus is dimmer than usual. When the clock strikes 8:30 pm, decorative lighting at many locations, including the Crooked Bridge and the Arch Bridge at Lake Ad Excellentiam of Chung Chi College, the Pavilion of Harmony and the Water Tower at New Asia College, the lawn outside the Adam Schall Residence and the Water Tower at United College, the Herbal Garden and the common areas of student hostels at Shaw College, the outdoor garden at the Lee Shau Kee Building, and the Satellite Remote Sensing Receiving Station will be turned off.

As in the past few years, CUHK supports the 'Earth Hour' event organized by WWF Hong Kong by turning off non-essential lights for one hour to show our care about climate change. The amount of electricity saved by turning off lights for one hour may be minimal. But it shows our commitment to promoting energy saving and emissions reduction, which are the duties of a socially responsible organization. By saving energy and reducing carbon footprint, we not only help to protect the environment, but also lower our electricity bills.

校園省電措施

中大每年總用電量逾一億千瓦時，電費八千七百多萬元。中電在2012年增加電費約百分之五。預計中大今年電費會因而上升至九千二百多萬元。此外，現時校園有多座建築物正在興建，全部落成後，無論冷氣、照明、科研器材的用電量無可避免會上升，估計至少再增加百分之十。

為了節約用電，中大由1999年起翻新校內照明系統，以高能源效益的T5光管取代舊的T8光管。翻新計劃在2001年完成，為校園節省近三成照明用電。近期，大學又試用發光二極管 (LED) 燈，一個裝置了三百多支LED燈的辦公室，用電量比使用T5光管減少百分之四十三，加上以太陽能為輔助電源，在陽光普照的日子更可節省高達百分之八十的用電量。



校園隨處可見的太陽能板
Solar panels on CUHK campus

其他近年採用的省電設施還有水冷式空調系統、中央樓宇管理系統、用戶感應器、智能恆溫器、太陽隔熱膜、熱交換系統等。校園的新樓宇設計也積極加入節能和其他環保元素。自2009年起，中大要求校內所有新建築物符合香港環保建築協會最高的「白金評級」標準，以更有效運用能源及其他資源。

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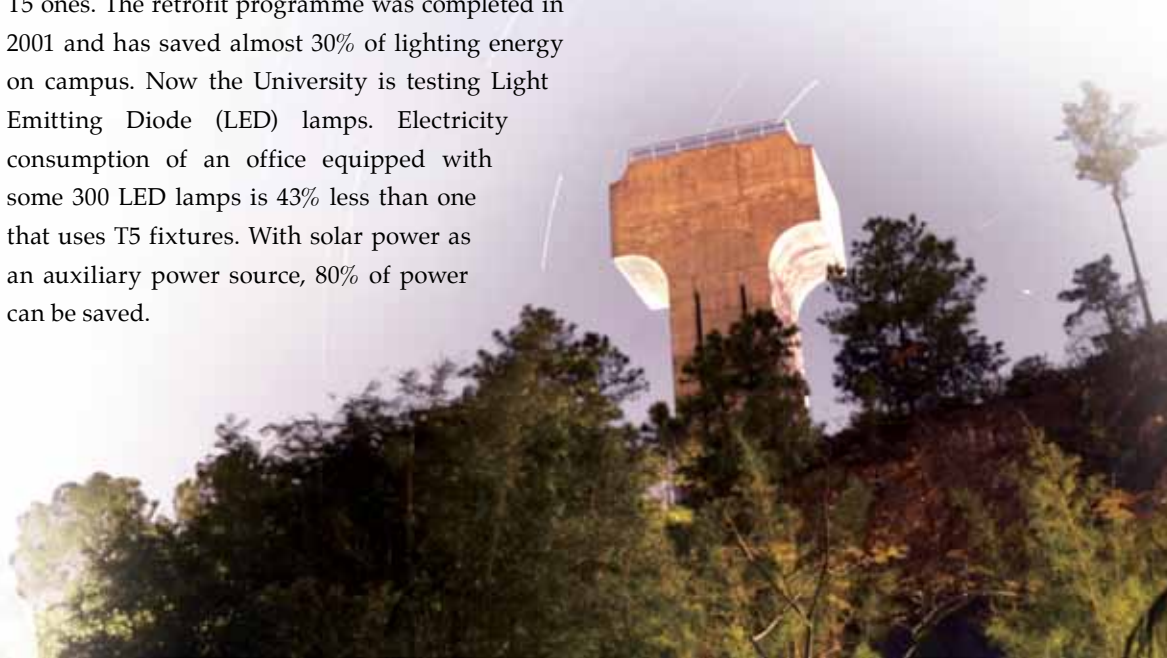
CUHK's Power Saving Measures

