

# 創新綠化之美 The Beauty of Innovative Greening

儘管基礎設施對城市發展不可或缺，但很多時候卻不受大眾歡迎。本港的創新綠化技術正在改變這種觀念。在建築及設施中融入屋頂綠化、垂直綠化以及其它創意綠化，基礎設施的綠色外衣令整個城市煥發蓬勃生機。

近期其中一項最成功的綠化項目是渠務署的沙田污水處理廠的園境美化工程。這個佔地28公頃的綠化得獎項目深受讚賞。位於城市中的污水處理廠往往被視為礙眼的建築物，對居住在附近的居民來說，這個感覺尤其強烈。

渠務署從2008年開始著手沙田污水處理廠的園境美化工程，通過配置栽種不同的植物，在各個季節呈現獨特的繽紛色彩。綠化後的變化得到各界的好評。

「在2010年11月的開放日，一位區議員在參觀後很欣賞這個園境美化工程並建議在許可的情況下把廠園開放給市民作公園用途。」渠務署副署長徐偉先生回憶說。「得到公眾的認同令我們深受鼓舞，因為這個工程本來就是為了社區而建設的。」

這個項目的創新之處，並不僅僅在於美化環境。例如經過改造的綠化屋頂，減少了城市熱島效應的影響。研究顯示屋頂綠化令室內溫度下降了1.5至2.3°C，有效減少了廠園的能源消耗。

渠務署現正與多間本港大學合作研究項目，其中一個與香港理工大學合作的項目，是進一步評估屋頂綠化與地方氣候之間的相互影響。這些研究的結果在未來有望為本港獨特的生態環境乃至亞太其他地區的屋頂綠化系統提供設計、發展及維護方面的指引。

沙田污水處理廠另一個深化研究是與香港大學合作的垂直綠化研究。徐先生不僅是資深的工程師，他亦對環境美化及園藝擁有濃厚興趣，在這些領域投入了大量的時間。在過去數年間，他為渠務署主導了多個環境美化項目，並於近期通過了國際樹藝學會（International Society of Arboriculture）的註冊樹藝師認證，亦是少數擁有這資格的高級政府官員之一。在最近的一個項目中，徐先生針對多種攀爬性植物在本地生態環境中的適應性進行研究。結合屋頂綠化，研究人員正在評估它們長期性的吸熱效果，以求在亞太地區分享這些知識。

這些園境美化措施需要花費大量的水資源，渠務署對此當然不會掉以輕心。灌溉所用的「再造水」來自於經過消毒處理的二級污水。「我們仍在研究及觀察其效果及成本，」徐先生表示，「但前景大有可為，而且仍有拓展空間。」

香港園境師學會於其2010周年大獎中授予渠務署園境設計獎金獎及銀獎（環境設計組別），以表揚渠務署在這方面的傑出成就。此外，渠務署憑藉綠化沙田污水處理廠的報告，成為香港工程師學會土木分部的「2011年土木工程論文獎」的最佳得主。

令人欣慰的，是公眾對這項工程的認同。工程解決了當地居民的擔憂，同時消除了一般對渠務工作感官上的不良感覺。在2010年11月的開放日，參觀人數超過了7 000，其中包括多位區議員，更有來自本地學校的學生親身參與種植工作。渠務署希望能夠幫助促進這種綠色的生活態度，共同建設更清新，更環保的香港。✿

沙田污水處理廠將於2012年3月3日及4日再次舉辦開放日，誠邀各位有興趣的公眾參與。有關詳情，可瀏覽渠務署網站 [www.dsd.gov.hk](http://www.dsd.gov.hk)

Utilities have traditionally been regarded as an undesirable albeit necessary presence in the neighbourhood, but local green innovators are quickly transforming this notion. By integrating green roofs, vertical greening and other innovative greening means to structures and buildings, local utilities are turning over a fresh green face in the city.

