



# 香港消防處 環保報告 2014

## HONG KONG FIRE SERVICES DEPARTMENT ENVIRONMENTAL REPORT 2014



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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。消防處轄下共有 9,443 名軍裝人員及 720 名文職人員，管理 81 間消防局(包括兩間機場消防局)、38 間救護站、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 間訓練中心、西九龍救援訓練中心、上水坍塌搜救專隊訓練場，及昂洲消防處潛水基地。為執行職責，部門管有 1,006 輛消防車、救護車及支援車輛，以及 21 艘滅火／救援船隻。

二零一四年，消防處處理了 36,335 宗火警召喚、33,420 宗特別服務召喚，當中包括交通意外、工業意外、氣體洩漏、山泥傾瀉及水浸等等；以及 747,437 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 10,793 份消除火警危險通知書、19,909 份消防安全指示／改善消防安全指示以及作出了 823 宗檢控。

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

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. There are 9,443 uniformed members and 720 civilian staff working in the Department. The Department manages 81 fire stations (including 2 airport fire stations), 38 ambulance depots, 8 fireboat stations (including 2 airport sea rescue berths), 5 office-based workplaces, 4 fire appliance workshops, 2 training centres, 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 operates a fleet of 1,006 fire appliances, ambulances and supporting vehicles plus a fleet of 21 fire boats and support vessels.

In 2014, FSD responded to 36,335 fire calls, 33,420 Special Service calls (including traffic incidents, industrial accidents, gas leakages, landslides, floods, etc.) as well as 747,437 ambulance calls. A total of 10,793 Fire Hazard Abatement Notices and 19,909 Fire Safety Directions/Fire Safety Improvement Directions were issued to owners/occupiers of buildings and premises with special fire risks, along with conducting a total of 823 prosecutions.

As an emergency service Department, FSD is not only responsible for fire-fighting, rescue and fire protection,

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。
- ✧ 以符合歐盟V廢氣排放標準的消防車作為更換舊車之用，從而減少車輛廢氣排放。

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 goods or chemicals 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.
- ✧ to replace aged fire appliances with vehicles of Euro V emission standards, which would reduce emissions.

## 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：

☆ 透過減少、再用及循環來減少能源及資源的使用。

須符合有關法例的要求；例如：

☆ 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。

☆ 減少消防車輛、船隻及救護車的氣體排放。

reducing the use of energy and resources such as:

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

meeting the legal and regulatory obligations such as:

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

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

## 環保政策

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：

☆ 遵守與本處有關的環保法規；

☆ 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；

## Environmental Policy

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

☆ comply with all the legal requirements for environmental protection;

☆ 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

自一九九五年，我們已成立了環境審核委員會，由總部總區助理處長擔任主席，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：

Since 1995, we set up the Environmental Auditing Committee (EAC), chaired by the Assistant Director of Headquarters Command with Divisional Officers/Superintendent and 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 is 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 81 間消防局(包括兩間機場消防局)及 38 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

二零一四年的用電量共 35,595,665 千瓦小時，較二零一三年上升約 3.12%，主要是因為部門的人手編制、部門行動車輛及各類召喚服務都有所增加。例如，部門行動車輛數目多增了 3.60%，另外，救護召喚服務亦增加了 3.78%。

#### Conservation of Energy

The 81 fire stations (including 2 airport fire stations) and 38 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 2014 was 35,595,665 kWh. It was about 3.12% more than that consumed in 2013 as a result of an increase in establishment, operational vehicles and operational activities. For example, the number of operational vehicles increased by 3.60%, and the ambulance calls increased by 3.78%.

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 6,560,460 千瓦小時，比去年度的 6,343,785 千瓦小時上升約 3.42%。

用電量上升主要因為器材增加以及總部的整體使用率上升所致。例如，部門正開發一套資產管理及保養系統，以改良採購程序及資產管理，令耗電量增加。

除了繼續在翻新工程時將 T8 光管照明設施更換為更具節能效益的 T5 光管照明設施以及在非繁忙時間關掉部分升降機外，我們更進一步推行了以下節省能源的措施:-

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 (FSHQ) Building is one of the major government buildings with annual electricity consumptions exceeding 500,000 kWh. In 2014, the energy consumption for the building was 6,560,460 kWh, which increased of about 3.42% comparing to the 6,343,785 kWh in 2013.

