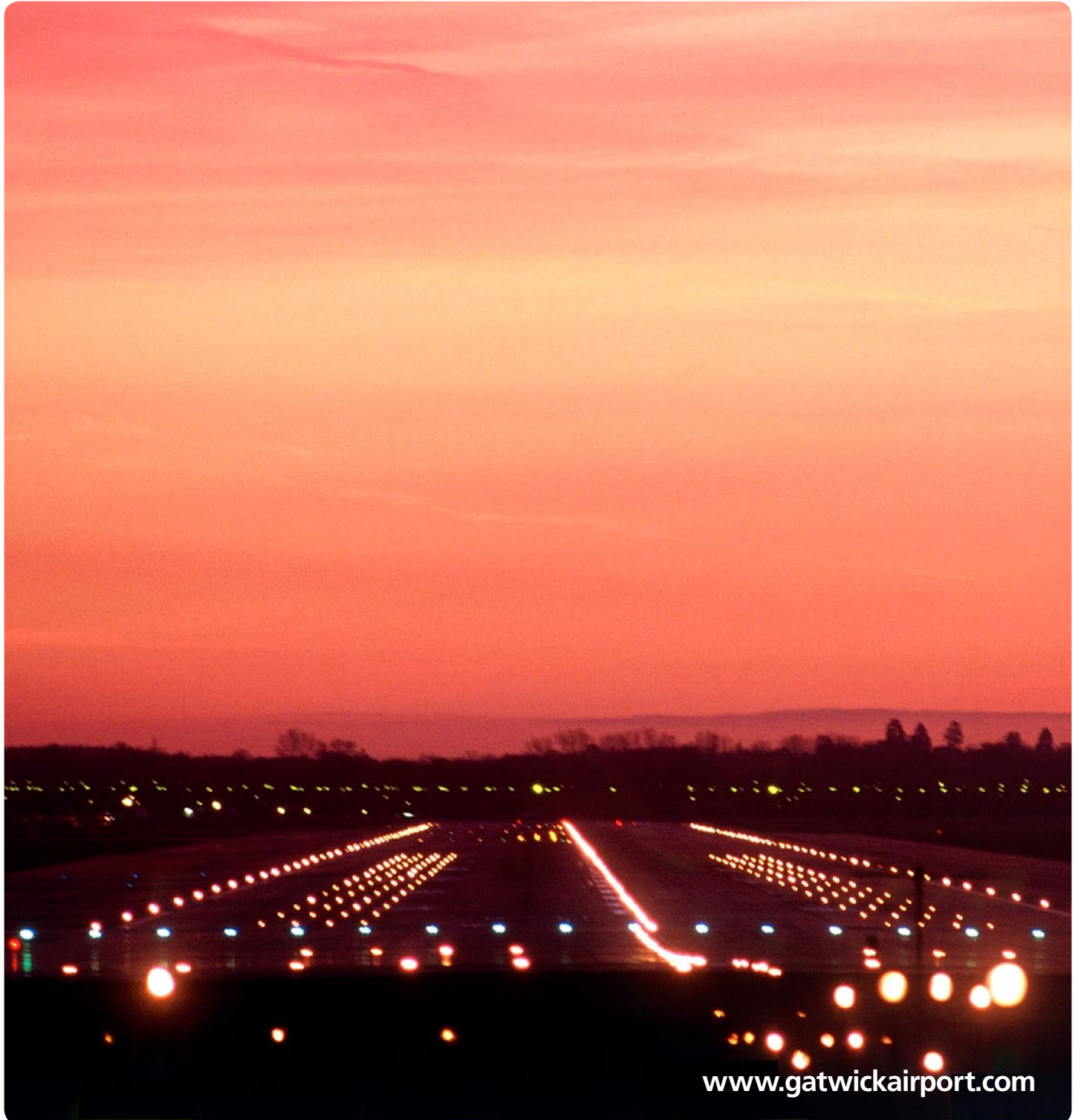


London Gatwick Airport Utilities Management Action Plan

2009-2011



www.gatwickairport.com

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Introduction

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Position

Gatwick Airport is the world's busiest single runway airport and, in the UK, second only to Heathrow in terms of passenger throughput, which was close to 35 million in 2008. The airport is also an important public transport hub, with frequent rail services to London, and direct or connecting rail or coach services to many towns in South East England and elsewhere in the UK.

