



BAA Edinburgh 

Edinburgh Airport Master Plan

July 2006



Foreword

I am pleased to introduce Edinburgh Airport's master plan, a comprehensive and exciting blueprint for the future development of Scotland's capital city airport and its growing number of routes.

In providing this long-term picture of sustainable and responsible airport growth, I hope this plan provides a significant level of certainty and clarity to airport communities, local authorities and wider business and tourism interests, whose collective future prosperity and success depends very much on a strong, successful airport.

This publication follows a lively and constructive programme of consultation, during which we engaged with many people and organisations across Edinburgh and beyond, listening to the many differing opinions of how our airport should grow and expand to support the local economy and our neighbouring communities.

We have also listened to the many views expressed around the impact of today's airport and will take action in due course to manage some of these issues, particularly those around aircraft noise and how we care for our environment.

There is little doubt that Scotland's airports are the country's gateways to the world and sit at the heart of our country's future economic growth. Equally, there are environmental challenges to which we must all respond if we are to build a powerful consensus round ambitious expansion plans such as this one.

At BAA, we are clear that permission to grow our airports in the future will rest on our ability to reflect on the environmental impact of aviation and bring forward effective mitigation measures which seek to reduce this industry's negative impacts wherever possible and maximise the social benefits of these economic powerhouses.

These views were clearly reflected in the UK Government's 2003 White Paper, *The Future of Air Transport*, which laid down a long-term framework for the responsible development of Scotland's airports.

We continue to support that White Paper, and its key conclusions around Edinburgh Airport, and see any long-term view of public policy as being in Scotland's best interests, particularly where its

airports and physical connectivity are concerned.

Sustainable airports represent one important key to continued social and economic growth and prosperity, providing world-wide business and leisure connections and valuable employment opportunities.

In 2005, BAA Scotland's three airports handled more than 20 million passengers. Between 1996 and 2005, the number of passengers travelling through Edinburgh Airport increased by 154%, rising from 3.3 million to 8.5 million. BAA is investing the equivalent of nearly £1 million a week in Scotland to meet demand and provide world class airport facilities and services of which the country can be proud. This is an exciting industry and an exciting time for Scotland.

Now, we have listened to our communities and we have responded. We better understand the existing and future impacts the airport may have on our neighbouring communities and look forward to building a culture of engagement round our expansion plans, now and in the future.

Refreshed every five years, this master plan sets out our vision for the future of the capital's airport and we will always strive to make this a document of which many people and organisations can feel ownership.

I passionately believe that Edinburgh Airport's success is good for Edinburgh and good for Scotland but we recognise with greater success comes added responsibility. We will continue to work with communities, with government at local and national levels and with our airline partners to ensure that future growth is delivered in a responsible and financially sustainable way.

We are also committed to working with the public sector to consider and develop a range of ground transport measures which connect our ever-increasing numbers of passengers with the airport and our facilities and connections. There are several schemes currently being proposed and we continue to challenge the promoters of these to ensure that they work in the best interests of all airport users, from the international travellers to our staff.

It is important to stress that this master plan does not seek to replay old debates around airport expansion – these were exhausted during one of the

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UK Government's longest consultations, which in turn led to the 2003 White Paper.

The purpose of this document is simply to reflect the principles of the White Paper – agreed by Scottish Ministers and the Department for Transport, and outline how we intend to turn the White Paper into reality.

Edinburgh is a modern, dynamic and beautiful European capital city. The seat of Scotland's Parliament, and home to one of Europe's largest financial centres, Edinburgh is now a major player on the world stage, attracting millions of business and leisure visitors every year.

At BAA Edinburgh, we are proud of our city and proud of our airport. I believe that this master plan strengthens the foundations of this world-class airport, better fit to meet the challenges of our world-class city.

Richard Jeffrey

Managing Director
Edinburgh Airport

This master plan has been produced following a public consultation exercise during 2005. It will be reviewed every five years in line with Government advice.

If you have any queries about the content of this document, or wish to discuss any aspect of the airport's future development, please contact:

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Executive Summary

There can be little doubt that Edinburgh Airport plays a key part in the prosperity of Scotland's capital city and of the wider Scottish economy.

A study by the Fraser of Allander Institute found that in 2002, Edinburgh Airport supported 7,200 jobs across Scotland, with 2,300 people directly employed at the airport. Direct airport employment is forecast to increase to 5,700 by 2013, and to 9,000 by 2030, and it can reasonably be assumed that the number of people whose jobs and livelihoods depend on Edinburgh Airport will increase at a similar rate. The report also found that the airport's contribution to the Scottish economy is nearly £300m a year.

But Edinburgh Airport's most critical contribution to the economic and social well-being of Scotland is its role as a vital gateway for business and tourism, connecting Edinburgh with the rest of the world, increasingly through a 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 Edinburgh and the surrounding area, to the global economy.

BAA Scotland is committed to providing the air transport infrastructure that Edinburgh needs, 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 Edinburgh 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 capital city airport will become one of Europe's leading airports, supporting Edinburgh, 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 Edinburgh's future.

If Edinburgh Airport is to serve Scotland well in the future, it must continue to provide first-class facilities, and this 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 2013, and beyond that to 2030. The first section of the plan considers how the airport will grow up to the year 2013 and sets out, in some detail, how it will cope with the increasing demand for air travel by developing, largely within its current boundaries.

It details how the terminal building will expand to cater for the forecast increase in passengers from 8 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 2013 and 2030, which is the upper limit of the timescale 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 19 million to 26 million a year by 2030 and aircraft movements reaching between 155,000 and 241,000 a year.

However, it is quite clear that the continued development of Edinburgh Airport up to that time will require the purchase of land outside the current boundary. This master plan gives an indication of where the terminal will develop and where the additional runway, which the Government has predicted will be needed, could be built, if required.

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.

The main points arising from the Master Plan are these:

2005 - 2013 Forecasts

- Passenger numbers will grow from 8.5 million per annum now, to between 12 million and 13.7 million per annum.
- Aircraft movements (ie the number of landings and take-offs) will increase from 111,000 per annum today, to between 138,500 and nearly 160,000 per annum.
- Runway movements will grow from 35 movements an hour now, to between 42 and 44 an hour.
- Aircraft parking stands required will increase from 31 now, to between 37 and 45.
- Cargo and mail tonnage will rise from approx 54,000 tonnes per annum today, to 66,700 per annum.

At the airport

- In the terminal building, more check-in desks, baggage reclaim, departure lounge and boarding gate facilities will be needed to meet rising demand. The first stage, to construct a pier to serve the south-east section of the airport, will open in the summer of 2006.
- Two aircraft maintenance hangars are likely to be needed.
- Edinburgh's current on-airport car parking capacity of 6,200 could rise to between 9,500 and 10,500.

Surface access

- Edinburgh Airport recognises the importance of good surface access. The environmental benefits of ensuring as many passengers as possible use public transport in getting to and from the airport are also widely accepted. Edinburgh Airport will work in partnership with local councils, the Scottish Executive and bus operating companies to achieve a public transport mode share of 25% by 2007.
- The airport's internal road system will undergo a major reconfiguration, with priority given to key public transport options.
- A new Edinburgh Airport Rail Link (EARL) could be operational by 2011.
- A new tram link is envisaged by 2010.
- New external road links including a direct link to the trunk road network are likely to be required.

- Car parking strategy will be reviewed within the context of achieving an integrated surface access system which maximises opportunities for passengers and staff to travel to the airport by public transport.

The environment

- 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 would be carried out before any major development. Noise schemes which have been introduced since the publication of the outline master plan are explained.
- Government research indicates that the development of the airport will not compromise air quality standards in the period to 2013 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 developments in this time-frame. Edinburgh Airport is working with the Scottish Environmental Protection Agency (SEPA) to develop a range of quality management solutions relating to surface water discharge. Edinburgh Airport is a member of the Gogar Burn Partnership Group, and is committed to working with it to explore the best solutions for the future of the Burn.
- BAA recognises that climate change is a significant issue and supports the leading role the UK Government has played in relation to it.
- BAA is committed to working with Scottish Natural Heritage, Historic Scotland and City Of Edinburgh Council with regard to biodiversity and the area's archaeological heritage.

Land use

- An additional 15.5 hectares of land will be required by 2013 to enable ancillary facility developments. This will not lead to any loss of housing.

2013 - 2030 Forecasts

- Passenger numbers could grow to 26 million a year, with over half travelling to and from international destinations.
- Passenger aircraft movements could increase to between 175,000 and 241,900 per annum.

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- Runway movements could grow to between 58 and 65 per hour.
- The number of aircraft parking stands needed could increase to between 58 and 69.
- Cargo and mail tonnage could grow to 106,500 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 its boundaries would be necessary; to the north east of the airfield, next to the cargo village, 4.5 hectares would be needed by 2020 to extend the cargo facilities and another 5.5 hectares by 2030.
- To the south west of the existing terminal, 34 hectares of land, currently occupied by the Royal Highland Agricultural Society of Scotland (RHASS) would be required by 2020 for additional terminal and aircraft apron capacity, with another 51 hectares of land, also currently occupied by RHASS, needed by 2030 for similar purposes. For the proposed second runway, an additional 280 hectares north of the existing airport boundary would be required by 2030.
- The Government has stated that Edinburgh Airport 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. Edinburgh Airport consulted on proposals in 2004 and in August 2005, Edinburgh Airport published a scheme designed to protect the local area from generalised blight arising from the Government's proposals for a possible second runway at Edinburgh Airport.

The Environment

- More people will be affected by aircraft noise if the second runway is built. The Government has stated that Edinburgh Airport should put in place a voluntary scheme to address the generalised blight caused by the potential impacts of noise. Edinburgh Airport consulted on proposals in 2004 and in August 2005, Edinburgh Airport published details of a scheme for households that would be newly exposed to medium to high levels of aircraft noise arising from any second runway at Edinburgh Airport.

Next Steps

- This master plan is not a statutory planning document. The draft West Edinburgh Planning Framework Review (WEPFR) is expected to be published in July 2006 by the Scottish Executive and will set out the policy framework for development in the west of Edinburgh to 2030. It

may incorporate this master plan (either in whole or in part). Following the publication of the Finalised WEPFR, City of Edinburgh Council will review the Edinburgh and Lothians Structure Plan and the Rural West Edinburgh Local Plan.

1 Introduction

1.1 Background to the Master Plan

1.1.1 In December 2003, following a three year period of public consultation, the Government published a White Paper¹, *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 sets out the Government's conclusions on the future development of airport capacities, including Edinburgh Airport. For the Scottish Airports, these conclusions were reached in conjunction with the Scottish Executive. The main conclusions of relevance to Edinburgh Airport are summarised below:

- Land should be safeguarded for terminal development and an additional close parallel runway;
- Optimum use to be made of existing runway infrastructure before construction of new parallel runway;
- Safeguard for possible future extension of existing runway;
- Requirement for terminal and apron expansion will necessitate the relocation of Royal Highland and Agricultural Society of Scotland (RHASS) by around 2013.

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 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 also directed that the appropriate planning and transport bodies take these airport master plans into account, along with the policies set out in the White Paper, in their guidance, strategies and decisions together with the need to protect any land required for future airport expansion.

1.1.5 The Government recommended that airport operators produce outline master plans for consultation as soon as was practicable, followed by a final more detailed version. Accordingly, Edinburgh

Airport published an outline master plan in May 2005 for public consultation. A summary of the responses is included at Appendix 2. This finalised master plan has been amended where appropriate to take account of relevant comments received. It is BAA's intention, in line with the Government's advice, to review the master plan every five years.

1.1.6 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.

1.1.7 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 Edinburgh Airport

1.2.1 Edinburgh Airport, as it stands today, covers 375 hectares and its current layout and land use are shown in Drawings 1 and 2. It is bounded to the north by the River Almond, to the south by Royal Highland and Agricultural Society of Scotland (RHASS) land and to the east by the Edinburgh to Fife rail line.

1.2.2 The existing terminal building and main runway were developed in 1977 and replaced the runway and terminal facilities at Turnhouse to the east of the existing terminal. The Turnhouse facilities had been in place since before the Second World War and, by the early 1970s, these were clearly outdated and not able to facilitate the rising demand for air travel at that time or in the future.

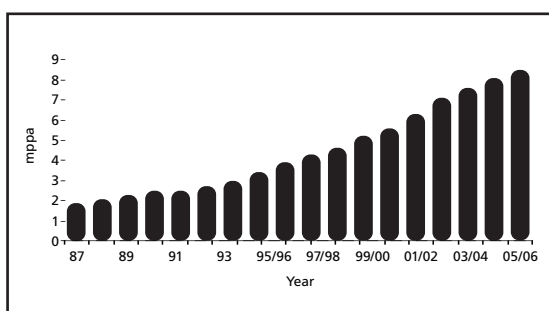
1.2.3 On completion of the new terminal building and runway in 1977, the facilities at Turnhouse became the centre for Edinburgh Airport's burgeoning cargo operation, which is now Scotland's small parcels hub and a key facility supporting Scots businesses and the economy.