The major reasons leading to the increase in electricity consumption include installation of additional equipment and increase of overall usage of the building. For example, we were developing the Asset Management and Maintenance System (AMMS) to enhance procurement process and assets management, which would entail a higher electricity consumption.

Other than continuing the replacement of T8 fluorescent light fittings by more energy efficient T5 fluorescent light during our refurbishment works and to switch off some elevators during off-peak hours, we had also implemented the following more pro-active energy saving measures:-

- ☆ 在翻新工程時將一些照明設施的線路改為由幾組電路控制，方便根據所需光度選擇開關光管的數量，盡量節省用電；
  - ☆ 更換老化升降機從而改善成本效益；
  - ☆ 將多個工作平台連接到一個列印機增加用量，減少閒置時間，改善機器效能從而避免浪費電力。
- ☆ to wire light fittings into several circuit arrangements during refurbishment works so that users could control different fluorescent tubes according to the required illumination and reduce electricity consumption;
  - ☆ to replace aged elevators to improve efficiency;
  - ☆ to connect different work stations to one printer to maximize usage and minimize idling time, improve the efficiency of the machine thus lessen electricity wastage.

## 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。

二零一四年度紙張的總耗用量上升了大約 2.66% 至 47,842 令，主要原因是本處的人手及服務需求均有所增加。例如，二零一四年發出的消除火警危險通知書比去年增加了約 31.99%。而且，

## 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 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 2014 is 47,842 reams, representing an increase of about 2.66% as against 2013. The surge of paper consumption was mainly due to the increase in establishment and demand of services in the Department. For instances, the

防火巡查亦比去年增加了11.15%，相應增加的行政工作亦耗用了較多紙張。另外，部門正籌劃興建新的消防局、救護站，以及新的消防及救護學院，並開發一套資產管理及保養系統，以改良採購程序及資產管理，這些工作都增加了對紙張的需求。

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

number of Fire Hazard Abatement Notices issued in 2014 increased by about 31.99% as compared with 2013. Besides, the number of inspections for fire protection was 11.15% higher than last year, leading to an increase in paper consumption for additional administrative works. Moreover, we were planning to build new fire stations, ambulance depots and new Fire and Ambulance Services Academy. We were also developing the AMMS to enhance procurement process and assets management. All these works entailed a greater demand on paper consumption.

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

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；

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：

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

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；

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;

使用追蹤修定模式更改文件，毋需逐次列印不同修定文件；

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

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；

minimizing photocopies and avoiding producing excessive copies. Reuse the blank side of used papers to photocopy, print and receive faxes;

傳真文件時，避免使用傳真

avoiding the use of fax cover sheets;

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。

透過使用「綜合發牌、消防安全及檢控系統」，減少需列印存檔的文件數目。

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.

reducing the number of hardcopies kept in case files through the use of Integrated Licensing, Fire Safety and Prosecution System (LIFIPS).

## 燃料消耗

消防處工程部和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。消防處的車隊在二零一四年的總汽油耗用量為 324,575 公升，而柴油耗用量則為 3,262,892 公升。燃料總耗量為 3,587,467 公升，比上年度的總耗量輕微上升約 0.93%。主要是因為各類召喚服務有所增加。

## 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 2014, the FSD vehicle fleet consumed about 324,575 litres of petroleum and 3,262,892 litres of diesel, totaling 3,587,467 litres which was about 0.93% slightly more than the last year's total consumption. The major reason accounting for the change was an increase in number of emergency calls.

本處非常支持政府提倡的“停車熄匙”政策，除訓令所有本處司機必須嚴格遵守有關規定外，更鼓勵屬員在工餘駕駛時停車熄匙。

除了教授優良的駕駛技術及安全意識給本處司機外，本處的駕駛訓練中心亦推行環保駕駛，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。

## 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。為了減低噪音影響，消防處已推行以下消減噪音措施：

### 消防局及救護站的緊急廣播系統

This Department had been very supportive towards the government's "switch off idling vehicles" policy. Not only did we require all Service drivers to strictly comply with the requirements, but also encouraged our members to practice the same driving manner when driving their private cars.

