



Sustainable Campus

可持續校園

二零一二年冬 Winter 2012



圖書館新翼
Library Extension



綜合教學樓群——康本國際學術園(左)和伍何曼原樓(中)及尚未命名的第三棟教學大樓(右)
Integrated Teaching Buildings—Yasumoto International Academic Park (left), Wu Ho Man Yuen Building (middle) and the Third Integrated Teaching Building (right)

校園重點新建築

圖書館新翼 和 綜合教學樓群

CUHK's Stellar Projects Library Extension and

Integrated Teaching Buildings

踏入2012-13學年，兩項大型建築項目相繼落成，校園生活更見勃勃生氣。這些主要建築包括校園本部的圖書館新翼及下校園的三棟教學樓——康本國際學術園、伍何曼原樓及尚未命名之第三座教學大樓。

圖書館的融和新翼

圖書館新翼堪稱近年校園最精心設計的建築之一，乃因它融合了簡約和可持續發展兩大原則，既表現出熱愛自然，又尊重歷史。新翼的特色在於放棄純粹模仿原有建築，而以當代的設計來詮釋傳統。

綠色通透

新翼高度與圖書館大樓相若，渾然一體，並順貼林蔭大道的中軸線，建築外圍採用夾層玻璃，引進天然景致和光，阻擋熱力滲透。外層玻璃敷上搪瓷格網，有助進一步減低日光直射產生的熱量，這種隔熱效果在東西面向的外牆尤為明顯。特別一提的是塗膜反光度低，有助防止大家珍視的小白腰雨燕不知就裏，橫衝直撞而傷亡。

光影結合水影

在圖書館大樓和新翼相連之處，建築師劃為中庭，視覺上成為新與舊的交匯處。最巧妙之處是中庭保留了圖書館大樓原有的一面舊牆，並在這特色牆上加建了一個全新的玻璃天花。這個天窗加上新翼各層面向中庭一面的通空設計，確保日光透入各層內部。

Life is bustling at two building projects that have been completed recently on campus—the Library Extension on Central Campus and three new teaching buildings on lower campus.

The Library's Lovely Wing

One of the most elegant structures to appear on campus in recent years, the Library Extension features a minimalist and sustainable design that cleverly integrates a love of nature with respect for history. It's a feat in architectural design that foregoes simplistic imitation of the old for a contemporary interpretation where history has its place.

Green and Transparent

The new annex is of a similar height to the original library building and aligned to the axis running along the University Mall. External walls in low-E double-glazing provide a low-solar-gain envelope for the building. These also serve to invite nature into the interior and minimize heat gain, in particular on the elevations facing east and west. The glazing, moreover, has low reflectivity and an outer pane fritted with a grid of dots like

a silk screen. This further tones down the effects of sunlight and prevents the campus's much loved house swifts from unwittingly performing kamikaze.

Light and Water

At the juncture of the University Library and the extension, the architect has designed an atrium, which serves as a visual articulation of the meeting of the old and the new. The most interesting feature of the atrium is the old wall of the University Library which has been kept as a feature wall and now finds itself with a glass roof over its head. This skylight, together with voids on the various annex floors, ensure daylight penetration to the inner space of the study environment.

In the basement of the extension is the much talked about and photographed Learning Garden, where skylights lend sunrays and visual openness to the subterranean environment. One of the skylights sits right under the fountain of The Forum which not only floods the room with water-diffused light, but also cools the interior and creates attractive water reflections on the walls.

