5. Quality of Life – Environmental and Social Issues
Environmental Challenges Facing HKIA

Hong Kong and, by extension, HKIA must address a series of environmental challenges.

One of the most critical environmental issues is Hong Kong’s air quality. Even though most air pollution originates outside the airport, HKIA nevertheless has a role to play in reducing pollutants that may be harmful to airport workers, passengers and the public.

Aircraft noise is another issue we must address. We have been working with the Civil Aviation Department (CAD) the regulatory authority for air traffic management to review measures that could minimise noise levels in communities surrounding HKIA.

We are also addressing other environmental challenges facing Hong Kong, such as energy and waste management, through a series of innovative technologies and measures. These include improving our energy efficiency, greening our procurement and reducing our carbon footprint. We are also monitoring and managing the impact of our present operation on the surrounding ecosystem and assessing the potential impact of planned developments on biodiversity.

Reducing HKIA's Environmental Footprint

In May 2012, AAHK and its business partners pledged to make HKIA the world’s greenest airport. The key to realising this objective is the implementation of a rigorous rolling Three-year Environmental Plan. The plan contains more than 120 initiatives covering carbon emissions, air quality, water management, energy efficiency, biodiversity, green procurement, and waste management. It also sets benchmarks and measurable targets to reduce HKIA’s environmental footprint and includes mechanisms for monitoring and reporting progress.

In addition, we require our tenants and franchisees to produce, implement and update their own environmental management plans, which are reviewed periodically by AAHK.
Climate Change and Carbon Reduction

Recognising that airports have a role to play in combating climate change, HKIA has pledged to reduce its carbon emissions by 25% per workload unit (WLU) (one workload unit is either one passenger or 100 kg of cargo) by the year 2015 from the 2008 baseline level.

In 2008, we conducted our first carbon audit of all AAHK-owned facilities at the airport. The success of the first carbon audit laid the foundation for AAHK to develop an airport-wide carbon reduction programme for our business partners in 2009. This programme includes three key components:

1. engagement with stakeholders at the airport through a series of educational workshops on climate change and carbon auditing;

2. development of an online carbon audit system to allow business partners to calculate, analyse and report their annual carbon footprints; and

3. development and implementation of over 400 carbon reduction initiatives across the airport since 2008.

In March 2013, AAHK was awarded the “Optimisation” level in the Airports Council International’s (ACI) Airport Carbon Accreditation scheme in recognition of the work we have done with our 43 airport business partners to map and reduce HKIA’s carbon footprint. “Optimisation” is the second-highest of four progressively demanding accreditation levels under the scheme. HKIA was the first airport in Asia-Pacific to achieve this rating, which is also the highest level achieved in this region.
Energy Savings

Closely related to carbon reduction is our comprehensive series of programmes to reduce energy consumption. These include large-scale optimisation projects such as the reconfiguration of our chillers and the installation of a network of temperature and humidity sensors that ensure comfort with minimal energy wastage. Another important initiative, the first of its kind in Hong Kong, is the large-scale replacement of conventional lighting with 100,000 LEDs in our terminal buildings.

In 2012/13, our electricity consumption per passenger was 4.87 kilowatt hours (kWh), a 4.13% reduction compared with 2011/12.

Case Study How AAHK is Lighting the Way

Since lighting accounts for 10% of the energy consumed at the airport, AAHK recognised that replacing conventional lights with LEDs would offer a significant opportunity for energy savings.

During the initial phase of the LED conversion programme in 2009, the market was still undeveloped and the supply of available LEDs limited. To overcome this challenge, our Technical Services Department worked with the Government’s Energy Liaison Group to develop the specifications for LED lighting in Hong Kong. Now part of our procurement standards, these specifications have opened the way for other large organisations to embark on their own LED replacement programmes.

Hong Kong’s largest LED conversion project, now underway, will eventually replace conventional lights in the passenger terminals with LEDs. Although the initial cost of the programme was high, we were able to demonstrate an acceptable financial payback when assessing the full lifecycle costs as LEDs have a longer replacement and maintenance cycle. When completed, the project will provide an estimated 15 million kWh in electricity savings. This equates to reducing 9,000 tonnes of CO₂ equivalent emissions per year.

