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# The Future of Air Transport







Department for Transport

# The Future of Air Transport

Presented to Parliament by the Secretary of State for Transport  
by command of Her Majesty  
December 2003

This White Paper refers to aviation policy across the UK.

In Scotland, Wales and Northern Ireland, land-use planning, surface access and a number of other matters associated with airport development are the responsibility of the devolved administrations.

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A Regulatory Impact Assessment has also been undertaken by DfT; this is available on the DfT website at [www.dft.gov.uk/aviation/whitepaper](http://www.dft.gov.uk/aviation/whitepaper)



# Foreword

Air travel is essential to the United Kingdom's economy and to our continued prosperity. In the last 30 years there has been a five-fold increase in air travel. And it has opened up opportunities that for many simply did not exist before; half the population flies at least once a year, and many fly far more often than that.

The challenge we face is to deal with the pressures caused by the increasing need to travel whilst at the same time meeting our commitment to protect the environment in which we live.

Our economy depends on air travel. Many businesses, in both manufacturing and service industries, rely on air travel; and it is particularly important for many of the fastest growing sectors of the economy. Visitors by air are crucial to UK tourism. Airfreight has doubled in the last 10 years; one third by value of all goods we export go by air. And 200,000 people are employed in the aviation industry, with three times as many jobs supported by it indirectly.

All this puts pressures on airports, some of which are at, or fast approaching, capacity. And environmental problems cause genuine concern for their impact on people near airports, as well as for the global environment. We need to plan ahead so we can continue to benefit from the economic and social advantages of air travel, but also to deal with the impacts of increasing air transport for the environment.

This White Paper sets out a measured and balanced approach providing a strategic framework for the development of air travel over the next 30 years.

The Government consulted on a range of options covering the whole of the UK. And, illustrating the importance of the issues, half a million people gave their views.

Our starting point is that we must make best use of existing airport capacity. We have concluded against proposals to build new airports at a number of locations. In every case we considered the consequences would be severe and better options are available.

We want to encourage growth at regional airports, and we have concluded that increased capacity is needed at a number of airports across the country, including some new runway capacity, more terminal capacity and support facilities.

In the South East, there are particular environmental concerns about expansion at the main London airports, but balanced against this there is the importance of these airports to the South East and to the UK's prosperity. Failure to provide some additional capacity could have substantial repercussions in the country as a whole, as well as for us individually.

Taking a measured and balanced view of all these concerns, we have concluded that provision should be made for two additional runways in the South East over the next three decades.

With these conclusions we have set stringent environmental conditions which developers will need to meet to take proposals forward. And the White Paper includes other proposals to limit and mitigate the impact air transport has on the environment, including its impact on global warming.

Here we set out a framework for the future development of air transport over the next 30 years. It is essential we plan ahead now – our future prosperity depends on it.

A handwritten signature in black ink, appearing to read 'Alistair Darling', followed by a small dot.

Rt Hon Alistair Darling MP  
Secretary of State for Transport  
December 2003

# Executive Summary

This White Paper sets out a strategic framework for the development of airport capacity in the United Kingdom over the next 30 years, against the background of wider developments in air transport.

It does not itself authorise or preclude any particular development, but sets out a policy framework against which the relevant public bodies, airport operators and airlines can plan ahead, and which will guide decisions on future planning applications. It sets out the conclusions of the Government, and of the devolved administrations where appropriate, on the case for future expansion at airports across the country. In doing so it takes account of views expressed in an extensive consultation exercise, in the course of which around 500,000 responses were received.

The Government recognises the benefits that the expansion in air travel has brought to people's lives and to the economy of this country. Its increased affordability has opened up the possibilities of foreign travel for many people, and it provides the rapid access that is vital to many modern businesses. But we have to balance those benefits against the environmental impacts of air travel, in particular the growing contribution of aircraft emissions to climate change and the significant impact that airports can have on those living nearby.

Air travel has increased five-fold over the past 30 years, and demand is projected to be between two and three times current levels by 2030. Some of our major airports are already close to capacity, so failure to allow for increased capacity could have serious economic consequences, both at national and at regional level. That must be balanced by the need to have regard to the environmental consequences of air travel. The Government believes that simply building more and more capacity to meet demand is not a sustainable way forward. Instead, a balanced approach is required which:

- recognises the importance of air travel to our national and regional economic prosperity, and that not providing additional capacity where it is needed would significantly damage the economy and national prosperity;
- reflects people's desire to travel further and more often by air, and to take advantage of the affordability of air travel and the opportunities this brings;

- seeks to reduce and minimise the impacts of airports on those who live nearby, and on the natural environment;
- ensures that, over time, aviation pays the external costs its activities impose on society at large – in other words, that the price of air travel reflects its environmental and social impacts;
- minimises the need for airport development in new locations by making best use of existing capacity where possible;
- respects the rights and interests of those affected by airport development;
- provides greater certainty for all concerned in the planning of future airport capacity, but at the same time is sufficiently flexible to recognise and adapt to the uncertainties inherent in long-term planning.

As part of this approach, the Government believes more needs to be done to reduce and mitigate the impacts of air transport and airport development. At the global level, the Government will play a major role in pressing for new solutions and stronger action by international bodies. And the White Paper sets out proposals to bring aviation within the European Union emissions trading scheme, to help limit greenhouse gas emissions.

To tackle local impacts around airports, the White Paper prescribes a range of measures to be applied nationally and locally. These include new legislation and economic instruments as well as improved technology and stringent planning conditions attached to airport development. The Government's under-pinning objectives are to limit and, where possible, reduce noise impacts over time, to ensure air quality and other environmental standards are met, and to minimise other local environmental impacts. Where noise impacts cannot practically be limited, the White Paper sets out new measures which it expects airport operators to take to help those affected, by offering to insulate or, in more severe cases, purchase properties.

Looking at other broader issues, the White Paper sets out the Government's approach to the crucial areas of aviation safety and security, as well as proposals for further action to promote consumer interests. It emphasises the importance of aviation for the tourism industry, and of air freight for business in general.

Airport growth needs to reflect the Government's wider objectives for sustainable communities and helping to improve the economic performance of the English regions. Airports are particularly important for the development of regional and local economies, and proposals for their development need to be incorporated within the relevant spatial and economic development strategies. The Government wishes to encourage the growth of regional airports in order to support regional economic development, provide passengers with greater choice, and reduce pressures on more over-crowded airports in the South East. Proposals to establish Centres of Excellence for aircraft maintenance and aviation-related business clusters at or around regional airports could also contribute to these aims.

The Government recognises too that for many areas of the UK the availability of air services to London is crucial to their economic prosperity. Working within EU legislation, the Government will if necessary intervene to protect slots at the London airports through Public Service Obligations, subject to certain criteria being met. The Government will also work to secure improvements to the existing legislation. In addition, the Government considers that the establishment of Route Development Funds in Wales and some English regions – along the lines of those already operating in Scotland and Northern Ireland – could help to establish valuable new services.

Airports are an important part of our national transport infrastructure, and their development needs to be planned within that context. Current and future enhancements to the long-distance rail network could help to meet some future demand for travel on certain routes. Ensuring easy and reliable access to airports, which minimises environmental, congestion and other local impacts, is a key factor in considering any proposal for new airport capacity. The Government expects airport operators to develop appropriate access plans, and to contribute to the costs of the additional infrastructure or services needed.

The White Paper sets out the Government's conclusions on the future development of airport capacity across the UK region-by-region and case-by-case. Where appropriate these conclusions were reached in conjunction with the relevant devolved administrations. The main conclusions are summarised below. In all cases where development is envisaged, full environmental assessment will be required when specific proposals are brought forward.

## Scotland

- Land should be safeguarded for terminal development and an additional runway at Edinburgh Airport.
- Substantial terminal development at Glasgow Airport is supported, and should be safeguarded.
- Measures should be considered to ensure that the possibility of providing an additional runway at Glasgow Airport during the period covered by the White Paper is safeguarded.
- The development of a new Central Scotland airport is not supported.
- Terminal and other facilities should be developed to support growth at Glasgow Prestwick, Aberdeen, and Dundee.
- There may also be a need for runway extensions at Aberdeen and Inverness.
- There will be a need for enhancements at some of the smaller airports in the Highlands and Islands.

## Wales

- Cardiff should remain the main airport serving South Wales, and the concept of a new airport in South East Wales is not supported.
- Further terminal development is needed at Cardiff Airport.
- There is potential for new intra-Wales services and interest in developing a route development fund to support new services.
- Access to Cardiff Airport, and to airports in England, needs to be improved.

## Northern Ireland

- The Northern Ireland authorities should review the form of the planning agreement at Belfast City Airport, if so requested.
- Development of increased capacity at Belfast International Airport within its existing boundary is supported.
- Proposals for the future development of City of Derry Airport should be given early consideration in conjunction with the Government of the Republic of Ireland.

## The North of England

- Significant growth at many airports in the North of England is anticipated and supported.
- Additional terminal capacity should be provided at Manchester Airport, but should be accompanied by measures to minimise the number of people affected by noise and a strategy for enhancing access to the airport.
- Development of increased capacity at Liverpool John Lennon Airport within its existing boundary is supported, to be accompanied by improved access. There may also be a case for extending the runway provided this does not encroach on environmentally sensitive sites.
- Any proposals to develop Blackpool and Carlisle Airports should be decided locally.
- Plans to expand terminal facilities and extend the runway at Newcastle Airport are supported.
- There is scope for extending both terminal facilities and runway length at Teesside Airport.
- Additional terminal capacity and a runway extension at Leeds Bradford Airport are supported, but should be accompanied by measures to minimise and mitigate noise impacts and improve access.

## The Midlands

- There is a need for additional runway capacity in the Midlands.
- The option of a new airport between Coventry and Rugby is not supported.
- Birmingham Airport is the preferred location for an additional runway. The variant put forward by the operator is supported, subject to stringent measures to limit noise impacts and improved access.
- The expansion of passenger and freight operation at East Midlands Airport is supported, subject to stringent controls on noise impacts. The case for a new runway is not currently supported, but will be kept under review.
- Any proposals to develop Coventry Airport, Wolverhampton Business Airport or for civil use of RAF Cosford should be decided locally.

## South West England

- There is potential for beneficial growth at airports in the South West.
- The expansion of Bristol Airport, including a runway extension and new terminal, is supported, subject to certain conditions.
- The option of a new airport north of Bristol is not supported.
- Additional terminal capacity within the airport boundary at Bournemouth Airport is supported, subject to action to minimise impacts on environmentally sensitive sites and improved access.
- Any proposals to develop Exeter, Plymouth and Newquay Airports should be decided locally.
- Action to support new services and to protect existing routes, including to the Isles of Scilly, may need to be considered.

## South East England

- There is an urgent need for additional runway capacity in the South East.
- There is no strong case for the development of a second international hub airport alongside Heathrow.
- The first priority is to make best use of the existing runways, including the remaining capacity at Stansted and Luton.
- Provision should be made for two new runways in the South East by 2030.
- The first new runway should be at Stansted, to be delivered as soon as possible (around 2011 or 2012).

- The further development of Heathrow is supported, including a further new runway and additional terminal capacity to be delivered as soon as possible (within the 2015-2020 period) after the new runway at Stansted, but only if stringent environmental limits can be met. An urgent programme of work and consultation will be started to examine this issue further and to consider how best use can be made of the existing airport.
- The Government will not seek to overturn the 1979 planning agreement preventing construction of a second runway at Gatwick before 2019.
- In case the conditions attached to the construction of a third Heathrow runway cannot be met, and since there is a strong case on its own merits for a new wide-spaced runway at Gatwick after 2019, land should be safeguarded for this.
- The option to develop two or three additional runways at Stansted is not supported.
- The option for two new runways at Gatwick is not supported.
- The development of a second runway at Luton is not supported.
- The option to develop a new airport at Cliffe is not supported.
- The development of Alconbury for passenger or freight services is not supported, but the potential for relocation there of aircraft maintenance operations from Cambridge is recognised.
- There is scope for other existing South East airports, including London City, Norwich, Southampton and some smaller airports, to help meet local demand, and their further development is supported in principle, subject to relevant environmental considerations.
- No other proposals put forward during the consultation for new airports at alternative locations are supported.

## Conclusions

The policies set out in this White Paper will support economic prosperity throughout the United Kingdom, will enable ordinary people to make flights at reasonable costs, and will manage and mitigate the environmental impacts of aviation, in particular noise, air quality and the contribution to climate change.

## Next steps

The Government invites airport operators to bring forward plans for increased airport capacity in the light of the policies and conclusions set out in this White Paper.



In doing so they are asked to produce new or revised airport master plans as quickly as possible. These should include details of the necessary environmental controls and mitigation plans, proposals for improved surface access, and, where appropriate, measures to address blight.

The appropriate planning and transport bodies will need to take these into account, along with the policies set out in this White Paper, in their guidance, strategies and decisions, together with the need to protect any land required for future airport expansion and to provide the necessary airspace.

# 1



# Purpose

- 1.1** This White Paper sets out a strategic framework for the development of airport capacity in the United Kingdom over the next 30 years, against the background of wider developments in air transport.
- 1.2** Airports are different from other parts of our strategic transport infrastructure. The Government is not the primary provider of civil airport capacity in this country. The UK's major airports are in the main operated by private sector companies or, in some cases, under local authority ownership.
- 1.3** The Government's role is primarily one of enabler and regulator, operating through the planning system in particular, to take a strategic view of where airport development may be needed. It must also ensure an appropriate balance both between competing land uses and between benefits and their impacts, when proposals for new development are under consideration.
- 1.4** It is for airport owners and operators to bring forward such proposals, which will need to be considered through the planning system in the normal way. This White Paper does not itself *authorise* (or *preclude*) any particular development, nor does it preclude any particular development, but sets out policies which will inform and guide the consideration of specific planning applications.
- 1.5** At the same time, airport development is a matter of great significance at both national and local levels. The provision of adequate infrastructure and capacity is important for national competitiveness, for regional development, and for people's ability to travel quickly, easily and affordably to where they want to go. Airports have environmental impacts now and increasing capacity may worsen those impacts at both local and global levels unless remedial action is taken.
- 1.6** The Government therefore believes that a national strategic framework for the future development of airport capacity, looking forward over a thirty-year time horizon, is needed in order to:
  - provide a clear policy framework against which airport operators, airlines, regional bodies and local authorities can plan ahead. The lack of such a framework has been a serious hindrance to the efficient development of airports in this country, resulting in over-lengthy planning inquiries and unnecessary delay;
  - give greater certainty wherever possible to those living close to airports and their flight paths. Again, the lack of a clear long-term strategy and the slow progress of decision-making has helped create unnecessary blight, uncertainty and distress for many people;

- take a view of the long-term demand for air travel and airport capacity, both for the country as a whole and across regions, and of the best long-term strategy to respond to that demand, rather than addressing each separate proposal in a piecemeal and uncoordinated fashion;
- set out a strategic and sustainable approach to balancing the economic benefits of airport development, the social benefits of easier and more affordable air travel, and the environmental impacts that air travel generates; and
- ensure that airport development is properly linked in to our wider transport strategy and to our other transport networks.

**1.7** The strategic framework set out in this White Paper will need to be reviewed periodically given the uncertainties involved in looking ahead over the next thirty years – both in the aviation sector, and more generally. Policies may also need to evolve over time to reflect changing market conditions and expectations. We will carry out such reviews as and when the circumstances require. And we will continue to consult on issues of significance which may affect the policies set out above.

**1.8** In preparing this White Paper the Government undertook an extensive consultation exercise, involving people and organisations with an interest around the country (see box). The results of that consultation have closely informed our conclusions.

### THE CONSULTATION PROCESS

The consultation exercise included:

- a wide-ranging national consultation document ‘The Future of Aviation’, published in December 2000, which covered many aspects of aviation policy. Over 550 responses were received and a summary of the responses can be found on the DfT web-site. Three supporting papers were published alongside the consultation document – on air freight, the potential impact of changes in aviation technology and valuing the external costs of aviation;
- seven regional consultation documents, published in July/August 2002 and February 2003, based on regional air services studies commissioned by the Government. The consultation documents sought views on the economic, environmental, social and airspace appraisals of options for future airport development and surface access improvements in each region. Over 125,000 copies of the main documents and 190,000 summary documents were issued. In total, around 500,000 responses were received by the end of June 2003, including completed questionnaires. Reports are available on the DfT web-site;
- a series of public exhibitions held around the main airports, enabling local people to obtain information and ask questions of Government officials and technical advisers;

- seminars, briefings, presentations and conferences for stakeholders across the UK;
- discussions with stakeholders at workshops held in Spring 2003 based on a joint DfT/Treasury document published in March on 'Aviation and the Environment – Using Economic Instruments'. This invited views on the desirability and effectiveness of a variety of possible economic instruments to address the environmental impacts of aviation. The document, and a summary of the key points made by stakeholders at the workshops, is also available on the DfT web-site.

We are grateful to everyone who took part in these events or responded to the documents.

- 1.9** Our conclusions are set out in the following chapters. In reaching them we have been conscious of the Government's responsibility to balance the economic, environmental and social costs and benefits; whilst protecting the rights and interests of individuals. The studies and consultations we have undertaken in preparing this White Paper have been designed to help us reach decisions which strike a fair balance for all, and in all parts of the UK; difficult decisions, but ones which should provide a sound and sustainable basis on which to plan the future of aviation in this country.

# 2



# The Strategic Framework

- 2.1** This chapter sets out the strategic framework against which the Government has reached its conclusions on the future development of the UK's airports. It emphasises the need for a balanced approach, recognising both the costs and benefits of air travel. And it sets out a series of key principles against which our decisions have been reached, within the context of the Government's overarching commitment to sustainable development.



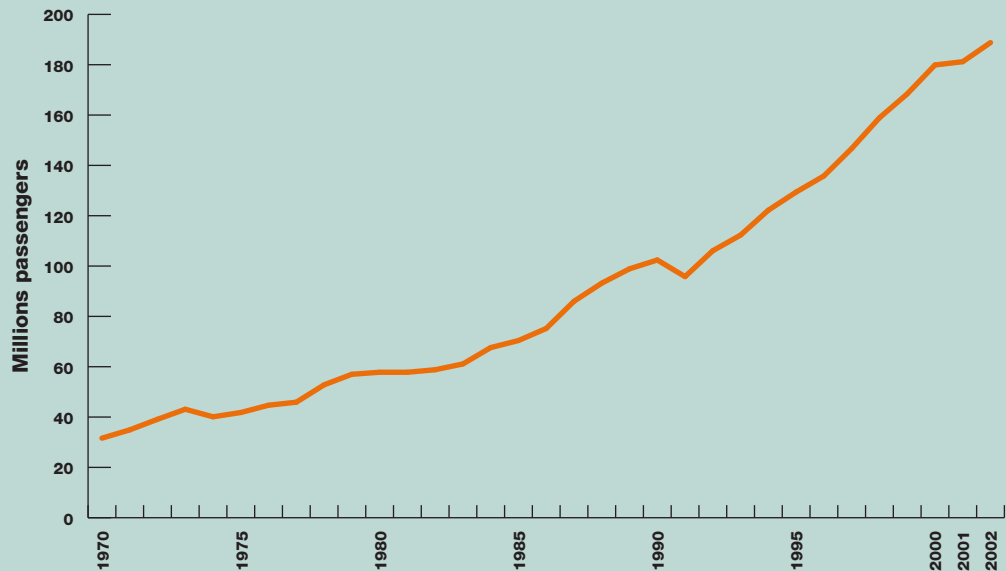
## The growth in air travel

- 2.2** Economic prosperity brings with it greater demand for travel. As people get wealthier, they can afford to travel further and more often. They can also afford to pay for goods and services brought from further afield.
- 2.3** In the case of aviation this trend has been amplified by technological advances, cost efficiencies and strengthened competition within the industry, which have brought air travel within the reach of many more people. In an era of increasing globalisation, foreign travel – whether for pleasure or on business – is now a common experience. The increasing affordability of air travel has opened up new destinations and possibilities; it has expanded people's horizons, opportunities and expectations.
- 2.4** As a result, we have seen a five-fold increase in air travel over the last 30 years. Half the population of the UK now flies at least once a year. And freight traffic at UK airports has doubled since 1990.





NUMBER OF PASSENGERS AT UK AIRPORTS



Millions of  
passengers



**2.5** Britain's economy is in turn increasingly dependent on air travel. One third of our visible exports, by value, now go by air. Exports of services, which depend on the ability to travel by air, make up a further eight per cent of our national income. Around 25 million foreign visitors a year contribute to a tourist industry that directly supports more than two million jobs; two thirds of these visitors come by air. Businesses coming to Britain are attracted by our good air links, and airports are a magnet for other forms of development. In an increasingly competitive global marketplace, Britain's continuing success as a place in which to invest and do business depends crucially on the strength of our international transport links.



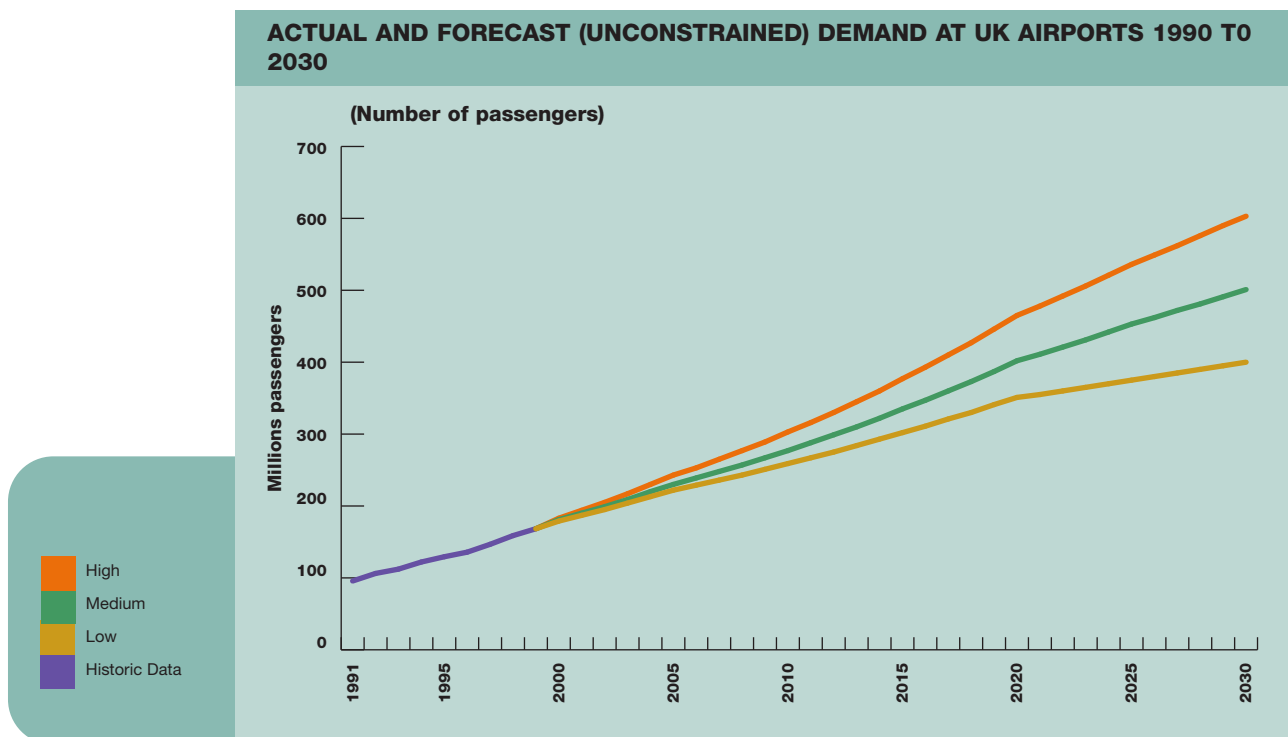
**2.6** The aviation industry itself makes an important contribution to our economy. It directly supports around 200,000 jobs, and indirectly up to three times as many. In a tough competitive environment, UK airport operators and UK-based carriers of all types are leaders in their fields, whose success brings significant economic benefits to this country. An illustration of this is the fact that one fifth of all international air passengers in the world are on flights to or from a UK airport.



- 2.7** Air services are important for the economic vitality of Scotland, Wales and Northern Ireland, and the English regions. They offer rapid access to other parts of the country, and essential connections to a range of European and global markets. For some communities, like those in the Scottish Highlands and Islands or Isles of Scilly, air services are quite simply a lifeline.

## Future demand

- 2.8** All the evidence suggests that the growth in the popularity and importance of air travel is set to continue over the next 30 years. In 2003 some 200 million passengers will pass through UK airports. Our latest published forecasts suggest that by 2030 this figure could, if sufficient capacity were provided, have risen to between 400 million and 600 million – in other words, these forecasts predict that demand will be between two and three times what it is today. This would imply an average of two return trips a year for each UK resident by 2030, compared to an average of just under one return trip each today.



- 2.9** There are, of course, large uncertainties involved, which increase the further we look ahead. For instance, it is possible that the market for air travel might mature more rapidly than we expect, causing the rate of growth to slow more quickly than forecast. Or the cost of flying may prove to be higher than projected, perhaps, for instance, due to rising oil prices or due to the costs of tackling global warming being higher than expected. The physical constraints on airport capacity will have the effect of limiting actual traffic. And there will be some scope for high-speed rail travel to substitute for air on certain short-haul routes once our inter-urban rail improvements have been completed.

- 2.10** Previous forecasts have often proved conservative; during the 1990s, for example, air traffic exceeded projected levels. The forecasts we have used (which are described in more detail in Annex A) are consistent with predicted future growth in air travel globally. We believe the ranges they show provide a reasonable indication of the likely scope of underlying future demand. However, the considerable uncertainties involved in looking 30 years ahead mean it is right to proceed in a measured and balanced way.

### Limitations on growth

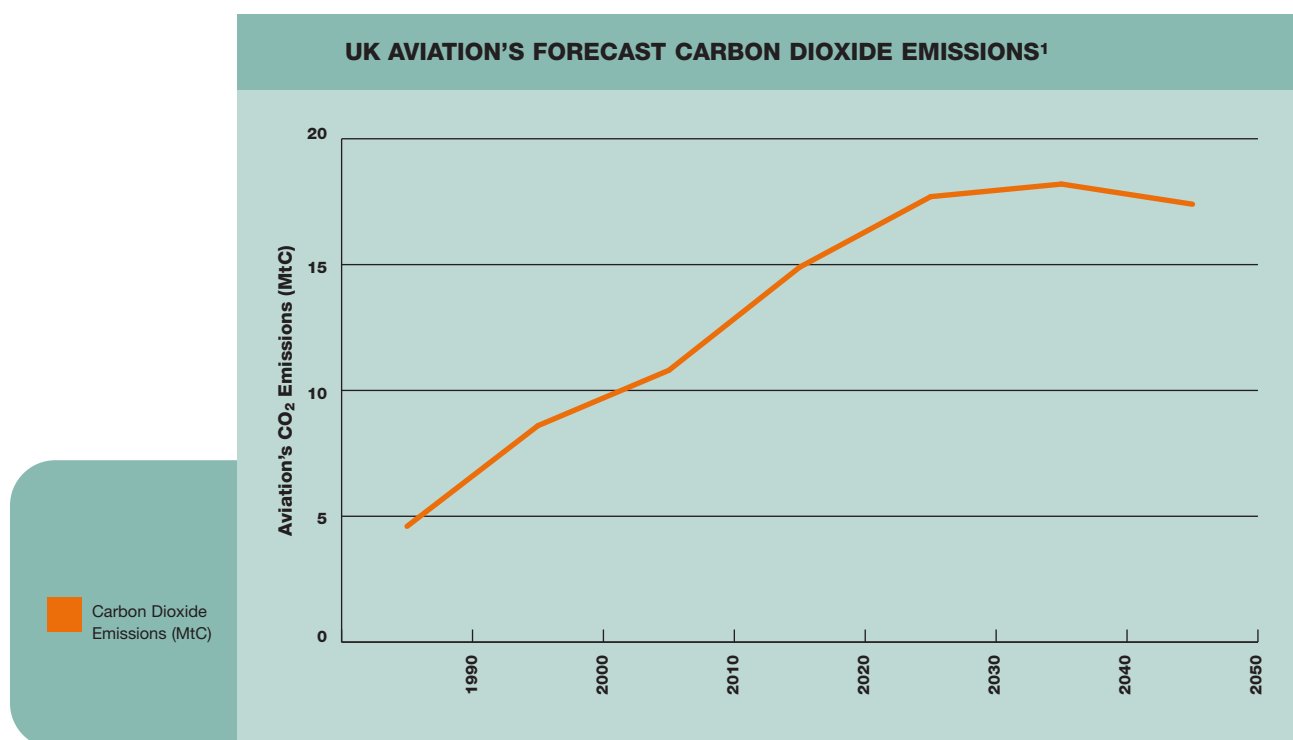
- 2.11** The availability of sufficient airport capacity is an important constraint on future growth. Our starting point is that we should make the best use of existing airports before supporting the provision of additional capacity. A sustainable approach entails first making better use of existing infrastructure, wherever possible, and this has been a primary consideration in developing our conclusions.
- 2.12** However, even at current levels of use, many airports in the UK are becoming increasingly congested as they attempt to cope with rising passenger numbers. In some cases, the capacity of terminals and runways is at, or near, saturation point. At Heathrow – the busiest international airport in the world – the two runways are already full for virtually the whole day. The same is true at Gatwick, already the world’s most intensively used single-runway airport. The pressures are less intense outside the South East, but Birmingham’s runway is already close to its existing capacity during peak times and will have reached it within the next five to six years. And Edinburgh is approaching the limit of its existing terminal capacity and urgently needs further investment.



- 2.13** The provision of some additional airport capacity will therefore be essential if we are to accommodate, even in part, the potential growth in demand. The most significant quantifiable benefit from additional capacity would be savings in travellers’ costs. Direct and wider economic benefits and costs are described in the South East consultation document. Failure to provide additional capacity would become a barrier to

future economic growth and competitiveness. Airports would become more congested; air fares would rise as slots became increasingly sought-after; and much of the future growth in air travel – along with the associated economic growth – could in due course migrate elsewhere. In the case of international traffic, this would often mean to other European countries.

- 2.14** At the same time, we have to balance that with the environmental impacts of air travel. We have to recognise that simply building more and more capacity to meet potential demand would have major, and unacceptable, environmental impacts, and would not be a sustainable approach.



- 2.15** At the global level, the growing contribution to climate change of greenhouse gas emissions from aircraft is a cause for concern. It is a problem that can only be tackled effectively on an international basis. But the Government will play a major role in seeking to develop new solutions and stronger actions by the appropriate European and international bodies. We will use every opportunity open to us in international forums to press for new international regimes that can address this problem, and in particular to ensure that, over time, aviation meets its external costs, including through a system of emissions trading. Further details of these proposals are set out in Chapter 3.
- 2.16** At the local level, for all the benefits they bring, airports can have significant impacts on those living nearby. Noise, air quality, traffic generation and urbanisation are all issues that naturally concern those who live near airports, or who may be affected by

<sup>1</sup> DfT forecast based on an assumption of three new runways in the South East and does not reflect any impact of economic instruments – hence it represents a slight over-estimation.

proposals to increase capacity. We must find ways of reducing, limiting and mitigating these impacts. Chapter 3 again sets out our proposals in this area.

## A balanced strategy

**2.17** The Government does not believe that either of the extremes – failing to provide additional capacity, or encouraging growth without regard for aviation’s wider impacts – is an acceptable option for the future. The Government is committed to sustainable development, with four main aims:

- social progress which recognises the needs of everyone;
- effective protection of the environment;
- prudent use of natural resources;
- maintenance of high and stable levels of economic growth and employment.

**2.18** A balanced and measured approach to the future of air transport is needed, which:

- recognises the importance of air travel to our national and regional economic prosperity, and that not providing additional capacity would significantly damage the economy and national prosperity;
- reflects people’s desire to travel further and more often by air, and to take advantage of the affordability of air travel and the opportunities this brings;
- seeks to reduce and minimise the impacts of airports on those who live nearby, and on the natural environment;
- ensures that, over time, aviation pays the external costs its activities impose on society at large – in other words, that the price of air travel reflects its environmental and social impacts;
- minimises the need for airport development in new locations by making best use of existing airports where possible;
- respects the rights and interests of those affected by airport development;
- provides greater certainty for all concerned in the planning of future airport capacity, but at the same time is sufficiently flexible to recognise and adapt to the uncertainties inherent in long-term planning.

**2.19** The conclusions set out in the following chapters seek to reflect these principles and identify, case-by-case and region-by-region, an appropriate and fair balance between them. Examples of a wider range of impacts from our conclusions on airport development are illustrated in the Integrated Policy Appraisal annexed to this White Paper.



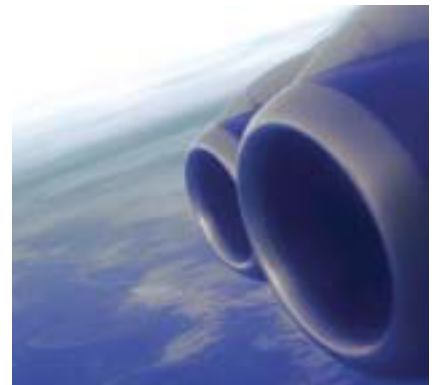
# 3



# Environmental Impacts

## Objectives

- 3.1** The balanced strategy set out in the previous chapter requires that we do more to reduce and mitigate the environmental impacts of air transport and of airport development.
- 3.2** One of the features of air travel is that while many of the benefits are spread across society as a whole, many of the adverse impacts are distributed unevenly. People living near airports have to live with the immediate effects of aircraft noise, air quality problems and increased congestion on local roads. Urbanisation sometimes associated with airport development can also have adverse impacts on landscape and habitats. Action can be taken to mitigate these adverse effects, but it is seldom possible to eliminate them altogether.
- 3.3** At the global level, the greenhouse gases emitted from aircraft engines into the atmosphere make a significant, and growing, contribution to climate change.
- 3.4** In many respects, the international nature of the aviation industry means that action to tackle these problems must be taken in collaboration with governments and institutions world-wide. The Government will ensure that we meet our international commitments and obligations; and we will continue to play a major role in seeking to develop new solutions and stronger actions by the appropriate international bodies.
- 3.5** At the local level, decisions about the amount and location of future airport capacity must properly reflect environmental concerns. Adverse impacts should be





controlled, mitigated and, where relevant, made the subject of suitable compensation. The following basic principles are fundamental to achieving these objectives. They provide an essential framework within which additional local controls should operate to manage the local environmental impact of aviation and airport development:

- we will respect targets on air and water quality which have been agreed to protect human health and the wider environment;
- we will require that airport developments are consistent with existing arrangements for the control of the noise impacts of aviation;
- we will work constructively with our European and, where appropriate, international colleagues to develop further procedures and regimes for managing noise, including night noise.

**3.6** Local controls should operate within these principles to manage the environmental impact of aviation and airport development so that:

- noise impacts are limited, and where possible reduced over time;
- local air quality is maintained within legal limits across all relevant pollutants in order to protect human health and the wider environment;
- loss of landscape and built heritage is avoided wherever possible, and otherwise minimised and mitigated to the greatest extent possible;
- all relevant water quality and other mandatory environmental standards are met;
- surface access to airports is designed to help limit local environmental impacts (see also Chapter 4); and
- impacts on biodiversity, such as disturbance of habitats and species, are minimised.

**3.7** A wide-ranging and balanced approach will be needed to deliver these objectives, including:

- applying increasingly stringent technical standards to limit emissions and noise at source;
- encouraging airport operators, airlines and air traffic managers to adopt the cleanest and quietest operational practices;
- the withdrawal of the noisiest and dirtiest aircraft, and replacing them with aircraft capable of better environmental performance;
- using economic incentives to encourage noise and emissions reductions, and the use of best available technology (see box);
- working with industry and universities to research, develop and introduce cleaner and quieter technology; and
- using land-use planning and management measures at and around airports, including avoiding new housing development in areas exposed to high levels of noise.



These measures will be applied with full regard for safety considerations, international obligations, technical feasibility, and economic reasonableness, including international equity.

- 3.8** Finally, we will work to ensure that aviation meets its external costs, including its environmental and health costs. The aviation industry has a responsibility to reduce its impacts under the ‘polluter pays’ principle. The biggest impact in monetary terms is aviation’s contribution to climate change, and a longer term solution is set out in paragraphs 3.35 to 3.40 and Annex B. In the meantime we expect the aviation industry and international bodies to address the ‘polluter pays’ problem seriously, responding creatively to the common challenge of global warming.
- 3.9** The rest of this chapter sets out in more detail our policies to address noise, local air quality and climate change. They will be supplemented by specific, and in many cases locally determined, environmental controls at individual airports. And they will be accompanied by stronger mitigation and compensation measures.

### DEVELOPING ECONOMIC INSTRUMENTS

Well-designed economic incentives offer an important mechanism for delivering the Government’s environmental objectives, including those for aviation. Potential economic instruments include environmental charges, taxes and trading schemes. Such measures use price signals to drive improvements, and can help to encourage the development and use of environmentally friendly technology. Economic instruments can help ensure that aviation bears the external costs it imposes on society.

