

# **Lands Department Environmental Report 2017**

## **Introduction**

In this environmental report, we set out our environmental policy and related performance in 2017. Since the inception of annual environmental reporting eighteen years ago, we have attached increasing importance to environmental protection and preservation. We are committed to the development and promotion of a green culture in our daily work and among our staff. We welcome any suggestion on how we may better achieve our environmental objectives.

## **Key Responsibilities of the Department**

We are responsible for the administration of land throughout the territory. The specific responsibilities of our three functional offices are as follows:

- ***Lands Administration Office***

Disposal of land for development purposes including land grant, lease modification, land exchange and renewal of existing leases, acquisition of private land for public projects, valuation of land and property, land control and lease enforcement, maintenance of slopes on unleased and unallocated government land, ad hoc maintenance of vegetation on unleased and unallocated government land not managed by other specified government departments, and provision of expert advice on landscape and tree issues related to development control on private land and dangerous trees on private land.

- ***Survey and Mapping Office***

Land and aerial survey, map production, maintenance of the geodetic control network, maintenance of land information system for mapping data and land record information; and provision of web map services and administration of the Land Survey Ordinance (Cap. 473).

- ***Legal Advisory and Conveyancing Office***

Provision of legal advisory and conveyancing services primarily to the Department, and giving consent to the pre-sale of uncompleted units and approval of deeds of mutual covenant.

## **Environmental Policy**

In carrying out our land administration functions, we support environmental protection and improvement by:

- formulating and implementing departmental policies and practices in line with Government's environmental objectives;
- joining hands with other government departments to improve the environment in Hong Kong;
- developing a culture of environmental protection and awareness among staff members; and
- employing best practices in green housekeeping including adoption of energy-efficient measures in daily operations and publication of information on energy and fuel use.

## **Land Disposal**

We will make available land or enter into land transactions with leaseholders of existing private properties for development purposes. Through the incorporation of appropriate lease conditions in land grants, land exchanges and lease modifications, and engineering conditions in the allocation of government land to government departments, we also provide, where appropriate, a vehicle whereby the Government may exercise control over environmental issues, or implement its environmental initiatives which are related to land but are outside the purview of the existing statutory framework. Some examples of the above are as follows:

- ***Liquefied Petroleum Gas***

We continue to render full support to Government's policy initiative with regard to Liquefied Petroleum Gas (LPG) and provide sites for petrol filling stations with LPG filling facilities, where suitable. In 2017, two sites for petrol filling station purposes with the requirement of providing facilities for the supply of LPG to motor vehicles were sold by public tender.

- ***Sites for Waste Recycling and Waste Management***

We work with the Environmental Protection Department to identify suitable sites for the waste recycling industry. For instance, a site in Tuen Mun has been allocated to the Environmental Protection Department for the "EcoPark". As at the end of 2017, we were managing a total of 53 short term tenancies for waste recycling use.

- ***Control on Contamination of Land***

Where there may be potential risk of contamination arising from various specific land uses such as petrol filling stations, we incorporate relevant environmental protection requirements in land leases. This measure has been extended to sites let on short term tenancies or being held under government land allocations by other departments.

- ***Optimizing Development Density***

For sites included in the 2018-19 Land Sale Programme, air ventilation assessment has been or will be conducted where required. Such assessment assists us to incorporate where necessary specific development parameters or restrictions in the Conditions of Sale for the sites concerned.

- ***Fostering a Quality and Sustainable Built Environment***

The Government announced detailed measures in October 2010 to enhance the design standard of new buildings to foster a quality and sustainable built environment in Hong Kong. The Buildings Department promulgated in January 2011 the practice notes to implement the measures with effect from 1 April 2011. Appropriate sustainable building design requirements are also included in the lease conditions.

- ***Tree Preservation***

We continue to play a key role in tree preservation, mainly through drafting of lease conditions and approval of development and landscaping plans. All applications for tree works in private developments and public projects are carefully examined, with due consideration given to preservation, transplanting and compensatory planting.

We conduct pre-land sale tree surveys, where required, so as to identify whether or not there are any trees of particular value within the sale site.

## **Land Management**

Our target is to maintain and where appropriate improve the environmental conditions of all unallocated government land and private land through effective land control and lease enforcement measures. Some specific tasks carried out in 2017 are set out below:

- We posted 64 140 government land notices under the Land (Miscellaneous Provisions) Ordinance for clearance of unauthorised dumping or occupation of government land. We issued another 1 980 warning letters to private land owners in respect of nuisances, erection of structures or conversion of uses not permissible under the leases.
- Our District Lands Offices joined hands with other government departments in providing off-street bicycle parking spaces to encourage the use of this environmentally friendly mode of transport.
- In addition to cutting grass on a regular basis at 1 180 sites on government land, we removed rubbish and waste and drained stagnant water on another 2 417 sites, some of which were illegal cultivation blackspots and fly-tipped

sites, as part of Government's effort in the anti-mosquito campaign.

