



# 香港消防處 環保報告 2011

## HONG KONG FIRE SERVICES DEPARTMENT ENVIRONMENTAL REPORT 2011



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# 第 1 章 引言

## Chapter 1 Introduction

消防處的法定職責，是保障香港市民的生命及財產，免受火警及其他災難損害，同時為市民提供緊急救護服務，以及就防火措施提供意見。截至二零一一年十二月三十一日，消防處轄下共有 9,171 名軍裝人員及 636 名文職人員，管理 80 間消防局(包括兩間機場消防局)、37 個救護站、8 間滅火輪消防局(包括兩間機場的海上救援消防局)、5 個辦事處、4 個消防車輛維修工場、2 間訓練學校、西九龍救援訓練中心、上水坍塌搜救專隊訓練場，及昂船洲消防處潛水基地。為執行職責，部門管有 929 部消防車、救護車及支援車輛，以及 22 艘滅火／救援船隻。

二零一一年，消防處處理了 34,188 宗火警召喚、27,159 宗特別服務召喚，當中包括交通意外、工業意外、氣體洩漏、山泥傾瀉及水浸；以及 690,114 宗救護召喚。對於有特別火警危險的樓宇及處所，本處發出了 6,332 份消除火警危險通知書、18,539 份消防安全指示／改善消防安全指示以及作出了 472 宗檢控。

The statutory duties of FSD are to protect life and property against fire and other calamities, provide emergency ambulance service and give advice on fire protection measures for the community. As at 31.12.2011, there were 9,171 uniformed members and 636 civilian staff working in the Department. We managed 80 fire stations (including 2 airport fire stations), 37 ambulance depots, 8 fireboat stations (including 2 airport sea rescue berths), 5 office-based workplaces, 4 fire appliance workshops, 2 training schools, the West Kowloon Rescue Training Centre, Training Ground for Urban Search and Rescue Team in Sheung Shui and the Diving Base on Stonecutters Island. To carry out our duties, the Department operated a fleet of 929 fire appliances, ambulances and supporting vehicles plus a fleet of 22 fire boats and support vessels.

In 2011, FSD responded to 34,188 fire calls, 27,159 special service calls which included traffic incidents, industrial accidents, gas leakages, landslides and floods, as well as 690,114 ambulance calls. A total of 6,332 Fire Hazard Abatement Notices and 18,539 Fire Safety Directions/Fire Safety Improvement Directions were issued to owners/occupants of buildings and premises with special fire risks, along with conducting a total of 472 prosecutions.

消防處作為提供緊急服務的部門，不單肩負救火、拯救生命及防火工作，亦注意到需要以環保和對環境負責的方式提供服務和進行行動，以表現我們對環保的承擔。我們已在各項工作中採取適當的環保措施，以期達至環境保育效果：

- ✧ 減少事故對環境的破壞；
- ✧ 發展及採用可減少傷害環境的救火策略、滅火媒體及工具；
- ✧ 舉行大型防止山火宣傳活動，提升公眾「防止山火」的意識，同心協力，減少山火的發生，從而保護大自然的郊外；
- ✧ 謹慎處理涉及危險品或化學品事故，盡量減低有害物料對環境的破壞；
- ✧ 着重防火，提供專業意見及實施規管政策，以期減少火警及可能引致的污染，如空氣及水源污染。

As an emergency service Department, FSD is not only responsible for fire-fighting, rescue and fire protection, we are also conscious of the need to deliver our services and conduct our operations in an environmentally friendly and responsible manner to demonstrate our green credentials. The following environmental measures have been put in place in our work for the betterment of the environment:

- ✧ to reduce the impact of incidents on the environment;
- ✧ to develop and adopt more environmentally friendly fire-fighting strategies, extinguishing media and equipment;
- ✧ to launch hill fire prevention programme & publicity activities to disseminate hill fire prevention messages to the public for the purpose of reducing the number of hill fires, which in turn contributes to the conservation of our countryside;
- ✧ to cautiously handle incidents involving dangerous or chemical goods in order to minimize the impacts of such hazardous materials on the environment;
- ✧ to put emphasis on fire prevention, advisory and regulatory roles aiming at reducing the number of fires, which would in turn reduce pollution to air and water.



## 第2章 我們的承諾及環保政策

### Chapter 2 Our Commitment and Environmental Policy

#### 我們的承諾

我們致力保護環境。雖然面對資源限制，但我們為社會提供服務時，仍會在不影響核心服務的效率及成本效益的情況下，不斷改善我們在環境保護方面的表現。我們已制定各項減少污染的計劃，以降低在提供服務時可能會對環境造成的影響，計劃內容如下：

採取適當的滅火措施，例如：

☆ 在處理火警時使用不會破壞環境的滅火媒體；

☆ 避免在滅火時過量用水。

為緊急車輛召喚程序制定愛護環境的指引，例如：

☆ 減低警報裝置的聲浪，例如消防車或救護車在緊急召喚出動時使用警號所產生的聲響；或減低消防局及救護站的廣播系統及自動摺門所產生的聲響。

#### Our Commitment

Despite constraint in resources, we are committed to protecting the environment and, accordingly, pursuing continual improvement in delivering our services to the community without compromising the efficiency and cost-effectiveness of our core functions. We have established mitigating programmes to reduce the impacts on the environment that may be caused during the delivery of our services. These include :

adopting appropriate practices in fire fighting operations such as:

☆ to use environmentally friendly extinguishing media to tackle fires;

☆ to avoid excessive use of water in fire suppression.

establishing environmental care guidelines in the turn-out of emergency vehicles such as:

☆ to reduce noise generated from audio warning devices such as sirens of fire appliances & ambulances, or from our facilities like the PA systems and folding gates of fire stations and ambulance depots;

節約能源及資源；例如：

reducing the use of energy and resources such as:

☆ 透過減少、再用及循環來減少能源及資源的使用。

☆ to minimize energy and resources consumption through reduction, reuse and recycling.

