



BAA Glasgow 

# Glasgow Airport outline Master Plan

Draft for Consultation  
July 2005



---

# Foreword

The publication of Glasgow Airport's outline Master Plan, for public consultation, represents the beginning of an important new chapter in this airport's long and illustrious history.

In this outline Master Plan, we unveil our vision for the future of Scotland's busiest airport and the developments which we feel sure will enable its continued success.

The Government's 2003 White Paper, *The Future of Air Transport*, set out a clear policy framework for the development of UK airports. This long-term vision marks an important commitment by the Government to facilitate planning for future aviation growth.

Glasgow Airport provides many benefits to the city, to Renfrewshire and the whole of Scotland, which can be measured in terms of social and economic impact. As the business grows, so too will the number of good quality jobs for local people and the existing £700 million contribution to the Scottish economy will undoubtedly increase significantly.

BAA is already committed to a £500 million investment and development programme at its three Scottish airports. This money, drawn entirely from BAA's private funds, will provide a world-class infrastructure for Scotland and a high-quality legacy for travellers in the future.

However, there are many more impacts associated with airports. BAA Glasgow will support growth in air travel but will only do so in a responsible manner, with due consideration for our neighbours and the environment in which we all must live and work.

It is our job to work with Government and local communities to promote a balance between the positive impacts such as jobs and investment and the negative effects such as noise and air quality around our operations. In Europe, we continue to lobby for the aviation industry to be included in the EU Emissions Trading Scheme, which will allow the issue of aviation's greenhouse gas emissions to be effectively and responsibly addressed.

We know that our responsibilities extend far beyond our boundary. BAA Glasgow works closely with a number of key partners in Renfrewshire, Glasgow City and beyond, promoting the city-region and Scotland to the world and building strong and

sustainable international connections, well serving the area's thriving business community and tourism industry.

Now we are engaging the wider community in our development plans. We want to hear as many views as possible, from as wide a range of people as possible. This consultation, on the development proposals contained in this outline Master Plan, will remain open until 28th October and, during that time, I hope to speak to as many people and communities as possible.

We aim to publish a final Master Plan, taking on comments wherever possible, by the end of this year. I hope you take the opportunity to share your comments and opinions and I look forward to hearing from you in due course.



Stephen Baxter  
Managing Director, BAA Glasgow  
July 2005

---

# Contents

<b>Executive summary</b> .....	<b>6</b>
<b>1. Introduction</b> .....	<b>9</b>
1.1. Background to Master Plan .....	9
1.2. Historical development of Glasgow Airport .....	9
1.3. Role and character of Glasgow Airport .....	9
1.4. Objectives of the Master Plan .....	11
<b>2. The social and economic benefits of aviation</b> .....	<b>12</b>
<b>3. The framework of regulation and legislation</b> .....	<b>13</b>
3.1. Introduction .....	13
3.2. UK airports policy .....	13
3.3. Regional planning policy .....	13
3.4. Local authority policies .....	13
3.5. Development control .....	14
3.6. Airport design criteria .....	14
3.7. Airport security .....	14
3.8. Aerodrome safeguarding .....	14
3.9. Public Safety Zones .....	15
3.10. Environmental regulation .....	16
3.11. Economic regulation .....	16
<b>4. Today's airport – Glasgow in 2005</b> .....	<b>17</b>
4.1. Introduction .....	17
4.2. Air traffic control/airspace .....	17
4.3. Runway and taxiway system .....	17
4.4. Aircraft aprons .....	17
4.5. Passenger terminal facilities .....	18
4.6. Car parking .....	18
4.7. Cargo .....	18
4.8. Aircraft maintenance .....	18
4.9. Ancillary facilities .....	19
<b>5. Passenger demand – the forecasts</b> .....	<b>20</b>
5.1. Introduction .....	20
5.2. Air passenger forecasts .....	20
5.3. Passenger air transport movement forecasts .....	21
5.4. Passenger aircraft stand forecasts .....	21
5.5. Air cargo forecasts .....	22
5.6. Car parking forecasts .....	22
<b>6. Land use to 2015</b> .....	<b>24</b>
6.1. Introduction .....	24
6.2. Air traffic control/airspace .....	24
6.3. Runway and taxiway system .....	24
6.4. Aircraft aprons .....	24
6.5. Passenger terminal facilities .....	24
6.6. Car parking .....	25
6.7. Cargo .....	25
6.8. Aircraft maintenance .....	25
6.9. Ancillary facilities .....	25
6.10. Landscaping .....	25

<b>7. Surface access (transport links) to 2015</b>	<b>.27</b>
7.1. Surface access strategy in context	.27
7.2. Existing surface access infrastructure	.27
7.3. Future surface access infrastructure	.28
<b>8. Managing external impacts to 2015</b>	<b>.30</b>
8.1. Sustainable development and responsible growth	.30
8.2. Safeguarding the environment	.30
8.3. Air noise	.31
8.4. Ground noise	.32
8.5. Air quality	.32
8.6. Management of the water environment	.33
8.7. Biodiversity	.33
8.8. New land take	.34
8.9. Waste management	.34
8.10. Energy use and climate change	.34
8.11. Heritage	.35
<b>9. Land use to 2030 and a possible new runway</b>	<b>.36</b>
9.1. Introduction	.36
9.2. Air traffic control / airspace	.36
9.3. 2030 – Single main runway layout	.36
9.4. 2030 – Twin parallel runway layout	.37
9.5. Future Runway safeguarding policy	.38
9.6. Cargo	.39
9.7. Aircraft maintenance	.39
9.8. Ancillary facilities	.39
9.9. Future surface access infrastructure	.39
<b>10. Managing external impacts to 2030</b>	<b>.41</b>
10.1. Introduction	.41
10.2. Air noise	.41
10.3. Blight	.41
10.4. Other environmental issues	.41
<b>11. Where now? - the next steps</b>	<b>.43</b>
11.1. General	.43
11.2. Unresolved issues – 2015 land use plan	.43
11.3. Unresolved issues – 2030 land use plan	.43
<b>12. What do you think? - the public consultation</b>	<b>.44</b>
12.1. Introduction	.44
12.2. Summary of questions	.44
<b>13. Evaluating your responses</b>	<b>.46</b>
<b>14. Master Plan drawings</b>	<b>.47</b>
Drawing 1: 2005 Land Use	
Drawing 2: 2005 Layout	
Drawing 3: Indicative Boundary of Twin Parallel Runway Airport	
Drawing 4: 2015 Indicative Land Use	
Drawing 5: 2030 Indicative Land Use	
Drawing 6: Indicative Land Use - Twin Parallel Runways	
Drawing 7: 2015 Indicative Noise Contours	
Drawing 8: 2030 Indicative Noise Contours	
Drawing 9: Indicative Noise Contours - Twin Parallel Runways	

---

This edition of the Master Plan has been issued for consultation, as a precursor to the preparation of a final edition of the plan, which we aim to publish at the end of 2005.

If you have any comments please send them to us as soon as possible and no later than **28th October 2005**.

They should be addressed to:

**Airport Master Plan Consultation**

BAA Glasgow

St. Andrew's Drive

Glasgow Airport

Paisley

PA3 2SW

Email: [glasgow\\_masterplan2005@baa.com](mailto:glasgow_masterplan2005@baa.com)

Tel: 0870 040 0008

➔ [www.baa.com](http://www.baa.com)

---

# Executive summary

There is no doubt that Glasgow Airport plays a key part in the prosperity of Scotland's largest city and of the wider Scottish economy.

As Scotland's busiest airport, Glasgow provides valuable domestic and international air connections and represents the country's main gateway to and from North America, supporting the tourism industry and important business interests across Scotland.

Furthermore, Glasgow Airport has for many years led Scotland's leisure travel market, offering as many as 100 destinations in a busy year-round schedule.

A study by the Fraser of Allander Institute found that in 2002, Glasgow Airport supported 15,700 jobs across Scotland, with more than 5,000 people directly employed at the airport. Direct airport employment is forecast to increase to 8,200 by 2015, and to 12,100 by 2030, and it can reasonably be assumed that the number of people whose jobs and livelihoods depend on Glasgow Airport will increase at a similar rate. The report also found that the airport's contribution to the Scottish economy is more than £700m a year. Again, this figure will grow substantially as the airport develops.

Glasgow Airport's most critical contribution to the economic and social well-being of Scotland is its gateway role, supporting business and tourism and connecting Glasgow and Scotland with the rest of the world, increasingly through a fast-growing number of direct international services.

Scotland's cities are its economic heart, and are vital to the future health and competitiveness of the national economy. So it is essential that these cities are well supported by the infrastructure which connects them, and the high value-added businesses that will locate in Glasgow and the surrounding area, to the global economy.

BAA Scotland is committed to providing the air transport infrastructure that Glasgow demands, and thereby playing our part in the long-term growth of Scotland's economy and society. We see the development of our airports going hand-in-hand with the development of the nation's global competitiveness and future prosperity.

BAA's vision for Glasgow Airport is simple: through sustained and sensible investment in the airport's infrastructure and through the continuing

development of a strong and lasting route network, Scotland's busiest airport will become Europe's most successful regional airport, supporting Glasgow, supporting Scotland, and promoting social and economic prosperity.

In doing this, BAA Scotland willingly accepts its responsibility to local communities and we restate our commitment to long-term engagement with all airport neighbours, to ensure we remain a responsible and trusted partner in Glasgow's future.

If Glasgow Airport is to serve Scotland well in the future, it must continue to provide first-class facilities, and this outline Master Plan represents a blueprint for the airport of the future.

The plan looks at the development of the airport in two distinct time frames: between today and 2015, and beyond that to 2030. The first section of the plan considers how the airport will grow up to the year 2015 and sets out, in some detail, how it will cope with the increasing demand for air transport by developing within its current boundaries.

It details how the terminal facilities will expand to cater for the forecast increase in passengers from 8.6 million a year today to around 13 million and describes how the existing runway and taxiway systems will cope with the extra aircraft movements (take-offs and landings).

It assesses the need for good ground transport connections (surface access) and how this could be provided and deals with the important issue of sustainable development and responsible growth, together with how BAA intends to protect the environment, particularly in relation to noise and air quality.

The second element of the plan looks at how, and where, it is proposed that the airport will grow between 2015 and 2030, which is the upper limit of the timescales set by the Government in its White Paper.

Here, and particularly after 2015, the plan is less detailed, because of the difficulty in being absolutely certain about how air traffic will grow over that period with passenger estimates ranging from 17 million to 24 million a year by 2030 and aircraft movements reaching between 144,000 and 206,000 a year.

---

## Executive summary

However, it is quite clear that the continued development of Glasgow Airport up to that time will require the purchase of land outside the current boundary and the plan gives an indication of where the terminal may develop and where a second main runway, if needed in the future, would be located.

### Summary of the Master Plan

This plan, of necessity, is a fairly detailed planning document. But we have endeavoured to simplify the content as far as possible and we are ready to explain or interpret the detail as necessary. Contact details can be found in the consultation section of this document.

The main points arising from the outline Master Plan are these:

### 2005 - 2015

#### Forecasts

- Passenger numbers will grow from 8.6 million now, to between 12 million and 15 million
- Aircraft movements, also referred to as ATMs, (ie the number of landings and take-offs) will increase from 91,500 today to between 115,000 and nearly 140,000
- Peak runway movements will grow from 32 movements an hour now, to around 40 an hour
- Aircraft parking stands required will increase from 37 now, to around 48 under our central forecast
- Cargo tonnage will rise from 8,169 tonnes today, to 13,000 tonnes.

#### At the airport

- The terminal building will be extended and re-configured to accommodate more check-in desks, new hold baggage processing facilities, greater baggage reclaim capacity and additional departure lounge and boarding gate facilities to meet rising passenger demand. The first stage, to expand the International Departures and Arrivals areas of the main terminal, will open in the autumn of 2005.
- A new (second) international pier and associated stands (the i2 project) will be built to accommodate the growth in international services
- At least two replacement aircraft maintenance hangars are likely to be needed
- On-airport public car parking capacity of 5,500 today could rise to 10,000 by 2015, even if a rail link is built.

#### Surface access

- A new Glasgow Airport Rail Link (GARL) could be operational by 2008

- A new eastbound (Glasgow bound) slip road onto the M8 motorway will be required
- The airport's internal road system will undergo a major reconfiguration, with the creation of an integrated public transport interchange giving priority to key public transport services.

### The environment

- The population within the 57-decibel Leq contour by 2015 is forecast to increase, relative to the situation in 1999. To test the work completed on behalf of the Government and to obtain an up to date estimate of the number of people affected, BAA Glasgow proposes to commission a new set of more precisely constructed contours for 2015, to inform the final Master Plan
- The number of people who hear ground noise will not change significantly as developments during this time will occur within the existing boundary of the airfield and, mostly, well away from the nearest housing. However, noise assessments will be carried out before any major development.
- Research conducted on behalf of the Government indicates that the development of the airport will not compromise air quality standards in the period to 2015 and beyond. However, BAA is already working with local authorities to identify and address areas of poor air quality and has set out objectives to reduce the impact of the airport on air quality
- Water courses near the airport will not suffer any adverse impact as a result of new developments in this time-frame. BAA Glasgow is committed to working with the Scottish Environmental Protection Agency (SEPA) and other agencies to develop a range of quality management solutions relating to surface water discharge
- The impact of new developments on sites of ecological and heritage value will be minimal in the period to 2015. The Black Cart Special Protection Area (SPA)/Site of Special Scientific Interest (SSSI) and Paisley Moss Local Nature Reserve (LNR) will not be directly affected by our proposals and we will continue to work with Renfrewshire Council, Scottish Natural Heritage, the RSPB and others to ensure they continue to be managed in a manner that protects their biodiversity, whilst ensuring the safe operation of the airport.

### Land use

- An additional 20 hectares of land will be developed by 2015 to enable apron and ancillary facility developments. This land is currently within BAA Glasgow's ownership.

### 2015 - 2030

#### Forecasts

- Depending on the actual rate of growth, passenger numbers could grow to between 17 and 24 million a year, with more than half travelling direct to and from international destinations
- Aircraft movements could increase to between 144,000 and 207,000
- Peak runway movements could rise to around 45 per hour
- The number of aircraft parking stands needed would increase to around 60 under our central forecast, but possibly as high as 70 if higher growth is realised
- Cargo tonnage could grow to over 19,000 tonnes a year.

#### Land use

- In order to cater for the predicted growth of the airport, the purchase of additional areas of land not currently within BAA Glasgow's ownership will be necessary by 2030; to the east of Abbotsinch Road, 52 hectares of farm land would be needed to extend the airfield taxiway system and provide space for displaced and new cargo and maintenance facilities
- To the west of Barnsford Road, we envisage the development of the 25 hectares of land currently within our ownership (known locally as Walkinshaw Brickworks)
- If market growth dictates and the project is judged to be commercially and environmentally sustainable, BAA Glasgow is committed to building a second main runway. We welcome the positive action taken by the planning authorities in west central Scotland to safeguard the land required for this development through an amendment to the Glasgow & Clyde Valley Structure Plan
- A second main parallel runway, beyond 2030, would require an additional 105 hectares of land to the north of the existing airport boundary to accommodate the runway, associated taxiways and additional/relocated ancillary facilities
- The Government has stated that BAA Glasgow should put in place a voluntary scheme to address the blight caused to properties which would need to be purchased in the event of a second runway being built. BAA Glasgow consulted on proposals in 2004 and will soon publish a scheme to provide market support to affected property owners.

#### The environment

- More people will be affected by aircraft noise if a second runway is built. The Government has

stated that BAA Glasgow should put in place a voluntary scheme to address the generalised blight caused by the potential impacts of noise. BAA Glasgow consulted on proposals in 2004 and will soon publish a scheme to provide support to affected property owners.

#### Listening to your views

In reading this outline Master Plan and our ideas for the future development of Glasgow Airport you should bear in mind that it is by no means prescriptive, and simply sets a framework for what could follow.

The publication of an outline plan provides an opportunity for the company to consult with a wide range of stakeholders around the airport and it is our aim to do this over the coming months. Renfrewshire Council, as the airport's Local Planning Authority, and the Scottish Executive also need to know about our plans so that these can be considered alongside their own important strategic planning decisions.