The University consumed over 100 million kWh of electricity annually, with an electricity bill of about HK\$ 87 million. As CLP increased its tariff by about 5% in 2012, it is expected that our electricity bills will go up to some HK\$ 92 million. And after the completion of all of the new buildings that are now under construction, it is estimated that our electricity consumption will increase by at least another 10% because of additional power needed for air-conditioning, lighting and research equipment.

The University began to retrofit its lighting since 1999, replacing old T8 fixtures with energy-efficient T5 ones. The retrofit programme was completed in 2001 and has saved almost 30% of lighting energy on campus. Now the University is testing Light Emitting Diode (LED) lamps. Electricity consumption of an office equipped with some 300 LED lamps is 43% less than one that uses T5 fixtures. With solar power as an auxiliary power source, 80% of power can be saved.

Various technologies and infrastructures such as water-cooled chiller plants, the centralized building management system, motion sensors, solar shield window films and the heat exchange system have also been adopted in the past few years to further reduce electricity consumption. The University has actively incorporated green elements into the designs of its new buildings. From 2009 onwards, the University has required all new buildings on campus to meet the highest platinum standard of the Hong Kong Building Environmental Assessment Method Society, so as to achieve a more efficient use of energy and resources.

(To be continued)



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你也許會注意到太陽能板在校園隨處可見，因為大學積極研究並採用太陽能和風力等可再生能源，學生宿舍、游泳池和大學體育中心均安裝了太陽能熱水器。巴士站和花園利用太陽能照明，也有以太陽能驅動的水簾裝置。在2011年各項太陽能設施為大學節省了約一百一十多萬千瓦時的電力。

廣袤的中大校園有約六百枝路燈，原屬一百三十五瓦特的低壓鈉路燈，兩年前起開始汰舊換新，一百枝已換成更節能的一百瓦特無極管路燈，過去六個月再淘汰四百枝舊燈，其中三百枝換成一百二十瓦特的無極管路燈，另外一百枝是一百二十瓦特的LED燈。所有路燈換新後，估計可節省約兩成耗電量。此外，大學也在試驗太陽能路燈。

節能減碳 全校總動員

大學盡力採用新科技來節省電固然重要，但更重要的是校內每人都養成節能減碳的良好習慣。大家總以為自己能省下來的錢微不足道，對於保護環境也沒有多大作用。這是非常錯誤的觀念。

校園規劃及可持續發展處處長何婉兒說：「節能減碳，每位同仁都可從日常生活的小節做起，例如把空調設定在攝氏二十五點五度；用完教室或離開辦公室午膳、開會或上課時，隨手關掉電燈及其他不用的電器；電腦長時間不使用應關機，若短時間內會再用，覺得全機關掉再重新啟動太費時，也可以關掉螢幕。」

不要少看這些一根手指頭可以做到的動作，物業管理處處長譚必成指出，中大在2006至07年舉行了一次「節能獎勵計劃」，參與的數棟建築物在用戶齊心協力節能下，比平時平均節省百分之七點六用電量，最高的超過百分之十二。由此可見，聚沙成塔，節省下來的電力非常可觀。反過來說，如果每個人連舉手之勞也不願意，日積月累下來，浪費掉的電力會相當驚人。

參與「地球一小時」活動，是大學承諾節能減碳的象徵，更重要的是，校內每人都把環保理念融入每一天的生活之中，動一動手指頭，減掉不必要的能源消耗，為保護地球盡點力。

(Continued)

You may notice that solar panels become a common sight on the CUHK campus. It is because the University has been stepping up efforts to tap renewable energy sources such as sunlight and wind. For examples, evacuated tube solar hot water systems have been installed in student hostels, the swimming pool and the University Sports Centre. Solar lights are used to illuminate bus stops and gardens. There are also water curtains powered by solar energy. It is estimated that the solar energy facilities on CUHK campus generated about 1.1 million kWh of electricity in 2011.