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

1 Introduction

1.2.4 The core developed area is around the terminal building. Other developed areas comprise the Business Aviation Terminal and maintenance area adjacent to the Gogar Burn, the Cargo Terminal at Turnhouse Road and the western ancillary area at Almond Road. At privatisation in 1987, Edinburgh handled just 1.85 million passengers per annum (mppa). Figure 1 illustrates the considerable growth since 1987.

Figure 1: Annual Passenger Figures since Privatisation



1.3 Role and Character of Edinburgh Airport

1.3.1 Edinburgh Airport provides air services for the greater Edinburgh area and south-east Scotland. It is one of the fastest growing airports in the UK, serving over 70 domestic and short-haul destinations and two long-haul, including the first scheduled long-haul route from Edinburgh to New York, launched successfully by Continental Airlines in June 2004. Delta Airlines will be launching a new daily service to Atlanta in June 2006.

1.3.2 In 2005/06, the airport handled 8.5m passengers, of whom 73% were travelling on domestic services (primarily to/from the London airports) and 27% on international services. Approximately 42% of passengers were travelling on business and 47% of passengers travelled on no-frills airlines. The majority of passengers (83%) were resident in the UK.

1.3.3 The airport has grown at an average of 10% per year since 1995. The airport is dominated by domestic services and approximately half of all domestic traffic is to and from the five London area airports. However, a significant proportion of this traffic transfers onwards to international destinations. Table 1 shows the growth in passenger numbers (split between domestic and international), passenger air transport movements (PATMs) and the average passenger load per passenger aircraft for the period 1995 to 2005.

Table 1: Edinburgh Historic Passenger Air Traffic Data (1995-2005)

	Annual Domestic Passengers (millions)	Annual International Passengers (millions)	Annual Total Passengers (millions)
1995	2.42	0.86	3.28
1996	2.84	0.97	3.81
1997	3.08	1.08	4.16
1998	3.33	1.21	4.54
1999	3.56	1.53	5.09
2000	3.76	1.73	5.49
2001	4.22	1.82	6.04
2002	4.93	1.98	6.91
2003	5.40	2.08	7.48
2004	5.84	2.15	7.99
2005	6.13	2.31	8.44

	Annual PATMs	Average Flight Load (Passengers)
1995	55,487	59
1996	60,079	63
1997	63,179	66
1998	66,475	68
1999	74,262	69
2000	78,681	70
2001	90,450	67
2002	96,856	71
2003	97,418	77
2004	103,977	77
2005	109,249	77

1.3.4 In recent years, international traffic has grown faster than domestic traffic, albeit from a much smaller base. At the same time, recent growth in the domestic market has been driven mainly by the no-frills sector. Average passenger load per passenger aircraft has risen from 59 to 77, an annual average increase of approximately 3.5%.

1.3.5 Naturally, passenger demand is greater in the summer months as leisure demand increases, primarily due to the school breaks in Scotland/England in July and August encouraging a peak in those two months. This is more than enough to offset the slight reduction in business demand.

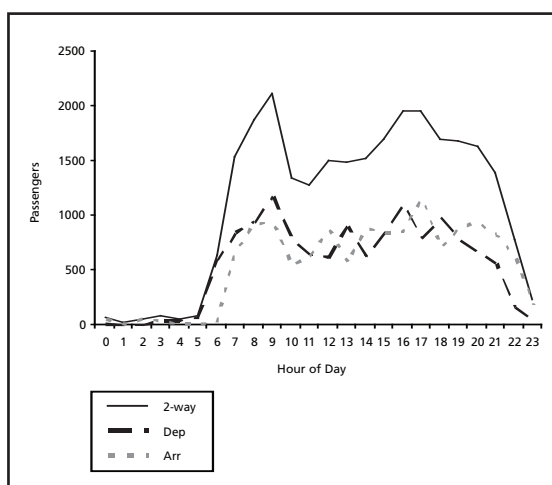
1.3.6 The daily demand profile shows that weekdays are busier on average in the peak month than weekends. This is due to the combination of

business and leisure demand during the week, and much reduced business traffic at weekends.

1.3.7 The illustration of hourly demand, outlined in Figure 2, shows that the periods between 5am to 9am and 3pm to 7pm are the busiest times at Edinburgh 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 Edinburgh is an overnight base for a large number of aircraft. Other busy periods during the day reflect the in-bound and out-bound patterns created by a busy short-haul, domestic route network. However, Edinburgh has achieved some “peak spreading” of services over the last two years, reflecting a better utilisation of airport capacity.

1.3.8 There remains considerable scope for growth in demand around the middle of the day. Long-haul routes, increased frequencies and international-based aircraft operators can naturally fit into these relatively quiet periods.

Figure 2: Edinburgh Average Hourly Distribution over the Peak Month



1.3.9 The monthly profile of passenger air transport movements shows that available capacity is relatively consistent throughout the year. This demonstrates that airlines operating from Edinburgh are generally running year-round businesses with fixed frequencies. Any slight fluctuations are caused by a small number of charter operations.

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 Edinburgh 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 2013, 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 up to 2030;
- 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 West Edinburgh;
- To inform the review of the West Edinburgh Planning Framework being undertaken by the Scottish Executive and, subsequently, the Rural West Edinburgh Local Plan.

1.4.3 The White Paper included an indicative new airport boundary, which the DfT considered would be required to serve Edinburgh Airport’s future development up to 2030. The process of evaluating and developing the airport expansion proposals has resulted in Edinburgh Airport developing a future boundary which is very similar to the area shown in the White Paper, but which does differ slightly in certain areas. 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 Edinburgh Airport, are shown on Drawing 3.

2 The Social and Economic Benefits of Aviation

2.1 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.

2.2 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."

2.3 Scotland's main cities, namely Edinburgh and Glasgow, 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. The Scottish Executive has prioritised West Edinburgh as a strategically important location to the region and the Scottish economy. Edinburgh Airport is clearly well placed to support and serve the high value-added economic activities arising from Edinburgh's position as Scotland's capital city and one of Europe's leading financial services centres.

2.4 In 2002, the respected Fraser of Allander Institute studied the social and economic impacts of BAA's three Scottish airports. The study measured the total employment, output and Gross Domestic Product (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 into 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.

2.5 The main conclusions of the Fraser of Allander report, as it affected Edinburgh, were:

- In 2002, the airport supported 7,200 jobs across Scotland, with 2,300 of those people directly employed at the airport. The remainder were employed indirectly, through supply chains and associated service-providers etc.
- The airport's contribution (economic output) to the Scottish economy measured £287 million.

2.6 A copy of the 2002 Fraser of Allander report is available at www.baa.com. The Fraser Of Allander Institute is in the process of updating this study, the results of which will be published later in the year.

2.7 Since the publication of this report, the number of people employed at the airport has risen to approximately 3,200. The total number of jobs supported by the airport is therefore now more than 8,000.

2.8 Direct employment at Edinburgh Airport is forecast to increase to 5,700 in 2013 and 9,000 by 2030. It is fair to say that a significant increase in the number of people directly employed will have a similar affect on the number of people whose jobs rely on a growing airport.

2.9 Edinburgh Airport currently pays over £1 million to Lothian and Borders Police and more than £3 million in rates every year to City Of Edinburgh Council. Unlike many other rate-payers, Edinburgh Airport maintains all the roads within the airport boundary, including the costs of street lighting and is also responsible for all waste disposal costs.

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, Government exerts its influence through its own transport policy and through the national, regional, and local planning systems. To regulate existing airport activities, Government uses primary legislation.

3.1.2 There are functional and legal limits to Edinburgh Airport's activities as an airport owner and operator. For example, responsibility for aviation policy and air traffic control respectively lies with the UK Government and National Air Traffic Services. This chapter outlines the principal controls and influences of relevance to Edinburgh 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 Edinburgh Airport should be 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 primary conclusions with regards to Edinburgh Airport is that the land-take associated with an additional runway should be identified and protected as soon as possible, and that the RHASS should relocate in order to provide land for the expansion of terminal, apron and support facilities.

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 Edinburgh Airport will closely scrutinise such policy documents, relevant to the airport, which may in future be published by regional bodies, local authorities and other agencies. Edinburgh Airport 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 National and Regional Planning Guidance

3.3.1 In 2004 the Scottish Executive published the National Planning Framework for Scotland. This is a policy framework to guide the spatial development of Scotland to 2025. It states that "to compete successfully in the world economy, Scotland requires a modern, flexible and well integrated transport system with high quality links to the rest of the UK, Europe and the world". It goes on to say that "Given Scotland's geographical position, good air links are vital for international connectivity and competitiveness".

3.3.2 The Edinburgh and the Lothians Structure Plan was approved by Scottish Ministers on 17th June 2004. 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 long-term planning vision for development and the environment in Edinburgh and the Lothians until the year 2015.

3.4 Local Authority Policies

3.4.1 Edinburgh Airport lies within West Edinburgh and falls within the area covered by the Ratho, Newbridge and Kirkliston Local Plan, in which it is designated as a non-conforming use within the Green Belt. This plan will shortly be superseded by the Rural West Edinburgh Local Plan (RWELP).

3.4.2 In 2003, the West Edinburgh Planning Framework (WEPF) was published by the Scottish Executive. This is in the process of being reviewed in light of the White Paper and it is expected that a draft will be published in July 2006. City of Edinburgh Council (CEC) has stated its intention to pursue an early alteration to the adopted RWELP once the revised WEPF has been published.

3.4.3 In August 2004, the CEC's Planning Committee approved a protocol for dealing with planning applications in the vicinity of the airport, pending the publication of the revised RWELP. A copy of this report is included at Appendix 1.

3.5 Development Control

3.5.1 All airports in Scotland have extensive permitted development rights in terms of Part 14 of the Town And Country Planning (General Permitted Development) (Scotland) Order 1992. 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

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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 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, for example the Boeing 787.

3.6.2 Edinburgh Airport's facilities meet all the CAA's requirements, and future developments will continue to do so. Indeed, some development may be introduced 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 Edinburgh Airport. For example, we are required by DfT to segregate departing and arriving international air passengers in the airport's airside (the area after security) areas.

3.8 Aerodrome Safeguarding

3.8.1 Edinburgh 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 west of Edinburgh 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 Aerodromes² is a process of 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;
- Protect the accuracy (and therefore safety) of radar and other electronic aids to air navigation, e.g. 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

2 SE Circular 1/2003 – Safeguarding of Aerodromes.

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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 wind turbines being brought forward in the last few years. BAA has been consulted on proposals at more than 200 sites. 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 the height of the structures and, importantly, their visibility to radar and the potential confusion this can cause air traffic controllers.

3.8.5 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 advice of air traffic control providers, 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. The airport would recommend that 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 or in accordance with the guidance available on the British Wind Energy Association (BWEA) website

➔ www.bwea.com/aviation. BAA also asks that local authorities highlight this issue in their local and strategic development plans.

3.8.6 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, 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.

3.8.7 Safeguarding issues related to the possible development of a new runway at Edinburgh 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. The Department for Transport (DfT) are responsible for PSZ policy in the UK. Local Planning Authorities (LPAs) are responsible for applying the published policy.

3.9.2 The current PSZs were calculated in 1999 and formally adopted in 2002. They were defined in a Government circular 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 airports³. 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 Edinburgh 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 12/30 (Edinburgh'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 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 emptied. The area is defined in the 1 in 10,000 contour. There are no such properties at Edinburgh Airport.

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

3.10 Environmental Regulation

3.10.1 Edinburgh 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

3 Scottish Executive Circular 8/2002 – Control of development in airport Public Safety Zones

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Edinburgh Airport's potential environmental effects up to the year 2013.

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 Edinburgh Airport Limited as a relevant airport operator and Edinburgh 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. In the UK, this service is provided by National Air Traffic Services. 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.

4 Today's airport – Edinburgh in 2006

4.1 Introduction

4.1.1 This chapter paints the picture of Edinburgh Airport as it is today. It details existing airport facilities and committed developments.

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 A new £11m Air Traffic Control Tower was opened in November 2005, sited within the short stay surface car park at the front of the airport's terminal building.

4.2.2 The 57-metre high tower provides clear views of both the main and standby runways and aircraft stands. Importantly, this development, in conjunction with improvements to the taxiway system, has been an important step towards the full utilisation of the existing runway infrastructure.

4.2.3 The airspace serving Edinburgh Airport is managed by NATS and controlled from the Scottish Control Centre at Prestwick. NATS employs long-established procedures for routing departing and approaching aircraft.

4.2.4 Although the airspace surrounding Edinburgh and Glasgow Airports is relatively small and densely utilised, there is enough separation (ie space between the airports), to ensure that operations at one airport do not affect the other. It is not anticipated that the proximity of these airports to each other will lead to any capacity constraints.

4.3 Runway and Taxiway System

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

- Runway 06/24 (main runway) is 2,560m in length and is equipped with full instrument landing facilities (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. Following the completion of the extended parallel taxiway in January 2005 and the completion of the new Control Tower sustainable capacity has increased from 30 movements (take-offs and landings) per hour (mph) to 38mph.
- Runway 12/30 (secondary runway) is 1,976m in length and lies in a north-west/south-east direction. It is a visual runway only and is not equipped with instrument landing facilities. In

normal operation, this runway can accommodate operations of aircraft up to and including the Boeing 747, but with restricted payload (combined weight of passengers and cargo). Use of this runway is restricted at night and weekends to reduce the impact of noise on local communities. Currently, runway 12/30 handles approximately 3% of the airport's total air traffic movements.