To that end, we are actively seeking the views of everyone who wishes to contribute to the debate and will be meeting with representatives of community councils, local authorities and business organisations amongst others as we seek to find the best possible solution as to how to deliver our vision of the Glasgow Airport of the future.

What do you think of our plans? What are the main issues of concern to you and your neighbours? What do you think of our strategies to tackle aircraft noise and air pollution? Is there anything of which we have not taken account? We will listen to anyone who has a point to make.

Throughout this document, and summarised in a later chapter, you will find a series of questions posed around the key issues. While we are keen to understand the responses to these specific questions, we are willing to listen to any view on any issue.

Afterwards, having carefully considered all your comments, we will, if we can, reflect these in the final version. By the end of this year, our aim is to produce a Master Plan for the future of Glasgow Airport which attracts the widest possible consensus, so that when we publish our final blueprint for the future, we do so with the support of the communities we serve.



---

# 1 Introduction

## 1.1 Background to the Master Plan

1.1.1 In December 2003 the Government published a White Paper<sup>1</sup>, *The Future of Air Transport*, which sets out a strategic framework for the development of airport capacity in the UK up to 2030.

1.1.2 The White Paper states that in the Central Belt: "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."

1.1.3 The White Paper asks specified airport operators to produce Master Plans to incorporate the Government's conclusions regarding the future development of aviation. It indicates that Master Plans should set out proposals for the development of airports to 2015 in some detail, but indicative plans only are expected for the period between 2016 and 2030. It views Master Plans as the key planning tool through which airport operators should explain how they propose to take forward the strategic policy framework for their airport as set out in the White Paper.

1.1.4 The Government has recommended that airport operators produce outline Master Plans as soon as is practicable, with a final more detailed version by the end of 2005. Accordingly, this is a consultative draft of the Master Plan for Glasgow Airport and the intention is to publish the final version by December 2005. Thereafter, in line with the Government's advice, the Master Plan will be reviewed every five years.

1.1.5 The White Paper does not itself authorise any particular development, but sets out policies to inform and guide the consideration of planning issues. Development proposals will need to be considered through the planning system in the normal way.

1.1.6 The continued development of Glasgow Airport to 2030 will require the purchase of land outside the existing airport boundary. It is the policy of BAA Glasgow to optimise development of its existing land holding where practicable before acquiring additional land. It is envisaged that the development requirements to meet current forecast traffic growth to approximately 2015 can be met

within the existing airport boundary. After this date, more significant areas of land to the east of the current BAA boundary will be required to enable further growth. For this reason, this outline Master Plan sets out proposals for the development of the airport to 2015 in some detail and gives indicative plans only for the period 2016-2030.

1.1.7 This Master Plan recognises that, as stated in the White Paper: "ensuring the provision of adequate airport capacity in Scotland, whilst taking full account of environmental concerns, is an important priority for the Government and the Scottish Executive."

## 1.2 Historical development of Glasgow Airport

1.2.1 Glasgow Airport, as it stands today, covers 340 hectares and its current layout and land use are shown in Drawings 1 and 2. It is bounded to the north by the Black Cart Water, to the south and west by the M8 Motorway and to the east by the White Cart Water.

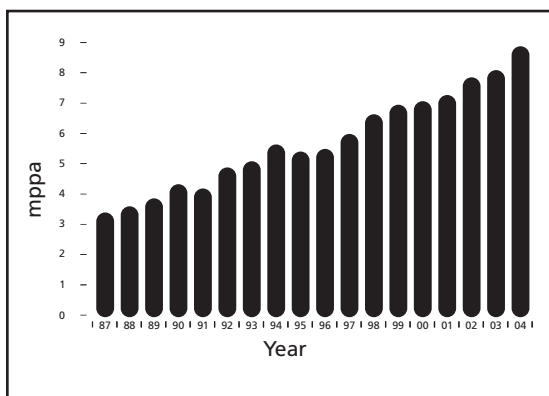
1.2.2 The existing airport was opened in May 1966 on the site of the former HMS Sanderling air base. It replaced Renfrew Airport, a much smaller facility located two miles to the east, as the principal airport for the city of Glasgow and west central Scotland.

1.2.3 The core developed area is around the terminal building, located on Caledonia Way. Other main developed areas include the cargo and maintenance base at Campsie Drive and the western maintenance and ancillary area around St. Andrew's Drive West and St. Andrew's Crescent. At privatisation in 1987, Glasgow Airport handled 3.4 million passengers a year. Figure 1 illustrates the substantial growth since 1987.

---

1 CM6046 The Future of Air Transport, Department for Transport, December 2003

Figure 1: Annual passenger figures since privatisation



### 1.3 Role and Character of Glasgow Airport

1.3.1 Glasgow Airport provides air transport services for the greater Glasgow area and the entire west of Scotland. It is the busiest airport in Scotland by passenger throughput and the sixth busiest in the UK, serving more than 100 destinations worldwide. The airport is recognised as Scotland's transatlantic and long-haul gateway providing 16 services to the United States and Canada and other destinations such as Dubai, the Caribbean and North Africa.

1.3.2 In 2004, the airport handled 8.6m passengers, of whom 53% were travelling on domestic services (primarily to/from the London airports) and 47% on international services. Approximately 29% of passengers were travelling on business and 27% of passengers travelled on no-frills airlines. The majority of passengers (approximately 85%) were resident in the UK.

1.3.3 The airport has grown at an average rate of 5.2% per year for the period 1995 to 2004, from 5.4m to 8.6m passengers. UK domestic services driven by the low cost carriers continue to dominate total throughput, accounting for 53% (or 4.6million passengers a year of all traffic). Approximately 60% (2.8 million passengers a year) of all domestic traffic is to and from the five London area airports, with a significant proportion of this traffic transferring onwards to international destinations. Glasgow is the principal base for charter operations in Scotland and the fourth largest in the UK, which accounts for the large volume of the airport's international passenger traffic. Table 1 shows the growth in passenger numbers (split between domestic and international), air transport movements (ATMs) and the average passenger load per passenger aircraft for the period 1995 to 2004.

Table 1: Glasgow Historic Passenger Air Traffic Data (1995-2004)

	Annual Domestic Passengers (millions)	Annual International Passengers (millions)	Annual Total Passengers (millions)	Annual ATMs	Average Flight Load (Passengers)
1995	2.63	2.79	5.42	72,970	74
1996	2.80	2.68	5.47	74,090	74
1997	3.14	2.87	6.01	78,790	76
1998	3.38	3.11	6.48	83,180	78
1999	3.41	3.35	6.76	85,600	79
2000	3.41	3.51	6.92	87,620	79
2001	3.80	3.45	7.25	91,260	79
2002	4.18	3.60	7.77	87,190	89
2003	4.48	3.64	8.12	87,460	93
2004	4.63	3.93	8.56	91,508	94

1.3.4 Between 1995 and 2004, international traffic grew steadily at 3.9% a year. New direct international services introduced during 2004 saw this sector grow by nearly 8% last year. At the same time, recent growth in the domestic market has been driven mainly by the low-cost/no-frills sector. Average passenger load per passenger aircraft has risen from 74 to 94, an annual average increase of approximately 2.8%.

1.3.5 Naturally, passenger demand is greater in the summer months as leisure demand increases, primarily due to the school holiday period in July and August encouraging a peak in those two months. This is more than enough to offset the slight reduction in business demand during the same period. The October school holiday period also generates a significant amount of demand for package holidays and short breaks.

1.3.6 The daily demand profile shows that Fridays and Saturdays are much busier on average in the peak month than any other days. This is due to a combination of business and leisure demand on Fridays and the relatively high charter capacity for

---

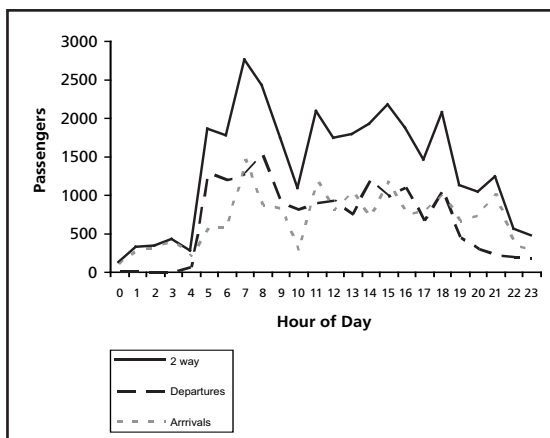
## 1 Introduction

leisure passengers on Saturdays.

1.3.7 The illustration of hourly demand, outlined in Figure 2, shows that the periods between 6am and 8am and 3pm and 6pm are the busiest times at Glasgow Airport. The peak departing period at the beginning of each day, and the peak arriving period at the end of the day, reflect the fact that Glasgow is an overnight base for a large number of aircraft. The other peaks during the day (eg between 10:30 and 11:30) reflect the in-bound and out-bound patterns created by a busy short-haul, domestic route network and international scheduled and charter services.

1.3.8 There is scope for growth in demand around the middle of the day between 10am and 2pm. Long-haul routes, increased frequencies and international-based aircraft operators could easily be accommodated during these relatively quiet periods.

Figure 2: Glasgow average hourly distribution over the peak month (2004)



1.3.9 The monthly profile of passenger air transport movements indicates how available capacity varies with season. A large proportion of the airlines operating at Glasgow are year round businesses with mixed frequencies. However the seasonal variation which is apparent at most airports is more pronounced at Glasgow due to the large summer charter capacity.

### 1.4 Objectives of the Master Plan

1.4.1 As outlined in paragraph 1.1.6, this Master Plan sets out the development strategy for the sustained, and responsible, growth of Glasgow Airport to 2030. In line with the expectations of the White Paper, this document describes proposed terminal and airfield expansion and that of supporting ancillary facilities up to 2015, with

indicative plans of development beyond that date up to 2030.

1.4.2 The key objectives of this Master Plan are as follows:

- To set out the prospects for air traffic growth for the next 25 years
- To clearly identify the areas of land currently outside the airport's boundaries which will be required in order to allow the airport to expand to handle the forecast growth in passenger numbers
- To set out the approximate timescales for the incremental phasing of additional capacity requirements
- To identify the key improvements required to ground transport links (surface access), serving the airport and the surrounding area
- To inform the current review of the Glasgow and Clyde Valley Structure Plan and, subsequently, the planned review of the Renfrewshire Local Plan expected to commence in 2006; and
- To identify external impacts and set out mitigation strategies and proposals.

1.4.3 The White Paper included an indicative new airport boundary, which the DfT considered would be required to serve Glasgow Airport's future development up to 2030. The process of evaluating and developing the airport expansion proposals has resulted in BAA Glasgow developing a future boundary which is very similar to the area shown in the White Paper, but which does differ to the north of the existing airport boundary. Chapters 6 and 9, which describe future development requirements, outline what these differences are and explain why changes have been made.

1.4.4 The existing airport boundary, together with the indicative area shown in the White Paper and the future boundary proposed by BAA Glasgow, are shown on Drawing 3.

---

## 2 The social and economic benefits of aviation

2.1.1 The White Paper states that “Aviation makes a significant contribution to Scotland’s economy and social welfare.” In BAA’s view, the responsible growth of air transport in Scotland can help disperse the economic and social benefits which air travel generates across the country and society.

2.1.2 Scotland’s main cities, namely Glasgow and Edinburgh, are critical to the health and competitiveness of the national economy and it is important that their contribution is reflected in their ability to grow. Glasgow Airport is clearly well placed to support and serve the high value-added economic activities arising from Glasgow’s position as Scotland’s largest city.

2.1.3 In 2002, the respected Fraser of Allander Institute studied the social and economic impacts of BAA’s three Scottish airports at Aberdeen, Edinburgh and Glasgow. The study measured the total employment, output and GDP in Scotland, supported by the activities at the three airports. The study did not set out to address other economic issues, such as how good air transport links might facilitate inward investment to particular parts of the UK, or the role that transport infrastructure in general has in growing Scotland’s productivity and its future ability to compete in a global marketplace.

2.1.4 The main conclusions of the Fraser of Allander report, as it affected Glasgow, were:

- In 2002, the airport supported 15,700 jobs across Scotland, with more than 5,000 of those people directly employed at the airport. The remainder are employed indirectly, through supply chains and associated service-providers etc
- The airport’s contribution (economic output) to the Scottish economy measures £700 million.

2.1.5 A copy of the 2002 Fraser of Allander report is available on our website at [www.baa.com](http://www.baa.com).

2.1.6 Direct employment at Glasgow Airport is forecast to increase to 8,200 in 2015 and 12,100 by 2030. These forecasts have been prepared following an airport employment survey by BAA Glasgow in 2004.

2.1.7 BAA Glasgow currently pays more than £3.5 million in rates every year to Renfrewshire Council and over £2.5 million to Strathclyde Police. Unlike many other rate-payers, BAA Glasgow maintains all the roads within the airport boundary, including the costs of street lighting and is also responsible for all waste disposal costs.

2.1.8 Since 1990, BAA has invested more than £250 million at Glasgow Airport, creating a high-quality facility of which Scotland can be proud and at no cost to the taxpayer. The company is further committed to a ten-year £500 million investment programme across its three Scottish airports at Aberdeen, Edinburgh and Glasgow.

### **Question:**

**What principal social and economic benefits do you associate with Glasgow Airport and which of these do you regard as most important to local people?**

---

# 3 The framework of regulation and legislation

## 3.1 Introduction

3.1.1 The Government's role in the aviation industry is one of principal enabler and regulator. To enable future airport development, the Government exercises its influence through its own transport policy and through the national, regional, and local planning systems. To regulate existing airport activities, Government uses primary and secondary legislation.

3.1.2 There are functional and legal limits to BAA Glasgow's activities as an airport owner and operator. For example, responsibility for airspace policy and air traffic control respectively lies with the UK Government, the Civil Aviation Authority (CAA) and National Air Traffic Services (NATS). This chapter outlines the principal controls and influences of relevance to Glasgow Airport's operation and future development.

## 3.2 UK airports policy

3.2.1 The White Paper is the principal policy document with which BAA's future plans for Glasgow Airport are aligned. The White Paper sets out a strategic framework for the development of airport capacity in the UK up to 2030, against the background of wider developments in air transport. The White Paper's main conclusions with regards to Glasgow Airport is that BAA should plan for significant expansion of the terminal and associated facilities and that land for the provision of an additional parallel runway should be reserved through a review of the Development Plan framework.

3.2.2 Government airports policy will need to be reflected within the hierarchy of planning policy documents at national and local level. Referring to airport Master Plans, the White Paper states that: "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."

3.2.3 BAA Glasgow will closely scrutinise such policy documents, relevant to the airport, which may in future be published by regional bodies, local authorities and other agencies. BAA Glasgow will seek to ensure that they respect, and make reasonable provision for, the interests of the airport, its suppliers and its users, consistent with national policy.

## 3.3 Regional planning policy

3.3.1 The Glasgow and Clyde Valley Structure Plan was approved by Scottish Ministers on 1st May 2002. It constitutes the Structure Plan in force for the purposes of Section 24 of the Town and Country Planning (Scotland) Act 1997. The Structure Plan provides a strategic planning framework for the development of the greater Glasgow area to around 2020.

3.3.2 Following the publication of the Aviation White Paper in December 2003, the eight constituent local authorities of the Glasgow and Clyde Valley Structure Plan Joint Committee, recognising the economic and social importance of Glasgow Airport, promoted an alteration to the Approved Plan to ensure consistency with national policy. This alteration, which reserves more than 200 hectares of land for the expansion of Glasgow Airport, was approved by Scottish Ministers and became operational on 24 January 2005. BAA Glasgow welcomes and supports the positive intervention of the Local Authorities to ensure this land is safeguarded through the development plan process.

3.3.3 The Joint Committee is now proposing a comprehensive revision of the Structure Plan. In May 2005, it published a consultative draft version of the replacement plan, which will incorporate the recently approved alteration for Glasgow Airport and seek to safeguard long-term capacity improvements to the M8 motorway and its junctions.

## 3.4 Local authority policies

3.4.1 Glasgow Airport lies within the Renfrewshire Council area and is covered by the local planning policies of the Renfrew District Local Plan, adopted in February 1996. This plan is expected to be superseded by Autumn 2005, by the Renfrewshire Local Plan, which was the subject of a Public Local Inquiry (PLI) in December 2003.