There are about 600 street lamps to provide outdoor lighting for CUHK's vast campus. Two years ago, the University began to replace the old 135W low pressure sodium lamps with more energy-efficient types. One hundred of them have been changed to 100W induction lamps. In the past six months, 300 120W induction lamps and 100 120W LED lamps have been installed to replace 400 old street lamps. It is estimated that electricity consumption for street lighting can be reduced by 20% with these new lamps. The University is also testing solar lamps.

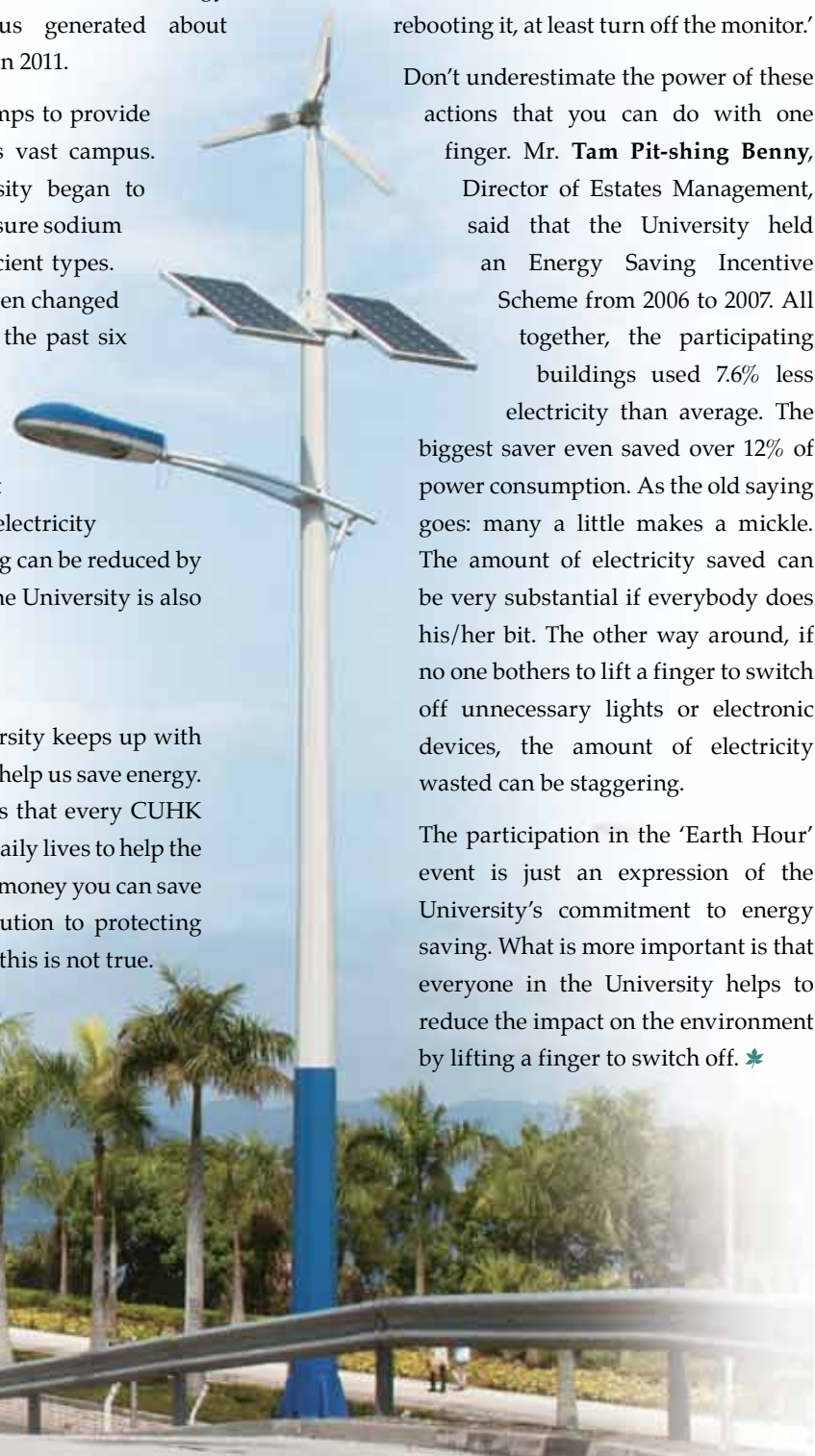
Time to Get Mobilized

It is important that the University keeps up with the new technologies that can help us save energy. But what is more important is that every CUHK member takes action in their daily lives to help the cause. You may think that the money you can save is minimal and your contribution to protecting the Earth is insignificant. But this is not true.

Energy saving and carbon footprint reduction start from many seemingly small deeds. Ms. **Ho Yuen-yi Vivian**, Director of Campus Planning and Sustainability, offered some green tips: 'Pre-set air-conditioners to 25.5°C, turn off lighting and other unnecessary electronic devices when you leave classrooms or your office for lunch, meetings or classes, turn off your computer when it is not in use. If you need to use it after a short interval and want to save the trouble of rebooting it, at least turn off the monitor.'

Don't underestimate the power of these actions that you can do with one finger. Mr. **Tam Pit-shing Benny**, Director of Estates Management, said that the University held an Energy Saving Incentive Scheme from 2006 to 2007. All together, the participating buildings used 7.6% less electricity than average. The biggest saver even saved over 12% of power consumption. As the old saying goes: many a little makes a mickle. The amount of electricity saved can be very substantial if everybody does his/her bit. The other way around, if no one bothers to lift a finger to switch off unnecessary lights or electronic devices, the amount of electricity wasted can be staggering.