- We also broadcast messages on both television and radio to appeal to the general public not to build, buy, rent or occupy any unauthorised structures on private agricultural land or government land. Such activities could lead to serious consequences.
- To contain the proliferation of placing skips for collection of renovation debris in public streets, we conducted 1 443 inspections and 33 clearance operations.
- We enhanced the appearance of 69 man-made slopes by planting vegetation or applying landscape treatments, such as stone facing during improvement works under our preventive maintenance programme.

## **Acquisition**

To facilitate early implementation of sewerage improvement works in the New Territories, we acquired private land under the relevant ordinance. In 2017, we acquired 700 m<sup>2</sup> of private land and also made available 7 360 m<sup>2</sup> of government land in Tuen Mun for carrying out local sewage works.

## **Survey and Mapping**

- ***ISO14001 Environmental Management System***

Our Survey and Mapping Office (SMO) has adopted an Environmental Management System (EMS) since 2007. Through implementing EMS, SMO takes into account environmental considerations in project planning and execution, in office administration work as well as in every stage of the survey and mapping processes. The performance of SMO in these areas is regularly audited. Both the internal environmental audit conducted in April 2017 and the external audit conducted by an external certification body in October 2017 confirmed that SMO had been in full compliance with the 2015 version (i.e. the latest one) of ISO-14001 EMS requirements.

- ***Large Format Digital Aerial Camera (LFDAC) System***

SMO undertakes aerial photography in the territory of Hong Kong periodically at different altitudes producing various types of aerial photographs. These large format photographs are widely used by the society in engineer projects, land development, serving as court evidence etc. After over 20 years' service, the previous film-based aerial camera had completed its historic task. The new Large Format Digital Aerial Camera (LFDAC) system was put into full commission in early 2017 to take over all aerial survey missions. Benefitted from the high camera performance, the numbers of photo taken each year is increased. The LFDAC system makes

aerial film no longer necessary and film processing, which is a step producing chemical waste, is also eliminated in this full digital processing environment. Aerial photograph production now becomes a more advanced and environmental friendly service.

- ***Digital Map Products***

The successful launch of “i-Series Digital Maps” which allow users to purchase digital maps in accordance with their own area-of-interest had further boosted the figures of sale and supply of Lands Department digital maps. A continuous growth on number of user organisations, including government departments and private companies was recorded in 2017. The increased usage of digital maps will bring about further reduction in paper consumption.

- ***Public Sector Information (PSI) – Open Maps and Open Spatial Data***

To promote the use of digital maps and digital spatial data and align with the PSI policy of the Government, SMO has made three sets of Open Maps and six sets of Open Spatial Data as PSI data for free commercial and non-commercial uses, which can be obtained through the SMO websites as well as the public sector information portal (<http://data.gov.hk>). The Open Maps are Digital Topographic Map (B100k-OM and B200k-OM) and Digital Orthophoto Map (DOPM100-L0-OM). The Open Spatial Data sets are Geo-referenced Public Facility Data, SatRef GNSS Real-time Raw Data Streams, Geodetic Survey Control Station Database, Aerial Photo Flight Index, Digital Terrain Model and Street Name. The PSI in digital form can be downloaded, distributed, reproduced and reused on electronic platforms, thus encouraging paperless uses of them and reduction of use of environmentally unfriendly storage devices like CD/DVD ROM by the public. Moreover, on-going study is under way to identify more SMO data for opening up as PSI.

- ***Data Alignment Measures (DAM)***

The DAM policy was promulgated by the Development Bureau in 2007 and SMO has been playing a major role in facilitating the standardisation and sharing of common geospatial data among government bureaux and departments. The standardisation and sharing of geospatial data for planning, engineering, conservation and other environmental related purposes are regarded by the United Nations as being fundamental to the achievement of sustainable development.

- ***Hong Kong Map Service (HKMS)***

HKMS (<http://www.hkmapservice.gov.hk>) is an online service for shopping the digital and paper map products of SMO. Over 95% of the sales of digital maps are now made through HKMS online. Customers can complete their

ordering, payment and download of digital maps by electronic means. The workflow behind in processing an order is also designed to be paperless.