---

## 3 The framework of regulation and legislation

### 3.5 Development control

3.5.1 All major airports in Scotland have extensive permitted development rights under the provisions of Part 14 of the Town And Country Planning (General Permitted Development) (Scotland) Order 1992, as amended. Essentially, this allows: "the carrying out on operational land by a relevant airport operator or its agent" of development (including the erection or alteration of an operational building), in connection with the provision of services and facilities at a relevant airport, subject to the prior submission of a consultation (rather than a planning application) to the local planning authority. The entitlement does not include:

- The construction or extension of a runway
- Non-operational buildings (ie ones unrelated to the movement or maintenance of aircraft, or the embarking, disembarking, loading, discharge or transport of passengers, livestock or goods) eg hotels
- Development on non-operational land.

These exceptions require specific applications for planning permission to be submitted for scrutiny and determination in the normal way.

3.5.2 The Town and Country Planning (Scotland) Act 1997 defines operational land as land owned by the airport and used for the purpose of carrying out the airport's undertaking.

### 3.6 Airport design criteria

3.6.1 The UK, as a signatory to the 1944 Chicago Convention, is required to operate its airports in accordance with specific internationally-agreed criteria. In the UK, responsibility for ensuring this occurs resides with the Civil Aviation Authority (CAA). Airports operate in accordance with the terms of a licence issued by the CAA and, to obtain and retain that licence, operators must satisfy and continually adhere to the CAA's exacting safety-related standards. Those affecting the design of airports are finely detailed in a CAA publication, CAP168, and are subject to revision in the light of ongoing monitoring and review, including international co-operation to consider such matters as the introduction of new aircraft, including the Airbus A380.

3.6.2 The development of Glasgow Airport's facilities will be in accordance with CAA requirements, indeed, some development may be implemented as a direct response to the introduction of new or revised standards. While it is not appropriate for this Master Plan to explain the

standards in fine detail, it is worth noting that these cover such matters as:

- The layout, separation and widths of runways and taxiways
- Aircraft stand sizes and apron layouts
- Airport fire service facilities
- The height and design of buildings and structures.

### 3.7 Airport security

3.7.1 Airport security requirements are the subject of regulatory control by the Department for Transport (DfT). They too can have a defining influence on the need for development, as well as on the form and character of the airport facilities at Glasgow Airport. For example, we are required by DfT to segregate departing and arriving international air passengers in the airport's airside areas. This explains for example why the existing international pier is a two level facility as opposed to the single level domestic piers.

### 3.8 Aerodrome safeguarding

3.8.1 Glasgow Airport, in common with other major airports, is situated at the centre of a series of obstacle limitation surfaces which define, relative to the runway, maximum acceptable heights for buildings and other structures, such as telecommunications masts and wind turbines. Some features in an airport's locality, notably higher ground such as that to the north and south of Glasgow Airport or significant buildings or structures, can constrain and consequently determine the usable length of a runway. The protection of these surfaces is undertaken as part of the routine Aerodrome Safeguarding process.

3.8.2 Safeguarding of Aerodromes<sup>2</sup> is a process of statutory consultation between local planning authorities and airport operators. The process is intended to:

- Ensure that an airport's operation is not inhibited by developments, buildings or structures which might infringe that aerodrome's obstacle limitation surfaces
- Protect visual flight paths by ensuring that runway approach lighting is not obscured by any development and that lights elsewhere do not present any potential for confusion

---

2 Scottish Executive Planning Circular 2/2003 Safeguarding of Aerodromes, Technical Sites and Military Explosives Storage Areas: The Town and Country Planning Scottish Executive (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) (Scotland) Direction 2003

---

### 3 The framework of regulation and legislation

- Protect the accuracy (and therefore safety) of radar and other electronic aids to air navigation, eg by opposing wind farm developments whose turbine blades could generate an intermittent return on air traffic controllers' radar screens
- Reduce the hazard from bird strikes to aircraft, associated with such land uses as waste disposal and sewage treatment, areas of open water and large landscaping schemes.

3.8.3 Local Planning Authorities are issued with safeguarding maps which enable them to identify those planning applications on which BAA, or any relevant airport operator, must be consulted. As a consequence of this consultation process, BAA may choose to object to a proposal, to not object or to withhold its objection, subject to the application of appropriate conditions.

3.8.4 Government targets for renewable energy provision in the UK have resulted in a large number of proposals for land based wind farms being brought forward in the last few years. BAA has been consulted on proposals at more than 200 sites since 2003, 44 of these are within a 30km radius of Glasgow Airport. Within a 45km radius, a further 21 proposals are being investigated or progressed.

3.8.5 While the company is generally supportive of renewable energy initiatives and has no objection in principle to wind farms, there remain significant concerns regarding the impact that wind turbines can have on the safe and efficient operation of aircraft and airports, both in terms of their physical obstruction to air navigation (ie the height of the structures) and, more significantly, their visibility to radar and the potential confusion this can pose for air traffic controllers. The amount of interference ("clutter") generated on the radar screen depends on the number of wind turbines, their size, construction materials and location and on the shape of its blades. Although a number of different technical solutions continue to be investigated by the Department for Trade and Industry, the British Wind Energy Association, civil aviation bodies and the military, there is at present, no approved solution for this problem.

3.8.6 The proliferation and scale of wind farm proposals in south and west Scotland, coupled with the possibility that these may receive consent without a technical solution being approved and implemented, gives BAA Glasgow and NATS very serious concerns that the additional airport capacity promoted by the White Paper will not be achieved, as airspace capacity in the Scottish Terminal

Movement Area (TMA) will be constrained by the introduction of preventative measures to ensure the safe operation of aircraft.

3.8.7 In order to safeguard the future expansion of the airport and the safe, orderly and expeditious flow of air traffic, BAA will continue to examine very closely any proposals for wind farms and turbines which are referred to the company for advice. On the expert advice of NATS, our air traffic control provider, BAA will continue to adopt a precautionary approach to proposals for wind turbines where we are advised that there is a risk that these might compromise the safety, flexibility or capacity of the airport. We would recommend that renewable energy developers undertake discussions at an early stage in order to identify any potential areas of concern. This can be done through direct contact with BAA's Safeguarding Team (email [safeguarding@baa.com](mailto:safeguarding@baa.com)) or in accordance with the guidance available on the British Wind Energy Association (BWEA) website ([www.bwea.com/aviation](http://www.bwea.com/aviation)). BAA Glasgow also asks the Scottish Executive to give greater recognition of this issue in their Planning Guidance and that Local Planning Authorities give serious consideration to this issue when preparing their local and strategic development plans.

3.8.8 Chapter 12 of *The Future of Air Transport* specified that the Aerodrome Safeguarding process should be used to protect land, outside existing airports, needed for future expansion against incompatible development in the intervening period. Revised safeguarding maps will be issued to Local Planning Authorities towards the end of 2005, separately to this Master Plan, to ensure that BAA is consulted on any application which might conflict with safe operations at the existing or expanded airport.

3.8.9 Safeguarding issues related to the possible development of a new runway at Glasgow Airport are addressed in Chapter 9.

#### 3.9 Public safety zones

3.9.1 The risk of air accidents occurring within, and in close proximity to, airports has long been the subject of Government policy, through the clear definition of Public Safety Zones (PSZs) which extend backwards from a runway's landing threshold. PSZs are the means by which airport operators identify areas where the risk of an aircraft accident, while extremely low, may be such as to merit some restrictions on the use of land.

---

## 3 The framework of regulation and legislation

3.9.2 The current PSZs were calculated in 1999 and formally adopted in 2002. They were defined following thorough Government studies of the risk of death or injury to people on the ground in the event of an aircraft accident on take-off or landing at the UK's busiest airports<sup>3</sup>. The basic policy objective is that there should be no increase in the number of people living, working or congregating in PSZs and that, over time, the number should be reduced as far as circumstances allow.

3.9.3 The areas of Glasgow Airport's PSZs are based on the 1 in 100,000 individual risk contours for the airport, based on forecasts of the numbers and types of aircraft movements in 2015. There are no PSZs relating to Runway 10/28 (Glasgow's cross-wind, secondary runway) as this runway is not used intensively enough to warrant this particular form of protection.

3.9.4 In addition, the Secretary of State for Transport has asked that all occupied residential properties and commercial and industrial properties occupied as normal all-day workplaces, within an area of greater risk, are vacated. The area is defined in the 1 in 10,000 contour. There are no such properties at Glasgow Airport.

3.9.5 It is the responsibility of the Local Planning Authority to ensure that the directions contained within the Circular are adhered to.

### 3.10 Environmental regulation

3.10.1 Glasgow Airport operates within the context of a variety of nationally applicable policies and standards relating to the environment. These are described in relevant detail in Chapter 8 of this plan, which explores the scale and mitigation of Glasgow Airport's potential environmental effects up to the year 2015 and seeks views on BAA's current approach.

### 3.11 Economic regulation

3.11.1 The Airports Act 1986 established the framework for private ownership of airports and provides specific controls on the use and operation of airports. The status of Glasgow Airport Limited as a relevant airport operator and Glasgow Airport as a relevant airport is conferred by Section 57 of that Act.

3.11.2 Airlines are required to pay for the air traffic control services for the airspace through which they fly. At our Scottish airports, this service is provided by National Air Traffic Services (NATS). There is also a government tax, Air Passenger Duty, which is a levy paid directly to the UK Treasury. Charges currently range from £5 to £40 per departing passenger depending on destination.

---

3 Scottish Executive Planning Circular 8/2002 – Control of Development in Airport Public Safety Zones



# 4 Today's airport - Glasgow in 2005

## 4.1 Introduction

4.1.1 This chapter describes the facilities of Glasgow Airport as it is today (apart from surface access arrangements which are addressed in Chapter 7). It details existing airport facilities and committed developments, ie those projects either under construction or due to be in place by the end of 2005.

4.1.2 The existing airport layout and current land-use are illustrated on drawings 1 and 2.

## 4.2 Air traffic control / airspace

4.2.1 The existing air traffic control tower was originally built in the late 1940s and was substantially upgraded in the early 1960s prior to the opening of the current airport in 1966. Located on an island site between the main runway and apron area, the 15-metre high structure provides clear and uninterrupted views across the airfield and apron area.

4.2.2 The increasing number of aircraft movements on the main runway, taxiway system and apron area has resulted in the need for investment in new technology to assist air traffic personnel. The most recent example of this type of project is the newly completed £1million surface movement radar to improve the operational efficiency and safety of the airfield.

4.2.3 The airspace serving Glasgow Airport is managed by NATS and controlled from the Scottish Air Traffic Control Centre at Prestwick and the airport control tower at Glasgow. NATS employs long-established procedures for routing arriving and departing aircraft.

4.2.4 Although the airspace surrounding Glasgow, Edinburgh (and Prestwick) airports is relatively small and densely utilised, there is enough separation (ie space between the airports and their departure and arrival routes), to ensure that operations at one airport do not affect the other.

## 4.3 Runway and taxiway system

4.3.1 There are two operational runways in use at Glasgow today:

- Runway 05/23 (the main runway) is 2,658m in length and is equipped with a Category III instrument landing system (ILS). It lies in a south-west/north-east direction and is oriented into the prevailing wind. It can accommodate the operation of any aircraft up to and including the

Boeing 747. The main runway is complemented by a parallel taxiway system which allows for a peak hourly movement level of 36 take-offs or landings per hour

- Runway 10/28 (the secondary cross wind runway) is 1,104m in length and lies in an east/west direction. It is a visual runway only and is not equipped with instrument landing facilities. The relatively short length means this runway can only accommodate operations of aircraft up to regional jet size. As a result, runway 10/28 handles approximately 3 air transport movements per day, which amounts to less than 1% of the airport's total.

4.3.2 There are further enhancements that can be made to the main runway and taxiway system, which BAA Glasgow believes could increase the capacity of the runway system as a whole to approximately 45 movements per hour.

## 4.4 Aircraft aprons

4.4.1 Glasgow Airport currently has 37 aircraft parking stands of various sizes for regular passenger operations, including three jumbo stands which can accommodate Boeing 747 aircraft. Of these stands, 30 are "contact" stands, ie they are located immediately adjacent to the terminal building/piers and passengers can walk directly to and from the aircraft. The remaining seven stands are known as "remote", ie they are not within walking distance of the terminal and passengers have to be coached to and from aircraft.

Table 2: Glasgow airport passenger stands

	Small	Medium	Large	Jumbo	Total
Contact stands	14	7	7	2	30
Remote stands	0	5	1	1	7
Total	14	12	8	3	37

Small: eg BAE ATP, Boeing 737-400, Embraer 145 and BAE146

Medium: eg Boeing 757, Airbus 320 and Boeing 737-800

Large: eg Boeing 767

---

## 4 Today's airport - Glasgow in 2005

Jumbo: eg Airbus 330, Airbus 340, Boeing747 and B777

4.4.2 There are three small stands on the east side of the apron, serving the airport's cargo facility.

### 4.5 Passenger terminal facilities

4.5.1 Glasgow Airport is served by a main passenger terminal, which was originally built in 1966, and T2, an adjacent passenger check-in and baggage facility completed in May 2004. The main terminal building was extensively redeveloped and remodelled in the early 1990s and is nearing its current design capacity of around 9 million passengers a year. Adjoining the main terminal are three piers (international to the west, domestic in the centre and the east pier, which caters for a mixture of domestic and international traffic). Internally, the building is organised such that international departures and arrival facilities are situated at the western end of the building, with domestic departure/arrivals located in the centre and towards the eastern end. After the passenger security search areas, which are located close to the start of each pier, there are departure lounges and gate areas.

4.5.2 A forecourt, which allows passengers to be picked up and dropped off at the front of the terminal, forms part of Caledonia Way, an internal access road. Public transport facilities in the form of bus stops and a taxi rank are all located along the forecourt directly opposite the terminal.

4.5.3 The main terminal and the new T2 facility provide a total of 63 check-in desks with 100% hold baggage screening systems and 14 self-service check-in kiosks. There are three domestic and four international baggage reclaim belts.

4.5.4 There is a range of retail and catering facilities both landside (before security) and airside (the zone after security).

### 4.6 Car parking

4.6.1 There are four public car parking areas within the airport, offering a total of 5,531 spaces. There are 1,382 staff car parking spaces on the airport campus, 680 of which are located within the Viaduct car park located between St. Andrew's Drive and Sanderling Road. The remaining spaces are attached to the various offices and ancillary service buildings located around the airport campus.

4.6.2 Table 3 below shows the number of parking spaces by type:

Table 3: Car park capacity

Location	Spaces
Short stay car park 1	825
Short stay car park 2 – new MSCP and surface levels	2,405
Short stay car park 3	522
Long stay car park (NCP Flightpath)	1,779
Staff car parking	1,382

### 4.7 Cargo

4.7.1 Glasgow Airport has a busy cargo facility which occupies a land area of approximately 2.5 hectares at Campsie Drive. The area comprises a mixture of transit sheds and warehouses (providing approximately 8,000m<sup>2</sup> of floorspace) and is served by a dedicated cargo apron. Glasgow's cargo business comprises both flown and trucked cargo, as the airport is a focal point for trucked air freight operators who access other major freight airports such as London Heathrow and Stansted by road.

4.7.2 In 2004, 8,169 metric tonnes of cargo were handled, representing a 54% rise on the previous year. Air flown cargo accounted for approximately 10% of the total.

4.7.3 The very significant increase in total cargo throughput is mainly due to growth in the volume of "bellyhold" freight being carried on passenger services. A number of long-haul airlines serving Glasgow such as Emirates and US Airways operate aircraft such as the Airbus A330 and the Boeing 767, which have a large "bellyhold" freight capacity. Emirates has made Glasgow a Scottish hub for its Skycargo operation, shipping goods to the Gulf region, the Far East and Australasia. Cargo throughput is forecast to grow by an average of 3.2% per year between now and 2030.

### 4.8 Aircraft maintenance

4.8.1 There are currently three aircraft maintenance hangars at Glasgow Airport providing a total of 68,000m<sup>2</sup> floorspace. The largest hangar, located on Campsie Drive, comprises 27,000m<sup>2</sup> and is occupied by British Airways. This base is the principal location for the maintenance of their short-haul Boeing 737 fleet. British Airways Cityexpress (the regional subsidiary of BA) occupies the 7,700m<sup>2</sup> Hangar 10,

---

## 4 Today's airport - Glasgow in 2005

located at the western maintenance base. This hangar dates from World War Two and is due to be demolished by Autumn 2005.