In March 2003, the Department for Transport and HM Treasury published a report ‘Aviation and the Environment: Using Economic Instruments’, which provided estimates of monetary values of external costs relating to climate change, local air quality and noise. The report estimated the climate change costs associated with aviation, using an illustrative value for the cost of carbon of £70 per tonne (rising by £1 per year in real terms). The cost of carbon emissions associated with UK passenger aircraft was estimated at £1.4 billion in 2000, rising to over £4 billion in 2030. Local air quality costs for all passengers at UK airports in 2000 were estimated in the range £119 – £236 million a year, while noise costs at all UK airports in 2000 were estimated at £25 million a year. These costs have been taken into account in assessing future demand for air travel. There is a range of other environmental factors associated with aviation which are more difficult to quantify in monetary terms. These factors have been taken into account in assessing additional airport capacity.

Specific proposals for the development of new economic instruments are set out in the sections below and in Annex B. Specific measures available include noise and emissions-related landing charges, en route charges to address specific pollutants, and emissions trading – the last two best delivered on a multilateral basis.



## Noise

**3.10** Today's aircraft are typically 75 per cent quieter than jets in the 1960s. Despite that, action is needed to prevent a deterioration in the noise climate as growth in air traffic overtakes the rate of technological advance. The increases in airport capacity envisaged by this White Paper need to be matched by stringent measures to control noise – mostly delivered locally, but within an overall national and international framework.

**3.11** Our basic aim is to limit and, where possible, reduce the number of people in the UK significantly affected by aircraft noise. This is a challenging objective, and meeting it will require a combination of measures, including:

- promoting research and development into new low noise engine and airframe technologies. We support the research target set by the Advisory Council for Aeronautics Research in Europe<sup>1</sup> that perceived noise should be reduced to one half of current average levels by 2020;
- implementing the regulatory framework agreed by the International Civil Aviation Organisation (ICAO) – see box. The key elements of this framework have now been incorporated into UK law by the Aerodromes (Noise Restrictions) (Rules and Procedures) Regulations 2003. These regulations currently apply at ten UK airports, but we expect the underpinning principles to be applied at all significant UK airports;
- implementing EU Directive 2002/49/EC, which requires periodic noise mapping at many airports from 2007 to identify day and night noise problems and, from 2008, action plans to deal with them;
- retaining and, where necessary, strengthening the current regulation by central Government of noise at Heathrow, Gatwick and Stansted airports. We will also consider exercising similar powers at other airports if there is evidence that a major

<sup>1</sup> Strategic Research Agenda, Volume 2, October 2002.

noise problem is not being dealt with adequately through local controls. However, the Government's preference remains that local solutions should be devised for local problems wherever possible, and we expect that airport master plans (see Chapter 12) will describe the package of measures that an airport operator intends to apply to deal with local noise (and air quality) problems;

- widening the use of economic instruments, including the use of differential landing charges according to noise levels – for which powers already exist – at all airports where a significant local noise problem exists. Funds from a noise-related element in user charges could be used to finance local mitigation and compensation schemes.

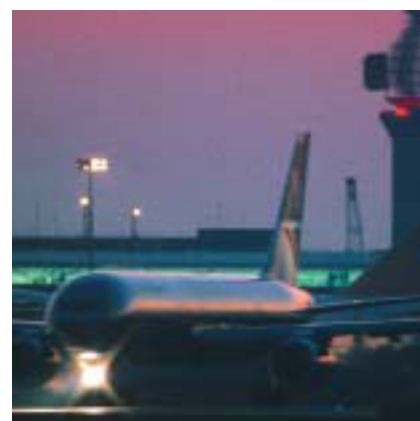
### ICAO AGREEMENT ON CONTROLLING NOISE

The ICAO Assembly agreed in 2001 that states should pursue a balanced approach to controlling noise at airports. This has four elements:

- **reducing noise at source** – to be regulated through ICAO, by means of progressive tightening of noise certification standards. The latest 'Chapter 4' standard for new aircraft takes effect in 2006, but many modern aircraft are already comfortably beating this standard and we will continue to press for even better performance;
- **land-use planning and management** – to ensure that inappropriate development is discouraged or prohibited around airports. We have consulted separately on planning for major projects, and will update the relevant planning policy statements for England, including Planning Policy Guidance Note 24 (Planning and Noise).
- **noise abatement operational procedures** – steps taken by pilots and air traffic controllers to minimise the noise nuisance from overflights, for example the use where feasible of continuous descent approach; and
- **operating restrictions** – measures that limit the access of aircraft to airports, such as night restrictions or the phased withdrawal of the noisiest aircraft types.

**3.12** The Government recognises that noise from aircraft operations at night is widely regarded as the least acceptable aspect of aircraft operations. We will bear down on night noise accordingly, but we must strike a fair balance between local disturbance, the limits of social acceptability and the economic benefits of night flights. This should be done on a case-by-case basis.

**3.13** We will start consultations in 2004 on a new night noise regime for Heathrow, Gatwick and Stansted.



- 3.14** The Government intends that new legislation should be introduced, when Parliamentary time allows, to strengthen and clarify noise control powers both at larger commercial airports and at smaller aerodromes. There are two main measures:
- *an amendment to section 78 of the Civil Aviation Act 1982 so that controls such as night restrictions could, subject to public consultation, be set on the basis of noise quotas alone, without a separate movements limit.* This would mean that the primary control at an airport regulated by the Government could be related more directly to the noise nuisance, providing a more effective incentive for airlines to acquire, use and develop quieter aircraft. This amendment does not signal any intention to make the controls any less stringent than they are currently; and
  - *new powers to extend these controls so that they can relate to overall use of the airport, thereby enabling clearer environmental objectives to be set.* At present, overall contour or similar controls may only be set voluntarily or through the planning system, which means that generally they must be directly related to a specific development, such as in recent years for the Manchester second runway and the Heathrow fifth terminal.<sup>2</sup>

### AIRCRAFT NOISE MEASUREMENT AND MAPPING

**Noise** is measured using the standard decibel scale (**dB(A)**). A series of aircraft noise events can be averaged over any given period of time using the **equivalent continuous sound level ( $L_{eq}$ )**.  $L_{eq}$  is the method of averaging recommended in the Government's planning guidance on noise and in guidelines issued by, for example, the World Health Organisation.

Noise **maps** depict **contours** which connect points having the same average noise exposure. The contours are generated using computer models, based upon the known characteristics of aircraft noise generation and attenuation and, for the major airports, calibrated from noise measurement **monitors** on the ground.

Both in the consultation documents and in the White Paper, the dB(A) values used relate to the  $L_{eq}$  **16 hour daytime** period from 7am to 11pm. This is because daytime rather than night movements are the relevant factor in considering capacity issues in nearly all cases. **Projected** future noise contours rely on assumptions about future fleet composition. Inevitably this introduces an element of uncertainty, which becomes greater as we look further ahead.

Based on research the Government has used 57dB(A)  $L_{eq}$  as the level of daytime noise marking the approximate onset of **significant community annoyance**. The relationship between noise and annoyance is of course not an exact one, and varies according to individuals and locations. In the consultation document for the South East, the 54dB(A)  $L_{eq}$  contours were also shown as a sensitivity indicator.

<sup>2</sup> Further details about these proposals, and other issues raised by the consultation paper *Control of noise from civil aircraft* (DETR, July 2000) are available on the DfT web site.

From 2007, EU Member States will be required (by Directive 2002/49/EC) to collate noise maps using a variant of  $L_{eq}$  which incorporates weightings on events in the evening and night, the  $L_{den}$  index.

## Noise mitigation and compensation

- 3.15** Our approach to noise impacts is first, to seek to control the scale of impacts; second, to mitigate remaining impacts; and third, to compensate for those impacts which cannot be mitigated. A variety of measures is available to help reduce noise impacts at source, as described earlier in this chapter, but there is a limit to how far noise nuisance near airports can be reduced.
- 3.16** The consultation responses underlined the significance of aircraft noise as a key environmental impact in the public mind, and we particularly recognise the concerns of those living near airports where expansion may occur. We believe, therefore, that in addition to controlling and reducing aircraft noise impacts, a proportion of the large economic benefits provided by airport development should be used to mitigate their local impacts.
- 3.17** The principal mitigation measure for aircraft noise impacts is the provision of acoustic insulation. This can be required on a statutory basis under section 79 of the Civil Aviation Act 1982 at Heathrow and Gatwick. In practice, however, all current noise insulation schemes are provided on a voluntary basis by airport operators, often supported by local planning agreements.
- 3.18** Under the Land Compensation Act 1973, those affected by future airport development can claim compensation for loss in the value of their property directly attributable to the operation of the development. But this does not apply until twelve months after a new runway is in operation.
- 3.19** We believe people are entitled to know what steps will be taken to help protect them against aircraft noise or, in the more severe cases, to help them move house. We set out below the measures we expect airport operators to adopt in order to help those impacted when new development takes place. These will be complemented by voluntary proposals to address blight (see Chapter 12).
- 3.20** Airport operators currently operate voluntary schemes to mitigate the impact of aircraft noise, as well as other community projects, and we wish to see a continuation of this voluntary approach. In addition, at the larger UK airports (those with more than 50,000 movements<sup>3</sup> a year), we wish to see the measures outlined below applied as a benchmark for mitigating aircraft noise, and adopted either as an adaptation of existing schemes or when new mitigation schemes are brought forward.

<sup>3</sup> A movement being a take off or landing but excluding those solely for training purposes in light aircraft.



**3.21** Accordingly, *with immediate effect*, we expect the relevant airport operators to:

- offer households subject to high levels of noise (69dBA  $L_{eq}$  or more) assistance with the costs of relocating; and
- offer acoustic insulation (applied to residential properties) to other noise-sensitive buildings, such as schools and hospitals, exposed to medium to high levels of noise (63dBA  $L_{eq}$  or more).

**3.22** To facilitate the application of this new benchmark, operators of airports where these criteria might be triggered may wish to institute noise contouring programmes to verify current noise levels, where they do not already do so.

**3.23** We recognise the difficulties associated with insulating some noise-sensitive buildings. Where acoustic insulation cannot provide an appropriate or cost-effective solution, airport operators should endeavour to provide alternative mitigation measures such as environmental grants, the provision of quiet rooms for reading or music, or funding for school trips away from the noisy environment – especially where the loss of amenity outdoors may be severe. The priority of need and the level of any contribution would be assessed on a case-by-case basis by the airport operator and relevant stakeholders. We commend the Birmingham Schools Environment Improvement Programme<sup>4</sup> as an example of a successful scheme.



**3.24** To address the impacts of *future* airport growth we expect the relevant airport operators to:

- offer to purchase those properties suffering from both a high level of noise (69dBA  $L_{eq}$  or more) and a large increase in noise (3dBA  $L_{eq}$  or more);<sup>5</sup> and
- offer acoustic insulation to any residential property which suffers from both a medium to high level of noise (63dBA  $L_{eq}$  or more) and a large increase in noise (3dBA  $L_{eq}$  or more).

<sup>4</sup> This has resulted in over £500,000 being invested in schemes to improve the noise climate in five schools located close to flight paths.

<sup>5</sup> An increase of 3dBA  $L_{eq}$  is approximately equivalent to a doubling of noise energy.

- 3.25** Relevant airports should use 2002 noise contours as the base year when applying these measures related to further growth. Noise contours should be produced in 2007 for 2006 and at five yearly intervals thereafter as a minimum. Smaller airports, currently with less than 50,000 movements a year, should use noise contours for the year when the movement threshold is first passed as the base year when applying these measures. Similarly, at these airports, noise contours should be produced five years after this date and at five yearly intervals thereafter. Airport operators should continue to work closely with local stakeholders and offer to incorporate these arrangements within local planning agreements. If necessary, the Government would give statutory force to these acoustic insulation arrangements under sections 79–80 of the 1982 Act.
- 3.26** These arrangements are more generous towards people who suffer a large increase in noise, for example due to the developments supported in this White Paper, as these people are likely to have moved to the affected areas without the expectation of major airport development. In respect of current noise levels, many people will have chosen to live in these areas with knowledge of the existing noise climate, and many of these properties will have benefited from previous insulation when noise levels were higher than they are today.
- 3.27** In our consultation on the South East, we asked whether those entitled to insulation should be offered equivalent cash payment as an alternative. There was little support for this; many consultees felt it was important to secure lasting improvements, and compensation is already payable under the Land Compensation Act 1973 in appropriate cases. We are not therefore proceeding with that option.

## Local air quality

- 3.28** Aircraft engines contribute, along with airport traffic on local roads and surface vehicles at the airport, to the totality of emissions of air pollutants in the vicinity of airports. The most important emissions are of nitrogen dioxide (NO<sub>2</sub>) and particulates (PM<sub>10</sub>). On a national scale the contribution of air transport and associated activities to these impacts is small, but locally their effect can be significant.
- 3.29** There are mandatory EU limits for levels of these pollutants in the air, irrespective of the *source* of the emissions. These limits come into effect in 2005 for particulates and 2010 for NO<sub>2</sub>. We are committed to meeting these standards, and it is clear that major new airport development could not proceed if there was evidence that this would likely result in breaches of the air quality limits. The Government has also set national objectives in the Air Quality Strategy. These targets have a different legal status from the EU limit values, but they form part of a joint DfT/Defra Public Service Agreement target and they will help underpin decisions on the future development of aviation in the UK.
- 3.30** Compliance with mandatory air quality standards is an issue that extends beyond the air transport sector. But we must make significant progress in reducing the expected impacts of airports on local air quality over the next six years and beyond if the

mandatory EU limits are to be fully met. This will be particularly challenging at very busy airports served and surrounded by high levels of road traffic. (Clearly measures will also be required to reduce emissions from vehicles.)

**3.31** Achieving it will again require a combination of measures, including:

- the use of economic instruments to incentivise improvements. The Government intends to bring forward legislation, enabling the Secretary of State to require an emissions-related element to be included in landing charges at airports where there are local air quality problems. In the meantime, the Government sees merit in individual airport operators modifying their charges to take account of local air quality impacts. There may also be scope, subject to compliance with international laws and obligations in relation to slot allocation, for other instruments such as permit trading schemes for NO<sub>2</sub> at individual airports;
- reducing airport ‘airside’ emissions substantially, through technological and operational improvements by both airports and airlines;
- local authorities and transport bodies working with airports to limit road traffic emissions associated with air passengers and employees, including through increased use of public transport;
- securing improvements in motor vehicle technology and reductions in background levels of pollution from other sources;
- pressing through ICAO for more stringent international standards to limit emissions from aircraft engines; and
- promoting research in industry and universities aimed at better understanding the problem and how it can be controlled.

## Other local impacts

**3.32** The public health impacts of aviation are a matter which the Government takes very seriously. As noted earlier, we must ensure air quality standards around airports are met. Research continues on the effects of noise on human health, and the Government will take account of existing guidelines from the World Health Organisation. We are also supporting research to obtain better evidence on this and, through the European Commission, on whether, for example, aircraft noise exposure in schools can interfere with children’s cognitive performance.

**3.33** Urbanisation emerged as a focus of concern in the responses to the national consultation. New development to serve airports should be consistent with the broad framework of planning policy which includes the protection of green belt. It may be appropriate to designate green belts around substantial new airport developments to safeguard the countryside from further encroachment (see also Chapter 12).



- 3.34** In assessing options for airport development, we have taken into account a wide range of other environmental impacts. We are clear that loss of habitats, species, landscape and built heritage should be minimised where any new development takes place, including relocation of historic buildings, replanting of woodland, creation of new recreation sites, and other measures to preserve and restore as much of the UK's heritage as is compatible with airport safety and feasible within reasonable costs. All relevant water quality and other mandatory environmental standards must be met.

## Climate change

- 3.35** Attention has become increasingly focused on the growing contribution of air transport to climate change (see box). Forecasts have suggested that by 2030 CO<sub>2</sub> emissions from UK aviation<sup>6</sup> will amount to some sixteen to eighteen million tonnes of carbon, of which some 97 per cent would be from international flights. This could amount to about a quarter of the UK's total contribution to global warming by that date.
- 3.36** The Government is committed to taking a lead in tackling the problem of climate change, and to putting the UK on a path to a reduction in carbon dioxide emissions by some 60 per cent from current levels by 2050. International flights from the UK do not currently count in the national inventories of greenhouse gas emissions as there is no international agreement yet on ways of allocating such emissions. However, the Government's Energy White Paper<sup>7</sup> makes it clear that we should ensure that the aviation industry is encouraged to take account of, and where appropriate reduce, its contribution to global warming. The aviation sector needs to take its share of responsibility for tackling this problem.

### HOW DOES AVIATION CONTRIBUTE TO CLIMATE CHANGE?

Aviation emissions arising from the combustion of kerosene include:

- carbon dioxide;
- water vapour (which leads to the formation of contrails and cirrus clouds at altitude);
- nitric oxide and nitrogen dioxide, together termed NO<sub>x</sub> (which forms ozone, a greenhouse gas, at altitude);
- particulates (soot and sulphate particles);
- other compounds including sulphur oxides, carbon monoxide, hydrocarbons and radicals such as hydroxyl.

<sup>6</sup> In this context UK aviation is defined as all domestic services plus all international departures from the UK.

<sup>7</sup> *Our energy, our future – creating a low carbon economy*, Cm 5761, February 2003.

The impact of aviation on climate change is increased over that of direct CO<sub>2</sub> emissions alone by some of the other emissions released and their specific effects at altitude. These effects include increased tropospheric ozone, contrail formation and a small amount of methane destruction. The environmental impacts of aircraft have been assessed by the Intergovernmental Panel on Climate Change (1999) and more recently by the Royal Commission on Environmental Pollution (2002), and they are thought to be 2–4 times greater than that from CO<sub>2</sub> alone. While further research is needed on these issues, the broad conclusion that emissions are significantly more damaging at altitude is clear.

- 3.37** Reduction in greenhouse gas emissions across the economy does not, however, mean that every sector is expected to follow the same path. The Government is committed to a comprehensive approach, using economic instruments to ensure that growing industries are catered for within a reducing total. The use of emissions trading allows coverage of environmental costs through a mixture of emissions reduction within the sector and purchase of reductions that can be produced more cheaply by other sectors.
- 3.38** There are reductions that can be made by the aviation industry. Fuel efficiency gains arising from fleet replacement and technology improvements will make a contribution to reducing CO<sub>2</sub> emissions. Research targets agreed by the Advisory Council for Aeronautical Research in Europe suggest that a 50 per cent reduction in CO<sub>2</sub> production by 2020 can be achieved, which compares well with other sectors. However there is no viable alternative currently visible to kerosene as an aviation fuel. We have long recognised that the global exemption of aviation kerosene from fuel tax is anomalous, but a unilateral approach to aviation fuel tax would not be effective in the light of international legal constraints.
- 3.39** The Government therefore believes that the best way of ensuring that aviation contributes towards the goal of climate stabilisation would be through a well-designed emissions trading regime. For an international industry, an international trading regime is the best solution. We are pressing for the development and implementation through ICAO of such a regime, consistent with the request to ICAO from the UN Climate Change Convention for action on aviation emissions. The ICAO Assembly has already endorsed the development of an open emissions trading system for international aviation.
- 3.40** A greenhouse gas trading scheme is fast developing in Europe. We intend to press for the inclusion of intra-EU air services in the forthcoming EU emissions trading scheme, and to make this a priority for the UK Presidency of the EU in 2005, with a view to aviation joining the scheme from 2008, or as soon as possible thereafter. The possible elements of such a scheme are described in Annex B to this White Paper.

**3.41** Such an economic instrument would give added weight to other emissions-reducing actions for which the Government will press, including:

- adoption by airports, airlines and air traffic controllers – including EUROCONTROL – of working practices that minimise the impact of their activities on climate change;
- research and development by aerospace manufacturers of new technologies to reduce the climate change impact of future fleets; and
- voluntary action by airlines, airports and aerospace companies to control greenhouse gas emissions and develop sustainability strategies. Such action should include emissions reporting and targets at a company level.



**3.42** All these measures provide a solid foundation for action in tackling aviation's global impacts. However, the Government recognises that they may not provide a total solution. In view of this, the Government will continue to explore and discuss options for the use of other economic instruments for tackling aviation's greenhouse gas emissions, building on the work in the March 2003 report *'Aviation and the Environment: Using Economic Instruments'* (see box on page 39). We reserve the right to act alone or bilaterally with like-minded partners if progress towards agreements at an international level proves too slow.

**3.43** As a matter of principle, any additional action to tackle the environmental impacts of aviation will take full account of the effects on the competitiveness of UK aviation and the impact on consumers. The Government recognises that because of its blunt nature, Air Passenger Duty is not the ideal measure for tackling the environmental impacts of aviation.

# 4



# The Air Transport Sector

- 4.1** In the following chapters we set out our conclusions on the airport capacity needed over the next 30 years. This chapter describes the wider context within which the aviation industry operates, both internationally and across the countries and regions of the UK. It also considers the implications of these and other cross-cutting issues for future airport capacity, and sets out our policies in these areas.

## An international industry

- 4.2** Aviation is a quintessentially international industry. There are few areas, apart from airport development, in which the UK is free to make policy in isolation from other countries. Most new aviation legislation now originates at the European Union (EU) level. On wider European issues we co-operate closely with the 40 other countries in the European Civil Aviation Conference (ECAC), and a global framework of minimum technical standards is produced by the International Civil Aviation Organisation (ICAO) (see box).
- 4.3** In the EU, the creation of the single market has dismantled traditional restrictions on market access, capacity, frequencies and fares. Airline licensing, slot allocation, ground handling and various aspects of consumer protection are all subject to Community law. Member States have also been ready to accept that the EU should take the lead in appropriate technical fields such as safety regulation, air traffic management and environmental matters. This has led to the creation of the European Aviation Safety Agency and proposals for a 'Single European Sky' for the purposes of air traffic management.
- 4.4** Over the next 10 years we can expect to see further developments, including extension of the single aviation market (already effectively covering Norway, Iceland and Switzerland) to include those states which will have acceded to the EU, and perhaps some neighbouring countries as well; and an increasing role for the EU in conducting aviation relations with other countries. In addition there will be further development of the 'Single European Sky',<sup>1</sup> and a consequent decrease in the number of air traffic management centres in Europe. The European Aviation Safety Agency (EASA) is likely to take on responsibility for rule-making in all matters relating to operations, personnel, airports and air traffic management. And we can expect

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<sup>1</sup> An initiative of the European Commission, aimed at reducing delays by improving the performance of Europe's air traffic management system.

further EU legislation for harmonising and strengthening environmental protection measures – both on noise and emissions.

- 4.5** Global standards in such areas as safety, air traffic management, navigation satellite systems, security, and accident investigation will continue to be set by ICAO. This will help to secure stable, harmonised and internationally recognised standards, and avoid a proliferation of local rules. An extended and strengthened role for ICAO in auditing safety standards in contracting states will be important if we are to move successfully towards a more liberalised commercial environment.

## KEY INTERNATIONAL BODIES

### **The European Union**

The EU currently consists of 15 Member States, with a further ten set to join in May 2004. It has powers to adopt legislation which is binding – either directly or following transposition into national law – on Member States.

### **The International Civil Aviation Organisation**

ICAO is a United Nations Specialist Agency which aims to promote the safe and efficient development of international civil aviation. Founded in 1944, ICAO currently has 188 Contracting States. Contracting States are obliged either to comply with the minimum safety, security and environmental standards established by ICAO, or to inform other States of variations.

### **The European Civil Aviation Conference**

ECAC was founded in 1955 to promote co-operation between European states on civil aviation matters. It is not a law-making body, but provides a forum for the exchange of views, advice and information. ECAC currently has 41 Member States, and is particularly active in assisting European countries with less developed aviation industries.

### **EUROCONTROL**

EUROCONTROL (The European Organisation for the Safety of Air Navigation) develops short, medium and long-term initiatives in a collaborative effort with 33 Member States, industry, and airspace users. Since its inception, Eurocontrol has promoted a number of significant benefits to the European air traffic management system, including the setting up of the Central Route Charges Office, which collects and disburses route charges on behalf of Member States.

## Safety

- 4.6** Safety will continue to be of prime importance across the aviation sector. The UK air transport industry has a good record, with accident rates kept low despite the rapid rise in traffic levels over the past two decades. But the Government, the Civil Aviation Authority (CAA) and the industry are determined to ensure that we maintain the



present high safety standards, identify potential threats and seek appropriate improvements.

- 4.7** In seeking improvements, we recognise the importance of independent checks on our national safety systems. Both the CAA and the Department for Transport's Air Accidents Investigation Branch have already been audited by ICAO experts and received good reports. Both organisations will take the necessary remedial action where an audit suggests things can be done better, and will continue to be subject to follow-up checks. In addition, the CAA will ensure that the proper level of safety regulation is delivered as cost-effectively as possible, so as not to disadvantage UK industry.
- 4.8** To ensure effective policing of international standards, we will continue an active policy of inspecting foreign aircraft visiting UK airports as part of a joint European action programme, soon to be enshrined in EC law. We will also continue to support the strengthening and broadening of ICAO's auditing activities, and agree concerted action if other countries fail to ensure the safety of their aviation.
- 4.9** Within Europe, a genuinely single market in air transport services calls for common rules and harmonised standards of implementation. Establishing a properly resourced and legally robust regime, based on the EASA, for ensuring high safety standards across Europe is an important step forward. We will work to ensure that EASA delivers an efficient, high quality safety regime as the European Common Aviation Area gradually expands. In supporting liberalisation beyond Europe, we must demonstrate that it will not lead to lower safety standards or loss of effective safety oversight, and must ensure clear lines of responsibility leading back to specifically accountable regulatory authorities.
- 4.10** For people living and working near airports, safety is best assured by ensuring the safe operation of aircraft in flight. However, in areas where accidents are most likely to occur we seek to control the number of people at risk through the Public Safety Zone system. Public Safety Zones are areas of land at the ends of runways at the busiest airports, within which development is restricted. Our basic policy objective is not to increase the number of people living, working or congregating in Public Safety Zones and, over time, to see the number reduced. Where necessary, we expect airport operators to offer to buy property which lies wholly or partly within those parts of the zones where the risk is greatest. We will continue to protect those living near airports by maintaining and, where justified, extending the Public Safety Zone system.

## Aviation security

- 4.11** We have for many years operated a stringent aviation security regime which, in many respects, exceeds the standards and recommended practices laid down by ICAO. Its key principles are that protective measures should reflect an assessment of the threat at any given time, and be capable of providing a properly robust defence.



- 4.12** We have further tightened security since the attacks in the USA of 11 September 2001. Action has included extending the list of prohibited items in the aircraft cabin, carrying out secondary searches of passengers and their cabin baggage at the departure gate, requiring UK airlines to fit special intrusion-resistant flight deck doors, and establishing a capability to put covert armed police on UK aircraft where necessary. And with the valuable input from a recent review of airport security,<sup>2</sup> we will work to improve liaison between the various government agencies in the UK with a regulatory role at airports – HM Customs and Excise, HM Immigration Service and the Police, as well as the Department for Transport.
- 4.13** The primary aim of aviation security is the protection of aircraft and their occupants. It is right, in our view, for industry to meet the full costs of security – as it does other running costs – and to pass these costs on to the consumer as appropriate. We do not believe the general taxpayer should have to subsidise the aviation industry through Government funding of security, beyond our considerable programme of research and training.
- 4.14** Today an important vulnerability arises beyond our shores, in countries whose aviation security arrangements may be less robust than our own – in some cases very much less. So we are strengthening and accelerating our programme of engaging relevant foreign governments in an effort to drive up aviation security standards overseas, including for services by foreign airlines to the UK. We will continue to press in appropriate international forums for improved standards world-wide.
- 4.15** The aviation industry is changing rapidly. We will ensure that aviation security evolves in parallel, both through improvements to the measures already in place and identification and development of imaginative new approaches and maximum use of new technologies.

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<sup>2</sup> 'Airport Security', a report by Sir John Wheeler published on 30 October 2002 – see Bibliography.



## Service quality

- 4.16** Standards of service are a legitimate element of competition between operators. Many travellers, for example, attach more importance to price than to in-flight service, particularly on shorter routes. Provided certain minimum levels of consumer protection are offered, we see no reason for the Government to insist on operators meeting defined standards of service. Healthy competition between operators and reliable consumer information are the starting points for ensuring that the customer gets good value for money.
- 4.17** The steady growth in the number of people flying has brought a sharper focus on passenger issues, and we can expect this to continue. Consumers in all sectors feel more empowered in expecting high levels of personal attention and customer service, and more confident in making complaints. Airlines and airports need to respond to this wider trend. And with more elderly and mobility impaired people flying, the industry will come under increasing pressure to raise standards of passenger care.
- 4.18** We support the European Voluntary Commitments on passenger service, which include important protocols on meeting the needs of disabled people when flying. This is a welcome step forward, but we take the view that ensuring that airlines do not charge disabled people directly for services, or refuse to carry them, should be the subject of European Community legislation. At UK level, airlines and airports have agreed to follow a Code of Practice on access to air travel for disabled people, which complements the European Voluntary Commitments.
- 4.19** European Community legislation already regulates the provision of package travel, compensation for denied boarding, carrier liability in the event of accidents or loss or damage to baggage, and Computer Reservation Systems. In the future this coverage is expected to extend to the treatment of passengers subject to cancellation and delays, and the provision of consumer reports on airline performance so that passengers can make informed choices between them. We will support moves at Community level to



strengthen air passenger rights, particularly where the aim is to empower consumers, and so long as they are confined to securing minimum rights which should be enjoyed by all passengers, without inhibiting innovation, reducing consumer choice, or imposing a disproportionate regulatory burden.

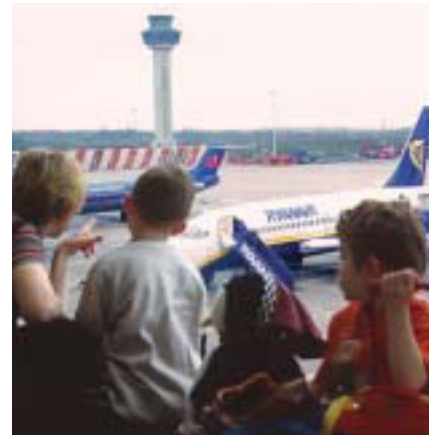
**4.20** Within the UK, further action to promote and strengthen consumer interests will include:

- reviewing the Air Travel Organisers' Licensing arrangements in the light of the CAA's current consultation on financial protection for air travellers and package holidaymakers;
- seeking statutory powers to impose a new levy to ensure future solvency of the Air Travel Trust Fund;
- retaining the Air Transport Users Council as the organisation representing the interests of air passengers;
- working closely with the industry, the police and other interested parties to minimise the amount of disruptive behaviour on board aircraft, including maintaining the Government's unified incident-reporting scheme;
- working closely with the CAA's new specialist unit on aviation health issues, promoting research, and keeping advice to passengers and crew up to date; and
- the work of the Office of Fair Trading in promoting consumer choice.



## Aviation and tourism

- 4.21** Consumers have benefited greatly from the growth in foreign travel. Today, UK residents make around 60 million visits overseas each year, compared to just thirteen million in 1978. Around 80 per cent of these are by air. Not only do we enjoy an unparalleled choice of destinations, including many international services operating from regional airports, but also wider and speedier access to a range of consumer and other goods airlifted from overseas markets.
- 4.22** The importance of in-bound tourism to the UK economy is referred to in Chapter 2. It accounts for an estimated 4.4 per cent of GDP in 2002, and more than two million direct jobs. Outbound tourism too, although sometimes presented as encouraging people to holiday abroad to the detriment of the domestic economy, also contributes significantly to the economy through revenue earned by tour operators and the air transport sector.
- 4.23** The Government, working with VisitBritain and the Tourism Alliance, has launched a series of recent programmes and campaigns to attract foreign visitors and encourage domestic tourism, in the face of a widening gap in the tourism balance of payments. Britain can compete on its strengths while at the same time enabling British people to holiday abroad and gain from the revenue this generates for British tour operators, airlines, airports and other services. British travellers have little alternative to air travel for long-haul, and many short-haul, destinations, and limits on air capacity would greatly disadvantage incoming tourism, through decisions by travellers from overseas to switch to more convenient and lower-cost destinations away from the UK.



## Airports and regional economies

- 4.24** Airports are an important focus for the development of local and regional economies. They attract business and generate employment and open up wider markets. They can provide an important impetus to regeneration and a focus for new commercial and industrial development.

And they are increasingly important transport hubs, especially for the logistics industry (see **Air freight** below).

- 4.25** Many airports increasingly act as a focal point for ‘clusters’ of business development. By offering the potential for the rapid delivery of products by air freight and convenient access to international markets through the availability of flights for business travel, they can attract inward investment to a region.
- 4.26** Some airport clusters, such as those in the West of Scotland or at Bournemouth airport, relate directly to the provision of aviation-related services, such as aircraft maintenance and aeronautical components. At present, however, the majority of indirect employment associated with the supply of goods and services to airports and the airlines which operate from them is located in the South East of England. Building local supply chains and capacity for the aviation industry, including the promotion of Centres of Excellence for aircraft maintenance (see box), could bring important benefits to the economies of regions, as well as assisting the airports and airlines that serve them.
- 4.27** For all these reasons, it is essential that proposals for new airport capacity and related development both reflect, and are reflected in, the spatial development, transport and economic strategies of the English regions and Scotland, Wales and Northern Ireland. The Government expects the relevant English regional bodies to take the conclusions in this White Paper fully into account in drawing up their strategies, and the devolved administrations are encouraged to do the same (see also Chapter 12).

### **DEVELOPING THE AIRCRAFT MAINTENANCE, REPAIR AND OVERHAUL SECTOR**

The UK’s leading role in commercial air transport has resulted in the development of an extensive maintenance, repair and overhaul sector in this country. This includes a number of specialist independent, companies who can offer airlines the opportunity to outsource maintenance work, if they need to concentrate on their core business activities and reduce their fixed costs.

As well as serving domestic airlines, maintenance companies based in the UK are well placed to attract business from overseas carriers, based on comparative costs, geography, skills and reputation. The UK currently has some 20 per cent of the European market; and with the world’s commercial airliner fleet expected to double over the next twenty years there is a significant opportunity to expand the sector by maintaining or increasing the UK’s share of this business.

At the same time, there are concerns about the industry’s ability to provide sufficient numbers of licensed engineers and other well-qualified technical personnel to meet the industry’s long-term need. This is particularly the case in the South East where the majority of maintenance operations are currently concentrated, but where living costs and wage levels are rising fastest.

The Government therefore wishes to promote the establishment of a number of Centres of Excellence in civil aircraft engineering and training at airports outside the South East of England. This would have a number of advantages:

- encouraging the growth of this sector, and of the UK's share of an increasing global market;
- increasing competitiveness as a result of lower labour and facilities costs outside the South East,
- increasing the supply of well-trained engineers and technicians for the industry as a whole (including operations based in the South East);
- encouraging the growth and economic benefits of regional airports; and
- reducing pressures at the busy London airports, so freeing up space for additional passenger and freight facilities.

There are already well-developed proposals for Centres of Excellence in the West of Scotland and the North East, and the concept is being examined in South Wales. But the opportunity exists to extend the idea to other UK airports, particularly where they can build upon established maintenance facilities or aerospace clusters.

The Department for Transport will work with other Government departments, devolved administrations, skills agencies, regional bodies and the industry to develop these ideas further and facilitate their implementation.

## Air freight

**4.28** Airports play an increasingly important role in the supply and distribution of goods within their regions. At major airports, such as Heathrow, Gatwick and Manchester, freight is predominantly moved in the holds of passenger aircraft ('bellyhold'), but other airports also cater for dedicated freight-only aircraft. Stansted and East Midlands are the UK's largest freighter airports, and Edinburgh, Glasgow Prestwick and Belfast International also have important roles serving regional markets.