Passenger numbers are currently forecast to increase to around 40 million in 2018, in line with government policy to make full use of existing airport runways. The Gatwick Airport Interim Master Plan (October 2006) explains the character and implications of Gatwick's growth as a single runway airport over the period to 2015 and, for 2030, outlines scenarios with either one or two runways.

The scale of existing and future activity at the airport brings appreciable benefits to the local, regional and national economies, but also has environmental impacts that need to be mitigated and/or managed.

Our environmental policy

Gatwick Airport generates substantial economic benefits both locally and regionally; however, there are intrinsic environmental effects relating to operating an airport. The predicted growth in the airport to around 40 million by 2018 has the potential to increase these effects unless effectively managed. In recognition of these pressures our environmental policy states that we are:

'Committed to minimising the impacts of its growing business on the environment and local communities, through the continuous improvement of its environmental performance. We will strive to act as responsible stewards of the environment at all times.'

This commitment is formalised in an agreement between Crawley Borough Council, West Sussex County Council and GAL. This agreement sets out our approach to our environmental management and stewardship in a series of objectives and commitments.

A proportion of the identified commitments take the form of 'obligations' in a legal agreement between GAL, Crawley Borough Council and West Sussex County Council. This was signed in December 2008, and covers the period until 2015. The obligations within the Agreement, among other targets, relate to the production, auditing and periodic review of a number of Action Plans, of which this is one example.

This document is the Utility Management Action Plan and covers the years 2009-2011. It contains measures to manage emissions from London Gatwick and to meet our Utility Management Objectives, which is to: 'manage our assets and people to drive efficiency in utility use, and thereby reduce the CO₂ emissions attributable to energy consumption at Gatwick Airport'

This objective is supported by 2 of the commitments between us, West Sussex County Council and Crawley Borough Council and forms the basis of this action plan:

We will publish a Utility Management action plan and will review it no less frequently than every three years. The action plan will describe our approach to the supply, demand and efficient use of utilities in its fixed assets.

Gatwick Airport will monitor and report annually on:

- CO₂ impact from energy consumption of fixed assets through our kWh consumption from gas and electricity; and
- water consumption of our fixed assets.

01 Introduction

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Sustainable Aviation Strategy

The utilities action plan has been developed to directly address one of the goals of the 'Sustainable Aviation Strategy'¹ an overview of which is provided in Box 1. The goal of the Sustainable Aviation Strategy which the Plan seeks to address is the commitment to:

'continue to manage and limit the industry's overall environmental footprint.'

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Box 1 Sustainable Aviation Strategy

Sustainable Aviation is a comprehensive strategy for the long term sustainability of the UK aviation industry. This initiative brings together the UK's leading airlines, airports, aerospace manufacturers and air navigation service providers. Signatories to the strategy are committed to delivering significant reductions in carbon dioxide emissions, nitrogen oxide emissions and aircraft noise over the next 15 years. It identifies eight goals to which each endorsing company (BAA being one) will contribute according to its respective operation; one of these goals directly underpins the Utilities Action Plan:

Continue to manage and limit the industry's overall environmental footprint.

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The content of the Action Plan is as below:

This Utility Management Action Plan is structured as follows:

Section 2 Summarises the legislative, regulatory and policy context concerning utility consumption.

Section 3 Explains how the actions set out in this plan have been developed and agreed.

Section 4 Records the actions GAL is proposing to undertake

Section 5 Details the means by which the action plan is to be implemented.

Section 6 Glossary.

¹ A strategy towards sustainable development of UK aviation (2005) Sustainable Aviation. Available online at: www.sustainableaviation.co.uk/images/stories/key%20documents/Sustainable-Aviation-full-document.pdf

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Legislative, regulatory and policy context

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02 Legislative, regulatory and policy context

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There is increasing pressure from the UK Government and Non Government Organisations (NGOs) to reduce the carbon impact of energy consumption. There are various statutory instruments concerning utility consumption at continental, international and national level. This section summarises the principal legislation, regulations and policies for utility management in the UK, with a particular focus on those which apply to Gatwick Airport.

International

United Nations Framework Convention on Climate Change

The UNFCCC is an international treaty that was set up in 1992 to begin to consider what can be done to reduce global warming and to cope with inevitable temperature increases.