4.8.2 Loganair occupies the newest maintenance facility at the airport, also located at the western maintenance base. Completed in 2001, their hangar provides 6,100m<sup>2</sup> of floorspace.

### 4.9 Ancillary facilities

4.9.1 A range of ancillary services and facilities are required at all airports to support the aviation business. These sometimes require a considerable land-take and although some can be located "off-airport", the majority need, for operational efficiency or regulatory reasons, to be in close proximity to the core terminal area. We indicate some of the more important ancillary facilities below:

- **Airport fire station** - Glasgow Airport has its own airport fire service, which employs 67 staff and is operational 24 hours a day. The fire station is approximately 1,350m<sup>2</sup> in size and is located in an airside area adjacent to the airfield taxiway system. The airport's fire training ground covers an area of 0.5 hectares and is located in the north western part of the airport, off Barnsford Road. The fire station has a CAT 8 designation, consistent with operations by widebody aircraft (eg Airbus A330-200) under normal operating conditions, but, with the provision of additional fire-fighters, the airport fire cover can be upgraded to CAT 9 to cater for the largest "jumbo" size aircraft (eg Boeing 747-400)
- **Fuel farm** - There is one fuel farm covering an area of approximately 1.5 hectares. There are a total of seven surface level tanks with a combined capacity of 3.3 million litres for the storage of Jet A1 aviation fuel. On-site accommodation includes offices, training and staff welfare facilities. Fuel is delivered by tanker to the fuel farm and then by bowser to the aircraft
- **In-flight catering** - There are two flight catering businesses operating at Glasgow Airport, located at Campsie Drive. The principal operator, Alpha Catering, occupies a total site area of 11,000m<sup>2</sup>. In addition to the building, there are car-parking facilities and loading bays. Gate Gourmet occupies a slightly smaller base, of 9,500m<sup>2</sup>
- **Car-hire facilities** - Car-hire facilities including terminal facilities (desks within the domestic reclaim hall), ready return areas (parking spaces and modular kiosks, with customer shuttle bus service to the terminal). There are also back-up areas (servicing areas with vehicle wash and fuelling facilities and office accommodation). A

total of 187 ready return parking spaces are provided opposite the main terminal, adjacent to Short stay car park 2. Five of the six car hire companies have back-up facilities located on-airport, covering a total area of 1.65 hectares, with Europcar's back-up depot located off-airport on Inchinnan Road

- **Hotels** - There are three hotels located on the airport campus, and a further two immediately to the south within the Glasgow Airport Business Park. The largest of the on-airport hotels is the Holiday Inn, situated opposite the main terminal, which provides 300 rooms, a restaurant and several function/meeting rooms. The Express by Holiday Inn and The Travel Inn provide a further 141 and 101 rooms respectively. The overall area occupied by on-airport hotels is approximately 2.2 hectares.

4.9.2 In addition to these ancillary facilities, Glasgow Airport also has the following:

- General / business aviation facility
- Aircraft sanitation unit
- Motor transport facilities
- Emergency rendezvous points
- Engineering workshops and snow base
- Contractors compounds
- Office accommodation
- Police station
- Taxi feeder rank
- Petrol filling station
- Nursery
- Flying club.

#### QUESTION:

Do you agree that the contents of Chapter 4 represent a fair and accurate summary of Glasgow Airport today? If not, why not?

---

# 5 Passenger demand - the forecasts

## 5.1 Introduction

5.1.1 Following *The Future of Air Transport White Paper*, which predicts a significant and consistent rise in the number of people travelling by air, it is necessary to outline the range of traffic forecasts from the present day to 2030. Growth in the demand for air travel to and from Glasgow has been forecast using a standard air traffic forecasting model which measures various economic indicators. It is assumed that growth in air travel demand is driven mainly by economic growth (ie GDP, trade and consumption) and changes in the price of travel (ie real air fares).

5.1.2 The approach to passenger demand forecasting taken by BAA and the DfT means that the actual annual passenger volume in any one year will be influenced by any number of economic variables, such as those outlined above. Movements in air fares and population will also influence traffic change along with the extent to which Glasgow Airport has a share of the Scottish lowlands traffic, which is currently shared across three airports at Glasgow, Edinburgh and Prestwick. Consequently, Glasgow Airport's annual passenger demand in 2030 will fall somewhere within a range of possibilities. For planning purposes, BAA Glasgow has based its medium and long-term development plans on the midpoint of this range of forecasts. It is important to emphasise that if traffic growth is at the upper end of the range, development will need to be accelerated to meet demand, while if traffic grows more slowly than predicted, capacity will inevitably be provided at a later date.

5.1.3 Forecasts included in this section relate to the following:

- Annual passenger figures
- Annual aircraft movement figures
- Peak hourly runway movement figures
- Passenger aircraft stand figures
- Cargo tonnage figures
- Public car parking figures.

## 5.2 Air passenger forecasts

5.2.1 The econometric model used to produce unconstrained passenger demand forecasts incorporates the best estimates of economic growth, real fares and other variables. The model delivers an average annual increase in passenger figures of 4.0% to 2015, and approximately 3.4% over the period to 2030. GDP for the UK is assumed to grow at an average annual rate of 2.1% over the period,

consumer expenditure at a similar rate, and trade at an average of 4.2%. This represents a slowing down of growth over recent trends.

5.2.2 The domestic market has experienced a high rate of growth since 2000 with the entrance of no-frills carriers into the market, supported by active marketing of our airports by BAA Scotland. Indications are that the high level of expansion slowed dramatically in late 2003 with some airline retrenchment and consolidation. Glasgow Airport's catchment area is now well served by domestic air services, with a significant proportion of travellers utilising these services to transfer in the South East to international destinations. This provides scope for a significant expansion of international air services at Glasgow, which will to an extent mean a substitution of international for domestic air travel, ie the component currently transferring at other domestic points (eg London), to onward international destinations.

5.2.3 Table 4 below illustrates the range of BAA air passenger forecasts, as outlined above.

Table 4: Annual passenger forecasts (millions)

Year	Low	Central	High
2004 (Actual)		8.6	
2015	12.1	13.3	14.4
2030	16.9	20.7	24.3
Avg. growth a year	2.7%	3.4%	4.1%

5.2.4 The current international passenger volume at Glasgow is around 3.7 million passengers. Of this figure, around 70% are using charter carriers such as Thomsonfly and First Choice Airlines, 24% traditional full service operators such as Continental, Emirates and KLM and 6% are on low cost/no-frills carriers such as FlyGlobespan. Average annual growth in the international market of 5% over the full period is forecast. Of this, the no-frills market share is expected to increase to around 50% of international traffic. Long-haul traffic is expected to increase from the current figure of around 700,000 passengers a year to 3.6 million by the end of the

## 5 Passenger demand - the forecasts

period. Domestic passengers as a proportion of the total are forecast to decrease from the current 55% to 45% by the end of the period.

5.2.5 Foreign-based passengers, ie those passengers whose homes are not in the UK, currently represent 15% of the total passenger base. This number is forecast to increase to 31% by 2015 and to 41% by 2030, underlining a need for Glasgow's total number of available hotel beds to increase in support of the area's growing tourism business.

5.2.6 It is assumed that general, short-term improvements in rail services will have little impact on domestic air services. However, significant impacts would no doubt result from any future development of high-speed links, similar to the TGV or Eurostar, between Scotland and London. Given that there are no firm commitments to deliver rail investment of this scale, the forecasts have to assume that domestic rail competition will have a moderate effect, less than 1%, on the growth of domestic air travel demand beyond 2025.

### 5.3 Passenger air transport movement forecasts

5.3.1 Table 5 below shows the range of BAA forecasts for the annual number of passenger air transport movements.

**Table 5: Annual passenger air transport movement forecasts**

Year	Low	Central	High
2004 (Actual)		91,500	
2015	115,200	125,300	136,100
2030	144,200	177,600	206,800
Avg. growth a year	1.8%	2.6%	3.2%

5.3.2 In terms of air transport movements, BAA's forecasts reflect a reduction of domestic service share for Glasgow, from 70% of passenger air transport movements in 2004 to 60% by 2030. By contrast, the share of international scheduled service movements increases under the illustrated hypothesis from 30% of the total to 40% by 2030.

5.3.3 Table 6 below shows the range of BAA forecasts for the peak runway movements.

**Table 6: Peak runway movement forecasts per hour**

Year	Low	Central	High
2004 (Actual)		31	
2015	35	39	42
2030	37	45	53

5.3.4 It is currently estimated that Runway 05/23 could be enhanced to offer approximately 45 movements per hour by the provision of additional rapid access and exit taxiways (RATs and RETs) and by the construction of additional sections of parallel taxiway. As Table 6 above indicates, our central case forecast demonstrates that peak runway capacity will not be exceeded until after 2030.

5.3.5 Peak runway movement demand in excess of the available capacity is the key driver for the development of a new runway. Should demand closely follow our central forecast, it is likely that Glasgow Airport will not require a second main runway until after 2030. However, were air transport movements (and passenger throughput) to continue to grow as strongly as experienced during 2004 and the late 1990s, both our central and high case forecasts would be exceeded. In these circumstances, BAA Glasgow is committed to bringing forward the construction of a second main runway before 2030.

### 5.4 Passenger aircraft stand forecasts

5.4.1 In 2004, the actual peak stand requirement was for 34 stands, against available capacity of 37 stands. (It should be noted that two new medium sized stands only became available for use in late 2004, so actual capacity for most of last year was 35 stands).

5.4.2 By 2015, peak stand demand is expected to be in the range of 44 to 52 stands, with a central case forecast of 48 stands. By 2030, peak stand demand is likely to be in the range of 49 to 70 stands, with 60 stands being the most likely forecast. Table 7 below shows a detailed breakdown of the central case (most likely) forecasts for passenger aircraft stands by size.

## 5 Passenger demand - the forecasts

**Table 7: Passenger aircraft stand forecasts (central case)**

Year	Small	Medium	Large	Jumbo	Total
2004 (Actual)	14	10	8	3	35
2015	8	23	11	6	48
2030	8	29	16	7	60

Small: eg BAE ATP, B737-400, Embraer 135/145 and BAE146

Medium: eg B757, A320 and B737-800

Large: eg B767

Jumbo: eg A330, A340, B747 and B777

5.4.3 As highlighted earlier, the forecast growth in large and jumbo-sized stands is driven by the anticipated growth in the international market, specifically long-haul and medium-haul routes.

5.4.4 The growth in the requirement for medium stands is driven by the predicted expansion in international short-haul routes and by airlines changing the make-up of fleets and replacing older, smaller aircraft with new, larger ones.

### 5.5 Air cargo forecasts

5.5.1 As noted in Chapter 4, Glasgow's cargo business comprises both flown and trucked cargo, as the airport is a focal point for trucked air freight operators who access other major freight hubs by road.

5.5.2 Glasgow Airport handled 8,169 metric tonnes of cargo during 2004, a 54% rise on the previous year. As noted in paragraph 4.7.3, this very significant rise was mainly due to a large increase in the volume of bellyhold freight being carried on passenger services. A number of long-haul carriers such as Emirates, US Airways and Zoom operate their services with aircraft such as the Airbus A330 and the Boeing 767. These aircraft types can carry around 13 and 15 tonnes of belly-hold freight respectively.

5.5.3 In October 2005, Emirates' daily service to Dubai will switch to a larger Boeing 777-300ER aircraft, capable of carrying 427 passengers and 17 tonnes of cargo. This increase in capacity along with the forecast growth in other direct international air services is expected to facilitate sustained growth in

Glasgow's cargo business (particularly air flown belly-hold) over the forthcoming years.

5.5.4 Table 8 outlines indicative BAA forecasts for cargo tonnage.

**Table 8: Cargo tonnage forecasts**

Year	Cargo
2004 (Actual)	8,169
2015	13,000
2030	19,700
Average Growth	3.2%

### 5.6 Car parking forecasts

5.6.1 Table 9 below shows the range of BAA forecasts for public car parking space demand. The figures for long-stay car parking include BAA Glasgow's estimate of off-airport demand within a five mile radius of the airport.

**Table 9: Public car parking space demand forecasts**

Year	Low		Central		High	
	Short	Long	Short	Long	Short	Long
2004 (actual)			3,200	9,900		
2015	3,800	17,200	4,200	18,700	4,700	20,400
2030	4,100	25,500	4,700	31,100	5,400	36,600

5.6.2 The forecasts suggest that in the period to 2030 the demand for short-stay car parking spaces will increase by approximately 50%, while the total demand for long-stay car parking spaces related to the airport's operation will increase more than three fold over the same period. It is important to highlight two particular points in relation to public car parking provision.

Firstly, short stay car park capacity is best developed in the form of multi-storey developments which are planned to accommodate growth over a number of years (ie capacity needs to be provided slightly ahead of demand); and

Secondly, much of the growth in long stay capacity will continue to be provided by third party off-airport operators. However, as a significant volume of this capacity is provided on sites with temporary planning approvals (typically 3 – 5 years), BAA

---

## 5 Passenger demand - the forecasts

Glasgow will continue to play an important role in providing a consistent and high quality supply of long stay parking to support the airport's operation and growth.

5.6.3 These forecasts assume that a new rail link to Glasgow Airport is brought into operation by Strathclyde Passenger Transport in the period 2008-09. Should the rail link not proceed, public car parking provision may have to increase slightly higher than the forecasts.

### QUESTIONS:

In 5.1.1, we assume that growth in air travel is driven primarily by economic growth and the price of air travel. Do you share this view and if not, what drivers do you believe facilitate growth?

For planning purposes, BAA Glasgow bases its medium and long-term development plans on the midpoint of the range of forecasts. Do you agree that this is a sensible strategy and if not, why not?

In 5.2.6, BAA Glasgow outlines its view that UK rail developments will have a "moderate" effect on the growth of air travel. Do you share this view and if you do not, why not?

---

## 6 Land use to 2015

### 6.1 Introduction

6.1.1 It is predicted that in 2015, Glasgow Airport will be handling between 12 and 15 million passengers a year. The White Paper states that: "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."

6.1.2 This section of our outline Master Plan details the developments which will be required to cope with the scale of growth for all aspects of the airport's operation up to 2015. Within this timescale, BAA Glasgow believes that airport development can be accommodated on land currently owned by BAA. However, to facilitate airport growth beyond 2015, additional land to the east of Abbotsinch Road (ie Nethererton Farm) will be required. Drawing 3 highlights that the airport development to 2015 is undertaken within the existing boundary.

6.1.3 Any development will take place incrementally, to ensure as far as possible that additional capacity closely matches passenger demand. It must be emphasised that if traffic grows at a faster rate than is currently predicted, then it may be necessary to accelerate some of the expansion programme. Similarly, a slower rate of growth would be reflected in development of new or replacement facilities at a later stage. The exact nature and timing of the developments outlined in this section will always be subject to detailed financial and environmental evaluation. Consequently, the precise location and configuration of capacity enhancements may be subject to change.

### 6.2. Air traffic control / airspace

6.2.1 In preparing this plan, BAA has assumed that the capacity of the airspace surrounding the airports, and of the corridors and airspace across Scotland and the UK generally, will grow to accommodate the forecast growth in traffic.

6.2.2 The new Scottish Air Traffic Control Centre currently being constructed at Prestwick is due to supersede the existing Scottish control centre in 2009 and will offer the potential for increased airspace capacity through the delivery of new technology.

6.2.3 BAA understands that NATS plans to undertake a major review of the Scottish air traffic area in 2009 in order to deliver additional airspace capacity. The promoter of any changes in published airspace routes must follow a specified public consultation process prior to approval by the CAA.

### 6.3 Runway and taxiway system

6.3.1 It is anticipated that the construction of rapid access and exit taxiways and an additional section of parallel taxiway will be required in the period to 2015 to achieve approximately 45 movements per hour to meet forecast demand. The normal operation of the main runway will be maintained while these taxiways are under construction.

6.3.2 It is anticipated that the secondary runway, 10/28, will be utilised in exactly the same way in the period to 2015, with no increase in usage.