Besides imparting good driving skills and safety awareness to our drivers, our Driving Training Centre 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.

## 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



☆ 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。為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。

### 消防局／救護站的自動摺門

☆ 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，作為消減噪音的措施。此外，本處策劃組亦

☆ 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 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.

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

☆ 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

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。



**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*

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.

## 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二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 would conduct 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 reduce climate damaging hydrocarbon emission being released into the atmosphere.

## 停車熄匙

部門每半年都會以電郵形式提醒單位主管，所有駕駛政府車輛的司機必須嚴格遵守《汽車引擎空轉(定額罰款)條例》(第 611 章)。

## 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，並於二零一四年在工作間收集了約 21,863 公斤可循環再用的廢紙，相等於大約 9,348 令紙張，大約佔本處全年耗紙量的 19.54%。

### 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。

## Switching Off Idling Engines

An email reminder will be issued to Unit Commanders on a biannually basis to encourage drivers of government vehicles to strictly comply with the requirements set out in the Motor Vehicle Idling (Fixed Penalty) Ordinance (Cap 611).

## 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 2014, about 21,863kg of papers were collected from our workplaces for recycling, which was equivalent to about 9,348 reams of papers or about 19.54% 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。

### 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.

## 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》，截至二零一四年十二月三十一日本處共有 114 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。

在二零一四年，本處將 34,400 公升的廢機油交由註冊承辦商回收處理。此外，本處亦安排回收一些固體化學廢物，包括 29 桶(每桶 200 公升)沾有機油的布碎，20 桶(每桶 200 公升)沾有機油的廢棄過濾芯，200 公斤含有汞的光管和 960 件廢棄的汽車電池。

## 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，會暫存在設有「醫療廢料貯存櫃」的救護站，然後由指定承辦商收走及妥善棄置。

## Chemical Wastes

As at 31<sup>st</sup> December 2014, a total of 114 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 2014, a total of 34,400 litres of used lubricating oil were collected by the registered contractor for recycling and disposal. A total of 29 drums (200 litres capacity) of cloth, rags soaked with lubricating oil, 20 drums (200 litres capacity) of spent filter with lubricating oil, 200 kg of spent HG-containing fluorescent tubes and 960 numbers of used vehicle-used-type batteries were also collected.

## Clinical Waste

Clinical waste generated in the course of providing ambulance and paramedic services by ambulance staff would be temporarily stored in ambulance depots installed with “Clinical Waste Storage Cupboard”. Those clinical waste would then be collected and properly disposed of by designated contractors.

## 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。截至二零一四年年底，本處共有 694 輛符合歐盟 IV 或以上廢氣排放標準的車輛服役。此外，31 輛符合歐盟 V 廢氣排放標準的新車將於二零一五年投入服務。本處已採購及擬採購 153 輛符合歐盟 V 廢氣排放標準的消防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。

在二零一四年，我們安排承辦商回收 2,966 個已使用的打印機碳粉盒。我們自二零零七年開始，在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 524 個碳粉盒中回收了 425 個，其餘的將會在消耗後回收，確保可以循環再用。

For continual improvement, green procurement measures had been incorporated in tender specifications. Under such procurement policy, by the end of 2014, a total of 694 Fire Services vehicles were in compliance with Euro IV or above emission standards. In addition, 31 new vehicles with Euro V emission standards will be put into commission in 2015. We have procured and planned to procure 153 fire appliances to replace aged vehicles with vehicles of Euro V emission standards 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.

In 2014, we arranged the collection of 2,966 used toners by contractors. Since 2007, we have included recycling of used toner cartridges for facsimile machines in our maintenance contracts. For this type of toner cartridges, we had recycled 425 cartridges out of the 524 procured in 2014, where the remaining cartridges will be recycled after they have been completely used.

## 第 6 章 二零一四年主要環保措施

### Chapter 6 Major Environmental Initiatives in 2014

#### 「零山火計劃」

為保護大自然，部門自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。二零一四年的兩個節日，共有多達 564 條參與的鄉村能夠達到「零山火」目標。

#### “Zero Hill Fire Scheme”

With a view to protecting our countryside, the Department had launched the “Zero Hill Fire Scheme” since 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 their undertaking. In 2014, 564 villages had successfully hit the target of “Zero Hill Fire” and were awarded.