- ***Geospatial Information Hub (GIH)***

GIH is a web-based information platform for searching, displaying and sharing a vast amount of geospatial data through the government Intranet. Various geospatial data from different departments, e.g. digital maps, aerial photographs, heritage sites and other land record information can be conveniently overlaid for viewing on a computer screen which reduced the need of printing paper maps.

On the infrastructure side, GIH has started to employ virtualisation technology progressively since mid 2013 whereby a single computer server is used for running multiple applications and map services. As a result, fewer hardware was required and less electricity was consumed. In 2017, 21% power saving in the SMO's data centre was achieved as compared to the total consumption before the employment of virtualization technology in 2012.

- ***GeoInfo Map, GeoMobile Map and MyMapHK***

GeoInfo Map, GeoMobile Map and MyMapHK are government web map portals providing useful online geospatial information services for the general public. Geospatial data from different sources are integrated into this one-stop platform for convenient access by the public through the Internet. These three e-services promote the use of digital maps with a view to reducing paper consumption.

Since the official launch of GeoInfo Map in May 2010 and GeoMobile Map in June 2011, there are over 270 types of facility data from 29 government departments being incorporated in the GeoInfo Map. The services have been further extended since June 2014 by launching a mobile map app, named MyMapHK. With the implementation of GeoInfo Map, GeoMobile Map and MyMapHK, government departments can make use of this common platform to deliver individual types of geospatial information to the public. Their efforts in establishing their own platforms for disseminating geospatial information are reduced, thus improving the cost effectiveness of government services. To give an example, Lands Department has collaborated with the Environmental Protection Department to incorporate various facility data in the GeoInfo Map for searching and viewing by the public, including "Recycling Organisations and Collection Points", "Environmental Exhibition & Resource Centres" and "Charging Points for Electric Vehicles" as well as some real time data, namely the Air Quality Health Index (AQHI) and Beach Water Quality Index.

- ***Geographic Information Retrieval System 2 (GIRS2)***

GIRS2 is an internal application system through which users can retrieve base

maps, aerial photographs and land boundary records being kept in the Land Information System of SMO. Following the full launch of GIRS2 in May 2011, all staff of SMO are now able to view, query and overlay the information in one go on their desktop computers instantly without the need to print and keep paper copies, thus helping reduce paper consumption in the office.

The services have been further enhanced since early 2015 by integrating the Survey Record Retrieval System maintained at the district offices into GIRS2 hosted centrally at Land Information Centre. The consolidation aligns with our commitment to the green culture, promoting paperless use of survey records online instead of printing copies in supporting office operations.

- ***Online Geodetic Survey Information***

The provision of Online Geodetic Survey Information service to the public was launched in October 2006. The public can browse and download the horizontal and vertical survey control data and other geodetic survey related reference documents from the SMO website (<http://www.geodetic.gov.hk/smo/gsi/programs/en/index.htm>). Downloading the Geodetic Survey Station Summary and relevant data is free of charge and its monthly average usage was about 29 000 times in 2017. This service has greatly reduced the need for paper printouts and, at the same time, enhanced service delivery effectiveness and efficiency.

- ***Paper-less Meeting***

SMO has introduced the use of tablet PCs for most professional staff and set up wireless LAN at meeting rooms in Headquarters to facilitate the practice of paper-less meeting. Through the secure wireless network connection, meeting members can retrieve and share meeting documents using their tablet PCs without the need of printing the documents for the meeting. It helps reduce the consumption of paper for printing meeting documents which are usually in multiple copies and of one-off use.

- ***Electronic Map Book***

The electronic map book produced by Lands Department, the “*eHongKongGuide*” 2018 edition, is now available for free download at the website of Lands Department. The “*eHongKongGuide*” is based on the paper version of *Hong Kong Guide*. It provides detailed maps covering the territory of Hong Kong as well as carries comprehensive information on geographic and community facilities in digital form. This year, SMO had reduced the printing copies of our annual publication *Hong Kong Guide 2018 edition* to about 90% of last year.

## **Green Housekeeping**

We are committed to the promotion of a green culture in the workplace. We have

established house rules on green office management for staff to follow.

- ***Environmental Management and Auditing***

The Departmental Secretary is our Green Manager who coordinates and reviews our green housekeeping initiatives. Green Executives have also been appointed in individual sections / groups of offices to coordinate and monitor green housekeeping measures and to encourage staff participation in green housekeeping in their offices. In addition, an Energy Warden is appointed in each office to ensure strict implementation of energy saving measures.

The Green Executives are also tasked to conduct quarterly reviews and audits of green management practices in their offices, focusing on aspects such as paper and energy saving. They also ensure other green management practices (e.g. air conditioning units, lightings and other electrical equipment are switched off when not required/in use) are followed through.