### 6.4 Aircraft aprons

6.4.1 As mentioned in Chapter 5, forecast demand is for between 44 and 52 stands in 2015. Under our central forecast of 48 stands, this would require the building of about one new stand every year over the next ten years. The current preferred airfield development strategy in the period to 2015 is to develop these additional stands to the west of the current main terminal beyond the existing International Pier and its associated aircraft stands, utilising land currently occupied by a range of different operational and airport-related facilities (see Drawing 4).

6.4.2 The forecasts highlight a requirement for an increase in jumbo-sized stands to accommodate such aircraft as the Boeing 747, Boeing 777 and Airbus 330/340. This need reflects the expectation that Glasgow Airport will be handling more international services in the future, especially those to and from long-haul destinations.

### 6.5 Passenger terminal facilities

6.5.1 It is envisaged that Glasgow Airport will continue to be served by the main passenger terminal and the T2 check-in and baggage facility in the period to 2015. As noted in paragraph 4.5.1, the main terminal is reaching its 9 million passengers a year design capacity and will therefore require to be extended to the east and west in a phased development programme. There may also be a need to expand the terminal to the north or south to increase the size of the baggage processing facilities.



---

## 6 Land use to 2015

This will allow the terminal to cater for passenger growth up to 2015.

6.5.2 Additional terminal capacity will be required for check-in, baggage processing, baggage reclaim, departure lounges and boarding gate facilities. The first stage of development, which will be completed for autumn 2005, is the construction of a western extension to the main terminal. This development has already provided a fourth baggage reclaim belt at ground floor level for passengers arriving from international destinations and at first floor level, when complete, will result in a 50% increase in the International Departure Lounge (IDL), offering passengers more space and improved catering and retail facilities.

6.5.3 Following this development, there will be further expansion on the western (international) side of the main terminal, including a new international pier (known as the i2 project) to cope with the growth in passengers travelling direct to and from Scotland. A significant amount of capital expenditure will also be invested in the re-development and re-configuration of the main terminal. This major project will promote new levels of customer service, through a centralised security search facility, as opposed to the three separate areas at present, increased circulation space and additional retail and passenger facilities for travellers.

6.5.4 A southern or northern expansion to the main terminal will offer an opportunity for more bagging processing facilities.

6.5.5 In addition to these significant terminal expansions, there will be an ongoing programme of refurbishment and renewal of existing facilities, to ensure that Glasgow Airport can respond to changes in technology, airline needs and passenger expectations as appropriate.

### 6.6 Car parking

6.6.1 Additional multi-storey capacity for short-stay car parking will be required before 2015 and will need to be sited in close proximity to the main terminal. It is likely to be of similar size and scale to Short stay car park 2, which opened in 2002. In addition to accommodating forecast growth in demand, it will re-provide short-stay capacity expected to be lost when the airport rail station and public transport interchange are constructed and the airport road network is reconfigured.

6.6.2 Recent analysis of long-stay parking usage has indicated that on-airport supply is lower than

peak demand. BAA Glasgow intends to provide additional long stay capacity (1,650 spaces) on a site at Abbotsinch Road, following the recent approval of its planning application by Renfrewshire Council. As noted in Section 5.6.3, it is likely that the majority of long stay provision will continue to be provided by third party off-airport operators. Further analysis of car parking (including additional long stay provision by BAA Glasgow and staff car parking demand) is underway and more detail will be provided in the final Master Plan.

### 6.7 Cargo

6.7.1 While strong and sustained growth in cargo is expected to be facilitated by new direct international services, new developments will be undertaken only as a result of specific requests from cargo operators. It is our understanding that cargo handlers require additional pallet make-up space to cope with the growth in air flown cargo. Detailed plans will be brought forward once they have been prepared and agreed with operators.

### 6.8 Aircraft maintenance

6.8.1 Two replacement maintenance hangars are likely to be needed as a result of the western expansion of the terminal and apron area. An indicative development zone of approximately three hectares for these hangars is reserved to the east of the runway 10/28, adjacent to the General Aviation area (see Drawing 4). It is anticipated that these hangars would be used to maintain small or medium sized aircraft such as the SAAB 340, Embraer 135/145, Boeing 737 variants and Airbus 319/320.

### 6.9 Ancillary facilities

6.9.1 As the number of air passengers increases, the demand for land to house extended support services will also increase. Some examples of the types of additional support facilities needed were given in Chapter 4. Where practicable, the sites of existing facilities will be further developed to provide this extra capacity. Where site constraints exist, or the site is required for other uses, then facilities may need to be relocated. Drawing 4 illustrates the area required for ancillary uses.

6.9.2 It is anticipated that a further increase in the provision of hotel beds at Glasgow Airport will be required before 2015 and will most likely be met by the construction of one new on-airport hotel.

### 6.10 Landscaping

6.10.1 As the airport campus develops, appropriate landscaping provisions will be made, to maintain the existing high standards without compromising

aircraft safety through the attraction of birds to the airfield.

**QUESTIONS:**

Section 6.1.3 outlines BAA Glasgow's intention to develop the airport incrementally, to ensure capacity more closely meets demand at all times. Do you agree with this approach and if not, why not?

In the period to 2015, are there any other facilities you would like to see developed at Glasgow Airport? Please list these, along with a brief rationale.

---

# 7 Surface access (transport links) to 2015

## 7.1 The surface access strategy in context

7.1.1 The scale of aviation activity and growth at Glasgow Airport has a direct relationship with the demand for road and rail connections. The association between airport activity and the demand for road, rail and even non-motorised travel is complex and requires full understanding of a wide range of passenger and airport servicing requirements. Air passengers, people accompanying or meeting them, and staff, account for the majority of journeys and there is goods traffic serving the airport's supply chain and cargo operation.

7.1.2 BAA Glasgow recognises the importance of monitoring, planning for and managing the demand associated with its operation and the prominence that this issue has been given within UK Government and Scottish Executive policy. Early recognition of the importance of surface access prompted each of BAA's three airports in Scotland, including Glasgow, to establish an Airport Transport Forum, which in turn developed a long-term Surface Access Strategy. This document was published in 2001, with due cognisance of the Scottish Executive's request that all local authorities develop Local Transport Strategies.

7.1.3 The Glasgow Airport Surface Access Strategy was developed in consultation with the organisations that make up the Airport Transport Forum, such as Renfrewshire Council, City of Glasgow Council, and the Scottish Executive and sets three broad objectives relating to surface access:

- To increase the percentage of passengers using public transport from 8.5% to 12% by 2006
- To reduce single-occupancy car journeys by staff from 76% to 66% by 2006
- To develop an integrated transport strategy.

7.1.4 The strategy makes clear that while improvement in public transport access is important, road capacity improvements in the wider conurbation are of increasing long-term significance, given the disparate nature of passenger origin and demand and the limited capability of public transport to serve such a geographically-dispersed customer base. This perspective means Glasgow Airport continues to promote the existing high-frequency, high-quality bus services in an effort to meet its objective of 12% public transport use. The need for improved access to the M8 also shapes the following Master Plan surface access requirements.

## 7.2 Existing surface access infrastructure

7.2.1 The main access route to the airport is the M8 motorway. Junctions 28 and 29 provide direct access to the airport road network, which is controlled and maintained by BAA Glasgow. The M8 is the critical link between Glasgow Airport and the wider trunk road network in west central Scotland, providing connections to the A737 (North Ayrshire), the A898 Erskine Bridge, the M77 (East and South Ayrshire) and the M80 (Stirling and the north). The trunk road network (though particularly the M8) suffers from high levels of congestion during peak times, resulting in unreliable journey times. Whilst the airport is a significant generator and attractor of road traffic, the daily passenger profile and staff shift patterns are such that it is far from the main cause of congestion on the road network.

7.2.2 Local road access to the airport from Paisley and other towns in Renfrewshire can be obtained via the A726, Inchinnan Road and Abbotsinch Road.

7.2.3 Table 10 below shows the current method of transport used by passengers accessing Glasgow Airport. The information shown is derived from BAA's continuous Retail Profiler Survey, which includes questions about journeys to and from the airport. The CAA is currently conducting a much larger sample of passenger mode choice as part of its four yearly survey. The initial output from this survey work is expected in Spring 2006.

Table 10: Existing modal split – July - September 2004

Mode of transport	%
Private car	60
Bus / coach	11
Taxi	22
Hire car	4
Other	3

7.2.4 Express bus services currently represent the main public transport connection from the city centre to Glasgow Airport. Scottish Citylink's 905 service operates between 06:00 and 23:59 from Buchanan Bus Station and a number of other city centre stops via the M8 to the airport. The service frequency ranges from every ten minutes during the day to every 30 minutes after 20:00. Linn Park Buses introduced their 950 service in January 2005, with a

---

## 7 Surface access (transport links) to 2015

30 minute frequency between 05:55 and 23:50. This service also starts at Buchanan Bus Station. The published journey time for both services is approximately 25 minutes, though at peak times this time can be longer.

7.2.5 A number of other operators provide regular bus services to, from and via the airport. The corridor along Inchinnan Road to Paisley town centre benefits from a ten minute service frequency and locations further away such as Clydebank and Clarkston have an hourly service.

7.2.6 The current public transport mode share of 11% (relative to 8.5% in 2001) shows the impact that improvements to the bus services, and the marketing of them, have had in recent years. BAA Glasgow believes that its target to increase public transport usage to 12% will be achieved this year through the existing bus services.

7.2.7 Our transportation consultants will conduct an airport road network study during August 2005 to identify what improvements to the BAA controlled roads will be required to support the growth of the airport to 2015. The key areas of focus will be the capacity and configuration of the junctions serving the M8 motorway and BAA Glasgow controlled roads, options for the future layout of the terminal forecourt and options for a new public transport interchange to complement the proposed airport rail station.

### 7.3 Future surface access infrastructure

7.3.1 The White Paper acknowledges that good surface access will be critical to the future ability of Glasgow Airport to grow. The key issue for BAA Glasgow is general road traffic congestion in the airport's immediate surroundings which is unconnected with the airport. BAA Glasgow believes that this will have a growing and significant impact on the airport if it is not adequately addressed. It is important that passengers can access the airport efficiently and reliably. If they cannot, then the natural growth of the airport will be restricted and the demand for air travel is likely to be met at other airports.

7.3.2 BAA Glasgow will continue to explore any initiative which could improve surface access links to the airport. The Scottish Executive, Renfrewshire Council, City of Glasgow Council and all the surrounding local authorities also wish to see better surface access provision to and from the airport. BAA Glasgow is fully committed to working with the relevant agencies to ensure that appropriate improvements are implemented as and when

required. During 2006, we will work with our partners on the Glasgow Airport Transport Forum to bring forward a revised Surface Access Strategy which will identify in greater detail the full package of transport improvements that we believe will be necessary to support the airport's growth to 2015.

7.3.3 The White Paper states that: "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 transport corridors serving the airport for consideration as part of the Executive's review of strategic transport projects." More detail on these proposals is outlined below:

### Rail

Strathclyde Passenger Transport (SPT) is promoting the provision of a heavy-rail link to the airport, with the financial and technical support of BAA Glasgow. This proposal involves the installation of a third track on the main Glasgow Central Station – Paisley Gilmour Street line, the construction of a new double track branch line into the airport from a point close to Paisley St. James Station, and the construction of an elevated airport rail station to the south of Short Stay Car Park 2. It is proposed that the new station will be linked to the terminal buildings by an enclosed walkway with "travellers": SPT intends to submit a Parliamentary Bill in October 2005 and the current programme is for the new airport link to be operational by the end of 2008.

The introduction of the rail link should provide a more reliable and faster journey time into the centre of Glasgow (estimated by SPT to be 17 minutes), particularly during peak periods, but at a higher capital cost than the existing bus services. The proposed rail link will allow for connections via Glasgow Central Station to other destinations within and beyond the Greater Glasgow conurbation. BAA Glasgow is currently awaiting the detailed conclusions of the transportation modelling work to understand the scale of improvements and benefits which a 15-minute frequency rail service may deliver for airport growth in future years, within the overall public transport strategy.

---

## 7 Surface access (transport links) to 2015

A separate technical assessment is being conducted by SPT into the proposed Glasgow Crossrail scheme. If approved and constructed, this project would allow for new cross-Glasgow and cross-country rail services, greatly improving the connectivity of the airport by offering the potential for direct rail travel from the north and east. BAA Glasgow believes Crossrail is the logical next step in rail infrastructure investment in the west of Scotland and that its implementation will be important to the long-term success of the Airport Rail Link.

### Road

Even with the development of a rail link to the airport, the many differing origins of people coming to the airport will mean that the majority of passengers will continue to access the airport by road, principally by private car. The existing congestion on the road network, together with the anticipated economic growth in the Greater Glasgow conurbation, means that benefits from the probable requirement to improve road capacity will have to be matched with measures to lock in the benefits achieved.

Within the immediate vicinity of the airport, work previously undertaken by transport consultants indicated the volume of traffic using the current eastbound (Glasgow bound) on-ramp at junction 28 of the M8 motorway will exceed its design capacity by around 2010. The road network study soon to be undertaken by our consultants will review this conclusion in the light of recent air passenger growth and the 2015/2030 forecasts detailed in Chapter 5. Notwithstanding their forthcoming assessment, the slip road does not meet current design standards due to its steep gradient and short length. This causes vehicles using the main carriageway over the White Cart Viaduct to avoid using the inside lane at this junction, thereby effectively reducing the road width to two lanes on the elevated section. BAA Glasgow is committed to working with the Scottish Executive and Renfrewshire Council to identify the most appropriate solution to this sub-standard slip road to ensure current and future traffic volumes can access the motorway in a safe manner. An indicative alignment based on the previous study noted above is shown on Drawing 4.

Beyond the airport boundary, the Scottish Executive has announced its intention to proceed with the construction of the M74 extension, which by providing an alternative to the Kingston Bridge, should reduce peak time congestion for passengers

wishing to access the airport from the city centre and from areas to the east of the Glasgow conurbation. The completion of the M74 is expected to be in 2008-09 and the project will also deliver an increase in M8 capacity between junction 21 at Seaward Street and junction 25 at Cardonald / Clyde Tunnel.

Paragraph 5.23 of the White Paper (noted above) acknowledges that surface access improvements over and above the proposed rail link will be required to support the airport's future growth and calls on BAA, the Scottish Executive, local authorities and SPT to bring forward proposals for consideration in the forthcoming review of strategic transport projects. The Glasgow and the Clyde Valley Consultative Draft Structure Plan published in May 2005 also states that priority should be given to investigating an upgrade to the M8 between junctions 26 and 29. BAA Glasgow supports this proposal and calls on the Scottish Executive and Renfrewshire Council to undertake a detailed study to identify what additional improvements are required to the M8, not only to secure the benefits from the anticipated growth of Glasgow Airport but to accommodate traffic volumes from the large scale regeneration projects at Braehead / Renfrew Riverside and Bishopston.

7.3.4 Glasgow Airport's internal road system was re-configured and upgraded in the early 1990s when the airport underwent a major development programme. Another reconfiguration of the internal road system will be required over the next ten years to cater for future traffic growth and to facilitate the expansion of the terminal and associated landside ancillary facilities. Architects and roads consultants have been commissioned to prepare a landside development strategy, which includes substantial changes to the road network and details of this will be included in the final Master Plan.

### QUESTIONS:

**Do you agree with the appraisal of surface access issues given in this section? If not, please explain any other transport matters that concern you or your organisation.**

**Do you agree that even with the potential development of a rail link to the airport, new road capacity and improvements (including improvements to the M8 motorway) must be developed in line with strategies to promote public transport improvements and usage? If not, why not?**

---

## 8 Managing external impacts to 2015

### 8.1 Sustainable development and responsible growth

8.1.1 BAA Scotland's airports are and will continue to be managed and developed in the context of the Government's strategy for sustainable development. In 1999, in *A better Quality of Life*, this identified four objectives for sustainable development:

- 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.

8.1.2 The Government published a new strategy, *Securing the Future*, on 7 March 2005, to which we will give thorough consideration while finalising this plan. The new strategy outlines how the Government will develop its sustainable development policy – building on the earlier strategy, not departing from it. Five guiding principles are to form the basis of policy in the UK:

- Living within environmental limits
- Ensuring a strong, healthy and just society
- Achieving a sustainable economy
- Promoting good governance
- Using sound science responsibly.