設在新翼地庫的進學園是近期談論和留影的熱點。由於開了多個玻璃天窗，導入陽光，予人開揚之感，尤其是在惠園水池下的天窗，陽光透過池水，化為粼粼波光，投影牆上，靈動氣息泛滿一室。再說，一池清水也為進學園添了涼意。

和諧對比

貫徹減廢和重用原則，圖書館大樓原有的公共閱讀空間的書桌和書架等，盡量留用。恰巧現時崇尚懷舊，這些舊家具居然與新購置的時尚家具出奇地協調，營造出一個雅致而富現代感的空間。

夜裏，這座玻璃牆的建築物別有風味，路過的人遠遠便可看到學生在內研習，牆裏牆外，看似相隔，但亦相連。

- 1 鋪上搪瓷格網的外層玻璃，反光度低，配合校園保育小白腰雨燕和其他鳥類的原則。透明的玻璃外牆，使室外內產生聯繫。
- 2 保留原有圖書館大樓北面外牆，成為擴建部分的一面特色牆。
- 3 開在惠園水池之下的地庫天窗，引進日光，並收降溫之效。
- 4 新建築，舊家具。
- 5 樓層之間的通空設計，讓日光透過中庭天窗滲進室內。

Harmonious Contrasts

Furniture wise, the old communal reading tables and shelves of the old library are used in the extension as much as possible. And surprisingly, their retro design goes swimmingly with the newly acquired design-oriented pieces to create a chic, soothing and contemporary haven.

At night, the building with its glass walls is stunning. You can see students studying from afar, as they remain connected to the world beyond the walls.

- 1 Fritted dot pattern with low reflective glass panels that are bird-proof. Transparent glass wall enhances the connectivity between the external environment and internal space.
- 2 Northern façade of UL now an internal feature wall of the Library Extension.
- 3 Skylight in the basement.
- 4 Reuse of the old furniture in the new building.
- 5 Voids under roof skylight to allow daylight penetration to the inner space of every floor.

新建築的其他環保設施

The Two Projects' Other Green Features

校園新建築的其他環保節能設施如下：

Other energy conserving features of the buildings include:

- 綠化天台（隔熱及節省能源）
Green roof gardens (for thermal insulation and energy efficiency)
- LED（發光二極管）燈
LED lighting
- 室外及周邊照明設有光電感應器
Photoelectric sensors for perimeter and external lighting
- 公共空間及課室設有移動感應器
Motion sensors for lighting at communal areas and classrooms
- 課室及講堂通風控制設有二氧化碳排放感應器
Carbon dioxide sensors for ventilation control at classrooms and lecturer theatres
- 停車場設有一氧化碳排放感應器
Carbon monoxide sensor for car parks
- 配備感應器的兩段式沖水坐廁，衛生省水
Sensor-type, dual-flush water closets for hygienic and water saving
- 具有高度能源效益的中央供冷系統
Centralized cooling system with highly energy-efficient air conditioning units



歡渡綠色佳節

佳節將臨，大學金禧快至，慶典喜宴紛至沓來，如何才能做到普天同慶而又愛護環境？校園規劃及可持續發展處特撰備錦囊，供大家參考。有關節紙節能和綠色採購的指引，過去已曾公布，在此不贅。

再用、循環再用

- 曾用於其他活動的名牌胸章和橫額，大可再用。
- 在活動場地擺設收集循環再用物料設施。
- 活動規模較大者，請於事前一至兩星期聯絡物業管理處劉聖安先生 (3943 4049/6337 6346)，準備大型容器以收集塑料瓶和飲品罐，並安排回收事宜。
- 有關細節務必通知所有活動參加者，以便群策群力。

惜飲惜食

即用無須即棄

- 避免提供瓶裝水或個別包裝的飲品，提供可再用的杯及用大型容器供應飲料，或使用流動供水機。
- 請食品供應商提供可再用的餐具、餐巾和桌布。
- 如必須使用即棄物品，請避免使用發泡膠或聚苯乙烯盛器，選用含有循環物料的物品（如再造紙餐巾），另盡量不提供獨立包裝的調味料。

嚴選食物

- 避免以魚翅或其他有違持續發展原則捕養的海產奉客。請參考中文大學的停止食用魚翅政策 (www.cuhk.edu.hk/cpso) 和世界自然基金會網站有關食用環保海鮮的指引 (www.wwf.org.hk)。
- 準備低碳食物如素菜、公平貿易食材和有機產品，以供選擇。