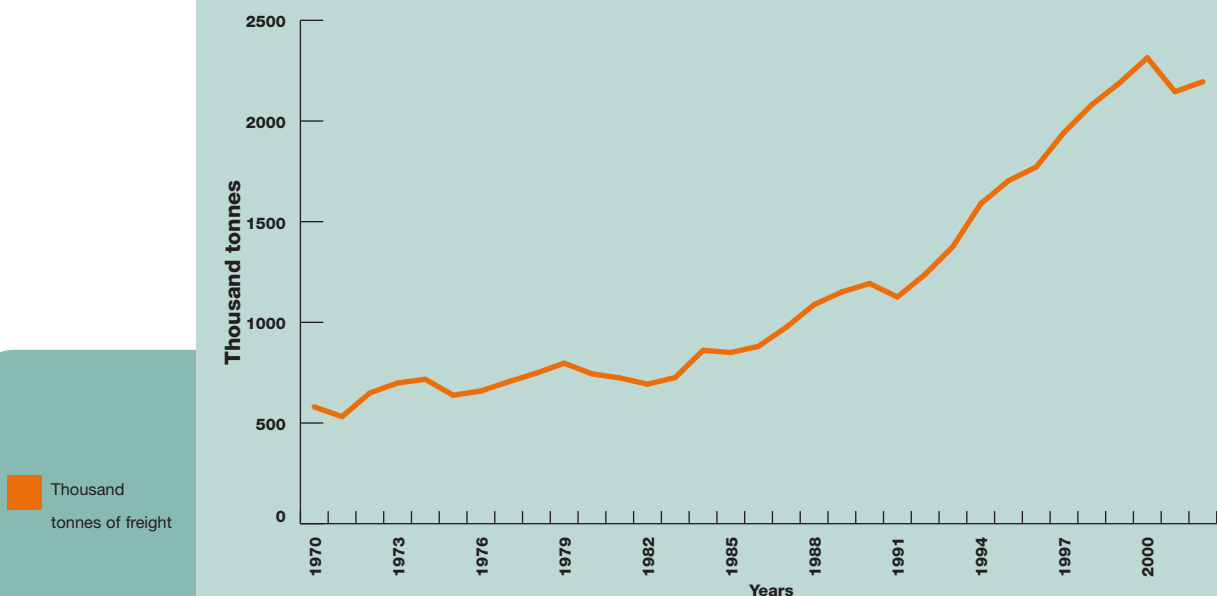
**4.29** The speed of delivery that air freight can offer is an increasingly important factor for many modern businesses, especially where just-in-time practices and high value commodities are concerned. Work carried out in connection with the consultation exercise suggests that specialist express carriers could account for over 50 per cent of the air freight market by 2030.





**4.30** The ability to meet the world-wide rapid delivery and logistics requirements of modern businesses is an important factor in assuring the future competitiveness of both the UK and regional economies. The Government wishes to ensure that there are airports in the UK able to accommodate the anticipated growth in demand in this area, subject to the satisfactory resolution of environmental concerns, especially in respect of night noise.

**AIR FREIGHT HANDLED AT UK AIRPORTS: 1970 – 2002**



### Growing regional airports

**4.31** Most airports serve local demand, generally from within their own region. However, larger airports, such as Manchester and Birmingham and a number of those in the South East, also attract passengers from a wider area. These airports provide services to more destinations – some of which would not be viable from smaller airports – and also offer more frequent services.



## REGIONAL AREA MAP

### Key

- Scotland
- Northern Ireland
- North of England
- Midlands
- Wales
- South East and East
- South West





- 4.32** The major London airports play a dual role. Around 80 per cent of their passenger traffic<sup>3</sup> has an origin or destination in London, the South East or the East of England. These regions have a very high level of demand for air travel, accounting for nearly half the total UK demand. This enables airlines to offer a very wide range of destinations from the London airports, with frequent services, and with two or more competing airlines on most routes. As a result, Heathrow, Gatwick, and increasingly Stansted also, play a national role as well as a regional one. Many travellers from other parts of the UK fly to one of these London airports in order to catch connecting flights. And many travellers from Wales, the Midlands and parts of the South West travel by road or rail to the major London airports.
- 4.33** The demand for passenger air travel is growing fastest outside the South East, and this trend is expected to continue. As a result, airlines should be able over time to offer direct services to more destinations from a wider range of airports.
- 4.34** The recent emergence of ‘no-frills’ services, offering a new model of service provision, has stimulated demand across the country, but has been a particularly important factor in the growth that has occurred over the last ten years at many regional airports. Apart from bringing air travel within the reach of more people, it has opened up new routes and destinations. The ‘no-frills’ sector throughout the UK has expanded from carrying under eight million passengers a year in 1998 to 35 million in 2002, and a projected 47 million in 2003.
- 4.35** The Government’s policy is to encourage the growth of regional airports to serve regional and local demand, subject to environmental constraints. This will have a number of benefits, including:
- supporting the growth of the economies of Scotland, Wales, Northern Ireland and the English regions;
  - relieving congestion at more over-crowded airports, particularly in the South East, and therefore making better use of existing capacity;
  - reducing the need for long-distance travel to and from airports; and
  - giving passengers greater choice.

This policy is reflected in the conclusions set out in the following Chapters. It is also supported by the proposal later in this Chapter to encourage the Welsh Assembly Government and English Regional Development Agencies to establish new route development funds.

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<sup>3</sup> Excluding connecting traffic.

**4.36** The great majority of airports in the UK are operated on a commercial basis whether privately or publicly owned. At these airports we will look to the operators to determine the exact form of development needed and to bring forward proposals for investment in new capacity, in a timely manner, to be funded commercially. However, exceptions to this approach may occur where:

- small local airports are owned by local authorities or by the Scottish Executive. Some of these airports require deficit funding to cover operating costs and investment in new capacity, but in return offer important accessibility, economic and social benefits to the catchment areas which they serve; or
- airports fall within Objective 1 and 2 Areas.<sup>4</sup> In these cases, applications for public funding to help finance investment in new capacity will be considered on their merits on a case by case basis, provided there is clear evidence that the project is not fundable commercially, after account is taken of an appropriate contribution from airport charges to cover the costs of additional infrastructure. The proposals will also have to offer good relative value for money and not be anti-competitive.

**4.37** In each of these circumstances, some limited public funding may be appropriate provided it is clearly justified by the contribution that the development of the airport can make to wider employment creation, regeneration, social inclusion and regional and local economic development programmes.

**4.38** It is likely that the Government's policy of encouraging the growth of regional airports will have some impact on demand at airports in the South East. The predominant role of South East airports is, however, also a regional one (over 80 per cent of their terminal passenger demand being South East based). The development of regional airports will therefore not have a material impact on demand for additional capacity in the South East.

## Regional air services to London

**4.39** A key issue for Scotland, Northern Ireland, the North of England and parts of South West England is the availability of landing and take-off 'slots' at other airports, particularly the major London airports. At congested airports in the UK, where demand for slots exceeds supply, slot allocation is governed by EU law and implemented by a slot co-ordinator who is required to act in an independent manner (see box).

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<sup>4</sup> Designated for the purposes of regional aid under European Community Law.

**THE CURRENT SLOT ALLOCATION REGIME**

EU Regulation 95/93 provides common rules throughout Europe. These are aimed at ensuring neutral, transparent and non-discriminatory allocation, and at providing some certainty for airlines, whilst encouraging competition.

The Regulation allows airlines to retain slots allocated to them by the co-ordinator provided they used them for 80 per cent of the previous equivalent season. When new slots become available, either as a result of new capacity being provided or because existing slots are handed back to the pool by airlines which no longer require them, some priority is given to new entrants.

Slot allocation at Heathrow, Gatwick, Manchester, Birmingham, Glasgow and Stansted is carried out by a company approved for the purpose by the Secretary of State for Transport.

The pressure on slots in the UK has led to the development of a ‘grey market’ in which airlines trade slots with one another in order to increase their holdings or obtain more attractive slots that would not otherwise become available through the pool. This gives airlines commercial flexibility, enabling them to acquire additional or more attractive slots. UK and foreign airlines have been able to secure slots at Heathrow and Gatwick airports by trading and acquiring interests so as to provide services better suited to the needs of consumers.

- 4.40** The current allocation system contains fundamental weaknesses. The majority of slots at congested airports are awarded on the basis of historic use – so-called ‘grandfather rights’, and not in ways that reflect their true value or benefits to consumers and the economy. The Government wishes to see a slot allocation system that encourages the more efficient use of scarce capacity. We believe that at congested airports a transparent, market-based approach should offer the best solution; and that if airlines’ decisions on slots reflect consumers’ preferences, as expressed in their willingness to pay for flights, this should maximise benefits to consumers. Changes to the law governing slot allocation require the support of the rest of Europe and we will work within the EU to pursue this objective.
- 4.41** We recognise, however, that in deciding whether to buy or sell slots, airlines will not take into account all the wider economic and other benefits that domestic air services to London may bring to other parts of the UK. The Government notes that the Route Development Fund established by the Scottish Executive in November 2002 has been very successful, having already helped to deliver fifteen new routes from Scottish Airports, bringing the prospect of substantial benefits to Scotland’s economy. We are also aware that the Northern Ireland Administration has recently established a similar fund, and that a number of new routes are in prospect as a result.

- 4.42** We believe that the establishment of further funds in Wales and in English regions outside the South East and East of England could play a valuable role in establishing new direct business links from both primary and secondary airports in these areas, thus stimulating inward investment and tourism. We accordingly invite the Welsh Assembly Government and the relevant English Regional Development Agencies to consider whether they would wish to set up a route development fund to encourage the establishment of new services at airports in their respective areas, and to consider what priority they would attach to such a fund.
- 4.43** Any such fund will need to comply with UK and European Union law, especially in respect of state aids and competition. In particular, ensuring transparency and non-discrimination will be essential. The Department for Transport will accordingly continue to monitor and offer guidance on the structure and operation of the existing funds and any others that are brought forward in order to:
- ensure compatibility with EC guidelines;
  - address any problems that may emerge; and
  - keep under review the contribution they are making to regional economic development targets.
- 4.44** In addition, and recognising the importance of regional services, the Government is prepared to intervene in well defined circumstances to protect slots at the London airports for such services by imposing Public Service Obligations (PSOs). The imposition of a PSO enables the slots used for that service to be ‘ring-fenced’, so that an airline cannot use them for a service to an alternative destination. The rules for imposing PSOs are set out in European regulations (Regulation 2408/92 and Regulation 95/93).
- 4.45** The Government will apply PSOs where, in accordance with the existing EU Regulation 2408/92, three criteria are met:
- the route is to a peripheral region, or to a development region, or is a ‘thin’ route; we will consult shortly on the details of this;
  - the air service concerned is vital to economic development for the region; and
  - a PSO is required to ensure an adequate level of service. We will be consulting regional stakeholders and the aviation industry shortly on an appropriate definition of ‘adequate’ bearing in mind the importance to travellers of services at both peak and off peak times.
- 4.46** The Government will work closely with the European Commission and other Member States with the aim of ensuring that any amendments to the regulations will recognise the importance of regional access to London airports. In the interim, it will be necessary to develop clear guidelines so that any applications for the imposition of PSOs on routes from regional airports into London can be processed in an objective and transparent manner. For the purposes of this policy, London airports will include Gatwick, Heathrow, London City, Luton and Stansted.

- 4.47** Under current Community law it is not possible to impose a PSO on a route between two cities or regions on which adequate services are already being operated commercially and the airline concerned has no intention of withdrawing from the route. We propose that, where there is an existing service, PSOs would be imposed only when an airline's withdrawal from a currently operated route would reduce the frequency level below an adequate level. In judging whether there was an adequate service, we would take into account the frequency of services, the timing of the services, and the seat capacity offered. Airlines currently operating services to London airports will be asked to provide the Government with at least four months' notice of their intention to withdraw from a route or reduce frequencies if, as a consequence of such withdrawal or reduction in service, the overall level of service went below an adequate level.
- 4.48** Demonstrating the importance of the service to the economic development of the region concerned will be the responsibility of local bodies such as the relevant Devolved Administration, Regional Development Agency or local authority. It will also be for these bodies to reimburse the Department for Transport for any funds provided for subsidies, should these be required.

### Long-distance rail alternatives

- 4.49** In assessing the need for additional airport capacity we have considered the scope for substitution by alternative modes, and in particular rail.
- 4.50** Passengers on internal flights currently account for some thirteen per cent of total traffic at UK airports. Most of them are on flights between the London airports and other parts of the UK. These services are important for point-to-point traffic, especially to and from Scotland, Northern Ireland, the North of England and parts of the South West, but also for passengers wishing to connect with onward flights or reach destinations in the South East outside central London.
- 4.51** Studies suggest that rail competes well with air on point-to-point journeys of two to three hours. So rail is, for example, the preferred option for inter-urban travel between London and the Midlands. But for longer journeys air travel is the mode of choice. For example, comparing business trips by rail or by air from Scotland to London and the South East, the overwhelming majority – some 93 per cent – are by air.
- 4.52** Investments to improve our inter-urban rail network will, over time, increase the attractiveness of rail as an alternative, as will more attractive pricing packages from rail operators. Work already in hand on up-grading the West Coast Main Line will, for example, cut journey times between Manchester and Central London by half an hour, and between Glasgow and London by 45 minutes, and enable more frequent and reliable services. The completion of the new High-Speed Channel Tunnel Rail Link in 2007 will further enhance the competitiveness of rail for some journeys between London and Northern European cities (see box). Looking further ahead, there are plans for improvements to the East Coast Main Line, and the Strategic Rail Authority is considering the feasibility of proposals for a new high-speed North-South rail line.

## EUROSTAR

Eurostar has provided an attractive alternative to short-haul air services to the continent. It has already secured some 60 per cent of the market on the London-Paris route, and 50 per cent on the London-Brussels route. There are at least a million fewer air passengers a year on these routes since the introduction of Eurostar and Shuttle rail services. The first phase of the Channel Tunnel Rail Link opened in September 2003. Completion in 2007 will see the fastest journey time between London and Paris cut to two and a quarter hours and between London and Brussels to two hours, making rail an even more attractive choice for these routes.



- 4.53** In bringing forward proposals for new airport capacity, operators will need to have regard, where appropriate, to the potential impact of new rail investment on demand for air travel. The introduction of high-speed rail lines in France has had a dramatic effect on domestic air services on individual short routes, although it has had a relatively modest effect on air traffic overall. For the UK, on specific routes, and particularly for city-centre to city-centre journeys, it might cause some reduction in service frequency or aircraft size. But for other long-distance journeys, including interlining (travel to connecting flights), rail is unlikely to be the most attractive choice. And for some parts of the UK, travel by air will remain the only realistic option.
- 4.54** New investment in rail capacity will see more long-distance journeys by rail. But the majority of this increase is expected to come through switching from car travel or as a result of new demand. Work undertaken by the Strategic Rail Authority suggests that the number of passengers switching from air to rail as a result of planned improvements to the West and East Coast Main Lines will be around 25 per cent from Manchester, ten to fifteen per cent from the North East, and less than five per cent from Scotland. These switches will be welcome, particularly during the next few years when runway capacity at the major London airports will be in short supply; but they are not expected to affect future passenger demand at the most crowded airports by more than a few percentage points.



## Access to and from airports



**4.55** Ensuring easy and reliable access for passengers, which minimises environmental, congestion and other local impacts, is a key factor in considering any proposal for new airport capacity. All such proposals must be accompanied by clear proposals on surface access which meet these criteria.

**4.56** Increasing the proportion of passengers who get to airports by public transport can help reduce road congestion and air pollution. We expect airport operators to share this objective, and to demonstrate how they will achieve it in putting forward their proposals for developing new capacity.

**4.57** Airports are part of our national transport infrastructure, and need to be planned and developed in that context. The Strategic Rail Authority and (for strategic roads within England) the Highways Agency will take full account of likely future airport development, and regional and local transport strategies should do the same.



**4.58** The Government expects developers to pay the costs of up-grading or enhancing road, rail or other transport networks or services where these are needed to cope with additional passengers travelling to and from expanded or growing airports. Where the scheme has a wider range of beneficiaries, the Government, along with the devolved administrations, the Strategic Rail Authority, the Highways Agency and local authorities, will consider the need for additional public funding through their investment programmes on a case-by-case basis. Prospective developers should consult those bodies at an early stage in formulating their proposals. Further detail on this is given in Chapter 12.

**4.59** Specific aspects of surface access to individual airports are covered in the following chapters, which set out our conclusions on the expansion of airport capacity across the countries and regions of the UK.





# 5



# Scotland

## Key issues

- 5.1** Aviation makes a significant contribution to Scotland's economy and social welfare. Air services are essential to reach many international destinations for business and leisure purposes, and they are frequently also the most convenient means of travelling to other parts of the UK as well as the Highlands and Islands.
- 5.2** Throughout Scotland, therefore, many people make extensive use of air travel for domestic, as well as international journeys. This is true in the Central Belt, where air travel plays an important part in improving the economic competitiveness of Scottish businesses and attracting inward investment, as well as serving the main population centres. And it is also true in the Highlands and Islands, where air services provide essential social and economic links.
- 5.3** Ensuring the provision of adequate airport capacity in Scotland, whilst taking full account of environmental concerns, is therefore an important priority for the Government and the Scottish Executive. Indeed, in the face of growing demand for new routes and increased service frequency in recent years, the Executive has made improving international connectivity one of the key elements of its economic strategy for Scotland. The conclusions which follow have been drawn up in conjunction with the Scottish Executive, which also has devolved responsibility for land use planning, surface transport and a number of other matters related to air transport.

## Main conclusions

- 5.4** As requested by a number of respondents to the consultation,<sup>1</sup> we have reviewed the passenger forecasts for the main Scottish airports. The most significant result has been a substantial upward revision of the forecast for Glasgow Prestwick International Airport, reflecting its rapid recent growth, with consequential adjustments of the forecasts for the other Central Belt airports. Overall, the forecasts show demand for air travel increasing from around 20 million passengers per annum (mppa) today to close to 50mppa by 2030. A sizeable proportion of this demand is expected to arise at airports in the Central Belt. The revised forecasts suggest that demand at the two main West of Scotland airports, taken together, will be higher than indicated in the consultation document, and is likely to be broadly similar to that attracted by Edinburgh Airport. The forecasts for cargo traffic remain unchanged.

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<sup>1</sup> See Bibliography.

- 5.5** The consultation document described options for development at both Edinburgh and Glasgow airports, including additional runway capacity. Based on the analysis set out in the Scottish consultation document, the consultation responses we received and the review we have undertaken of some aspects of that analysis, our conclusion is that we should safeguard for an additional runway located at Edinburgh Airport. We recommend that appropriate measures should also be considered to ensure that the possibility of providing an additional runway at Glasgow Airport during the period covered by the White Paper is not foreclosed.
- 5.6** The consultation document also referred briefly to the option of a *new Central Scotland Airport*, but indicated that this did not appear attractive. An independent study by the David Hume Institute concluded that there was no economic case for such an option; and the great majority of respondents who commented on this proposal were also opposed to it. We therefore confirm that we do not support the development of a new Central Scotland airport.

## Edinburgh Airport

- 5.7** In the East of Scotland passenger demand at Edinburgh Airport is forecast to be above 20mppa by 2030. It is also anticipated that Edinburgh will remain the focus of the express freight and flown mail operations serving Scotland. In the Government's view, there is therefore a good economic case for a phased development of additional runway capacity:
- first, making full use of the existing main runway through building a full length parallel taxiway, together with a new control tower, additional terminal capacity and more aircraft stands. A number of these measures are being planned or will be needed soon to address peak period pressures;
  - second, making more use of the current crosswind runway for departing aircraft – although this will provide only a relatively small amount of additional runway capacity; and
  - third, constructing a new parallel runway, probably around 2020, whereupon the use of the crosswind runway would be terminated and the runway closed to all but taxiing traffic.
- 5.8** The new runway would require a section of the River Almond to be culverted, and associated mitigation measures would need to be undertaken to prevent flooding elsewhere within the river's floodplain, but we would not anticipate any other significant environmental impacts. Indeed, by 2030 we would expect the new runway to help reduce the number of people within the 57dBA noise contour by around 1,000 compared with 4,500 today, and also to allow a reduction in the number of night movements flying directly over Cramond.

**5.9** The phased approach described above implies that the crosswind runway will be used more intensively for departing aircraft for a limited period. We propose that the crosswind runway should be closed to all but taxiing aircraft once the new runway is brought into operation. This would:

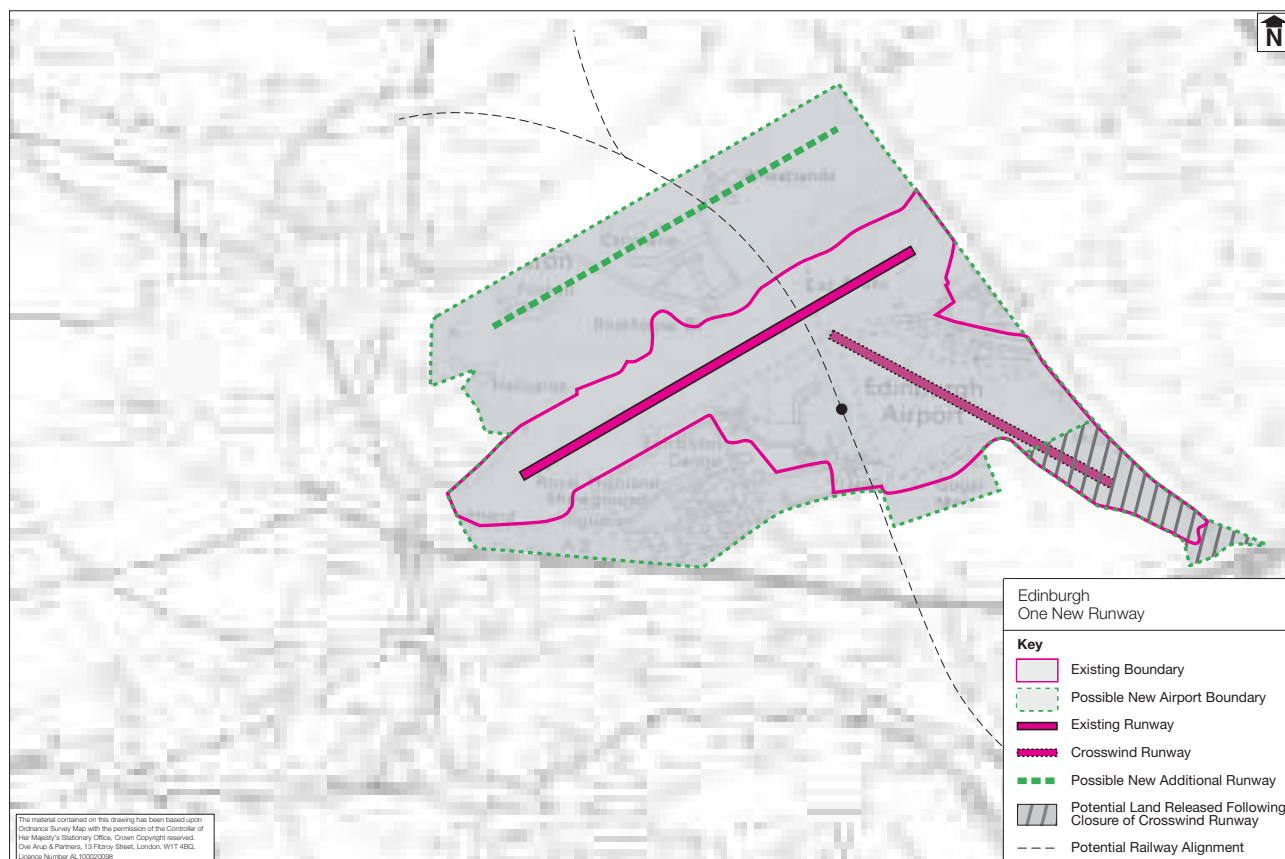
- limit the additional noise that intensification of use will generate over South Gyle and Edinburgh Business Park;
- remove the need for the existing runway, which has approach paths over Cramond on westerlies, to take a greater share of inbound aircraft, allowing noise contours to shrink commensurately;
- bring forward the date at which the expected noise reductions would be experienced by the population of Cramond;
- remove building height restrictions on Edinburgh Business Park that would otherwise have to be kept in place, thereby capping building densities and increasing development pressures on open land in West Edinburgh; and
- allow a robust long-term land use planning framework for West Edinburgh to be developed, by enabling a major investment site to be created on land to the north of the A8 adjacent to the Gogar roundabout.

**5.10** Analysis of potential future route development suggests that at some stage it may also be necessary to extend the existing runway to allow a wider range of aircraft to access Edinburgh and facilitate direct services to a range of long haul destinations. We believe the length of runway available could be extended to meet most requirements within the airport's existing boundaries, thereby avoiding possible impacts on the Fife Line and M9. Provision for this should be made alongside the safeguarding of the new runway.

**5.11** The growth of road traffic on the strategic road network in the vicinity of the airport has the potential to become a major concern in the medium-to-long term unless action is taken. The current widening of the A8000, rail and tram links to the Airport, proposals for which are currently being developed on behalf of City of Edinburgh Council and the Scottish Executive, and improvements to the road layout serving the Airport directly (including the possibility of additional access points from the A8), should help to address potential congestion problems in the period to 2015. The rail link in particular would contribute significantly to increasing the share of passengers travelling to or from the airport by public transport. Beyond 2015 there may be a need to improve the capacity of the strategic road network as well as access from it to the airport. This will be reviewed in the context of the Scottish Executive's proposed revisions to the West Edinburgh Planning Framework and its planned review of strategic transport projects, both of which will be informed by this White Paper. All these surface access requirements will need careful environmental assessment.

**5.12** Our conclusion, therefore, is that the option of a new close parallel runway, broadly as shown in the map below, and the associated development of terminal and stand capacity needed to support its development, should be safeguarded.

*It must be stressed that this map is only indicative, pending detailed design work and the submission of a planning application by the operator. The map should not therefore be taken to be a formal safeguarding map.*



**5.13** The particular circumstances at Edinburgh will require land for terminal and apron development in advance of the construction of a new runway to be safeguarded, in addition to the steps the airport operator will need to take to safeguard the new runway.<sup>2</sup> Scottish Ministers will therefore issue an Article 17 Direction<sup>3</sup> requiring the City of Edinburgh Council to refer to them any relevant planning applications within the areas of land likely to be required for the expansion of terminal, apron, taxiway and landside support facilities at Edinburgh Airport. The Direction will remain in force until the policies contained in a review of the West Edinburgh Planning Framework, to be undertaken following this White Paper, are embodied in statutory development plans.

**5.14** We have considered in some detail whether these plans would allow the Royal Highland and Agricultural Society of Scotland (RHASS) site to remain in situ, possibly with modified boundaries, but still able to function effectively. This, however, would

<sup>2</sup> In accordance with the Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosive Storage Areas) (Scotland) Direction 2003.

<sup>3</sup> The Town and Country Planning (General Development Procedure) (Scotland) Order 1992.



require development of the airport to be concentrated south east of the existing terminal facilities on land which is mostly in the ownership of the RHASS, rather than on land to the west. We have concluded that this would not be an appropriate long term development strategy for the airport because it will be important to:

- maintain efficient use of the crosswind runway until the new close parallel runway is operational;
- minimise the impact on existing passenger facilities to keep construction costs within viable limits;
- minimise the number of gates and the extent of aircraft circulation dependent on the parallel taxiway serving the crosswind runway as this will reduce the potential for operational delays;
- maintain active gates close to the main runway to reduce aircraft taxi time on the ground, limit fuel burn and therefore noise and emissions; and
- maintain a balanced passenger facility providing equivalent walking distances for passengers using both of the main piers planned for the airport.

**5.15** Our proposals would therefore require the relocation of the RHASS, by around 2013 (or earlier if that would be more suitable). The Scottish Executive will work with the Society, BAA and relevant local authorities to identify an alternative site for the Society and help facilitate their relocation.

## Glasgow International Airport

**5.16** In the West of Scotland, Glasgow International Airport will continue to play a very important role in meeting the needs of air travellers. Recent announcements including the commencement of a new route to Dubai by Emirates next year and Continental's commitment to use a larger aircraft on its established route to New York provide tangible evidence of this. Our central forecast of demand at Glasgow Airport in 2030 is around 15mppa, representing a broad doubling of current passenger volumes. However, it could be higher if the recent trend of more rapid growth in passenger demand on the eastern side of the Central Belt were to halt or be reversed.

**5.17** The Government's view is that substantial development of terminal and airside facilities at Glasgow Airport will therefore be required, including doubling or more the present terminal capacity. We support their provision and the safeguarding of any land required outside the airport boundary to allow full use to be made of the existing runway. This would allow growth to be accommodated under even the most optimistic of forecast scenarios. However, there will be a need to balance the economic and social benefits that would undoubtedly be generated by the expansion of Glasgow Airport against the environmental impacts that would arise from it. For example, the consultation document estimated that under the highest growth forecasts around 35,000 people could be within the 57dBA noise contour in 2030 compared with 25,000 today; the level of increase under lower traffic forecasts would be much smaller. With this in mind, the airport operator, working with the relevant



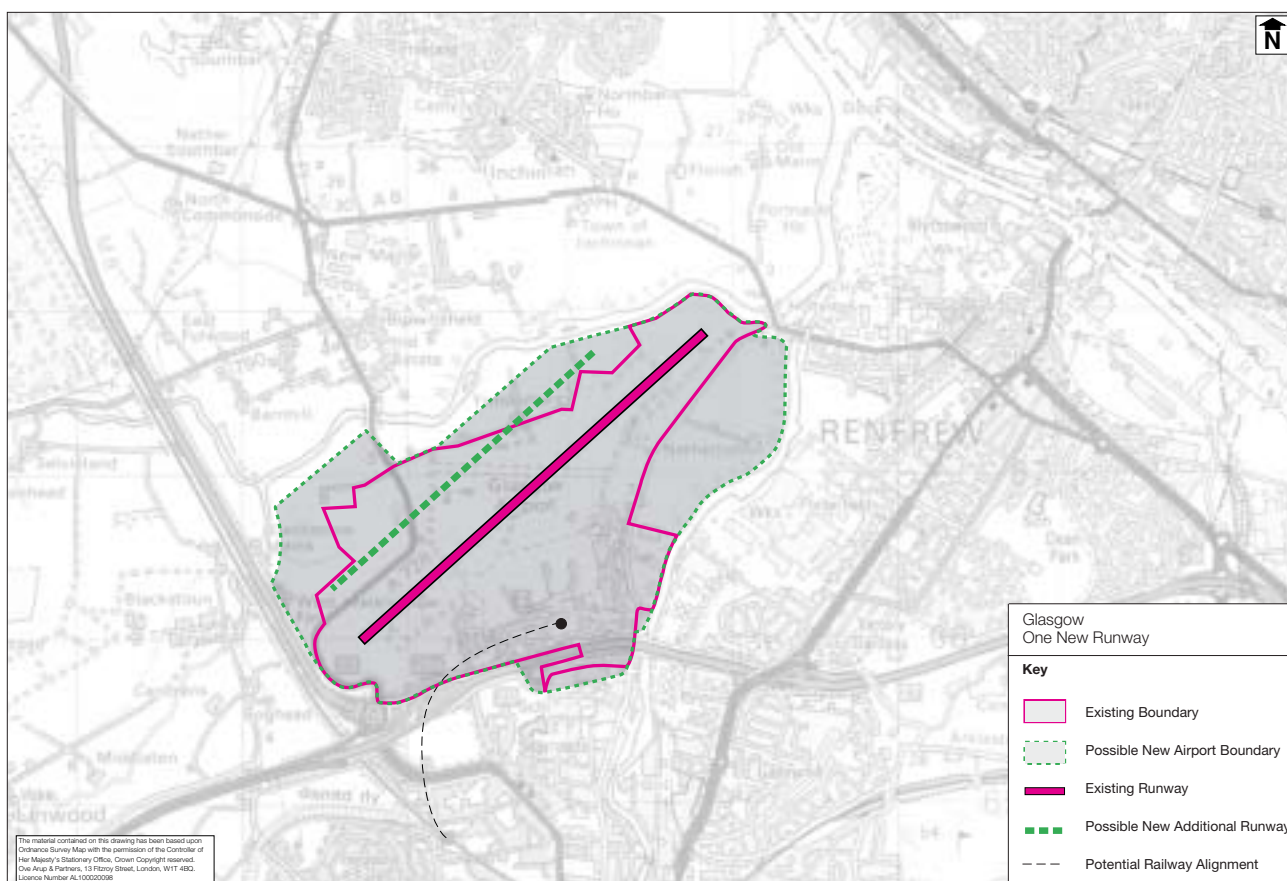
planning authorities, will need to ensure that every effort is made to limit any increase in the size of the 57dBA noise contour as the airport grows. The aim would be to minimise the number of people potentially affected.

- 5.18** Although we expect Glasgow Airport to continue to develop and increase passenger numbers, the evidence provided in the Scottish consultation document indicated that, on the basis of the analysis we have undertaken, there does not at this stage seem to be a clear case for an additional runway at Glasgow International Airport.
- 5.19** In part this is because charter and long-haul flights form a significant proportion of Glasgow's traffic. Charter and long-haul services tend to carry relatively large numbers of passengers per flight, which means that fewer aircraft movements are needed to handle a given annual passenger throughput. This in turn makes it easier for Glasgow to accommodate greater passenger volumes without putting pressure on the capacity of its runway. Any assessment must also recognise the recent growth of Glasgow Prestwick in the short-haul scheduled market. Indeed, given its core catchment area, Glasgow Prestwick could be viewed as already providing a second runway serving the west of the Central Belt.
- 5.20** For these reasons, and taking account of the principles and policies set out earlier in this White Paper, there is not a clear justification for the formal safeguarding of land for the construction of a second runway at Glasgow International Airport in the period covered by the White Paper.
- 5.21** However, we recognise that various factors could lead to a different balance of development across the Central Belt, particularly towards the end of the period covered by the White Paper, or beyond. For example we note that there are significant plans for development in the City of Glasgow, particularly along the Clyde, which may have an impact on the volume and type of passenger traffic at Glasgow Airport.
- 5.22** In addition, we have also had regard to the likelihood that there will be little pressure to develop land north of the airport, which might be needed for a second runway at Glasgow Airport (see map), because of existing land use and ecological designations. This means that the impact of protecting land for the possible addition of a close-spaced parallel runway in the longer term would probably be limited. In these circumstances, both the UK Government and the Scottish Executive recommend that Renfrewshire Council, as planning authority, consider reserving further land for long-term development of the airport, including beyond the timescale of this White Paper, in a future review of their Local Plan.
- 5.23** The proposed increase in terminal capacity at Glasgow Airport would need to be supported by improvements to the surface transport infrastructure serving the airport. The Scottish Executive has asked Strathclyde Passenger Transport (SPT) to work up plans for a rail link to the airport. This could form one element of a potential package of surface access improvements that may be needed to cater for increased traffic volumes associated with the airport's future growth. BAA and the relevant local authorities,

in conjunction with Strathclyde Passenger Transport, are therefore invited to work up proposals for enhancing the transport corridors serving the airport for consideration as part of the Executive's review of strategic transport projects. All surface access requirements will need careful environmental assessment.

- 5.24** Glasgow Airport also provides an important heavy maintenance base for some airlines. As part of a wider strategy for developing the West of Scotland as a Centre of Excellence for aircraft maintenance, repair and overhaul activities, we also support provision being made for the replacement of existing hangar facilities elsewhere in the airport, as these need to be demolished to allow the development of a new eastern pier. We would encourage BAA to make provision for this in their master plan for the airport.

*It must be stressed that this map is only indicative, pending detailed design work and the submission of a planning application by the operator. The map should not therefore be taken to be a formal safeguarding map.*



## Glasgow Prestwick International Airport

- 5.25** In the timescale covered by this White Paper, Glasgow Prestwick International Airport is expected to grow rapidly. It already plays an important role in serving the market for passenger travel, especially in the West of Scotland, and the market for air freight throughout Scotland. The revised forecasts indicate that Glasgow Prestwick could be handling up to 6mppa (three times current passenger volumes), and over 200,000 tonnes of freight annually (an increase of around 400 per cent on the 40,000 tonnes handled last year), by 2030. The airport operator has been working on a master plan setting out how these levels of traffic and beyond could be accommodated.
- 5.26** Our appraisal shows no significant local environmental impacts associated with growth at Glasgow Prestwick. Indeed, noise impacts should reduce over time as older aircraft are replaced by quieter, more modern ones.
- 5.27** We therefore conclude that the terminal and support facilities at Glasgow Prestwick should be developed to accommodate the likely increase in passenger and freight traffic once current capacity of around 3mppa has been reached, prospectively within the next 5 to 10 years.
- 5.28** Enhanced capacity may also be needed on rail services connecting the airport to Central Glasgow, especially as a significant proportion of passengers (currently around 30 per cent) already access Glasgow Prestwick this way. The airport will benefit substantially from improvements to the M77/A77 which are already under construction.
- 5.29** Recent developments in the aerospace sector at Glasgow Prestwick, including the creation of an aerospace park at the airport, are welcomed. Glasgow Prestwick has an important role to play in developing the West of Scotland as a Centre of Excellence for aircraft maintenance, repair and overhaul operations.

## Aberdeen Airport

- 5.30** Growth at Aberdeen Airport over the last five years has been relatively flat due to the decline in oil industry-related traffic. However, passenger demand is expected to rise to between 4mppa and 5mppa by 2030 from around 2.5mppa today.
- 5.31** Our appraisal does not indicate serious local environmental impacts associated with growth at Aberdeen Airport. By 2030 the additional population affected by noise is likely to be small and possibly could reduce over time depending on future traffic levels and the extent to which older aircraft are replaced by quieter, more modern ones.
- 5.32** We therefore conclude that there is a good case for the existing terminal to be developed incrementally to reflect the increase in traffic.
- 5.33** There may also be a need for an extension of the runway to allow a wider range of aircraft types to use the airport and to enable existing users to fly longer sectors with full payloads. We invite the airport operators to reach a firm view on their future requirements in this respect, so that the necessary land can then be safeguarded.