8.1.3 The new strategy also specifies four priority areas for action:

- Sustainable consumption and production
- Climate change and energy
- Natural resource protection and environmental enhancement
- Sustainable communities.

8.1.4 More information on BAA's, and BAA Scotland's, sustainable development programme is available at [www.baa.com/sustainability](http://www.baa.com/sustainability).

8.1.5 Responsible growth of air transport and airports should only be undertaken where it is aligned with these key national sustainability objectives. However, there is clearly a balance to be struck in weighing up the social and economic benefits to the UK and its communities and the environmental impacts of aviation. While there are real environmental issues which require a clear specific response, such as the Earth's capacity to handle greenhouse gases, it is also necessary to recognise economic and social costs and benefits, not least in the communities around airports, which enjoy significant employment benefits as well as enduring local impacts.

8.1.6 BAA Scotland will always work hard to maintain effective working relationships with a wide range of stakeholders, including local communities, passengers, airlines, staff and control authorities, in a way which promotes the social and economic benefits and which seeks, wherever possible, to minimise the disbenefits. Our ultimate aim is to secure the widest possible support for the development and management of Glasgow Airport.

8.1.7 BAA Scotland has a first-class track-record in funding and delivering high-quality airport capacity infrastructure, at no cost to the tax or rate payer. The Government can have confidence in BAA's proven ability to deliver major projects in a responsible way.

### 8.2 Safeguarding the environment

8.2.1 BAA Scotland recognises that the UK Government, the Scottish Executive and a number of regulatory agencies will need to be satisfied that the environmental implications of airport expansion and of new runways in particular, can be managed in a manner which would not lead to unacceptable impacts. BAA Scotland recognises that the biggest global environmental issue facing aviation is its contribution to greenhouse gas emissions. BAA believes that international aviation emissions should be brought within the Kyoto framework as soon as possible. We believe that the most effective solution to address aviation's contribution to climate change is through a system of tradable permits in emissions – emissions trading - and BAA is actively pressing for EU aviation's greenhouse gas emissions to be brought within the EU Emissions Trading Scheme as soon as practicable from 2008. This will force the aviation industry to make a choice: either cut emissions or pay for permits which will fund innovation in other industries to deliver matching emissions reductions.

8.2.2 For people living under flight paths or close to an airport, noise is a major concern and its effective management is an important part of our ability to deliver responsible development. While aircraft are becoming progressively quieter, there is no avoiding the fact that increased capacity and the possibility of new runways will inevitably lead to larger noise footprints around airports. BAA believes that airlines and manufacturers must make further progress to improve their performance and standards.

---

## 8 Managing external impacts to 2015

8.2.3 The remainder of this chapter considers in more detail the following issues:

- Air noise
- Ground noise
- Air quality
- Water environment
- Biodiversity
- Land take
- Waste management
- Energy use / CO<sub>2</sub> – airport operation
- Heritage.

### 8.3 Air noise

8.3.1 The term 'air noise' refers to noise from aircraft in flight or on an airport runway during the take-off or after landing. BAA Glasgow has a role to play in the control of air noise around Glasgow, and does so through a number of measures, such as higher landing fees for noisy aircraft, fines for noise threshold infringements, the introduction, by the air traffic control provider, of take-off flight paths (noise preferential routes) that, as far as practicable route aircraft away from the densely-populated areas, and various measures to minimise ground noise.

8.3.2 National Air Traffic Services (NATS) is responsible for air traffic control in the UK, and their unit at Glasgow directs activity on the ground at the airport (ie movements on the runway and the entire taxiway network). NATS and the CAA are the Government's principal advisors on the use of UK airspace and on possible future changes in its allocation between the many flows of air traffic, for example to accommodate the growth associated with airport development.

8.3.3 The total air noise to which local communities are exposed over a given period depends on the noise emitted by individual aircraft and the total number of aircraft movements (arrivals and departures) in that period. An overall measure of air noise exposure can be depicted by noise contours, and noise footprints relating to particular aircraft types can depict single noise events. Forecast contours for 2015 produced by the Government for studies prior to the White Paper are reproduced in Drawing 7. This work was carried out as part of the Regional Air Services Consultation (RASCO) study and is based on a simplified spreadsheet model calibrated against ANCON 2 (the model used by the Government and CAA to measure noise), developed by the CAA's specialist noise unit. For Glasgow, the population within the 57-decibel Leq contour by 2015 is forecast to increase, relative to the situation in 1999. To test the work completed on behalf of the Government, BAA Glasgow proposes to

commission a new set of more precisely constructed contours for 2015, to inform the final Master Plan.

8.3.4 Following the installation of a noise and track keeping (NTK) system in August 2003, BAA Glasgow is now able to gather and analyse the tracks, including position and height, of all aircraft flying to and from the airport. The information gathered from this system allows BAA Glasgow to consider and respond to the complaints and questions received from local people who are troubled by the noise from aircraft. The system can also be used to study the consistency of piloting procedures and, through working with NATS and airlines, we can identify opportunities to lessen the overall impact of Glasgow Airport's operation on local communities and, if necessary, speak directly to individual pilots and air crew.

8.3.5 For the London airports, the DfT has set day and night time departure noise limits (at 94 and 87 dBA respectively), which apply at a point 6.5km from the start of an aircraft's take off. These limits were last revised in 2002 and BAA Glasgow will judge aircraft performance against these limits from April 2004.

8.3.6 While BAA Glasgow's degree of direct control over the noise climate is limited, the airport is able to take a number of steps to address the monitoring and reporting of air noise and a variety of means whereby the impacts of noise are less. In summary, these are:

- Forecasting future air noise, aiming for a significant reduction in the area contained within the daytime 16-hour 57-decibel Leq contour
- Monitoring air noise in selected local communities
- Setting differential airport charges which encourage airlines to operate quieter aircraft types
- Penalising aircraft which infringe the DfT noise limits from April 2004
- Working with stakeholders to identify and encourage the use of flying procedures which minimise levels of noise heard at ground level
- Encouraging manufacturers to design quieter aircraft
- Encouraging international organisations to set tougher standards for aircraft noise.

8.3.7 The White Paper established new policies for the mitigation of aircraft noise arising from existing and future airport operations.

8.3.8 In September 2004, BAA Glasgow published a consultation document, Protecting Against Noise which related to existing airport operations and set

out voluntary proposals for the acoustic insulation of noise sensitive buildings within the 2002 16-hour 63-decibel Leq contour, and the offer of assistance with relocation for owners of residential properties within the 16-hour 69-decibel Leq contour. The consultation period ended early in January and an independent analysis of the responses have informed the detail of BAA's schemes to be introduced at Glasgow and at other airports shortly.

8.3.9 The final Master Plan will report on the schemes in place around Glasgow.

### 8.4 Ground noise

8.4.1 Noise generated other than by aircraft in flight or taking-off or landing is known as 'ground noise'. The main sources of ground noise are:

- Aircraft taxiing between runways and stands - this includes all holding, engine start-up and shut-down procedures during taxiing
- Auxiliary Power Units (APUs) on aircraft for air conditioning the aircraft cabin while its on stand, for supplying electrical power and other aircraft services and for engine start-up
- Ground running of aircraft engines during maintenance and testing
- Mobile ground equipment such as ground power units providing power supplies to aircraft on stand
- Road vehicles, ie those on the airfield and those travelling to and from the airport
- Construction activities.

8.4.2 Airport ground noise exists in the context of off-airport noise sources, known as background noise. Generally, the most dominant contributor to the noise climate in residential areas is road traffic. Around Glasgow, airport ground noise is potentially audible within a limited radius of the airport boundary, particularly at night. Taxiing noise is by far the most significant airport source although engine testing at settings above idle (ie at high-power) can generate higher noise levels than taxiing. However, these are infrequent and of comparatively limited duration.

8.4.3 The proposed developments to 2015 mean that the number of people who hear ground noise would not change significantly as the developments would occur within the boundary of the airfield, largely away from the nearest housing.

8.4.4 BAA Glasgow will seek to improve the understanding of the impacts of ground noise between now and 2015, by carrying out a noise assessment when major development proposals are brought forward.

### 8.5 Air quality

8.5.1 The quality of air is affected by chemicals and particles emitted into the atmosphere as a result of human activity. Certain types of emission are of concern in the context of potential health impacts. Notably, in the cases of fine particulate matter (PM<sub>10</sub>) and nitrogen dioxide (NO<sub>2</sub>), which have widespread significance to health in the UK, the largest single contributor is currently road traffic. Homes, workplaces and other buildings produce emissions either locally (eg gas boilers) or elsewhere (electricity generation from fossil fuels). In order to protect public health and comply with EU directives, the Government has set objectives for air quality in the UK National Air Quality Strategy (NAQS).

8.5.2 Airports represent a complex source of air pollutants, consisting of many individual mobile and stationary sources. The pollutants emitted from airports fall into three principal categories and relate to aircraft operations, road vehicles and miscellaneous activities, such as boiler houses and fire training exercises.

8.5.3 While aircraft noise is arguably the issue of greatest concern to people living close to airports, or in areas regularly over flown by aircraft, airport-related emissions, coming from aircraft engines and vehicles travelling to and from the airport may also give rise to public concern.

8.5.4 Consideration of local air quality against NAQS objectives, which was carried out by the Government, prior to its publication of the White Paper, indicated that the expansion of Glasgow Airport would not compromise air quality standards for NO<sub>2</sub> or PM<sub>10</sub> in the period up to 2015 and beyond.

However, BAA Scotland has worked with the relevant local authorities on Local Air Quality Management Plans, which involve a review of air quality in the area and identify and address areas of poor air quality. BAA is committed to ensuring that air pollution issues are managed responsibly and, to that end, has developed an air quality strategy at Glasgow Airport, which sets out objectives to reduce the impact of the airport on local air quality. The objectives aim to develop management strategies and air quality measurement and action programmes, including the promotion of alternative fuels and emissions abatement technology for vehicles operating at the airport.



---

## 8 Managing external impacts to 2015

### 8.6 Management of the water environment

8.6.1 Within the context of the European Union Water Framework Directive (2000 / 60 / EC), the term "water environment" refers to all aspects of natural watercourses, covering such matters as their physical characteristics and the chemical and biological quality of the water they contain.

8.6.2 Developments planned in the period to 2015 do not have any potential physical impacts on the water courses near the airport other than to increase the amount of water they receive. The volume of water discharged into local water courses is governed by rainfall and the nature of the surface on which it falls. Glasgow Airport has a large impermeable surface area, therefore rainwater runs off relatively quickly, rather than gradually sinking into the soil and either recharging groundwater or percolating slowly into rivers and streams.

8.6.3 There are several airport activities which have the potential to cause pollution of local water courses, if those activities are not properly managed. For example, these are:

- De-icing of aircraft and airside areas
- Vehicle and aircraft washing
- Aircraft and vehicle maintenance
- Run-off from construction sites
- Aircraft refuelling (spillages)
- Waste and cargo handling
- Fire training activities.

8.6.4 Glasgow Airport's surface water drains into the two rivers which effectively form its natural northern and eastern boundaries. The Black and White Cart Waters are both major tidal tributaries of the River Clyde and cover large catchment areas. The Black Cart Water rises from Castle Semple Loch in west Renfrewshire and flows to the north of the airport perimeter. The White Cart Water passes to the east of the airport boundary rising from the hills bordering East Renfrewshire and South Lanarkshire. It flows through parts of East Renfrewshire, south Glasgow and Paisley, draining a catchment area of approximately 250km<sup>2</sup>. It is our belief that both river catchments are under significant flow management and water quality pressures, due to off-airport development, and are currently the subject of a comprehensive physical, chemical and ecological assessment by the Scottish Environment Protection Agency (SEPA) under the terms of the Water Framework Directive.

8.6.5 BAA Glasgow is currently working with SEPA towards the development of a range of solutions to

ensure compliance with future surface water discharge consents relating to discharge quality management. The company will continue to manage water quality issues in line with statutory control and best practice.

8.6.6 Flood risk assessments were carried out on both watercourses in December 2004. It is considered that the risk of flooding could increase from future development pressures around both rivers, due to the airport and upstream infrastructure. BAA Glasgow is already working with SEPA, Scottish Water, Renfrewshire Council and other stakeholders to identify possible flood mitigation measures. We are committed to controlling and minimising the volume of run-off draining from future airport developments into the Black Cart and White Cart Waters, where technically feasible, for example through the use of sustainable urban drainage systems (SUDS).

### 8.7 Biodiversity

8.7.1 The hierarchy of sites designated for their nature conservation value comprises:

- Internationally designated sites (eg Special Protection Areas and Ramsar sites)
- Nationally designated sites (eg Sites of Special Scientific Interest)
- Locally designated sites (eg Local Nature Reserves)
- Non-site specific protection measures.

8.7.2 Internationally designated sites are protected by the Conservation (Natural Habitats etc) Regulations 1994. Any development which is likely to have a significant impact on such a site must be subject to rigorous assessment.

8.7.3 Public bodies have a duty to enhance and maintain nationally designated sites such as Sites of Special Scientific Interest (SSSI). They are required to consult with statutory nature conservation agencies (ie Scottish Natural Heritage) on any proposal which is likely to damage the conservation interests for which a SSSI has been designated.

8.7.4 Locally designated sites can be afforded protection by local planning policies through their Local Plans. Some local sites will also be important because they host habitats or species which have special significance under the Biodiversity Action Plan process.

8.7.5 Wildlife is also safeguarded outside protected sites. All wild birds are protected under the Wildlife and Countryside Act 1981, which implements the EC Birds Directive in Great Britain. Other animals and

---

## 8 Managing external impacts to 2015

plants are afforded similar protection under this Act.

8.7.6 Paisley Moss is a Local Nature Reserve which lies within the existing airport boundary. BAA Glasgow plays an active role in the management of the Reserve along with Renfrewshire Council, the Carts River Valley Project and other stakeholders. Our proposals in the period to 2015 show an expansion of the apron area and operational facilities towards, but not into the Reserve. BAA Glasgow remains committed to ensuring that any development located in close proximity to Paisley Moss is fully assessed and that any potentially negative impacts are minimised and mitigated.

8.7.7 To the north of the airport boundary, a 3km stretch of the Black Cart Water has dual designation as a Special Protection Area and SSSI. This section of the river is used as a roosting and foraging site by wintering Icelandic Whooper Swans. Whilst the development of the airport's facilities in the period to 2015 will not lead to any loss of this habitat, BAA Glasgow remains concerned that the presence of these Whooper Swans represents a significant hazard to aircraft using the airport. In 2003, the Civil Aviation Authority (CAA) requested that BAA Glasgow undertake a bird management study to assess the risk of the presence of the Whooper Swans in close proximity to the airfield and identify ways of minimising any unacceptable risk. This study has recently been completed and recognising the forecast increase in air transport movements, BAA Glasgow would re-iterate its well documented view that relocation of this habitat would be the most appropriate solution to this difficult issue, not only for the safety of aircraft but for the birds themselves. We will work with the relevant agencies, such as Scottish Natural Heritage and the RSPB, to identify the most sensitive way to relocate this habitat and the swans.

8.7.8 In terms of measures to be taken in the future, all significant airport developments to 2015 will be assessed to establish their impact on biodiversity and provide appropriate mitigation, which is developed in consultation with stakeholders and the relevant approval authorities.

### 8.8 New land take

8.8.1 In the period to 2015, our current view is that the development of the airport (as shown indicatively on Drawing 4) can be accommodated within the existing airport boundary. Therefore, we do not envisage the need to acquire any additional land in the short term.

### 8.9 Waste management

8.9.1 Waste is generated from a number of sources at Glasgow Airport, notably from aircraft using the airport, catering outlets, offices, shops (packaging), and construction activity and from vehicle and aircraft maintenance. Such sources generate seven categories of waste, the handling and disposal of which is covered by extensive legislation:

- Inert (soils, hardcore, concrete, glass)
- General non-putrescible (plastic)
- Scrap metal
- End of life vehicles
- Electrical and electronic equipment
- General putrescible (food waste, vegetable matter, trees and bushes, paper)
- Hazardous waste, including lamps, fluorescent tubes, used oils, flammable liquids and batteries.