減少浪費

- 中式筵席可以六道菜式代替傳統的八道。避免以自助餐奉客。
- 若在餐廳或飯堂進餐，提醒客人可要求較少份量。
- 如預期將有大量剩食，先連絡本地非政府組織前來收取。待收食品必須未經人手接觸，且妥善存放盒中。
- 請參考地球之友草擬的食物銀行聯盟名單 (www.foe.org.hk)。

良心消費

- 選擇產品或活動時，盡量支持僱用弱勢群體的社會企業。

策劃和管理活動，怎樣才可符合環保和可持續發展原則？欲知詳情，員工及學生請參閱 (www.cuhk.edu.hk/cpso/documents/sustainable_event_tips.pdf)。



下校園的新綠色建築

綜合教學樓群位於車站路，毗鄰新啟用的港鐵大學站北面出口，樓群包括康本國際學術園和伍何曼原樓（原稱兩座綜合教學大樓），以及尚未命名、建築學院位處之第三座教學大樓。

綠色為主

一如圖書館新翼，綜合教學樓群亦糅合了多項環保及尊重自然的設計，尤以第三座教學大樓為最。作為建築學院的辦公及教學樓，第三座教學大樓應對學生及其他人起示範作用。政府亦撥出額外建築費，俾其得以裝置各項高新的環保節能設施。

巧妙裝置

由於鄰近鐵路站，第三座教學大樓的建築師特意在面向路軌的一方，裝上雙層玻璃和隔音屏，再以攀生植物綠化牆身，不單減低噪音，更可阻隔朝陽的熱力。大樓內設有中庭，連結周遭的樓梯和建築學院的開放式工作室，成為大樓的焦點。中庭採用前沿的建築整合太陽能（BIPV）玻璃，可以進一步平衡大樓的經濟效益和環保支出。BIPV玻璃是雙層玻璃組件，中間注入光伏電池，可供發電。這些獨特設計，相輔相成，利於生態，營造了光線充沛、空氣流通的環境，讓大樓綠意盎然。

教學大樓內其中一室試用了冷樑系統。這是室內的通風及空調系統，原理是在貼近天花處懸置橫樑，內嵌冷水管，附近的空氣冷卻後下沉至地面，降低室溫，自然上升的暖空氣又會被冷卻。

發展策略的考慮

康本國際學術園及伍何曼原樓不但與港鐵大學站北面出口近在咫尺，亦是校園內最大的教學樓群。這是經過刻意安排的，讓師生下車後，信步即達課室，不必再轉乘校車或駕車。雖然這裏可能有近四千人，在四十九個課室和九個講堂活動，但升降機大堂不覺人龍等候，皆因有七部扶手自動電梯及寬闊的中央樓梯，把大家送達各層。

方便行人

教學以外，兩座綜合教學大樓還擔當橋樑角色，協助連接山下和中部的同仁，有助完善校園內的上下行交通。大樓附設多種垂直通道，如天橋、升降機、小徑，吸引教職員和學生安步當車，穿梭校園。校方現正籌劃興建單車徑，日後來往大學站北面出口與三十九區的研究室和宿舍群，將有更環保的交通選擇。

開揚通透、互動連結，大學的新建築應對二十一世紀的特定需要，正如其前輩的建築物，因應其時代而建，各司其職。

New Green Buildings on Lower Campus

The site is conveniently located at Station Road, a stone's throw away from the new Northern MTR exit. The cluster of buildings comprises Yasumoto International Academic Park (YIA) and Wu Ho Man Yuen Building (WMY), the two buildings formerly known as Two Integrated Teaching Buildings or TITB, and the as yet unnamed Integrated Teaching Building which houses the School of Architecture and other teaching facilities.

Primed for Green

Like the Library Extension project, all buildings come with a plethora of green features and show a reverence for the natural environment. The Integrated Teaching Building, in particular, was built with an additional allocation from the Government for more provisions and advanced energy saving measures, seeing that it will be home to the School of Architecture and the educational value that would have on both the students and the rest of Hong Kong.