One of the most successful green projects in recent years is the Drainage Services Department's (DSD) award-winning transformation of the 28-hectare Sha Tin Sewage Treatment Works, situated in the midst of a growing urban area. Sewage treatment works are sometimes considered an eyesore, particularly for residents overlooking the area.

The DSD undertook the task of enlivening the facility in 2008, imbuing it with a seasonal palette of colours through a mix of plant species. The transformation was well received by the community. "During Open Day in November 2010, one impressed district councillor asked whether the plant would be open to the public as a park," recalled DSD Deputy Director Mr. Tsui Wai. "The positive public response has been encouraging, particularly since the work was chiefly carried out for the sake of the community."

The innovative methods went beyond traditional landscaping, delivering benefits over and above aesthetic value. One of these was a retrofitted green roof, which reduced the heating effect on the roof. Studies have shown that indoor temperatures were lowered by 1.5 to 2.3°C, reducing energy consumption within the facility.

Other studies are being carried out in conjunction with local universities. One of these is a collaborative study with the Hong Kong Polytechnic University, which aims to further assess the effect of the green roof on the local microclimate, and vice versa. It is hoped that this data can be used to establish guidelines for the design, development and maintenance of green roof systems specific to the unique ecology of Hong Kong, as well as parts of the Asia Pacific region.

Sha Tin Sewage Treatment Works is also the site of an in-depth study in vertical greening, engineered by Mr. Tsui in collaboration with the University of Hong Kong. Though he is an experienced engineer with a large number of projects to his credit, Mr. Tsui also has a great interest in landscaping and arboriculture, which are fields that he devotes much time to. Over the years, he has pioneered a number of landscaping projects for the DSD. He was also recently awarded the qualification of Certified Arborist by the International Society of Arboriculture, and is one of the most senior government officials to achieve this credential. In this most recent project, Mr. Tsui sought to investigate the

adaptability of various climber species to the local ecology. As with the green roof, researchers are assessing their long-term cooling effect, with the aim of sharing the knowledge across the Asia Pacific region.

These landscaping efforts consume a significant amount of water – a fact that was not overlooked by the DSD. Irrigation is carried out with 'reclaimed water' from disinfected secondary effluent. "We are still monitoring the effect and cost," elaborated Mr. Tsui, "but it is a promising avenue, and there is room for expansion."

In recognition of these outstanding efforts, the Hong Kong Institute of Landscape Architects



渠務署副署長徐偉先生  
Mr. Tsui Wai,  
DSD Deputy Director

## 香港濕地公園義工 Volunteering at Hong Kong Wetland Park

香港濕地公園義工計劃成立於2002年，是漁農自然護理署為了配合香港濕地公園的開放成為一個世界級的自然保育、教育和生態旅遊景點下提供的服務，目的是向市民和遊客推廣自然保育意識和鼓勵參與濕地保育工作。

香港濕地公園教育及社區服務組經理鄭翠如女士介紹說：「義工隊是一羣大自然的愛好者。他們願意透過參與和支持自然保育以回饋社會。」

何強先生是一名熱心和投入的香港濕地公園義工，他分享說：「參與義工服務既有趣又令人有所得著，不單可以因著自己的興趣去學習濕地生態、支持濕地保育工作，更可以服務社羣。」何先生從香港濕地公園義工計劃開展時便加入了義工服務，到現在已有十年了。香港濕地公園義工分組主管張志堅先生對他讚賞有加：「何先生今年會獲得長期服務獎！這是為了表揚他的貢獻及努力。這是義工獎勵計劃因應義工服務時數而頒發的感謝狀。」

何先生說：「能夠透過生態導覽、教育工作坊等活動和訪客分享我們在自然保育的樂趣，並在培訓、野外考察和參與實地和前線的濕地管理和保育工作與他們交流知識，例如除去具侵略性的外來品種如微甘菊等，都是賞心樂事。」

awarded the department the Landscape Design Awards for Landscape 2010 – Gold Medal, as well as the Silver Medal (Environmental Design Project). The DSD was also the sole winner of the Hong Kong Institution of Engineers' Civil Engineering Paper of the Year Award 2011, for its report on the greening work conducted at the Sha Tin Sewage Treatment Works.

