

Civil Aviation Department Environmental Report 2017



Content

Chapter 1	Foreword	
Chapter 2	Aircraft Noise Management	P.2
	Quieter Arrivals	P.2
	Quieter Departures	P.3
	Restrictions on Noisy Aircraft	
	Noise Monitoring	P.4
Chapter 3	Aircraft Emissions	P.5
	Measures Taken by Airlines	P.5
	Measures Taken by CAD	P.5
	Carbon Emission Certification	P.6
Chapter 4	Green Measures in Other Aviation Related Operations	P.7
	-	P.7
	CAD Safety Library	P.7
	Electronic Submission / Approval	P.8
	Electronic Flight Strip System	P.10
	Online Promulgation of Divisional Reference Documents	P.10
	Aeronautical Information Management System	P.11
Chapter 5	Green Housekeeping	P.13
	Energy Conservation	P.13
	Paper Conservation	P.18
	Waste Collection and Recycling	P.19
	Green Procurement	P.23
	Electric Vehicles	P.24
	Training and Communication	P.24
	Recognition	P.26
Views and Suggestions		P.28

1 | Foreword

This Environmental Report covered the environmental performance of the Civil Aviation Department (CAD) in 2017.

In the work of environmental management, the Department strives to minimize the disturbance caused by aircraft operations to the local communities and pursue environmentally friendly operations both in various functional areas and office management.

Our Environmental Goals

CAD is committed to ensuring that all services provided by the Department as well as our operations are conducted in an environmentally responsible manner.

Our Environmental Policy

We support the Hong Kong Special Administrative Region Government's initiatives to improve the environment by:-

- Committing to a safe, efficient and sustainable air transport system in Hong Kong;
- Compliance with relevant environmental protection ordinances;
- Striving to minimize the adverse effect that the development of the aviation industry may cause to our quality of life and environment;
- Promoting waste reduction, recovery and recycling, and reduction in consumption of resources including material, fuel and energy; and
- > Providing environmental education and training to staff.

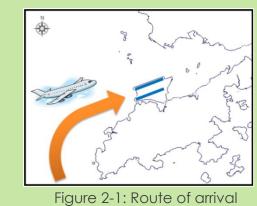
2 | Aircraft Noise Management

CAD is conscious of the impact of aircraft noise on the community and has implemented a series of noise mitigating measures. We have also monitored the implementation of these noise mitigating measures and the aircraft noise situation in various districts with the aid of a computer-based Aircraft Noise and Flight Track Monitoring System.

Quieter Arrivals

Arrivals from Southwest over Water

Subject to weather and safety conditions, arrival aircraft between midnight and 7 am are required to approach from the southwest of the airport over water. This measure aims to reduce the number of aircraft overflying populated areas such as Shatin, Tsuen Wan, Kwai Chung, Tsing Yi, Sham Tseng and Tsing Lung Tau. In 2017, 87% of

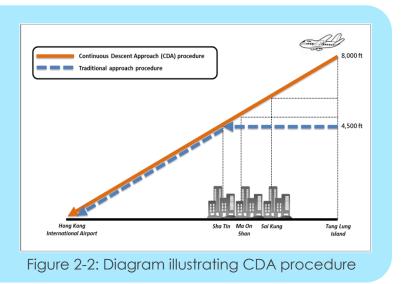


aircraft from southwest at night

arrival aircraft were able to approach from the southwest of the airport between midnight and 7 am under permissible conditions.

Continuous Descent Approach Procedure

When weather and safety conditions do not allow night arrivals to approach from the southwest, arrival aircraft from the northeast direction are encouraged to adopt the Continuous Descent Approach (CDA) procedure.



CAD Environmental Report 2017

The CDA procedure requires the aircraft to fly higher and adopt a lower power and drag configuration during the commencement of the approach, thereby reducing aircraft noise impacts to areas such as Sai Kung, Tseung Kwan O and Ma On Shan.

Quieter Departures

Noise Abatement Departure Procedures

All aircraft departing to the northeast are required to adopt the Noise Abatement Departure Procedures stipulated by the International Civil Aviation Organization (ICAO) so long as safe flight operations permit.

These procedures require aircraft to reduce power upon reaching an altitude of 800 feet or above, thus can alleviate aircraft noise impact during take-offs on communities in the vicinity of the airport.