4.3.2 There are further enhancements that can be made to both runways, which can increase the capacity of the runway system as a whole to approximately 55 movements per hour, including more use of runway 12/30.

4.4 Aircraft Aprons

4.4.1 Edinburgh Airport currently has 27 aircraft parking stands of various sizes, including two jumbo stands which can accommodate Boeing 747 aircraft, but which are more generally used to accommodate two medium-sized aircraft each (see Table 2 below). Of these stands, 13 are "contact" stands, ie they are located immediately adjacent to the terminal building and passengers can walk directly to and from the aircraft. The remaining 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.

4.4.2 There are two areas populated by remote stands: six of these located to the west of the terminal building (known as the 'Mirror Stands'), used for both international and domestic flights; and seven stands to the south east of the terminal building (known as the 'South-East Ramp') which are used primarily to serve domestic services.

Table 2: Edinburgh Airport Passenger Stands

	Small	Med	Large	Jumbo	Total
Contact Stands	4	5	3	1	13
Mirror Stands	3	3	0	0	6
SE Ramp Stands	1	6	0	1	8
Total	8	14	3	2	27

Small: eg Boeing 737-400, Embraer, BAE146

Medium: eg Boeing 757, Airbus 319

Large: eg Boeing 767

Jumbo: eg Boeing 747, B777

4 Today's airport – Edinburgh in 2006

4.4.3 There are 12 cargo stands on the east side of the airport, serving the airport's busy cargo facility.

4.5 Passenger Terminal Facilities

4.5.1 Edinburgh Airport is served by a single terminal, which was built in 1977 to replace the old Turnhouse Terminal to the east of the airport. The current terminal building was extensively redeveloped and remodelled in the late 1990s and is, again, nearing its capacity. Internally it is organised such that international arrival facilities are situated at the west end of the building, with domestic arrivals located to the east. Common departure facilities sit between the two.

4.5.2 Edinburgh Airport is working to complete its new forecourt, which prioritises public transport to the front of the terminal via barriered access. Shelters will be provided immediately adjacent to the terminal building for airport bus services with a separate coach park and two taxi ranks located towards the eastern end of the terminal. The new forecourt will provide a separate passenger "drop-off" area for private vehicles that is double the size of the area previously provided. A new passenger pick-up zone will be located on the ground floor of the MSCP.

4.5.3 The terminal has 46 check-in desks with 100% hold baggage screening systems and 12 self-service check-in kiosks. Internet check-in now accounts for approximately 15% of all check-in transactions and this is expected to increase over time.

4.5.4 After the passenger security search area, there is a common departures lounge which serves both international and domestic traffic. There is a dedicated area for passengers travelling to destinations within the 'Common Travel Area' (Dublin, Channel Islands, and the Isle of Man). A new pier will be completed in summer 2006 linking the terminal building to the south-east stands.

4.5.5 There are three domestic and three international baggage reclaim belts.

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

4.6 Car Parking

4.6.1 There are three public car parking areas within the airport, offering a total of approximately 6,400 spaces.

4.6.2 There are approximately 700 staff car parking

spaces on the airport campus, 400 of which are located within the long-stay car park. The remaining spaces are attached to the various offices and ancillary service buildings located around the airport campus. Results from a recent Edinburgh Airport employment survey shows that 84% of all airport staff drive to work by private car.

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

Table 3: Car Park Capacity

Location	Spaces
Short Stay Car Park – Surface Level	1,508
Short Stay Car Park - MSCP	2,051
Long Stay Car Park – Surface Level	2,813
Staff Car Parking	700

4.7 Cargo

4.7.1 Edinburgh Airport is now home to the busiest cargo and mail facility in Scotland and the third busiest mail operation in the UK. According to the latest available figures, the airport currently handles 24,000 metric tonnes of cargo and 29,700 tonnes of mail a year. The cargo market grew by 8% in 2004/05 and is forecast to grow by an average of 3.2% per year between now and 2030. The cargo operation is located on the east side of the airport (formerly Turnhouse) and has been developed over a number of years. The 'Cargo Village' currently occupies 7,000m² and comprises a mixture of transit sheds (approximately 3,000m²), warehouses and offices, served by twelve dedicated cargo aircraft stands.

4.8 Aircraft Maintenance

4.8.1 There is currently one aircraft maintenance hangar at Edinburgh Airport measuring 2,760m². This facility is sub-divided and is occupied by two operators. There are also three airline engineering workshops, each with a dedicated compound. These workshops are located in landside areas and the total site area occupied by these is 3,764m².

4.9 Ancillary Facilities

4.9.1 A range of ancillary services and facilities is 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 good reason, to be in close proximity to the core terminal area. We indicate some of the more important ancillary facilities below:

- **Airport Fire Station** - Edinburgh Airport has its own airport fire service, which employs 66 staff

4 Today's airport – Edinburgh in 2006

and is operational 24 hours a day. The Fire Station is located on Almond Road and occupies approximately 1,350m². The adjacent fire training ground covers an area of 6,810m². The fire station has a CAT 8 consistent with operations by large aircraft (e.g. Boeing 767) under normal operating conditions, but, with the provision of additional fire-fighters, the airport can be upgraded to CAT 9 to cater for jumbo aircraft (eg Boeing 747).

- **Fuel Farm** - There is one fuel farm covering an area of approximately one hectare. There is a total of five surface level fuel storage tanks (2 x 279,000 and 3 x 327,000 litre capacity) for the storage of Jet A1 aviation fuel. On-site accommodation includes offices, training and staff welfare facilities and a general store. 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 Edinburgh Airport. The principal operator, Alpha Catering, occupies a total site area of 5,730m², on which is constructed a food preparation base of 3,800m². In addition, there are car-parking facilities and loading bays. A second operator, City Net, occupies a smaller base, of 400m², with no dedicated external compound.
- **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 380 ready return parking spaces are provided and the entire back-up facilities cover an area of 8,415m². Edinburgh Airport is currently planning a consolidated car-hire centre in order to ensure that existing land is used as intensively as possible and that the service ultimately provided to the customer is better.
- **Hotels** – There is a four-star Hilton hotel located on the airport campus, at the main entrance roundabout. This hotel has 150 bedrooms, a restaurant, leisure facilities and customer car parking. The overall area occupied is 31,000m².

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

- Aircraft Sanitation Unit
- Motor Transport Facilities
- Emergency Rendezvous Points
- Engineering Workshops
- Contractors Compounds
- Office Accommodation
- Police Station
- Coach Park

- Taxi Rank and Feeder Rank.

4.9.3 The airport has grown from less than 1m passengers per annum when it opened in 1977 to 8.5m today by intensively developing the land within its boundaries to provide all the facilities which are required to support growth of that scale.

5 Passenger demand – the forecasts

5.1 Introduction

5.1.1 Following the 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 Edinburgh 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 influence traffic change and the extent to which Edinburgh Airport has a share of the Lowlands traffic, which is currently shared across three airports at Edinburgh, Glasgow and Prestwick. Consequently, Edinburgh Airport's annual passenger demand in 2030 will fall somewhere within a range of possibilities. For planning purposes, Edinburgh Airport 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 and mail tonnage figures
- Car parking figures.

5.1.4 The forecasts relating to peak hourly runway movement may be of particular interest. As the forecast demand for runway movements rises above the capacity that the current runway system can provide there will clearly be a requirement to provide extra capacity in the form of a second parallel runway. This would represent a significant investment on the part of Edinburgh Airport and would be the subject of a detailed and thorough

business-case evaluation in advance of any public consultation and planning application.

5.2 Air Passenger Forecasts

5.2.1 To forecast aggregate passenger demand BAA uses an econometric framework to establish the relationship between growth in demand for air travel, and key economic drivers and other important factors that influence demand. These include growth in UK and World GDP, the prospects for international trade, future trends in air fares, the degree of market maturity, the effects of rail competition, of telecommunications competition and of the development of air services in the regions.

5.2.2 The econometric framework segments future passenger demand by geographical market, country of residence (whether UK or non-UK), and travel purpose (business/leisure, transfer/non-transfer). Informed by historic relationships and expectations about future trends, BAA takes a view on the sensitivity of each passenger segment to changes in the main factors influencing demand for air travel over the forecasting period.

5.2.3 Combining BAA's view on the future trends of these key influencing factors with its judgement on the relationship between each of them and the growth in demand for air travel in each market segment, BAA produces a projection of potential passenger demand for air travel.

5.2.4 An important area of judgement is the expected course of oil prices. OECD statistics demonstrate a substantial increase in oil prices between 1998 (an average over the year of \$13 per barrel) to 2005 (an average of \$55). Looking forward BAA has assumed oil prices slightly lower (in today's prices) than the current high levels for the next decade or so, followed by a period of further moderate increase.

5.2.5 BAA's current forecasts do not currently make any explicit assumption on higher levels of cost reflecting environmental impacts. Given the interest in extending the EU emissions trading scheme to cover aviation, something BAA strongly supports, we are embarking on a study to assess the potential impacts of such a step on BAA's airport forecasts. However, it is helpful to refer to the conclusions, set out in the 2003 White Paper, of UK Government studies in this area. These suggested that a notional

5 Passenger demand – the forecasts

100% fuel tax would have the effect of reducing demand by ten per cent.

5.2.6 In the case of Edinburgh the expected demand for travel is a result of assessing the share of the aggregate demand for air travel in the Central Scotland area (as described above) likely to be attracted to Edinburgh.

5.2.7 The model delivers an average annual increase in passenger figures of slightly less than 5% to 2013, and slightly over 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.

5.2.8 The domestic market has experienced a high rate of growth since 2000 with the entrance of no-frills airlines 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. More moderate growth is now being experienced. The international market is now experiencing high levels of growth of 13%. The demand forecasts assume:

- On going fleet expansion and aircraft renewal by airlines will deliver increased capacity per flight movement;
- Gradual growth of away-based services as the number of continental low cost bases increase;
- On going development of low cost services by foreign airlines;
- Continued reduction in 'real' air fares.

5.2.9 Edinburgh 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 Edinburgh, which will to an extent mean a substitution of international for domestic air travel, i.e. the component currently transferring at other domestic points (e.g. London), to onward international destinations.

5.2.10 Table 4, following, illustrates the range of BAA air passenger forecasts, as outlined above.

Table 4: Annual Passenger Forecasts (millions)

Year	Low	Central	High
2005 (Actual)		8.5	
2013	11.9	12.7	13.7
2020	14.8	17.6	18.1
2030	18.8	23.0	26.0
Average Growth	3.2%	4.2%	4.5%

5.2.11 The current international passenger volume at Edinburgh is 2.3 million. Of this figure, roughly half of all passengers are using traditional or full-service carriers, 32% are on no-frills operators and 17% are using charter flights. Average annual growth in the international market of 7% 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 approx 139,000 passengers a year to 1.7 million by the end of the period. Domestic passengers as a proportion of the total are forecast to decrease from the current 73% to 45% by the end of the period.

5.2.12 Foreign-based passengers, ie those passengers whose homes are not in the UK, currently represent 17% of the total passenger base. This number is forecast to increase to 28% by 2013 and to 41% by 2030, creating unprecedented opportunities for both Scotland's tourism and the wider economy.

5.2.13 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 the development of high-speed links in the form of TGV or Eurostar services between Scotland and London. Given that there appear to be no firm commitments to deliver investments of this scale, the forecasts have to assume that domestic rail competition will have a moderate effect, less than 1% per annum, 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.

5 Passenger demand – the forecasts

Table 5: Annual Passenger Air Transport Movement Forecasts

Year	Low	Central	High
2005 (Actual)		111,000	
2013	138,500	149,200	159,600
2020	157,500	187,900	192,300
2030	175,000	214,200	241,900
Average Growth	1.8%	2.7%	3.2%

5.3.2 In terms of air transport movements, BAA's forecasts reflect a reduction of domestic service share for Edinburgh, from 77% of passenger air transport movements in 2005 to 60% by 2013, and 50% by 2030. By contrast the share of international service movements increases under the illustrated hypothesis from 23% of the total to 50% 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
2005 (Actual)		35	
2013	42	43	44
2020	48	53	57
2030	58	63	65

5.3.4 As outlined in paragraph 5.1.4, the main driver for the development of a new runway will be the degree to which peak runway movement demand exceeds capacity, subject to a detailed business and financial appraisal and to securing approval through the formal planning process.

5.3.5 It is currently estimated that Runway 06/24 could be enhanced to offer approximately 50 movements per hour (mph) and more use of Runway 12/30 could give an overall runway system capacity of up to 55 movements per hour. Given the current range of forecasts, this would indicate that peak runway capacity will be exceeded before 2030 and possibly as early as 2020.