In addition to replacing our own lighting, we are now sharing our expertise in LED technology with our airport tenants in order to encourage them to carry out their own lighting conversion programmes. This will achieve even greater energy savings for the airport as a whole.
Waste Management

AAHK aims to reduce the absolute amount of waste generated on the airport island and to promote recycling of waste through a number of measures designed to encourage separation of waste at source.

In 2012/13, the amount of waste generated from areas controlled by AAHK was 318 grammes per passenger (g/pax), an increase of 2.5% compared with 2011/12 (i.e. 311 g/pax). Our efforts in promoting recycling are reflected in the increase in the amount of waste recycled per passenger from 40 g/pax in 2011/12 to 44 g/pax in 2012/13. In addition to managing its own waste, AAHK also recycled over 1,300 tonnes of food waste generated by our business partners.

We plan to improve our waste management further so that we can reach our target of recycling 50% of the waste generated at HKIA by 2021.

AAHK Waste Management Process

Recyclables collected by AAHK

<table>
<thead>
<tr>
<th>Recyclables</th>
<th>2011/12</th>
<th>2012/13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food waste and waste cooking oil</td>
<td>397</td>
<td>511</td>
</tr>
<tr>
<td>Paper and cardboard</td>
<td>1,600</td>
<td>1,840</td>
</tr>
<tr>
<td>Others (e.g. plastic, metal and cans, glass)</td>
<td>173</td>
<td>176</td>
</tr>
<tr>
<td>Total</td>
<td>2,170</td>
<td>2,527</td>
</tr>
</tbody>
</table>
Air Quality Monitoring and Control

HKIA continuously tracks outdoor air quality through two air quality monitoring stations on the airport island and a third control station on Sha Chau. The data collected helps AAHK monitor regional air quality and track our pollution reduction initiatives. Appreciating the public’s concerns and the desire to increase transparency, we began publishing data on individual criteria pollutants on our website alongside the Air Pollution Index in 2012. This information can be found at http://www.hongkongairport.com/eng/csr/environmental-management/air-quality/current-api.html.

We also make our air quality data available to academics seeking to better understand Hong Kong air quality issues, and to consultants conducting EIAs for other proposed developments.

While the greatest emitters – moving aircraft and general road traffic on Chek Lap Kok and north Lantau – are outside AAHK’s direct control, we have taken actions and set targets to control and reduce emissions from airside vehicles and stationary aircraft.

Vehicle Emissions

AAHK rolled out its Airside Saloon Electric Vehicles (EVs) Replacement Programme and installed over 50 EV chargers in 2012. We have set a requirement that by July 2017, all saloons on the airside must be EVs.

There is also a need to replace the older diesel-powered heavy vehicles and special ground service equipment that contribute the majority of emissions by the vehicle fleet. EV replacements are not yet available in the market for some of these, and may not be for several years. In order to accelerate the retirement of older vehicles, AAHK allows alternative technologies to be employed, including hybrids and Euro V diesel vehicles.

Aircraft Emissions

We have also set a target to ban the use of auxiliary power units (APUs) for aircraft at frontal stands in 2014. APUs are small jet engines in the tail of an aircraft that are used to deliver electrical power and air conditioning to the cabin while the aircraft is on the ground and the main engines are switched off. In order to facilitate this ban, we have been upgrading pre-conditioned air (PCA) units and fixed ground power (FGP) facilities. Since PCA and FGP units are powered by electricity instead of the jet fuel used by APUs, this ban will greatly reduce polluting emissions. In 2012/13, we upgraded 11 PCA units and replaced 112 FGP units. Another 37 PCA units and 24 FGP units will be upgraded by end of 2013.
Other Key Environmental Aspects

Water Management
HKIA has used seawater for its toilets and air-cooling systems as a standalone component of its innovative triple water system (TWS) since the airport opened in 1998. The TWS also uses potable water for drinking, catering and aircraft washing, and reclaimed water for landscape irrigation. Using seawater for sanitation and cooling delivers substantial cost, energy and carbon savings over more traditional “dual water systems”, which typically use potable water for these purposes.