Departures via West Lamma Channel

Subject to weather and safety conditions, aircraft taking off to the northeast between 11 pm and 7 am the following day are required to fly south to the West Lamma Channel, thereby avoiding flying over populated areas such as Kowloon, North Point, Shau Kei Wan and Chai Wan. In 2017, 98.4% of aircraft taking off to the northeast between 11 pm and 7 am the following day were able to take this southbound route over the West Lamma Channel.

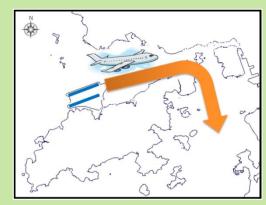


Figure 2-3: Route of departure aircraft to northeast at night

Improving Track Adherence

We have introduced a set of new noise mitigating departure procedures which make use of satellite-based navigation technology for noise mitigation. Aircraft which are equipped to use the technology, when departing to the northeast of the Hong Kong International Airport (HKIA), can make use of the on-board navigation capabilities to achieve higher track-keeping accuracy during their turn to the West Lamma Channel. With better adherence to the designated flight path, the aircraft can be kept at a distance from the populated residential areas. In doing so, the aircraft noise footprint can be confined and the overall aircraft noise effect on these residential areas can be reduced.

Restrictions on Noisy Aircraft

All noisy aircraft which do not comply with the noise standards stipulated in Chapter 3 of Annex 16, Volume I, Part II to the Convention on International Civil Aviation (Chapter 3 Noise Standards) are not allowed to operate in Hong Kong.

To further alleviate the aircraft noise impact on local communities, commencing from end of March 2014, CAD ceased to allow airlines to schedule aircraft whose noise levels only marginally meet the Chapter 3 Noise Standards (so-called "Marginally Compliant Chapter 3 aircraft") to operate between 11 pm and 7 am the following day. This measure has been extended to cover the whole day since end of October 2014 up to present.

Noise Monitoring

CAD has installed an Aircraft Noise and Flight Monitoring System to monitor Track the implementation and effectiveness of various noise mitigating measures, and the noise environment in various districts. The system comprises 16 outdoor noise monitoring terminals located in the vicinity of the flight paths and a central computer server which correlates the flight data provided by radars and the noise data recorded by the noise monitoring terminals.



Figure 2-4: Outdoor noise monitoring terminal

3 | Aircraft Emission

Most aircraft operating at the HKIA comply with the engine emission standards as stipulated in Annex 16, Volume II to the Convention on International Civil Aviation. With the growing attention to the climate change caused by the greenhouse gas (i.e. carbon dioxide), CAD has been closely monitoring the development of guidelines from ICAO on the reduction of carbon dioxide emission from aircraft operations and conveyed the guidelines to the industry.

Measures Taken by Airlines

Airlines have taken the initiative to retire and replace old aircraft with new models which are more fuel efficient hence less emissions. Apart from the modernization of aircraft fleet, airlines also endeavour to reduce emissions through reduction of aircraft weights, better maintenance and improved flight planning and management.

Measures Taken by CAD

Being the air navigation services provider, we have from time to time reviewed the air routes and air traffic management arrangements by making reference to the latest ICAO guidelines. Taking advantage of the latest development in satellite-based navigation technologies, CAD has conducted enhancements of the air route system which enabled shortened travelling distances and allowed more aircraft to fly at optimum and fuel efficient altitudes, thereby achieving fuel savings and a reduction of carbon dioxide emission.

CAD would continue to keep in view the development of the latest ICAO flight procedure criteria, progressively apply more advanced aviation technologies as appropriate and closely work with other air traffic control authorities and the airline operators for further enhancing the air route system in the Hong Kong Flight Information Region.

Carbon Emission Certification

New ICAO requirement for aircraft was published in July 2017, relating to Standards and Recommended Practices on certification of carbon emissions of aircraft. New aircraft type in the future will have to comply with the requirement.

4 | Green Measures in Other Aviation Related Operations

CAD recognizes the importance of environmental protection. We have implemented various green measures in aviation related operations. We would continue to explore means to infuse green measures into our operations to maintain sustainability of civil aviation.

Standardized Forms for Various Tariff and Flight Applications

Use of standardized forms for various types of applications has reduced the consumption of paper and processing time in the Air Services Office. As a result of the suspension and change of approval mechanism of the Passenger and Cargo Fuel Surcharges respectively, the consumption of paper has been further reduced. The use of e-filing as a platform for submission of forms and various relevant information continue to contribute to reduction of paper consumption, which also greatly enhances the readability and accuracy of the information provided.