5.4 Passenger Aircraft Stand Forecasts

5.4.1 Table 7 below shows the BAA range of forecasts for passenger aircraft stands. The 2005 actual requirement for 31 stands was accommodated by positioning three small aircraft on one of the Jumbo stands, and two medium-sized aircraft on the other.

Table 7: Passenger Aircraft Stand Forecasts

Year	Small Low-high	Med Low-high	Large Low-high	Jumbo Low-high	Total Low-high
2005 (Actual)	18	10	3	0	31
2013	11	22-26	3-5	1-3	37-45
2020	10-11	27-36	4-8	2-5	43-59
2030	7-9	26-42	9-13	4-7	58-69

S: eg B737-600, Embraer, BAE146

M: eg B757, A319

L: eg B767

J: eg B747, B777

5.4.2 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. New generation aircraft such as the Boeing 787 or Airbus A350 will be used on medium, long and in some cases short haul routes by international charter and scheduled airlines. These new generation aircraft require Jumbo stands, as their more efficient wings are much larger than the types of medium and large aircraft they replace, despite seating capacity being similar.

5.4.3 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 and Mail Forecasts

5.5.1 The air freight business has two major market segments. These are mainstream/consolidation and express delivery. The mainstream element consists of airlines, freight forwarders, and ground transport companies. Express delivery consists of 'integrator' carriers such as DHL, TNT, UPS, and Parcelforce. These operators offer air and ground transport as one service. Edinburgh Airport is currently the hub for integrator activity in Scotland, representing approximately 80% of Edinburgh's cargo tonnage throughput.

5.5.2 The major contributory factors to Edinburgh Airport's dominance in this market are as follows:

- its geographical position within Scotland's major strategic road system. The M8, M9 and M90 are all within one mile of the airport boundary. These excellent road links with the major 'hi-tech' industrial bases of Edinburgh, Glenrothes, and Livingston are important.
- The availability of airside access for new distribution hubs

5 Passenger demand – the forecasts

- Excellent airport infrastructure, ie new cargo stands, airside access points
- A good and steady supply of highly-skilled and trained people.

5.5.3 Table 8 outlines indicative BAA forecasts for cargo and mail tonnage.

Table 8: Cargo and Mail Tonnage Forecasts

Year	Cargo	Mail
2005 (Actual)	24,000	29,700
2013	31,000	35,600
2020	38,800	41,600
2030	53,300	44,700
Average Growth	3.2%	1.6%

5.5.4 The cargo market is forecast to grow by an average of 3.2% per year out to 2030, with mail forecast to grow at half this rate.

5.5.5 Table 9 shows the forecast cargo air transport movements (CATMs) for the plan period. The minimal growth in cargo movements reflects the fact that the growth in air freight will predominantly be in the “bellyhold” of passenger aircraft rather than dedicated freight aircraft.

Table 9: Annual Cargo Air Transport Movement Forecasts

Year	CATMs
2005 (Actual)	7,800
2013	7,800
2020	7,900
2030	8,100

5.6 Car Parking Forecasts

5.6.1 Table 10 below shows the range of BAA forecasts for passenger car parking space demand (NB: long-stay car parking figures include an estimate of off-airport demand).

Table 10: Passenger Car Parking Space Demand Forecasts

Year	Low	Central
	Short / Long	Short / Long
2004 (Actual)		2,920 / 3,300
2013	3,900 / 5,600	4,000 / 6,000
2020	4,700 / 7,800	5,300 / 10,300
2030	5,600 / 12,800	6,000 / 15,700

Year	High
	Short / Long
2004 (Actual)	
2013	4,100 / 6,400
2020	5,800 / 12,700
2030	6,300 / 17,300

5.6.2 The forecasts suggest that in the period to 2030 the demand for short-stay car parking spaces will approximately double from the 2004 figures, while the demand for long-stay car parking spaces will increase five-fold over the same period.

5.6.3 The assumption behind these forecasts is that there is one fixed rail link in place. However, as is explained in Chapter 7, more work needs to be undertaken to better understand the contribution rail can make to increasing public transport mode share.

6 Land use in 2013

6.1 Introduction

6.1.1 It is predicted that in 2013, Edinburgh Airport will be handling between 12 and 14 million passengers per annum (mppa). The White Paper states that: "The particular circumstances at Edinburgh will require land for terminal and apron development, in advance of the construction of a new runway, to be safeguarded." It goes on to state that such expansion will require the relocation of the Royal Highland Agricultural Society of Scotland (RHASS). This section of the 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 2013. Within this timescale, Edinburgh Airport believes that airport development can for the most part be accommodated on land currently owned by BAA and that the RHASS land will not be required. However, to facilitate any airport growth beyond 2013, part of the land currently owned by RHASS will be required. This will clearly be a significant time for all concerned and, for this reason, Edinburgh Airport has focused on 2013, rather than the 2015 specified in the White Paper, as the date to which airport development is described in some detail. Drawing 3 highlights that the airport development to 2013 is undertaken more or less within the existing boundary.

6.1.2 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 advance some of the expansion plans. Similarly, any slow-down in growth would be reflected in development of new 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 Prestwick Air Traffic Control Centre is due to supersede the existing control centre before 2013 and will offer the potential for

increased airspace capacity through the delivery of new technology.

6.2.3 There exists the potential that extra airspace capacity can also be delivered via changes to approach routes and Standard Instrument Departures (SIDs) routes. NATS currently takes the view that these changes will need to be implemented before Runway 06/24 is capable of handling more than 40 movements per hour. Any changes in published routes will of course be subject to the specified consultation process.

6.3 Runway and Taxiway System

6.3.1 It is anticipated that the construction of rapid exit taxiways and rapid access taxiways will be required in the period to 2013 to achieve more than 40 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, in the period to 2013, the secondary runway, 12/30, will be used in exactly the same way as it is now and that there will be no significant increase in its usage.

6.3.3 The White Paper suggested that at some stage it may be necessary to extend the existing main runway to allow a wider range of aircraft to access Edinburgh Airport and facilitate direct services to a range of long-haul destinations. The runway could be extended within the airport's existing boundary to achieve a take-off run of approximately 3km. This avoids any impact on the Edinburgh-Fife rail line and, at the other end of the runway, the M9. Such an extension would only be undertaken in response to a specific demand from the airlines for such capability and the necessary detailed business assessment. No such demand has been expressed at the present time and there is therefore no timescale for such work, although an indicative layout is illustrated on Drawing 4. Any extension to the runway would be the subject of a planning application with the relevant environmental impact assessments.

6.4 Aircraft Aprons

6.4.1 As mentioned in Chapter 5, forecast demand is for between 37 and 45 stands in 2013. This is an increase of one to two stands every year. The stand development strategy in the period to 2013 is to continue developing the south-east ramp

incrementally, utilising land on which the long-stay car park is currently sited.

6.4.2 The forecasts highlight a requirement for an increase in large and jumbo-sized stands to accommodate such aircraft as the Boeing 747 or Boeing 777. This need reflects the expectation that Edinburgh 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 Edinburgh Airport will continue to be served by one passenger terminal only and that the terminal will be expanded both to the east and to the south in incremental stages. This will allow the terminal to cater for passenger growth up to 2013.

6.5.2 Additional terminal capacity will be required for check-in, reclaim, departure lounge and boarding gate facilities. The first stage of development is a new pier to serve the south-east ramp area of the airport. This is currently under construction and will be completed in summer 2006. It will provide additional boarding gates and enable some of the south-east ramp stands to be pier served, removing the requirement to coach passengers to the aircraft parked in that area.

6.5.3 The expansion of the terminal to the east will facilitate departure lounge enhancements and presents the opportunity for extra departure baggage sort capacity and additional baggage reclaim capacity. This development will also promote new levels of customer service, through additional retail and passenger facilities for travellers.

6.5.4 The southern expansion to the terminal will offer an opportunity for enhanced check-in capacity, while it is anticipated that extra international baggage reclaim facilities can be provided within the existing shell of the terminal.

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 Edinburgh 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 2013 and will probably be sited in close proximity to the Terminal. A full analysis of long stay car parking is in progress.

Car parking strategy is discussed more fully in Chapter 7.

6.7 Cargo

6.7.1 While strong growth in cargo is forecast, new developments will be undertaken only as a result of specific requests from cargo handlers. At present, cargo handlers consider their current facilities to be adequate and therefore no detailed plans are available. However, Drawing 4 does show an indicative expansion zone.

6.8 Aircraft Maintenance

6.8.1 Two additional maintenance hangars will probably be needed, requiring approximately six hectares of land. The development zone for these facilities is shown on Drawing 4 to the east of the runway 12/30, adjacent to the area in which the Cargo Village is sited. It is anticipated that these hangars would be used to service smaller types of aircraft such as the Boeing 737 and the Airbus 319.

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. Of particular note is the required acquisition of approximately 11 hectares of land to the south east of the existing aircraft maintenance area to provide enhanced ancillary facilities. BAA is aware that this area is currently designated as flood plain for the Gogar Burn and is committed to working with City of Edinburgh Council and other agencies to explore the appropriate mitigation measures required. This is discussed more fully in Chapter 8.

6.9.1 It is BAA's belief that the vast majority of ancillary facilities should be provided within the airport campus in close proximity to the operational areas for two key reasons:

- If support facilities are located remotely from the airport then a considerable number of additional road journeys would need to be made to service the operational facilities. This would add unnecessarily to road congestion and to CO₂ emissions.
- The additional vehicles, staff and time allowances required to undertake remote servicing would add significantly to the operational costs of the

6 Land use in 2013

businesses providing support services to the airport.

6.9.2 The obvious exception to the above is long stay car parking, a proportion of which BAA fully accepts can be provided remotely, as is the case at present.

6.10 Hotels

6.10.1 By 2013 Edinburgh Airport will be handling between 12m and 14m passengers per annum.

6.10.2 Edinburgh Airport considers the need for onsite hotel provision to be a key requirement as it grows. Airport hotels serve business and leisure travellers and provide a range of complementary facilities to the airport. The availability of on-airport accommodation increases the potential catchment area by allowing passengers to access early and late flights and this assists airlines in the planning of new routes, and planning of new schedules.

6.10.3 In comparison with other BAA Scottish Airports, Edinburgh Airport is currently grossly under provided in terms of on-airport hotel accommodation, whilst the number of off airport hotels within the local area is comparable. Significantly, Edinburgh can offer only 0.04 bedspaces per 1000 passengers, whereas Glasgow provides 0.15 bedspaces and Aberdeen 0.23. This under-provision illustrates a weakness in the facilities being offered at Edinburgh airport and a failure to provide passengers with a range of quality and choice. The provision of suitable hotel facilities on airport will assist in ensuring that Edinburgh Airport can meet demand in the long term. The advantages of such provision are widespread, not least in terms of sustainable travel and ongoing economic benefit.

6.10.4 Airport hotels need to tailor their facilities to meet passenger demands and have a specific need to be located within the airport curtilage to be able to meet these demands. To be located within close walking distance from the main terminal and with secure pedestrian routes for baggage trolleys provides arriving and departing customers with easy and direct access to suitable accommodation without the need for intermediate transit by car or minibus. A prominent location within the core Terminal area is required to assist in wayfinding and to ensure customers and staff:

- Safe and comfortable accessibility to terminal by foot/wheelchair;
- Compliance with DDA (Disability Discrimination Act) regulations;

- Reduction in further over land travel need/patterns;
- Remove the need for reliance on shuttle buses/cars;
- Provision of direct access to check-in/departures and real time information;
- Facilitate smooth transition to business facilities/meeting space.

6.10.5 In the period to 2013 it is anticipated that two new on-airport hotels will be required. BAA intends to allocate land within the existing airport boundary for this purpose. The provision of additional hotel accommodation to meet customer need is consistent with BAA's policy of reducing unnecessary journeys on the local road system and thereby reducing congestion and CO2 emissions; providing customer choice; and intensifying land use within its existing boundary.

6.11 Landscaping

6.11.1 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.

7 2013 Surface Access (Transport Links)

7.1 Introduction

7.1.1 Edinburgh Airport recognises the importance of good surface access. The environmental benefits of ensuring as many passengers as possible use public transport in getting to and from the airport are also widely accepted. Edinburgh Airport has already set a target to increase the percentage of passengers using public transport from 16% in 2002 to 25% by 2007 and will be undertaking a proactive approach and will work in partnership with local councils, the Scottish Executive and bus operating companies to achieve this.

7.2 The Surface Access Strategy in Context

7.2.1 Edinburgh Airport believes that an integrated approach to surface access issues is required if the appropriate infrastructure to enable the airport to grow is to be provided.

7.2.2 The scale of aviation activity at Edinburgh Airport is the main driver of demand for improvements to ground transport connections. The relationship between airport activity and the demand for road, rail and even non-motorised travel is complex and requires complete understanding of a wide range of passenger and airport servicing requirements.

7.2.3 Edinburgh Airport recognises the importance of monitoring, planning for and managing this demand and the prominence that this issue has been given within UK Government and Scottish Executive policy. Early recognition of the importance of surface access developments prompted each of BAA's three airports in Scotland, including Edinburgh, to establish Airport Transport Forums, which in turn each developed a long-term Surface Access Strategy. Edinburgh Airport's strategy document was published in 2002, with due cognisance of the Scottish Executive's request that all local authorities develop Local Transport Strategies.

