

環保報告

ENVIRONMENTAL REPORT

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我們的環保政策與工作

我們在施行工程的各個階段均注重環保。我們通過履行綜合管理系統政策所訂定的下述承諾，致力達到這個目標：

- 遵守適用的法例和其他規定。
- 創建安全、綠化及可持續發展的環境。
- 監管承建商的表現，確保他們遵守本署的規定。
- 避免環境污染，並致力緩解因工程項目及部門運作而可能對環境構成的影響。
- 在可行的情況下，奉行以下原則：資源減省、資源再用和資源循環再造。
- 為持續改進表現，定期檢討綜合管理系統的成效，並訂立目標和指標。

我們的工作與環境息息相關

我們實施環境管理系統，並已取得ISO 14001:2004認證。透過環境管理系統，我們有系統地監察承建商在環保方面的表現，確保他們遵守有關環保的法例和合約規定。我們在這方面取得顯著成效，而部門向公眾提供的服務在環保方面的表現亦得以提升。

在致力提供基本服務以配合香港的發展時，我們審慎地評估工程和作出環保考慮，務求避免工程對環境造成不良影響。在進行公共工程時，我們也藉機引進環保設施改善環境。

Our Environmental Policy And Activities

We place due emphasis on environmental considerations in all stages of our projects, which is achieved through the following commitments in our Integrated Management System Policy:

- Complying with applicable legal and other requirements.
- Creating a safe, green and sustainable environment.
- Monitoring the performance of our contractors to ensure their compliance with our requirements.
- Preventing pollution and mitigating potential environmental impacts arising from our projects and operations.
- Observing the principles of reduction, reuse and recycling in the consumption of resources wherever practicable.
- Achieving continual improvement through regular review of the effectiveness of our Integrated Management System as well as the Objectives and Targets.

CEDD and the Environment

We have been implementing an environmental management system (EMS) and obtained ISO 14001:2004 Certification. By making use of the EMS, we systematically monitor the environmental performance of our contractors to ensure compliance with the legal and contractual environmental requirements. We have achieved remarkable improvement and enhanced the environmental performance in providing services to the public.

In providing essential services to support the development of Hong Kong, we carry out assessment with due regard to environmental considerations to avoid causing adverse environmental impacts. In implementing public works projects, we also endeavour to take every opportunity to introduce environmental facilities for improving the environment.

2009年的環保工作 Environmental Activities in 2009	環保目標 Environmental Objectives	環保措施 Environmental Measures
規劃及設計 Planning and Design	<ul style="list-style-type: none"> 避免對環境造成不良影響 Avoid adverse environmental impacts 如無法避免對環境造成不良影響，採取適當的緩解措施 Adopt suitable mitigation measures when adverse impacts are unavoidable 遵守減少廢物、廢物再用及廢物循環再造的原則 Observe the principles of Waste Reduction, Re-use, and Recycling 	<ul style="list-style-type: none"> 探討不同方法 Explore options 為指定工程項目進行環境影響評估 Carry out Environmental Impact Assessment for designated projects 加入緩解環境影響的措施 Incorporate environmental mitigation measures 編訂拆建物料管理計劃 Compile Construction & Demolition Material Management Plan
建造工程 Construction Works	<ul style="list-style-type: none"> 確保承建商遵守環保規定 Ensure that contractors comply with environmental requirements 	<ul style="list-style-type: none"> 遵守環境許可證的審批條件 Comply with Environmental Permit Conditions 實施環境管理計劃 Implement Environmental Management Plan 實施環境監察及審核計劃 Implement Environmental Monitoring and Audit Programme
環境改善工程 Environmental Improvement Works	<ul style="list-style-type: none"> 藉機改善環境 Take every opportunity to improve the environment 推廣綠化和採用創新的環境美化設計 Promote greening and adopt innovative landscape design 	<ul style="list-style-type: none"> 廣泛植樹 Adopt extensive planting 推行綠化總綱圖的工作 Implement Greening Master Plans 施行人造斜坡加固工程時美化斜坡 Landscape man-made slopes in upgrading works 修復石礦場 Rehabilitate quarries 監察已在天然山體崩塌後完成的土壤生物修復工程 Monitor installed bioengineering measures at natural-terrain landslide scars 清理河床 Clear up river-bed