Smart Conversions

Due to its close proximity to the MTR railway, the architect of the Integrated Teaching Building introduced double-glazed windows, vertical sound-deflecting fins as well as a vertical green wall on the façade facing the railway not only to mitigate noise pollution but to tone down the eastern sun and minimize morning heat gain. Furthermore, an internal focal point is created by having an atrium inside the building, which is surrounded by connecting staircases and the open-plan studios of the School of Architecture. The atrium uses cutting-edge BIPV (Building Integrated Photovoltaic) glass panes, which greatly enhance the building's economic and ecological balance. BIPV panes have built-in photovoltaic cells embedded between two sheets of glass to generate electrical energy using photovoltaic technology. All this creates an organic haven that is eco-friendly, interconnected, light and airy.

A pilot for a chilled beam system is being carried out in one of the rooms in the Integrated Teaching Building. A chilled beam is a type of ventilating and air-conditioning system. Pipes of cold water are passed through a beam suspended very close to the ceiling. As the beam chills the air around it, the air becomes denser and falls to the floor, cooling the room, while the warm air rises and gets cooled.



Strategic Considerations

The YIA and WMY are adjacent to the northern exit of the University MTR station and they are also where the largest cluster of classrooms can be found. This is a sensible arrangement as it allows students and teachers alighting from the trains to simply zip across the road to class, instead of taking buses or driving. Though there can be up to 4,000 people in its 49 classrooms and nine lecture theatres, one rarely sees people waiting to use the lifts, thanks to seven escalators and the sweeping staircase in the middle that helps to transport people to different floors.

Pedestrian Friendliness

The buildings also serve as bridges between the lower and middle reaches of the CUHK campus. There is comprehensive vertical pedestrian linkage, such as footbridges, lifts and footpaths, which makes walking an easy and attractive option for commuting students and staff. A cycling track is also being developed to provide an environmentally friendly option for commuters between the MTR northern exit and the research and hostel hub in relatively far-flung Area 39.

Transparent, interactive, and connected, the University's new buildings are constructed to hit all the spots of the 21st century, just as their worthy predecessors were raised in eras past to serve their particular purposes. ✨

Green Tips for Organizing Events

With the festive season and the University's Golden Jubilee just around the corner, the Campus Planning and Sustainability Office (CPSO) has compiled a list of tips for more eco-friendly ways to have a party (or conference).

As similar guidelines related to saving paper and energy, and green purchasing have been covered before, we will focus on other aspects:

Reuse and Recycle

- Besides reusing name badge holders and banners previously used at other events, make available provisions for recycling at the venue.
- For events of a considerable scale, contact Mr. Jimmy Lau (3943 4049/6337 6346) of the Estates Management Office one to two weeks in advance for large containers for collection of recyclables such as plastic bottles and beverage cans, and recycling service.
- Remember to bring the recycling arrangement to everyone's attention.

Food and Drink

Disposables Reduction

- Avoid bottled water and individually-packaged drinks by offering reusable cups and drinks in a larger container, or a portable water dispenser.
- Avoid providing individually-packaged condiments.
- If disposables must be used, choose recycled paper napkins and dishware with recycled content. Avoid foam or polystyrene containers.

Food Choices

- Avoid serving shark's fins and other unsustainably-produced seafood (see CUHK's No Shark's Fin Policy (www.cuhk.edu.hk/cpso) and WWF's Sustainable Seafood Guide (www.wwf.org.hk)).
- Offer low-carbon food options, such as vegetarian dishes, Fair Trade items and organic produce.

Food Waste Reduction

- For Chinese banquets, choose a six-course menu instead of the full eight-course menu.

- Avoid serving buffets. Remind participants dining at canteens that they can request smaller portions.
- If a large volume of leftovers is anticipated, contact a local NGO in advance to come pick up the surplus food. Keep in mind that the food must be untouched and packed in boxes for collection.
- See a list of 'Food Bank Alliance' members prepared by Friends of the Earth (www.foe.org.hk).

Ethical Consumption

- Choose services or products provided by social enterprises that employ the disadvantaged or minorities.