- 5.34** Surface access links to Aberdeen will be significantly improved by the plans the Scottish Executive has announced to support construction of the Aberdeen Western Peripheral Route. This will ease congestion on the A96, which provides the principal road corridor linking the airport to the city centre and its wider catchment area. The A96 is frequently congested at peak times and the new bypass should also enable more reliable bus journey times from the city centre to the airport.

## Dundee Airport

- 5.35** Although runway length and approach constraints at Dundee Airport impose limitations on the range of aircraft that can use the airport, its London City service has been successful in attracting a local business market. We believe there will be opportunities for Dundee to attract further services of this nature in the future.
- 5.36** There are no physical, land use or environmental constraints that should prevent incremental development of terminal capacity to cater for demand up to 0.25mppa as and when this proves necessary. Edinburgh Airport is also relatively accessible from Tayside and offers a wide range of scheduled services, many of them at competitive frequencies. Access to Edinburgh Airport would also be improved by the proposed new rail link, which would allow rail services to be provided from Dundee direct to the airport.
- 5.37** *RAF Leuchars* is also located nearby. However, so long as this remains an operational military airfield, the UK Government and the Scottish Executive believe that commercial aviation related development there should be confined to business aviation, diversions from other airports in poor weather and niche freight operations.

## Highlands and Islands

- 5.38** Air links greatly enhance accessibility for people living, working and doing business in the Highlands and Islands, and for tourists wishing to visit the area. Direct services reduce the need to rely on connections at other airports to reach key destinations – such as Scotland’s major cities, London and key European business cities – and reduce overall journey times. They also open up the opportunity to attract visitors to the area.
- 5.39** The Scottish Executive and its agencies will work with the airport operator and airlines to help deliver an air transport network in the Highlands and Islands which:
- is sustainable in the long term;
  - serves social and economic needs;
  - enhances internal and external business links;
  - develops opportunities for the promotion of inbound tourism; and
  - respects the unique environmental heritage of each location.
- 5.40** Delivery of an enhanced air network serving the Highlands and Islands may be assisted through a combination of imposing Public Service Obligations (PSOs), and

the provision of financial support via a route development fund (see Chapter 12).

- 5.41** There will also be a need for infrastructure enhancements at some airports in the Highlands and Islands within the timescale covered by this White Paper.
- 5.42** At *Inverness*, the revised forecasts suggest the airport may have the potential to grow to beyond 1mppa, and there are no local environmental or other constraints that should prevent this. An extension of the runway may be required to cater for larger planes and longer sector lengths. Additional terminal capacity will also be required, probably before 2015. Any consequential surface access improvements are likely to be local rather than strategic in nature.
- 5.43** Potential enhancements at the other main Highlands and Islands airports include:
- an extension to the length of the runway at *Sumburgh*;
  - runway rehabilitation and improvements to the Instrument Landing System and runway lighting (already underway) at *Kirkwall*; and
  - new runway lighting, improvements to the taxiway and development of new heliport facilities at *Stornoway*.
- 5.44** With the exception of *Scatsta*, these are the largest airports in the Highlands and Islands after *Inverness*. They are likely to see much of the future traffic growth outside *Inverness* and consequently have the greatest potential to attract jet operations, which will improve both the quality of service and journey times.
- 5.45** A programme has been developed for small-scale improvements at their other airports to 2009, and the operator will consider the possible development of *Oban* and *Broadford* airports to meet local needs in conjunction with the Scottish Executive and other stakeholders.



- 5.46** Airport infrastructure and air services operate under the regulatory framework set by the Civil Aviation Authority and the Department for Transport. With traffic volumes at airports in the Highlands and Islands comparatively low, the cost per passenger in maintaining infrastructure is substantially more than at major airports elsewhere in the UK. This directly contributes to the higher fares that people living in the Highlands and Islands have to pay and the high subsidy that is necessary to maintain airport infrastructure. The Civil Aviation Authority has already agreed a number of derogations for the smaller Scottish airports. The operator will continue to explore with the regulatory bodies the scope for further derogations consistent with ensuring the continued safety of operations.



# 6





# Wales

## Key issues

- 6.1** Cardiff International Airport is the largest airport in Wales; the only other airport currently offering commercial services is Swansea. However, Wales does have several other active aerodromes – the civil ones mainly serve air taxi operations and other general aviation users; Aberporth, RAF St Athan, RAF Valley and RAF Mona are presently used mainly for military purposes.
- 6.2** It is a notable feature of the air travel market in Wales that the great majority of air passengers (around 70 per cent) travelling to and from Wales currently use airports in England. Of these, Heathrow and Gatwick are the most important, but Manchester and Liverpool Airports also play an important role in meeting the needs of air travellers in North Wales, and Birmingham serves a similar function for Central Wales.
- 6.3** The key issues raised during the Welsh consultation related to the location of additional airport capacity, and whether this should be at Cardiff International or a new airport near the Severn Estuary; surface access links to Cardiff and the major English airports; intra-Wales air services; and the scope for building on the existing aircraft maintenance cluster in South Wales to create a ‘Centre of Excellence’.

## Main conclusions

- 6.4** The conclusions in this section have been drawn up in conjunction with the Welsh Assembly Government, which has devolved responsibility for land use planning, surface transport and a number of other matters related to air transport, in the light of responses to the consultation document for Wales.<sup>1</sup>
- 6.5** We have given careful consideration to the concept of a new airport in South East Wales, including the specific proposals for Severnside International and Llanwern. Our assessment is that a new airport would struggle to attract sufficient traffic to be financially viable and would not generate sufficient economic or regeneration benefits to merit support in this White Paper. Accordingly, our view is that Cardiff will remain the main airport serving South Wales and that the additional terminal capacity and surface access improvements needed to facilitate its long-term growth should be supported, subject to satisfactory resolution of any local environmental concerns.

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<sup>1</sup> See Bibliography.

- 6.6** Although we expect Cardiff Airport to claw back an increased share of Welsh traffic, airports in England will continue to have a significant role in meeting the needs of air travellers from Wales. Surface access connections to these airports from Wales, by both road and rail, are therefore important.
- 6.7** We have also identified that there may be an opportunity to develop intra-Wales air services. The Welsh Assembly Government is reviewing possible options. We have highlighted an opportunity to establish South Wales as a Centre of Excellence for aircraft maintenance and training. And we have noted the Welsh Assembly Government's interest in creating a route development fund similar to those operating in the UK's other devolved areas.

### Cardiff International Airport

- 6.8** Cardiff International Airport is the principal airport in Wales and likely to remain so. It has recently undergone a period of rapid growth, in particular following the introduction of new 'no-frills' scheduled services. Passenger throughput in 2003 should be approaching 2mppa and forecasts suggest that demand by 2030 could exceed 5mppa.
- 6.9** Further terminal development will be needed to cater for this level of traffic. The airport operator is currently considering whether this is best provided by extending the existing terminal building or by constructing a new one.
- 6.10** The number of people affected by noise is small, and we expect that this will continue to be the case. We do not expect the projected growth to give rise to significant negative local impacts, although these will need to be monitored carefully. We therefore consider that proposals for the necessary level of increased terminal capacity should be brought forward, and that its exact form should be determined locally.
- 6.11** The airport owners have expressed the view that, in due course, a runway extension will be desirable to facilitate larger planes than can currently be handled. Since the consultation document did not seek views on this possibility, we do not address it in our conclusions, and any such proposal would need to be considered through the land use planning system in the normal way.<sup>2</sup>
- 6.12** If the economic benefits arising from the projected passenger growth are to be felt more widely across South Wales, there will be a need to improve access to Cardiff International Airport. The Welsh Assembly Government has agreed arrangements with the Strategic Rail Authority for the reopening of the Vale of Glamorgan line (expected to be in 2005), and the construction of a new station at Rhoose with a dedicated bus link to the airport. The Welsh Assembly Government is also examining improvements to the road network west of Cardiff, from which the airport would be an important (though not the only) beneficiary. These include phased enhancements to the existing road network and the possible development of a new link from Junction 34 of the M4. The Welsh Assembly Government is currently considering these proposals,<sup>3</sup> and it will

<sup>2</sup> Any planning application would need to be judged on its merits and in the light of guidance from the Welsh Assembly Government.

<sup>3</sup> The A48/A4232 Culverhouse Cross and Airport Access Study 2003, Welsh Assembly Government.

ultimately determine the exact form of the final schemes, and their funding and timing, in consultation with the relevant local authorities.

- 6.13** English airports will continue to play a significant role in serving the air travel needs of Wales throughout the period covered by the White Paper. The quality of surface access links to those airports will therefore remain important. Strategic road access is currently good, although increasingly affected by congestion on the approach to the airports concerned. As a result, if opportunities arise to improve rail access to Heathrow and Gatwick and to Manchester, either directly or by improving interchange connections, these could impact positively on travel times and the public transport mode split for air passengers travelling to and from Wales.

## Other proposals

- 6.14** We received two proposals for a *new airport* in or around the Severn Estuary to the east of Newport, and Newport City Council supported further exploration of such a concept, with a view to capturing the jobs and regeneration benefits it could offer. We have examined these proposals carefully, and have assessed how much traffic such an airport might attract. Our assessment is that a new airport would struggle to attract traffic from the established airports at Cardiff and Bristol, and is too distant from South East England to serve that market. With the forecast levels of traffic, we consider that a new airport would not be financially viable and would not attract sufficient economic or regeneration benefits to justify its development. We therefore do not support this concept being taken forward.
- 6.15** The Welsh Assembly Government is working on proposals to establish a network of intra-Wales air services, including a link between North Wales and Cardiff and Swansea in the south of the country. The Assembly Government will consider the merits of each of the routes under consideration and the costs of the infrastructure improvements required to ensure the Civil Aviation Authority is willing to license the chosen airports in the North as being safe to accept commercial services. Consultation will take place before a preferred route or routes are determined. It will then need to evaluate the potential environmental impacts and economic benefits of such services, and whether the initial support that would need to be provided would represent value for money. The Government will need to consider any proposals for setting up and funding a Public Service Obligation that the Assembly Government may wish to support. Responsibility for ensuring compliance with the criteria laid down in the relevant European Regulation remains a reserved matter for the UK Government.
- 6.16** Separately, the Welsh Assembly Government is also considering setting up a route development fund on similar lines to those in Scotland and Northern Ireland (see Chapter 4) to encourage new services to be developed on routes that would improve international and UK connectivity but would not be eligible for PSO support. There is the potential to develop a Centre of Excellence for aircraft maintenance and training based around the existing aerospace cluster in South Wales, which includes a heavy maintenance centre for long-haul aircraft at Cardiff and proposals for a new aerospace park at RAF St Athan.

# 7



# Northern Ireland

## Key issues

- 7.1** Given its geographical location, good air links to Great Britain are particularly important for Northern Ireland, and its future economic development. Northern Ireland is well served for travel to and from London and other parts of Great Britain, but currently only has one direct connection with an airport on the European mainland. A route development fund has been announced by the Northern Ireland Administration, a key aim of which is to improve international connectivity.
- 7.2** The aviation market in Northern Ireland is split between Belfast City which caters for full scheduled services, Belfast International which has attracted ‘no-frills’, charter and freight traffic and City of Derry Airport which has a catchment mainly in the north west of the Province and Donegal in the Republic of Ireland. There is some evidence of passengers travelling to and from Northern Ireland using airports in the Republic of Ireland, particularly Dublin, but the scale of this is not clear.
- 7.3** How to address this cross-border ‘leakage’ was one of a number of issues raised by the consultation document – in this case, the route development fund has provided a potentially significant policy response. Other issues were where future increments of airport capacity should be located, regional access and airport competition. The latter was superseded following the sale of Belfast City, and we have therefore focused in this section of the White Paper on airport capacity. Access to London airports is discussed in Chapter 4.

## Main conclusions

- 7.4** The conclusions in this section have been drawn up in the light of responses to the consultation document for Northern Ireland.<sup>1</sup> They take account of the views of the Northern Ireland Administration, which has responsibility in Northern Ireland for airports policy and legislation, land use planning and surface transport, amongst other matters related to air transport.
- 7.5** The principal conclusions are that the Northern Ireland authorities should review the form of the planning agreement at Belfast City should the airport operator ask them to do so; that the scope to develop capacity within Belfast International’s existing boundaries is significant and should be supported; and the future development

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<sup>1</sup> See Bibliography.

of City of Derry Airport needs early consideration in conjunction with the Government of the Republic of Ireland. All developments will need careful environmental assessment.

### **Belfast City Airport**

- 7.6** Belfast City Airport is conveniently located close to the city centre, and has an above average proportion of business traffic, as a result of providing a wide range of scheduled services to destinations within the UK. Our forecasts suggest a potential demand of slightly over 4mppa by 2030.
- 7.7** However, the airport does face significant operational constraints. These include the length of its runway, and the planning controls imposed as a condition of its development. The most important of these are: the requirement that air transport movements should not exceed 45,000 a year; an early evening and night scheduling curfew; and a restriction on the number of aircraft seats provided, broadly equivalent to an airport capacity of 2.2mppa. Forecasts suggest that this level of traffic could be reached within the next five years.
- 7.8** Belfast City is also one of only four airports in the EU designated as a ‘city airport’ in EU Directive 2002/30/EC, which potentially allows the imposition of more stringent noise-related operating restrictions than at other airports in the EU, if desired.
- 7.9** We recognise the desirability of maintaining suitable controls on the environmental impacts of the airport, given the large number of people who live in the vicinity and are affected by aircraft noise. At the same time, the airport does have an important role as a transport gateway in the economic life of Northern Ireland. As is the case with many airports elsewhere, we recognise that a balance needs to be struck between these conflicting environmental and economic factors. However, we believe there may be scope to devise controls that would limit the local environmental disbenefits of Belfast City Airport without severely constraining the potential economic benefits which the airport could provide. We therefore invite the Northern Ireland authorities to review the form of the planning agreement, if and when they are so requested by the airport operator.

### **Belfast International Airport**

- 7.10** Belfast International Airport (formerly known as Aldergrove) is by far the largest airport in Northern Ireland, and is likely to remain so. By 2030, forecasts suggest demand may increase from around 4mppa currently to between 8mppa and 9mppa.
- 7.11** The airport has developed a strong presence in the ‘no-frills’ and charter markets, and its runway length (c.2700m) means that it is also able to serve long-haul services should airlines wish to develop these. It is situated in a sparsely populated area, and is able to operate 24 hours a day. As a result, it is the major freight and flown mail airport in Northern Ireland, and we envisage that these activities will also continue to expand.



- 7.12** It has adequate space within the airport boundary to serve the whole of the forecast demand and well beyond. We therefore support the development of the airport within the existing airport boundaries to serve the forecast passenger and freight demand in full, subject to consideration of any local environmental impacts.

### City of Derry Airport

- 7.13** Unlike the other two Northern Ireland airports, City of Derry Airport is in public ownership and serves the market for air services in the north west of the island of Ireland. It provides services to a limited range of destinations, but could have potential to develop routes to a number of others.
- 7.14** The airport is regarded as having an important role in facilitating access to the north west of the Province and Donegal in the Republic of Ireland, and in contributing to the development of the area. Proposals for a runway extension are currently under consideration and give rise to a number of technical, economic and competition issues outside the scope of this White Paper. Given the cross-border nature of the market served by the airport, the Northern Ireland authorities will want to consider the airport's future infrastructure requirements carefully, in conjunction with the Government of the Republic of Ireland.

### Surface access

- 7.15** Surface access links to Northern Ireland's three major airports are unlikely to require any significant enhancements before 2015. The existing roads and bus links are considered adequate to cater for the levels of growth envisaged. Beyond that date, the Northern Ireland authorities will need to consider the need for, and timing of, possible improvements to the A2 to Belfast City Airport and the junctions serving it and the single carriageway access provided by the A26 to Belfast International. A shuttle bus already serves Belfast City from Sydenham station, but the business case for a rail link to Belfast International is unlikely to arise much before the end of the White Paper period, if at all.





# 8



# The North of England

## Key issues

- 8.1** The North of England<sup>1</sup> is served by several well established airports, each of which plays an important role within the region in addition to serving its own local catchment area. Each has its own natural advantages and strengths, and some have established particular sectoral or geographical roles within the North of England air travel market. Each also has environmental impacts, which need to be monitored and managed carefully.
- 8.2** The consultation paper for the North of England<sup>2</sup> set out the forecast demand at airports in the region by 2030 under a range of scenarios and identified the infrastructure that would be required if some, or all, of that demand were to be met. It also considered the potential impacts, both positive and negative, of meeting demand.
- 8.3** A particular issue raised by the consultation document was whether Manchester Airport could develop as a secondary UK hub serving the North of England and other parts of the UK outside the South East of England. It also examined a number of related issues such as the need to improve surface access to airports and the potential for route development.

## Main conclusions

- 8.4** We anticipate significant growth at the North of England's airports. In many cases the impacts associated with this growth are expected to be limited and we therefore support the development of the additional terminal capacity, runway extensions and improved taxiway systems needed to cater for it.
- 8.5** A significant share of the increased demand is expected to arise at Manchester Airport. It is here that the greatest impacts of providing new capacity will also arise, not only in terms of noise but also potential economic benefits. Manchester Airport serves as the major international gateway for the whole of the North of England, North Wales and for some air travellers from the Midlands. With these considerations in mind, we have concluded that additional terminal capacity should be provided to ensure the full use of the existing runways in segregated mode – around 50mppa. The location and disposition of that capacity is for future determination, but would

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<sup>1</sup> For the purposes of the White Paper this comprises the Government Office Regions for the North East, North West and Yorkshire and the Humber.

<sup>2</sup> See Bibliography.

need to be accompanied by stringent measures to ensure that the number of people affected by noise is minimised, and that all local air quality standards are met.

- 8.6** Significant further work will also be required to develop a package of surface access improvements at Manchester to cater for the forecast level of growth. This includes a comprehensive strategy for increasing public transport mode share and for enhancing capacity on Manchester's motorway network to cater for both airport and background traffic. Surface access improvements will also be needed at a number of other North of England airports over the period of the White Paper. Airport operators will need to work with their regional and local partners and surface transport providers to bring forward proposals to cater for the anticipated increase in passenger volumes and to minimise environmental impacts, taking account of the policies on surface access set out in Chapter 4.

### Manchester Airport

- 8.7** Manchester Airport is by far the largest airport in the UK outside the South East, with passenger numbers around 19mppa. It provides services to around 170 destinations, including a substantial network of long-haul scheduled services. As a major international gateway, it provides an important alternative to the congested airports in the South East and is the only UK airport other than Heathrow to have two full-length runways. Consequently it potentially has significant spare runway capacity, especially if new operating procedures allowing more intensive use to be made of the existing runways in segregated mode were to be introduced. This would enable Manchester to cater for demand of at least 50mppa, provided this could be delivered in an environmentally acceptable manner.



- 8.8** However, if the airport were to attract a major airline to establish a substantial hub operation, it is possible the existing runway system could also accommodate the higher levels of demand this would generate. This would depend on the average number of passengers carried per aircraft, the pattern of runway utilisation across the day and the potential benefits

future technology developments may bring in terms of making more intensive use of the airport's runways. Although we do not anticipate major runway capacity constraints at Manchester before 2030, the position will not become clear until well into the second part of the White Paper period and so will need to be kept under review. In the interim the main focus for investment at Manchester should be on terminal capacity.

- 8.9** Manchester Airport has three terminals, which could be expanded within existing planning approvals to serve 30mppa, and with further approvals to 40-45mppa. Beyond that, major new terminal development would be required. This could be in the form of a satellite to Terminal 2 accommodated within existing airport land, or it could be an entirely new terminal, in which case some land outside the airport boundary may be required.
- 8.10** We did not consult on these options or where the best location for a new terminal might be. We have not therefore come to any conclusions on the form or location of new terminal capacity, but we do support in principle the growth of terminal capacity to make maximum use of the existing runways operated in segregated mode, subject to meeting environmental concerns.
- 8.11** We recognise that the location of Manchester Airport already causes large numbers of people to be exposed to aircraft noise nuisance. In 1999, around 45,000 people lived within the 57dBA noise contour. Our estimates suggest that, if capacity were increased to cater for a passenger throughput of over 50mppa by 2030, this figure could rise to around 70,000 people unless noise improvements beyond those currently assumed in our analysis can be achieved.
- 8.12** However, we have also taken into account the potential that the growth of Manchester Airport has to generate significant benefits for the economy of the North of England. Having regard to the policies and principles set out earlier in this White Paper, we do not believe, on balance, that these impacts are so severe that constraints should be imposed on the development of the airport to prevent it growing to the levels of demand forecast. The Government considers therefore that Manchester Airport's capacity should in principle continue to grow to accommodate additional demand up to around 50mppa by 2030. But it will be important that every effort is made to secure the maximum possible reduction in noise levels and to minimise the number of people potentially affected.
- 8.13** We have therefore concluded that growth of Manchester Airport should be subject to stringent limits on the area affected by aircraft noise, with the objective of incentivising airlines to introduce the quietest suitable aircraft as quickly as is reasonably practicable. The limits should look at least ten years ahead, and will need to be reviewed at intervals between now and 2030 to take account of emerging developments in aircraft noise performance. It is also essential that airport growth does not jeopardise legal air quality standards, notably in respect of NO<sub>2</sub>. This will require thorough monitoring and evaluation.
- 8.14** Manchester Airport has recently completed a new ground transport interchange, is contributing £19 million to the cost of junction improvements and motorway

widening on the M56, and is potentially a significant contributor to a proposed Metrolink connection to the airport. The airport operators have also developed an outline strategy which would increase the share of passengers arriving at the airport by public transport to well beyond their target of 25 per cent by 2005. The strategy, which has a long-term public transport mode share target of 40 per cent, includes enhanced rail services, the Metrolink connection, better bus and coach access and a number of satellite park and ride schemes.

- 8.15** Improvements in the public transport mode share at Manchester Airport will be important in supporting its long-term growth. As part of its strategy the airport operator will need to work closely with local and regional partners to develop measures to limit the growth in road traffic. These could include better traffic management and, potentially, charging for road access to the airport, in order to restrain traffic volumes.
- 8.16** The motorway network in the vicinity of the airport is nevertheless likely to require some capacity enhancements over the period of the White Paper. The airport will need to contribute to work by the Highways Agency examining the form, timing and location of improvements to the motorway network in South Manchester, in order to develop a comprehensive set of proposals that address both airport and other traffic needs, in harmony with environmental goals.

### Liverpool John Lennon Airport

- 8.17** Liverpool John Lennon Airport has seen rapid recent growth, providing a welcome boost to the local economy. Passenger numbers have quadrupled in the last five years, mainly as a result of expansion by 'no-frills' airlines, and are now approaching 3.5mppa. Forecasts suggest that by 2030 throughput could be two or three times current levels, and the airport's master plan caters for up to 12mppa.
- 8.18** Noise levels at the airport are rising because of the very large increase in operations from a low base, and will continue to do so as traffic volumes increase. However, the number of people affected is, and should remain, relatively low.
- 8.19** The Government therefore considers that the airport's capacity should continue to grow to accommodate increased demand. This growth will require further terminal capacity, but there is land available for this within the existing site.
- 8.20** There may in the future be a case for extending the runway to around 2,700 metres, if required for long-haul charter and freight operations. This would be acceptable provided there is no encroachment on the River Mersey Site of Special Scientific Interest, Ramsar site and Special Protection Area.
- 8.21** The airport will also need to continue to work with regional and local partners and surface transport providers to bring forward surface access enhancements that will be needed to cater for increased passenger volumes. These should include improved public transport links.

## Blackpool Airport

- 8.22** Until recently, Blackpool Airport has been a small-scale operation focused on serving the Isle of Man, Belfast and winter sun charter destinations. However, the introduction of 'no-frills' services to Stansted and Dublin has altered this position and the traffic levels are expected to have more than doubled by the end of 2003, to around 0.2mppa.
- 8.23** The airport should be capable of developing the additional capacity it needs in order to handle the levels of traffic it might attract (including terminal and apron capacity, and possibly a short runway extension) within its existing boundaries and land ownership. We consider, therefore, that any proposals that come forward to cater for future expansion should be determined locally.

## Carlisle Airport

- 8.24** Although Carlisle is not currently a significant commercial airport, it has had commercial services in the past, and plans have been put forward to invest in the airport with a view to providing new commercial flights serving Cumbria and the southern parts of Dumfries and Galloway and the Scottish Borders. There are no major local physical or environmental constraints, and there is support from a range of stakeholders for these proposals, with little opposition.
- 8.25** Cumbria is more remote from access to air services than any other part of the UK with a comparable population. Services from Carlisle Airport would assist economic growth in the areas within its potential catchment, and in particular could improve access for high spending inbound tourists to the Lake District and the South West of Scotland. We therefore encourage the airport operator to bring forward proposals for the development of the airport, to be considered through the normal regional and local planning processes.

## Newcastle Airport

- 8.26** Newcastle is the largest airport in the North East, with passenger traffic now approaching 4mppa as a result of the introduction of new 'no-frills' services. Continued interest from a combination of full scheduled, 'no-frills' and charter carriers suggests passenger throughput will continue to grow rapidly over the next few years. As a result, it is now estimated that traffic levels could rise to around 10mppa by 2030.
- 8.27** The airport has published its long-term master plan, which is designed to cater for this level of traffic, including expansion of terminal facilities and a 360m runway extension. There is likely to be an increase in the number of people within the 57dBA noise contour as a result of these developments, but the population affected will still be quite small. There has been little opposition and significant support locally for the proposed development of the airport, and we therefore support these plans. However, potential environmental impacts will need to be assessed carefully.



- 8.28** The airport already has planning approval for the development of maintenance facilities at the 'South Side' Development, and has opened an Aviation Training Academy as an initial phase of this strategic long-term development scheme.
- 8.29** With the exception of proposals to improve access into the airport from the A696, there are no significant airport-related road access problems that should constrain development of the airport. However, congestion on the wider strategic road network could ultimately begin to affect access to the airport from some parts of the airport's catchment. The airport is already served by the Tyne and Wear Metro system and a range of bus and coach links. Proposals have also been put forward, and are currently being examined at the regional level, for a possible rail link to the airport to improve access from across the airport's potential catchment area.

### Teesside International Airport

- 8.30** Teesside Airport has a distinct catchment within the North East focused on the Tees Valley and the south of County Durham. It also serves passengers in some parts of North Yorkshire and Cumbria.
- 8.31** The airport currently handles 0.7mppa, but overall traffic has fallen in recent years with materially less domestic traffic. However, that is likely to change in the near future when new 'no-frills' services come on line. By 2030 forecasts suggest that passenger traffic could be double current levels, and perhaps more.
- 8.32** Freight operations grew rapidly between 1998 and 2000 but have since declined, though this remains an important target sector for the airport. There are also plans for a major business park next to the airport, which is likely to develop as an important strategic investment site serving the southern part of the region.
- 8.33** Teesside Airport has the important advantage that very low numbers of people are affected by noise. The airport will also benefit from a new access road from the A66, and from proposals to provide good quality bus links from Darlington station and Middlesbrough.
- 8.34** Extensions to both terminal facilities and runway length, and enhancements to the existing taxiway system, could be provided within existing airport land. We consider therefore that there are no major impediments to the future expansion of Teesside, and we support this.

### Leeds Bradford International Airport

- 8.35** The core catchment area of Leeds Bradford International Airport encompasses the most densely populated parts of West Yorkshire, although it also draws passengers from further afield, particularly North Yorkshire. The addition of new 'no-frills' international services to the airport's existing full scheduled and charter network has brought rapid growth in 2002–2003. The airport will handle around 2mppa in 2003 and is forecast to grow to around 7mppa by 2030.



- 8.36** Additional terminal capacity would be required to accommodate this level of growth. A runway extension of some 300 metres may also be desirable in the future to facilitate medium and long-haul operations, and to allow a wider range of aircraft to operate non-stop services with full payloads to an extended range of destinations.
- 8.37** This level of growth could lead to a small increase in the number of people affected by noise, and every effort should be made to mitigate and minimise these impacts. Improvements to both public transport and road access to the airport may also be required in the medium term as passenger volumes continue to grow.
- 8.38** Subject to these points, we would support the further development of the airport as set out above, and we invite the local planning authority to safeguard for the runway extension should the airport operators bring forward such proposals through their airport master plan.

### Humberside International Airport

- 8.39** Humberside International Airport handles some 0.5mppa. It also has an important role in serving the offshore oil and gas industry. It had been forecast to grow to around 1.6mppa by 2030 with additional runways in the South East, but this took no account of Finningley. Humberside is likely to be affected by competition from Finningley and that level of passenger throughput could be difficult to achieve.
- 8.40** It is not expected that any people will fall within the 57dBA noise contour and there are no significant physical constraints on future expansion. We therefore agree that the airport should seek to attract as much traffic as it can.

### Doncaster – Finningley Airport

- 8.41** Planning permission for the development of a civil airport at the former RAF Finningley, near Doncaster, was granted in April 2003. The issues were considered at the public inquiry, and were therefore not considered in the Government's consultation. Finningley will be able to develop within the conditions set as part of the planning permission, including a limit of 57,000 air transport movements a year.
- 8.42** The long-term development of Finningley will need to be considered in any future review of this White Paper or, if required sooner, through normal regional and local planning processes.

### Sheffield City Airport

- 8.43** Scheduled commercial passenger services no longer operate from Sheffield City Airport. The current airport operator has been reviewing the airport's prospects and is expected to set out proposals for the future of the airport around the time of the publication of this White Paper. These will need to be determined through the normal regional and local planning processes.

# 9



# The Midlands

## Key issues

- 9.1** The Midlands<sup>1</sup> has two principal passenger airports – Birmingham International and East Midlands Airport. Between them these airports handle virtually all the commercial passenger traffic flowing into or out of the region. East Midlands also serves as the UK base for two of the four major express freight companies and a regional base for a third. There are also two other, smaller airports in the Midlands – Coventry Airport, which serves a niche role catering for air freight and flown mail, and Wolverhampton Business Airport which, like Coventry, has developed a presence in the business aviation market.
- 9.2** An important feature of the air travel market in the region is that currently less than half the air passengers travelling to or from the Midlands use the region's airports. In 2000, 37 per cent flew from South East Airports. Manchester also attracts a significant share of Midlands passengers. With the overall market for air travel in the Midlands due to grow substantially, offering a wider range and greater frequency of services, an opportunity exists to claw back some of this leaking traffic and reduce the number of long distance journeys currently made – mainly by car. But in the next ten to fifteen years this will bring significant pressures for new runway capacity to be provided somewhere in the region.
- 9.3** The Midlands consultation document<sup>2</sup> set out the Government's assessment of the likely need for additional runway capacity in the region before 2030. It went on to present options for additional runways at Birmingham and East Midlands Airports, alongside the alternative of a new three-runway airport between Coventry and Rugby. The consultation document also considered the surface access improvements that might be needed to serve different levels of airport growth in different locations.

## Main conclusions

- 9.4** Based on careful consideration of the analysis set out in the consultation document, the large number of consultation responses received, and our conclusions on airport capacity in other regions, we are persuaded that there is a need for additional runway capacity in the Midlands. However, our conclusions regarding new runway capacity in the South East over the period of this White Paper (see Chapter 11) mean that a new

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<sup>1</sup> For the purposes of this White Paper this constitutes the Government Office Regions for the East and West Midlands.

<sup>2</sup> See Bibliography.

airport in the Midlands is unlikely to be economically justified or financially viable. In concluding not to support this option we have also taken account of the almost uniform opposition to this proposal within the region, and a number of important concerns highlighted during the consultation process.

- 9.5** Our preferred location for a new runway to meet future growth in passenger demand in the Midlands is at Birmingham, where we support the airport operator's variant proposal for a short wide-spaced runway, which is a refinement of the wider spaced option set out in the consultation document. However, it will need to be accompanied by a range of stringent measures to ensure that the number of people exposed to noise from the airport is kept within acceptable limits, that all local air quality standards are met, and by improvements to the road and rail links that provide access to the airport.
- 9.6** At East Midlands, the most significant driver behind the potential need for new runway capacity is the anticipated growth of express freight aircraft movements. These are forecast to arrive in a concentrated period in the late evening, coinciding with the final inbound journeys of passenger aircraft based at the airport. We are not yet convinced that there is a clearly demonstrable economic case that would justify safeguarding for a new runway. But we recognise the strategically important role that the airport provides for the express freight sector in the UK, and the growing passenger volumes that it is attracting. We therefore propose to keep under review the case for a possible new runway at East Midlands during the period covered by the White Paper.

## New airport option

- 9.7** As conceived in the consultation document, this option would provide the Midlands with a major new hub airport, located between Coventry and Rugby. Such an airport would be able to provide more air services from the Midlands to a greater range of destinations than under any other scenario. In order to be viable, however, it would require the existing Birmingham International Airport to close, its site to be redeveloped, and significant constraints to be imposed on airport capacity in the South East.
- 9.8** Because the new airport option is located in a much more sparsely populated area than Birmingham International, it would bring about a large net reduction in the number of people affected by aircraft noise. On the other hand, a large airport on a greenfield site would have significant negative environmental and social impacts. These include the potential loss of two villages and 150 properties, damage to a range of heritage resources arising from the need to re-contour significant areas of land to create a platform for the development of the airport, increased flood risk in the Avon river corridor and concerns about potential bird-strike hazard. There would also be the need for major investment in surface access links.

- 9.9** These issues were just some of the many concerns raised in responses to the consultation, and the general public and stakeholders of all types from across the region were overwhelmingly opposed to the new airport option.
- 9.10** Taking account of these impacts, the major question marks over the viability of the proposals in the light of decisions about runway capacity elsewhere and the large number of comments received, the Government has come to the view that there are better ways of accommodating likely demand in the Midlands. We therefore do not support the option of a new airport between Coventry and Rugby.

## Birmingham International Airport

- 9.11** Birmingham serves as an important regional base for several airlines. It has a growing charter programme and an emerging long haul market. Passenger volumes have grown by 10 per cent over the last twelve months to around 9mppa and are expected to pass 10 million within the next year or so. Traffic levels are forecast to increase by 2030 to between 32mppa and 40mppa (dependent in part on the level of growth at airports in the South East). The optimal capacity of the existing runway is likely be around 20mppa although this is heavily dependent on the average number of passengers carried per aircraft and the diurnal profile of the traffic using the runway.
- 9.12** The consultation document put forward two options for a single additional runway at the airport – a close parallel runway around 400m to the west of the existing runway with significant dependency in its operation; or a wide-spaced runway with a separation of around one kilometre, which offers the potential for fully independent operation. The accompanying appraisal indicated that a wide-spaced runway would provide greater capacity and larger economic benefits, but would also have greater environmental impacts, especially in respect of the number of people subject to aircraft noise. Both options included lengthening of the existing runway to allow services to be offered to more distant destinations and larger aircraft types to use the airport.
- 9.13** In October 2002 the airport operator published its own variant proposal ('The Birmingham Alternative')<sup>3</sup> in response to our consultation. This included a shortened wide-spaced runway option (limited to 2,000 metres) – together with other adjustments, designed to reduce land-take in sensitive locations. This option, which is a refinement of the wide-spaced option in the consultation document, would provide sufficient capacity to handle forecast traffic to 2030 and beyond. It would also give strong economic benefits and, taken together with extension of the existing runway, should be capable of catering adequately for the anticipated future mix of traffic at the airport.
- 9.14** Only smaller types of aircraft (turboprops, regional and narrow bodied jets) would be able to use the new short runway, and to mitigate potential noise impacts this could be limited further to the quieter types. As a result, the noise impacts would be significantly less than with the full-length wide-spaced option, which could have accommodated much noisier, larger and wide-bodied heavy aircraft. Nonetheless, the impacts could still be large, with possibly 81,000 people living within the 57dBA noise

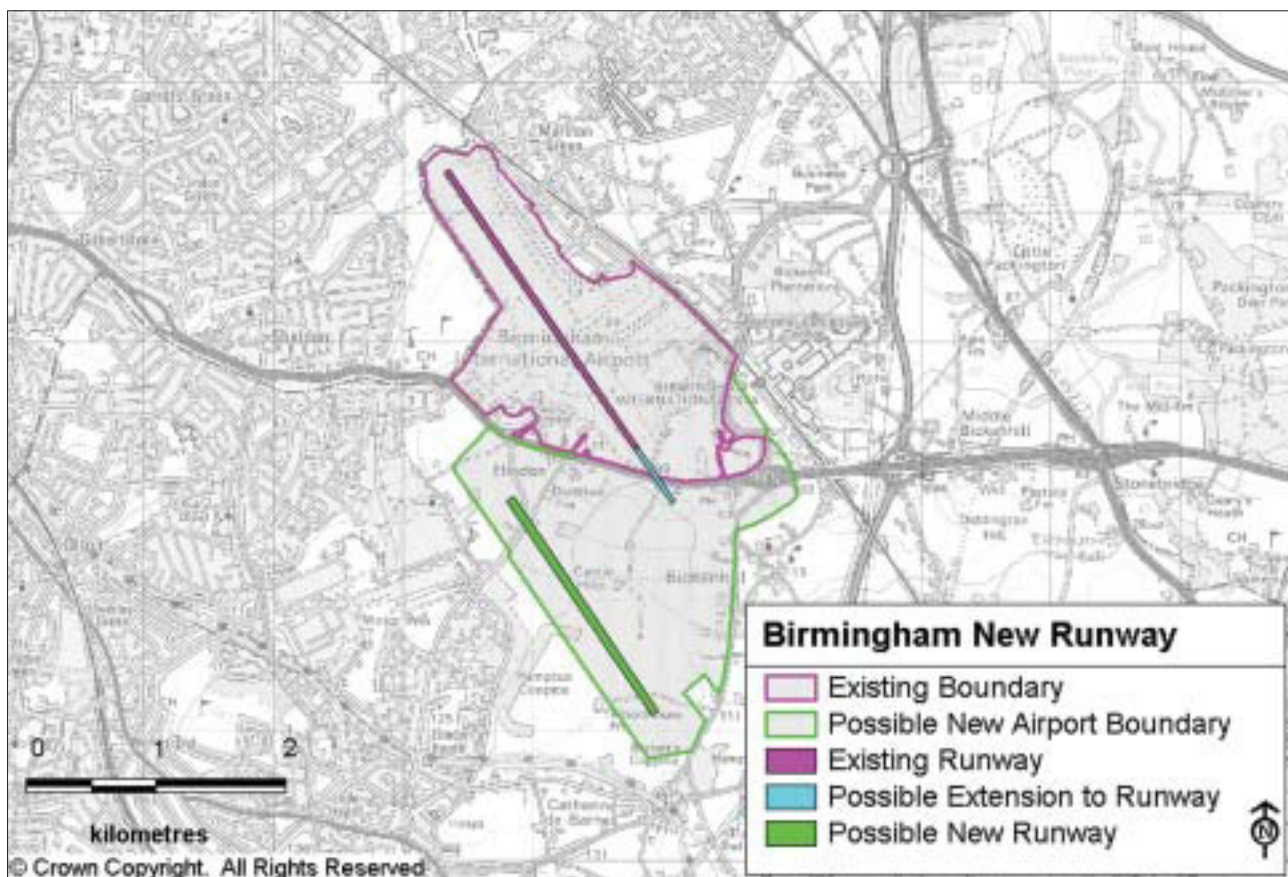
<sup>3</sup> *The Birmingham Alternative – a positive alternative to meet long term runway capacity demand in the Midlands.*



contour in 2020 compared to 34,000 in our 1999 base year under our latest assumptions. The numbers affected could be higher still by 2030 without significant technology improvements beyond 2015.