環境管理計劃

環境管理計劃是致力提升環保表現的方法，藉更佳管理、密切監察和持續改善，促使本署的建造工程達致更高的環保表現水平。環境管理計劃旨在盡量減低空氣、噪音和廢水污染到環境造成的滋擾，以及減少產生剩餘拆建物料。環境管理計劃需載明承建商在環境管理方面的政策、組織架構、職務與責任、培訓安排等。在環境管理計劃下，承建商須推行特定的環境滋擾減低措施，並委派一名指定的環境主任，確保環境管理計劃在建造工地切實執行。本署在每項2,000萬元以上的基本工程合約推行環境管理計劃已逾4年。直至2009年，加入了環境管理計劃規定的基本工程合約數目，已由2008年的19份大幅增至2009年的36份。

Environmental Management Plan

Environmental Management Plan (EMP) is a means to achieve a higher level of environmental performance by means of better management, closer monitoring and continual improvement on our construction works. It aims at minimizing the environmental nuisances of air, noise and wastewater pollution as well as minimizing the generation of surplus construction and demolition materials. The EMP sets out the contractor's policy, organisational structure, duties and responsibilities, and training arrangements, etc. for the environmental management of the works. As part of the EMP requirements, the contractor is required to implement specific environmental nuisance abatement measures, and to appoint a designated environmental officer to oversee the implementation of the EMP. CEDD has been implementing the EMP in every capital works contract with a contract sum exceeding \$20 million for more than four years. The number of capital works contracts incorporating the EMP requirements has increased from 19 in 2008 to 36 in 2009.



在斜坡安裝的噴水系統，以減少揚塵。
Water spraying system on slope to reduce dust.



在斜坡的土面安裝排水蓋，以防止水土流失。
Drainage cover on eroded slope face.



監察水質。
Monitoring of water quality.



在建築工地設置沉澱池，以處理建築廢水。
Sedimentation tank to treat wastewater on construction site.

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拆建物料的管理

公眾填料委員會由我們的署長擔任主席，負責公眾填料的策略性管理。有關的管理工作按下列3項原則執行：

- 減少
- 再用
- 循環再造

政府的政策是在公共工程的規劃、設計和施工階段，盡量減少產生拆建物料。我們為建造業提供服務，讓公眾填料可以卸置位於策略性地點的公眾填料接收設施。剩餘的公眾填料我們會暫時堆存，以供日後再用。

在2009年，公眾填料接收設施共接收約1 400萬公噸公眾填料。

Management of Construction and Demolition Material

The Public Fill Committee, under the chairmanship of our Director, is responsible for the strategic management of public fill. The management builds on the 3R principle:

- Reduce
- Reuse
- Recycle

It is the government policy to reduce generation of construction and demolition material in planning, design and construction of public works projects. We provide services to the construction industry for disposal of public fill at public fill reception facilities at strategic locations, where we also temporarily stockpile the surplus public fill for future reuse.

In 2009, the total quantity of public fill received at public fill reception facilities was about 14 million tonnes.



屯門公眾填料接收設施
Tuen Mun public fill reception facility at Tuen Mun

緩解環境影響的措施

透過綜合規劃和設計，我們致力減少擬建工程對環境可能造成的不良影響。倘若這些影響實在無可避免，我們在施工及設施運作期間，採取適當的緩解措施。

> 斜坡工程



在斜坡工程中使用物料覆蓋措施 (在鑽孔時使用帆布覆蓋和灑水以減少塵埃散佈)
Typical dust-control measures covered in slope engineering works (use tarpaulin sheets and water spraying to suppress dust generated from drilling)

Environmental Mitigation Measures

Through comprehensive planning and design, we endeavour to minimise all possible adverse environmental impacts resulting from the proposed projects. When projects inevitably bring about adverse environmental impacts, we would adopt suitable mitigation measures in both construction and operation stages.

> Slope Engineering Works

> 處理建築拆建物料

土木工程處負責營運和管理建築廢料處理設施，以及把剩餘的公眾填料運往內地再用。

我們採取了一些緩解措施以減少在處理有關物料時所產生的泥塵，措施包括經常於工地範圍內灑水，以帆布覆蓋在駁船上將被運送的填料，以及使用裝有機動蓋掩的運泥車以減少在運送建築廢料時所散播的泥塵。

> Handling Construction and Demolition Material

The CEO is responsible for operating and managing a number of construction waste handling facilities and delivering surplus public fill to the Mainland for beneficial reuse.