須符合有關法例的要求；例如：

meeting the legal and regulatory obligations such as:

☆ 減少及監察在執行任務時或由機械及裝備所產生的工業廢料。

☆ to implement appropriate measures to handle wastes generated by operational activities, machineries or equipment.

☆ 減少消防車輛、船隻及救護車的氣體排放。

☆ to reduce emission from fire appliances, vessels & ambulances.

## 環保政策

## Environmental Policy

在執行行動或提供服務時，我們採取對環境負責的態度。為此，我們致力：

We act responsibly to the environment in carrying out operations and delivering services. To this end, we endeavor to:-

☆ 遵守與本處有關的環保法規；

☆ comply with all the legal requirements for environmental protection;

☆ 盡量減少我們在執行職務和工作時對環境所造成的影響，並且節省資源及防止污染，包括排放氣體、產生噪音、排放污水，以及處置廢物；

☆ minimize environmental impacts, conserve resources and prevent pollution arising from our operations and activities in regard to air and noise emission, effluent discharge and the disposal of wastes;

- ☆ 監察及監管會對環境造成嚴重影響的工作及行動；加強防止損害環境；
  - ☆ 在本處的日常運作中採取物盡其用及循環再用的原則；
  - ☆ 提高本處員工的環保意識及推行環保的能力；以及讓員工、承辦商、供應商及市民了解部門的環保政策及管理策略；
  - ☆ 支持公眾環保計劃及活動。
- ☆ monitor and control the significant environmental impacts associated with our activities and operations; enhance prevention of harm to environment;
  - ☆ commit ‘reducing, re-using and re-cycling’ principles into our day-to-day operations;
  - ☆ promote staff’s awareness of and competence in environmental protection ; and to communicate the department’s environmental policy and management strategy to staff, contractors, suppliers and general public;
  - ☆ support public environmental programmes and activities.

## 第3章 環境管理制度

### Chapter 3 Environmental Management System

一九九五年，我們成立了環境審核委員會，由總部總區消防總長擔任主席，而各有關總區的區長／救護監督，以及行政科的行政主任則獲委任為委員。委員會的職權範圍如下：

In 1995, we set up the Environmental Auditing Committee (EAC), chaired by the Chief Fire Officer (Headquarters) with Divisional Officers/Superintendent /Executive Officer appointed from respective Commands and the Administrative Division as members. The EAC has been empowered to:

☆ 加強防止可能損害環境的做法，並提高本處人員的環保意識；

☆ enhance prevention of harm to the environment and promote staff's environmental awareness;

☆ 防止日後出現破壞環境的情況，以及循環再用資源；

☆ prevent future damage to the environment and to recycle resources;

☆ 進一步促進能源效益和節約能源工作；

☆ further promote energy efficiency and conservation;

☆ 在本處執行及管理環保工作，並且定期進行環境審核；以及

☆ conduct and administer the environmental work and periodic environmental audits in the Department; and

☆ 協調本處環境管理制度的發展及推行。

☆ co-ordinate the development and implementation of departmental environmental management systems.



同年，所有消防局及救護站主管獲指派為所屬消防局及救護站的單位環境審核員，協助環境審核委員會發展及推行部門的環境審核及管理制度。

## **監管制度**

每個總區的參事官須擔任節約能源主任，負責監管所管轄範圍的處所的能源消耗情況。每個行動總區的單位環境審核員，亦須每月向所屬總區總部提交能源消耗情況報告，以便監察。

In the same year, all fire station and ambulance depot commanders were appointed as Unit Environmental Auditors of their fire stations/ambulance depots to assist the EAC in the development and implementation of the Department's environmental auditing management systems.

## **Monitoring System**

The Staff Officer of each Command has been appointed as the Energy Economy Officer to monitor the energy consumption on the premises under his purview. The Unit Environmental Auditor of each operational unit has been required to submit monthly energy consumption reports to the Command Headquarters for monitoring purposes.

## 第4章 環保工作表現

### Chapter 4 Environmental Performances

#### 節約能源

消防及救護總區轄下的 80 間消防局(包括兩間機場消防局)及 37 間救護站，是行動人員為市民提供 24 小時服務的基地。部門運作所引致的溫室氣體排放主要是來自消防局及救護站建築物消耗的能源、辦公室的用電、設備的運作及車輛的燃料等。部門已採取一系列措施，務求在這些工作地方節約能源並減少在操作車輛和工具時的氣體排放。

#### 電力消耗

二零一一年度的用電量共 35,368,046 千瓦小時，較二零一零年上升約 4.15%，主要原因是因為部門的人手編制、各類的召喚服務、建築物數目與數碼集群無線電系統基站的數目都有所增加，例如本年新增設了五個數碼集群無線電系統基站，而新落成的上水坍塌搜救專隊訓練場亦正式投入運作。

#### Conservation of Energy

The 80 fire stations (including 2 airport fire stations) and 37 ambulance depots in the fire and ambulance Commands were the bases for the operational staff to deliver 24-hour services to the public. In our operation, greenhouse gas emissions were primarily from energy consumption of fire stations and ambulance depots, electricity for office accommodation, equipment operation and fuels for our fleet vehicles. We had adopted measures to conserve energy at our workplaces and to reduce emissions arising from the operation of our equipment and vehicles.

#### Electricity Consumption

Our total electricity consumption in 2011 was 35,368,046 kWh. It was about 4.15% more than that consumed in 2010 as a result of an increase in establishment, operational activities, number of buildings and TETRA Base Stations, like the installation of five new TETRA Base Stations and commissioning of Training Ground for Urban Search and Rescue Team in Sheung Shui.