7.2.4 It is important to be clear on the very different roles of the master plan and the Airport Surface Access Strategy (ASAS). The master plan takes a long term strategic view, outlining the anticipated demand for air travel and the physical responses to this demand. As would be expected of such a strategic document it takes a necessarily high level view. The ASAS deals with short to medium term tactical responses to the demand identified in

the master plan and has the setting of increasingly challenging mode share targets as a core objective.

7.2.5 The ASAS for Edinburgh airport will be developed and published during the course of 2006. It will be a subsidiary document to the master plan and will set mode share targets based on a corridor and area analysis. It would be inappropriate for this master plan to prejudge this analysis and to present revised mode share targets, that whilst challenging, may prove to be unachievable. With this in mind this chapter will concentrate on current performance, the drivers of mode share, future challenges and the potential strands of future Airport Surface Access Strategies.

7.3 Current Airport Surface Access Strategy (ASAS)

7.3.1 The Edinburgh Airport Surface Access Strategy was developed in consultation with the South East Scotland Transport Partnership and sets three broad objectives relating to surface access:

- To increase the percentage of passengers using public transport from 16% in 2002 to 25% by 2007.
- To reduce single-occupancy car journeys by staff from 88% to 78% by 2007.
- To develop an integrated transport strategy.

7.3.2 The strategy makes clear that while improvement in public transport access is important, road capacity is of increasing long-term significance, given the disparate nature of passenger demand and the limited capability of public transport to serve such a geographically-dispersed customer base. This perspective means Edinburgh Airport continues to promote bus routes to and from the airport in an effort to meet its objective of 25% public transport use by 2007.

7.4 Existing Surface Access Infrastructure

7.4.1 The Airport is accessed from Eastfield Road, a single-carriageway road which links to the A8 by means of a grade-separated junction, more commonly known as the "Dumbbell" roundabouts. The A8 Glasgow Road connects the airport with the M8 (Glasgow), M9 (Stirling) and the A720 Edinburgh City Bypass (East Coast and Borders) and Edinburgh City Centre. As such, Eastfield Road and the A8 Glasgow Road provide a vital link between Edinburgh Airport and the wider road network, to all vehicular traffic. The major surface access routes are shown on Drawing 1.

7 2013 Surface Access (Transport Links)

7.4.2 Additionally, access to the airport from the A8 Glasgow Road corridor can be taken from Ingliston Road. This road is approximately six metres in width and provides east-bound access only for traffic. This road is used as an emergency access when the Eastfield Road corridor is closed. The route is unsuitable for large volumes of traffic and any traffic arriving from Edinburgh must first travel to Newbridge Roundabout prior to turning and heading back along the A8 west-bound before using the “left-in” arrangement at Ingliston Road. The junction of Ingliston Road with the A8 is simple in format and does not have deceleration / acceleration lanes. It is in close proximity to the eastbound Eastfield Road off-ramp.

7.4.3 Access to the freight terminal is taken from Turnhouse Road, via the Maybury junction. The freight terminal is located on the site of the former RAF Turnhouse airfield, to the east of the main passenger terminal.

7.4.4 A report compiled by traffic consultants Faber Maunsell in December 2004, *Setting the Scene*, highlighted the following concerns with current surface access infrastructure around Edinburgh Airport:

- Eastfield Road is the main conduit between the external road network and the airport but does not solely serve the airport. This road, in fact, provides access to a number of different places, for example the Royal Highland Showground and the Quality Hotel.
- Ingliston Road is sub-standard and cannot, in its current state, provide adequate contingency if Eastfield Road closes for whatever reason.
- Access to two park and ride sites is taken from the Dumbbell junction, which can be subject to operational difficulties at peak times.
- All road traffic faces extensive delays through the Gogar roundabout at peak times, with queuing on the A8 eastbound approach occasionally as far back as the airport /Eastfield Road junction.
- The limited capacity of the road network is clearly exposed during major events at the RHASS site, which can lead to significant queuing and considerable delays for air travellers and airport employees.
- A significant number of developments around the airport have gained planning consent in recent times, e.g. Royal Bank of Scotland’s world headquarters at Gogarburn. At present this has had a minimal impact on the road system and Edinburgh Airport suggests that further studies are

required to examine the capacity of the local road network to absorb growth in the short and long term.

7.5 Existing Public Transport Options

7.5.1 The 100 ‘Airlink’ bus service currently represents the main public transport connection to Edinburgh Airport. Operating every eight minutes during the day, this service runs from Waverly Station in the city centre, past Haymarket Station, and through Corstorphine to the airport. The published journey time for this service is 25 minutes. The service uses a dedicated bus and taxi lane for much of its journey and considering current passenger numbers is a successful service.

7.5.2 At night times (from 2330 – 0400) this service becomes the N22.

7.5.3 The 35 service connects the airport to the Gyle, Fountainbridge and Ocean Terminal in Leith. Total journey time to Ocean Terminal is 1 hour and 30 minutes.

7.5.4 In February 2006 the 747 service to Ferry Toll Park and Ride and Inverkeithing rail station was launched by Stagecoach. Journey time to the airport is approx 25 minutes.

7.5.5 The nearest rail stations are Haymarket and Edinburgh Park.

7.6 Passenger and Employee Distribution

7.6.1 The table below illustrates the origin of passengers using Edinburgh Airport. This shows that the vast majority come from the Lothians – the airport’s immediate hinterland.

Table 11: Origin of Passengers using Edinburgh Airport⁴

Origin	Percentage
Lothian	60.6 %
Fife	11.8 %
Tayside	9.8%
Central	6.8%
Strathclyde	5.1%
Grampian Borders	2.5%
Highland and Islands	0.9%
Grampian	1.6%
Dumfries and Galloway	0.3%
Rest of UK	0.7%

⁴ 2005 CAA Passenger Survey

7 2013 Surface Access (Transport Links)

7.6.2 The residence of airport employees is broadly similar, as shown in the table below.

Table 12: Origin of staff using Edinburgh Airport⁵

Origin	Percentage
Lothian	59%
Fife	19%
Central Scotland	11.5%
Strathclyde	6.5%
Tayside	2%
Other	2%

7.7 Existing Mode Share

Table 13: Existing Modal Split

Mode of Transport	Percentage
Private car	48
Bus/Coach	20
Taxi	25
Hire car	6
Other	1

7.7.1 The table above shows the existing mode share. At 20%, the number of passengers travelling to/from the airport by public transport compares favourably with other regional airports, exceeding the mode shares achieved at Manchester, Birmingham and Southampton, all of which are served by rail.

7.7.2 Edinburgh Airport believes that its ambitious target to increase public transport usage to 25% by 2007, whilst challenging, can be achieved solely through bus services.

7.7.3 The current public transport mode share of 20% (relative to 16% in 2002) is largely due to the success of the Lothian Buses 100 service, and shows the impact that improvements to the bus service, and the marketing of it, have had in recent years. In particular, it clearly demonstrates the ability of such a service to deliver real benefits, where the right package of transport measures exists. In this case, traffic management of the route through bus priorities and 'clearways', and regular direct services to the city centre throughout the day have shown exactly what a quality, well-marketed bus service can deliver.

7.8 Future Surface Access Infrastructure

7.8.1 Good surface access will be critical to the future ability of Edinburgh Airport to grow. The key issue for Edinburgh Airport is general road traffic

congestion in the airport's immediate surroundings which is unconnected with the airport. It is important that passengers can access the airport efficiently and reliably. If they cannot, then the natural growth of the airport may be affected.

7.8.2 Edinburgh Airport is therefore keen to explore any initiative which improves surface access links to the airport. The Scottish Executive, City of Edinburgh Council and all the surrounding local authorities also wish to see better surface access provision to and from the airport. Edinburgh Airport is keen to work with the relevant agencies to ensure that appropriate improvements are implemented as and when required.

7.8.3 The White Paper states that: "The growth of road traffic on the strategic road network in the vicinity of the airport has the potential to become a major concern in the medium-to-long term unless action is taken." (paragraph 5.11) The White Paper goes on to say that the introduction of tram and rail links to the airport together with improvements to the road layout, "including the possibility of additional access points to the A8", could help to address potential congestion problems in the period to 2013. "Beyond 2015 there may be a need to improve the capacity of the strategic road network as well as access from it to the airport." Edinburgh Airport's view is that its 2007 modal share target of 25% of passengers travelling on public transport can be achieved through greater use of the existing bus services by travellers. It is increasingly important to understand – on the basis of clear and concise data - to what extent light and heavy-rail initiatives can increase what can be delivered by bus-based systems and whether rail-based systems deliver any additional capability for the airport to grow (over bus).

7.8.4 Section 7.3 detailed the surface access network serving the airport and problems which are currently experienced. It is important that new surface access initiatives are coordinated to ensure that their development does not compromise the accessibility and operation of the airport. To this end, new surface access initiatives should be considered as part of a fully integrated transport system. Some of the proposed initiatives are outlined overleaf:

5 2005 Edinburgh Airport Employment and Employee Survey, BAA Market Research

7 2013 Surface Access (Transport Links)

Rail

The provision of a heavy-rail link to the airport is currently being promoted through the Scottish Parliament. This proposal involves the construction of a new rail route under the runway and the land safeguarded for the second runway, and the construction of a sub-surface station close to the terminal building, enabling Glasgow-Edinburgh and Aberdeen-Edinburgh trains to diverge from their existing lines to the airport. The existing routes would remain in place and continue to be used by a minority of services. A Parliamentary Bill was submitted in March 2006 and the current programme is for the new line to be operational by 2011.

The introduction of the rail link should provide a more reliable and faster journey time into the centre of Edinburgh, but at a significantly higher capital cost than the existing bus system. A rail link will also open up public transport options to the north and west of the airport. However, further work is required to understand – again on the basis of reliable data – the scale of improvements which rail solutions can deliver in the future, within the overall public transport strategy.

Tram

Final approval to the Tram Bill promoting a link from the airport to Leith was granted in March 2006. BAA has a legal agreement with City Of Edinburgh Council covering the impact of the tram on the airport. It is envisaged that the tram will be operational in 2010.

Edinburgh Airport is aware of the facilities that have to be provided to make the tram attractive to air passengers and this will form part of the work of the ASAS with TIE as a key stakeholder.

Bus and Coach

Edinburgh Airport understands the social benefits of bus services and is keen to work with local authorities, bus and coach companies to explore the possibilities for new bus services to destinations not currently served by public transport. For those areas which will not be on the line of the tram or heavy rail routes bus will represent the only public transport alternative to the car. The ASAS will identify potential new bus routes and will identify ways in which the airport can work in partnership with key stakeholders to achieve them and to increase the existing 20% of passengers who travel to the airport by bus still further.

Taxis

In January 2006, Edinburgh Airport introduced a new system for taxis wishing to operate at the airport. This has resulted in three separate taxi ranks now being provided in the forecourt area. The fleet of airport taxis continue to operate from the eastern end of the terminal building, with a new city 'black cab' taxi rank now also operational adjacent to the coach park. The third rank is located in the short stay multi-storey car park and is available for pre booked taxis.

Non-motorised modes of transport

There are well established routes for pedestrians at the airport and these will be kept under review to ensure that pedestrian access to and around the airport continues to be safe and convenient. The ASAS will review the work required to assess the potential to link to the Edinburgh Cycle Network.

Road

Even with the development of rail and tram connections to the airport, the 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. BAA believes that the existing congestion on the road network, together with the anticipated economic growth in West Edinburgh, means that improvements to the road network will be required in the period up to 2013.

BAA is awaiting the outcome of the transportation modelling exercise undertaken by the Scottish Executive to determine the most appropriate improvements to the road network in the west of Edinburgh, including a possible road link to the A8 at Gogar roundabout, as identified in the White Paper.

The construction of a Southern access road direct, connecting the airport to the trunk road network is indicatively shown on Drawing 4 and is also likely to be required. It is envisaged that the exact timing of the construction of this link will be informed by the transportation modelling exercise which will be undertaken as part of the WEPF review. Edinburgh Airport believes that the current annual passenger throughput, let alone the growth anticipated in the future, justifies a direct link to Scotland's trunk road network, most likely at the M8, as identified in the White Paper.

Edinburgh Airport's internal road system remains largely unchanged since the present terminal was built in 1977. A major reconfiguration of the

7 2013 Surface Access (Transport Links)

internal road system will be required over the next 25 years to cater for traffic growth.

7.9 Parking Strategy

7.9.1 It is BAA's view that car parking has to be considered as part of an integrated approach to surface access improvements.

7.9.2 Short stay car parking (up to 3 days) is provided in the area immediately in front of the Terminal Building, at surface level and within a multi storey car park (MSCP). There are a total of 3559 spaces in this area. Long stay car parking (2813 spaces) is provided in a surface level car park to the south of the terminal building and east of the Gogar Burn.