To minimise dust nuisance given rise by the handling of the materials, mitigation measures have been adopted including regular water spraying on sites, covering the material loaded to barge by tarpaulin before the barge setting off, and using mechanical covers on trucks for dust control during transportation of construction waste.



在運載物料上貨車蓋上帆布
Covering the material by tarpaulin on barge during delivery



經常於工地範圍灑水以控制泥塵散佈
Regular water spraying on sites for dust control

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使用機械式車蓋以確保在運送建築廢料時不會散漏。
Use of mechanical covers on trucks for waste control during transportation of construction waste.



在工地出口處設有車輪清洗站，以確保車身不會帶出泥塵。
Wheel-washing facilities at site exits to remove any sticky material from vehicles.

> 沙田水泉澳及九肚的道路工程

為了改善環境，直至2009年年尾，沙田水泉澳及九肚的道路工程合約已種植了大約4 500棵喬木、130 000株灌木/地被植物，以及提供了40 000平方米的綠化地帶，改善周邊的環境。



沙田水泉澳及九肚路（沙田水泉澳段）的綠化工程。
Landscape works at Road 1 (Sha Chuen Street), Sha Chuen O, Sha Tin.

> Road works at Shui Chuen O and Kau To, Sha Tin

Up to end 2009, about 4 500 trees, 130 000 shrubs/groundcover and 40 000 m² of green area had been provided under the roadworks contract at Shui Chuen O and Kau To, Sha Tin to improve the surrounding environment.

> 在舊啟德機場南面停機坪進行清拆和淨化工程

九龍拓展處繼續為舊啟德南面停機坪的土地進行餘下的清拆和淨化工程，務求令未來發展的土地符合環保要求和避免日後影響居民的健康。

主要受污染的地方已經挖掘並填回潔淨填土，而那些受總石油烴氫化合物和揮發性有機化合物污染的泥土正透過「生物堆置法」的處理來分解這些污染物。工程合約預計於2010年年初完成。

> 佐敦谷發展計劃

為了改善綠化環境，多項園境美化工程已融入佐敦谷發展計劃，包括在斜坡和路旁花帶中種植約39 400棵喬木和約237 000株灌木。

> Decommissioning and decontamination works at the south apron of the former Kai Tak Airport

The Kowloon Development Office continued the remaining decommissioning and decontamination works at the south apron area of the former Kai Tak Airport, to make land environmentally safe for future development and eliminate any health impact on future residents.

The majority of the identified contamination areas had been excavated and backfilled with clean fill. The contaminated soil, with total petroleum hydrocarbons and volatile organic compounds, had undergone treatment, "biopiling" operation, to degrade such contaminants. The contract was anticipated to be completed by early 2010.

> Jordan Valley Development

To enhance greening of the environment, the Jordan Valley Development project has incorporated substantial landscape softworks, including planting about 39 400 trees and 237 000 shrubs on slopes and in roadside planters.



園境美化工程 Landscape softworks.



園境美化工程 Landscape softworks.

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收集水樣以作水質監察
Collection of water samples for monitoring of water quality

> 中環填海計劃第三期

承建商實施了多項緩解環境影響的措施，以減低施工期間對空氣、噪音及水質的影響。工地人員亦會進行定期監察，以確保工程符合環境保護的規定。承建商根據廢物管理計劃，有效地減少建築廢物的產生，以及在地盆透過廢物分類方法生產可循環再用的合適物料。

> 屯門第18區的L18A道路工程

為了改善環境，我們在屯門L18A道路工程的周邊範圍種植了約700棵喬木和10 000棵灌木/地被植物。



位於屯門18區的園境美化工程
Landscape works at Area 18, Tuen Mun

> 第12區(部分) - 大埔發展計劃

為了改善環境，大埔第12區(部分)發展計劃已展開園境美化工程，包括種植大約8 100棵喬木及59 000棵灌木。

> Central Reclamation Phase III

The contractor has implemented various environmental mitigation measures to alleviate the impacts on air, noise and water during the construction stage. Regular monitoring has been conducted to ensure the compliance with the environmental requirements. In accordance with the Waste Management Plan, the Contractor has effectively minimised the generation of construction waste and produced suitable recycled material by means of on-site sorting.