CAD Safety Library

The CAD Safety Library launched in December 2016 provides a centralised electronic platform for easy storing, sharing and distribution of documents. It allows all divisions and offices to store and retrieve documents in the CAD Safety Library

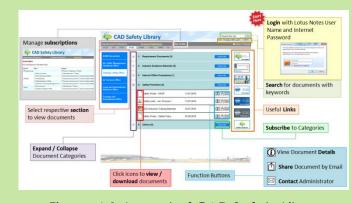
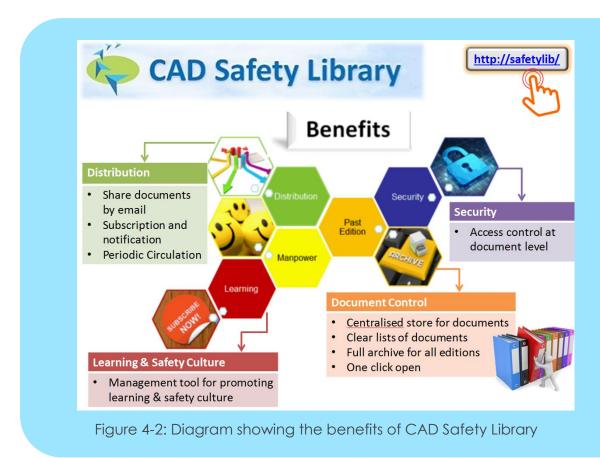


Figure 4-1: Layout of CAD Safety Library

which is readily accessible through office desktop or laptops connected to CAD intranet. Since the launching of the CAD Safety Library, around 250 documents from divisions have been uploaded on this electronic platform, including departmental and divisional policies, operating procedures and guidance manuals, and links to published documents. The CAD Safety

CAD Environmental Report 2017

Library helps to promote the sharing and exchange of safety information and to reinforce the learning and safety culture within CAD. It is also a measure to support environmental protection by reducing the need for printouts and paper copies.



Electronics Submission / Approval

Use of Electronic Flight Bags

CAD has promulgated to airlines that upon the fulfillment of safety related requirements, most document records, manuals and licenses that used to be carried on board aircraft or submitted to CAD in paper form, can be provided through electronic means. This practice greatly replaces and reduces paper-based references found in the carry-on flight bag in the past, including various operations manuals, maps and navigational charts. With the use of electronic flight bags which brings the technological advances of computer information delivery to the airplanes, flight crews can perform different management tasks more efficiently with less paper.

Currently, Cathay Pacific Airways, Hong Kong Airlines and TAG Aviation Asia Limited obtained CAD's approval to use Electronic Flight Bags for various applications, including document viewer for operational manuals, maintenance manual and navigation charts. There are also applications for aircraft technical log and performance calculations underway. These applications replace the paper copies onboard and associated hard copy revisions.

In 2017, there was a plane returning to Hong Kong after taking off when the pilot realized that the required approach chart for the destination was not carried to the flight. With the use of electronic flight bags, this kind of service disruptions could be avoided.

Application for Guided Tours of the Aviation Education Path

In 2017, the Aviation Education Path in the CAD Headquarters (HQ) welcomed more than 14,200 visitors from schools, charities, professional bodies and social groups, etc. Any individual or group interested in a guided tour of the CAD Aviation Education Path may download the application form from CAD website and submit the duly completed form by electronic means.



Figure 4-3: Aviation Education Path

CAD Environmental Report 2017

Electronic Flight Strip System

For a long time, paper flight progress strips had been used by CAD in the Air Traffic Control Tower (ATCT) and the Air Traffic Control Centre (ATCC). Electronic Flight Strip System, which displays flight data on a and allows screen data management by electronic means, first commissioned was in December 2012 in ATCT. With the full commissioning of the new



Figure 4-4: Traditional paper flight progress strips

Air Traffic Management System in November 2016, paper strips in both ATCT and ATCC have been totally replaced by the Electronic Flight Strip System. Based on the current air traffic volume handled by ATCC, it is estimated that more than 3,260,000 paper strips (equivalent to about 270,000 sheets of A4 size paper) could be saved every year.

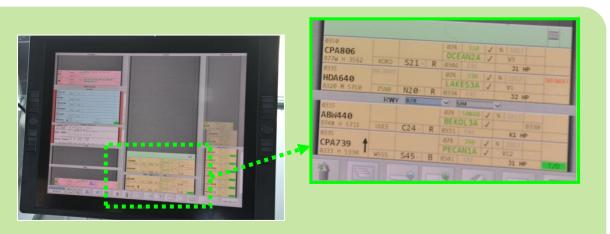


Figure 4-5: Display of the Electronic Flight Strip System

Online Promulgation of Divisional Documents

The Air Traffic Management Division of CAD has launched a website with secured access limited to divisional staff, named as the "ATMD Information Dissemination Website", since 1 September 2014. The website was at first used to disseminate roster information to colleagues through the intranet.