More satisfying still was the public reception to the project, which succeeded in addressing the concerns of local residents and dispelling traditional aversions to sewage works. Over 7 000 visitors, including a number of district councillors, attended the plant's Open Day in November 2010, while children from local schools rolled up their sleeves to help with the planting. It is this green attitude that the DSD hopes to help foster, paving the way to a fresher and more environmentally friendly Hong Kong. ✿

Sha Tin Sewage Treatment Works will be hosting its next Open Day on 3 and 4 March 2012. All interested members of the public are warmly invited to attend. For details, please visit the DSD website at [www.dsd.gov.hk](http://www.dsd.gov.hk)



何強先生  
Mr. Keung Ho

作為資深的義工，何先生現正協助義工培訓工作，為了維持義工團隊的優質服務。目前在義工計劃內已登記的義工有6 100多名。義工計劃除了招募一般市民為義工外，亦會將招募工作伸展到各個社區羣體，包括學校、大學、專業團體和企業，以加強連繫，建立伙伴和緊密的合作關係。義工計劃長遠的目標是藉此為義工團隊吸納更多人力資源和專業人材，同時將濕地保育意識推廣到社區。✿

香港濕地公園義工計劃和義工團隊的優質服務獲得了「2011年公務員優質服務獎勵」隊伍獎（一般公共服務）。

To promote public awareness and participation in wetland conservation, the Hong Kong Wetland Park Volunteer Scheme was launched in 2002 in connection with the opening of Hong Kong Wetland Park (HKWP), a world-class attraction for conservation, education and eco-tourism, managed by the Agriculture, Fisheries and Conservation Department.

季節與觀賞 IN SEASON



中文名: 桃花  
學名: *Prunus persica*  
原產地: 中國  
香港觀賞勝地: 馬鞍山公園、香港公園

Common name: Peach  
Scientific name: *Prunus persica*  
Origin: China  
Viewing in HK: Ma On Shan Park, Hong Kong Park

對中國人來說，沒有桃花的農曆新年，實在美中不足。桃花於年初開花，其後才會長出葉子。本港花農會於新界培植這種美麗的年花，以應市場需求，此外，某些公園亦會種植桃花，供遊人觀賞。桃屬植物遍布世界各地，當中包括多種會開花結果的植物，例如櫻桃、李和杏。此外，桃仁亦有傳統藥用價值，能活血祛瘀、潤腸通便。

No celebration of Chinese New Year is complete without the use of this beautiful flowering plant that displays its attractive flowers early in the year before its foliage. The plant is cultivated in the New Territories to meet local demand and is also used as an ornamental plant in some parks. *Prunus*, the genus, contains many fruiting and flowering plants such as cherries, plums, almonds which are found and cultivated throughout the world. The Kernel (桃仁) of this plant also has traditional medicinal value to help blood circulation and digestion.

"HKWP volunteers are a group of dedicated nature lovers, who are willing to contribute to society through participating and supporting conservation on wetlands," said Ms. Josephine Cheng, HKWP Manager/Education and Community Services, the Volunteer Scheme in-charge.

"Volunteering at HKWP is so much fun and a rewarding way to learn about wetland ecology, support conservation works and serve the community," shared by Mr. Keung Ho, a passionate and committed HKWP volunteer who has joined the Scheme ever since it was launched. "He will receive a 10-year services award this year, as an appreciation towards his contribution and efforts under the "Volunteer Award Scheme", which is awarded according to the number of service hours undertaken by volunteers," Mr. Sam Cheung, Supervisor of the Volunteer Unit, complimented.