> Road works at L18A Area 18, Tuen Mun

To improve the environment, we planted about 700 trees and 10 000 shrubs/groundcover under the Road L18A project at Tuen Mun.



位於大埔第十二區的園境美化工程
Landscape works on slopes at Area 12, Tai Po

> Development at Area 12 (Part), Tai Po

To improve the environment, landscape works including planting about 8 100 trees and 59 000 shrubs has been carried out under Tai Po Development at Area 12 (part).



綠化牆噪音屏障試驗
Trial green wall noise barriers

綠化隔音屏障

擴闊後的楊屋道中央分隔帶，將會設置共約250米長之隔音屏障。為減輕隔音屏障對車道兩旁的行人及住戶在視覺上的影響，這些隔音屏障將會採用綠化牆隔音屏障。屏障會以吸音物質為材料，並會在垂直屏障面栽種植物。在香港市區道路設置綠化牆隔音屏障屬新嘗試，因此，我們在工地設置數塊測試屏障板，以測試不同植物品種在綠化牆隔音屏障之生長情況。

其他綠化工作

為了改善環境，在擴闊後的楊屋道及馬頭壩道路旁種植地帶及中央分隔地帶，將會進行大量綠化工作，包括種植約30棵8米高之棕櫚樹、3萬棵灌木及2萬5千棵地被植物。

Green Wall Noise Barriers

Noise barriers with a total length of about 250m will be installed along the future central median of the widened Yeung Uk Road. In order to mitigate the visual impact of the noise barriers on pedestrians and residents on both sides of the road, a green wall noise barrier system is proposed to be constructed. The barriers will be made of a material with noise abatement property and will be provided with greening plants on their vertical faces. As green wall noise barriers in urban roads are new to Hong Kong, a few trial panels have been built on site for testing different plant species to be grown in the green wall noise barriers.

Other Greening Works of the Project

In order to enhance the environment, extensive greening works will be provided in the roadside planting areas and central median of the widened Yeung Uk Road and Ma Tau Pa Road. The works include 30 numbers of 8m high palm trees, 30 000 shrubs and 25 000 ground cover plants.

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> 荃灣象鼻山路隔音屏障加建工程

本署已完成於二波洲與三棟屋村之間沿象鼻山路東行線加建共長約845米、高6米的懸臂式隔音屏障工程，以及在石圍角邨和象山邨外沿象鼻山路西行線加建長共約645米的半封閉式隔音罩工程。目前，荃灣石圍角邨與象山邨之間的象鼻山路路段毗鄰約1600個住宅所受的交通噪音已由高達80分貝(A)L10(1小時)降低至18分貝(A)L10(1小時)的低水平。

> 綠化總綱圖

本署正積極落實市區的綠化總綱圖。總綱圖訂明個別地區的整體綠化大綱和主題，並採用加強地區參與的模式制定。在制定過程中會諮詢區議會和地區人士。

中環、上環、灣仔、銅鑼灣、尖沙咀、旺角和油麻地等地區的綠化總綱圖所建議的短期綠化工程已完成。我們在以上各區共種植了約7100棵樹和150萬株灌木，令市容得到顯著改善。市區餘下地區的短期綠化工程亦已展開，預期2011年年中完成。我們正為新界地區綠化總綱圖的研究作準備工作。



12月後 After greening

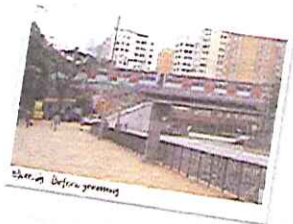
> Retrofitting of Noise Barriers on Cheung Pei Shan Road, Tsuen Wan

Upon the completion of the retrofitting of cantilevered noise barrier of about 845m in length and 6m in height between Yi Pei Chun and Sam Tung Uk Resite Village and retrofitting of semi-noise enclosure of about 645m outside Shek Wai Kok Estate and Cheung Shan Estate along the westbound carriageway of Cheung Pei Shan Road, the existing high traffic noise levels on the affected adjoining more than 1600 dwellings up to 80 dB(A)L10 (1 hour) have been reduced to a very low level of 18 dB(A) L10 (1 hour).