For the full list of guidelines and implementation details, CUHK staff and students can see 'Tips for Sustainable Event Planning and Management' (www.cuhk.edu.hk/cpso/documents/sustainable_event_tips.pdf). ✨

友凝·友義環保營 CLOVER Eco-camp

已是第四年舉辦的「友凝·友義」計劃，本年度提倡推廣環保信息。學生在服務前將接受一系列包括義工導向以及環保意識的整合訓練，以期把所得的體驗發揮在社會服務中。

在10月13及14日，五十三名本地、內地及外地學生參與了在長洲舉行的環保營。他們親身察看長洲島內與綠色生活和環保相關的地標，又參加了一個海岸遊，領略其海岸線和地貌之美，並認識農耕情況。

「友凝·友義」計劃由學生事務處來港生組籌辦，致力推動本地、內地及海外學生間的文化共融，推廣環保信息，並團結各地學生攜手服務社會上有需要的人士。

Fifty-three local, mainland and overseas students took part in a two-day Eco-camp on Cheung Chau on 13 and 14 October 2012, as part of a programme known as CLOVER (Community + Local and Overseas students + Volunteers = Everlasting Relationships). The programme was held for the fourth year in a row and the theme this year was environmental awareness.

Students were given a chance to explore landmarks on Cheung Chau related to green living and environmental protection. The 'Seacoast Tour' gave students an excellent opportunity to appreciate the outlying island's natural coastline, geology as well as its farms and plantations.

Organized by the Incoming Students Section of the Office of Student Affairs, CLOVER is a campus-wide volunteer service programme for local, mainland and overseas students, that is aimed at enhancing cultural diversity, spreading a message of environmental protection, and rendering help to the needy in society. ✿



學生聆聽導師講述長洲地貌
Students being introduced to the geology of Cheung Chau



親炙大自然有助提高環保意識
Raising environmental awareness through personal experience

第四批持續發展環保大使誕生 New Environmental Sustainability Ambassadors

2012-13年度持續發展環保大使計劃開幕禮於11月21日舉行，今年以「省電環保齊做到！」為主題。同日被提名為環保大使者亦參與一日的密集研討會，認識節能、減耗及綠色建築等課題。持續發展環保大使計劃是由恒生銀行贊助、物業管理處每年籌辦的活動之一。為貫徹環保精神，物業管理處在準備該天的午餐時，特別確保份量剛剛足夠，並以多菜多穀少肉為原則，而海鮮的選擇則遵照世界自然基金會的《海鮮選擇指引》。



八道菜簡化為六道，減少剩食
A six-course rather than the usual eight-course Chinese banquet-type meal was provided



智能轉插及智能拖板可減少電器在備用狀態中浪費的電力—研討會上討論的節能心得
Smart plugs and smart adaptors prevent energy loss from appliances in stand-by mode—knowledge about energy conservation was disseminated at the training

The opening ceremony of the Environmental Sustainability Ambassador Programme 2012-13 was held on 21 November. The annual programme is sponsored by Hang Seng Bank and organized by the Estates Management Office (EMO), and this year's theme was 'Let's Go, Energy Conservation'. On the same day, the ambassadors nominated underwent a one-day intensive training on energy saving, prevention of wastage, and green building design.

In line with the spirit of environmental conservation, the EMO scrutinized the lunch menu for that day to ensure the food provided was just enough, that the seafood selection complied with the Sustainable Seafood Guide of the World Wildlife Fund (WWF), and that there were more vegetables and grains than meat. ✿

綠色分享會 Green Sharing Session

校園規劃及可持續發展處於11月9日特為「綠色辦公室計劃」成員在潤昌堂舉辦綠色分享及網絡連繫聚會。在一小時的分享會中，大學部門代表扼述他們對校園可持續發展的看法，以及如何在所屬部門鼓勵相關行動，尤其着重介紹其實踐經驗。

The Campus Planning and Sustainability Office (CPSO) held an hour-long Green Sharing and Networking Session exclusively for members of the Green Office Programme ('GO!') on 9 November at the Y.C. Liang Hall. Participants were invited to share their views and experiences in encouraging campus sustainability, in particular, their experience in implementing sustainable practices in their respective offices. ✿