In 2012, AAHK’s water usage was 15.6 litres per passenger. This compares favourably with the best performing European airports.

Green Procurement and Retailing
AAHK aims to minimise its ecological footprint through careful procurement of office and cleaning supplies. We are also sourcing environmentally-friendly construction materials for major projects, including carbon-efficient concrete works and Forest Stewardship Council certified timber. Working closely with our many retailers and caterers, we are encouraging “green retailing” through our green fit-out guide and promotion of recycling.

To further reduce our footprint, we are reviewing our procurement guidelines to require the use of a greater range of sustainable materials where these are available.

Noise
AAHK considers noise-related issues in planning and assessing the potential impacts of our future infrastructure developments. Indeed, one of the main considerations in relocating the airport from Kai Tak to Chek Lap Kok was to minimise noise disturbance by selecting a remote and less populated site. As the demand for housing in Hong Kong continues to grow, a number of sites on north Lantau that are close to the flight path have been identified for potential residential development. In order to avoid disturbance to future residents, AAHK works closely with the Civil Aviation Department and other government departments concerned to explain the potential impacts of aircraft-related noise on the proposed developments, to explore possible measures that have successfully been taken by other airports to address noise issues and evaluate the feasibility of adopting such measures at HKIA.

Ecology and Biodiversity
In addition to the key environmental aspects covered above, our operations may have impacts on local ecosystems and biodiversity. In addition to our on-going environmental control measures, we are formulating strategies and initiatives to support the conservation of species on which HKIA has had an impact. We recognise that we have a demonstrable duty of care to these species, particularly the Chinese White Dolphin and Romer’s Tree Frog. In particular, we will outline the measures to be taken to protect Chinese White Dolphin in the Environmental Impact Assessment for the proposed three-runway system.

Reuse of Wastewater
- Greywater from aircraft catering kitchens
- Greywater from aircraft washing
- Greywater from restaurants and hand basins in terminals

Source: AFCD
Social Issues – People and Community

Our Airport, Our People
AAHK is a fair and equal opportunity employer, offering long-term career development opportunities for staff members. AAHK also helps create work opportunities at the airport, ranging from basic frontline services to highly skilled technical and professional jobs.

Training and Development
People development is of paramount importance to the personal growth of our staff as well as the continuous success of AAHK. In 2009, we initiated a people development and succession planning framework for the senior management staff. Since then, we have been building a wider pool of airport management generalists for middle and senior management positions. Candidates are equipped to be well-rounded managers through regular job rotation and development programmes. From 2012 onwards, we have cascaded down the framework to include staff at the entry managerial level with the aim of identifying staff with potential in the early stage of their careers.

In addition to the people development and succession planning framework, we provide a wide range of training to keep staff abreast of airport developments and to meet changing business and operational needs. Regular informal lunchtime seminars on personal development topics such as staff wellness and self-enhancement are also organised. In 2012/13, we refined the Staff Training Curriculum and expanded the use of e-Learning courses. Through these efforts, we increased the total number of training hours by over 50% to more than 28,000 hours in 2012/13.

Case Study: Job Security for Frontline Workers

Frontline service workers are essential for keeping the airport clean, comfortable and working efficiently around the clock. However, service contract renewals may result in the possibility that workers might lose their jobs between contracts.

AAHK has therefore instituted a hire-back practice which requires incoming service contractors to retain at least 40% of workers from the outgoing service provider at no less than the same pay levels.

This practice enhances job stability for frontline workers and benefits contractors as workers are already familiar with the unique requirements of the airport. Retaining experienced staff also enables AAHK to maintain its high service standards, especially during the transitional phase.
Labour Challenges at HKIA
One of the critical challenges faced by AAHK, and especially our business partners, is the general shortage of workers in the Hong Kong labour market.

The challenge of hiring personnel to fill management, professional and frontline positions at HKIA is compounded by the relatively remote location of the airport that requires staff to spend extra time and money in travelling to and from their workplace. This is particularly true for some of HKIA’s business partners, who have reported difficulties in finding suitable candidates for frontline service and technical jobs. Many of these jobs require shift duty to meet the airport’s requirement to provide round-the-clock service. AAHK maintains regular liaison with our business partners and has put in place different initiatives to help them to promote job opportunities on the airport island.