我們會繼續在部門內廣傳節省能源的信息《節能環保，人人有責》，以保持整體的用電量在合理的低水平。

## 消防總部大廈節約能源

不少政府部門的辦公大樓每年用電量都超過 500,000 千瓦小時，消防處總部大廈亦是其中之一。本年度總部大廈的耗電量為 6,008,660 千瓦小時。總部大廈於 2011 年 6 月起增設了兩組冷凝器以確保伺服器房間的溫度處於合適的水平。該冷凝器於 2011 年度的耗電量大約為 201,600 千瓦小時，撇除冷凝器的影響，本年度總部大廈的耗電量約為 5,807,060 千瓦小時，比去年度的 5,768,513 千瓦小時輕微上升約 0.67%。用電量上升的主要原因包括總部大廈有外牆裝修工程，屬員在辦公時間以外及假日需留守辦公室以應付緊急事故、颱風或參與演練等等。



We would continue to widely circulate energy conservation messages amongst staff reminding their roles to play in energy consumption in order to achieve our overall target at reasonably low level of electricity consumption.

## Energy Conservation of FSHQ Building

The Fire Services Headquarters Building is one of the major government buildings with annual electricity consumptions exceeding 500,000 kWh. In 2011 calendar year, the energy consumption for the building was 6,008,660 kWh. Two sets of air condensers were newly installed in June 2011 to ensure the temperature of the server room would remain at the optimum level. These two sets of air condensers led to a consumption of about 201,600 kWh in 2011 calendar year. Excluding the consumption made by the air condensers, the energy consumption for the building in 2011 calendar year was about 5,807,060 kWh, which was a slight increase of about 0.67% comparing to the 5,768,513 kWh in 2010 calendar year. The major reasons leading to the increase in electricity consumption include the renovation works of the external walls of the building, staff performing duties at office outside normal office hours and holidays to handle emergencies, typhoons or taking part in exercises, etc.

### 新增設的兩組冷凝器

*The two sets of air condensers newly installed*

## 節約用紙

紙張是珍貴資源，因此我們在使用紙張時，會盡量採取物盡其用及循環再用的原則。為配合電子政府的策略，我們已推行一些電腦輔助系統及資訊科技程式，從而減少使用紙張作記錄用途及處理事務，例如電子文書系統及資訊科技設施普及計劃。

二零一一年度紙張的總耗用量上升了大約 9%至 38,227 令，主要原因是本處的人手及服務需求均有所增加。例如，二零一一年本處聘任的軍裝人員比一零年增加約 9%，由於學員人數上升，因此需要耗用較多紙張以準備教材。另外，二零一一年發出的消除火警危險通知書、消防安全指示/改善消防安全指示，及處理迫切的火警危險投訴分別比去年增加了約 12.6%，4%及 25.6%，這些防火工作亦相應地增加了對紙張的需求。

## Economy in the Use of Paper

Paper is a valuable resource. We strived our best to adhere to the principles of **Avoid, Reduce and Reuse/Recycle** in the use of paper. To keep in pace with the E-Government strategy, we had implemented some computer-aided system and IT Programme such as the Electronic Submission of Administrative Correspondence System and the Accessibility Programme to reduce paper records and transactions.

The paper consumption in 2011 is 38,227 reams, representing an increase of about 9% as against 2010. The surge of paper consumption was mainly due to the increase in establishment and demand of services in the Department. For example, the number of recruits in 2011 was about 9% more than that of 2010. More recruits would pose a greater demand for paper in the preparation of training materials. In addition, the number of Fire Hazard Abatement Notices issued, number of Fire Safety Directions / Fire Safety Improvement Directions issued, and number of complaints of imminent fire hazards handled in 2011 increased by about 12.6%, 4% and 25.6% respectively as compared with 2010. These fire prevention works would lead to a greater demand on paper consumption.

部門上下將繼續致力實施各種環保措施，務求能盡量節約用紙。本處在減少用紙方面的一系列環保措施臚列如下：

☆ 我們鼓勵員工利用內部電子通訊發布通告、電子便箋報告最新的活動訊息或蒐集建議等。另外，我們將分享使用的資料放在部門電子報告板上，以取代複製影印本給使用者；

☆ 使用部門電子電話簿，代替印刷本；

☆ 我們鼓勵善用部門網頁向市民發放資訊。例如本處的年報，為避免浪費紙張，我們將它上載在部門網頁，以供市民參考。我們亦鼓勵員工用電郵取代書信與市民聯絡，既快捷亦環保。部門把執行消防安全政策與規例的資料、管制危險品、消防裝置承辦商註冊程序的資料放在部門網頁『資料公布』報告板上，使市民可以隨時獲得電子複本，從而令資訊更流通，更能有效傳遞訊息；

We will continue to make every effort with a view to reducing paper consumption. Details of our measures to economize the use of papers are listed below:

☆ to encourage our staff to issue e-copy of circulars/memos about activities or for gathering views and suggestion. Besides, we uploaded the information for sharing at the electronic bulletin of the intranet to replace the need for distribution of photocopies to individual users;

☆ to replace the internal hardcopy telephone list with an electronic list;

☆ to make use of departmental homepages as an effective means to disseminate information to the public. For instance, the Fire Services Review had been uploaded to our homepage instead of printing out large number of copies for distribution. We also encouraged our members to communicate with the public through email instead of by post, this way not only could we respond in a more expedite manner but also more environmentally friendly. Reference materials had been placed on the Department's homepages bulletin board - "Information Release", through which information about our licensing procedures, enforcement of fire safety regulations, control on dangerous goods and registration of fire service installation contractors, are more readily accessible in electronic form. These measures have greatly enhanced

the efficiency in information flow to meet the public needs;