8.9.2 In addition to meeting legal requirements, BAA Glasgow's strategy for waste is based on the Government's sustainable waste management strategy A Way with Waste and its three core principles:

- Best Practicable Environmental Option (BPEO) - the option which provides the most benefit/least damage to the environment as a whole, at acceptable cost, in the long and short-term
- The waste hierarchy - reduce, reuse, recover (recycle, compost or energy recovery), dispose
- The proximity principle - the disposal of waste should be as near to its place of production as possible.

8.9.3 The strategy covers a number of aspects including:

- Measurement of waste tonnage
- Waste management infrastructure
- Communication to improve performance
- The supply chain
- A construction waste strategy.

8.9.4 BAA Glasgow is committed to reducing the waste generated from the airport's operation. Over the past four financial years (ie comparing 2000/01 with 2003/04), the proportion of waste recycled has been increased from 13% to 22%, and it is intended to further reduce the proportion of waste going to landfill, following the principles of reduce, reuse, recycle.

### 8.10 Energy use and climate change

8.10.1 It is widely acknowledged that the world is experiencing climate change and that global warming, principally attributable to an increase in the proportion of carbon dioxide in the atmosphere, is likely to continue for the foreseeable future. The

---

## 8 Managing external impacts to 2015

influence of commercial aviation on the situation is principally associated with emissions at altitude. However, BAA Glasgow's local emphasis on tackling climate change relates to the emissions attributable to the operation of airport facilities. These are carbon dioxide emissions from the burning of fossil fuels in boilers which provide space heating at the airport and, more significantly, emissions elsewhere that are attributable to the generation of electricity consumed at the airport. Emissions from surface transport represent another significant source and BAA Glasgow's air quality strategy includes measures to reduce transport-related emissions.

8.10.2 The BAA's group-wide objective is to achieve a 15% reduction in absolute CO<sub>2</sub> emissions from fixed sources by 2010, compared with the level in 1990. Glasgow Airport's CO<sub>2</sub> emissions from fixed sources in 2003/04 were approximately 16,800 tonnes, down from 17,200 tonnes in 2000/2001.

8.10.3 Current energy / CO<sub>2</sub> objectives for Glasgow Airport include:

- Investment in equipment that can improve the efficiency of existing plant
- Information and tools to improve the measurement and management of the airport energy consumption
- Behavioural change in the way the airport is operated to promote the efficient use of utilities
- Renewable electricity procurement and where appropriate the use of low and no carbon on-site electricity generation.

### 8.11 Heritage

8.11.1 Studies undertaken on behalf of the Government prior to the publication of the White Paper identified two key types of heritage resources which could be affected by the future development of the airport. They are Scheduled Ancient Monuments and Historic Gardens and Designed Landscapes.

8.11.2 Three Scheduled Ancient Monuments (SAMs) were identified within a five kilometre radius of Glasgow Airport:

- The site of All Hallows Church, near the A8 road, Inchinnan
- Two cross slabs and a cross shaft at Inchinnan Parish Church, Inchinnan
- Barochan Cross within Paisley Abbey, Paisley.

8.11.3 The studies concluded that none of these SAMs would be directly affected by the airport's development.

### QUESTIONS:

Section 8.1.5 states BAA's view that major airport developments should only be undertaken in line with national sustainability objectives, and in a responsible way. Do you agree with this approach? If you do not, please indicate why.

Furthermore, BAA's development strategy looks for a sensible balance between promoting social and economic benefits and managing local and environmental impacts. Do you support this approach? Again, if not, why not?

In 8.2.1, BAA argues that aviation should be included in the EU Emissions Trading Scheme, as the most effective means by which EU aviation can address its climate impacts. Do you agree with this approach? If not, please explain why not and detail any possible alternatives.

In this chapter of our outline Master Plan, BAA addresses a number of key environmental issues, from noise and air quality to waste management and energy use. Are there any more issues that BAA Glasgow should be addressing and, if so, what are these?

On each specific area listed in 8.2.3, do you believe that BAA Glasgow is doing enough to effectively address these issues? If not, what more do you believe could be done?

---

# 9 Land use to 2030 and a possible new runway

## 9.1 Introduction

9.1.1 For the period beyond 2015, the White Paper has stated that only indicative land use plans are required at this time. This acknowledges that: *“Proposals which will come to fruition so far in the future are likely to bring with them considerable uncertainties and that consequently there is likely to be little value in working them up in any great detail.”*

9.1.2 Accordingly, this section of our outline Master Plan provides an overview of the future development of the airport between 2015 and 2030, given the information available to BAA Glasgow at present. It outlines a development framework which would allow the airport to grow to handle between 17 and 24 million travellers a year.

9.1.3 Accompanying this Chapter, BAA Glasgow has produced two sets of indicative land use for the period from 2015 to 2030. Drawing 5 shows the airport as a single main runway operation and Drawing 6 indicates how the airport could accommodate twin parallel runways, were significant changes in forecast market demand to dictate that a new runway would need to be built before 2030. This approach provides greater clarity to the expected order of the airport development strategy and its impact on the land outside the current land ownership boundary.

## 9.2 Air traffic control / airspace

9.2.1 As the need for growth in runway capacity (and possibly a new runway) becomes clearer, more detailed analysis and modelling work will require to be undertaken in conjunction with the air traffic service provider to understand what airspace changes, if any, will be needed to accommodate the increase in traffic in addition to those outlined in Chapter 6. Where an airspace change proposal is identified then the CAA airspace change process would need to be undertaken. This process engages stakeholder organisations in consultation including, among others, local authorities, environmental groups, airport consultative committees and resident organisations.

## 9.3 2030 – Single main runway layout

### 9.3.1 Runways and taxiways

9.3.1.1 Drawing 5 shows the indicative land use for Glasgow Airport with a single main runway in 2030, in accordance with the 2003 White Paper.

Preliminary work undertaken for BAA Glasgow indicates that improvements to the existing main runway (05/23) and additions to the parallel taxiway system could support around 45 movements per hour. As noted in Chapter 5, this hourly movement rate would be sufficient to accommodate the peak runway demand under our central forecast.

9.3.1.2 This ‘single runway maximum use’ scenario requires the purchase of additional land that is currently not under the ownership of BAA Glasgow. The land comprises 52 hectares of farmland at Netherton Farm (located to the east of the current boundary between the airport and the White Cart Water) and is required for a number of reasons:

- To construct an additional section of parallel taxiway to allow the airport to obtain the maximum number of movements per hour off a single main runway; and
- To provide sufficient land for the relocation and future expansion of the cargo, maintenance and ancillary facilities.

9.3.1.3 The expansion of the airfield and cargo / maintenance facilities further east will require the re-provision of Abbotsinch Road. The road is an adopted highway and serves as a district distributor between Renfrew / Inchinnan and Paisley. When appropriate to do so, we will work with Renfrewshire Council, as Roads Authority, to determine the most suitable design and alignment of the new public road, taking account of matters such as the level and type of development planned. It is our current view that the most appropriate alignment should be close to the river bank of the White Cart Water. We have therefore reserved land for this alignment between the proposed cargo / maintenance development zone and the extended airport boundary (see Drawing 5).

### 9.3.2 Aircraft aprons

9.3.2.1 Forecast demand is for between 44 and 52 aircraft stands in 2015 and for 49 to 70 stands in 2030. In Chapter 6, we explained the preferred airport development strategy is to build the first phase of these new stands and a second international pier to the west of the existing international pier / apron area by 2015. As we will have utilised all the developable land in that zone by that time, the emphasis of the airport development strategy to 2030, is to expand the apron area towards the eastern boundary of our land ownership (ie into the area around Campsie Drive

---

## 9 Land use to 2030 and a possible new runway

which is currently occupied by cargo, maintenance and ancillary facilities).

9.3.2.2 The forecasts show an increasing requirement for jumbo and large stands. This reflects the continued expectation for Glasgow Airport to be serving more international destinations in the future, especially long haul destinations. We envisage that approximately 15 additional stands of varying sizes could be developed in this area. This approach will allow us to maintain high levels of pier service for airlines but will require the relocation of a significant number of important facilities. As noted in paragraph 9.3.1.2, the need to relocate these facilities is a key driver for the acquisition of an additional 52 hectares of land at Nethererton Farm.

### 9.3.3 Passenger terminal facilities

9.3.3.1 Under a single main runway layout, further extensions and improvements will be required to the terminal to accommodate the forecast 20 million passengers a year, which Glasgow Airport is expected to be handling by 2030. It is envisaged that the existing east pier will be demolished and replaced by a modern and significantly longer pier on a different alignment to provide pier service to a greater number of larger aircraft stands than is currently the case.

## 9.4 2030 – Twin parallel runway layout

### 9.4.1 Runways and taxiways

9.4.1.1 The White Paper notes that, *“there does not at this stage seem to be a clear case for an additional runway at Glasgow International Airport.”* BAA Glasgow acknowledges the airport’s charter and long-haul services carry large numbers of passengers per flight making it easier to handle a higher passenger throughput than an airport where short-haul domestic or European services dominate. However, we believe that based on past growth rates and to a lesser extent, the considerable changes occurring in the low-cost and charter market, it is sensible to make provisional plans for a scenario of higher aircraft movement and passenger growth. Drawing 6 therefore shows the indicative position of a second close parallel main runway, should passenger and peak runway movements exceed our central and high growth forecasts. If market growth dictates and the project is confirmed as being commercially and environmentally sustainable, BAA Glasgow is committed to building a second main runway.

9.4.1.2 Our preliminary work indicates that the new runway would be located to the north of Runway 05/23 and require approximately 50 hectares of land

not currently contained within the airport boundary. The current secondary runway (10/28) would be closed for normal day-to-day operations.

9.4.1.3 Given that the need for an additional runway is still some way off, BAA considers it impractical, at this time, for a precise alignment and runway design to be identified. This is primarily because the planning and operation of a future runway is dependent on a number of complex and interrelated factors and many of these cannot be predicted with any certainty so far ahead of construction. This explains our decision in Drawing 6, to replicate the indicative position for a new runway as shown in the White Paper.

9.4.1.4 In connection with the twin parallel runway layout, it is important to highlight the differences between the extended airport boundary as shown in Drawings 3 and 6 of this Master Plan and the boundary shown in the Government’s White Paper. It is our view that a twin runway airport should, at least in land ownership terms, occupy the full extent of its natural boundaries (ie up to the edge of the Black Cart Water and the M8 motorway). We do not believe that the squared boundary line as drawn in the White Paper would leave workable areas of land for the current owners and occupiers. Therefore, BAA Glasgow would propose to purchase the full extent of this land to accommodate a re-aligned Barnsford Road, a service corridor and an effective landscape buffer. This is shown as a white coloured strip of land along the western and northern boundaries in Drawing 6.

### 9.4.2 Aircraft aprons

9.4.2.1 Under a twin parallel runway layout, the apron development strategy is to continue to incrementally provide aircraft stands in a north-easterly direction towards the proposed cargo and maintenance area at Nethererton Farm. This is shown on Drawing 6 and it is likely that a number of these stands would be designated as remote stands.

### 9.4.3 Passenger terminal facilities

9.4.3.1 Were Glasgow to develop as a twin parallel runway airport by 2030, it is possible that a single main terminal would not be sufficient to accommodate the associated passenger volumes. Therefore, in Drawing 6, we have indicated where we believe a second main terminal and piers might be located if this scenario were realised. This would result in the relocation of ancillary facilities (eg long-stay surface car parks, staff car parks, airline cleaning/catering facilities) from this zone to the development zone west of Barnsford Road.

---

## 9 Land use to 2030 and a possible new runway

### 9.5 Future runway safeguarding policy

9.5.1 The purpose of Aerodrome Safeguarding is to protect the operation and development of airports and air navigation aids (eg radars). However, there are limitations when applying this process in preserving the capability of a future runway. Identifying and protecting the land within an extended airport boundary is a straightforward process but beyond the extended boundary it is much more difficult, particularly where the design of the runway will not be finalised for many years and when flexibility needs to be maintained to accommodate specific, and as yet unknown, circumstances which might arise in the future.

9.5.2 The protected surfaces and criteria used in safeguarding are precise in nature and are based on detailed alignment and topographical data. BAA Glasgow considers it impractical, at this time, for a precise alignment and runway design to be identified at Glasgow Airport, for the reasons stated earlier.

9.5.3 In formulating a policy for Aerodrome Safeguarding around possible new runways, BAA has considered how best to retain the flexibility to deal with different development scenarios should these occur, while remaining flexible enough to deal with a specific runway design as definition is achieved. BAA Glasgow considers it prudent to safeguard what it considers to be the most realistic runway development options - based on the information available at the current time. A new safeguarding map, endorsed by the CAA, will be lodged with the LPAs (Local Planning Authorities) at the same time as the finalised Airport Master Plan. The map will be subject to review every five years in line with the review process for the airport Master Plans, as specified in DfT and Scottish Executive guidelines.

9.5.4 The LPA will use the new map as a filter for determining which applications should be sent for assessment under the safeguarding regime. BAA will receive and assess the applications against the constraints for the existing runway and against those for a future runway and the impacts from each will be recorded separately. If there are impacts from an existing runway these would be dealt with as they are now, in that BAA can choose to object, not object or not object subject to the application of appropriate conditions.

9.5.5 Where an impact from a future runway is identified, BAA will notify the LPA and advise whether any changes can be made to remove the potential conflict. If appropriate, BAA will work with the LPA and developer to explore the issues in more detail. As long as a planning application for a future runway has not been approved and the future design of a runway remains uncertain, BAA does not intend to object to any development proposal which conflicts with the Aerodrome Safeguarding constraints associated with that runway. BAA's response will simply seek to inform the LPA and developer that should BAA proceed with developing a future runway at the airport, there is a likelihood that it will conflict with the development outlined in their planning application. The aim of this approach will be to ensure that the developer is fully aware of the timing, implications, risks and potential outcomes if they proceed with their plan.

9.5.6 Any development carried out which conflicts with Aerodrome Safeguarding criteria might still be subject to a potential Compulsory Purchase Order (CPO) at a later date. In extreme cases, BAA could still choose to object to a proposal if it considered that the overriding circumstances warranted this course of action. However, this is only likely to occur in exceptional circumstances.

9.5.7 There are a number of advantages in adopting this policy:

- BAA would not be objecting unnecessarily to proposals which could prove to be acceptable in the future, as a runway design develops
- Very few objections are likely for developments proposed prior to a definitive runway design being agreed and approval being granted by a local authority
- Developers will be fully informed of the issues when considering whether to proceed with their own development. It is worth noting that any development which infringes safeguarding criteria may not automatically need to be removed. It will depend on many factors, such as predominant traffic type, method of operation, location, height, adjacent obstacle environment and regulatory considerations. A risk assessment would be undertaken to determine the likely requirements during the detailed design of the future runway
- Developers would remain protected in that, should the new runway go ahead, they would be compensated at that time under the Compulsory Purchase Order mechanism
- The safeguarding associated with possible new runways will be linked to the Master Plan review process. As understanding of the need for a future

---

## 9 Land use to 2030 and a possible new runway

runway evolves (and any detailed design develops), this will be incorporated into the revised Master Plan and, at the same time, the appropriate safeguarding can be undertaken in conjunction with the LPA.

### 9.6 Cargo

9.6.1 As outlined in Chapter 6, cargo developments are only undertaken in response to specific requests from operators. However, as noted earlier in this Chapter, the easterly expansion of the apron and terminal will require the relocation of the existing cargo facilities located around Campsie Drive. With significant year-on-year growth in cargo throughput forecast, we have sought to allocate approximately 17.5 hectares (50%) of the land in both layout options for a large cargo base in the indicative development zone at Netherton Farm (see Drawings 5 and 6). Furthermore, a detailed cargo and MRO (maintenance / repair / overhaul) study will be undertaken by BAA Glasgow and Scottish Enterprise Renfrewshire to pinpoint specific opportunities for Glasgow Airport to develop its cargo business. The findings of this study could influence the detail of the finalised Master Plan later this year.