> Greening Master Plans

The department is implementing the greening measures recommended in the Greening Master Plans (GMPs) for urban areas. GMPs define the overall greening frameworks and themes for individual areas and are developed using an enhanced partnering approach, consulting District Councils and the local community in the process.

The short-term greening works proposed in the GMPs for Central, Shoung Wan, Wan Chai, Causeway Bay, Tsim Sha Tsui, Mong Kok and Yau Ma Tei have been completed. A total of about 7100 trees and 1.5 million shrubs have been planted in those districts, resulting in significant improvement in the city amenity. The short-term greening works for remaining urban areas are in progress for completion by mid 2011. We are now preparing for the studies for developing GMPs in the New Territories.



12月前 Before greening

▲ 旺角界限街
Boundary Street, Mong Kok



0 4 2 3 4 5 6 7 8 9
Noise barriers and semi-noise enclosures

環保辦公室

經過多年的努力和推廣，員工間已大致建立起綠色工作間文化。同事大都自發地採取各項環保辦公室措施，包括廣泛利用電子布告板或電郵發放通告或傳遞訊息，雙面影印或列印文件，離開辦公室前關掉空調和電燈等。

在辦公室節能方面，我們採取了多項內務管理安排，以減少虛耗能源，包括在非辦公時間暫停總部大樓大部分升降機的運作，在午膳時間局部關掉辦公室的電燈，在天氣較清涼的月份提早關掉空調，為影印機和網絡印表機等共用設備加裝自動關機時間等等。為進一步改善能源效益，我們已拆除了總部大樓停車場內43支非必要的光管。我們又計劃更換總部大樓兩台舊式的空調製冷機。更換工程完成後，預計兩台新的製冷機將較舊式的耗電少近一成半。

在減廢方面，同事都習慣了循環再用已在一面列印的紙張及其他紙製文書用品。再循環用量佔我們的總用紙量四成以上，這比例逐年提升。我們亦已建立系統，分類回收廢紙、鋁罐和塑膠廢物。在許可情況下，我們會盡量採用循環再造產品。我們亦要求所有本署的辦公室清潔承辦商採用循環再造塑料袋收集一般垃圾。

良好的空氣質素有助提升員工的工作效率。在2009年，我們更換了總部大樓中央冷氣系統的鮮風過濾網，以此一步改善室內空氣的質素。大樓更連續第7年獲頒「室內空氣質素管理計劃」良好級檢定證書，而六個總部以外的辦事處亦同樣獲頒良好級證書。

我們在建立綠色工作間方面的表現獲得認可，本署在2009年獲「香港環保卓越計劃」頒發良好級別的「清新室內空氣標誌」及「減廢標誌」。該計劃由環境保護運動委員會主辦。

Green Office

After years of efforts and promotion, our staff members have generally built up a green workplace culture among themselves. Most colleagues take initiative to adopt various green-office measures including widely use of the electronic bulletin board or e-mailing to issue notices or convey messages, photocopying or printing on two-sides of a piece of paper, switching off the air-conditioning and lights before leaving offices, etc.

For office energy-saving, we have adopted various housekeeping arrangements to reduce energy consumption. They include suspending the operation of most of the lifts in the Civil Engineering and Development (CED) Building during non-office hours, switching off some lighting of the office during lunch-time, turning off the air-conditioning supply earlier during the cool season, introducing timers to automatically switch off share-used equipment such as photocopiers and network printers after office hours, etc. To further enhance energy efficiency, we have removed 43 unnecessary fluorescent tubes in the carpark of the CED Building. We are also planning to replace two old chiller plants in the CED Building. We expect that after the replacement, the two new chiller plants will reduce electricity consumption by about 15% as compared with the old models.

For waste reduction, colleagues have developed the practice of reusing paper printed only on one side and other paper stationery. Usage of recycled paper accounts for more than 40% of our total paper consumption and the proportion is rising each year. We have also established systems to sort and collect waste paper, aluminium cans and plastic waste for recycling. Recycled products are used as far as practicable. In addition, all of our office-cleaning contractors are required to use plastic bags made of recycled materials for collecting general refuse.