Kyoto Protocol

The Kyoto Protocol, an international and legally binding agreement to reduce greenhouse gas emissions worldwide, entered into force on 16 February 2005. The first commitment period of the Kyoto Protocol covers 2008 until 2012 – the UK's target being 12.5% below 1990 levels.

European

European Union Emissions Trading Scheme

The EU Emissions Trading Scheme (EU ETS) is a Europe wide scheme which aims to reduce emissions of carbon dioxide and combat the serious threat of climate change. EU ETS puts a price on carbon that businesses use and creates a market for carbon. The most polluting sectors are currently included in the EU ETS, e.g. electricity generation, and from 2013 pan-European aviation emissions will also be included.

EU Energy Performance of Buildings Directive

The occupation and use of buildings are responsible for almost 50% of the UK's energy consumption and carbon emissions. This directive introduces measures to improve the energy efficiency of buildings, including:

- energy performance certificates for properties providing A-G efficiency ratings and recommendations for improvement
- requiring public buildings to display energy certificates
- requiring inspections for air conditioning systems
- giving advice and guidance for boiler users.

The EU directive is implemented in the UK via the Energy Performance of Buildings Regulations 2007.

UK

Sustainable Development Strategy

One of the themes of the UKSDS is Climate Change and Energy; as part of this there are various programmes the UK Climate Change programme being one of them. It sets out the UK Government's commitments at international and domestic levels to tackle climate change. Domestically it is split into several sectors – energy supply, business, transport, domestic, public sector and local government, agriculture forestry and land management and the encouragement of personal action.

Carbon Reduction Commitment

The Carbon Reduction Commitment (CRC) is a mandatory emissions trading scheme being introduced by the Government to cover large business and public sector organisations whose annual half-hourly metered electricity use is above 6,000MWh. The scheme is scheduled to begin in April 2010, with a three-year introductory phase. The first capped phase will begin in April 2013. Our electricity consumption is sufficiently high to require participation in the CRC.

Environmental Permitting Regulations

The Environmental Permitting (EP) Regulations came into force on 6 April 2008. These new regulations will make existing legislation more efficient by combining Pollution Prevention and Control (PPC) and Waste Management Licensing (WML) regulations. The boiler houses at Gatwick Airport came under the PPC regulations. We are required to report the energy performance of our boilers to the environment agency under these regulations and also to improve its performance.

Climate Change Act 2008

The Climate Change Act 2008 was passed in November 2008. It has two key aims:

- to improve carbon management and help the transition towards a low carbon economy in the UK; and
- to demonstrate strong UK leadership internationally.

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02 Legislative, regulatory and policy context

The Climate Change Act has a number of key provisions that are relevant to the running of an international airport, including:

- legally binding targets for CO₂ and greenhouse gases;
- the introduction of a Carbon Budgeting System;
- the creation of a Committee on Climate Change;
- international shipping and aviation; and
- further measures to reduce emissions.

Our Policy

As a major international airport, our utilities consumption is significant, in 1990 the CO₂ from the energy consumption equated to 137,940 tonnes.

BAA has a Group target for 2020 to reduce CO₂ emissions produced from energy used in fixed assets to 30% below 1990 levels: to support this target, we are targeting a reduction in CO₂ emissions by 5% each year (on business as usual, BAU) until 2011.

We are also targeting a 2% reduction each year (on BAU) in water consumption across the site until 2011. In 2007, water consumption was 973,047 m³.

Energy and water consumption at the airport is divided according to our internal business units, with the largest consumers being Terminals, Logistics and Property.

Data collection and reporting

The data that we collect and report is based on what the airport is charged for, this includes the utility consumption of third parties connected to our network. In short, this incorporates all parties who operate on site – within the boundaries of the airport itself as well as properties which are no longer owned by BAA.

However, the data currently collected and reported does not include CO₂ emissions from other sources such as refrigerants, airport related surface access, airside vehicles, supply chain (embodied energy), APUs (Auxiliary Power Units), aircraft on the ground or aircraft in the air.

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Development of the action plan

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03 Development of the action plan

The areas of improvement for which the action plan applies have been identified via four methods:

- **Carbon Trust Audits**
These audits highlighted three key areas for improvement, heating ventilation and cooling, lighting and passenger sensitive equipment.
- **Water balance audits**
These audits are carried out every year and highlight areas where there is an imbalance in use or leakage.
- **Bottom-up review**
Staff working within the relevant internal business units and areas were engaged to encourage improvements in their respective areas in relation to energy and water consumption
- **Learning and case studies**
Learning from other airports showing where improvements can be made.