- ☆ 如必須列印文件，我們鼓勵員工盡量減少用紙，例如：

縮小篇幅可節省列印用紙，改用小冊子模式列印、壓縮多個畫面放在一頁列印或雙面列印。使用有雙面打印功能的影印機；

使用追蹤修定模式更改文件，毋需逐次列印不同修定文件；

減少影印和避免印製過量複本。利用已使用紙張空白的背面作接收傳真、草擬及影印等用途；

傳真文件時，避免使用傳真引頁；

- ☆ 處理非機密文件時，避免使用信封；

- ☆ 循環使用舊的文件夾或循環使用信封。

- ☆ 定期傳閱有關節約用紙的電子通告，以提倡員工盡量減少用紙。我們鼓勵員工「想清楚才列印」的習慣，如非必要，切勿列印備存。

- ☆ when printed documents were absolutely necessary, to encourage our members to reduce the amount of paper used by means of:

rightsizing approach to save paper e.g. use of booklet mode, multiple images per page printing pre-set function or double-sided printing. Use photocopier with duplex capabilities;

using tracking mode for document amendments in order to avoid printing each amended version;

minimizing photocopies and avoiding producing excessive copies. Reuse the blank side of used papers for photocopying, drafting and receiving faxes;

avoiding the use of fax cover sheets;

- ☆ avoid using envelop for unclassified documents

- ☆ reusing file jackets and envelopes;

- ☆ promoting periodically the message of economizing paper consumption by electronic circulars to staff. We encouraged all users to adopt a "think before you print" practice and consider printing only when absolutely necessary.



## 「綠色僱主」

在 2010/11 課稅年度，透過「稅務易」在網上提交年度個別人士報稅表的消防處僱員佔全部僱員數目的四份之一或以上，因此，本處獲選為「2011-12 年度綠色僱主」以表揚本處對稅報局電子服務及保護環境的支持。

## “Green Employer”

As the number of staff submitting their 2010/11 Tax Returns – Individuals via eTAX had accounted for 25% or above of the total number of staff, FSD was awarded “Green Employer for the year 2011-12” in appreciation of our support of Inland Revenue Department’s e-services and a green environment.



## 「2011-12 年度綠色僱主」獎狀

*Certificate of “2011-12 Green Employer Award”*

## 燃料消耗

消防處工程部及機電工程署汽車維修部人員，定期檢查及維修所有消防車及救護車，確保車輛機件性能良好，避免消耗過量燃料。消防處的車隊在 2011 年的總汽油耗用量為 566,327 公升，而柴油耗用量則為 3,005,907 公升，燃料總耗量為 3,572,234 公升，比上年度的總耗量下降約 2.1%。

本處非常支持政府提倡的“停車熄匙”政策，因此訓令所有本處司機必須嚴格遵守有關規定。

除了教授優良的駕駛技術及安全意識給本處司機外，本處的駕駛訓練學校亦推行環保駕駛，目的是在每一處細微的地方養成良好習慣，將車輛的耗油量、廢氣排放量、以至制動系統、輪胎及機件的損耗減至最低。

## Consumption of Fuel

Staff of the Fire Services Workshops and the Electrical & Mechanical Services Department conducted periodical maintenance and necessary repairs to ensure that our fire appliances and ambulances were maintained at the most optimum mechanical efficiency to avoid excessive fuel consumption. In 2011, the FSD vehicle fleet consumed about 566,327 litres of petroleum and 3,005,907 litres of diesel, totaling 3,572,234 litres which was about 2.1% less than the last year's total consumption.

This Department had been very supportive towards the government's "switch off idling vehicles" policy and required all Service drivers to strictly comply with the requirements.

Besides imparting good driving skills and safety awareness to our drivers, our Driving Training School also promoted "Eco-driving", with attention paid to every single little detail so as to reduce the fuel consumption and emissions, as well as minimize the depreciation of the braking system, tires and the different mechanical components.

## 減少噪音影響

當消防或救護車被緊急召喚時，消防局／救護站內的緊急廣播系統、自動摺門，以及消防車／救護車的警號，均會產生不同程度的噪音。爲了減低噪音影響，消防處已推行以下消滅噪音措施：

### 消防局及救護站的緊急廣播系統

☆ 除了向所有行動單位發出指示在夜間把緊急廣播系統的音量調低外，我們還加入音量調校時間掣，進一步減低對社區的噪音污染。

### 消防車及救護車警號的使用

☆ 警號可幫助消防車或救護車快速抵達緊急事故現場，而警號所發出的聲響，更可以紓緩等待救援及求助者的疑慮。不過，警號所產生的噪音，難免對公眾造成滋擾。爲了在這兩方面取得平衡，本處已有明確訓令說明如何妥善使用警號，包括指示車輛主管在深夜時分酌情使用

## Reduction of Noise Impact

Noise was inevitably generated by the emergency broadcasting systems, the automatic folding-doors at fire stations/ ambulance depots and the sirens of the fire appliances/ ambulances in responding to emergency calls. We implemented the following mitigating measures to reduce the noise pollution levels:

### Emergency Broadcasting System in Fire Stations and Ambulance Depots

☆ Apart from instructing all operational units to tune down the volume of the emergency broadcasting systems during night time, we had also installed the volume control timers which further reduced our noise pollution to the community.

### Use of Siren by Fire Appliances and Ambulances

☆ the purpose of using siren mounted on fire appliances or ambulances was to enable them to promptly arrive at the scene of incident. The sound of siren also provided a form of reassurance to persons awaiting assistance or rescue and to comfort their anxieties. However, the noise inevitably caused nuisance to the public. With a view to striking a balance, the Department had laid down clear orders on the proper use

警號，可以根據當時的路面或交通情況，關掉或間歇使用聲響示警裝置。

of siren which included instructing the officers-in-charge to exercise discretion during the night time to either switch off the audio warning devices or use them intermittently, according to the prevailing road configuration or traffic condition.

### 消防局／救護站的自動摺門

### Automatic Folding Doors of Fire Stations and Ambulance Depots

☆ 為減低操作摺門所引致的噪音滋擾，消防處已在自動摺門安裝變速驅動裝置，作為消滅噪音的措施。此外，本處策劃組亦已將有關系統納入所有新建消防局及救護站的設計內。有此裝置後，本處自二零零八年已沒有收到市民提出有關自動摺門發出噪音的投訴。

☆ to reduce the noise generated from the operation of folding doors, variable speed drivers had been installed as a mitigation measure on all the existing automatic folding doors. Moreover, Planning Group of this Department had also included such device in the design of all new fire stations and ambulance depots. With the installation of such device, this Department had received no complaint since 2008 regarding the noise caused by automatic folding doors.