- 9.15** In response to the consultation, there was strong support among aviation industry, economic development and business stakeholders in the West Midlands for the development of a second runway at Birmingham International Airport. This was accompanied by recognition among some other stakeholders, including a number of local authorities, of the considerable economic benefits that this would bring to the Midlands and the UK as a whole. However, potential noise impacts were a major area of concern for local people, environmental groups and a number of other stakeholders.
- 9.16** Of the options proposed, there was strongest support for the 'Birmingham Alternative' proposal (see below). The Government shares the view that this would be the best option. It would require less green belt to be taken and the loss of fewer properties than the full-length option, and avoids the loss of Bickenhill Meadow Site of Special Scientific Interest. It could also be phased more effectively, and would not require a major diversion of the A45. And it would have lower noise impacts than the full-length option.

*It must be stressed that this map is only indicative, pending detailed design work and the submission of a planning application by the operator. The map should not therefore be taken to be a formal safeguarding map.*



**9.17** We consider, however, that noise impacts on the scale that could arise from the new runway must be addressed. We have concluded, therefore, that the growth of Birmingham International Airport should be subject to stringent limits on the area affected by aircraft noise, as an incentive to airlines to introduce the quietest suitable aircraft as quickly as is reasonably practicable. The limits should look at least ten years ahead, and will need to be reviewed at intervals between now and 2030 to take account of emerging developments in aircraft noise performance. We also agree with the airport company that the new runway should be limited to aircraft with a noise quota no greater than 0.5 (typically this means modern variants of aircraft such as the Boeing 737 and Airbus A320 families), and should not be used at night.<sup>4</sup>



**9.18** With a new runway operating, emissions modelling predicts that NO<sub>2</sub> levels will be within the EU 40µg/m<sup>3</sup> annual limits.

**9.19** Subject to these conditions, we have concluded that the option put forward by the operator is on balance acceptable, and are satisfied that it is a significant improvement on the original full-length option. We therefore invite the airport operator to safeguard the land required, to develop a master plan and to consult the interested parties on this, as an input to future revisions of Regional Planning Guidance and the local planning framework prior to the preparation of a planning application.

**9.20** Although forecasts suggest the runway may be needed around 2016, it is for the airport operator to judge when the project would be commercially desirable and, accordingly, when it would be appropriate to submit a planning application. In the meantime, the airport operator will also need to put in place a scheme to address the problem of generalised blight resulting from the runway proposal (see paragraphs 12.3 to 12.17).

**9.21** The airport operator will also need to work closely with the Strategic Rail Authority, the Highways

<sup>4</sup> The period between 11.00pm and 7.00am.



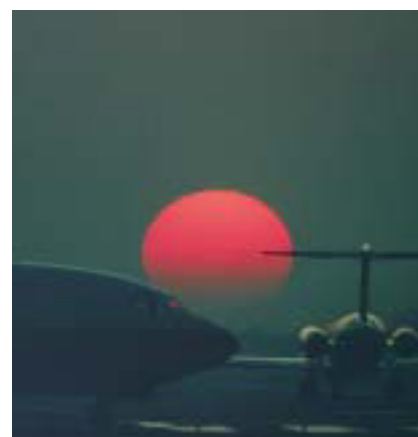


Agency and regional stakeholders to develop a robust strategy for improving surface access to the airport. The aim should be to improve the public transport mode share significantly, with 25 per cent as a long-term target. Improved rail, bus and coach services will need to contribute to this, alongside the new interchange at Birmingham International Station and new SkyRail connection to the Airport.

- 9.22** Road access to the airport and future capacity requirements on the M42 between Junctions 3 to 7 will also need to be reviewed. This review will need to ensure that there is adequate capacity for both background and airport traffic growth on this key section of motorway. It will also need to address the complexities associated with designing an acceptable widening scheme for the M42 and new airport access arrangements from the motorway, should these prove to be necessary. These will need to be considered alongside other factors such as the pressures of other potential developments along this corridor and the results of the Advanced Traffic Management scheme currently being piloted by the Highways Agency. The airport operator should initiate such a review with the Highways Agency, in conjunction with regional and local interests, at an early stage.

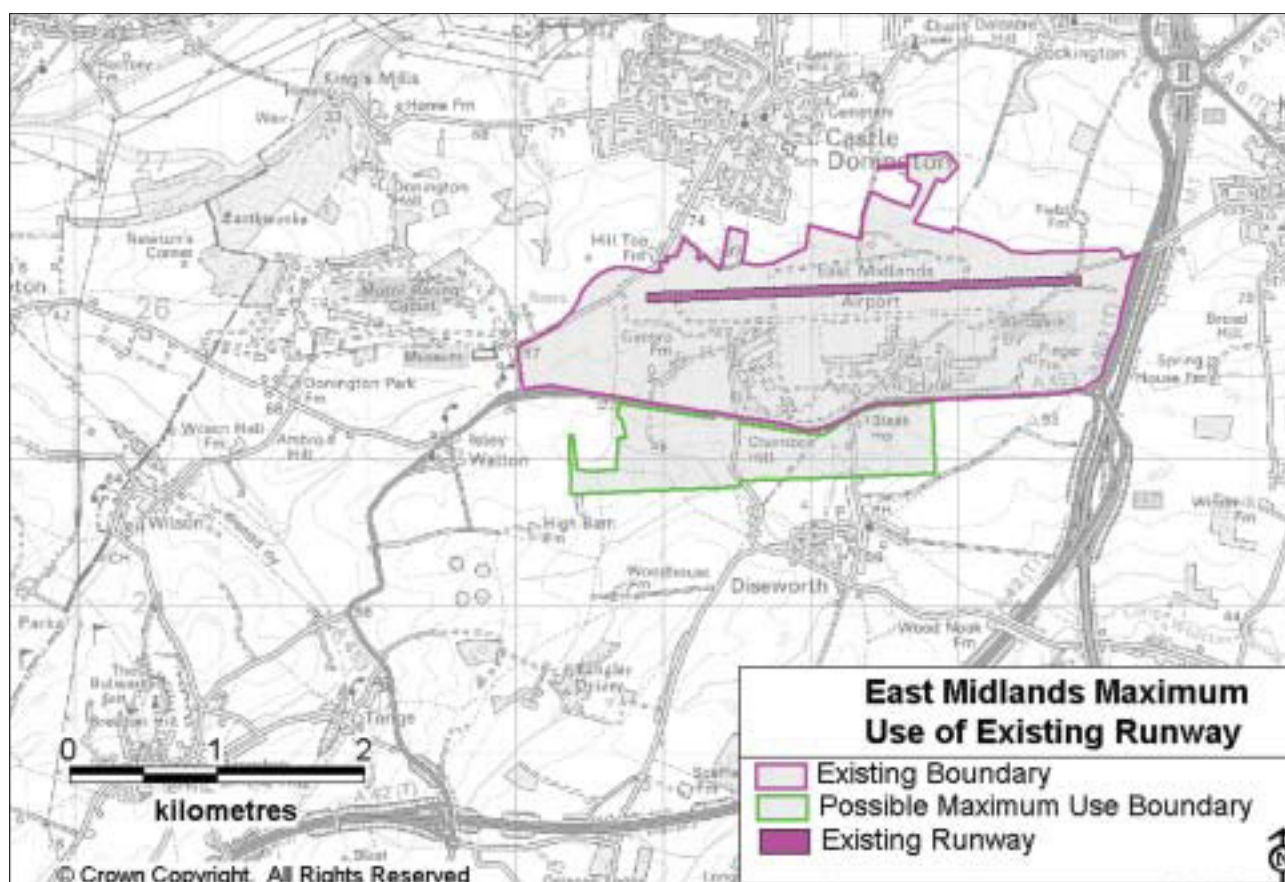
## East Midlands Airport

- 9.23** East Midlands Airport has seen passenger traffic virtually double in 2002–2003, with two ‘no-frills’ carriers developing significant bases at the airport. It is now handling around 4.5mppa. Forecasts suggest that by 2030 it could attract between 12mppa and 14mppa.
- 9.24** East Midlands Airport is also the third largest freight airport in the UK, and is the leading UK airport for freight carried in all-cargo aircraft. It is the main centre of operations in the UK for two of the four major global express freight operators, and an important regional base for another. Forecasts indicate that East Midlands Airport could be handling as much as 2.5 million tonnes of freight a year, possibly more, by 2030.
- 9.25** East Midlands Airport is situated away from the main centres of population, and a relatively small number of people live in the 57dBA noise contour. However, the projected growth of the airport would increase the size of the contour to include over 10,000 people. Moreover, the nature of the air-cargo operations means that many flights are at night, when background noise levels are lower. There is likely to be a large increase in the number of flights at night; our consultation document forecast that there could be over 60,000 cargo flights a year by 2030, and a substantial proportion of these are likely to be in the late evening or the night.
- 9.26** The airport owners foresee a need for a second runway at the airport around 2020, regardless of decisions about runways at other airports. They project that there will be a shortage of runway capacity during late evening hours, when the last inbound passenger flights overlap with the peak period of arrivals by cargo aircraft. However, this assessment is based on higher estimates of traffic during these critical hours than we currently forecast for the airport, which impacts on the economic benefits of a second runway.



**9.27** On the evidence available to us, and in line with the balanced approach we are taking to new runways across the country, whilst we can support the expansion of passenger operations suggested in the Government's forecasts, we could not at this stage justify approval of, nor safeguarding for, a second runway. However, if growth at the airport in future years proves to be more rapid than we currently expect, this issue will be kept under review.

*It must be stressed that this map is only indicative, pending detailed design work and the submission of a planning application by the operator. The map should not therefore be taken to be a formal safeguarding map.*



**9.28** At the same time, given the particular importance of air freight to the future national and regional economy, and of East Midlands Airport as a centre of these operations, we consider that the projected expansion of air freight operations at East Midlands should be permitted. However, this would need to be accompanied by stringent controls on night noise in particular and increasingly generous noise insulation and other mitigation measures. These measures should build on those applying currently.

## Other Midlands airports

- 9.29** We also consulted on three smaller airports in the Midlands: Wolverhampton Business Airport, Coventry Airport and RAF Cosford.
- 9.30** *Wolverhampton Business Airport* should continue its role of serving business and general aviation. The airport could be capable of delivering commercial services on a limited scale, but should do so only in line with regional planning and transport priorities, and the scale of development at the site must take account of the constraints imposed by the lack of strategic road access. With this in mind, any such development should be a matter for decision locally.
- 9.31** *Coventry Airport* currently serves a specialist role within the region, catering for business aviation, air mail and some freight, and can continue to perform this role within existing constraints. There is a current planning application for a terminal development at the airport. However, in the light of our conclusions on capacity elsewhere in the Midlands, and having regard to potential surface access, environmental and airspace constraints, we would not envisage any significant further development being appropriate beyond the level of passenger throughput in the current application.
- 9.32** There could be potential for the commercial use of *RAF Cosford*, but this is dependent on the RAF's decisions on spare capacity. If the RAF decided to make capacity available, it would be for local and regional planning bodies in the first instance to decide on the appropriate scale of development.

# 10



# The South West of England

## Key issues

- 10.1** The South West is the largest of the English regions. Its size and population distribution mean it is difficult for any one airport to serve the whole region. As a result, the region contains several airports, many of them serving a distinct geographical area or commercial role, supporting air services which are of considerable importance to the regional economy. But most offer only a limited range of services at present, leaving many from the South West (currently around 70 per cent) to use airports in adjacent regions, mainly those in the South East, and Heathrow and Gatwick in particular.
- 10.2** As the region's airports grow, however, there are likely to be considerable opportunities to attract inward investment and inbound business travellers, and also predominantly leisure-orientated traffic (foreign and domestic tourists), for whom the travel times by alternative surface modes are a significant constraint. Combined with growth in indigenous traffic, this should enable a wider range of services to be sustained from the region's own airports, and should reduce by 2030 to 50–55 per cent the proportion of traffic using airports outside the region.
- 10.3** Our forecasts suggest Bristol will remain the region's largest airport; the scale of development at other South West airports is dependent on a number of variables. These include the scale, timing and location of development at South East airports and at Bristol, population and economic growth relative to the UK average and the extent to which the tourism market grows and is attracted to use air services.
- 10.4** The South West consultation document,<sup>1</sup> and a subsequent study of options for developing airport capacity in the far South West, commissioned by the South West Regional Development Agency during the consultation process, considered these issues in some depth. Both documents sought views on where further airport capacity might best be located, given the economic benefits and environmental impacts it would have. This included consideration of a new airport to the north of Bristol, and (in the case of the latter) a new airport in the South Hams area.
- 10.5** The consultation document also addressed surface access links to the region's airports and those in adjacent regions that make a contribution to meeting its air travel needs, regional air access to London and the role of the region's smaller airports.

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<sup>1</sup> See Bibliography.



## Main conclusions

- 10.6** We believe there is significant potential for growth at existing airports in the South West of England and that this will generate substantial economic benefits to the region. The development of new services and improved service frequency will, over the lifetime of the White Paper, also enable the proportion of South West air passengers that need to rely on the use of airports outside the region to be significantly reduced. However, airports elsewhere in England will continue to have a significant role in meeting the needs of South West air travellers. Maintaining, or improving, surface access connections to these airports from the South West, by both road and rail, will therefore be important.
- 10.7** The main potential for growth in the South West will be at Bristol Airport. Having due regard to the environmental impacts that would accompany its expansion, we support its development to around 12 mppa, to include a runway extension and new terminal south of the existing runway when these are required. We also support development at Bournemouth, provided appropriate surface access improvements are put in place and any direct or indirect impacts on sensitive ecological sites are minimised or compensated.
- 10.8** Newquay and Exeter have a distinctive role in serving their local catchment areas and there is significant scope for development without major environmental impacts. We therefore support proposals for their expansion, with the detailed form of development and funding to be determined at regional and local level. We also invite the regional authorities to review the options for meeting the air travel needs of the City of Plymouth and its hinterland and to make appropriate provision for this in future regional planning, transport and economic strategies.

## Bristol International Airport

- 10.9** Bristol International Airport is by far the largest airport in the South West of England. Like several other regional airports in the UK, it has seen substantial growth recently, with passenger throughput nearly doubling between 2000 and 2003. The airport is now handling almost 4mppa. The forecasts suggest that by 2030 it could attract between 10mppa and 12mppa, taking account of our proposals in Chapter 11 for new runways in the South East.
- 10.10** The airport faces some complex constraints. The existing terminal site should be able to cope with up to 8mppa, provided additional aircraft stands can be accommodated. Beyond about 8mppa, a second terminal south of the runway would be required, together with a runway extension to the east and extended parallel taxiway.
- 10.11** The number of people living within the 57dBA noise contour in 1999 was only about 1,000, and we expect only a very small increase in this number by 2015, even at the higher end of our growth forecasts. With a runway extension, and our highest levels of forecast throughput, estimates suggest that by 2030 there would be no more than around 3,500 people within the 57dBA noise contour. The airport operator is invited to bring forward as soon as possible a long term master plan setting out these



proposals, to be accompanied by a voluntary purchase scheme for any properties that would be adversely affected.

- 10.12** The runway extension would also require some common land to be taken, and we would expect this to be replaced elsewhere. There would also be some loss of green belt as a result of a runway extension and new terminal development. However, we do not believe this would fundamentally affect the integrity of the green belt within the area and consider it would, on balance, be justified by the importance of the airport's growth to the region's economy.
- 10.13** Subject to the conditions outlined above, we therefore support the proposed development of the airport.
- 10.14** Strategic surface access links to Bristol are not as good as at many other airports of a similar size in the UK. Links to the motorway network, which is some distance away, are via 'A' and 'B' roads that pass through villages and other built-up areas. These are not heavily congested, except to the north of the airport where the A38 enters Bristol itself. Away from the immediate vicinity of the airport, the proportion of airport-related traffic is small. The express bus service from Bristol Temple Meads to the airport, which is the main public transport link, is proving increasingly successful; but public transport mode share is low at four per cent and the provision of a direct rail service is not a realistic prospect.
- 10.15** The Greater Bristol Strategic Transport Study will consider what might be done to improve both road and public transport access to Bristol Airport, and we encourage the airport operator to participate fully in this process. Access to the airport could be significantly improved by routing traffic away from congested urban areas within Bristol and by bringing forward bus priority proposals which would help provide speedy and reliable journey times for the airport express coach service operating from Bristol Temple Meads station.

### **New airport – north of Bristol**

- 10.16** The option of building a new airport north of Bristol was set out in the South West consultation document if development of the existing Bristol (Lulsgate) Airport needed to be constrained, or in the event that new capacity was not provided at South East airports. Based on the decisions set out above, and our conclusions on capacity in the South East, neither of these circumstances arise. The appraisal set out in the consultation document indicates that a new airport north of Bristol would therefore be neither economically beneficial nor commercially viable.
- 10.17** In addition, respondents to the consultation identified a number of problems with the new airport proposal, including the proximity of major industrial complexes and settlements nearby, flood risk, and congestion on key motorway links. These concerns, combined with the cost of building a new airport and the negative impact from closing the existing airport on the economy of south Bristol, resulted in strong opposition to a new airport north of Bristol from a number of important stakeholders in the region.

- 10.18** Taking all of these factors into account, we have concluded that there is no case for supporting a new airport to the north of Bristol in the period of this White Paper.

### **Bournemouth International Airport**

- 10.19** Bournemouth International Airport is situated on the eastern edge of the region. It competes with Southampton for certain types of traffic, although the two airports have, to some extent, complementary roles as a result of Southampton's relatively short runway. Bournemouth handled nearly 0.5mppa in 2003. It also has, and is likely to retain, a small but important air cargo operation.
- 10.20** Future traffic will be heavily influenced by the provision of capacity in the South East. Forecasts suggest Bournemouth in 2030 could attract around 4mppa with one new runway in the South East, but less than 3mppa with two new runways in the South East.
- 10.21** By 2015, there could be some 700 more people within the 57dBA noise contour and 3,000 in total by 2030. Further terminal capacity is likely to be required to accommodate the projected growth, but this can be provided within the existing airport boundary. The Environment Agency is concerned that growth in air services and surface access traffic could have some indirect detrimental effects on sites nearby which are designated for nature conservation. The airport operators should make every effort to minimise these impacts. Where there are direct impacts they should ensure that appropriate compensatory measures or replacement habitat is provided.
- 10.22** Further growth is likely to require improvements to road access to serve the airport and its adjacent business park, alongside further enhancements to bus links from Bournemouth station.
- 10.23** Subject to the conditions above, we agree that additional terminal capacity should be provided to serve the forecast traffic, as and when required.

### **Exeter International Airport**

- 10.24** Exeter International Airport has outline planning approval for a new terminal and associated Skypark development on the northern side of the airport, subject to agreement being reached about a new road link to the A30. Recent enhancements to the strategic road network in the vicinity of the airport, which is readily accessed from the M5 and upgraded A30, have also helped to extend the airport's potential catchment area.
- 10.25** If the airport grows as anticipated to 2.0 to 2.5mppa, or beyond, a move to the new terminal will be essential. With modular extensions and progressive development of the apron and taxiway system, the new terminal should be capable of meeting the airport's long term capacity needs. We would therefore see no strategic need to impose caps on the traffic volumes it can cater for; if these are required, they can be determined locally.

## Plymouth

- 10.26** During the consultation a proposal was put forward for a new airport to the east of Plymouth. As this was not covered by the consultation, we have not reached conclusions on it. The Government is content, therefore, for this issue to be considered by regional and local authorities, having careful regard to the alternatives. These are to extend the runway at the existing Plymouth City Airport, or to take advantage of air services available from other airports in the region potentially capable of serving the Plymouth catchment area.
- 10.27** In the interim, at the existing airport a range of safety-related and surface access enhancements are underway that will provide an improved Runway End Safety Area. These are essential to facilitate continued operation of the existing Plymouth/Newquay – London Gatwick service, and to enable other routes to be established. This should allow the City of Plymouth to continue to benefit from air connections to a number of domestic, and possibly international, business destinations using aircraft types that can use the airport's short runway, while final decisions on long-term solutions for air access serving Plymouth are being taken at a regional level.

## Newquay Airport

- 10.28** Newquay Airport's traffic has seen substantial recent growth following the start up of 'no-frills' services to Stansted. The airport has potential to attract new services catering principally but not exclusively for inbound tourism markets. These are likely to be of significant benefit to the Cornish economy. We therefore welcome the work which the Ministry of Defence, Cornwall County Council, Restormel Borough Council and the South West Regional Development Agency which will examine the potential for further commercial opportunities for Newquay Airport and St Mawgan.
- 10.29** If the airport fulfils its commercial potential, the existing terminal facilities are likely to need relocating to a larger site elsewhere on the airfield within the next ten years, depending on the extent to which incumbent airlines expand the frequency of services at times of peak demand. We support such development in principle, not least because of the economic benefits it could be expected to bring to an Objective 1 area, and the limited environmental impacts it would have. However, the exact timing of this development, its funding and the detailed proposals for the new facilities, will all need to be subject to approval at the regional and local level, as appropriate.

## Other South West airports

- 10.30** Filton and Gloucester Airports play an important local role in respect of business aviation, as do Land's End Aerodrome, Penzance Heliport, St Mary's Airport and Tresco Heliport in respect of lifeline air services to the Isles of Scilly. We fully support the continuation of these roles. PSO support for the Isles of Scilly services would need to be considered should this prove necessary.

### Other issues

- 10.31** South East airports will continue to play a significant role in serving the air travel needs of some parts of the South West. The quality of surface access links to those airports will therefore remain important. Strategic road access from the near South West is currently good, although increasingly affected by congestion on the approach to the airports concerned. As a result, any improvements to rail access to Heathrow and Gatwick, either directly or by improving interchange connections, would impact positively on travel times and the public transport mode share for air passengers travelling to and from the South West.
- 10.32** For other parts of the South West, however, particularly parts of Devon and Cornwall, the journey times involved in using surface transport mean that air travel will remain an important, and in some cases essential, alternative. In that respect, we recognise the importance of maintaining air services between London and the South West. We set out in Chapter 4 the arrangements to apply in considering any proposals for imposing Public Service Obligations to safeguard such services.



# 11





# The South East of England

## Key issues

- 11.1** In 2003 there were some 120 million journeys through South East airports out of a national total of around 200 million. More than half of the total UK demand that is forecast for 2030 is for airports in the South East of England. Demand is high principally because of the nature and strength of the economy within the South East, and in London in particular.
- 11.2** The pressures on existing capacity in the South East of England are already more severe than those in the rest of the country. At Heathrow, for many years now the demand for runway capacity has exceeded the available supply for virtually all hours of the day – and there are very stringent controls on the number of flights permitted at night. At Gatwick, demand exceeds supply for much of the day, especially in summer. At Stansted, there is no spare capacity in some peak hours, and demand is continuing to grow extremely rapidly. Only at Luton, and, to a lesser extent, at London City is there significant capacity available in peak hours.
- 11.3** At the same time, the South East is the most densely populated part of the United Kingdom. As a result, the pressures from competing land uses are greater, and the likelihood of airport growth impacting on people, and on protected land such as green belts, will often be greater. Airports are themselves a significant driver of economic growth, and their expansion needs to fit with the Government's wider policies for sustainable growth as reflected in the Communities Plan.<sup>1</sup>



<sup>1</sup> The Communities Plan ('Sustainable Communities: Building for the Future'), ODPM, 2003.

- 11.4** The issue of airport capacity in the South East is significant for the whole of the country. 80 per cent of air travellers using the main London airports are travelling to or from somewhere in the South East. But it was made very clear in responses to the consultation<sup>2</sup> that business and leisure travellers from all parts of the UK benefit from the range and frequency of international services from those airports.
- 11.5** In the consultation exercise, we put forward options for one or more new runways at each of Stansted, Heathrow and Gatwick as well as an option for a new airport at Cliffe. We also consulted on two options for development of Luton Airport. During the consultation promoters of alternative airport projects submitted proposals, including new offshore and coastal airports. We also sought views on the role of smaller South East airports. We have taken account of all the views expressed in reaching our conclusions on the provision of additional airport capacity in the South East, which are set out below.

## Main conclusions

- 11.6** Our first priority is to make the best possible use of the existing runways at the major South East airports.
- 11.7** Making best use of existing runways in the South East will provide some much-needed additional capacity. But on its own it would fall a long way short of providing a lasting solution. Facilitating the growth of airports in other regions will also reduce the pressure on the major South East airports, but this will not substantially reduce the long-term pressure on London airports.
- 11.8** Having considered all the information before us, we believe, on balance, that two new runways will be needed in the South East over the next three decades. It is clear that a first new runway is needed as soon as possible, although it would take up to a decade to put in place. Beyond that there are large uncertainties, which increase the further ahead we look, for the reasons set out in Chapter 2. But we believe that work has to start now on planning for a second new runway to be built probably around 2015–2020.
- 11.9** Each of the potential locations for additional runways identified in our consultation has significant environmental, practical and other constraints. We also recognise that, wherever we identify a need for another runway, this will cause concern, even if it might be fifteen to twenty years or more before such a runway is built.
- 11.10** Taking all these factors into account, including the longer-term uncertainties, we propose to take a balanced and measured approach, based on the principles set out in Chapter 2 and Chapter 3. We therefore intend to identify now where we believe the first new runway should be located, and to start to plan for a second new runway, including safeguarding the necessary land.

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<sup>2</sup> See Bibliography.

**11.11** In summary, our principal conclusions about new runway capacity in the South East are:

- we support making best use of the existing runway at Stansted and development to its full use of a single runway at Luton;
- we support the provision of two new runways in the South East in the thirty year period to 2030;
- we do not believe that there is a strong case for attempting to create a second hub airport in the South East;
- we support development as soon as possible (we expect around 2011/2012) of a wide-spaced second runway at Stansted, with strict environmental controls, as the first new runway to be built in the South East;
- we support development of Heathrow provided that stringent environmental limits can be met, including a new runway as soon as possible after the new runway at Stansted (our assessment is that there is a substantially better chance that the limits could be met in the 2015-2020 period);
- we propose an urgent programme of work and consultation to find solutions to the key environmental issues at Heathrow and to consider how we can make best use of the existing airport;
- we have concluded that we should not take action to overturn the 1979 planning agreement that prevented construction of a second runway at Gatwick before 2019;
- we believe that there is a strong case on its merits for a wide-spaced second runway at Gatwick after 2019 and that land should be safeguarded for such a runway, in case it becomes clear in due course that the conditions that we wish to attach to our support for the construction of a third Heathrow runway cannot be met;
- the policies set out above provide for the two new runways which are needed; we do not, therefore, support development of two or three additional runways at Stansted, or development of two new runways at Gatwick;
- we do not support the option of a new airport at Cliffe, or any of the proposals for alternative locations put forward during the consultation;
- we support, in principle, development of smaller airports in the South East to meet local demand subject to relevant environmental considerations; and
- we do not support development of Alconbury for passenger or freight services, but we recognise the potential for relocation there of aircraft maintenance operations from Cambridge Airport.

## A South East hub airport

- 11.12** We sought views from consultees about the value to the UK of having one or more major hub airports in the South East. This is an important prior consideration for any decision about the long-term provision of airport capacity.
- 11.13** Large airports are able to support a wider range of destinations and greater frequency of services than could be supported by local demand alone. Major airports attract passengers connecting from one flight to another and, because of this concentration, airlines can operate routes and frequencies that would not otherwise be viable. This is well illustrated at Heathrow, which has the highest number of international transfer passengers of any airport in the world.
- 11.14** At the same time, our assessment suggests that the greatest economic benefits are obtained by providing capacity in locations which are convenient for as much as possible of the total demand. That is better achieved by a more dispersed pattern of capacity than by concentrating all additional capacity at one location.
- 11.15** There is evidence to suggest that a combination of liberalised air markets, changing aircraft design and growing demand will increasingly mean that airlines will want, and be able, to fly point-to-point to a greater number of destinations. Demand in the South East will be strong enough to support more point-to-point services without the reliance on connecting traffic. However, some long-haul services will continue to be reliant on feed from connecting passengers. This suggests that long-haul airlines will continue to be attracted to major airports.
- 11.16** A South East hub can deliver substantial benefits to the whole of the UK, and most believe that Heathrow is the only candidate for that role. There is very little support for the concept of a second or alternative hub, which most felt was impractical and would carry high risks. Indeed, many airlines believe that an alternative South East hub would work only if Heathrow were to close.
- 11.17** We recognise the immense value to the UK of Heathrow's status as an international hub airport and we want to see that continue. However, we do not believe that there is a strong case for attempting to create a second hub airport in the South East, whether or not additional capacity is created at Heathrow.

## Cliffe

- 11.18** Early in the process leading up to this White Paper, the Government was urged by a range of interested parties to consider an option for a new airport as an alternative to incremental development of existing airports. Many believed that a new, purpose-built airport could provide the best long-term solution to the need for more airport capacity in the South East.
- 11.19** A detailed site search considered some 400 possible locations in the South East and other parts of the country, including some offshore. The site near Cliffe, on the Hoo Peninsula in Kent, emerged from this selection process as the leading candidate. In particular it offered enough land for large-scale development, the potential for good

transport connections to key markets in and around London, support for regional planning objectives in the Thames Gateway, and the potential for 24-hour operation (of particular value to freight operators), with relatively low numbers of people affected by noise.

- 11.20** The Government recognised in the consultation document that the potential benefits of developing a major new airport at Cliffe would need to be considered in the context of its significant impacts on important wildlife habitats. Moreover, the internationally important status of some of the habitats under European law mean that any potentially adverse effect would require the Government to demonstrate that it has considered all reasonable alternatives. In the light of the consultation, the Government is satisfied that there would be reasonable alternatives to Cliffe.
- 11.21** The Government has also taken careful note of the conclusions of the report by the Central Science Laboratory and British Trust for Ornithology, who were commissioned to address in more detail concerns that had been raised in the consultation paper about the potential safety risk from bird-strikes at this location and about the feasibility of effective mitigation.
- 11.22** Our analysis shows that in the right conditions, an airport at Cliffe could attract a substantial number of passengers and generate large economic benefits. However, it also showed that, because of high capital costs, the net benefits of Cliffe were lower than for any of the combinations of additional capacity at existing airports involving more than one new runway, including the four-runway option at Stansted.<sup>3</sup> The high up-front construction costs also presented a risk that the financial viability of the project would be threatened if demand proved to be less strong than forecast, or if airlines and passengers simply did not use the airport.
- 11.23** Taking all factors into consideration, the Government does not support the option of a new airport at Cliffe.

## Stansted Airport

- 11.24** Stansted has grown very rapidly in recent years, particularly in the leisure market. In 2003 it is expected to handle nearly 19 million passengers compared with just under seven million passengers in 1998. The airport has planning approval to cater for up to 25mppa, subject to an annual aircraft movement limit of 241,000. The airport is also currently subject to a passenger aircraft movement limit of 185,000 approved by Parliament in 1999 under section 32 of the Airports Act 1986. We believe that it is preferable for controls of this kind to be agreed locally and that there is no longer a good case for use of the statutory limit in respect of Stansted. We intend to ask Parliament to remove it. At current rates of growth, Stansted's runway capacity could be fully used within a few years. However, more terminal capacity would allow passenger numbers to continue to grow without additional runway capacity, up to about 35mppa.

<sup>3</sup> Unless otherwise stated, economic costs and benefits for options in the South East are those reported in Airport Development Options in the National Consultation Documents: New Green Book Revisions [www.dft.gov.uk/stellent/groups/dft.aviation/documents/page/dft\\_aviation.507467.pdf](http://www.dft.gov.uk/stellent/groups/dft.aviation/documents/page/dft_aviation.507467.pdf) February 2003. All benefits and costs calculated assuming a 3.5 per cent discount rate, 3 year benefit delay and cost optimisation bias.



**11.25** Development to provide that increase in terminal capacity would be limited to the current airport site. Daytime noise impacts would not be greatly worse as a result of an increase to 35mppa: forecasts suggest that the area within the 57dBA noise contour in 2015 with maximum use of the runway would be about 43 sq.km – the same as the contour limit set as a condition of the recent planning permission for development to 25mppa. However, the airport operator and the Strategic Rail Authority would need to consider the adequacy of existing and planned rail capacity to accommodate this level of growth.



**11.26** Because we expect there to be an increasingly severe shortage of runway capacity at the major South East airports over the remainder of this decade, making full use of the available capacity at Stansted will be essential to avoid stifling growth. Making full use of Stansted would generate large net economic benefits. We therefore support growth at Stansted to make full use of the existing runway and expect the airport operator to seek planning permission in good time to cater for demand as it arises.

**11.27** Turning to the option for a second runway at Stansted, this would provide a very substantial amount of additional capacity for London and the South East – up to 46mppa. We expect that there will be strong demand for this capacity, especially as there will be little runway capacity available at other major South East airports by the time that the new runway could open (around 2011/2012). Traffic would therefore grow rapidly, and the new runway would generate substantial net benefits to the national economy.<sup>4</sup> The space available for expansion means that the development of the airport could be phased in an efficient way such that terminals and stands could be added as and when needed.

**11.28** The Government believes the realisation of its regional and sub-regional growth objectives would be strongly complemented by expansion of Stansted. Regardless of decisions on airport capacity at Stansted, the sub-region is set to grow strongly, reflecting

<sup>4</sup> These were reported at over £5 billion. This is likely to be a significant underestimate because that calculation assumed some intervention in the market to direct airlines to Stansted so as to build up a hub there. However, it seems likely that natural traffic growth at Stansted will be strong enough to support development in line with market demand without such measures, and this will provide higher economic benefits – of the order of £9 billion.



employment-led growth in the service and high-technology economies of London, east Hertfordshire, west Essex and Cambridge. This is reflected in designation of the London-Stansted-Cambridge area as a Growth Area in the Communities Plan. Harlow, the Lower Lea Valley and East London are all identified as Priority Areas for Economic Regeneration in Regional Planning Guidance.