Good air quality helps to boost staff's working efficiency. In 2009, we replaced the fresh air inlet filters of the central air-conditioning system in the CED Building to further improve the indoor air quality. The building was awarded the 'Good Class' Indoor Air Quality Certificate for seven years consecutively. Six outstation offices were also awarded the 'Good Class' Indoor Air Quality Certificates.

Our efforts on building a green workplace have gained recognition. In 2009, we were granted the 'Good Class' 'IAQWiSe Label' and 'WastewiSe Label' by the Hong Kong Awards for Environmental Excellence Scheme. The scheme is organised by the Environmental Campaign Committee.

環保報告 ENVIRONMENTAL REPORT



> 辦公室「碳審計」

我們已完成本署總部辦公大樓的二氧化碳排放審計。在2008年7月至09年7月期間，總部大樓直接產生的二氧化碳約為40公噸，而通過用水用電間接排放的二氧化碳則約為2 488公噸。我們全力支持建設綠色香港，並會對相關的數據進行分析，研究減少排放溫室氣體的對策。

環保教育及培訓

我們為員工提供環保知識和相關技能的培訓，讓他們持續進修，以應所需。在2009年，我們舉辦了下列課程：

課程 Course Title	課程數目 No. of Courses	參加人數 No. of Participants
環境管理及與環境有關的經驗分享研討會、講座和簡報會 Experience-sharing Seminars, Talks, Briefing and De-briefing Sessions, etc. on Environmental Management or Environment-related Topics	24	327
環保法例及環保事項培訓課程 Environmental Legislation and Environmental Issues	3	243



> Office "Carbon Audit"

We have completed the carbon audit in the CED Building. During the period from July 2008 to July 2009, the amount of carbon dioxide generated directly by the CED Building was about 40 tonnes, while the amount emitted indirectly through water and electricity consumption was about 2 488 tonnes. We are fully committed to building a green Hong Kong. Analysis of relevant data will be carried out to explore measures for reducing greenhouse gas emissions.

Environmental Education and Training

We provide environment related training to equip our staff with the necessary knowledge and skills. In 2009, we organised the following training courses:

2009年的環保表現

我們每年訂定環保目標和指標，務求在環保表現方面持續改善。2009年的工作成效如下：

Environmental Performance in 2009

To achieve continual improvement in our environmental performance, we have set annual environmental objectives and targets. Below is a summary of our achievement in 2009:

環保目標 Environmental Objectives	環保指標 Environmental Targets	成績 Achievement
減少用紙及用電量 Reduction of paper and electricity consumption	<ul style="list-style-type: none"> 減少總用紙量，較2003年少17.5% Reduce total paper consumption by 17.5% as compared with that in 2003 以環保紙取代普通紙至總用紙量的44% Substitute 44% of normal plain paper with recycled paper 減少本署大樓的總用電量，較2007年少2% Reduce total electricity consumption of the Civil Engineering and Development Building by 2% as compared with that in 2007 	<ul style="list-style-type: none"> 總用紙量較2003年減少23.3%，達到指標 Total paper consumption reduced by 23.3% when compared with that in 2003. The target has been achieved. 環保紙佔總用紙量的50.2%，達到指標 Recycled paper took up 50.2% of total paper consumption. The target has been achieved 本署大樓的總用電量較2007年增加1.5%^(註) Electricity consumption of the Civil Engineering and Development Building increased by 1.5% when compared with that in 2007 ^(Note)
改善所有人造斜坡的外觀 Enhancement of the appearance of all man-made slopes	<ul style="list-style-type: none"> 美化380幅在防止山泥傾瀉計劃下已鞏固的斜坡 Landscape 380 upgraded slopes under the Landslip Preventive Measures Programmes 	<ul style="list-style-type: none"> 已美化380幅在防止山泥傾瀉計劃下已鞏固的斜坡 380 upgraded slopes under the Landslip Preventive Measures Programme have been landscaped
改善居住環境 Enhancement of living environment	<ul style="list-style-type: none"> 種植至少170萬棵樹/灌木 Plant at least 1.7 million trees/shrubs 	<ul style="list-style-type: none"> 已種植190萬棵樹/灌木 1.9 million trees/shrubs have been planted

註：用電量的增加乃由於電腦伺服器裝置了11台新空調系統。

Note: Increase in electricity consumption was resultant from the installation and operation of 11 new air-conditioning units in the new computer server room.