CAD Environmental Report 2017

Since December 2014, the function of the website was extended to house and disseminate training materials, airport circulars, divisional information circulars and materials of professional interest aiming to replace the traditional means of distributing hard copies.

In order to reap further environmental benefits, since 2015, the use of the website has been extended to provide online access to divisional reference documents and their updates which used to be disseminated by CD-ROMs. As a result of this initiative, about 2,000 CD-ROMs were saved in a year.

Since August 2017, the distribution of internal Administrative Memorandum has been digitised to enhance the operational efficiency while being more environmentally friendly. With the significant reduction of hard copies to be distributed, it is estimated that about 10,000 sheets of A4 size paper will be saved each year.

Aeronautical Information Management System

With the commissioning of the Aeronautical Information Management Centre in the CAD Headquarters in December 2015, a new Aeronautical Information Management System has replaced traditional paper based information management. Aeronautical data is stored in the new system in digitised and structured format, which enables further processing and distribution by electronic means. The new system not only enhances the accuracy, efficiency and quality of information dissemination, but also helps reduce paper consumption.



Figure 4-6: The Aeronautical Information Management System

Graphical Presentation of Aeronautical Information

Before implementation of the new system, when graphical presentation of information on special areas affecting flight operations was required, our staff would make hard copies of the charts, then manually plot the areas on the charts after detailed measurement. At times, several drafts were made during the plotting process and several sheets of charts were required when the area covered more than the extent of one chart. Subsequently, the plotted paper chart would be sent out by fax or delivery. Not only did the process require much time and effort, it was also not environmentally friendly.

Provisions under the New System

The new system has a graphical report tool which enables operators to input the geographical coordinates of areas concerned and instantaneously display the areas on the screen. Operators can select to display essential elements in the background to make a clear presentation in a paperless environment. An electronic copy of chart can be easily generated and sent out via email efficiently. It is much more user-friendly and can save paper.

Taking advantage of the functionality of the new system, CAD will continue to explore new initiatives to disseminate and exchange information in an environmentally friendly manner.

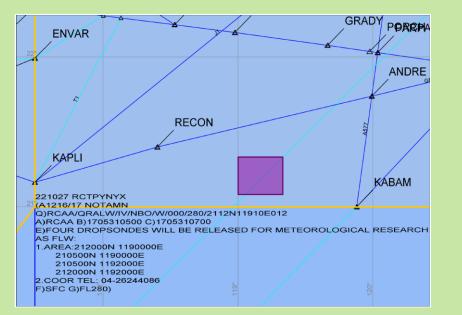


Figure 4-7: Graphical Presentation of Aeronautical Information

5 | Green Housekeeping

CAD has been implementing a number of housekeeping measures in daily office operations to encourage energy conservation, paper conservation, waste collection and recycling, proper disposal of environmentally hazardous waste, green procurement and environmental awareness among all staff.

Energy Conservation

Daily Energy Saving Measures in Housekeeping

To minimize the consumption of energy in our daily office operations, the following green measures have been adopted in CAD buildings:-

- Continuing to follow the Government recommended summer air conditioning setting of 25.5°C and use electric fans to improve air circulation and provide better staff comfort if necessary;
- Continuing the practice of switching off any air conditioning, interior lights, exterior lights, decorative lights, lifts, escalators, digital signage system and video wall, etc. when not in use;
- Fine-tuning the external essential lighting on-off hours periodically to optimise against seasonal changes in light / dark hours;
- > De-lamping in corridors and common areas;



Figure 5-1: De-lamping in common area

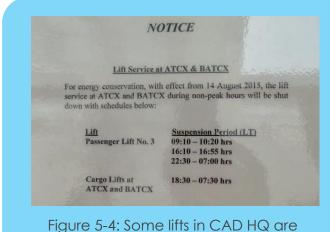


Figure 5-2: Fluorescent light tubes were removed alternately at the corridors

- During non-peak office hours, switching off some lifts in CAD Headquarters, ATCX and Back-up Air Traffic Control Complex (BATCX) for energy-saving;
- Outside normal office hours, operating limited lifts; lighting under night mode and suspending service of escalators in the Office Building of CAD Headquarters;
- Encouraging staff to use staircases instead of lifts;
- Installing energy-saving timer devices in most share-used printers and photocopiers to prevent the consumption of electricity in standby mode during non-office hours;
- Checking lights and electrical appliances during security patrol outside office hours to ensure that they are switched off when not in use;
- Displaying notices in all meeting / training rooms to remind users to switch off lights and all electrical appliances before leaving. Users will be reminded if necessary;