### 9.7 Aircraft maintenance

9.7.1 While there is no quantifiable demand for additional maintenance facilities in the years between 2015 and 2030, the White Paper recommends that BAA Glasgow makes provision for maintenance facilities to support the establishment of a "centre of excellence" for aircraft maintenance, repair and overhaul activities. Accordingly, under both layout options for the period to 2030, approximately 17.5 hectares of land has been allocated in the indicative development zone at Netherton Farm for maintenance related uses. The joint BAA Glasgow and Scottish Enterprise Renfrewshire study noted above will identify new opportunities for maintenance activities at Glasgow Airport and will assist the various agencies who are working in partnership to create this "centre of excellence".

### 9.8 Ancillary facilities

9.8.1 As explained in Chapter 6, as the airport passenger and cargo throughput increases, so too does the demand for land for extended support services. Some examples of the types of additional support facilities were given in Chapter 4. It is certain that in the period between 2015 and 2030, additional land will be required to ensure provision of all the necessary ancillary facilities can be made.

9.8.2 Under a single main runway layout, we have allocated approximately 25 hectares of land currently within BAA Glasgow's ownership and located to the west of Barnsford Road (the Walkinshaw Brickworks), for ancillary facilities. Given the types of uses likely to be located in this area, it is probable that the current alignment of Barnsford Road (A726) would remain unchanged. When appropriate to do so, BAA Glasgow will discuss with Renfrewshire Council, the method for achieving a modification to the planning policy designation of this land.

9.8.3 In Drawing 6, we have allocated a further 17 hectares of land for ancillary uses in connection with a twin parallel runway operation. This area, the majority of which is not within BAA Glasgow's ownership, is likely to be required for additional long-stay car parking, staff car parking, airline cleaning/catering facilities and contractor's compounds displaced by a second terminal.

### 9.9 Future surface access infrastructure

9.9.1 Further enhancements to the surface access capacity will be required to meet the demands placed on the infrastructure by 2030, but it is not possible at this stage to accurately quantify the type of improvements to the road and public transport networks which will be needed. BAA Glasgow will continue to work with the relevant agencies and operators to ensure that appropriate improvements which are necessary to facilitate the sustainable development of the airport are delivered in a timely manner. Future revisions of the Airport's Surface Access Strategy will address the airport's long term transportation challenges and solutions in depth.

#### QUESTIONS:

Based on the limited detail provided for the period between 2015 and 2030, do you agree with BAA Glasgow's land-use strategy as outlined in sections 9.3 to 9.9? If not, what alternative plans would you propose, which allow the airport to grow in line the national policy outlined in the White Paper?

In sections 9.3 and 9.4, BAA Glasgow considers runways and taxiways in the period to 2030. Do you agree with the view that based on the central forecasts highlighted elsewhere in this plan, a new runway will not be needed at Glasgow until after 2030? If not, why not?

Sections 9.3.3 and 9.4.3 discuss the provision of terminal facilities associated with a single and twin parallel runway airport. Do you believe

---

## 9 Land use to 2030 and a possible new runway

that a twin runway airport is likely to require a second main terminal? If you do not, what alternative solution would you put forward?

In sections 9.6. and 9.7, we consider the development of large scale cargo and maintenance facilities at Glasgow Airport. Do you agree with this strategy, and if not, what alternative uses would you put forward?



# 10 Managing external impacts to 2030

## 10.1 Introduction

10.1.1 As this outline Master Plan has previously indicated, there are significant uncertainties around various points of planning detail which may affect the environmental impacts associated with the development of Glasgow Airport. This plan's purpose is to provide an early indication of the extent and broad land use of the development which may be the subject of a planning application, with detailed planning and environmental studies being undertaken only when it becomes appropriate to prepare a planning application.

10.1.2 It is indisputable that the expansion of the air traffic and the facilities Glasgow Airport will lead to some adverse environmental impacts. On the other hand, it will also facilitate social and economic benefits, to which some reference has been made in Chapter 2 of this document.

## 10.2 Air noise

10.2.1 Aircraft noise is arguably the impact of greatest interest to Local Planning Authorities and some communities, given the potential need to consider this when allocating land and considering planning applications for housing. Estimates of future noise exposure around Glasgow and other airports were a key element of the studies undertaken to inform the preparation of the White Paper and they were subsequently updated and published by the CAA<sup>4</sup>. Table 11 shows the change in population affected by noise between 1999 and 2030, and the contours are depicted on Drawing 8. The number of people within 57-decibel Leq contour increases significantly, while the affected population within the 63-decibel Leq and 69-decibel Leq contours also increases compared to the 1999 base case.

Table 11: Population affected by noise

Leq (dBA)	Base population (000s) 1999	Population (000s) 2030
>57	25.0	32.1
>63	0.8	2.5
>69	0.0	0.1

<sup>4</sup> Revised Future Aircraft Noise Exposure Estimates for UK Airports; ERCD Report 0308, CAA, December 2003

10.2.2 The White Paper prescribes the measures that BAA Glasgow must take to mitigate and compensate for aircraft noise impacts arising from future airport operations:

- Offer to purchase those properties suffering from both a high level of noise (69-decibel Leq or more) and a large increase in noise (3-decibel Leq or more)
- Offer acoustic insulation to any residential property which suffers from both a medium to high level of noise (63-decibel Leq or more) and a large increase in noise (3-decibel Leq or more).

10.2.3 BAA Glasgow will be consulting in due course on its proposals to implement these measures.

## 10.3 Blight

10.3.1 As previously noted, the Government has stated that BAA should put in place a scheme to address the problem of generalised blight resulting from the possibility of a new runway.

10.3.2 In September 2004, BAA Glasgow published a consultation document, Protecting Against Blight, setting out voluntary proposals to help protect the value of properties in communities close to Glasgow Airport against blight resulting from a possible new runway. The consultation period ended in January and an independent analysis of the responses has again informed BAA's decision as to the precise form of the scheme to be introduced at Glasgow.

10.3.3 The final Master Plan will report on the schemes in place at Glasgow.

## 10.4 Other environmental issues

10.4.1 Other environmental and related issues which will require thorough consideration at the appropriate time include:

- Ground noise
- Emissions and air quality
- Water environment
- Resource use
- Biodiversity
- Visual impact
- Archaeology
- Heritage
- Loss of existing properties and land uses
- Construction impact.

---

## 10 Managing external impacts to 2030

**Question:**

Do you agree with the broad principle that airport operators must work with local communities and others to find a balance between the social and economic benefits of air travel and the environmental costs? If not, please explain why not and, if you wish, put forward an alternative strategy.

Do you expect BAA Glasgow to consider strategies for any area not listed at 10.4.1? If so, please provide details.

---

# 11 Where now? - the next steps

## 11.1 General

11.1.1 BAA Glasgow is arranging a programme of briefings and meetings to inform key stakeholders (including the general public) of the detail of this Master Plan and to encourage dialogue with the company. In addition to giving full consideration to the responses received during the consultation process, there are a number of other tasks that we must undertake.

## 11.2 Unresolved issues – 2015 land use plan

11.2.1 By October 2005, SPT expects to have submitted the Glasgow Airport Rail Link Parliamentary Bill. Around the same time, BAA Glasgow will be preparing its detailed plans for a reconfigured airport road network and public transport interchange.

11.2.2 There are several surface access issues - road, rail and bus strategy - all of which require further work to be carried out during 2005/06. Details of this work will be outlined in the final Master Plan.

11.2.3 Further work is required in terms of air and ground noise and in terms of air quality. The work carried out prior to publication of the White Paper indicated that air quality was not a major issue at Glasgow Airport and, in any event, further work will depend on the development of agreed methodology as part of the Government-led studies taking place at Heathrow Airport.

## 11.3 Unresolved issues – 2030 land use plan

11.3.1 The final decision on whether and when Glasgow Airport will require a new runway will not be addressed in the time period between this outline Master Plan and the finalised Master Plan which we aim to publish in December 2005. This issue will be kept under review every five years and will be the subject of detailed studies closer to the time.

11.3.2 The ongoing surface access studies should enable further information on future requirements to be reported in the final Master Plan.

### QUESTION:

Are there any issues not currently set out in this outline Master Plan which you feel merit further consideration ahead of the final plan's production and publication later this year?

---

# 12 What do you think? - the public consultation

## 12.1 Introduction

As stated in the introduction to this document, the views of the local communities and stakeholders are important. Added to the detailed work of BAA Glasgow's planning team, these views will shape the final Master Plan and, ultimately, influence the future development of Glasgow Airport.

The Government has made it clear that an airport Master Plan is not a statutory document and therefore does not have development plan status. Its principal aim is to inform, and be informed by, the regional and local planning processes.

This version of the Master Plan, therefore, provides an opportunity for BAA Glasgow to communicate our outline proposal to the Scottish Executive and Renfrewshire Council, so that those organisations can take account of BAA Glasgow's aspirations when preparing the revised National Planning Framework and the Renfrewshire Local Plan.

The document also presents an opportunity to consult extensively with the wider community, asking questions of the plan's key elements and, specifically, around the forecasts on which much of the plan is based.

BAA Glasgow would particularly like to receive responses to the questions posed throughout the document. However, all comments received will be considered fully at the end of the consultation period.

Additional information can be obtained, using the postal or email address that appears beneath the foreword to this outline plan.

BAA Glasgow is committed to meeting representatives of community councils, local authorities and any organisation or business with an interest in Glasgow Airport's future, to discuss our plans in more detail and listen to as many views as possible. If you wish to meet members of our team to discuss any issue associated with this outline Master Plan, please contact BAA's Sustainable Development Department by writing to the postal or email addresses provided at the front of this document or by calling 0141 848 4299.

## Summary of questions

As indicated above, BAA Glasgow will welcome any comments relevant to the content of the Master Plan. It would be particularly helpful if consultees' responses could include answers to the questions outlined clearly at the end of each chapter. Here is a summary of them:

### Chapter 2 – The social and economic benefits of aviation

1. What principal social and economic benefits do you associate with Glasgow Airport and which of these do you regard as most important to local people?

### Chapter 4 – Today's airport – Glasgow in 2005

2. Do you agree that the contents of chapter 4 represent a fair and accurate summary of Glasgow Airport today? If not why not?

### Chapter 5 – Passenger demand – the forecasts

3. In 5.1.1, we assume that growth in air travel is driven primarily by economic growth and the price of air travel. Do you share this view and if not, what drivers do you believe facilitate growth?
4. For planning purposes, BAA Glasgow bases its medium and long-term development plans on the midpoint of the range of forecasts. Do you agree that this is a sensible strategy and if not, why not?
5. In 5.2.6, BAA Glasgow outlines its view that domestic rail developments will have a "moderate" effect on the growth of air travel. Do you share this view and if you do not, why not?

### Chapter 6 – Land use to 2015

6. Section 6.1.3 outlines BAA Glasgow's intention to develop the airport incrementally, to ensure capacity more closely meets demand at all times. Do you agree with this approach and if not, why not?
7. In the period to 2015, are there any other facilities you would like to see developed at Glasgow Airport? Please list these, along with a brief rationale.

---

## 12 What do you think? - the public consultation

### Chapter 7 – Surface access (transport links) to 2015

8. Do you agree with the appraisal of surface access issues given in this section? If not, please explain any other transport matters that concern you or your organisation.
9. Do you agree that even with the potential development of a rail link to the airport, new road capacity and improvements (including improvements to the M8 motorway) must be developed in line with strategies to promote public transport improvements and usage? If not, why not?

### Chapter 8 – Managing external impacts to 2015

10. Section 8.1.5 states BAA's view that major airport developments should only be undertaken in line with national sustainability objectives, and in a responsible way. Do you agree with this approach? If you do not, please indicate why.
11. Furthermore, BAA's development strategy looks for a sensible balance between promoting social and economic benefits and managing local and environmental impacts. Do you support this approach? Again, if not, why not?
12. In 8.2.1, BAA argues that aviation should be included in the EU Emissions Trading Scheme, as the most effective means by which EU aviation can address its climate impacts. Do you agree with this approach? If not, please explain why not and detail any possible alternatives.
13. In this chapter of our outline Master Plan, BAA addresses a number of key environmental issues, from noise and air quality to waste management and energy use. Are there any more issues that BAA Glasgow should be addressing and, if so, what are these?
14. On each specific area listed in 8.2.3, do you believe that BAA is doing enough to effectively tackle the issue? If not, what more could be done?

### Chapter 9 – Land use to 2030 and a possible new runway

15. Based on the limited detail provided for the period between 2015 and 2030, do you agree with BAA Glasgow's land-use strategy as outlined in sections 9.3 and 9.10? If not, what alternative plans would you propose, which allow the airport to grow in line the national

policy outlined in the White Paper?

16. In Section 9.3, BAA Glasgow considers runways and taxiways in the period to 2030. Do you support the view that based on forecasts highlighted elsewhere in this plan, a new runway will not be needed at Glasgow until after 2030? If not, why not?
17. In section 9.6, BAA states its intention to develop Glasgow as a single main terminal airport. Do you agree with this strategy and, if not, what alternative proposals would you put forward?

### Chapter 10 – Managing external impacts to 2030

18. Do you agree with the broad principle that airport operators must work with local communities and others to find a balance between the social and economic benefits of air travel and the environmental costs? If not, please explain why not and, if you wish, put forward an alternative strategy.
19. Do you expect BAA Glasgow to consider strategies for any area not listed at 10.4.1? If so, please provide details.

### Chapter 11 – Where now? – the next steps

20. Are there any issues not currently set out in this outline Master Plan which you feel merit further consideration ahead of the final plan's production and publication later this year?

---

## 13 Evaluating your responses

Following the consultation period, BAA Glasgow will carefully consider all the views expressed and comments received, and, where possible, reflect these in the final Airport Master Plan. The company may well wish to meet with some of the people who respond to this consultation to discuss in more detail their contributions. If, for whatever reason, BAA Glasgow does not adopt consultees' suggestions, then the company will explain clearly why that is the case.

In any event, BAA Glasgow always seeks to maintain a regular dialogue with principal stakeholders, including airlines, Scottish Executive, DfT, local authorities and the Glasgow Airport Consultative Committee. A programme of meetings will be facilitated at the airport, in order to keep stakeholders, including local people, informed of progress on the plan and ensure that we are familiar with their views at all times.

Our aim, by the end of 2005, is to complete the revision of the outline Master Plan, guided by the consultation and to outline any further work we might undertake. We will then publish the final Master Plan, which will be reviewed every five years to ensure it is relevant and appropriate given changing times and circumstances.

---

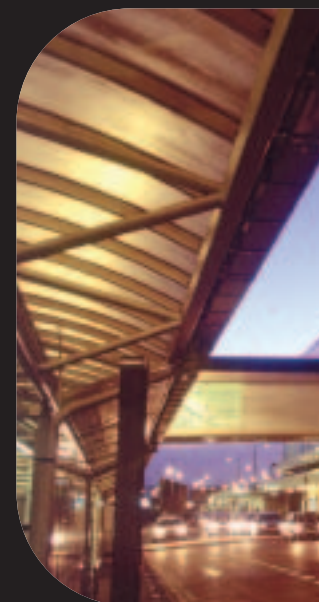
# 14 Master Plan drawings

- Drawing 1: 2005 Land Use
- Drawing 2: 2005 Layout
- Drawing 3: Indicative Boundary of Twin Parallel Runway Airport
- Drawing 4: 2015 Indicative Land Use
- Drawing 5: 2030 Indicative Land Use
- Drawing 6: Indicative Land Use - Twin Parallel Runways
- Drawing 7: 2015 Indicative Noise Contours
- Drawing 8: 2030 Indicative Noise Contours
- Drawing 9: Indicative Noise Contours - Twin Parallel Runways

If you would like this document in an alternative format please call us on 0800 731 4247. Alternatively a fully accessible version of this document can be found on our website



➔ [www.baa.com](http://www.baa.com)



This edition of the master plan has been issued for consultation, as a precursor to the preparation of a final edition of the plan, which we aim to publish at the end of 2005.

If you have any comments please send them to us as soon as possible and no later than 28th October 2005.

They should be addressed to:

Airport Master Plan Consultation  
BAA Glasgow  
St. Andrew's Drive  
Glasgow Airport  
Paisley  
PA3 2SW  
Email: [glasgow\\_masterplan2005@baa.com](mailto:glasgow_masterplan2005@baa.com)  
Tel: 0870 040 0008  
➔ [www.baa.com](http://www.baa.com)