"It is so enjoyable to share with visitors our interest in nature conservation through guided eco-tours and educational workshops, exchanging our knowledge on wetlands gained from training, field trips and practical services in front-line habitat management and conversation, such as weeding and removal of the invasive exotic species *Mikania* (*Mikania micrantha*)," said Mr. Ho.

Being an experienced HKWP volunteer, Mr. Ho has been assisting in training of new recruits to upkeep the quality of volunteering services. So far, over 6 100 volunteers have registered in the Scheme. Apart from recruitment of volunteers from the general public, the HKWP Volunteer Scheme is reaching out to the community and various groups including schools, universities, professional bodies and corporations for networking, partnership and collaboration, with a vision to attract more workforce and expertise as well as promoting awareness of wetland conservation in the community. ✿

The quality service of volunteering at the Hong Kong Wetland Park has been awarded one of the winners for the 2011 Civil Service Outstanding Service Award Scheme under the General Public Service Team Award.

人物介紹 PROFILES

以綠為先 TAKING THE LEAD





## 高空綠化大獎 2012 Skyrise Greenery Awards 2012

為了推動優質高空綠化的發展，發展局的綠化、園境及樹木管理組聯同專業學會舉辦高空綠化大獎2012。此獎項是給公共和私人項目參與競逐，收件截止日期為4月2日。詳情請參閱政府綠化網頁網址：[www.greening.gov.hk](http://www.greening.gov.hk)。



To promote the development of quality skyrise greening, the Greening, Landscape and Tree Management Section of the Development Bureau has co-organised with professional institutes in launching the Skyrise Greenery Awards 2012. The Awards are open to the public and private sectors with submissions due by 2 April 2012. Please visit the Greening website for more details. [www.greening.gov.hk](http://www.greening.gov.hk)

### 政府綠化網頁網址的新增項目 New Additions on Greening Website [www.greening.gov.hk](http://www.greening.gov.hk)

請瀏覽政府綠化網頁有關新增項目：「百花盛放」、「常見問題」及其他更新資料  
Please visit our website on new additions: Flower in Bloom, FAQ and other updates!

## 一月 Jan - 三月 Mar 2012

### 渠務署開放日 2012 DSD's Open Day 2012

渠務署 2012年3月3日及4日，上午9:30至下午5:00 沙田污水處理廠 查詢：渠務署開放日熱線 3919 9097	Drainage Services Department 3 and 4 March 2012, 9:30 am to 5:00 pm Sha Tin Sewage Treatment Works Enquiries: Drainage Services Department Open Day Hotline 3919 9097
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[www.dsd.gov.hk/EN/What\\_s\\_New/news193.html](http://www.dsd.gov.hk/EN/What_s_New/news193.html)

### 香港花卉展覽 2012 Hong Kong Flower Show 2012

康樂及文化事務署 2012年3月16日至25日，香港維多利亞公園 查詢：康樂及文化事務署 2601 8260 或 hkfs@lcsd.gov.hk	Leisure and Cultural Services Department 16 -25 March 2012, Hong Kong Victoria Park Enquiries: Leisure and Cultural Services Department 2601 8260 or hkfs@lcsd.gov.hk
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[www.lcsd.gov.hk/green/hkfs/2012/b5/index.php](http://www.lcsd.gov.hk/green/hkfs/2012/b5/index.php)

### 樹木研習徑導賞服務 Tree Walks Guided Tours

漁農自然護理署 至2012年3月 星期日及公眾假期 大棠樹木研習徑 查詢：大棠護理組 2477 4896	Agriculture, Fisheries and Conservation Department Until March 2012 Sundays and Public Holidays Tai Tong Tree Walk Enquiries: Tai Long Ranger Office 2477 4896
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[www.natureintouch.gov.hk/outdoor/activity/public\\_guided\\_tour/0/49](http://www.natureintouch.gov.hk/outdoor/activity/public_guided_tour/0/49)