Figure 5-3: A photocopier on energy-saving mode



switched off during non-peak office hours

- > Installing solar films in strategic locations to reduce sunlight and heat;
- Installing motorized blinds at the atrium of the CAD Headquarters to shield sunlight and heat on sunny days;
- Introducing green installation during the building construction, e.g. installing photovoltaic panels on the rooftop of CAD Headquarters. In 2017, the electricity generated by the panels was 19,285 kWh;
- Reviewing the occupancy patterns in CAD Headquarters before the summer season to optimize the operation schedules of air-conditioning supply for different zones for further reduction of the operating hours of air-conditioning and the overall cooling (energy) demands; and
- The operation schedule of the video wall at CAD Headquarters has been reviewed to optimize the energy saving.



Figure 5-5: Motorized blinds at the atrium of CAD Headquarters shield sunlight effectively



Figure 5-6: Photovoltaic panels on the rooftop of CAD Headquarters

CAD Environmental Report 2017 Electricity Consumption of CAD Buildings

	Electricity consumption (kWh)	Electricity consumption under comparable operating conditions (kWh)
FY 2013-14 (baseline)	26,590,970	Not applicable
FY 2014-15	27,090,851 (+1.9%)	27,103,123 (+1.9%)
FY 2015-16	26,080,028 (-1.9%)	26,094,576 (-1.9%)
FY 2016-17	24,370,751 (-8.3%)	24,384,915 (-8.3 %)
FY 2017-18	22,752,437 (-14.4%)	24,061,073 (-9.5%)

Electricity consumption of our government buildings in financial year (FY) 2017-18 as compared with FY 2013-14 as baseline is tabulated below:-

Remarks: (1) Figures in brackets indicate percentage change compared with the baseline.

(2) The change in operating conditions is mainly the change in accommodation occupied by CAD in the past years.

As set out above, the electricity consumption of our government buildings in FY 2017-18 has decreased by 9.5%, when compared with FY 2013-14 (baseline), under comparable operating conditions. This was mainly due to our effective implementation of energy-saving initiatives.

Carbon Audit and Energy Audit

A consultant was appointed in 2015 to conduct energy audits for the major CAD premises including the CAD Headquarters, ATCX and BATCX. The Energy Utilisation Indices $(EUIs)^1$ of CAD Headquarters, ATCX and BATCX in FY 2013/14 were 1,393, 2,906 and 8,306 MJ / m² / annum, respectively. The consultant reports issued in 2016 recommended that the green measures adopted by CAD should be continued. As specifically mentioned in the energy audit reports, the following energy saving initiatives are recommended to be implemented/maintained based on site conditions:-

¹ EUI is the annual energy consumption per unit area.

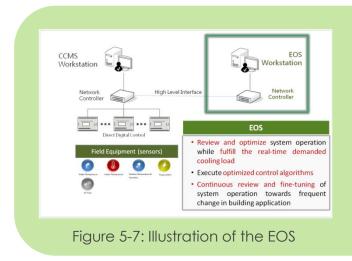
- ➤ Keeping temperature setting to 25.5°C for all air-conditioning installation;
- Labelling zone control plans near the switches;
- Lowering or closing the blinds to avoid direct sunlight;
- Switching off the electrical appliances when the facility is unoccupied; and
- > Keeping lights off alongside windows, as far as practical.

This year, CAD conducted the first in-house carbon audit for 2017. The results are reported in the table below:-

	CAD Headquarters	ATCX	BATCX
Greenhouse Gas Emission per floor area (kg of CO ₂)	180	310	1,230

Energy Optimization System

Energy Optimization System (EOS), which was installed in 2015 and commissioned progressively in 2016, for the central air conditioning system in CAD Headquarters operated smoothly in 2017. The performance of energy saving is very promising. With a full year operations of EOS in 2017, CAD achieved an estimated yearly saving of some 750,000 units of electricity, equivalent to reduction over 400 tons of greenhouse gas emission. With