- 11.29** Stansted enjoys good transport connections by road and rail. The package of road schemes announced by the Government in July 2003 included several improvements that will support the airport's development, including the widening of the M25 and M11, and upgrading of the A120.
- 11.30** A key advantage of a new runway at Stansted would be that substantial additional capacity would be achieved with a lower noise impact – the number of people within the 57dBA noise contour would be less – than for other comparable options.
- 11.31** Nevertheless, Stansted will be a growing airport, and so the area within the 57dBA noise contour will increase. Estimates suggest the numbers affected would rise to around 8,000 by 2015 and 14,000 by 2030 (assuming no further improvements in aircraft noise performance after 2015) or maybe a little less in both cases. We believe that development of Stansted should therefore be subject to stringent limits on the area affected by aircraft noise, with the objective of incentivising airlines to introduce the quietest suitable aircraft as quickly as is reasonably practicable. The limits should look at least ten years ahead, and will need to be reviewed at intervals between now and 2030 to take account of emerging developments in aircraft noise performance.
- 11.32** We note suggestions by the airport operator in responding to the consultation, that runway operational controls might reduce impacts on the village of Takeley. We urge the operator to explore such possibilities thoroughly as they develop the design of the new runway, and seek to identify good environmental solutions for all communities affected by noise, including ground noise.
- 11.33** Chapter 3 sets out the mitigation arrangements that we wish to see introduced to address those noise impacts that will occur even with application of controls such as the affected area limits described above.
- 11.34** We do not expect that an additional runway would result in exceedences of EU limits on NO<sub>2</sub>. The consultation document suggested that in 2015, with the addition of one new runway, about 20 people might be affected by levels of NO<sub>2</sub> above EU limits. Subsequent work on modelling of NO<sub>2</sub> concentrations<sup>5</sup> suggests that, on the basis of a realistic range of mitigation measures to address airport-related emissions, it should be possible to manage local air quality impacts such that no exceedences of the EU limits for NO<sub>2</sub> occur. The NO<sub>x</sub> concentration limit for the protection of vegetation is not considered to be applicable around a developed Stansted. In bringing forward its proposals, the airport operator must incorporate mitigation measures necessary to ensure that concentrations of all relevant pollutants are kept within legal limits.

<sup>5</sup> This is described in more detail in the next section, on Heathrow Airport.

**11.35** Some respondents to the consultation were concerned that development of Stansted could lead to urbanisation of the wider area that would fundamentally alter its largely rural character, and could give rise to serious environmental pressures. The Government continues to recognise these concerns.<sup>6</sup> The area around Stansted has an attractive, varied landscape, with many villages and smaller settlements, including much valuable architectural heritage. We believe that these characteristics should be preserved as much as possible, but at the same time it is important to consider the potential growth of the airport and its associated development within the wider planning context.



**11.36** The Government's objective is to ensure that in this wider context the London – Stansted – Cambridge Growth Area makes a strong contribution to the Communities Plan objective of substantial additional growth to relieve pressures both local and in the wider South East but to do this sustainably. This means growth which maximises the potential for high quality urban development, respects qualities of place and character and maintains good public and private services. Also important to this wider growth objective will be the need to encourage growth in the north of the South East region and build stronger links between the Midlands and the South East.

**11.37** Provision for surface transport infrastructure to support a new runway at Stansted will need to be developed in conjunction with emerging proposals for the Growth Area to serve not only links to London but also to the North and the East Midlands in particular. Growth at and around Stansted from airport and wider regional development will place pressure on strategic and local surface transport infrastructure. The package of road schemes announced by the Government in July 2003 included several improvements that will support the airport's development, including the widening of the M25 and M11, and upgrading of the A120. Work to date suggests that the following are likely to require further consideration in the context of a new runway:

- increased capacity on the West Anglia Main Line, including platform lengthening and additional tracks on key sections;

<sup>6</sup> See paragraph 5.36 of the Airports Policy White Paper 1985 (Cm 9542).

- peak capacity at Liverpool Street and Tottenham Hale;
- increased capacity on the M11 between the M25 and the airport; and
- enhanced local access (both road and public transport) to serve the needs of airport employees and the wider community in the Stansted area.

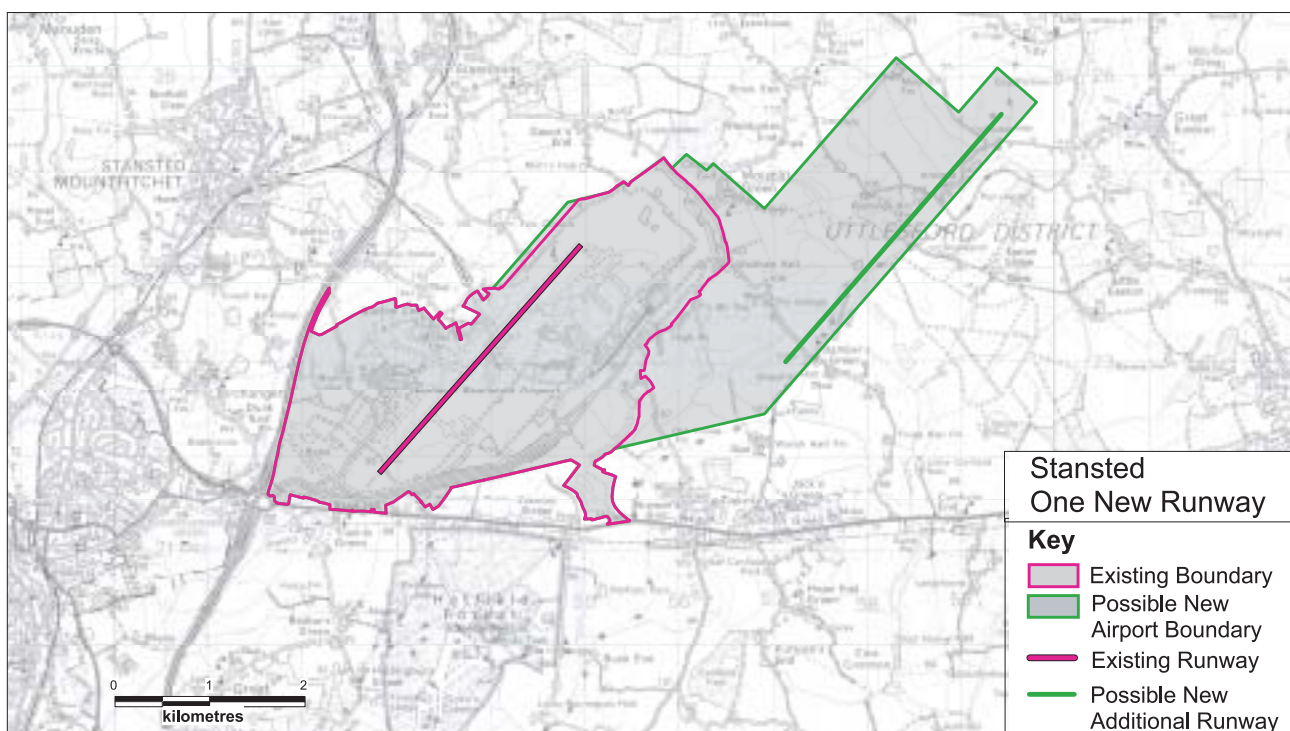
**11.38** All these surface access requirements will need thorough environmental assessment.

**11.39** The option for a new runway at Stansted would require substantial land take and the loss of around 100 properties. The loss of two Scheduled Ancient Monuments and 29 Grade II listed buildings was a cause of particular concern in the consultation. The precise land boundary of a proposed development of Stansted will be a matter for the airport operator in the first instance in developing a detailed design for planning approval. However, the Government would wish the operator to consider positively how any listed buildings that would be affected might be relocated.

**11.40** On balance, taking into account all relevant factors, and in the light of the responses to consultation, the Government now supports the development of a second runway at Stansted as the first new runway to be built in the South East. We expect it could be completed by around 2011 or 2012. The new runway would be the wide-spaced runway option presented in the consultation document, as shown on the map below.

**11.41** The airport operator will need to put in place a scheme to address the problem of generalised blight resulting from the runway proposal (see paragraphs 12.13 to 12.17).

*It must be stressed that this map is only indicative, pending detailed design work and the submission of a planning application by the operator. The map should not therefore be taken to be a formal safeguarding map.*



## TAKING FORWARD DEVELOPMENT AT STANSTED

The East of England Regional Assembly is currently finalising its draft Regional Planning Guidance (RPG) which will set out the development strategy for the region to 2021. It is doing so on the assumption that Stansted will expand to the capacity of the existing runway. Planning for a second runway at Stansted will require more detailed consideration of airport development and transport issues, beyond what will be possible in RPG 14. This may require a limited review of the RPG. The Government supports the view that development of a second runway should be done in a way that respects the character of the countryside around Stansted.

The Government will not promote or pay for the development of Stansted. New airport capacity should be paid for by airport users. We look to the airport operator to take it forward in a way that is responsive to users, and to provide necessary funding. It is a responsibility of the regulator, the CAA, amongst its statutory duties, to encourage timely investment. The Government expects both parties, regulator and airport operator, to secure an appropriate framework to bring the development to fruition. It expects this process to be guided by the decisions in this White Paper, as well as by the regulator's duties towards users of airports, towards the operation of airports, and towards investment in new facilities at airports.

The Government will work with the airport operator, the SRA, and a range of regional and local partners in taking forward work urgently to identify robust and affordable surface transport solutions that would support growth of the airport and across the region. The airport operator will be expected to contribute to the costs of rail and road improvements to the extent that these are required to cater for airport-related traffic. Their contribution is likely to be substantial, in particular for provision of increased rail capacity.

- 11.42** The consultation also considered an option for two new runways at Stansted. The proposal for a third (close parallel) runway at Stansted would increase the airport's ultimate capacity to just over 100mppa.
- 11.43** Adding two new runways at Stansted runway found little support. The economic benefits reported in the consultation document were the lowest of all combinations of two new runways. Our analysis shows that greater economic benefits are generated by a more dispersed pattern of new capacity rather than by concentrating all additional capacity at one location.
- 11.44** Some 10,000 more people would live within the 57dBA noise contour in 2030 with the addition of a third runway, and around 20 more Grade II listed buildings would be lost. This option would also place further pressure on road and rail networks which would be likely to require substantial further investment, particularly for rail.

- 11.45** On balance, taking all factors into consideration, we believe that the case for a third runway at Stansted compares unfavourably with the case for an additional new runway at either Heathrow or Gatwick. The Government does not therefore support this option.
- 11.46** An option was also put forward for three new runways at Stansted. Around 4,000 more people would live within the 57dBA noise contour and fourteen more Grade II listed buildings would be lost. The Strategic Rail Authority cannot at this stage identify a robust scheme to meet the rail access needs of an airport of that size. The net economic benefits of this option are only marginally greater than a combination of one new runway at each of Stansted and Heathrow. The Government does not therefore support this option.

## Heathrow Airport

- 11.47** The South East consultation document recognised the central role that Heathrow has played in the UK's aviation industry for several decades. For many people around the world, Heathrow is 'London airport', a long-established and widely recognised global brand. But it is much more than just an airport for London. Travellers from all over the UK rely on access to Heathrow's global route network. It is the prime business airport for London and the South East, and this will almost certainly continue to be the case; indeed, it is probable that services at Heathrow will increasingly be focused on routes (both international and domestic) which are important for business travellers. And Heathrow's excellent connections to the rest of the world have been a significant factor in attracting foreign investment.
- 11.48** The demand for Heathrow is extremely strong, and always likely to be far in excess of its capacity. London has perhaps the strongest local catchment area for international air travel in the world. The demand is particularly high in businesses in the finance and business services sector, which are reliant on global markets and good international communication. A significant part of forecast economic growth in London is in those industries. Heathrow Airport is also a prime driver of the economy of West London and the Thames Valley.
- 11.49** Heathrow's unique role within the UK as a major hub airport is discussed in paragraphs 11.12-11.17 above. It competes in this role primarily with the major continental airports of Northern Europe, such as those at Amsterdam, Frankfurt and Paris. And in doing so it helps London and the South East compete for business investment and economic growth with those cities and their surrounding regions. This in turn produces economic benefits – direct and indirect – for the rest of the UK. The airport directly or indirectly supports nearly 100,000 jobs.
- 11.50** Additional capacity at Heathrow would generate the largest direct net economic benefits of any new runway option.<sup>7</sup> And although not easy to quantify with certainty, there is little dispute that the range and frequency of Heathrow services bring wider benefits to the national economy. It appears to be generally accepted that without

<sup>7</sup> The net benefits were reported as over £6 billion, but could be higher if greater throughput could be achieved with a third runway than originally assumed.





additional capacity, Heathrow's route network will tend to shrink over time, most likely to the advantage of other continental hub airports.

- 11.51** The Government believes there is a strong case for seeking to secure the large economic benefits achievable through the addition of a third runway at Heathrow. At the same time, however, we recognise that these strong economic arguments must be weighed against the serious environmental disadvantages of Heathrow.

- 11.52** Daytime noise impacts at Heathrow are many times worse than at any other airport in the UK, despite significant improvements in the noise climate over many years. The Government's policy – reaffirmed in the consultation document – is to take all practicable steps to prevent any deterioration in the noise climate at Heathrow, and to continue to do everything practicable to improve it over time.



- 11.53** We believe that development of Heathrow should be subject to a stringent limit on the area significantly affected by aircraft noise, with the objective of incentivising airlines to introduce the quietest suitable aircraft as quickly as is reasonably practicable. The limit will need to be reviewed at intervals to take account of emerging developments in aircraft noise performance. Specifically for Heathrow, we propose that any further development could only be considered on the basis that it resulted in no net increase in the total area of the 57dBA noise contour compared with summer 2002, a contour area of 127 sq.km.



- 11.54** The most difficult issue confronting expansion of Heathrow concerns compliance with the mandatory air quality limit values for NO<sub>2</sub> that will apply from 2010 (as set down in EU Directive 1999/30/EC), and in particular the annual mean limit of 40 µg/m<sup>3</sup>. The consultation document (para 16.30) said:

‘...another runway at Heathrow could not be considered unless the Government could be confident that levels of all relevant pollutants could be consistently contained within EU limits.’





Heathrow Terminal 5 (under construction)

- 11.55** In the light of responses to the consultation, including some detailed work commissioned by the airport operator, substantial further analysis and sensitivity testing was done for the Department for Transport to review the appraisal methodology used in the original study, and to explore in greater detail what scale of response would be needed to reduce emissions from aviation as well as from other sources, principally road traffic, which are responsible for a substantial proportion of the emissions.<sup>8</sup>
- 11.56** A range of possible measures to tackle emissions from aviation sources was examined. These included improvements from airport operations (for example a cleaner airside vehicle fleet, greater use of fixed electrical ground power and more efficient taxiing of aircraft) and economic incentives in relation to aircraft emissions that would put pressure on airlines and manufacturers to deliver technology improvements quickly. The study also assumed that traffic management measures including airport road charging would be introduced to reduce emissions from airport-related road journeys, as well as to tackle congestion on the surrounding motorway network. It also assumed a slow build-up of the use of the new runway in order to reduce total emissions in the early years of the additional capacity.
- 11.57** The Government recognises that there is some uncertainty in the techniques available for estimating future concentrations of pollutants. Even with full implementation of this package of tough measures, and making aggressive assumptions about future developments in aircraft and motor vehicle technology, the evidence of our further work suggests that substantial areas around Heathrow, containing the homes of many hundreds or thousands of people, would be subject to exceedences of the mandatory air quality limit value. Such exceedences would not be acceptable, and would be against the law. However, our overall assessment is that, within the 2015–2020 timescale, there would be a substantially better prospect of avoiding exceedences, in particular because it would allow more time to develop improved technologies, for both aircraft and road vehicles, to tighten standards, and to achieve widespread use of the improved technologies in road and aircraft fleets.

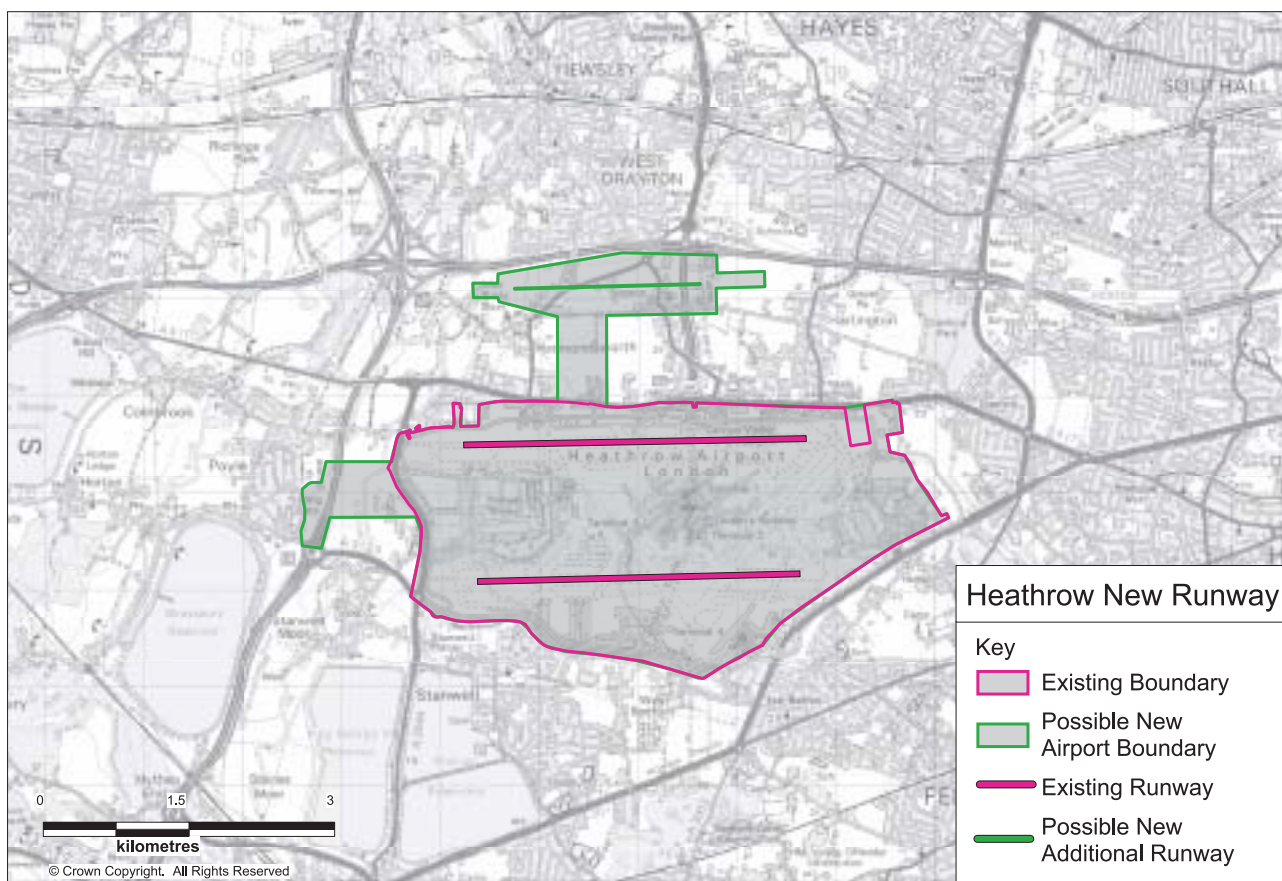
<sup>8</sup> A report of this further technical work will be made available at the same time as this White Paper.

- 11.58** Further expansion of Heathrow will place pressure on already congested road and rail networks. The Government has no plans for further motorway widening in this area beyond that which we announced in July 2003. The solution will need to be based on improvements to public transport, which is likely to require the airport operator spending several hundred million pounds on new rail infrastructure. The prospects for the introduction of some form of road user charging, either by means of charges to enter the airport or pricing across a wider area, should also be considered. The Government has already established a feasibility study to advise on practical options for a new system of road charging in the UK, which is expected to report in Summer 2004.
- 11.59** We have noted concerns expressed by the South East England Regional Assembly and the Mayor of London about the additional pressure that development of a third runway could put on labour markets and the increase in housing requirement. We believe that these effects would probably be less severe if additional capacity were introduced later and more gradually than was assumed in the consultation document.
- 11.60** Heathrow is in the Green Belt and that will have implications for its further development (see **Green Belt** in Chapter 12).
- 11.61** The Government recognises the economic strength of Heathrow and the direct and wider benefits to the national economy that will be lost if additional capacity cannot be provided there for many years, or at all. At the same time, on the basis of the evidence available, we cannot be confident that air quality limits at Heathrow with the addition of a third runway will be met, even with aggressive mitigation measures.
- 11.62** The Government supports a third runway, which would bring substantial benefits for this country, at Heathrow, once we can be confident that the key condition relating to compliance with air quality limits can be met. We judge that there is a substantially better prospect of achieving this with a third runway and terminal capacity built in the 2015–2020 period, as long as we take action without delay to tackle the NO<sub>2</sub> problem. The Government's support would also be conditional on measures to prevent deterioration of the noise climate and improve public transport access as set out above.
- 11.63** We will therefore institute immediately, with the airport operator and relevant bodies and agencies, a programme of action to consider how these conditions can be met in such a way as to make the most of Heathrow's two existing runways and to enable the addition of a third runway as soon as practicable after a new runway at Stansted.
- 11.64** Compliance with air quality limits for NO<sub>2</sub> will require a concerted effort by the airport operator and the aviation industry to identify ways of reducing emissions from aircraft, from other airport activity, and from airport-related road traffic. They will need to take account of the scope to increase the use of public transport and manage the demand for road access. The Government will examine the contribution from vehicular traffic on the surrounding road network.

- 11.65** The airport operator argued in its consultation response that the full potential of a third runway could not be realised without a sixth terminal to the north of the A4. They suggested four possible options for new facilities. In all cases more land would be needed than allowed for in the consultation option, which assumed that terminal capacity would be provided within the airport boundary. In principle, we recognise the force of these arguments and suggest that the operator should carry out further work on proposals for terminal capacity and an appraisal of the impacts, on the basis of which a further consultation would be required.
- 11.66** Our current assessment is that a new runway at Heathrow could not come into operation before some time in the period 2015-2020. It is important, therefore, to consider the scope for greater utilisation of the two existing runways. For example, mixed mode operation in peak hours might be introduced, while retaining runway alternation for the rest of the time. The impacts and benefits of any such proposal would have to be studied in detail, and there would need to be a full public consultation. We expect the airport operator, working with the Civil Aviation Authority, National Air Traffic Services and the Government, to develop proposals to form the basis of such a consultation. The proposals will need to take account of air quality and noise implications, including review of existing procedures such as westerly preference and the 'Cranford Agreement', as previously indicated in the decision on the Heathrow Fifth Terminal.
- 11.67** We look to the airport operator to take steps to safeguard the land needed for the option for a third runway at Heathrow. We welcome the amendments suggested by the operator<sup>9</sup> to the layout for a third runway that would reduce impacts on Harmondsworth. The map below reproduces that shown in the consultation document, but has been revised to take account of those proposals by the airport operator.
- 11.68** The airport operator will need to put in place a scheme to address the problem of generated blight resulting from the runway proposal (see paragraphs 12.13 to 12.17).

<sup>9</sup> These were set out in the first bullet of paragraph 5.18 of the airport operator's consultation response, *Responsible growth*: essentially, moving the runway 100 metres to the east and a revised runway and taxiway layout.

*It must be stressed that this map is only indicative, pending detailed design work and the submission of a planning application by the operator. The map should not therefore be taken to be a formal safeguarding map.*



## Gatwick Airport

- 11.69** There are three principal issues to consider in respect of Gatwick: first, whether the Government should seek to overturn the 1979 agreement between West Sussex County Council and the British Airports Authority (now BAA plc) which prevented construction of a second runway at Gatwick airport before 2019; second, whether (in either case) to support or retain options for one or more runways to be built at Gatwick; and third, if so, which option to provide for.
- 11.70** On the first issue, the Government's position on the 1979 agreement remains that it is highly undesirable as a matter of policy and principle to seek to overturn that agreement because (1) people should be able to continue to rely on agreements of this kind; (2) to overturn it would seriously undermine efforts to create greater certainty, thus creating unnecessary blight and anxiety and (3) it remains the case that West Sussex County Council and others are opposed to the overturning of it. All of these reasons are elaborated in the judgement in November 2002 in the case brought by Medway and others. We considered that it would be appropriate to seek to overturn the agreement only if there was demonstrably no alternative way forward.



**11.71** The Government has considered this issue, taking account of all the factors relevant to Gatwick and the agreement, and in the light of responses to the consultation. We believe that there clearly is an alternative way forward. We have concluded that the case for a runway at Gatwick is not as strong as for the options at Stansted and (subject to meeting the critical conditions) Heathrow. We have therefore concluded that we should not take action to overturn the 1979 agreement.

**11.72** Taking the second and third issues together, the second edition of the consultation document set out two options for a new runway at Gatwick: a close parallel or a wide-spaced runway. The close parallel runway would provide additional capacity of about 20mppa, the wide-spaced option about 40mppa (taking the airport to a total of about 62mppa and 83mppa respectively).

**11.73** Forecasts show that additional capacity at Gatwick would be very attractive to travellers. The option for a wide-spaced runway at Gatwick would generate around double the economic benefits of the close parallel option.<sup>10</sup>

**11.74** The close parallel option would increase the number of people within the 57dBA noise contour in 2030 by around 3,000, and the wide space option by around 15,000. We therefore believe that any development of a second runway at Gatwick would need to be subject to stringent limits on the area affected by aircraft noise, with the objective of incentivising airlines to introduce the quietest suitable aircraft as quickly as is reasonably practicable. The limits should look at least ten years ahead, and would need to be reviewed at intervals to take account of emerging developments in aircraft noise performance.

**11.75** The Government's further analysis of local air quality, described in the section on Heathrow airport, considered the impacts in 2030 of the two options for one new runway at Gatwick if they were to come into operation in the early 2020s. Our analysis shows that, on the basis of a realistic range of mitigation measures similar to those that might be applied at



<sup>10</sup> Estimates suggest £4.4 billion for the wide-spaced option, and about £2 billion for the close parallel option.

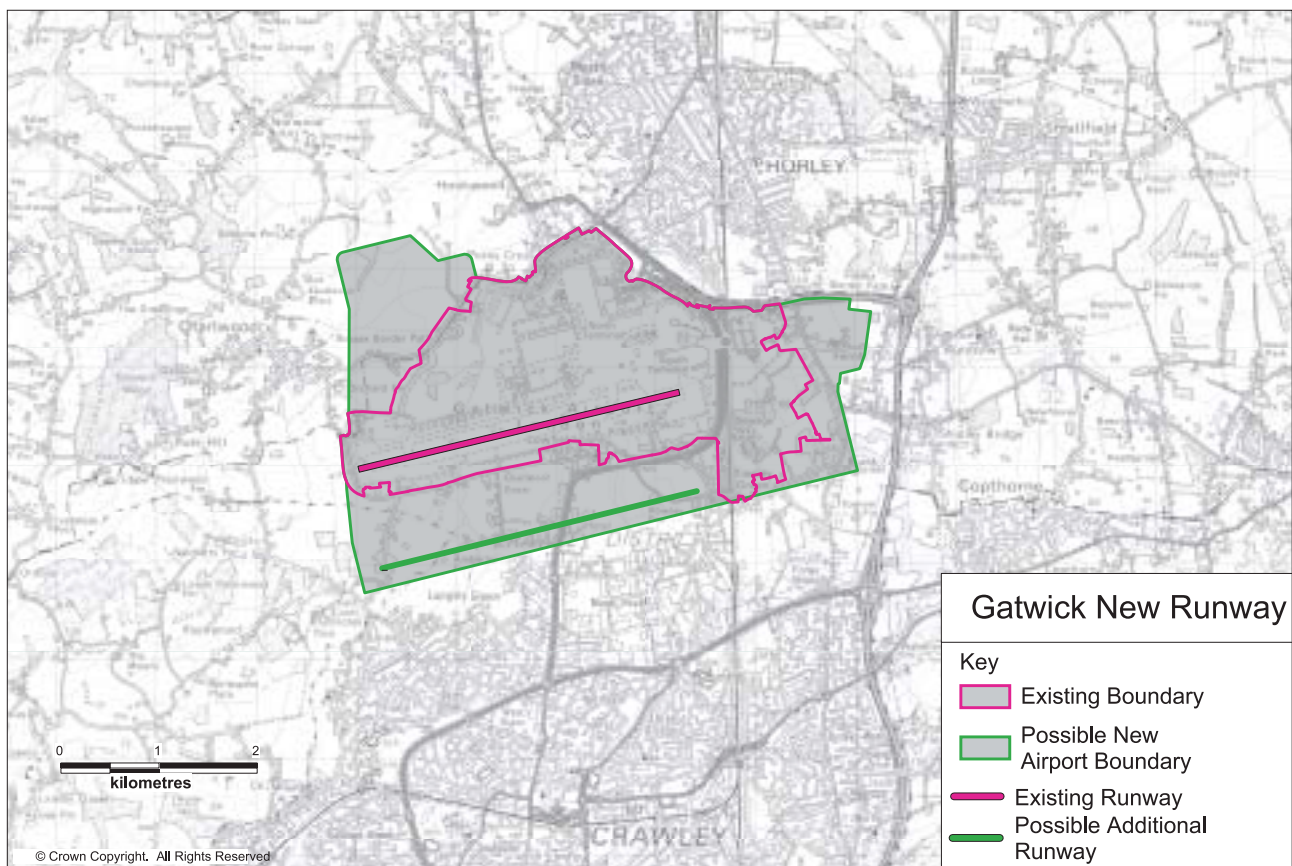
Heathrow, around 50 people might be exposed to concentrations of NO<sub>2</sub> that would exceed EU limits with the close parallel option, and around 230 people with the wide-spaced option. We believe that appropriate action by the airport operator and the aviation industry could ensure that concentrations of all relevant pollutants could be kept within legal limits.

- 11.76** Seven Grade II or Grade II\* listed buildings would be lost with a close parallel runway, and seventeen with the wide-spaced Gatwick option. 50 residential properties would be lost as a result of the close parallel option, compared to more than 300 with the wide-spaced option (although the airport operator has suggested that there might be no need to take land in Povey Cross and Hookwood, which might in fact mean that less than 200 properties would be lost).
- 11.77** Gatwick is in Green Belt and that will have implications for its further development (see **Green Belt** in Chapter 12).
- 11.78** The airport operator expressed the view in their response that the close parallel option put forward in the consultation might not be capable of delivering the additional capacity that had been assumed. The Civil Aviation Authority expressed similar views. We are not able to reach a concluded view on the merits of any of the alternative options put forward by the airport operator, but we recognise that further work on this issue would be needed before a viable proposal for a new close parallel runway could be delivered.
- 11.79** On balance, we believe that there is a stronger case for the wide-spaced runway option (after 2019) at Gatwick.
- 11.80** As explained above, we cannot be certain at this stage when, or whether, the conditions attached to development of a third runway at Heathrow might be met, particularly in relation to air quality. We are also mindful of the uncertainties surrounding longer-term demand forecasts described in Chapter 2. The Government believes that it is sensible for the time being to retain and provide for a suitable alternative option, should this prove necessary. Taking all relevant factors into account, including the strong economic case for additional capacity at Gatwick, we therefore propose to keep open the option for a wide-spaced runway at Gatwick after 2019.
- 11.81** We look to the airport operator to take steps to safeguard the land needed for the wide-spaced option at Gatwick. The map below reproduces that shown in the consultation document, except that the indicative airport boundary to the north of the airport has been redrawn to avoid Hookwood and Povey Cross, in line with the suggestion by the airport operator.
- 11.82** The airport operator will need to put in place a scheme to address the problem of generalised blight resulting from the runway proposal (see paragraphs 12.13 to 12.17).
- 11.83** A further option, for two new runways at Gatwick, was also considered. The option would generate higher economic benefits than all other two runway options, other



than the combination of Heathrow and Stansted. However, the Strategic Rail Authority and the Highways Agency have identified difficult road and rail access problems for this option. Over 400 properties would be lost. A further 8,000 people would live within the 57dBA noise contour with the addition of a second new runway – around 30,000 in total by 2030. There would need to be very extensive and intrusive earthworks to accommodate the northern runway. There was very little support for this option, and the Government too does not support it.

*It must be stressed that this map is only indicative, pending detailed design work and the submission of a planning application by the operator. The map should not therefore be taken to be a formal safeguarding map.*



## London Luton Airport

**11.84** Luton currently handles about seven million passengers per annum, and is growing steadily towards its current planning limit of 10mppa. Forecasts suggest that there would be sufficient demand to justify expansion of Luton to the full potential of a single runway – say about 30mppa and 240,000 ATMs – in the period up to 2030, even with two new runways at other South East airports.

**11.85** Luton/Dunstable is identified in Regional Planning Guidance as a Priority Area for Economic Regeneration and, along with Bedford, is designated as a Growth Area in the Communities Plan. The continued expansion of Luton Airport has the potential to play a key role in delivering employment-led growth in this area.

**11.86** The M1 is the principal access road for traffic to and from Luton airport. Improvements to the M1 and M25 and provision of bypasses for Dunstable and Luton were announced in July 2003. Growth of the airport could contribute to pressures on the road network beyond 2015, depending on the rate of build up. The Strategic Rail Authority's view is that, with improvements to links from the airport to Luton Airport Parkway station, for example through a new tracked transit system, the rail capacity enhancement projects underway or planned for Thameslink and Midland Main Line should be sufficient to support expansion to maximum use of one runway.

**11.87** The consultation document included two options for a replacement runway at Luton. One of these involved moving the runway to a NNE-SSW alignment and extending it. The other option that was put forward was for a replacement full-length runway to the south of the existing runway and on the same alignment, with the latter to be used as a taxiway. There would be no advantage in a realigned runway in terms of economic benefits, and the environmental impacts would be similar to a runway on the existing orientation except that the total number of people within the 57dBA noise contour in 2030 is estimated to be lower (14,000 rather than 19,000). There appears to be no disagreement with the conclusions of the Civil Aviation Authority and National Air Traffic Services that the realignment of the Luton runway would require major changes in airspace for very little overall gain in capacity. On balance there does not appear to be a compelling argument for this option and we do not support it.