The participation in the 'Earth Hour' event is just an expression of the University's commitment to energy saving. What is more important is that everyone in the University helps to reduce the impact on the environment by lifting a finger to switch off. ✨



持續發展環保大使心聲

Thoughts of an Environmental Sustainability Ambassador

鍾志斌
心理學系技術員
Chung Chi-bun Matthew
Technician
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在2006年，我當上協調員，負責推廣工作間的環保措施，後來易名「持續發展環保大使」，由於職責繁重，最初有孤軍作戰的感覺。環保概念未普及前，有些同事會廿四小時開啟空調。後來，物業管理處把照明和空調改為中央操控，我毋須再每夜巡邏關燈關冷氣機了。前一陣子大學鼓勵部門進行碳審計，結果令我大吃一驚，小小的心理學系居然有近一千支光管！為了省電，我們決定把燈盤內一組三枝光管的中間一枝關掉。近年，系裏來了好些外國學者，他們的環保生活方式很值得借鑑，例如室內光線充足時不會開燈，又少開冷氣，寧用電風扇和開窗。除了省電，我最希望學系能減少用紙，網上問卷調查和電子掃描及存檔的硬件已齊備，若系內同仁更能廣泛地加以應用，將可為環保多盡一分力。

I was nominated in 2006 as the coordinator to implement green measures at the Department of Psychology. The title was later changed to Environmental Sustainability Ambassador. It was a lonely battle at first. Back then when environmental protection concepts had not taken root, some colleagues would leave the air-conditioners on all day. Later, when lighting and air-conditioning began to be controlled by central switches, I no longer needed to go around the rooms at night and check the individual switches. The University encourages departments to do their carbon audit and ours was completed a while ago. I was stunned by the figures. Our small department had about 1,000 tubular florescent lights! To save electricity, we demobilized the middle tube in the set of three. Overseas scholars who joined the department in recent years have brought with them a green living philosophy. They love natural light and ventilation, and such habits require less electricity in office. Those are good examples to follow. Apart from cutting back on electricity, I wish our department can use less paper. Online questionnaire platforms and scanning facilities are already in place. If colleagues and students would get familiar with processing data by electronic means, we can contribute more to the protection of the environment. ✨