- ***Experience Sharing and Training***

To maintain momentum in environmental protection, we continued to provide relevant training to our staff in 2017. A total of 29 Green Executives/Energy Wardens or their assistants were nominated to attend workshops on energy efficiency and green management organised by the Electrical and Mechanical Services Department. We will identify more training opportunities in future to promote staff awareness of the importance of environmental protection.

For experience sharing, we have created the “Green Corner” webpage on the Departmental Intranet promulgating our green housekeeping policies, green tips, best practices, and other useful information. All new staff are informed of our green measures and initiatives via the welcoming e-mail message.

- ***Energy Conservation and Consumption***

The Chief Executive announced in his 2015 Policy Address the target of achieving 5% saving in electricity consumption in government buildings from Financial Year (FY) 2015-16 to FY 2019-20 under comparable operating conditions using FY 2013-14 as the baseline. The total electricity consumption of our offices installed with separate electricity meters in FY 2013-14 and FY 2017-18 is tabulated below :

	Electricity consumption (million kWh)	Electricity consumption under comparable operating conditions (million kWh)
FY 2013-14 (baseline)	1 320 695	Not applicable
FY 2017-18	1 314 408 (-0.5%)	1 262 021 (-4.4%)

Note : The figure of electricity consumption under comparable operating conditions should have taken into consideration significant changes in premises, plants and equipment, number of staff, services, service hours and demand for services etc. for a like-for-like comparison with the baseline.

As set out above, the change in electricity consumption of our offices from FY 2013-14 to FY 2017-18 was -0.5%.

Under comparable operating conditions of FY 2013-14, the saving in electricity consumption in FY 2017-18 was 4.4% after implementing some housekeeping measures. For example, simple and cost-free measures have been introduced to improve the energy performance of air conditioning, lighting and energy consuming equipment. Green tips on energy saving have been promulgated for compliance by staff. We also continue to implement established measures such as setting air conditioning temperature at 25.5°C.

- ***Fuel Consumption***

The major user of fuel is our vehicle fleet. We had instructed our Motor Drivers to strictly comply with the requirements set out in the Motor Vehicle Idling (Fixed Penalty) Ordinance (Cap. 611) which took effect from 15 December 2011. Switching off the vehicle engines whilst waiting helps reduce exhaust emission and helps achieve fuel saving.

The total fuel consumption of our vehicle fleet was 297 375 litres in 2017, representing an increase of 7% as compared with the consumption in the previous year. The increase in fuel consumption was mainly attributable to the factors including more ‘Very Hot Weather Warning’ issued, increasing average vehicle age and deterioration of the mechanical performance of aging vehicles. With the scheduled delivery replacement vehicles with environmentally friendly design in the coming 2018, we envisage savings in fuel consumption in future.

- ***Paper and Envelope Consumption***

Our environmental performance in terms of paper and envelope consumption since 2013 is indicated in Figure 1 and Figure 2 respectively. When compared with 2016, an increase of 4.6% in paper consumption and 0.7% in

envelope were recorded respectively. We are generally satisfied with the results in view of the increased departmental activities in 2017.

- ***Waste Recycling***

In 2017, we collected about 41 863 kg of waste paper, 6 095 used toner cartridges and 496 kg of plastic waste for recycling. Our performance in respect of these areas in the past five years is indicated in Figures 3 to 5 respectively. The overall trend is encouraging as staff are more attuned to the practice of recycling.

### **Availability of this Report**

This Report can be viewed at the Lands Department's website (<http://www.landsd.gov.hk>).

### **Contact Us**

You are welcome to give us suggestions and views on this Report by emailing to us at [landsd@landsd.gov.hk](mailto:landsd@landsd.gov.hk) or calling our enquiry hotline at 2231 3294.

**Statistics of Green Performance up to 2017  
for inclusion in the 2017  
Controlling Officers Environmental Report  
(To be Presented in Charts)**

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<b>Caption of Graph/Chart</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>To be presented in Chart</b>
<b>Green House-keeping Measures</b>						
Paper consumption (in reams)	41 813	42 571	43 707	45 227	47 320	Figure 1
No. of envelopes consumed	242 762	243 023	259 052	251 933	253 742	Figure 2
Quantity of waste paper collected for recycling (in kg)	45 208	41 223	46 088	45 618	41 863	Figure 3
No. of used printer toner cartridges collected for recycling	4 273	4 643	4 366	5 823	6 095	Figure 4
Quantity of plastic waste collected for recycling (in kg)	531	508	478	456	496	Figure 5