### 設有減低噪音裝置自動摺門的救護站

*Folding gates at Ambulance Depot installed with noise mitigation measure*

## 改善空氣質素

### 控制車輛的廢氣排放

在車輛進行一般維修檢查時，工程部的同事會進行車輛氣體(燃釋氣體分析)測試；以及柴油汽車排放(黑煙密度)測試，以確保本處車輛排放符合法例的要求。

### 汽車排氣設備

所有新的消防局及救護站均已在車房安裝廢氣設備。有關設備可以把消防車及救護車引擎排放抽走，從而改善工作地點之空氣質素。

### 氣體回收系統

機電工程署為所有消防局／救護站的汽油加油站安裝第II期氣體回收系統的工程已於2008年完成，表示本處已符合《空氣污染管制(油站)(汽體回收)規例》的最新要求。有關回收系統可減少對氣候有損害的碳氫化合物釋放到大氣層。

## Improving the Air Quality

### Vehicle Emission Control

Our workshop staff had conducted the Vehicle Emission (Gases Analysis) tests/ Diesel Vehicle Emission (Smoke Density) tests in the routine maintenance and servicing to ensure that the emission of our vehicles was in full compliance with legal requirements.

### Vehicle Exhaust System

All new fire stations and ambulance depots were equipped with fume exhaust systems at the appliance rooms. The systems served to extract exhaust from engines of fire appliances and ambulances and thus improve air quality in the workplaces.

### Vapour Recovery System

EMSD had completed the installation programme for Phase II Vapour Recovery Systems in all petrol filling stations in our fire stations/ambulance depots in 2008, which indicated that this Department has fully complied with the latest requirements of the Air Pollution Control (Petrol Filling Stations) (Vapour Recovery) Regulations. Such systems help reducing climate damaging hydrocarbon emission being released into the atmosphere.

## 廢物管理

### 廢物分類及循環再用

本處深明到地球的資源有限，因此我們除了努力減少浪費外，更鼓勵全體人員參與廢物分類及循環再用計劃，並於二零一一年在工作間收集了約 18,394 公斤可循環再用的廢紙，相等於大約 6,435 令紙張，大約佔本處全年耗紙量的 17%。

### 創意善用廢棄輸水喉

本處鼓勵同事利用廢棄輸水喉自行製作模型假人供訓練使用。模型假人不單成本低，同事亦可自行調節假人的重量以配合不同訓練需要。此舉能善用廢棄輸水喉以製作實用的訓練工具，符合循環再用的環保原則。



## Management of Wastes

### Waste Separation and Recycling

The Department fully understood that Earth's resources were limited. As such, we encouraged all members to take part in the waste separation and recycling programme. In 2011, about 18,394 kg of papers were collected from our workplaces for recycling, which was equivalent to about 6,435 reams of papers or about 17% of the Department's paper usage for the entire year.

### Creative Use of Out-of-Service Hoses

The Department encourages members of fire stations to use out-of-service hoses to construct "hose dummies" for training purpose. The weight of such low-cost hose dummies could be flexibly altered to cater for different training needs. This act of creating practical training tools out of dilapidated hoses goes in line with the principle of recycling.

#### 利用廢棄輸水喉製成的模型假人

*A hose dummy made from out-of-service hoses*



## 有效善用舊抗火衣

由二零一一年四月起，消防處全面使用 PBI Matrix 構築物滅火防護服(俗稱「黃金戰衣」)，取代之之前採用的碧士圖抗火衣(俗稱「太空褸」)。為推動環保理念，部門安排屬員保留舊有「太空褸」，用作局內操練時穿著。此外，部門亦會安排回收退休及離職屬員的「太空褸」，經徹底清洗及消毒後分發給屬員於操練時使用。此舉不單充份利用現有資源，亦減低因經常穿著 PBI Matrix 構築物滅火防護服進行操練而須清洗所引致的耗損。

## 化學廢物

根據《廢物處置條例》(第 354 章)的《廢物處置(化學廢物)(一般)規例》，截至二零一一年十二月三十一日本處共有 112 個單位登記為化學廢物產生者。本處亦已安排註冊化學廢物收集商，收集該等單位所產生的化學廢物。

在二零一一年，本處交由註冊承辦商回收處理的液體化學廢物，如廢機油、廢棄電池酸換液，合共 24,200 公升。

## Effective Use of Old Tunic

Since April 2011, the Department has replaced the Bristol Tunic with the PBI Matrix Structural Firefighting Protective Suit. For environmental reasons, members are arranged to retain their old Bristol Tunics for training purpose inside fire stations. In addition, the Department would collect Bristol Tunics from members who have retired / left the service, and distribute those thoroughly washed and sterilized Tunics for members to use in training. Such arrangement fully utilized the resources available, as well as reduced the wear and tear of the PBI Matrix Structural Firefighting Protective Suit due to frequent use and washing.

## Chemical Wastes

As at 31<sup>st</sup> December 2011, a total of 112 units of the Department had been registered as Chemical Waste Producers under the Waste Disposal (Chemical Waste) (General) Regulation of the Waste Disposal Ordinance (Chapter 354). Proper arrangements had been made with registered chemical waste collecting contractors to collect the chemical waste produced in these units.

In 2011, a total of 24,200 litres of liquid chemical wastes, e.g. used lubricating oil and spent battery acid refilling were collected by the registered contractor for recycling and disposal.