綠色校園樂步行

Walking for a Better Environment



On a spring morning in early March, led by Prof. **Joseph J.Y. Sung**, Vice-Chancellor, a procession of around 1,000 students and staff in a buoyant mood snaked its way through the crooked bridge over Lake *Ad Excellentiam* and followed the small path uphill. The procession comprised numerous young souls, who showed up to support the '2012 Walking Campaign and Car-free Day'. On 2 March, none of them drove to school or took the shuttle bus. Instead, they walked together to show their support for environmental sustainability and to help promote walking on campus.

At the kick-off ceremony, Professor Sung said the event was aimed at promoting low-carbon living, creating a healthy campus, as well as preparing ourselves for the '3+3+4' academic structure and the double-cohort year—in which the University will have 3,000 extra students, and an increase in

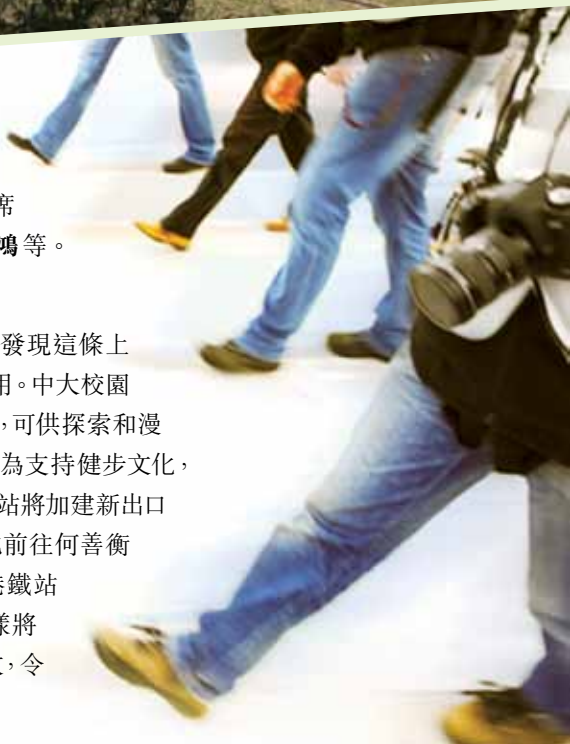
春 光明媚的三月天，約一千名學生及教職員興致勃勃地跟隨**沈祖堯**校長遊湖及漫步上山，行列之中不乏年輕面孔，他們都是為響應「樂步行暨無車日2012」的呼籲，在3月2日早上不駕車也不乘坐穿梭巴士，一步一腳印地實踐綠色生活，透過行動將步行文化植根校園。

沈校長在開步典禮致辭時說：「為了推廣低碳生活和建設健康校園，以及迎接『3+3+4』新學制雙軌年——屆時會增加三千名學生，教職員人數亦會上升——大家以後要習慣多步行。步行有益身心，今天我是從辦公室步

行下山，原來每行一公里，等於消耗四顆方糖的熱量。今天的路線剛好一公里，步程二十分鐘。倘若走到逸夫書院，等於消耗一碗飯的熱量。安步當車對減低碳排放量很重要，路面較少汽車行走，溫室氣體二氧化碳的排放也相應減少，有助減緩地球暖化。」

步行路線以港鐵大學站為起點，途經崇基學院未圓湖、眾志堂、明華堂、利樹培堂等，至終點善衡書院。人龍浩浩蕩蕩，主禮嘉賓一馬當先，包括常務副校長**華雲生**、副校長兼健康促進及防護委員會主席**鄭振耀**、副校長兼校園可持續發展委員會主席**程伯中**、校園環境委員會主席**朱利民**、社區醫學榮休講座教授**李紹鴻**等。眾人沿途欣賞中大早春時分的美景。