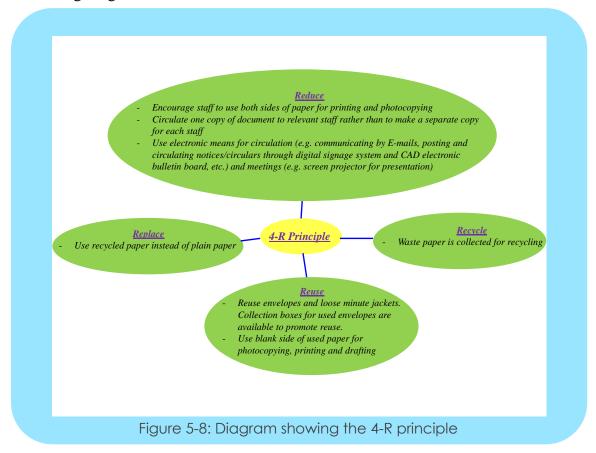


the substantial energy saving achieved, CAD is exploring the feasibility to launch the same initiative in the air-conditioning system at Air Traffic Control Complex building. CAD won the CLP Green^{Plus} award 2017 in the category "Smart Business Energy Saving Award" for our enthusiasm in introducing smart EOS technology to improve energy efficiency.

Paper Conservation

Daily Paper Saving Measures in Housekeeping

We promote the "4-R principle" in paper conservation as summarized in the following diagram.

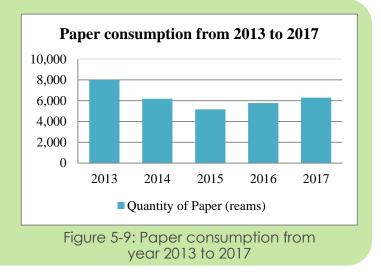


Measures on Paper Conservation

Apart from the daily housekeeping, we adopt the following arrangements in order to reduce the use of paper:-

- No longer producing hardcopies of the CAD Annual Report since 2017.
 This arrangement has saved about 28,000 sheets of paper per year;
- Posting notices at paper towel dispensers to encourage staff to use less paper towel; and
- Circulating newspaper cuttings by electronic means instead of hardcopies. It is estimated that about 46,000 sheets of paper were saved in 2017.

Paper Consumption



In 2017, we consumed 6,294 reams of paper, which recorded an increase of about 9% against the consumption in 2016. This was mainly due to the increase in recruitment exercises conducted in 2017, which involved printing a large number of application forms submitted through electronic means.

Waste Reduction, Collection and Recycling

Recycling Bins to Collect Waste Paper, Plastic Bottle, Metal Can and Glass Bottle

We collect waste paper, used plastic bottle, metal can, glass bottle and rechargeable batteries, etc. for recycling. Recycling bins are placed in common areas to facilitate disposal by staff members and visitors. The materials collected are delivered on a regular basis to recycling operators. The table below shows the amount of recyclables collected in 2017.

Recyclables	Amount Collected
Waste Paper	2,831.2 kg
Plastic	27 kg
Metal	31 kg
Glass Bottle	0 pcs
Rechargeable Battery	0 pcs



Food Waste Collection and Decomposition System

Food waste is one of the major solid wastes in Hong Kong. Reduction of food waste is therefore crucial for minimizing the load of landfills. To work towards this goal, a food waste decomposition system had been installed in CAD Headquarters.

Food wastes are collected in the CAD Staff Canteen at CAD Headquarters, then are disposed of into the food waste decomposition system. During the decomposition process, the food wastes are converted by enzyme into liquid, part of which is used as a natural fertilizer for the vegetation at CAD Headquarters and the remaining is discharged as an effluent. In 2017, we collected about 4.2 tonnes of food waste, which recorded a 21% decrease when compared with 2016.

Reduction of Waste in Staff Canteen

Besides handling the food waste collected through the food waste decomposition system, the Staff Canteen has taken actions to reduce other solid wastes through the following means:-

- Paper packages for re-usable chopsticks are no longer in use;
- Backing sheets for the food trays are not provided;



Figure 5-11: The food waste decomposition system in CAD



Figure 5-12: Food waste is collected in CAD Staff Canteen

- Encourage customers to request a smaller portion of rice, thus reducing the chance of creating food waste; and
- Publicity materials are posted in the Canteen to remind customers to reduce the amount of left-over food.



Fig 5-13: Publicity display in CAD Staff Canteen reminding customers not to waste food

Food Wise Charter

We have signed the Food Wise Charter implemented by the Environmental Protection Department since 2016. Upon joining the Charter, measures on food waste reduction are being reviewed regularly. Communication among the management, staff and the Staff Canteen operator is maintained through the Canteen Sub-committee meetings.