7.9.3 Passengers with limited mobility and holding blue badges are given 15 minutes free access to the short stay MSCP for drop-off and pick-up. Disabled parking bays are available in the area of the ground floor of the MSCP closest to the terminal building with access available via covered walkways. This provides a safe and secure place to be dropped off, away from the busier private car drop off area.

7.9.4 There are currently approx 4500 spaces provided in off airport car parks in the surrounding area. Thus of total long stay provision, approximately 38% is located on airport and 62% off airport. Broadly speaking, it is envisaged that this split will continue in the future. Any strategy for managing car parking demand has to include off-airport car parking which is currently the fastest growing sector of the market.

7.9.5. Passengers requiring short stay parking wish to be accommodated close to the terminal building and it is therefore intended to cater for short stay demand within additional MSCPs in the existing surface level car park at the front of the terminal. This intensification of land use reduces the amount of green field land required for parking.

7.9.6 There is a complex relationship between provision and pricing of car parking, car park utilisation and road congestion. Experience in recent years in Edinburgh has shown that provision of high quality parking, such as the MSCP, reduces the number of passengers being dropped off/picked up by friends and relatives. It is in everyone's interests to reduce "kiss and fly" as much as possible as this is the most environmentally damaging method of accessing the airport.

7.10 Role of Airport Surface Access Strategy (ASAS)

7.10.1 The ASAS is an important element of the airport's sustainable development policies. Improving travel choices will benefit not only passengers and staff but will benefit the environment by reducing emissions from private cars.

7.10.2 As explained in paragraph 7.2.4 the ASAS deals with short to medium term tactical responses to the demand identified in the master plan, including the setting of mode share targets. These targets will be developed by corridor or area in relation to the existing or potential passenger and employee concentrations, transport infrastructure and services levels. Data from the 2005 CAA Origin/Destination survey and BAA's 2004 Employee survey will be used to inform the analysis.

7.10.3 The airport's Air Transport Forum, which includes CEC, West Lothian Council, Fife Council, Lothian Buses, Scotrail and other key stakeholders will be fully involved in the production of the document.

7.10.4 The ASAS will be published by the end of 2006 and will cover the five year period from 2006 -2011.

8 The Environment – 2013

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 the Government published A better Quality of Life, which 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 Edinburgh Airport has given thorough consideration while finalising this plan. The new strategy's 'purpose' shows how the Government will evolve its sustainable development policy – developing 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.

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. The ultimate aim is to secure the widest possible support for the development and management of Edinburgh 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 be confident of 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 Government and the Scottish Executive will need to be satisfied that the environmental implications of airport growth, and of new runways in particular, can be managed in a manner which would not lead to unacceptable impacts. BAA 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 tradeable 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. 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 BAA's ability to deliver responsible development. While aircraft are becoming progressively quieter, there is no avoiding the fact that new runways will inevitably lead to larger noise footprints around airports. BAA believes that airlines have to make further progress to reduce the noise impacts of their operations.

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 and Climate change
- 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. Edinburgh Airport has a role to play in the control of air noise around Edinburgh, and does so through the introduction of a number of measures, such as punitive landing fees for noisy aircraft, and the implementation, by the air traffic control provider, of take-off flight paths (noise preferential routes) that route aircraft away from the most densely-populated areas, for example Cramond in Edinburgh, 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 team at Edinburgh 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. 2015 contours produced by the Government for studies prior to the White Paper were included in the draft masterplan. Earlier this year BAA commissioned new 2015 contours from the CAA based on the latest traffic forecasts and these are shown at Drawing 8 .

8.3.4 Following the installation of a noise and track keeping (NTK) system in September 2003, Edinburgh Airport is now able to gather and analyse the tracks, including position and height, of all aircraft flying to and from the airport. The data gathered from this

system allows Edinburgh Airport 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, Edinburgh Airport can identify opportunities to lessen the overall impact of its operation on local communities and, if necessary, speak directly to individual pilots and air crew.

8.3.5 On 1st January 2006 a new dedicated free phone number was launched for members of the public to contact the airport about noise. The number is operational 24 hours a day. All calls are recorded and all complaints are investigated. The airport aims to contact each caller within 48 hours with an update or answer to their enquiry.

8.3.6 While Edinburgh Airport’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. A number of measures are also taken to lessen the impact of noise. In summary, these are:

- Forecasting future air noise, aiming for a significant reduction in the area contained within the daytime 16-hour 57 dBA Leq contour.
- Monitoring air noise in selected local communities.
- Setting differential airport charges which encourage airlines to operate quieter aircraft types.
- On 1st May 2006, Edinburgh Airport introduced a system of fining for aircraft movements that infringe stated noise thresholds. Between 0600 and 2330, the noise threshold is 94dBA and between 2330 and 0600, the threshold is 87dBA. Edinburgh Airport charges any aircraft which infringes these thresholds, with the level of the charge dependent on the severity of the infringement. All money raised from these fines is placed into the Edinburgh Airport Community Fund, which invests in local community projects and good causes.
- 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. In line with the White Paper Edinburgh Airport published two separate schemes for properties within the 69 decibel contour

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and for noise sensitive buildings within the 63 decibel contour.

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 it is 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 Edinburgh, 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 (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 2013 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 Edinburgh Airport will seek to improve the understanding of the impacts of ground noise between now and 2013, by carrying out a noise assessment around each major development.

Environmental Noise Directive

8.4.5 The EU Environmental Noise Directive requires Member States to make Strategic Noise Maps for major agglomerations along major roads, major railways and major airports within their territories. The Scottish Executive are in the process of finalising the regulations which will introduce this directive into Scottish law. BAA Scotland will continue to consult with the Scottish Executive regarding the

mapping process, and will work to aid the mapping process when required to do so.

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 (PM10) and Nitrogen Dioxide (NO₂), 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 (e.g. 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, predominantly coming from aircraft engines, may 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 development of Edinburgh Airport would not compromise air quality standards for NO₂ or PM10 in the period up to 2013 and beyond.

8.5.5 Edinburgh Airport has commissioned two air quality studies in recent years, in 1999 and 2003. The air quality study consists of a six month survey using diffusion tubes to measure levels of NO₂ at different locations across and around the airport. The results of the 2003 study showed that the concentrations of NO₂ at the majority of sites around the airport were lower than at most of the Edinburgh City monitoring sites outside the Council's priority air quality management areas. Further studies will be undertaken on a regular basis. Results of these studies are shared with Edinburgh City Council.

8.5.6 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 Edinburgh 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.

8.6 Management of the Water Environment

8.6.1 Within the context of the Water Framework Directive, 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.

Surface Water Drainage

8.6.2 Edinburgh Airport’s surface water drains to two rivers. The River Almond to the north of the airport perimeter is a major watercourse which carries water from the relatively large catchment arising from West Lothian and land to the immediate west of the airport. The Gogar Burn rises in West Lothian, flows north-east to Edinburgh, meanders through the west of Edinburgh and passes through the airport site from south to north where it is culverted beneath the main runway before joining the River Almond.

8.6.3 Flooding of the River Almond and the Gogar Burn is a significant issue for the airport. Two floods in 2002 caused significant damage and disruption to the airport. Flood risk assessments have been carried out on both watercourses and also on the airport drainage network. As a result, flood protection measures have already been built around the Gogar Burn within the airport boundary.

8.6.4 The Gogar Burn is under significant pressure from development in its lower catchment area. The airport is just one of many development sites which will increase the amount of run-off into the Burn over the next 25 years. The West Edinburgh Planning Framework has identified land in this area as being nationally important for growth and development of the Scottish economy. In the spirit of sustainable development, the Gogar Burn Partnership Group (GBPG) was set up in 2005 with a view to addressing the environmental and

development issues which affect the Burn. The Group is chaired by SEPA and attended by CEC, Scottish Executive, Edinburgh Airport, SNH, Scottish Water and other key stakeholders.

8.6.5 In November 2005 the GBPG commissioned a study to identify a Sustainable Development Framework for the Burn. This study has identified a set of 10 potential improvements to the Burn to address environmental and development issues. One of these improvements is a possible diversion of the Burn from the west to the east side of the airport. A feasibility study now needs to be undertaken to investigate this option. BAA is fully supportive of such a study and has agreed to safeguard land within the airport boundary for a diversion of the Burn if the feasibility study indicates that this is the correct solution. We will continue to work closely on surface water issues with all key stakeholders as the airport develops and in particular with respect to the land to the south of the existing airport boundary, earmarked in this master plan for future airport development.

Water Quality

8.6.6 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.

8.6.7 As discussed above, 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 Environmental Protection Agency (SEPA) under the terms of the Water Framework Directive.

8.6.8 Edinburgh Airport 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.

8.7 Biodiversity

8.7.1 There is a range of statutory measures protecting nationally or locally designated sites and

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species. Public bodies (including Government) have a duty to enhance and maintain Sites of Special Scientific Interest (SSSI). They are also required to consult the statutory nature conservation agencies on any proposal which is likely to damage the conservation interests for which a SSSI has been designated.

8.7.2 In many cases, sites are afforded protection by local planning policies. Local Authorities maintain a register of such sites. Some local sites will also be important because they host habitats or species which have special significance under the Biodiversity Action Plan process.

8.7.3 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 plants are afforded similar protection under this Act.

8.7.4 The nearest designated area to the airport is the Forth Estuary, which is some five kilometres away and has been assessed by the Government as being at low-risk at present from aviation activities. As the airport develops Edinburgh Airport will continue to work with Scottish Natural Heritage with regard to biodiversity.

8.7.5 Closer to the airport, biodiversity issues primarily focus on the impact of airport developments on protected species, particularly around the River Almond and Gogar Burn. Edinburgh Airport's Biodiversity Strategy takes account of these legal aspects and spells out the airport's commitment to work in partnership with the Local Authority and other key stakeholders.

8.7.6 In 2003 Edinburgh Airport carried out an ecological appraisal of the airport site, the main purpose of which was to provide a baseline habitat map of the whole airport. This study showed that the airport site is of little conservation value. It is intended to undertake a comprehensive ecological survey later this year, from which it will be possible to identify potential opportunities for conservation.

8.7.7 In terms of measures to be taken in the future, all airport developments to 2013 will be assessed, to establish their impact on biodiversity and provide appropriate mitigation. BAA will take guidance from consultation with the relevant approval authorities (such as Scottish Natural Heritage) and stakeholders on what level of assessment is required, particularly when considering development which may have an impact on the

wider biodiversity outwith the boundaries of the airport.

8.8 New Land Take

8.8.1 It is currently proposed that Edinburgh Airport will require approximately 15.5 hectares of additional land by 2013 to enable the development of ancillary facilities. The change in use of the proposed area, (the land adjacent to the engineering maintenance area and an area adjacent to the Gogar roundabout), shown on Drawing 3, will not lead to any loss of housing.

8.9 Waste Management

8.9.1 Waste is generated from a number of sources at Edinburgh Airport, notably from aircraft arriving at 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 (paper, cardboard, plastic etc);
- Scrap metal;
- End of life vehicles;
- Electrical and electronic equipment;
- General putrescible (food waste, vegetable matter, trees and bushes);
- Hazardous waste, including lamps, fluorescent tubes, used oils, flammable liquids and batteries.

8.9.2 In addition to meeting legal requirements, Edinburgh Airport'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
- Reporting

8.9.4 Edinburgh Airport is committed to reducing the waste generated from the airport's operation. Over the four financial years from 2000/01 to 2003/04, the proportion of waste recycled increased from 12% to 27%, and it is intended to further reduce the proportion of waste going to landfill, following the hierarchy of reduce, reuse, recover. The current target is to increase recycled waste to 35% by 2011.

8.10 Climate Change

8.10.1 There is broad international scientific agreement that emissions of greenhouse gases from human activity are exceeding the earth's capacity to absorb them. This is likely to have a noticeable impact on climate, with potentially significant effects on global temperatures and weather patterns.

8.10.2 BAA recognises that climate change is a significant issue and we support the leading role that the UK Government has played in relation to it.

8.10.3 The aviation industry contributes to climate change in a number of ways. It is the burning of fossil fuel in flight that is the industry's biggest contribution, but greenhouse gas emissions are also generated by the production of the energy used in airport buildings. Finally, ground emissions from airport vehicles and the vehicles used by passengers and staff also contribute. BAA has taken a proactive approach to addressing its contribution to climate change in each of these areas.

Aircraft and climate change

8.10.4 Emissions trading – whereby industries which cannot reduce their own emissions can buy permits from industries which can, within an overall cap – has been identified as the most effective mechanism to meet reductions targets, as resources are directed to where cuts can be achieved most quickly and at the lowest cost. It does not matter who generates the emissions, as long as the total volume of emissions which is generated does not breach the cap.

8.10.5 BAA believes that an open emissions trading scheme represents the most economically efficient and environmentally effective way of addressing emissions from aircraft. BAA is strongly in favour of incorporating aviation into such a scheme at an international level. However, BAA recognises that this will take time, so supports regional action as an interim step.

8.10.6 As such, BAA has been a strong supporter of the UK Government's policy of including intra-EU

air services in the EU Emissions Trading Scheme (ETS) from 2008, or as soon as possible thereafter. BAA also welcomes the European Commission's recent Communication supporting emissions trading as the best way forward. The Commission is planning to bring forward a formal legislative proposal on this by the end of 2006.