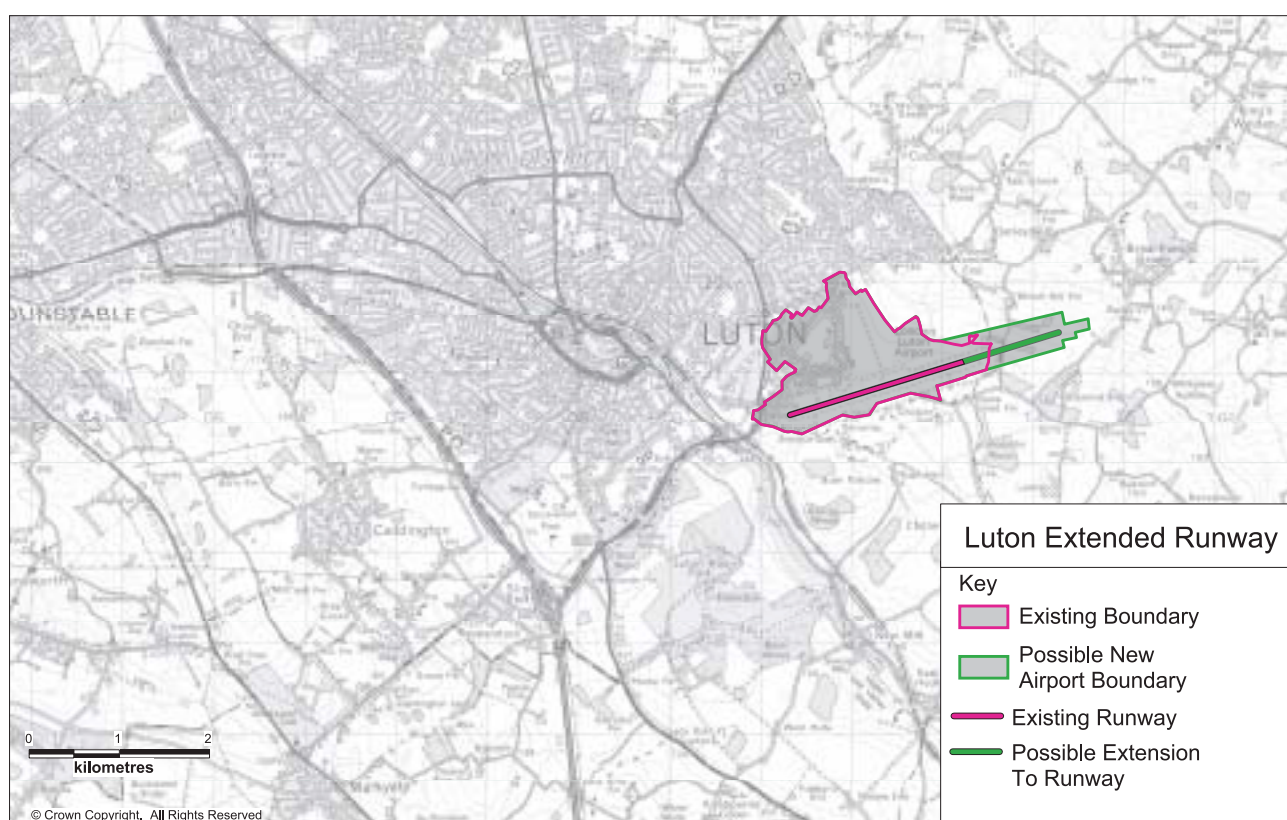
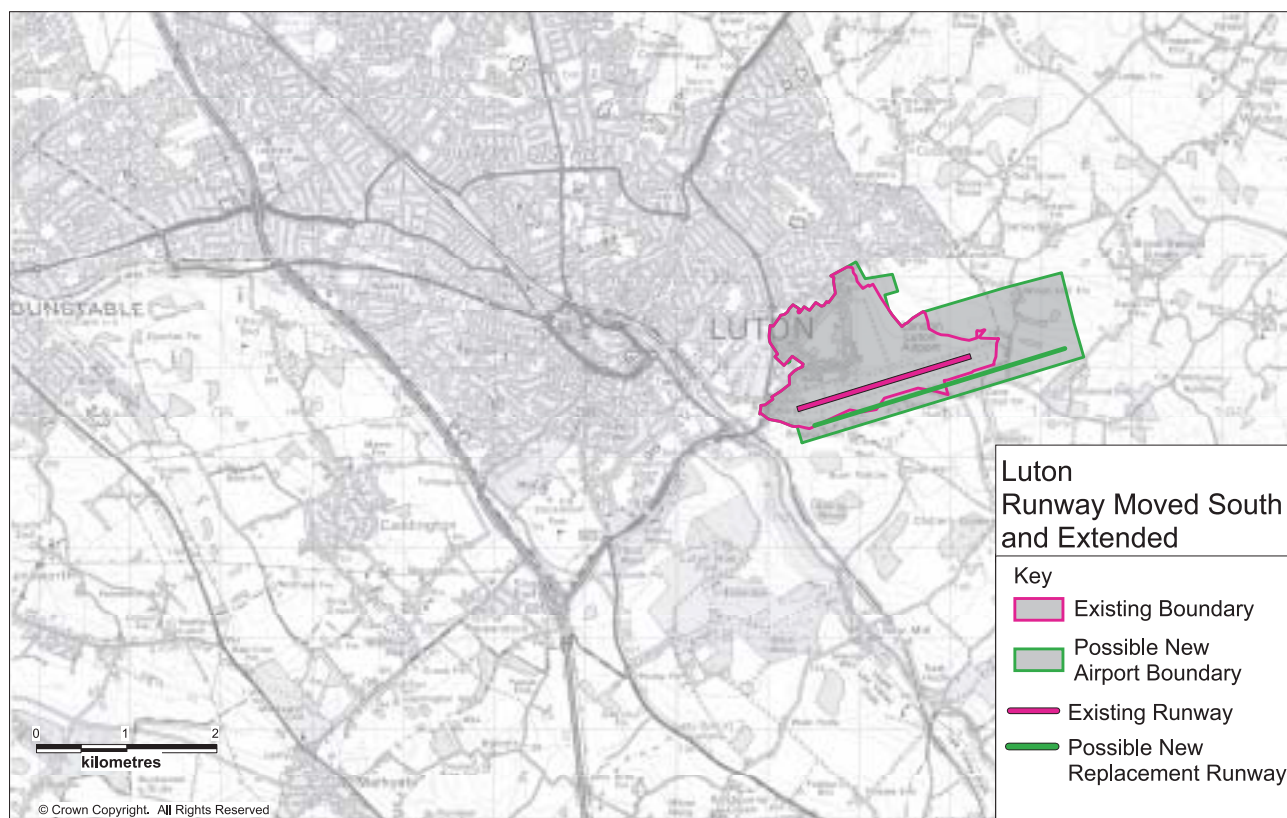


**11.88** There is a stronger case for the southern replacement runway option. The airport operator does not favour that option and proposes instead to lengthen the existing runway and taxiway. The second edition of the South East consultation document acknowledged the possibility of such an alternative.

- 11.89** The Government supports the growth of Luton up to the maximum use of a single full-length runway based broadly on the current alignment, on condition that the overall environmental impacts of such development will be carefully controlled and adequate mitigation provided. We believe that growth should be subject to stringent limits on the area affected by aircraft noise, with the objective of incentivising airlines to introduce the quietest suitable aircraft as quickly as is reasonably practicable. The limits should look at least ten years ahead, and will need to be reviewed at intervals between now and 2030 to take account of emerging developments in aircraft noise performance. We note that the airport operator's proposed single-runway solution may be a more cost-effective approach than the consultation option, and that less land outside the current boundary might be required.
- 11.90** The two maps below reproduce that shown in the consultation document for the option of a replacement runway to the south of the existing runway as well as the airport operator's alternative proposal.
- 11.91** The airport operator will need to put in place a scheme to address the problem of generalised blight resulting from the runway proposal (see paragraphs 12.13 to 12.17).
- 11.92** The airport operator also included in its consultation response a proposal for a second, close parallel runway at Luton that would provide a total capacity of about 62mppa. Our analysis suggests that the proposed second runway at Luton would attract fewer passengers and generate lower economic benefits than the equivalent-size (close parallel) option at Gatwick. We also believe that a second runway at Luton would be unlikely to come to fruition for many years, given the remaining spare capacity on the existing runway. It is uncertain at this stage how much additional transport infrastructure might be needed to support a second runway at Luton, but our judgement is that it could be extensive. We accept the airport operator's assessment that the noise impacts of the second runway might be smaller than for similar scale options in the consultation. On balance, we do not support a second runway at Luton.

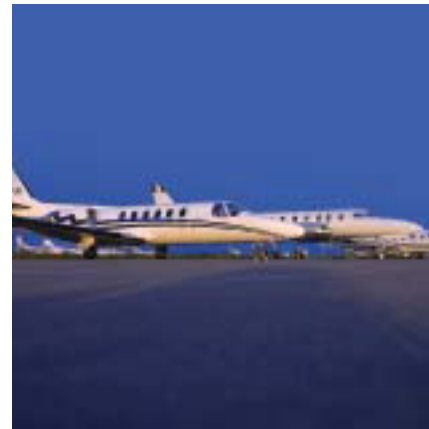


*It must be stressed that these maps are only indicative, pending detailed design work and the submission of a planning application by the operator. They should not therefore be taken to be formal safeguarding maps.*



## Smaller South East airports

- 11.93** Small airports have an important part to play in the future provision of airport capacity in the South East. Their ability to provide services to meet local demand, and thereby help relieve pressures on the main airports, will be particularly important in the period before a new runway in the South East is built.
- 11.94** There is support from a wide range of stakeholders that the small airports in the South East should be allowed to cater for as much demand as they can attract. And from the studies undertaken for the White Paper and the responses to the consultation, it appears that some further development could be possible at any of the smaller airports that have been assessed without insurmountable environmental constraints.
- 11.95** To help the small airports in the South East achieve their development aims, regional and local planning frameworks should take account of the benefits that development at the smaller airports could provide, and consider policies which facilitate the delivery of growth at these airports. The specific details of development at any airport should remain a matter of local determination through the planning system.
- 11.96** *London City* provides services within the UK as well as to a wide range of key European destinations such as Paris, Amsterdam and Zurich. Our forecasts show that the airport is likely to grow steadily and that this growth would not be significantly affected by the addition of runway capacity at the major London airports. It is particularly well placed to serve a niche business market. Several of the surrounding local authorities supported growth to 5mppa. The airport operator believes that with some further development a higher throughput could be achieved.
- 11.97** There was recognition in the consultation of the valuable role of *Southampton* as a regional airport and support for some growth to allow it to cater for local demand. Currently, Southampton services continental hubs and a range of other destinations. The airport operator doubts that the airport could reach the capacity of 7mppa suggested in the consultation



document and believes that, within its current boundary, the airport would more likely grow to a capacity of 2 to 2.5mppa. *Norwich* provides domestic and European short-haul services and offers the potential to interline to long haul destinations through a continental hub. Again, we believe that there is scope for the airport to grow to satisfy local demand.

- 11.98** The operators of *Southend*, *Lydd* and *Manston* argue that their airports could grow substantially and each has plans for development. The potential of other airports, including, *Shoreham*, and *Biggin Hill*, should also not be overlooked.
- 11.99** We consider that all these airports could play a valuable role in meeting local demand and could contribute to regional economic development. In principle, we would support their development, subject to relevant environmental considerations.
- 11.100** The future role of *Cambridge* airport was considered. However, the local planning authority has adopted a policy for housing development on this site and this has serious implications for the future of the aircraft maintenance operation based at the airport. This issue is addressed below in the section on *Alconbury*.
- 11.101** The ability of business aviation to gain access to the main airports in South East will continue to be problematic as capacity constraints cause airports to focus on more valuable commercial traffic. The Government recognises the important contribution made by small airports in the South East in providing capacity for business aviation. We support the adoption of policies which encourage the continued provision of these services. We sought views in the consultation on six existing business aviation aerodromes which we felt had potential to provide additional capacity to cater for business aviation demand: *Farnborough*, *Biggin Hill*, *Blackbushe*, *Fairoaks*, *Farnborough*, *Northolt* and *Southend*. There was a relatively limited, but generally, positive, response, although a number of local residents and others expressed concern about development of *Biggin Hill*.
- 11.102** *Northolt* is a 'core site' within the Ministry of Defence's future estates plan. Planning is well advanced to release several MOD London sites by moving other units to *Northolt*. It is the closest active military airfield to London and is of strategic importance. Alternative facilities could not be easily replicated elsewhere without significant adverse impacts on Government business. We do not believe that military flying from *Northolt* would be precluded by a third runway at *Heathrow*, although there would be some loss of flexibility at both airports. We considered options for development of *Northolt* as a satellite runway of *Heathrow* but these were rejected in favour of other development options.
- 11.103** Our studies suggested that *North Weald* and *White Waltham* might offer potential capacity in the longer term for business aviation. Future use of *North Weald* is being considered by the local planning authority, but it likely to be severely affected by our decision to support a new runway at *Stansted*.



## Alconbury

- 11.104** We consulted on an option to develop Alconbury airfield into a niche airport providing freight, maintenance and low cost passenger services. This option was on a much smaller scale than the other development options in the South East.
- 11.105** The concept of Alconbury as a specialist freight facility attracted little support, especially from within the industry. The East of England Development Agency and the East of England Regional Assembly did, however, support Alconbury's development as an aircraft maintenance facility in view of the potential loss of Cambridge Airport as a base for aircraft maintenance. The Government recognises the value of the current operation there to UK aviation and the importance of not losing the highly skilled workforce. This should not, however, affect consideration of options for relocation to Alconbury or other possible locations.

## Alternative proposals

- 11.106** In the second edition of the consultation document and elsewhere the Government made clear it was open to, and would consider, any serious and worked-up alternative ideas. The following proposals were considered:
- *Goodwin Sands* – a new island airport east of Deal in Kent comprising two sites, each with two runways, with a total capacity of 120mppa.
  - *London Oxford* – a new four-runway airport near Abingdon in Oxfordshire, with a capacity of 120mppa.
  - *Marinair* – a new four-runway island airport in the Thames Estuary north east of the Isle of Sheppey.
  - *Redhill* – development of Redhill aerodrome into an airport capable of handling 15mppa.
  - *Sheppey* – a new two-runway airport on the Isle of Sheppey in Kent with a capacity of 75mppa and the potential to grow to four runways beyond 2030.
  - *Thames Reach* – a new four-runway airport on the Hoo Peninsula in Kent (close to the Cliffe option), with a potential capacity of 120mppa.
- 11.107** In each case, our assessment took account of the promoter's own submission and any further information that was required to ensure a reasonable level of consistency with appraisal of the Government's own options. Our appraisal focused on the forecast passenger demand, an assessment of costs and benefits (including costs of airport construction and provision of necessary road and rail infrastructure), environmental impacts, and any other issues that were considered likely to be significant at a given location.
- 11.108** In reaching a view on the merits of these alternative proposals compared with options in the consultation, our assessment was informed by two other broad considerations. The balanced and measured approach we have taken to decisions about airport

capacity summarised in Chapter 2 includes minimising the need for airport development in new locations by making best use of existing capacity where possible. Also, it was evident from responses to the consultation that development of a major new airport – especially as an alternative or second South East hub – would very probably be viable only with substantial financial support of some kind from the Government.

**11.109** A number of consultees called on Government to consider new airport options in the Thames Estuary or similar locations, on the basis that the impacts would not be as great as development of existing airports. The Government has considered the proposals put forward during the consultation, in addition to the two estuarine sites for large new airports that were considered at various stages of the SERAS study:<sup>11</sup> Cliffe and The Cant (an island site in the Thames Estuary). Although, the Cliffe option was taken forward for further detailed study, The Cant option was dropped at the preliminary stage of the study.

**11.110** Our analysis identified a number of issues of concern common to all proposals for offshore or coastal airports, noting that:

- construction costs would be significantly higher than for onshore sites and less certain. The additional costs would be incurred largely in the early phases of development before any revenues are generated;
- construction might be several years longer for an offshore site;
- costs of related transport infrastructure could be very high. The further the distance from the key London markets, the more heavily an airport would depend on dedicated, high-speed rail access and sufficient terminal capacity in Central London. A new railway would be expensive and difficult to provide. There is little spare capacity at the London terminals. Substantial additional road infrastructure would also be required;
- some impacts (such as noise), would be reduced but damage to sensitive habitats is often more likely, and some new environmental impacts would need to be considered, such as marine ecology, and effects on tidal flow. Land-take at the site would be less than for onshore locations, though land might be still required for associated facilities and for new road and rail links. Risks posed by bird strike would be expected to be greater at estuarine sites, especially those on or close to the shoreline;
- forecasting suggests that the financial viability of a new estuarine airport would be likely to depend on government intervention to try to ensure early take up of new capacity by passengers and airlines. Although offshore airports have been built elsewhere in other parts of the world, none of them is part of a multi-airport system as would be the case in the South East. The level of intervention required to ensure success would almost certainly entail significant costs to the public sector.

**11.111** Additionally, *Goodwin Sands* would deliver poor economic benefits in relation to its high costs. The airport would be a long way from key centres of demand.

<sup>11</sup> The South East and East of England Regional Air Services (SERAS) Study was commissioned by the Government in 1999 to consider options for development of airports and air services over the next 30 years.

- 11.112** Insufficient information was supplied by the promoters of the *Marinair* proposal to enable a meaningful comparative appraisal of its potential costs and benefits. However, from the limited information provided it would appear likely that the *Marinair* project would be prohibitively expensive, both in terms of airport construction and road and rail links.
- 11.113** The *Sheppey* proposal would generate significantly lower net economic benefits than a combination of one new runway at each of Stansted and Heathrow. The promoters' heavy reliance on high speed rail access with limited road connections was considered to be highly optimistic. There are also uncertainties as to whether the site proposed is adequate to handle the assumed level of traffic.
- 11.114** Although the *Thames Reach* promoters managed to mitigate some of the drawbacks of Cliffe, a substantial part of the airport site would impact, as did Cliffe, on areas of very high ecological value that are protected under the EC Habitats Directive, and we have doubts whether the passenger numbers envisaged could be handled within the land-take given the likely demand for air travel over the day. We were concerned that the surface access proposals were not robust and over-dependent on rail. In the light of the appraisal of the Cliffe option, there remain significant concerns about the risk of bird strike and the efficacy of the measures proposed to address it. The capital costs assumed by the promoters are much less than those for Cliffe, including for surface access.
- 11.115** So far as the *London Oxford* proposal is concerned, it is accepted that the location of the airport in relation to centres of demand would mean that it could be well used without the need for market intervention by the Government. Nevertheless, the promoters accept that such a project could not be financed conventionally by the private sector. However, the net economic benefits of the airport with four runways by 2030 are estimated to be no greater than for a two-runway strategy at Stansted and Heathrow. There would be a need for substantial new investment in road and rail access, and there were significant doubts about the feasibility and capacity of the promoters' proposals in this regard. The proposal would require a very large land-take, including the loss of 23 Grade II listed buildings; and capacity might be constrained by the high chimney of Didcot power station.
- 11.116** In the light of these particular concerns, the evidence currently available to the Government, and all other relevant factors, the Government does not consider that any of the above proposals can be considered to offer a solution that is both superior to the preferred options for development of existing major airports, as previously described, and clearly viable within the timescale concerned.
- 11.117** Development of *Redhill* would provide lower capacity and hence generate lower net economic benefits than we estimate for a new runway at Stansted. There are doubts about the promoter's claim that Redhill could be developed more speedily than a new runway at Stansted, not least because of the time needed for consultation and the technical work required to resolve airspace issues satisfactorily. There are also doubts

about the land-take assumed, the provision of car parking space, construction impacts and the capital costs.

- 11.118** A planning application for Redhill's development was submitted in 1993, without success. A key issue in the planning inquiry at that time was a serious airspace problem caused by Redhill's proximity to Gatwick. The project promoters' recent submission put forward proposals for addressing this issue. However, National Air Traffic Services remain unconvinced of the feasibility of the Redhill proposals to address what they regard as the particular challenges of this location. They consider that development at Redhill would not yield the claimed capacity there, and could prejudice current and future capacity at Gatwick. The Civil Aviation Authority considers that the evidence put forward in support of the Redhill proposal has not shown convincingly that the capacities are achievable, and that further modelling would be required to demonstrate whether the capacity claimed by the promoters of the Redhill proposal could be realised without undue impact on capacity at Gatwick or other airports in the London area. Any reduction in Gatwick's capacity would undermine one of the benefits claimed for the Redhill proposal, which is to increase throughput at Gatwick.
- 11.119** At present, in the light of the concerns expressed by National Air Traffic Services and the Civil Aviation Authority, and the absence of evidence to prove or disprove Redhill's contentions, we remain unconvinced that development at Redhill would be a feasible proposition and we do not therefore support it.



# 12





# Next Steps

- 12.1** This chapter summarises the steps that now need to be taken in order to implement the conclusions in this White Paper.

## Securing statutory approval

- 12.2** It will be for airport operators to decide how to take forward plans for airport expansion in the light of the policies set out in this White Paper. Airport development will continue to be subject to the planning system, subject to changes announced following the Green Paper *Planning: delivering a fundamental change* in December 2001 (see box). Airport operators will have to meet the requirements for environmental impact assessment, and will also be expected to undertake appropriate health impact assessments. The timing of any planning applications will be a matter for commercial decision by the operators.

### PLANNING REFORMS

The key features are:

#### Major infrastructure projects

Changes are being made to improve the handling of developments involving major infrastructure projects, including airports. This will be facilitated by clearer Government Policy statements, such as this White Paper, which will in future also be supported by clearer regional strategies and new planning policy statements.

Coupled with this are proposals in the Planning and Compulsory Purchase Bill that will allow an inquiry to be conducted by a team of inspectors, together with new Rules governing the inquiry procedure.<sup>1</sup>

Taken together these measures will provide a clear strategic framework for future planning applications involving major infrastructure developments of national or regional importance.

<sup>1</sup> New draft rules were part of a consultation package published by ODPM on 13 October 2003, with comments invited by 16 January 2004. The new rules will be published at the earliest opportunity in 2004 subject to consideration of the consultation responses and to the Planning Bill receiving Royal Assent.

**Regional Spatial Strategies**

The Regional Spatial Strategy will replace Regional Planning Guidance. It will incorporate a Regional Transport Strategy, and provide a spatial framework to inform the preparation of Local Development Documents, local transport plans and regional and sub-regional strategies and programmes that have a bearing on land use activities.

**Local Development Frameworks**

Local Development Frameworks will replace local plans and unitary development plans. The Local Development Framework is effectively a portfolio of Local Development Documents which will collectively deliver the spatial planning strategy for a local planning authority's area. Local Development Documents will comprise Development Plan Documents – which form part of the statutory development plan – and Supplementary Planning Documents which could include airport master plans.

Local Development Frameworks must be in general conformity with the Regional Spatial Strategy, outside London, and the Spatial Development Strategy (if the local planning authority is a London Borough).

**Land protection**

- 12.3** Land outside existing airports that is needed for future expansion will need to be protected against incompatible development in the intervening period. Under the current planning system, such land is only formally protected once it is either reflected in the local development plan or when planning permission is granted for the airport development.
- 12.4** At airports where development may occur, early arrangements are being made to update current Civil Aviation Authority (CAA) safeguarding maps to reflect the relevant proposals.<sup>2</sup> This will ensure that the airport operator is consulted by the local planning authority over any planning applications which might conflict with safe operations at the airport, or nearby. The safeguarding map identifies areas by reference to the land height around the airport and its operational requirements, and describes the circumstances in which the local planning authority is required to consult the airport operator. The maps are produced and revised by the airport operators, and certificated by the CAA.
- 12.5** In exceptional circumstances, where these arrangements prove inadequate, directions by the Secretary of State under Article 14 of the Town and Country Planning (General Development Procedure) Order 1995 may be used.<sup>3</sup>

<sup>2</sup> Under the Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) Direction 2002.

<sup>3</sup> See Chapter 5 for equivalent provision in Scotland.

- 12.6** We know there are concerns about the effect of windfarms close to airports, both civilian and military, on airport radar. This is sometimes difficult to reconcile with our aim to increase renewable energy, and we are working on this with industry and the research community.

## Airport master plans

- 12.7** Airport operators are recommended to maintain a master plan document detailing development proposals. An airport master plan does not have development plan status, but the level of detail contained within it is essential to inform the content of the Local Development Framework.
- 12.8** We will expect airport operators to produce master plans or, where appropriate, to update existing master plans to take account of the conclusions on future development set out in this White Paper. The master plans should set out proposals for development of the airport to 2015 in some detail. They should include detailed proposals for surface access, environmental controls and mitigation and, where appropriate, measures to address blight. Indicative land use plans should be included for the period from 2016 to 2030.
- 12.9** Airport operators should begin this process immediately, with a view to the production of new or revised master plans as soon as possible, and preferably within the next twelve months. These should take account of the Regional Spatial Strategy (and the Regional Transport Strategy within it) and local transport plans in England, and their equivalent in Scotland, Wales and Northern Ireland. These documents should in turn take account of airport master plans when they are revised.

## Green Belt

- 12.10** A number of major airports, including Heathrow, Manchester and Edinburgh, are situated in Green Belts, where there is a general presumption against inappropriate development. Such development should not be approved except in very special circumstances. In most cases, development at airports in the Green Belt which requires planning consent will be inappropriate development and very special circumstances to justify the development will not exist unless the harm by reason of inappropriateness and any other harm is clearly outweighed by other considerations. In other cases, such as Manchester, certain parts of an airport may be designated as a Major Developed Site in a development plan, thereby permitting a certain level of in-filling; while in a few cases, such as at Newcastle, the Green Belt boundary has been realigned, through changes to the development plan, to allow the airport to develop.
- 12.11** In England, planning policy on Green Belts is set out in Planning Policy Guidance Note 2 (PPG2). PPG2 will be revised in 2004 in the context of the reforms set out in the Planning Green Paper.

- 12.12** No clear view emerged from the consultation as to how these differing considerations might be reconciled. The Government will review this issue further, and return to it when planning guidance on Green Belt policy is next reviewed. In England, this will be in the context of the review of Planning Policy Guidance Note 2 in 2004.

## Blight

- 12.13** While the publication of this White Paper will help to remove uncertainty and anxiety for many people, others will continue to be affected by the prospect of future airport development, whether short or long-term.
- 12.14** Under existing planning law, residential and agricultural owner occupiers directly affected by airport development plans will have access in due course to statutory blight provisions, either when planning permission is granted for the airport development, or when the local development plan has been revised to reflect development proposals.
- 12.15** In addition, the law provides for compensation in respect of loss of value arising from certain indirect effects of future airport development during construction such as noise or dust (under the Compulsory Purchase Act 1965) and for loss of value one year on from the opening of a new development and arising from its operation (under Part 1 of the Land Compensation Act 1973).
- 12.16** The prospect of airport development will in many cases have a wider impact on property values in the period before statutory protection is available. This is often referred to as 'generalised blight'. There is no statutory remedy for this, but we accept that people should have access to some form of redress, for example to help them relocate before the development takes place, if they need to do so. Arrangements are therefore being made for non-statutory schemes to be brought forward locally by the airport operators to deal with the problem of generalised blight where runways are supported by this White Paper or where land is safeguarded for future development. These schemes will complement the proposals for noise mitigation discussed in Chapter 3.
- 12.17** Recent precedents for the use of non-statutory schemes of this kind, include, for example, those used in connection with the construction of the Channel Tunnel Rail Link. We look to operators to minimise the impacts on local people, to consult on the details of their schemes, and to put them in place quickly. These schemes will not affect people's statutory rights.

## Delivering surface access improvements

- 12.18** In earlier chapters we have recognised the importance of airports as key strategic components of the UK's transport infrastructure and the need to ensure that they are served by good quality, well integrated, surface access, capable of supporting future airport development. We have also identified what we believe are the key surface access issues that will need to be addressed in each case.
- 12.19** Responsibility for bringing forward proposals and securing funding lies with airport operators, working closely with the Department for Transport, Strategic Rail Authority, Highways Agency, and regional and local bodies. In Scotland, Wales and Northern Ireland, where responsibility for strategic transport planning is largely devolved, the Scottish Executive, Welsh Assembly Government and Northern Ireland authorities will play a leading role.
- 12.20** Taking forward these proposals will need effective collaboration between these bodies. It will require:
- development or revision of long-term surface access strategies to accompany the preparation of airport master plans reflecting the conclusions in this White Paper;
  - project development, option appraisal and consultation, with a view to identifying preferred schemes, along with funding arrangements;
  - airport surface access strategies and schemes being reflected, as appropriate, in regional transport Strategies within Regional Spatial Strategies and Local Development Frameworks and Transport Plans in England and equivalent planning processes in the devolved areas and, in the long-term, the strategies of the relevant transport delivery agencies;
  - development of detailed design, costing, environmental impact assessment, value for money appraisal and funding plans;
  - application for approvals (including Compulsory Purchase Orders) through normal planning procedures, or where appropriate through Transport and Works Act (1992) and Highways Act (1980) procedures or, in Scotland, private bill procedures – including where necessary a public inquiry; and
  - commissioning and construction.
- 12.21** All airports in England and Wales with more than 1,000 passenger air transport movements a year are required to set up an Airport Transport Forum and prepare an Airport Surface Access Strategy. The strategy should set out short and long-term targets for decreasing the proportion of journeys to the airport by car and increasing the proportion by public transport, for both air passengers and airport workers. Where appropriate, these strategies will need to be revised, alongside the preparation of airport master plans, and in consultation with the relevant Forum, to reflect the conclusions in this White Paper.

**12.22** Chapter 4 sets out the Government's approach in relation to the funding of airport surface access schemes. In some cases it will be appropriate for the airport operator to pay in full for a particular enhancement or improvement. In others, especially where there are wider benefits or the airport is not the primary contributor to the problem the scheme is designed to address, there may be a requirement for a broader funding package.



**12.23** This could include public sector contributions via a range of national, regional or local agencies, provided the scheme meets relevant value for money criteria and has been accorded the appropriate spending priority. Airport-related expenditure has also sometimes been supported from the Regional Development Agencies, devolved administrations, or European funding through the 'Trans European Networks' and 'Objective 1' regional development programmes. There may also be opportunity to secure contributions from:

- other developers whose projects would benefit from the improved surface access being provided;
- operating surpluses secured from fares, where this is possible; and
- funding raised via airport access or other congestion charging schemes where airports are able to work with local authorities on schemes using powers under the Transport Act 2000.

**12.24** No single approach will suit all projects; each will need to be assessed on its merits, depending on the particular circumstances that apply. But airport operators should consider potential funding packages and engage with potential funding partners as soon as the schemes that may be needed to take forward the development plans for their airport are clear.



## Managing airspace

- 12.25** If the additional airport capacity which would result from the proposals in this White Paper is to be effectively utilised, it must be matched by a corresponding increase in airspace capacity. This will need to provide for the handling of the forecast increase in aircraft movements through enhancements to all types of controlled airspace, including arrival and departure routes, holding areas and airways. This must be done without compromising the existing standards of safety, and must also take account of any environmental impacts.
- 12.26** The Civil Aviation Authority is responsible for the planning and regulation of UK airspace. The Authority has examined the proposals for additional airport capacity contained in this White Paper. It believes that the necessary airspace capacity can, in broad terms, be provided safely through the redesign of airspace and the introduction of enhanced air traffic techniques and systems. The Government will now look to the CAA to make early progress in bringing forward a structured programme for the redesign of UK airspace, with a view to the phased implementation of changes to eliminate constraints and permit the integration of the forecast increases in aircraft movements, including traffic using the additional runways proposed in this White Paper.
- 12.27** The CAA will need to involve National Air Traffic Services, other major providers of air traffic services, airport operators and the Ministry of Defence as necessary in working up its proposals. It will also need to carry out detailed safety analysis and an assessment of the environmental impacts, and use its established mechanisms to consult interested parties, before deciding on future airspace arrangements.



## Monitoring and evaluation

**12.28** The Government will monitor and evaluate the effectiveness and impact of the policies set out in this White Paper. We will report in 2006 on progress.

**12.29** Meanwhile, the Department for Transport will continue regularly to publish data on air travel, including sponsoring surveys of passengers at UK airports, and to update traffic forecasts in the light of trends.

## Programme of action

### During 2004:

- *we expect the airport operator to move quickly to develop the detailed design for a new runway at Stansted and associated development, working closely with local communities, airport users and all relevant agencies*
- *we will institute immediately a programme of work on how to make the most of Heathrow's existing runways and add a new runway after the Stansted runway, while complying with conditions on air quality, noise and improving public transport access*
- *we expect all major airports to produce or update existing master plans, as appropriate, to take account of the conclusions in this White Paper*
- *we will consult on a new night noise regime at Heathrow, Gatwick and Stansted airports*
- *we will commence preparations for the inclusion of aviation in a European emissions trading scheme, with a view to making it a priority during our Presidency of the EU in 2005*
- *we will monitor progress by airports in bringing forward blight and noise mitigation schemes as described in Chapter 3*
- *we will consult in connection with the application of the proposed criteria in Chapter 4 for PSO support for regional air services to London*
- *we will develop an evaluation strategy setting out how we will assess the effectiveness of our aviation policy.*

### As soon as Parliamentary time permits, we will legislate to:

- *strengthen and clarify the powers to control noise at airports – see Chapter 3*
- *permit an emissions-related element in airport charges – see Chapter 3*
- *impose a new levy to ensure future solvency of the Air Travel Trust Fund – see Chapter 4.*

**By the end of 2006**, we will report progress generally on the policies and proposals set out in this White Paper.



# Annexes



# UK Air Travel Forecasts up to 2030

## Introduction

1. The Department of the Environment, Transport and the Regions' (DETR) document *'Air Traffic Forecasts for the United Kingdom 2000'*, May 2000, presents the national forecasts for the future demand for air travel, by passenger numbers, at UK airports as a whole between 1998 and 2020. These forecasts are calculated for low, medium and high scenario cases.
2. The estimates are based on unconstrained airport and airspace capacity, and include UK and foreign passengers, broken down into business and leisure services, long-haul, short-haul and 'no-frills' carriers (NFCs). Traffic will be lower if capacity is constrained.
3. The separate Department for Transport (DfT) traffic forecasting model calculates the impact of alternative airport development scenarios up to 2030. The model distributes demand between individual airports and takes account of any capacity constraints faced by the airports.

## The national forecasts

4. The long-term factors driving the increase in future demand for air travel in the UK were modelled using econometric techniques, i.e. statistical analysis of the determining factors using historic data. These factors included future growth in UK and world GDP, increased world trade, declining air fares, and exchange rates. Another key factor modelled in the forecasts is the onset of increasing market maturity which assumes that, over time, demand for air travel will grow more slowly than growth in GDP per person.
5. Future demand for air travel has a cyclical as well as a trend growth element. However, the modelling does not deal with any short-term factors like random shocks (11 September 2001, SARS virus, the second Gulf War etc), which temporarily affect demand for air travel.

## Underlying assumptions

6. The long-term real GDP growth assumption for the UK used in calculating forecasts was 2.25 per cent per annum. World GDP was projected at higher rates in less developed and newly industrialised countries (such as China and Eastern Europe) than in OECD countries.

7. There were a number of assumptions underlying the input one per cent decrease in air fares per annum between 2000 and 2030. Aviation fuel prices were assumed to stabilise at \$25 per barrel in real terms in year 2000 prices; no major changes were assumed in aircraft technology which might result in reduced operating costs or changes in regional jet use which might reduce air fares; and it was assumed that the market would be increasingly competitive and deregulated.

### Modelled effects on future prices

8. The future demand for air travel is dependent on assumptions made about the expected level of air fares in the future. Different assumptions produce different forecasts. For example, in a sensitivity test, the *'Air Traffic Forecasts for the United Kingdom 2000'* suggests that a two per cent per annum reduction in fares would increase the mid-point estimate for demand in 2020 by 20 per cent.
9. In contrast, the central national forecast assumes that there will be a one per cent reduction in air fares in real terms between 2000 and 2020, which is a lower reduction than the historic trend over the last 30 years and more.

### National demand forecasts

10. The graph in Chapter 1 shows the mid-point forecast for demand at UK airports in 2020 at 400 million passengers, rising to 500 million passengers by 2030. These figures relate to unconstrained passenger demand, i.e. before taking any account of capacity limitations at any individual airports and assuming there are no airspace constraints. The provision of the capacity supported by this White Paper, including new runways at Stansted and Heathrow, would permit around 470 million passengers by 2030.

### Dealing with the environmental consequences of growth in demand

11. As the Government has a policy commitment for aviation to pay for its environmental impacts, modelling takes account of the effects of an economic instrument, such as a permit trading scheme, on future demand. An economic instrument would reduce the demand for flights as the cost base for the industry would be increased. In *'Air Traffic Forecasts for the United Kingdom 2000'*, we calculated that a notional 100 per cent fuel tax would lead to a ten per cent increase in airline costs (assuming fuel costs were ten per cent of airlines costs) – and a ten per cent increase in air fares, assuming the increased costs were passed through in full to passengers. This would then have the effect of reducing demand by ten per cent.
12. Since the national forecasts were published in May 2000, there appear to be factors at work leading to airline costs – and hence air fares – declining faster than was previously forecast; and their effect is sufficient to offset the fall in demand expected from the impact of any economic instruments. These factors are:



- **the ‘no-frills’ sector:** The no frills sector (such as EasyJet and Ryanair) is expected to capture more of the mainstream domestic and short-haul markets. These airlines, with substantial lower costs and fares than traditional airlines, will contribute a large stimulus on the UK aviation market.
- **greater competitive pressure:** It is expected that to ensure commercial survival, the cost base of the traditional scheduled airlines will need to be cut. The pressure to cut costs stems from the competitive threat of the NFCs.
- **liberalisation:** In long-haul markets, it is expected that the liberalisation of current regulatory restrictions will represent an important cost driver. It is also believed that increased airline competition resulting from additional airport capacity will put downward pressure on costs.

## Composition of demand

13. The composition of future demand in the national forecasts published in 2000, measured in million passengers per annum (mppa), showed that international traffic was expected to grow by 4.6 per cent per annum in the period to 2020 under the central forecasts. Short-haul traffic was expected to grow at 4.5 per cent per annum over the same period, slightly less than the long haul growth rate of five per cent per annum to 2020.
14. Domestic traffic was expected to grow on average by 3.5 per cent per annum. The corresponding growth rate for NFCs was 6.6 per cent per annum from 1998 to 2020 using the central forecast. Most of the NFC growth was assumed to occur between 1998 and 2005 at a rate of fifteen per cent per annum. This initial high growth rate accounts for the introduction of new routes but after 2005 it was assumed that the growth is essentially due to the expansion of passenger numbers on existing routes.
15. Leisure traffic (4.4 per cent per annum) was expected to grow more slowly than business traffic (5.5 per cent per annum), between 1998 and 2020. The higher demand from business passengers reflects the slower maturity in this market compared with the leisure market. Demand from foreign leisure passengers (4.9 per cent per annum) is forecast to grow faster than demand from UK leisure passengers (4.1 per cent per annum) up to 2020, reflecting higher economic growth rates for countries outside of Western Europe.