## 改善室內空氣質素

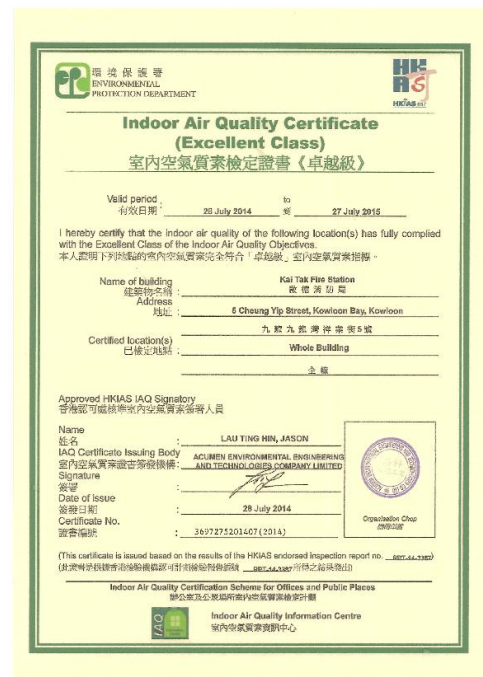
為響應政府提倡改善室內空氣質素的政策，本處已研究不同的可行方案。經過審慎考慮後，本處採取一系列措施提升空氣質素，例如在市場尋找合適的工具或儀器，以減少室內空氣污染物；清洗冷氣喉管，改善機械通風及空調系統等。



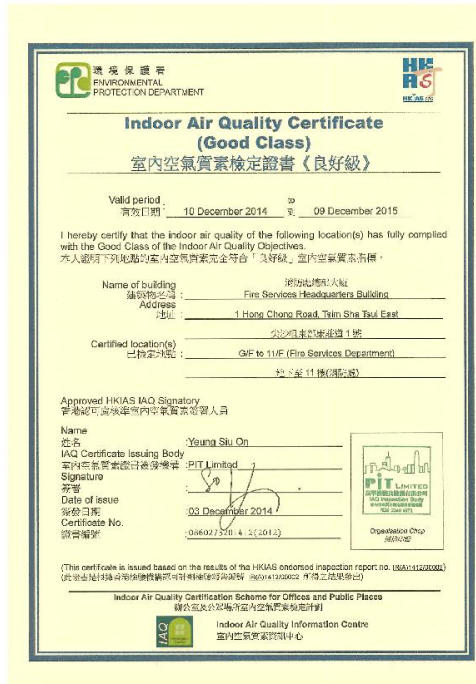
香港仔消防局暨救護站於2014年獲得「良好級室內空氣」的認證  
*Aberdeen Fire Station cum Ambulance Depot awarded the "Indoor Air Quality Certificate (Good Class)" in 2014*

## Indoor Air Quality Improvement

To echo with 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.



啟德消防局於2014年獲得「卓越級室內空氣」的認證  
*Kai Tak Fire Station awarded the "Indoor Air Quality Certificate (Excellent Class)" in 2014*



消防處總部大廈於 2014 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 2014*

## 消防局／救護站的天台綠化工程

在二零一四年，馬頭涌消防局的天台綠化工程已竣工。

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。



馬頭涌消防局的天台綠化工程  
*Green Roof at Ma Tau Chung Fire Station*

## Green Roofing of Fire Station and Ambulance Depot

In 2014, green roofing system was implemented in Ma Tau Chung 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.

於二零一五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

The following FS buildings were considered to be selected for implementation of green roofing in 2015:

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

## 環保建築設計元素

消防及救護學院加入多項環保及可持續性元素，力求達到善用資源，保護環境。學院致力採用節能措施，電力和照明裝置以及升降機等，均符合香港建築物能源效益的要求。消防及救護學院佔地約 158,000 平方米，包括約 53,000 平方米的綠化斜坡。學院內大部份的建築物均採用天台綠化及遮擋陽光設置；此外，教學大樓、體能訓練中心、駕駛訓練中心及宿舍的公用走廊，亦善用天然通風設計，減低對電力的需求。學院更引入小型風力發電系統、光伏系統、太陽能熱水系統、地熱導管，以及訓練用水及雨水循環再用系統等，以提供具可持續性的訓練環境。