Reduction of Waste in Other Aspects

- We encourage colleagues to bring their own cups when attending meetings, in order to minimize the waste generated from disposable paper / plastic cups.
- To support waste reduction, the caterer of departmental events is requested to provide reusable food utensils instead of using disposable table ware.

Collection of Rain Water Recycling for Irrigation

Rain water and air-conditioning condensate water is recycled for the irrigation system installed at CAD Headquarters. The following table shows the saving of irrigation water in 2017:-

Buildings of CAD Headquarters	Facilities Building	Office Building	Air Traffic Control Building
Annual Irrigation Consumption (L)	5,411,500	1,040,300	1,234,200
Annual Recycled Water Collected for Irrigation (L)*	1,745,500	202,500	184,400
Percentage of Saving	32%	19%	15%

* Including the water recycled from the cooling tower.

Water Saving Measures

Fresh water is a precious natural resource. We encourage our staff to actively reduce their water consumption by the following:-

- For seminar and conferences involving guests, water dispensers are placed in the meeting venues for their refilling.
 Bottled water is not provided as far as practicable; and
- Notices are posted in pantries to remind colleagues to save water.



Figure 5-14: A notice reminding colleagues to preserve water resources

Green Procurement

CAD follows the guidelines as set out in the Government's green procurement policy and avoids procuring single-use disposable items. We purchase items that are durable, energy-efficient and recyclable. Below are some examples of green procurement measures implemented in our Department:-

- Procuring operation equipment, office equipment and other electrical appliances having an energy label;
- Choosing green products such as refillable ball pens, mechanical pencils and recyclable laser printer cartridges;
- Reviewing the operational need against monthly supply items regularly, particularly for those items with expiry dates;



Figure 5-15: An electrical appliance with Energy Label Grade 1

- Avoid using items that are environmentally unfriendly, for example, correction fluid and batteries containing mercury; and
- Incorporating term requesting Contractor to follow green guidelines in new cleansing contract tendering in 2017.

During procurement, we recommend the following green measures to the suppliers for their preparation of tendering documents and performing the contract:-

- All documents printing on both sides and on recycled paper, avoiding paper that exceeds 80 gsm;
- Avoiding use of plastic laminates, glossy covers or double covers;
- Using single line spacing and avoiding excessive space in the margins and in between paragraphs;
- Minimizing the use of packaging material; and
- ➢ For those carton boxes used for packing, made from 100% recovered fibre is preferred, given that it is strong enough for storage, stacking and transit.

Electric Vehicles

To ameliorate the air pollution problems in Hong Kong, electric vehicles are becoming more widely used in the territory. CAD commenced to replace our petroleum saloon vehicles with electric vehicles since 2013. At present, among our existing fleet of six saloon vehicles, two-third of them are electric We will replace more petroleum vehicles with electric vehicles vehicles. subject to operational needs.



Figure 5-16: The electric vehicles of CAD

Training and Communication

Environmental Management Committee

The Environmental Management Committee (EMC) was chaired by the Departmental Green Manager and comprised of representatives from all divisions of the Department. It was established to recommend environmental goals, policy objectives and targets and to promote environmentally responsible management within the Department. To achieve this, the Committee met regularly to consider green initiatives, promote staff awareness, monitor and report on the implementation of green measures.

CAD Environmental Report 2017 Appointment of Green Managers and Energy Wardens

A green manager was nominated from each division to coordinate and oversee green management issues. Energy Wardens were also appointed to promote and remind staff to comply with green housekeeping and energy-saving measures in the workplace on a day-to-day manner. In 2017, there were a total of 36 Energy Wardens for CAD Headquarters, ATCX and BATCX. Regular briefings were provided to them in order to enrich their relevant knowledge.



Figure 5-17: CLP Power Hong Kong Limited conduct an energy conservation talk on 4 July 2017

Figure 5-18: Group photo at the briefing on 4 July 2017, attended by the Departmental Green Manager, EMC Members, Green Managers and Energy Wardens

Energy Conservation Talk

To raise staff's awarencess and refresh their knowledge on energy conservation, we continue to invite CLP Power Hong Kong Limited to conduct an energy conservation talk. Useful energy saving tips both in the workplace and household environment were introduced. Participants gained valuable advice in the talk. We hoped that they would bring the information to others who had not attended the briefing as well as their family members.