## Recent developments

16. The number of passengers through UK airports by major traffic groups in recent years is given below:

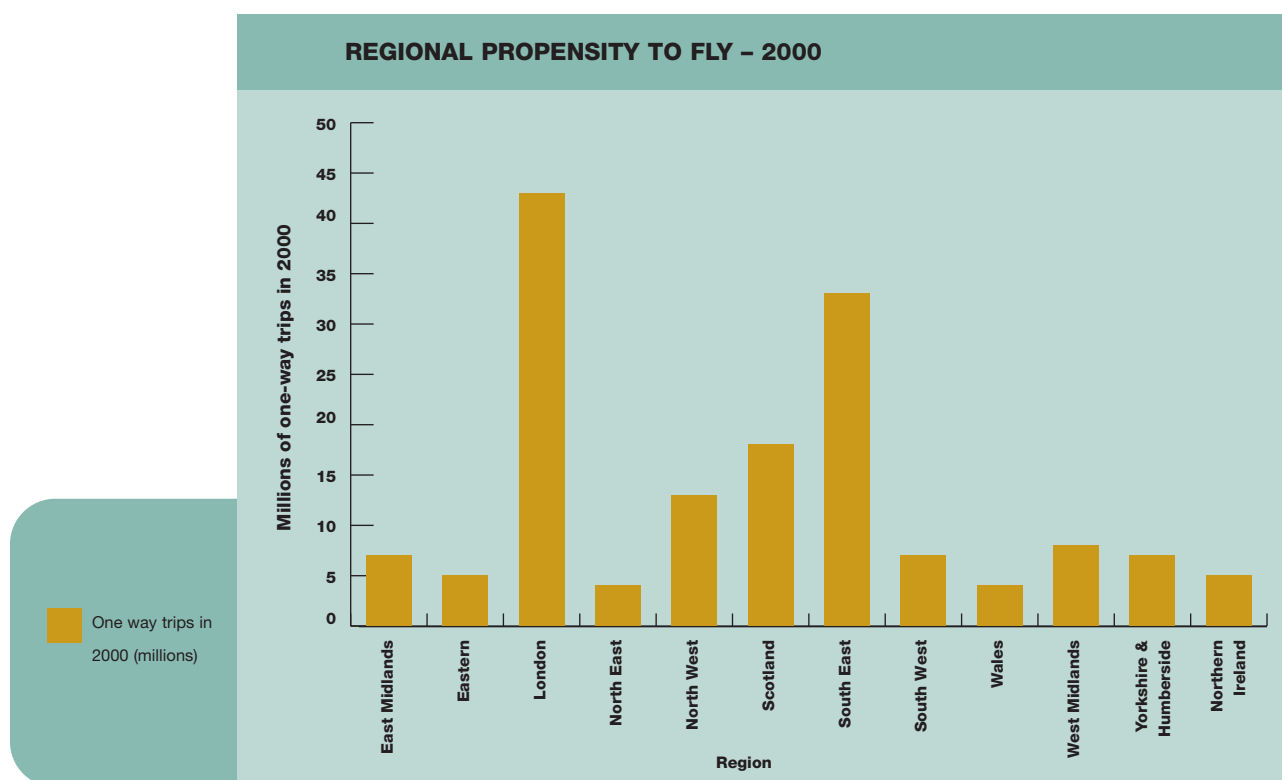
Million passengers per annum	1998	1999	2000	2001	2002
Domestic Scheduled	31.6	31.1	30.4	28.7	28.1
Domestic NFC	2.0	4.0	5.8	8.6	13.0
<b>TOTAL DOMESTIC</b>	<b>33.7</b>	<b>35.1</b>	<b>36.1</b>	<b>37.2</b>	<b>41.1</b>
International NFC	5.7	8.7	12.4	15.8	22.4
<b>TOTAL NO FRILLS</b>	<b>7.7</b>	<b>12.7</b>	<b>18.2</b>	<b>24.3</b>	<b>35.4</b>
International Charter	34.7	35.4	36.5	37.3	38.2
<i>o/w long-haul charter</i>	<i>3.8</i>	<i>3.7</i>	<i>3.4</i>	<i>3.1</i>	<i>2.9</i>
International Scheduled	83.5	88.0	93.4	89.3	86.0
<i>o/w long-haul scheduled</i>	<i>32.6</i>	<i>34.6</i>	<i>37.5</i>	<i>35.1</i>	<i>35.2</i>
<b>TOTAL INTERNATIONAL</b>	<b>123.9</b>	<b>132.1</b>	<b>142.3</b>	<b>142.4</b>	<b>146.6</b>
<b>TOTAL INT + DOMESTIC</b>	<b>157.6</b>	<b>167.2</b>	<b>178.4</b>	<b>179.6</b>	<b>187.7</b>
Other (e.g. air taxis)	1.5	1.3	1.6	1.7	1.5
<b>TOTAL PASSENGERS</b>	<b>159.1</b>	<b>168.5</b>	<b>180.1</b>	<b>181.3</b>	<b>189.1</b>

\*Totals may not add due to rounding.

17. The growth of the NFC sector through UK airports has been substantial, more than a six-fold increase in the low cost sector on UK domestic routes – from two mppa in 1998 to thirteen mppa in 2002. The growth rate of international NFCs has been somewhat less, but traffic has still risen from six mppa in 1998 to 22mppa in 2002. The rise and growth of the NFC sector has compensated in significant part for the recent cyclical weakness in the other sectors of aviation demand.

## Demand by region

18. The demand for air travel is not spread evenly across the UK. It is greatest in the capital, London, and in the South East. The central growth scenario estimates an unconstrained capacity demand in 2030 of 500mppa. In the South East, the unconstrained demand would be 300mppa in 2030, 60 per cent of total UK demand. The substantial demand in the South East reflects not only air trips by UK residents in the South East but also trips by foreign residents, many of whom are visiting tourist attractions, are on business or are visiting friends and relatives. London is the area with the largest demand for air travel. There is also considerable demand for air travel from the M4 corridor between London and Reading.
19. The chart below shows each region's propensity to fly in 2000. In this presentation, the propensity to fly is defined as the number of passengers, both UK and foreign residents, making a journey by air where the ultimate origin or destination of the total journey was in the region concerned.



## The DfT Air Passenger Forecasting Model

20. The DfT model is an airport allocation model used to forecast how air passengers might make use of different amounts of new capacity at different airports around the UK. The forecasts are on an annual basis from 1998 to 2030 and allocate demand between 29 existing UK airports and up to three potential new airports. The level of air passenger demand depends on the overall costs faced by passengers wanting to fly. Such costs include surface access journeys to the desired airport, the number and range of flights offered and flight times and fares on specific routes from that airport. In the model, 'fare premiums' apply at congested airports. A 'fare premium' is the extra price on top of the normal air fare required to bring demand into line with supply of capacity at a given airport, when demand exceeds supply.
21. In the model, the propensity to fly is assumed to grow more quickly in the regions, reflecting the greater maturity of the market in the South East.
22. The consultation documents published in June 2002 and in February 2003 used a version of the DfT model which kept to forecasts for NFCs in line with '*Air Traffic Forecasts for the United Kingdom 2000*'.
23. The most recent version of the DfT's air passenger forecasting model takes more account of changes in the aviation market since 2000. It remains controlled to the national forecast inputs in terms of total mid-point throughputs for 2020 and 2030 (400mppa and 500mppa respectively) and in the balance between UK/foreign residents, business/leisure passengers, international/domestic sectors, and between the South East and the other regions of the UK.

- 24.** The principal features of the most recent version of the model are:
- a total of 103mppa of NFCs in 2030 in the unconstrained case;
  - explicit modelling of the implementation of Government policy that aviation meets its external costs. However, this effect is offset by the judgement that airlines will be more successful in reducing their costs; through the stimulus of NFCs, the competitive response of scheduled airlines, and liberalisation of long-haul markets; and
  - the new forecasts also make credible ‘forecasts’ of airport throughputs for 2001-2003.

## Conclusion

- 25.** In spite of the recent significant under-performance of the long-haul market as a result of 11 September 2001 and the SARS virus, the NFC short-haul market has experienced continued growth. This growth has spurred competition between the NFCs and the traditional airlines, forcing costs to be cut, leading to lower fares. Together with a predicted recovery for the long-haul market as confidence returns, this should be sufficient to offset any suppressing effect of any environmental charge that might otherwise reduce air travel demand by ten per cent. The forecast of 500mppa in 2030, assuming airport capacity is accommodating, is therefore regarded as robust.

# Annex B

## Emissions Trading

(see Chapter 3)

1. The Government is committed to taking action to reduce the impact of aviation emissions on climate change. It considers the best means of achieving this is to work with the European Commission and other Member States over the next two years. The aim is to resolve any outstanding difficulties during the UK Presidency in 2005 so that aviation can be included in the EU Emissions Trading Scheme, with effect from 2008.

### What is emissions trading?

2. Emissions trading is emerging as a key instrument in the drive to reduce greenhouse gas emissions. In essence, it is a mechanism by which those responsible for emissions are required to keep within specified limits by reducing their own emissions and/or by buying additional 'allowances' from other parties with lower emissions. A limit is set by way of an overall cap on emissions of all participating industries. This is then divided into allowances for each industry, each allowance representing a tonne of CO<sub>2</sub>, or emissions of other gases equivalent to a tonne of CO<sub>2</sub> in terms of the global warming they cause. At the end of a pre-determined period for compliance, participants must hold sufficient allowances to account for all their emissions.
3. The rationale behind such an approach is to ensure that the emissions reductions required to achieve a particular environmental outcome take place in as cost-effective a manner as possible. Those participants for whom the cost of reducing emissions (abatement) is above the market price of allowances are likely to opt to live within their allowance by, at least in part, buying allowances from other participants. Participants with abatement costs below the market price are likely to make emissions reductions beyond the level of their allowance and benefit from selling on any surplus allowances or saving it for use in later years.
4. The advantage of emissions trading is that it guarantees the desired environmental outcome in a way that other instruments, such as charges, do not. Companies have the flexibility to meet emissions reduction targets according to their own strategy, by reducing emissions or by buying allowances from the market. The environmental outcome is still achieved, since it is determined by the overall cap on emissions which sets the limit on the number of allowances which are allocated. In this way, emissions trading combines environmental effectiveness with economic efficiency.

## The EU Emissions Trading Scheme

5. In October 2001 the European Commission proposed the establishment of an EU Emissions Trading Scheme (ETS) as one of the policies being introduced across Europe to tackle emissions of carbon dioxide and other greenhouse gases and combat the serious threat of climate change.
6. The EU Emissions Trading Scheme, which will initially only cover emissions of CO<sub>2</sub>, will commence on 1st January 2005. The first phase runs from 2005-2007 and the second phase will run from 2008-2012 to coincide with the first Kyoto Commitment Period.<sup>1</sup>
7. When it comes into force, the EU Emissions Trading Scheme will cover installations over a certain size in a range of industrial sectors, set out in the annex to the EU Emissions Trading Directive. These include energy activities, production and processing of ferrous metals and the mineral industry. The aviation sector is not included in phase one of the scheme but the Commission is able to propose extending the activities covered by the Scheme before the start of the second phase.
8. For aviation to be included in the EU Emissions Trading Scheme there are a number of issues we would need to work with the Commission and other Member States to resolve:

**Allocation of emissions.** The Kyoto Protocol does not currently say who is responsible for emissions from international aviation. Therefore, to operate an EU scheme, Member States would have to agree amongst themselves a basis for allocating responsibility for emissions from flights between EU Member States. There are several options which need investigating, but one possible arrangement would be for the countries of departure and arrival for each flight to share the emissions equally on the assumption that these two countries would be the ones to benefit economically from the flight.

**Allowances.** Emissions trading is trading in allowances to emit CO<sub>2</sub>. One allowance is a permit to emit one tonne of CO<sub>2</sub> (or CO<sub>2</sub> equivalent). The EU ETS will have its own brand of allowances, but because the scheme is intended to be compatible with the international emissions trading mechanism envisaged by the Kyoto Protocol, each movement of an EU allowance will be shadowed by an equivalent movement of the allowances issued under the Kyoto Protocol (Kyoto allowances are called assigned amount units, or AAUs).

As aviation falls outside Kyoto there are no AAUs to back emissions from aviation. A decision would be needed on how to distribute allowances to the aviation industry.

<sup>1</sup> The first Kyoto Commitment period runs from 2008-2012. Developed countries have agreed to reduce an overall basket of six greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride) by 5.2 per cent below 1990 levels.



**Basis for trading.** The impact of aviation on climate change is increased over that of CO<sub>2</sub> alone by the range of secondary emissions released and their specific effects at altitude. The Intergovernmental Panel on Climate Change report 'Aviation and the Global Atmosphere' included a central estimate that the impact of aviation emissions was 2.7 times the impact of CO<sub>2</sub> alone. A decision would be needed on how the extra impact of aviation should be taken into account when designing the sector's participation in the trading regime.

## Emissions trading on a global scale

9. The 33rd Assembly of the International Civil Aviation Organisation (ICAO) in 2001 endorsed the development of an open emissions trading scheme for international aviation, and requested the ICAO Council to develop, as a matter of priority, the guidelines for open emissions trading, focusing on the structural and legal basis for aviation's participation. The UK is supporting this work and would prefer to see aviation in a global emissions trading scheme. The Government recognises that the need for consensus among the participating states in ICAO means that progress is likely to take time. That is why we have concluded that an effective mechanism on an EU basis should be pursued.

# Annex C

## Glossary

AAU	Assigned Amount Units
AUC	Air Transport Users Council
CAA	Civil Aviation Authority
CO <sub>2</sub>	Carbon dioxide
dBA	Decibels, 'A'-weighted
Defra	Department for Environment, Food and Rural Affairs
DETR	Department of the Environment, Transport and the Regions
DfT	Department for Transport
EASA	European Aviation Safety Agency
ECAC	European Civil Aviation Conference
ETS	Emissions Trading Scheme
EU	European Union
EUROCONTROL	European Organisation for the Safety of Air Navigation
GDP	Gross Domestic Product
ICAO	International Civil Aviation Organisation
L <sub>eq</sub>	Equivalent continuous sound level
mppa	Million passengers per annum
MtC	Million tonnes carbon
NFC	'No-frills' carrier
NO <sub>2</sub>	Nitrogen dioxide
NO <sub>x</sub>	Oxides of nitrogen
o/w	one way
PPG	Planning policy guidance
PPS	Planning policy statements

PM <sub>10</sub>	Particulate matter which passes through a size-selective inlet with a 50 per cent efficiency cut-off at 10µm aerodynamic diameter
PSO	Public Service Obligation
SERAS	South East & East of England Regional Air Services Study
SRA	Strategic Rail Authority
RASCO	Regional Air Services Co-ordination Study
µg	1µg = 1 microgram = 1 millionth of a gram
µm	1µm = 1 micron = 1 millionth of a metre

# Annex D

## Bibliography

Six consultation documents on *The Future Development of Air Transport in the United Kingdom* were published by the Department for Transport in July 2003, in conjunction with the devolved administrations. These covered Scotland, Wales, the North of England, the Midlands, the South West and the South East. A seventh, on Northern Ireland, was published in August 2002. The documents were published on the Department's website and were available free of charge from the Department's distribution centre, along with supporting documentation listed in those documents.

Details of various other publications mentioned in this White Paper are as follows:

*Access to Air Transport for Disabled People: a code of practice*, Department for Transport 2003. Available on the DfT website at <http://www.dft.gov.uk> – follow the links to 'Access for Disabled People', 'Personal mobility' and 'Aviation and shipping'.

Advisory Council for Aeronautics Research in Europe, Strategic Research Agenda Volume 2, October 2002. Available on the ACARE website at: [www.acare4europe.com/html/strategic.shtml](http://www.acare4europe.com/html/strategic.shtml)

*Airport Security*, a report by Sir John Wheeler 30 October 2002. The report's introduction, findings and recommendations can be found on the Home Office website at: [www.homeoffice.gov.uk/docs/airport\\_security.pdf](http://www.homeoffice.gov.uk/docs/airport_security.pdf)

*Aviation*, House of Commons Transport Committee, Sixth Report of Session 2002-03, Volumes I (17 July) and II (18 September) 2003

*Aviation and the Environment: Using Economic Instruments*, Department for Transport and HM Treasury, March 2003

*A New Deal for Transport: Better for Everyone*, The Government's White Paper on the Future of Transport, July 1998, Cm 3950

*Economic incentives to mitigate greenhouse gas emissions from air transport in Europe*, CE Delft, November 2002

*External Costs of Aviation*, February 2003, CE Delft

*ICAO Assembly Resolution A33/7: Consolidated statement of continuing ICAO policies and practices related to environmental protection*, October 2001

*Our energy future – creating a low carbon economy*, The Government's Energy White Paper, February 2003, Cm 5761

*The Airline and Airport Commitments on Air Passenger Rights*. The full text, together with a list of the European signatories, can be found on the European Civil Aviation Conference website at <http://www.ecac-ceac.org/uk/>

*The Future of Aviation*, The Government's consultation document on air transport policy, DTLR, December 2000

# Annex E

## Integrated Policy Appraisal

Integrated Policy Appraisal		Qualitative assessment	Quantitative measure(s)
E C O N O M I C	Public accounts and public service	<ul style="list-style-type: none"> <li>● Will the policy or project involve cost to exchequer funds?</li> <li>● Will it result in receipts or savings to the Exchequer?</li> </ul>	<p>Airport operators/developers are expected to bear costs of airside developments and in respect of road/rail connections to airports, to the extent they benefit. But if there are wider benefits there may be costs to Exchequer relating to contribution to road/rail infrastructure; and offsetting revenues (see previous column).</p>
		<p>May be additional costs to Exchequer related to development of local authority airports in respect of Credit Approvals, Objective 1 funding or RDA funding e.g. in respect of Public Service Obligations. See also next column.</p> <p>To the extent that policies encourage growth, there will be increased revenues in respect of e.g. Air Passenger Duty, taxation (company and personal), VAT on airport/airline retailing, and any other economic instruments that may be introduced.</p> <p>Sectors of the economy that are likely to be drivers of future growth, such as financial services and high tech manufacturing, rely heavily on air services; to that extent, failure to provide additional capacity would have an adverse effect on economic growth in the UK.</p> <p>There are wider economic benefits: to industries such as tourism; attracting more inward investment and trade; and lower business costs from reduced delays at airports. Regional airports can have significant benefits for local and regional economies, promoting economic regeneration, encouraging inward investment and contributing to regional competitiveness.</p> <p>Some administrative costs will arise, for example from the programme of work to resolve environmental problems at Heathrow. There may also be new administrative costs if any expanding airports are designated by the Secretary of State for noise control purposes.</p> <p>Increased capacity and higher passenger numbers, will lead to some additional pressures on Customs and Immigration, and possibly also on planning, health and policing services.</p>	
		<ul style="list-style-type: none"> <li>● Will it impose administrative or other burdens on public service providers, e.g. frontline staff in health, education, local government or criminal justice?</li> </ul>	



Integrated Policy Appraisal		Qualitative assessment	Quantitative measure(s)
E C O N O M I C	Consumers	<ul style="list-style-type: none"> <li>● Will the policy or project affect the cost, quality or availability of commercially available or publicly-provided goods or services?</li> </ul>	The quantified net economic benefits of additional airport capacity are mainly in terms of passenger benefits, allowing more people to fly and giving all passengers a greater choice of timings and routings.
		<ul style="list-style-type: none"> <li>● Will it result in a change in the choice available to consumers, or the availability of information to enable them to exercise choice?</li> </ul>	The net economic benefits of a first new runway at Stansted around 2011 on an up to date basis is £9 billion (present value, reflecting latest HMT 'Green Book' changes). On the same basis Heathrow is £5.5bn. For a package with Stansted as the first runway and either Heathrow or (in 2024) a Gatwick wide-spaced runway as the second, the net present value would be around £17bn. A new runway at Birmingham Airport opening in 2016 has a benefit:cost ratio of some 4:1, and a new runway at Edinburgh opening in 2023 has a benefit:cost ratio of some 3:1.
	Business	<ul style="list-style-type: none"> <li>● Will it introduce a new technology or process that will make existing goods redundant over time?</li> <li>● Will the policy or project impose or relieve a cost or burden on business, charities or the voluntary sector?</li> </ul>	<p>Estimating the reduction in fare premiums enabled by additional capacity suggests that the fare premium per passenger for a return journey in 2030 at Stansted with no increase in capacity would be £122. With one extra runway, it would be £85, giving a reduction of £37.</p> <p>Meeting unconstrained demand could increase total aviation related employment by up to 150,000 by 2030 – providing jobs with airlines, handling agents, airport operators, retail, catering, hotels, control agencies, engineering, tourism, inward investment, and 'cluster' industries, etc. With one new runway at Stansted, additional jobs (direct and indirect) might be 56,000 by 2030, at Heathrow with a new runway, 117,000, and with a new wide-spaced runway at Gatwick, 64,000.</p>

Integrated Policy Appraisal		Qualitative assessment	Quantitative measure(s)
S O C I A L	Public accounts and public service	<p>● Will it result in a change in the investment in people, equipment, infrastructure, or other asset?</p> <p>● Will the policy or proposal enhance or harm health or safety?</p> <p>● Will it affect health related behaviour such as diet, physical activity, alcohol, tobacco and drug consumption?</p> <p>● Will it affect access to NHS services?</p>	<p>Countervailing pressures, particularly in areas of high employment, are on house prices and wages, and on public transport and infrastructure.</p> <p>For air quality, see specific entry below.</p>
		<p>Policy support for airport development should encourage airport operators to bring forward new infrastructure as the need arises.</p> <p>Airports require a high percentage of skilled labour, which could cause shortages elsewhere. But airport development (both construction and operation) also provide jobs for unskilled workers, encouraging training, with benefits in terms of addressing inequalities.</p> <p>Flying is a very safe mode of travel, with an accident rate over the last decade averaging one fatality for every forty-four million passengers carried by UK passenger airlines. Aviation safety will continue to be of prime importance, and growth in the volume of air travel should not significantly affect accident rates. Alternative policies of restraint would be likely to lead to some travellers having to use less safe modes. For Cliffe, studies indicated that mitigation measures would need to have included an ongoing, aggressive and comprehensive bird management programme to prevent bird-strike.</p> <p>Air travel has a number of positive health and social benefits which are difficult to quantify – for example, taking holidays abroad, relaxation, experiencing other cultures, visiting friends and family. Growth in air travel and development at airports would bring increased opportunities for employment, with its attendant benefits to health, especially in areas of deprivation and low employment.</p> <p>Conversely, growth in air travel means more noise and air pollution, more surface traffic and potential impacts on amenity and social capital. All these aspects have been taken into account in assessing the airport options, and have been quantified where possible. (See also entry for air quality, below).</p>	

Integrated Policy Appraisal		Qualitative assessment	Quantitative measure(s)
S O C I A L	Crime	<ul style="list-style-type: none"> <li>● Will it affect the use of the work environment to maintain or improve health, or the ability of people to return to work from illness (whether the illness is work-related or not)?</li> </ul>	<p>Risks of spread of infectious diseases from international travellers and impacts on local A&amp;E services are not thought to be significant.</p> <p>Government's forecast of underlying demand for leisure trips is stronger for foreign residents than for UK travellers. In principle, therefore, if capacity is provided to meet that demand, over time the higher numbers of foreign tourists could place additional demands on health services while visitors are in the UK.</p>
		<ul style="list-style-type: none"> <li>● Will the policy or project affect the rate of violent and non-violent crimes?</li> </ul>	<p>No.</p> <p>Not significantly. Growth in air travel will mean a greater number of flights and passengers, which in turn could see an increase in the (relatively small) number of incidents of 'air rage'. Higher numbers of people flying potentially offers more scope for petty crime at airports and smuggling of goods. Security continues to be strict but terrorism remains a constant threat.</p> <p>In the year to March 2003 there were 648 reported disruptive passenger incidents on UK airlines, of which 35 were judged to be serious. A significant increase in the number of passengers flying might lead to an increase in incidents. The Aviation (Offences) Act 2003 has increased police powers of arrest for disruptive behaviour and drunkenness on board aircraft and increased the penalty for endangering the safety of an aircraft. This may act as a deterrent.</p>
		<ul style="list-style-type: none"> <li>● Will it divert people away from or prevent crime?</li> </ul>	<p>Increased urbanisation might lead to higher levels of crime. To the extent that areas of high unemployment may benefit from jobs and regeneration arising from airport development, this may tend to divert some people away from crime.</p>
		<ul style="list-style-type: none"> <li>● Will it affect people's fears about being a victim of crime?</li> </ul>	No.
		<ul style="list-style-type: none"> <li>● Will it create a new offence or create an opportunity for crime e.g. through fraud?</li> </ul>	No.
		<ul style="list-style-type: none"> <li>● Does the policy create new investigative powers that could increase the risk of violence against public sector workers?</li> </ul>	No

Integrated Policy Appraisal		Qualitative assessment		Quantitative measure(s)
S O C I A L	Social capital, community and education	● Will the policy or project affect the number of people involved in voluntary and community activities?	Possibly, at the margins. Many airports are already involved in a range of voluntary and community activities ; a stronger airports industry could provide more opportunities for airport-sponsored community projects.	
		● Will it affect people's access to information or social networks?	Well planned airport development and surface access links have the potential to improve social networks; conversely, communities can become severed by poorly designed infrastructure. This needs to be taken into account in the planning stages. More access to air services could facilitate social networks i.e. visits to distant friends and relatives (currently around 20 per cent of all air journeys). This is becoming more important as the UK becomes a more multicultural society.	To meet the employment needs of 1 new runway at Stansted, 18,000 dwellings may be required by 2015 (in excess of those included in current RPG). For Heathrow, the equivalent figure would be 30,000.  In areas of high employment, incoming workers from other areas may put pressure on local housing stock, increase house prices and wages and lead to overheating of local economy. Offsetting factors include economic and social benefits of full employment. There may be opportunities for airport-sponsored affordable housing.
		● Will it affect the availability of affordable homes of suitable quality?	Depending on options chosen, may be some impact on cost/availability of local affordable housing.	
		● Will it affect the capacity for parents/guardians to provide a stable environment for their children?	No. See below for comment on children's health.	No robust direct evidence of noise impacts on physical health. Noise causes annoyance and may cause sleep disturbance, thus affecting the general quality of life. Annoyance responses to day and night noise may be correlated with negative affectivity (mental state) but the direction of causation is not fully established by research. DfT sponsored research is in progress on subjective responses to noise.
		● Will it affect the level of skills and education, in the workforce, among children, or otherwise?	There have been suggestions that aircraft noise may affect children's cognitive development, but no evidence so far of any pronounced or lasting effects – research is continuing at European level, with UK contributing.  A number of airports already work in partnership with schools and local organisations. There is significant potential for airport development to bring positive benefits in terms of local employment and training opportunities, particularly in deprived areas.	

Integrated Policy Appraisal		Qualitative assessment	Quantitative measure(s)
S O C I A L	Social capital, community and education	<p>● Will it affect access to, and the range of, facilities for the arts, culture, sports and leisure pursuits?</p>	<p>If Ministers approve options which will substantially increase capacity, large numbers of people will be able to fly at relatively low cost to many destinations and enjoy easy access to many arts, cultural and leisure facilities. And a large increase in inward tourism will help support UK arts and culture.</p>
		<p>Growth in air services should increase access to, and range of, facilities, for arts, culture etc. as result of easier access and low fares within the UK and abroad. But further development at airports could adversely affect the rural environment and people's enjoyment of it, particularly in the Stansted area. Noise impacts can also impair the enjoyment of outdoor events.</p>	

Integrated Policy Appraisal		Qualitative assessment	Quantitative measure(s)
Climate change	● Will the policy or project lead to a change in the emissions of any of the six greenhouse gases, for instance by consumption of fossil fuels?	Aviation growth will lead to increased consumption of aviation fuel and greater emissions of greenhouse gases, adversely affecting climate change. But accompanying policies to tackle environmental impacts, whether by regulatory or economic means, will help to mitigate this.	The SERAS and RAS appraisal frameworks provided for an assessment to be made of the impact of aviation on climate change. This involved an assessment of total CO <sub>2</sub> from additional flights calculated under a number of packages which offer different total amounts of capacity.
	● Will it affect, or be affected by, vulnerability to the predicted effects of climate change e.g. flooding?	The airport development options chosen are unlikely to be vulnerable to flooding, nor to increase the vulnerability of others.	The national cost of global warming from CO <sub>2</sub> from passenger aircraft in 2000 is estimated at £1.4 billion a year. This is estimated to increase to over £4 billion a year in 2030 assuming unconstrained demand. The introduction of economic instruments may lead to lower demand and have supply-side effects.
	Air quality	● Will the policy or project lead to a change in the emissions of air pollutants?	Policies to facilitate growth are likely to lead to significant expansion of activity and therefore potential increase in total emissions of air pollutants and in the number of people affected. But the impacts will depend very much on policies to tackle local air quality, and on technology advances.
	● Will it result in greater or fewer numbers of people being affected by existing levels of air pollution?		
	● Will it have a bearing on areas of existing poor air quality?	Any development is likely to be subject to mitigation measures and will need to comply with statutory limits. NO <sub>2</sub> and PM <sub>10</sub> were taken as the relevant pollutants, since they are subject to forthcoming mandatory EU limits.	In the case of the regional airports modelled, our initial screening indicated there could be potential exceedences of NO <sub>2</sub> at only Birmingham and Manchester airports, for 2030. Further work has been undertaken at Birmingham, which confirms that by 2020 there would be no exceedences and that it is highly unlikely beyond that date. For Manchester, the earlier modelling was undertaken on the assumption of higher passenger forecasts than the White Paper is now indicating and we do not believe exceedences are likely.



Integrated Policy Appraisal		Qualitative assessment	Quantitative measure(s)
ENVIRONMENTAL	Air Quality		Modelling of emissions from airport and non-airport sources at Heathrow showed that even with very significant improvements in aircraft and road vehicle emissions, and a wide range of other mitigating actions, an extra runway would lead to hundreds or even thousands of homes being exposed to exceedences in respect of NO <sub>2</sub> in 2015. No such exceedences are predicted for Stansted with one new runway. The small predicted exceedence at Gatwick with a new wide-spaced runway should be capable of elimination through tough mitigation.
	Landscape	<ul style="list-style-type: none"> <li>● Will the policy or project involve visually intrusive construction works?</li> <li>● Will it involve demolition or modification of historic buildings?</li> <li>● Will it impact on a location in such a way as to change its sense of place or identity in any other way?</li> </ul>	<p>Evidence from DoH suggests that respiratory hospital admissions might increase by 0.5% for each 10ug/m<sup>3</sup> of NO<sub>2</sub> – an increased admission rate of approximately 5 per 100,000. The AQS objective for NO<sub>2</sub> (which comes into effect in 2005) is 40 ug/m<sup>3</sup> or less when expressed as an annual mean. This will become an EU mandatory limit in 2010.</p> <p>The impact of various options on landscape was assessed in the air services studies, in terms of the extent of visual impacts, key visual receptors and the presence of screening by woodland or topography.</p> <p>The impacts on heritage, listed buildings and archaeology were assessed in the air services studies. At Stansted with one new runway two ancient monuments and 29 Grade II listed buildings would be lost. Corresponding figures at Heathrow are: one Grade I (but steps have now been taken to avoid this loss) and eight Grade II; and at Gatwick (wide-spaced runway) 5 Grade II* and 12 Grade II. One new runway at Stansted will take 700 hectares of agricultural land. And one new runway at Heathrow, Birmingham and Edinburgh will take 230, 90 and 300 hectares respectively, and at Gatwick 200 hectares (and 240 hectares of GreenBelt).</p>

Integrated Policy Appraisal		Qualitative assessment	Quantitative measure(s)	
ENVIRONMENTAL	Land use, waste and water	<ul style="list-style-type: none"><li>● Will the policy or project consume a substantial volume of natural, non-renewable resources, including land?</li><li>● Will it lead to a change in the volume of waste produced or to the way it is processed?</li><li>● Will it affect the efficient use of energy or water?</li><li>● Will it lead to an increase or decrease in water pollution?</li><li>● Will it increase or decrease water abstraction or otherwise affect the flow, run-off or recharge of water?</li></ul>	<p>Expansion outside existing airport boundaries is envisaged at only a few airports.</p> <p>Construction and use of new terminals/runways etc will inevitably lead to more waste and higher consumption of energy and water, except to the extent that this is addressed by mitigation measures.</p> <p>At Stansted and Heathrow there may be water resource problems which could be aggravated by persistently low seasonal rainfall. Supply and demand management techniques might address this problem. At Stansted, increased risk of flooding as a result of new development could be addressed by mitigation measures.</p>	
	Biodiversity	<ul style="list-style-type: none"><li>● Will the policy or project involve disturbance or relief of disturbance to habitats or species by change of land use, light or noise?</li><li>● Will it lead to severance, fragmentation, isolation or change in size of habitats?</li></ul>	<p>Impacts will vary according to location. It may be possible to provide alternative habitats.</p>	<p>The impacts of airport options on ecology were assessed in the air services studies. A new airport at Cliffe would have impacted on several national and international designated areas including a SPA and SSSI. Possible land purchase and habitat creation elsewhere was estimated to cost in the region of £200m.</p>

Integrated Policy Appraisal		Qualitative assessment	Quantitative measure(s)
ENVIRONMENTAL	Noise	<ul style="list-style-type: none"> <li>● Will the policy or project lead to increase or decrease in exposure to noise of sensitive buildings such as schools and hospitals?</li> <li>● Will it lead to an increase or decrease in the number of people affected by existing noise?</li> <li>● Will it lead to a change in standards or use that would increase or decrease the noise generated by products?</li> </ul>	<p>A new runway at Stansted could bring an additional 2,000 people within the 57dBA noise contour in 2015. At Heathrow, the limit imposed in the White Paper will ensure no net increase in the noise contour, but some 50,000 people would be newly affected by noise at the 57dBA <math>L_{eq}</math> level and above as a result of a new runway - with a similar number of people who are currently affected, ceasing to be within the area affected. At Gatwick, a wide-spaced runway would bring an additional 10,000 people within the 57dBA contour by 2015.</p> <p>In respect of schools and hospitals, we estimate a slight reduction in numbers exposed to noise at the 57dBA level and above in the year 2015 under the one runway options for Stansted and Heathrow.</p> <p>The proposed new runway at Birmingham could affect up to 103,000 people at 57dBA <math>L_{eq}</math> and above by 2030, compared to 34,000 in 1999. At Manchester, 43,400 people were within the 57dBA contour in 1999, and this could rise to around 70,000 people by 2030, depending on the level of growth at the airport.</p> <p>The numbers affected at other regional airports would be much lower but where they are significant the need for appropriate noise controls and mitigation measures is noted, for example in connection with growth at East Midlands Airport.</p> <p>Night noise restrictions at Heathrow, Gatwick and Stansted are a separate issue and will be the subject of consultation outside the White Paper process.</p>
	Other	<ul style="list-style-type: none"> <li>● Will the policy or project have a significant impact that does not appear to be reflected in any of the categories above?</li> </ul>	<p>Impacts on settlements, including community structure, distinctiveness and employment, and levels of deprivation, were considered in the SE airport studies.</p>

## Distributional impacts

Will the policy or project impact unevenly in respect of any of the following?

*Description of differential impacts across groups (quantified where possible)*

<b>Deprivation and income groups:</b>	Policies to encourage growth are likely to make air travel relatively more affordable, accessible and socially inclusive. By contrast, policies not to expand capacity would price-off lower income travellers and 'favour' higher income groups. Airport development could help provide employment opportunities for low income groups and deprived areas.
<b>Age:</b>	No differential impacts envisaged.
<b>Gender:</b>	No differential impacts envisaged.
<b>Disability:</b>	If anything, disabled passengers may benefit proportionately more than able-bodied, to the extent that growth of regional airports may encourage more point to point air services locally, and less need to travel long distances by road/rail to larger airports or to inter-line. In the UK, airlines and airports have agreed to follow a Code of Practice on access to air travel for disabled people, which complements the European Voluntary Commitments. This Code will be voluntary in the first instance, but if it does not prove effective the Government is prepared to give it statutory force.
<b>Race:</b>	Some differential impacts are possible. For example, the Heathrow third runway option would impact more heavily on ethnic minority communities (e.g. in Ealing, Southall, Slough) compared with the Stansted options.
<b>Regions and localities:</b>	Potentially, all regions should share in economic benefits from increased capacity, where it occurs, allowing a wider range and frequency of services. Constraining growth in the SE would have damaged all regions, but especially the SE and those parts of the UK (especially Scotland and Northern Ireland and the far South West) which depend heavily on air services to the SE, both for point-to-point and interconnecting traffic. By 2030 throughput for non-interlining passengers through SE airports are around 2.4 times 2000 levels. Corresponding growth factor for regional airports is 3.33 times.
<b>Rural areas:</b>	Rural areas are likely to benefit less, proportionately, than urban areas because most airports are sited close to centres of population. Growth in the regions, and more point to point air services, may tend to benefit peripheral (mainly rural) regions. Environmental disbenefits (noise, emissions, land take, habitat, biodiversity and so forth) are covered elsewhere. Loss of rural tranquillity in some locations is inevitable. But there will be countervailing economic benefits e.g. new direct and indirect jobs, better transport links, inward investment, inbound tourism, cluster industries and so forth which could also benefit rural areas in airport hinterland.
<b>Small firms:</b>	Aviation relies on many small firms providing services, including catering, cleaning, engineering and many small shops and businesses serving airport populations. Small firms more generally will benefit alongside others from the lower cost of air fares and better access to markets. Small firms will also benefit from improved air freight services, especially express services.
<b>Other effects that vary across different groups:</b>	–

## Risk

Main risks probably associated with air traffic forecasts, in the sense that if demand proves to be significantly greater or smaller than anticipated, costs and benefits will vary accordingly. But, although the White Paper sets out the Government's preferred options for any future capacity enhancement and indicates priorities in the South East, it will be for airport operators/developers to establish the business case and decide when to bring forward planning applications, depending on actual demand/growth. So the risk is minimised, and will fall largely on the private sector.

### Photographic acknowledgements

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