此外，本處亦安排回收一些固體化學廢物，包括 36 桶(每桶 200 公升)沾有機油的布碎和 26 桶(每桶 200 公升)沾有機油的廢棄過濾芯。

## **醫療廢物**

救護人員在提供救護及輔助醫療服務時所產生的醫療廢物，會被妥善放置在醫院的醫療廢物箱。

## **家居廢物回收**

本處為支持環保署在政府宿舍及屋邨舉辦的「家居廢物源頭分類計劃」，在多個消防宿舍大廈的電梯大堂、垃圾房或樓梯，設置廢物分類回收桶進行廢物源頭分類。

在 2011 年，消防處多幢政府宿舍在上述廢物回收計劃取得滿意的成績，將軍澳消防宿舍榮獲銀獎，而永定道消防已婚宿舍、消防處黃大仙員佐級已婚人員宿舍、柴灣消防員佐級已婚人員宿舍、西營盤郵政局大廈（消防員已婚宿舍）與薄扶林道消防官員政府宿舍亦獲頒優異獎。

A total of 36 drums (200 litres capacity) of cloth, rags soaked with lubricating oil and 26 drums (200 litres capacity) of spent filter with lubricating oil were also collected.

## **Medical Wastes**

Medical wastes generated in the course of providing ambulance and paramedic services by ambulance staff were properly disposed of in the infectious waste containers of hospitals.

## **Domestic Waste Recovery**

In order to support EPD's Programme on 'Sources Separation of Domestic Waste' in government quarters and other estates, waste separation bins had been placed at lift lobbies, refuse storage rooms or staircases of the FSD quarters.

In 2011, a number of FSD quarters achieved remarkable results in the Recycling Programme. Tseung Kwan O Fire Services Quarters won the Silver Award while Wing Ting Road Fire Services Quarters, Wong Tai Sin Fire Services Rank & File Married Quarters, Chai Wan Fire Services Rank & File Married Quarters & Sai Ying Pun Post Office Building (FSD Married Quarters) were awarded with Certificates of Merit.



**消防處宿舍在廢物回收計劃中獲頒的部份獎狀**

*Some of the certificates awarded to Fire Services Quarters in the Recycling Programme*

## 第5章 環保採購政策

### Chapter 5 Green Procurement Policy

為持續改善環境，消防處已在投標規格要求方面採用環保措施。截至二零一一年年底，本處共有 595 輛符合歐盟 III 或以上廢氣排放標準的車輛服役。此外，86 輛符合歐盟 IV 或以上廢氣排放標準的新車將於二零一二年投入服務。本處將會採購 52 輛消防車及 54 輛救護車作為更換舊車之用，從而減少車輛廢氣排放。

在採購工具時，我們會盡量考慮環保因素，例如能源效益及循環再用問題等。此外，本處會盡量考慮依照政府物流服務署的環保產品清單，採購消耗品。

For continual improvement, green procurement measures had been incorporated in tender specifications. Under such procurement policy, by the end of 2011, a total of 595 Fire Services vehicles were in compliance with Euro III or above emission standards. In addition, 86 new vehicles with Euro IV or above emission standards will be put into commission in 2012. We will further procure 52 fire appliances and 54 ambulances to replace aged vehicles which will also reduce emissions.

In the procurement of equipment, we took into account environmental factors such as energy efficiency and recyclability as far as practicable. Moreover, considerations were also given to procure consumable items from the Green Products List of the Government Logistics Department.

在二零一一年，我們採用了約 1,496 個循環再造的打印機碳粉盒，又安排承辦商回收 2,488 個已使用的打印機碳粉盒。我們在二零零七年訂定維修保養合約時，已經把這種環保做法推廣至回收傳真機的碳粉盒。而在這類型的碳粉盒方面，本處今年在已採購的 493 個碳粉盒中回收了 379 個，其餘的將會在消耗後回收，確保可以循環再用。

In 2011, we acquired 1,496 nos. of recycle toners cartridges and arranged the collection of 2,488 used toners by contractors. During the renewal of maintenance contract in 2007, recycling of used toner cartridges for facsimile machines was arranged. For this type of toner cartridges, we had recycled 379 cartridges out of the 493 procured in 2011, where the remaining cartridges will be recycled after they are completely used.

## 第6章 二零一一年主要環保措施

### Chapter 6 Major Environmental Initiatives in 2011

#### 「零山火計劃」

為保護大自然，部門於二零零七年推行全新的防止山火宣傳策略-「零山火計劃」，提高市民對山火隱患的警覺性。

過往的資料顯示，大部分的山林火都在清明節及重陽節期間發生。有見及此，消防處舉辦「零山火計劃」的目的，是鼓勵全港的鄉村參與防止山火，務求羣策羣力，大幅減少山林火發生，為保護環境而各盡一分力。

參與這項計劃的鄉村，須承諾在清明節及重陽節指定的時間內，確保其所屬範圍內沒有山林大火發生。能夠實現承諾的村落會得到消防處處長簽發的證書，以資鼓勵。二零一一年的兩個節日，共有多達 573 條參與的

#### “Zero Hill Fire Scheme”

With a view to protecting our countryside, the Department had launched the “Zero Hill Fire Scheme” in 2007 which was a campaign strategy to engage the community to increase their awareness of the hazards of hill fires.

It was shown in the past that most hill fires occurred around Ching Ming and Chung Yeung Festivals. The Campaign, “Zero Hill Fire Scheme” was aimed to encourage all rural villages in Hong Kong to participate in the prevention of hill fires. We hoped that with the concerted effort of all villages, we could better protect our environment by reducing significantly the number of hill fires.

All participating villages undertook that there would be no hill fire within their village area during a designated period around the Ching Ming Festival and Chung Yeung Festival. A certificate from the Director of Fire Services would be awarded as a token of appreciation to those villages which had succeeded in



鄉村能夠達到「零山火」目標。值得注意的是，自 2007 年推行這計劃起，每年參與的鄉村數目都有所增加，證明此計劃得到認同。

their undertaking. In 2011, 573 villages had successfully hit the target of “Zero Hill Fire” and were awarded. We were pleased to note that the number of participating villages has been increased yearly since the launching of the scheme in 2007, indicating that the scheme received recognition.