### 綠化義工計劃 Green Volunteer Scheme

康樂及文化事務署 查詢：康樂及文化事務署 2601 8688	Leisure and Cultural Services Department Enquiries: Leisure and Cultural Services Department 2601 8688
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[www.lcsd.gov.hk/green/b5/greenvolunteer.php](http://www.lcsd.gov.hk/green/b5/greenvolunteer.php)

我們希望您喜歡這份《綠化》季刊，如有任何意見或建議，歡迎與我們聯絡：  
We hope you enjoy our quarterly newsletter. You are welcome to contact us with any comments or suggestions:

發展局  
綠化、園境及樹木管理組  
Greening, Landscape and Tree Management Section, Development Bureau  
香港添馬添美道2號政府總部西翼16樓  
16/F, West Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong  
電話 Tel: 2848 2334 電郵 Email: [greening@devb.gov.hk](mailto:greening@devb.gov.hk)  
傳真 Fax: 2186 6932 [www.greening.gov.hk](http://www.greening.gov.hk)

## 香港古樹名木欣賞 – 吉貝 Appreciation of Old and Valuable Trees (OVTs) in Hong Kong – Ceiba

古樹名木是本地的珍貴自然資源和文化見證。自2004年起，政府在樓宇密集區的未批租政府土地，或鄉村地區的旅游勝地，記錄了約500棵經評為珍貴樹木的資料，編入《古樹名木冊》內。

在維多利亞公園毗鄰高士威路旁矗立了八棵如路標的「吉貝」樹。自2004年開始，它們已被收錄於《古樹名木冊》內。當中最高的一棵高33米，而最粗壯的胸徑逾1.6米，全部由康樂及文化事務署管理。

人們經常談論該群吉貝的樹齡，猜測究竟要經歷多少歲月方可長成如此高大的樹木？其實維多利亞公園地處舊銅鑼灣避風塘。公園於1954年8月開始興建，並於1957年10月落成啟用，是戰後首個大型填海工程。相信該批吉貝在公園興建期間種植，位於公園的一旁，用以分隔公園及車路，估計樹齡約60餘年（《香港古樹名木》2006）。

吉貝是熱帶雨林的樹種，喜全日照，栽培土質不拘，適宜在高溫多濕、排水良好的土壤生長。它生長快速，基部長有大型板根，樹形挺拔，樹高可達60米。幼株樹幹綠色並被尖錐狀瘤刺。吉貝屬於乾旱性落葉樹種，在熱帶地區的旱季，



學名：吉貝  
別名：爪哇木棉／美洲木棉  
Species Name: *Ceiba pentandra*  
Other names: Kapok Ceiba/Silk Cotton Tree

如香港的冬季，會完全落葉。在香港，它初春開花，花乳白或乳黃色，具5雄蕊，因此其學名的種加詞為 *pentandra*。果實蒴果，長約12-15厘米；種子藏於厚厚的棉毛纖維內。

吉貝原產於墨西哥、中美洲等地，是速生綠化樹種；木材具經濟價值，故曾被大量引種於亞洲各地，包括菲律賓、馬來西亞、海南島及爪哇，因此也被稱為爪哇木棉。它木質輕軟，樹幹挖空後可製木筏；板片先浸石灰水而後用可經年不朽，可製箱櫃；板根可製門、檯面和盤子等器具。蒴果內棉毛纖維較滑且脆，不適合紡織用途，但可用於家庭用品如枕頭、椅墊作填充料。✿

有關更多的古樹名木冊的資料，請參閱

[ovt.lcsd.gov.hk/ovt/index.jsp?lang=b5](http://ovt.lcsd.gov.hk/ovt/index.jsp?lang=b5)

Since 2004, the Government has identified some 500 heritage and precious trees growing on unleased lands within built-up areas and tourist attraction spots in village areas. To ensure that these trees can be well preserved and maintained, they were subsequently registered as Old and Valuable Trees (OVTs) for priority protection and preservation.