The key areas identified for improvement by the above activities are around the following sections:

HVAC

The scope of heating ventilation and cooling (HVAC) across the airport is vast, and includes

- main boiler houses at North and South terminal, plus two satellite boiler houses at Pier 3 and Pier 6;
- main cooling plant at North and South terminal and various satellite areas;
- air handling equipment that transports the hot/cool air around the airport.

The HVAC equipment is controlled by a Building Management System (BMS). This needs to be reviewed and upgraded to ensure all equipment can be controlled, i.e. matching the heating and cooling of areas with their periods of occupancy.

Lighting

Another key area for investigation for savings is around lighting, namely internal, external and in tenanted areas, including retail units.

PSE

Passenger sensitive equipment – lifts, escalators and conveyors can be controlled so that in remote areas it only comes on when there is a need – start on demand.

Water

Finding and fixing leaks in the potable water network, as well as identifying areas where water saving devices can be fitted.

Behavioural

Staff are encouraged, via poster campaigns and face-to-face events, to think of ways to reduce the consumption of energy and water in their work areas.

Cross-airport learning

Communication events and learning with other airports as well as other industries to identify best practice.

Development

Utilities consumption forms part of the environmental assessment process. Our internal environmental assessment process follows the same principles as strategic environmental assessment, first analysing the need for the development before assessing the proposed development type and identifying possible alternatives, in order to identify the environmental impact.

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The actions

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04 The actions

This action plan covers those activities to be completed over the next 2-3 years. The actions have been identified through a series of internal scoping exercises and consultation with our key external stakeholders.

Table of actions

 Complete by year end  Ongoing

Detail of Action	Year			
	2009	2010	2011	
Actions commenced in 2008 and are ongoing annually until 2011	We will track progress against our annual targets for energy and water consumption on a monthly basis via our governance groups within the airport.			
	We will identify priority projects to deliver savings in energy and water consumption.			
	We will work with our airport business partners who operate at Gatwick Airport to reduce their impact on the environment – Energy and Water being important topics.			
	We will undertake environmental assessments on our development projects to ensure that renewable energy/grey water recycling/ rainwater harvesting is considered where appropriate.			
	We will facilitate learning from other airports regarding energy and water efficiency.			
	We will report annually on progress towards CO ₂ emission reductions on our overarching long-term Group target.			
Annual actions from 2009 onwards	We will identify priority projects to deliver savings in the following areas: • HVAC • Lighting • PSE			
	We will review concessionaire fit out standards for retail to increase emphasis on the need for energy efficiency through design and during operation.			
	We will undertake an assessment of the impact of FEGP usage on energy consumption.			
	We will examine the opportunity for advanced low-carbon energy provision through alternative methods, we will develop these for Gatwick and will incorporate into broader applications.			
	We will also examine the opportunity to deliver on-site renewable energy; this will include (1) viability (2) realistic timescales for delivery and (3) the most appropriate means of doing so.			

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04 The actions

Detail of Action	Year			
	2009	2010	2011	
Annual actions from 2009 onwards	We will integrate and expand the use of the grey water recycling facility at North Terminal sanitation block.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	We will proactively engage with our suppliers and their partners through a sustainable procurement strategy to procure goods and services with lower environmental impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Implementing the action plan

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05 Implementing the action plan

It is important to ensure that the action plan is effective and that it remains a “live” document, responsive to the dynamic airport environment and changing legislation.

For this reason, this action plan will be reviewed internally on at least a three-yearly basis. The review will involve engagement with the following stakeholder groups:

- Crawley Borough Council
- West Sussex County Council

The aim of the review will be to critically assess the progress made across the key areas of improvement identified. It will also be to review the scope of legislative requirements and add any new requirements, and associated actions, to the action plan.

Action Plans will be audited as set out in the Action Planning obligation.

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Glossary

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06 Glossary

APU	Auxiliary power unit
BAU	Business as usual
BREEAM	Building Research Establishment Environmental Assessment Method
CBC	Crawley Borough Council
CHP	Combined heat and power
CO ₂	Carbon dioxide
EU	European Union
FEGP	Fixed electrical ground power
GAL	Gatwick Airport Ltd.
HVAC	Heating Ventilation and Cooling
NGO	Non-governmental organisation
PPC	Pollution prevention and control

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