二零一一年消防處「愛護林木防止山火推廣日」開幕禮  
*The Opening Ceremony of 'Zero Hill Fire Scheme' 2011*

## 改善室內空氣質素

為響應政府提倡改善室內空氣質素的政策，本處已研究不同的可行方案。經過審慎考慮後，本處採取一系列措施提升空氣質素，例如在市場尋找合適的工具或儀器，以減少室內空氣污染物；清洗冷氣喉管，改善機械通風及空調系統等。

## Indoor Air Quality Improvement

To echo the government's policy on improving Indoor Air Quality Control, the Department has looked into various options to enhance the indoor air quality of our office premises. We have implemented a number of measures, such as searching for suitable tools/equipment in the market which would reduce the level of indoor air pollutants, arranging cleansing of air ducts to improve the MVAC system etc.

消防處總部大廈在去年的室內空氣質素檢定計劃中獲得「良好級室內空氣」的認證。實際上所有屬消防處的處所已達到室內空氣質素(良好級)的指標。

**消防處總部大廈於 2011 年獲得  
「良好級室內空氣」的認證**

*Fire Services Headquarters Building  
awarded the “Indoor Air Quality  
Certificate (Good Class)” in 2011*

Fire Service Headquarters Building had been awarded the “Indoor Air Quality Certificate (Good Class)” in 2011. In fact, all the Fire Services premises had met the Indoor Air Quality Limitation Guidelines (Good Class).



**消防局／救護站的天台綠化工程**

在二零一一年，以下消防處所的天台綠化工程已竣工：-

- (1) 寶琳消防局
- (2) 荔枝角消防局
- (3) 觀塘消防局

綠化植物及土壤層於屋頂造成隔熱，除了美化環境外，某程度上還可減少能源消耗，從而減低碳排放量。

**Green Roofing of Fire Station and Ambulance Depot**

In 2011, green roofing system was implemented in the following Fire Services premises:-

- (1) Po Lam Fire Station
- (2) Lai Chi Kok Station
- (3) Kwun Tong Fire Station

The green roof substrate soil and vegetation, apart from beautifying the roof, brought positive effect to urban climatic change by reducing a certain degree energy demand through direct shading and better insulation of the roof.



**觀塘消防局的天台綠化工程**

*Green roof at Kwun Tong Fire Station*



**荔枝角消防局的天台綠化工程**

*Green roof at Lai Chi Kok Fire Station*

於二零一二年度被考慮納入綠化天台工程的消防處建築物臚列如下： -

- 旺角消防局
- 油麻地消防局
- 油塘消防局
- 馬頭涌消防局

The following FS buildings were considered to be selected for implementation of green roofing in 2012:

- Mong Kok Fire Station
- Yau Ma Tei Fire Station
- Yau Tong Fire Station
- Ma Tau Chung Fire Station

## **第7章 藍天行動及清新空氣約章**

### **Chapter 7 Blue Sky Action and the Clean Air Charter**

#### **藍天行動**

為改善我們的生活環境及香港的空氣質素，本處全力支持由環境保護署所推出的「藍天行動」的運動。總區環境審核員會嚴格檢討所屬總區的行動及日常活動，並且推行有助香港建立藍天的措施。本處已提醒屬員遵行措施以減少車輛、船隻及設備的排放。

#### **清新空氣約章**

為執行約章的承諾宣言，本處已於二零零七年成立能源及排放管理小組，成員來自各總區的代表。

能源及排放管理小組負責確定氣體的排放源頭及能源耗用的數據，從而制訂減排目標，制訂及推行減少排放氣體及節約能源的措施。此外，小組除了向環境審核委員會匯報小組的工作，亦安排工作匯報以加強同事的認知，保持他們對空氣清新目標的熱忱。

#### **Blue Sky Action**

The Department is in support of the 'Action Blue Sky' campaign launched by EPD. Command Environmental Auditors have been invited to review operations and daily activities conducted in respective Commands critically and put forward measures that are conducive to building up a Blue Sky in Hong Kong. Members of the Department have also been reminded to observe the measures that would help reduce emission from our vehicles and equipment.

#### **Clean Air Charter**

To fulfill the commitments under the Clean Air Charter, the Department has set up an Energy and Emission Management (EEM) Team with representatives from different Commands.

The EEM Team has been tasked to identify air emissions and energy consumption, establish energy/ emissions reduction targets, design and implement measures to reduce emission and minimize energy consumption etc. In addition to reporting the achievement to the Environmental Auditing Committee, the EEM Team would also provide briefings to our staff in raising staff awareness of and enthusiasm for clean air targets.

## 第8章 加強員工環保意識的訓練

### Chapter 8 Staff Awareness Training

屬員自願參與實行環保措施，是部門成功建立環保文化的關鍵。為鼓勵屬員參與建立環保文化，環境審核委員會編製了《香港消防處環境管理手冊》，從而提醒並協助屬員。我們會致力確保所有員工具備所需的技巧、知識，以及了解部門對環保的重視，從而得到他們全力支持上文提及的目的及目標。

總區／單位環境審核員會已經定期就環保表現進行內部審核，確保朝着正確的方向進發。環境審核委員會找出不符合環保的情況後，會建議相應的糾正和預防措施。環境審核委員會亦會不時發出電子郵件，就內務管理提出環保要訣及最佳的工作守則，提醒屬員注意環保，以及繼續努力建立更環保的工作場所。

Members' willingness to participate in green initiatives is crucial to the success in building a green culture in the Department. With a view to fostering staff involvement, the Environmental Auditing Committee has compiled a "Departmental Manual on Environmental Management" to remind and assist its members in this respect. We would ensure that all staff have the necessary skills, knowledge and understanding on the Department's green policy in order to get their support in the stated objectives and targets.

Environmental Management Teams of Commands/Units have periodically conducted internal auditing on performance, making sure that the targets are kept on track. The Environmental Auditing Committee suggests corrective and preventive actions if any irregularities are identified. From time to time, the Environmental Auditing Committee reminds members by issuing green tips and best practices in housekeeping through e-mails. Members are also reminded to make continuous effort towards a greener workplace.