In Victoria Park, there are eight post-like trees, namely *Ceiba pantandra*, growing along Causeway Road. Among them, the tallest is 33m in height and the

largest has DBH (diameter at breast height) of more than 1.6m. They are regularly maintained by the Leisure and Cultural Services Department.

There have always been discussions about the age of this tree group, and the years that it has taken for these trees to grow into such a size. In fact, Victoria Park was built on a reclaimed typhoon shelter in Causeway Bay. Construction of the Park started in August 1954 and the Park was opened to the public in October 1957. This was the first major reclamation project of Hong Kong after the war. It was generally believed that these trees were planted when the Victoria Park was built, and to purposely separate the Park from the carriageway.

Hence, the trees are estimated to be about 60 years old. (《香港古樹名木》2006)

*Ceiba pentandra* is a tropical rainforest species, sun-loving and is not sensitive to soil quality. It grows best in areas with high temperature and humidity and soil with good drainage. *Ceiba* is fast growing with large buttresses. It is tall and straight and can reach 60m or more in height. Young trees have green bark and a thorny trunk. It is dry deciduous, i.e. sheds most or all of its leaves in tropical dry season and here in Hong Kong, in winter. In Hong Kong, it blooms in early spring with numerous whitish and yellowish flowers. It is named *pantandra* because of its typical five stamens parts. Fruits are 12-15 cm long pods containing seeds surrounded by fluffy fibres.

The tree is native to Mexico and Central America, and was widely introduced to the Philippines, Malaysia, Hainan and Java in Asia and hence was also known as Java Ceiba. Its wood is exceedingly lightweight and easily worked. People used to hollow out the trunk in one piece for dugout canoes. The sliced wood would be treated with lime for making durable wooden boxes and closets. The buttresses are also commonly used for making doors, table-tops and trays. As the fluffy fibres inside the pods are light, very buoyant but difficult to spin, they are used as fillings of insulation, padding, sleeping bags and pillows. ✿

For more information about OVTs, please visit

[ovt.lcsd.gov.hk/ovt/index.jsp?lang=en](http://ovt.lcsd.gov.hk/ovt/index.jsp?lang=en)

## 年花環保小提示 Tips for Re-use of Lunar New Year Plants

每年春節，大家都會選購各式各樣的年花，粉飾家居迎接新的一年，但在春節過後，便丟掉年花，既浪費亦不環保。其實大部份的年花均可再行栽種或作其他用途，以下是一些建議：

We buy different plants and flowers to decorate our home and celebrate the Lunar New Year festival. However, the plants are usually disposed of after the festival, which is not only a waste but also not environmentally friendly. In fact, most of the plants can be re-planted or re-used. Below are some suggestions:

**1 球莖植物** – 在佳節過後可將花葉剪掉，保存球莖植物 (例如：水仙，風信子，鬱金香) 的球莖在陰涼的地方，待明年再行栽種。

**Bulbs** – After having removed the fleshy leaves and flowers, the bulbs could be kept under a cool and dry environment for replanting next year. ▼



**2 插花** – 可以因應花朵果實外形使用不同方法保存花朵。外形較立體 (例如：銀柳，五代同堂) 的可以在風乾後製作成乾花擺設；至於外形較平面 (例如：桃花，無忘我，三色堇，芍藥) 可以夾在舊書本或雜誌內製成壓花裝飾。

**Cut-flowers** – Depending on the morphology of the flowers and the fruits, different methods including air-drying and pressing can be used to preserve different shapes of flowers for decoration purposes.

**3 盆栽種植多年生植物** – 一般用泥種植的年花如四季桔及沙柑等柑橘屬的植物經過當修剪及施肥後可繼續栽種至下一個花期。除此之外，四季桔的果實更可以加工食用製成鹹金橘。

**Perennial Potted Plants** – In general, for the soil planted Citrus species such as the Calamondin and Mandarin orange, the plants can be kept for the next year after suitable pruning and fertilisation. Besides, the fruit of Calamondin can be edible after pickling with salt. ►



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