有學生表示，一直依賴穿梭巴士，故未有發現這條上山步道，經過今次的引介，日後會多加採用。中大校園依山而築，當中尚有許多景色優美的山徑，可供探索和漫步，或充當捷徑。此外，「校園發展計劃」為支持健步文化，在規劃和施工時已有周全考慮，例如大學站將加建新出口連接新教學大樓，學生及教職員可以由此前往何善衡工程學大樓到大學中部的步行捷徑，從港鐵站到新發展的三十九區將鋪設單車徑。這樣將有助舒緩校巴載客量，減少汽車廢氣排放，令校園空氣更清新。



the number of staff. 'We'd better get used to walking. Walking can benefit your body and mind. This morning, I've walked from my office downhill to this place. Walking 1 km can burn the calories equivalent to four sugar cubes. Today, our route is exactly 1 km long and it takes about 20 minutes to complete. If you walk on and go all the way to Shaw College, you can burn a bowl of rice's worth of calories. It is also important to reduce our carbon footprint. With fewer cars on the road, emissions of carbon dioxide, which is one of the main greenhouse gases that cause global warming, can be reduced.'

Participants followed a route starting from the piazza of the MTR University Station, crossing Lake *Ad Excellentiam*, passing Chung Chi Tang, Ming Hua Tang, Lee Shu Pui Hall, and ending at S.H. Ho College. Guests at the head of the procession included Prof. **Benjamin W. Wah**, Provost; Prof. **Jack C.Y. Cheng**, Pro-Vice-Chancellor and chairman of the Committee on Health Promotion and Protection; Prof. **Ching Pak-chung**, Pro-Vice-Chancellor and chairman of the Committee on Campus

Sustainability; Prof. **Chu Lee-man**, chairman of the Committee on Campus Environment; Prof. **Lee Shiu-hung**, Emeritus Professor of Community Medicine; etc. All cherished this rare opportunity to refresh themselves and enjoy the campus' beautiful scenery.

Some students said that they used to rely on shuttle bus services to get around the campus and were surprised to learn of the existence of such a route. Among the hilly terrain of our campus, there exist many footpaths, which are not only time-saving shortcuts, but also hidden treasures for students and staff to explore. To promote walking on campus, the Campus Master Plan has laid the groundwork for better pedestrian networks. For instance, the MTR University Station will have a new exit leading to our new teaching complex, where University members can go to the Ho Sin-Hang Engineering Building on foot, and take a shortcut to the Central Campus. Cycle tracks will also be built to connect the station with Area 39. These measures can help lessen our reliance on shuttle bus services and reduce vehicular emissions, thus improving air quality on our campus. ✨

職工宿舍變身學生宿舍 Adaptive Reuse of Old Staff Quarters



為應付2012年新生人數增加，學生宿舍不敷應用的情況，大學將在山村徑新設一座學生宿舍。不過，該址不會出現大規模的拆卸和地盤工程，因為新的學生宿舍是由職工宿舍第一座改建而成的。

在規劃改建時，保留了舊建築的外牆，並盡量按照樓內基本格局劃分住宿單位；既滿足新需要，又可節省建造新樓宇的大量原建材，減少拆卸舊樓產生的廢棄物料，符合環保與永續原則。

改建工程約在本年4月展開，預計8月份竣工。樓高四層的宿舍將編為國際生舍堂第三座，共可提供一百八十一個學生宿位。今年招收首屆學生的敬文書院，在其宿舍落成前，新生將暫住此宿舍，餘下宿位則分配給其他書院。

A new student hostel will appear at the Village Path to meet the surging needs of hostel places entailed by the increase in the student population in 2012. But there will be no large-scale demolition and construction works because the hostel will be converted from the existing Minor Staff Quarters Block 1.

The conversion involves preservation and renovation of the building, and reconfiguration of its interior space to serve new functions. Adaptive reuse of existing buildings can reduce the demand for new construction materials and minimize the amount of construction waste from demolition activities. It is perhaps the most sustainable choice we can make to meet new needs.