8.10.7 BAA has played a leading role within EU aviation in supporting aviation's inclusion in the ETS. In particular it has worked through ACI-Europe, its trade association, which represents over 450 airports in 40 countries, to build support. ACI-Europe issued two policy positions in 2005 in support of this approach.

8.10.8 BAA has also worked with airlines, aircraft manufacturers and other airports in the UK to develop the Sustainable Aviation strategy, published in June 2005. This includes a number of voluntary commitments by the aviation industry, including the assistance to policymakers in developing practical solutions for inclusion of aircraft CO₂ emissions in the EU ETS.

8.10.9 The long-term goal is for aviation's emissions to be mainstreamed within the global policy framework to address climate change. The International Civil Aviation Organisation (ICAO) has endorsed the development of an open emissions trading scheme including international aviation and has established an Emissions Trading Taskforce to produce guidance on this issue. BAA has been actively involved in those discussions through our international trade association, ACI World.

8.10.10 BAA recognises that aviation's impacts on the climate are complex, and that emissions trading may not be the right solution for all of them. In addition to CO₂ there are three other impacts from aviation: oxides of nitrogen (NO_x) in the cruise phase of a flight, the creation of condensation trails (contrails) and the potential impact of contrails on cirrus cloud. The Intergovernmental Panel on Climate Change has estimated that aviation's total climate impact resulting from these effects is some 2.7 times that due to CO₂ alone. However, there is a range of uncertainty around this estimate, particularly in relation to the impact of contrails on cirrus clouds, and wide agreement that further research is needed to fully understand the nature and scale of aviation's total climate change impacts.

8.10.11 BAA acknowledges the importance of addressing aviation's other impacts. BAA is committed to working with all stakeholders to

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discuss other possible policies to complement emissions trading, and has called on governments to establish a roadmap for addressing these impacts, with clear policy milestones.

The contribution of energy use at airports

8.10.12 Edinburgh Airport's main emphasis in addressing the issue of climate change relates to the ground level emissions attributable to the operation of airport facilities. These are emissions from the burning of fossil fuels that provide space heating at the airport; emissions from electricity generation at power stations located further and emissions from road vehicles using the airports.

8.10.13 BAA is one of the UK's top 20 industrial consumers of energy and we have set a target to reduce our absolute CO₂ emissions from energy use by 15% over 1990 levels by 2010. We are on track to meet that target, through improvements in energy efficiency and conservation and through increasing the use of renewable energy sources. BAA is also already a participant in the EU ETS and is currently undertaking work to develop its emissions reduction target for the period beyond 2010.

8.10.14 Edinburgh Airport has an important role to play in ensuring the group target is met and has put a range of measures in place, including improving the efficiency and management of the heating and cooling throughout the terminal by the introduction of a Building Management System. This system tracks the temperature of the building and maintains the temperature in the terminal between set parameters, reducing reactive demand on the boilers and chillers. There has also been considerable work on improving the operational efficiency of the boilers and chillers throughout the airport. New lighting systems in the terminal switch off lights when outside lighting is sufficient or during quiet periods at night. The multi-storey car park has an advanced lighting system which dims down the lighting when no motion is detected on specific floors.

The contribution of surface transport

8.10.15 Each BAA airport has a surface transport strategy, informed by national, regional and local transport policies. Those strategies will be updated over the next year, and set challenging but realistic targets for passenger and employee use of public transport, supported by a series of corporate level policies for travel to airports using rail, bus & coach, and road. Those strategies, discussed in Chapter 7 of this document, will play an important role in addressing our transport-related emissions.

8.11 Heritage

8.11.1 Edinburgh Airport is aware of the importance of the area's archaeological inheritance and the potential impact of the development proposals contained within this master plan. The Government's White Paper studies note four heritage sites within five kilometres of Edinburgh Airport:

- Dalmeny Historic Gardens & Designed Landscape;
- Three scheduled ancient monuments including the Cat Stane, Gogar Burns and Hill Fort, which overlook the airport and its approach paths.

8.11.2 The studies concluded that only Dalmeny would be marginally affected, but by noise and visual disturbance rather than direct physical impact. The Dalmeny site is already impacted in these two respects when the runway is operating on westerly approaches.

8.11.3 In the period to 2013 no listed buildings are affected by the airport's development proposals. Those affected in the period from 2013 -2030 are listed in Chapter 10. It is of course recognised that there could be some unknown archaeology in the area and this will be fully investigated at the appropriate time.

9 2030 Land use and a possible new runway

9.1 Introduction

9.1.1 For the period beyond 2013, and prior to the construction of a new parallel runway, 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 the master plan provides an overview of the future development of the airport between 2013 and 2030, given the information available to Edinburgh Airport's planners at present. It outlines a development strategy which would allow the airport to grow to handle between 20 and 25 million travellers a year.

9.1.3 Edinburgh Airport has decided to produce two sets of indicative land use plans, one for the period between 2013 and 2020 and another for the years between 2020 and 2030. This approach provides greater clarity on the expected order of the airport development strategy and its impact on the land outside the current land ownership boundary.

9.1.4 Drawing 5 shows the proposed land use for Edinburgh Airport in 2020. There are two areas of extra land required that are not within the current land take boundary. These are listed below with an outline of the reasons behind the need for acquisition:

- Approximately 4.5 hectares of land to the North East of the airfield, adjacent to the cargo village, will be required to expand the cargo facility;
- Approximately 34 hectares of land to the South West of the existing terminal (currently owned by RHASS), will be required to develop extra terminal and aircraft apron capacity.

9.1.5 Drawing 6 shows the proposed land use for Edinburgh Airport in 2030. There are three areas of extra land required that are not within the 2020 land take boundary, these are:

- Approximately 5.5 hectares of land to the North East of the airfield, adjacent to the cargo village, again required to enlarge the cargo facility;
- A further 51 hectares of land to the South West of the existing terminal (currently owned by RHASS), which are required to develop extra terminal and aircraft apron capacity and extra ancillary facilities;
- Approximately 280 hectares of land to the north of

the existing airport boundary, required to provide a second runway and its supporting infrastructure.

9.1.6 The reasons for the acquisition of all of the land referred to above is considered in more detail later in this chapter.

9.1.7 It should be noted that BAA's proposed airport boundary on the 2030 plan differs from the indicative White Paper boundary in a number of places. This is best illustrated on Drawing 3. The most significant difference is that the BAA proposed boundary shows that a greater area to the west of the proposed new runway will be required, for two main reasons:

- To provide adequate take-off run and landing distances, consistent with the larger aircraft likely to operate from the airport in 2030;
- To provide adequate space for the taxiway system required to serve the runway.

9.1.8 Another deviation from the indicative White Paper boundary is that the proposed 2030 airport boundary does not include the homes at Lennymuir Cottages, to the east of the cargo area. This change was communicated to that particular community in 2004, in response to local concerns.

9.1.9 In total, the additional land take required to develop Edinburgh Airport from 2013 to 2030 is currently estimated to be approximately 85 hectares of RHASS land, 280 hectares of land to the north of the River Almond, currently in several different ownerships, 15.5 hectares of farmland to the south, and 10 hectares of land to the east of the cargo village.

9.1.10 Consideration was given to the closure of Runway 12/30, and the redevelopment of this land to provide the expansion zone for terminal and apron mass. However, this was dismissed for a number of reasons, which are outlined in summary below:

- The closure of Runway 12/30 would leave Edinburgh Airport without a secondary, emergency runway;
- Major terminal extension to the east would conflict with mid-term planned infrastructure, such as the South East Pier, or indeed require the provision of a second terminal;
- The closure of Runway 12/30 would accelerate the need for a new parallel runway to be built;
- Development in this area would lead to longer

9 2030 Land use and a possible new runway

taxiing times for aircraft, increasing ground noise and air pollution and the negative impacts on local communities;

- Actual land available is limited once a twin parallel taxiway is provided to serve the South East Ramp and cargo stands. Furthermore, this land would not be sufficient to accommodate all development requirements for 2030.

9.1.11 The alternative strategy favoured by Edinburgh Airport is that mid to long-term development should be to the west, on part of the land currently occupied by RHASS. This view was expressed by BAA during the public consultation which preceded the publication of the White Paper and was ultimately supported by Government in that policy framework. All parties concerned were given equal opportunity to make their case.

9.2 Air Traffic Control/Airspace

9.2.1 As the need for a future runway is clarified, more detailed analysis and modelling may need to be undertaken in conjunction with the air traffic service provider to understand what 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 Runways and Taxiways

9.3.1 As outlined in Chapter 5 the current peak runway movement forecasts for Edinburgh Airport indicate that an extra runway will not be needed before 2020. In reality, the requirement may not materialise until much later than that. The Government's view, which is broadly endorsed by BAA, is that an additional runway is likely to be needed at Edinburgh Airport before 2030.

9.3.2 Given that the need for an additional runway is 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 in advance of construction. The principal factors can be summarised as follows:

- The rules and regulations which apply to the airspace around the airport may be different from those specified today. Minimum operating procedures, runway separation and obstacle limitation surfaces are all areas where significant changes could feasibly occur as advances in technology are made, whether in landing systems, navigation and surveillance equipment or through developments in aircraft design;
- Considering aircraft design in particular it is not unreasonable to expect that engine and airframe development will continue to advance, resulting in increasingly quieter aircraft. The degree of success in this area is difficult to predict but the advent of less noisy aircraft will affect noise contours and influence the siting of a new runway, the noise preferential routes which might be appropriate, and desirable runway operating procedures. At Edinburgh, the runway design will need to balance these requirements with the need to minimise the noise experienced in the surrounding area, in particular the balance between that experienced at Cramond to the south east and Kirkliston to the north west;
- The achievable capacity of the airport as a whole and the hourly capacity gain in the peak hour will be influenced by the location of any supporting infrastructure and terminal facilities. Where terminal facilities and aircraft parking areas are not located between two runways, the operational capacity of the two-runway airport is much reduced due to the number of runway crossings required. At this stage, BAA would wish to retain the flexibility to locate some aircraft facilities between the two runways at some time in the future, most probably after 2030;
- This arrangement would also deliver safety and operational benefits. For example, it could facilitate a faster turnaround of aircraft. This would be a key requirement if a low-cost operation happened to be sited between the runways. The type of aircraft and the future traffic mix will therefore influence the need for supporting facilities and ultimately the runway design. While forecasts give an indication of what is expected, flexibility should always be retained to allow for different development scenarios should these occur;
- The site and design of the proposed runway will be influenced by, and will influence, the water table and floodplain of the River Almond. This could change over time as a result of external environmental factors. It is not possible to predict at this stage to what extent these could change and to what degree this might affect a future runway design.

9 2030 Land use and a possible new runway

9.3.3 What is clear is that any proposals for additional land take must aim to provide sufficient flexibility to cope with unforeseen changes that might take place. They must also seek to provide guidance, as far as possible, to the local community and planning authorities in order that the appropriate area is protected. Edinburgh Airport believes that the extended airport boundary indicated within the White Paper can remain largely unchanged. However, the company also believes that it is too early for a definitive decision to be made on the alignment of the runway within this zone, for reasons outlined above.

9.3.4 But there are some points about which some certainty can be established. These are:

- The new runway would be sited parallel and to the north of Runway 06/24 and would require approximately 280 hectares of land not currently contained within the airport boundary;
- The new runway would have a centreline separation of between 760m and 915m from Runway 06/24;
- The new runway would be between 2.5km and 3.0km in length;
- The new runway and Runway 06/24 would normally operate in segregated mode; that is to say at any one time one runway would be designated for arriving aircraft and the other runway for departing aircraft.

9.3.5 It is also quite clear that the provision of a new parallel runway to the north of Runway 06/24 would have implications for the River Almond in its current form. A range of solutions will need to be considered and evaluated at the appropriate time.

9.3.6 Over time, as the need for a new runway becomes clearer, more certainty around detailed plans will be possible. Edinburgh Airport would expect future master plan reviews to identify, at the appropriate time, the optimum runway configuration. In the meantime, Edinburgh Airport considers it prudent to remain flexible and identify a zone within which a runway is likely to be built rather than a specific configuration (as shown in Drawing 6). This will give the airport sufficient flexibility to meet changing demands while still providing sufficient clarity to the local planning authority around future development. A revised safeguarding map will be lodged with the planning authority in order that the authority understands which planning applications should be sent to BAA for consultation as part of the Aerodrome Safeguarding process. In response to these consultations, BAA will make it clear to what extent

any development proposals impact on future runway proposals.

9.3.7 Once the new parallel runway is operational, the expectation at this stage is that Runway 12/30 will be closed and used as a taxiway serving extended cargo and maintenance facilities, and an extended south-east apron. This is the premise upon which Drawing 6 has been drawn. However, the advantages and disadvantages of closing Runway 12/30 will be kept under review in subsequent master plans.