## Green Elements in Building Design

Environmental sustainability features were integrated in the design of Fire and Ambulance Services Academy with a view to making good use of resources and achieving environmental protection. Low-energy design concepts were largely adopted in the Academy – all of the electrical installations, lighting installations and lifts complied with the requirements of Hong Kong Energy Efficiency for Buildings. Fire and Ambulance Services Academy covered an area of about 158,000 square metres, which included about 53,000 square metres of green engineering slope. Green roofs and architectural sun-shading devices could also be found in majority of the buildings in the Academy. To reduce the demand on electricity, natural ventilation design was adopted at the common corridors in Teaching Block, Physical Training Centre, Driving Training Centre and Dormitory. Furthermore, the introduction of small wind turbine system, photovoltaic system, solar hot water system, earth tubes and recycling of training/rain water promoted an sustainable training environment.

## 惜食香港運動

為響應由環境局推行的「惜食香港運動」，本處於二零一三年簽署「惜食約章」，以提倡減少浪費食物。

本處於總部食堂當眼處張貼溫馨提示以鼓勵屬員減少浪費食物。

## Food Wise Hong Kong Campaign

To support the “Food Wise Hong Kong Campaign” launched by Environment Bureau, this department signed the “Food Wise Hong Kong Charter” in 2013 with a view to reducing food waste.

A warm reminder has been posted in prominent areas at the canteen of Fire Services Headquarters Building with a view to encouraging our staff to reduce food waste.

### 惜食香港督導委員會 一周年慶典嘉許狀

*Food Wise Hong Kong Steering Committee  
1<sup>st</sup> Anniversary Ceremony  
Certificate of Appreciation*



## 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。

#### 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, vessels 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.

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。

現時，部門設有恆常機制及資料庫以監察燃油的使用情況。工程及運輸組會每月會於內聯網上載「非緊急車輛」的車輛資料及耗燃油量，以觀察及比較同類型車輛的耗油表現。

此外，部門亦會不時以電郵形式提醒各單位節約能源以支持環保。

部門進行採購時，亦會採用環保採購政策，考慮產品是否符合環境保護署制定的「環保規格」。例如，部門採購影印機、碳粉盒及其他電腦產品時均考慮該等產品是否符合「環保規格」。

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.

The Department has developed a mechanism and database to monitor fuel consumption. Each month, Workshops and Transport Division would upload the vehicle information and figures on fuel consumption of the non-emergency vehicles for monitoring and comparing the fuel consumption level of vehicles of the same type.

The Department would also from time to time send emails to remind all units about energy conservation.

In the procurement of equipment, the Department would adopt the green procurement policy and consider whether the products comply with the Green Specifications developed by Environmental Protection Department. For instances, the Department has taken the Green Specifications into consideration in the procurement of photocopiers, toner cartridges and computer equipment.

## 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.



為了在部門內培養環保管理，消防處已提名屬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。二零一四年消防屬員參加的簡介會包括「樹木風險評估和常見樹木問題的綜合訓練」及「監察市區樹木」等等。

To foster the culture of environmental protection management in the Department, 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. Examples of seminars attended by members in 2014 include “Comprehensive Training Tree Risk Assessment and Common Tree Problems” and “Community Surveillance of Trees”, etc.

## 第 9 章 目標及措施

### Chapter 9 Targets and Initiatives

本處二零一四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，本處已制定二零一五年的工作目標，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 2014. 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 2015:

#### 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

為保障屬員的健康和福祉，本處會繼續使部門轄下處所的空氣質素達至和維持於令人滿意的水平。

## 環境管理體系

本處工程及運輸組的工程部（香港及九龍區）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 protect the health and well being of our members, we would continue to achieve and maintain the indoor air quality of our premises to meet a desirable standard.

## Environmental Management Systems

With experience from the ISO 14001 accreditation on environmental management systems of the Hong Kong and Kowloon Workshops under our Workshops and Transport Division, the Department would consider to extend the implementation of the environmental management system to 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)

## 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?
- \_\_\_\_\_

3. How is the overall length and content of the Report?
- Too short  Too long  About Right
- Others: \_\_\_\_\_

4. Other comment:
- \_\_\_\_\_

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): \_\_\_\_\_