The conversion project will commence in April and is expected to be completed in August. The four-storey building will become I-house 3 and provide 181 hostel places for students. C.W. Chu College will recruit the first cohort of students in this year. Its students will reside in this hostel until construction of its residence halls is completed. Other hostel places of I-house 3 will be shared by other Colleges. *



校巴士站安裝太陽能風扇 Installation of Solar Fans at Bus Terminus

大學將在港鐵大學站校巴士站安裝太陽能風扇，令師生在夏季候車時更涼快舒適。太陽能風扇完全靠可再生能源驅動，在陽光充沛時就會運作。

整套設施除了散熱風扇外，還有獨立的LCD顯示屏，顯示由太陽能板產生電力的資料，以及其他環保資訊。安裝工程由中電教育基金資助。

In response to students and staff's concerns about the discomfort of high temperatures at the bus terminus at the MTR University Station during summertime, the University will install solar DC fans at the facility. Powered purely by renewable energy, the DC fan system will function when there is enough solar energy.

In addition to fans, the system also features a separate LCD console displaying general information about the electricity generated by solar panels and other green information. The installation project is supported by the CLP Education Fund. *

既新且綠的醫學圖書館 A Medical Library New and Green

以人體為主題來設計醫學圖書館，該是最適合不過。位於威爾斯親王醫院的李炳醫學圖書館最近翻新，室內設計靈感即來自人體血管。

翻新工程把圖書館原來的間隔拆除，圖書也予以數碼化，騰出地方創造開放和寬敞的「學習共享空間」，充滿動感的空間布局把通道、電腦設施、小組學習室和個人學習空間連繫起來，形成不同大小和形狀的學習區域。圖書館外圍原有的走廊納入館內範圍，變為休息區，讓讀者可以閒坐享受日光。線條變化靈動的屏風牆、天花和沙發，為圖書館增添猶如血管內血液奔流的流動感。

翻新後的圖書館注入了多項環保元素，包括安裝大玻璃窗充分利用天然光；使用耐用和可循環再用的

環保標籤產品，如地毯；安裝控制燈光開關的用戶感應器，以及根據實際使用情況控制鮮風供應量的二氧化碳感應器；採用節能照明系統，LED燈和T5光管各佔一半，以及可按照風量需求改變風扇轉速的空調設備機組等。

It seems entirely fitting that a medical library is designed with a theme of the human body. The Li Ping Medical Library at the Prince of Wales Hospital has been renovated with an interior layout inspired by human arteries.

During the renovation, partitions have been taken down and books digitized to provide open and spacious learning commons where learning clusters of different shapes and sizes are woven together through dynamic spatial organization of human traffic flow, IT facilities, group study rooms, and

individual study areas. The original external corridor on the periphery of the library has been converted into a lounge where patrons can sit and relax in natural daylight. Screen walls, ceilings and couches in dynamic forms give the library a sense of fluidity, resembling the flow of blood in human arteries.

The renovation project has added green elements to the library, such as big windows that let in a great deal of natural light; green label products like carpets, which are durable and recyclable; occupancy sensors for lighting control; CO2 sensors that regulate fresh air intake according to actual needs; energy-efficient lighting systems with half of them being LED lights and other half T5 fluorescent tubes; air handling units with variable speed fans that can optimize fan power in tune with load requirements for the air conditioning system. *



更環保的《可持續校園》

大學出版《可持續校園》，是為了推廣環保訊息，為了貫徹環保，刊物以再造紙印刷。但我們仍不斷檢討，希望減少在用紙、郵遞方面帶來的碳足跡，包括減少紙本版印量而鼓勵網上閱讀。讀者若有任何建議，歡迎來郵告知 (iso@cuhk.edu.hk)。

Sustainable Campus Goes Greener

The University publishes *Sustainable Campus* to spread green messages to its members. To protect the environment, the newsletter is printed on recycled paper. We constantly think of ways to further reduce our carbon footprint caused by paper consumption and postal distribution, including reducing the number of hard copies and relying on online edition. Your views are welcome. Please email to: iso@cuhk.edu.hk.