Green Tips to all CAD Staff

A Green Corner was established in the CAD electronic bulletin board. It serves as a platform to share among CAD staff guidelines related to environmental management and green tips, such as circulars and pamphlets on energy saving measures, waste avoidance practices in office, etc. The related information would also be re-circulated to staff by electronic means regularly. Divisions were encouraged to post up the green tips and housekeeping measures at prominent places in the office area.

Training for New Recruits

A session on green management was included in the orientation programme for new recruits. This would ensure a good understanding and compliance to departmental green policies and practices among them once they joined the Department.

Recognition

Indoor Air Quality

We support the commitments under the Clean Air Charter. As mentioned in the previous chapters, we have been implementing measures to reduce emissions from our daily operation.

The Indoor Air Quality (IAQ) of CAD premises has continued to be assessed annually to monitor the situation. In 2017, the CAD Headquarters and the BATCX have obtained the "Excellent Class" and "Good Class" of IAQ Certificate respectively. The renewal of IAQ Certificate for ATCX was suspended in 2017 as this premises is undergoing a large-scale refurbishment exercise.

PANECAMENTAL PROTECTION DEPARTMENT	
Indoor Air Quality Certificate (Good Class) 室内空氣質素檢定證書《良好級》	Indoor Air Quality Certificate (Excellent Class) 室内空氣質素後近調書(卓成版)
Valid period . 50 8752 (28) 28 July 2017 31 27 July 2018	Vaild period
I hereby certify that the indoor air quality of the following location(s) has fully complied with the Good Class of the Indoor Air Quality Objectives. 本人跟附子列始的的时时以后就是完全经行"良好说,我们也是只要问题,	I hereby certify that the indoor air quality of the Relowing location(s) has July complied with the Euroelem (Euroelem (Euroel and
Name of building 3870475.04 Address 2921 - 25 Chang Dears Read, HOA, Lantas Island 3922 - 25 Chang Dears Read, HOA, Lantas Island 4942 - 4942.07 (2018)	Nome of Dubling
Certified location(s) C.662995E	Centred location(s)
Approved HRIAS IAQ Signatory 你通信可慮然率定约在我们来答答人员	Approved HRMS IAQ Signatory 香港证可编标卷出内运取到常备署人員
Name Since Sin On Vice contrast Insuing Since Sin On Since Sin On Vice contrast Insuing Since Since Since	Name The Carl Lander VG Carl Control husing Block Tel Lander 201/00117 Tel Lander Tel Lander Tel Lander
(This certificate is insured based on the results of the HRAG endorsed inspection report no. <u>INALIZEDEDEDEDEDEDEDEDEDEDEDEDEDEDEDEDEDEDED</u>	(This certificate is insued based on the results of the H3/AB endorsed inspection region rise majorisemus) (ICCENTRATING INFORMATION
Indoor Air Quality Centification Scherne for Offices and Public Places MID WIRLD WIRF W/VERIER MX2118	Indior Air Quality Centification Scherer for Offices and Public Places INCORD.COMMISSION25000 Reducts #
Indoor Air Quality Information Contre 如何世紀世紀改正中心	Indoor Air Quality Information Centre

Figure 5-19: The IAQ Certificates obtained in 2017

Green^{Plus} Award 2017

We have participated in the annual Green^{Plus} Award organised by CLP Power Hong Kong Limited since 2014. In 2017, CAD was given the "Smart Business Energy Saving Award". We will further explore more green initiatives and strive for continuous improvement.



Hong Kong International Airport Carbon Reduction Award 2017

The HKIA Carbon Reduction Award aims to recognize airport business partners' performance in carbon reduction. The airport business partners are required to submit their carbon data to the HKIA's Carbon Audit System annually. The Airport Authority Hong Kong (AAHK) will identify the organization which has achieved the most significant carbon reductions relative to the base year in 2015. CAD won the 2^{nd} runner-up in the "above 10,000 tonnes CO₂-e" category of the HKIA Carbon Reduction Award in 2017.

Views and Suggestions

CAD Environmental Report in the previous years can be found in the CAD website (<u>http://www.cad.gov.hk/english/er_report.html</u>). We welcome comments and feedback from readers so that we could identify ways for improvements. You can provide your views and suggestions to us by the following means:-

Address	: Civil Aviation Department Headquarters,
	1 Tung Fai Road,
	Hong Kong International Airport
	Lantau, Hong Kong
Contact no.	: 2910 6352
Fax	: 2910 6351
Email	: enquiry@cad.gov.hk
Website	: <u>www.cad.gov.hk</u>