爲了在部門內培養環保管理，消防處已提名環境審核員、有關主管或能源及排放小組成員，參加由政府部門及其它環保機構籌辦的簡介會及經驗分享工作坊，了解影響環境的立法工作及推廣環保措施。

To foster the culture of environmental protection management in the Department, Environmental Auditors, relevant supervisors or EEM Team members have been nominated to attend briefings and experience sharing workshops on the relevant legislative initiatives and green management measures organized by the relevant government departments and organizations.



## 第9章 目標及措施

### Chapter 9 Targets and Initiatives

本處二零一一年的環保管理工作進展良好，大部分目標均已達到。為不斷改善環保管理的工作，以及推廣環保意識，本處已制定二零一二年的工作目標，詳情如下：

#### 節約用電

節省能源及改善用電都有助減低溫室氣體的排放，紓緩地球暖化問題。就這方面，我們會繼續落實各項節能措施，並找出有待改善能源管理的空間。我們會繼續探討內部綠色環保管理實務建議，加強辦公室在節省能源及其他資源方面的環保措施。

#### 節約用紙

我們盡量減少出版印刷刊物，改為採用電腦文件檔案；又鼓勵同事多利用電子方式、以內部電腦伺服器傳遞電子信息的溝通方式；以及多善用部門的網站向市民公佈有用的資訊。

We had made satisfactory progress in meeting the environmental management targets in 2011. To keep up continual improvement in green management and to promote a green culture, we have set for ourselves the following targets and initiatives for 2012:

#### Saving of Electricity

Both energy saving and improving energy efficiency would help reduce greenhouse gas emission and alleviate global warming. In this aspect, we would continue to implement energy saving measures and to identify any potential energy management opportunities. We would continue to explore green housekeeping practices to minimize the use of energy and other resources in our offices.

#### Saving of Paper

We would try to reduce paper consumption through production of reports in soft copies. We would continue our efforts to develop electronic systems and promote in-house use of intranet for communication and use Departmental Website for dissemination information to the public.

## 天台綠化工程

我們與負責保養的單位緊密合作，為所挑選的消防局和救護站推行天台綠化工程。天台種植不但有美化環境的價值，更能為建築物提供隔熱效用。

## 改善空氣質素

為了維持良好的空氣質素，本處會繼續確保部門轄下的處所達到室內空氣質素「良好級」或以上的指標。

## 環境管理體系

本處部分工作單位已取得 ISO14001 環境管理體系認證的經驗，本處會考慮在其他工作單位實施有關體系，相信屬員的環境保護意識將會藉此而大大提升。

## Green Roofing System

We would work closely with our maintenance agent to implement green roofing system at selected fire stations and ambulance depots. The growing of plants on roofs would not only give aesthetic value to the environment, but also provide insulation effect to the building.

## Improving air quality

To help maintain good air quality, we would continue to ensure the indoor air quality of our premises to meet the 'good class' or above standard.

## Environmental Management Systems

With experience from the ISO 14001 accreditation of some of our echelons on environmental management systems, the Department would consider to extend the implementation of the environmental management system to the other echelons. It is envisaged that members' awareness on environmental protection would be greatly enhanced thereby.

## 第10章 索取資料的途徑

### Chapter 10 Sources of More Information

如果需要更多有關資料，請致電 2733 7820 查詢，或致函消防處，地址如下：

香港  
九龍  
尖沙咀東部  
康莊道 1 道  
消防處總部大廈  
消防處

你亦可瀏覽消防處網址：

<http://www.hkfsd.gov.hk>

歡迎你提出寶貴意見。你可填寫夾附的回應表格，然後郵寄至上述地址，亦可電郵至下列地址：

[hkfsdenq@hkfsd.gov.hk](mailto:hkfsdenq@hkfsd.gov.hk)

For more information, please give us a call at 2733 7820 or write to us at:

Fire Services Department  
Fire Services Headquarters Building  
1 Hong Chong Road  
Tsim Sha Tsui East  
Kowloon  
Hong Kong

You may also visit our Web Site at :

<http://www.hkfsd.gov.hk>

Your valuable comments are most welcome. You may send them by mail and by using the enclosed feedback form to the above address or by email to:

[hkfsdenq@hkfsd.gov.hk](mailto:hkfsdenq@hkfsd.gov.hk)

## 回應表格

# 我們重視你的意見

你的寶貴意見有助我們改善環保管理制度

(請填妥以下問卷，並傳真至消防處總部管理組，傳真號碼：2739 5879)

1. 這份報告書能否提供所有你想知道的香港消防事務環保資料?

是

否

2. 如果上題所選的答案為“否”，你希望我們在下一份環保報告書內加入什麼資料？

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3. 這份報告書的整體篇幅及內容如何?

太短

太長

適中

其他：\_\_\_\_\_

4. 其他意見：

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5. 你屬於那個團體?

市民

環保組織成員

公務員

其他：\_\_\_\_\_

\* 如果希望我們回覆，請提供以下資料：

姓名： \_\_\_\_\_

聯絡方法： \_\_\_\_\_

## Feedback Form

### YOUR OPINION IS IMPORTANT TO US

#### We value your opinion as a way to improve our Environmental Management System

(Please complete the questionnaire and return it to Fire Services Headquarters, Management Group by Fax. No. 2739 5879)

1. Can the report provide you with all the Environmental Protection information that you want to know in relation to Fire Services in Hong Kong?

Yes  No

2. If your answer to question 1 is "No", what additional information will you want us to include in our next Environmental Report?

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3. How is the overall length and content of the Report?

Too short  Too long  About Right

Others: \_\_\_\_\_

4. Other comment:

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5. What is your affiliation?

Member of the Public  Environmental Protection Group Member

Civil Servant  Others: \_\_\_\_\_

\* If you want us to respond to you, please provide the following information:

(Name): \_\_\_\_\_ (Contact): \_\_\_\_\_