Apart from formal employment opportunities, AAHK also provides a Summer Internship Programme for undergraduates from local universities. The programme not only helps AAHK to identify talent for future job openings, it also helps raise interns’ interest and understanding of the aviation industry.

Case Study The Airport Comes to Wanchai at HKIA Job Expo
For the second year, AAHK co-organised a job expo with the Labour Department at the Hong Kong Convention and Exhibition Centre. The objective of the expo was to help our business partners address labour shortage challenges by attracting potential applicants for available positions at the airport and to introduce a wide range of job opportunities to the general public.

The HKIA Job Expo 2012, held from 3 to 5 August 2012, presented a wide range of employment opportunities at the airport. More than 5,900 vacancies from over 50 companies were showcased. The many vacancies available included positions ranging from cabin service and aircraft maintenance to baggage handling, retail sales and engineering. Many of the participating companies also gave career talks and offered on-the-spot job interviews during the fair. The job expo attracted about 10,200 visitors and over 600 positions were filled.
Community Engagement
We support the community through a wide range of engagement programmes. In addition to building closer relationships with neighbouring communities, these programmes give our staff a better understanding of the challenging social issues faced by many Hong Kong people.

Community and Charitable Activities
During the year, we supported a number of community activities through donations, sponsorships and volunteering. These activities included events organised by local green groups, and youth education and elderly services run by social service organisations. Some of the highlights of our activities in 2012/13 were:

• A spring reception for the elderly in Tung Chung in cooperation with the Hong Kong Sheng Kung Hui Tung Chung Integrated Services and the Neighbourhood Advice-Action Council Tung Chung Integrated Service Centre
• A banquet for the elderly in Tuen Mun in cooperation with the Tuen Mun Respect for the Aged Association
• A toys and books drive for less well-off families in cooperation with the Hong Kong Sheng Kung Hui Tung Chung Integrated Services
• Participation in the Community Chest’s Skip Lunch Day with donations going to the Services for Street Sleepers and Cage Residents programme
• Better Air Quality 2012 Conference co-organised by Clean Air Asia, the Environmental Protection Department and Hong Kong Polytechnic University
• Clean Air Drive organised by Clean Air Network
• International Coastal Cleanup 2012 organised by the Green Council
• Island District Healthy City Tree Planting Festival – Green Lantau arranged by the Island District Healthy City Working Group
• Lai See Packet Recycling Programme organised by Greener Action
• Sunday Green Market held by the Hong Kong Outlying Islands Women’s Association at Eco Expo Asia
• Tree Planting Challenge 2012 and Green Festival 2012 by Friends of the Earth (HK)
• WWF-Hong Kong’s Walk for Nature @ Mai Po 2012 and WWF-Hong Kong’s Corporate Membership Programme
• Green Power Hike 2013 organised by Green Power
Community engagement programmes give our staff a better understanding of the challenging social issues faced by many Hong Kong people.

Airport Ambassador Programme
Established in 2002, the Airport Ambassador Programme is an initiative that provides assistance to passengers in need while providing employment opportunities for young people and the elderly.

The programme enables young people to receive on-the-job training and senior citizens to continue playing a meaningful role as volunteers.

Supported by the Labour Department, the Airport Ambassador Programme is a unique social partnership that benefits both participants and the airport through the provision of more friendly and personal service to passengers.

Hong Kong International Airport Environmental Fund
To encourage community participation in environmental projects, AAHK has set up an environmental fund for projects, activities and initiatives that promote environmental protection and sustainable living in Hong Kong.

All local non-profit organisations, such as environmental groups, community bodies and academic institutions that address the same environmental concerns as AAHK, are welcome to apply. Current activities sponsored by the fund include the following:

- Hong Kong Kids Ocean Week, organised by Ocean Recovery Alliance
- Micro Carbon Operation, organised by The Climate Group
- Finding Pipefish in Hong Kong 2012, organised by Eco-Education & Resources Centre
- ClimateWatch Community Engagement Programme, organised by EarthWatch Institute

We also provide environmental NGOs with free space at the airport for exhibitions on environmental awareness and green living.