9.4 Future Runway Safeguarding Policy

9.4.1 Paragraphs 3.8.1 to 3.8.7 of this plan have explained “The Safeguarding of Aerodromes” process as it relates to Edinburgh’s existing runway. There is now a separate need to consider the manner in which the possibility of developing a second runway at Edinburgh should also be ‘safeguarded’ – a requirement which could potentially lead to the refusal of planning permission for:

- Proposals for development that are incompatible with “safeguarding of aerodromes” criteria specified in relation to the location of the second runway;
- Proposals for development on land within the area onto which the airport would be extended in the event of a second runway being permitted and built.

9.4.2 BAA initially adopted a passive safeguarding policy in relation to proposals which might conflict with a future or extended runway. The policy was published in its interim airport master plans and sought simply to inform local planning authorities (LPAs) and developers of potential conflicts with certain developments, rather than raise planning objections to these developments. Concerns were raised by stakeholders during the consultation period for these documents as to whether this policy would sufficiently protect the Government’s expectations. Specific comments were received from the DfT, the Scottish Executive and key local authorities, including Edinburgh City Council. Following a review of its proposed policy BAA is advocating a more proactive approach can now be taken to safeguarding.

9.4.3 BAA will safeguard future runway development options in accordance with Government policy, as published in their White Paper. The ‘safeguarding of aerodromes’ process makes use of safeguarding maps which are based on details of runway locations and elevations and

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which, amongst other things, relate the protected surfaces around runways to local topography. A new safeguarding map, endorsed by the Civil Aviation Authority (CAA) has been prepared for Edinburgh Airport. It reflects the existing runway's position, length and elevation as well as the details relating to a potential second runway. The map will be reviewed if there should be a material change in the assumptions about an airport's development, including any proposals for a future or extended runway, for example as a consequence of a five yearly review of the airport master plan. If and when a future or extended runway is built and precise details of its location, length and elevation are settled, then these details will be incorporated into the aerodrome safeguarding map.

9.4.4 The new map has been lodged with relevant LPAs and, with effect from 30 April 2006, will be used by them as a filter for determining which planning applications require consultation with BAA under the safeguarding regime. A significant proportion of a new safeguarding map (where that map is designed to protect an additional runway) is expected to be identical to its single runway predecessor. For a significant number of consultations the implications (if any) of protecting the future operation of a possible future or extended runway are unlikely to be any different from those associated with the protection of the current runway's operation.

9.4.5 BAA will treat each 'aerodrome safeguarding' consultation on its merits. If our aerodrome safeguarding conclusions in relation to an existing or a proposed future runway do differ, and our response to the consultation is to object to the development or to require particular conditions to be attached to the planning permission for the development, the justification for our response will be explained. Where conflicts exist, BAA will also notify the LPA of any changes that could remove them and we will, if appropriate, work with the LPA and the prospective developer to explore the issues in more detail.

9.4.6 Development proposals affecting land within a twin runway airport's indicative boundary are amongst those that will be subject to referral to BAA as a result of the LPAs' filtering process for 'safeguarding of aerodromes'. However scrutiny of those consultations is unlikely to identify aerodrome safeguarding reasons for refusing planning permission for all forms of development within the indicative extended boundary. It may, for example,

be possible to permit a new building provided its height was not such as to exceed that allowed beneath the 'protected surface' affecting its site.

9.4.7 Procedures under the 'safeguarding of aerodromes' process will not legitimise the refusal of planning permission for all forms of development within the affected area. Protecting the possibility of an extended airport boundary is consequently a different matter from the 'safeguarding of aerodromes' procedures which protect the operation of a runway, or runway extension that may be built in the future. It is therefore important that the LPAs ensure that local development frameworks (LDFs) 'safeguard' the land potentially required for an airport's expansion.

9.4.8 The production of LDFs is currently underway and, in addition to identifying the safeguarded area boundary, they will need to explain the development control policies that will apply within an indicative boundary for the extended airport. BAA will engage in the LDF preparation process and will wish to be satisfied that they adequately address the Government's expectations that land is safeguarded at their airports. Whilst the refusal of all planning applications is an option, so too is a more flexible approach, for example to permit such developments as small extensions to existing houses or commercial premises and changes of use, provided they are compatible with other LDF policies.

9.5 Public Safety Zone Policy PSZ Requirements

9.5.1 The Department for Transport (DfT) are responsible for PSZ policy in the UK. Local Planning Authorities (LPAs) are responsible for applying the published policy. DfT have stated that they expect PSZ contours to be produced for existing and future runways. These will inform the Aerodrome Safeguarding Process and provide local planning authorities with an indication of the areas outwith the airport boundary, that might be affected by the PSZs associated with a future runway.

Updated PSZ Contours for Existing Runways

9.5.2 PSZs for existing runways are based on traffic forecasts 15 years in the future. For the published PSZs at BAA airports forecasts for the year 2015 have been used. PSZ policy requires a review of the zones every 7 years. DfT have confirmed they will commission the modelling work to produce the updated contours for the existing runways at BAA airports and anticipate beginning this process towards the end of 2006. Revised PSZs for the

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existing runways will take account of potential extensions to the runways at Edinburgh and Aberdeen.

Projected PSZ Contours for Future Runways

9.5.3 In preparing its master plans BAA has used existing PSZ contours as a proxy for predicting future PSZ impacts. While this has been sufficient to give an indication of the extent of the zones the DFT have now requested that computer modelling of future PSZs be undertaken. This will provide a more robust assessment although it is still necessary to make some broad assumptions to input to that modelling exercise, for example, in relation to the operation and layout of the future runways.

9.5.4 The forecast year for the purposes of calculating PSZs for future runways will be 2030. This date is consistent with the planning horizon in the airport master plans. Modelling will need to be undertaken for additional runways located at Heathrow, Gatwick, Stansted, Edinburgh and Glasgow. PSZ modelling for a possible new runway at Edinburgh has been commissioned and will be completed between April and July 2006. This is consistent with the timeframe for the publication of the final master plans for these airports and indicative PSZs will be made available to LPAs, at the same time revised safeguarding maps are issued, to help inform the safeguarding process.

9.6 Aircraft Aprons

9.6.1 As mentioned in Chapter 5, forecast demand is for between 43 and 59 stands in 2020 and for 64 to 69 stands in 2030. The stand development strategy is to develop to the west (RHASS land) incrementally to maintain high levels of pier service for airlines, followed by further development of remote stands to the south of the south-east ramp as shown on Drawings 5 and 6.

9.6.2 The forecasts show an increasing requirement for jumbo and large stands. This reflects the continued expectation for Edinburgh Airport to be serving more international destinations in the future, especially long haul destinations.

9.7 Passenger Terminal Facilities

9.7.1 Drawing 6 shows an apron and terminal development zone to the west of the existing site. In formulating plans for an airport which will eventually serve between 20 and 25 million passengers a year, one key decision is whether to create one expanded terminal or two separate terminals. It is currently envisaged that the terminal will extend to the west with two new piers to serve

the apron development. This will start to be developed from 2013 onwards. However, this is just one option and so the drawing shows a terminal and apron development zone to the west of the existing terminal, but does not show the detailed configuration of these facilities.

9.8 Cargo Area and Apron

9.8.1 As outlined in Chapter 6, cargo developments are only undertaken in response to specific requests from operators. However, year-on-year growth is anticipated and so an indicative development zone for the cargo village is shown on Drawing 6.

9.9 Aircraft Maintenance

9.9.1 While there is no quantifiable demand for extra maintenance facilities in the years between 2013 and 2030, some provision has been assumed in a mixed development zone for maintenance and ancillary facilities. This area is at the southern end of what is currently Runway 12/30, as shown on Drawing 6.

9.10 Ancillary Facilities

9.10.1 As explained in Chapter 6, as the airport passenger 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 currently anticipated that, in the period between 2013 and 2030, additional land outside the existing boundary will be required to ensure provision of all the necessary ancillary facilities can be made. Drawing 6 illustrates the expansion zone for ancillary facilities.

9.11 Future Surface Access Infrastructure

9.11.1 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 necessary. Edinburgh Airport will continue to work with the relevant agencies to ensure that appropriate improvements which are necessary to facilitate the sustainable development of the airport are delivered in a timely manner.

10 The Environment – 2030

10.1 Introduction

10.1.1 As this 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 and subsequent operation of a second runway at Edinburgh 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 development of a second parallel runway at Edinburgh 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 and Blight

10.2.1 Aircraft noise is arguably the impact of greatest interest to local planning authorities, given the potential need to consider this when allocating land and considering planning applications for housing. Estimates of future noise exposure around Edinburgh 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. Edinburgh Airport sees no current need to supersede the CAA's estimate of the air noise attributable to a twin runway operation in 2030. Table 14 shows the change in population affected by noise between 1999 and 2030, and the contours are depicted on Drawing 9. It will be noted that for the two runway scenario, the number of people within 57 Leq increases slightly, while the affected population within the 63 Leq decreases compared to the 1999 base case.

Table 14: Population Affected by Noise

Leq (dBA)	Base population (000s) 1999	Population (000s) 2030
>57	4.4	4.8
>63	0.8	0.7
>69	0.1	0.1

10.2.2 The White Paper prescribes the measures that BAA 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 (69dBA Leq or more) and a large increase in noise (3dBA Leq or more);
- Offer acoustic insulation to any residential property which suffers from both a medium to high level of noise (63dBA Leq or more) and a large increase in noise (3dBA Leq or more).

10.2.3 In August 2005, Edinburgh Airport published details of two schemes designed to protect the local area from generalised blight arising from the Government's proposals for a possible second runway at Edinburgh Airport. This master plan seeks to safeguard land for a possible second runway, in line with the conclusions of the White Paper. Properties that are affected by this are covered by the first scheme: the Property Market Support Bond. A second scheme, the Home Owner Support Scheme, assist property owners in the area who would be newly exposed to medium to high noise levels should a second runway receive approval.

10.3 Heritage

10.3.1 As stated in Chapter 8, Edinburgh Airport is aware of the importance of the archaeological heritage of the area. The following listed buildings will be affected in the period from 2013 -2030:

Category A

- Carlowrie House
- Ingliston House
- Ingliston House stables and gardener's house

Category B

- Foxhall Dovecot
- Foxhall Walled Garden
- Foxhall North Lodge

Category C

- Foxhall Stables and Cottages
- West Mains of Ingliston Farmhouse

10.3.2 The extent of the impact on the above sites will be fully investigated as development proposals are progressed. Appropriate mitigation measures will be fully discussed with City of Edinburgh Council, Historic Scotland and other key stakeholders. It is of course recognised that there could be some unknown archaeology in the area and this will be fully investigated at the appropriate time.

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
- Loss of existing properties and land uses
- Construction impact.

11 Where now? – The next steps

11.1 West Edinburgh Planning Framework Review

11.1.1 The Draft West Edinburgh Planning Framework Review (WEPFR) is expected to be published in July 2006 by the Scottish Executive. This document will set out the policy framework for development in the west of Edinburgh to 2030. The draft WEPFR may incorporate this Master Plan (either in whole or in part). The draft WEPFR will be the subject of a public consultation exercise. The WEPFR will then be finalised after full consideration of consultation responses and published, probably in early 2007.

11.2 Edinburgh & the Lothians Structure Plan

11.2.1 The Lothians Councils are reviewing the Structure Plan and are expected to pursue a limited scope Alteration to address a range of matters including housing land and retailing. A consultation exercise on an options paper is likely to be undertaken in late spring. When finalised, the WEPFR will inform that process.

11.3 Rural West Edinburgh Local Plan

11.3.1 Following publication of the finalised WEPF, City of Edinburgh Council intend to promote an alteration to the Rural West Edinburgh Local Plan to take account of the policy guidance contained within the WEPF. This will be subject to all the usual statutory provisions, including a local plan inquiry into objections to the Council's proposals.

11.4 Vision for Capital Growth 2020 – 2040

11.4.1 As an input to the longer term aspects of the Structure Plan Review, City of Edinburgh Council has produced a draft spatial vision for the city's growth in the period 2020 to 2040. This proposes a "spokes and wedges" model of growth and identifies 6 candidate development corridors. "West Edinburgh / A8 Corridor / expanded Airport / Newbridge / Kirkliston" is one such corridor. City of Edinburgh Council intends to finalise this document later in the year and the Master Plan and finalised WEPF will also inform that process.

11.5 Master Plan 5 Year Review

11.5.1 This master plan will be reviewed and updated every 5 years, in line with Government guidance. However, Edinburgh Airport will regularly review the commitments made in this document to ensure airport development plans are kept relevant to the local and national scene. The impacts of airport growth on the surrounding area will continue

to be considered carefully and Edinburgh Airport will work with key stakeholders to review the impacts outlined in this document. BAA is committed to ensuring that Scotland's capital city is served by a world class airport, which meets the demands of its passengers and supports the local and national economy. Edinburgh Airport is keen to work in partnership with its key stakeholders to achieve this goal and will therefore continue to hold meetings with the Master Plan Steering Group, which is attended by the Scottish Executive, City of Edinburgh Council, West Lothian Council, Fife Council and Scottish Enterprise. Although the formal consultation on this master plan has ended, we will continue to welcome constructive comments and suggestions from others about our development plans and will endeavour to respond to all queries and concerns raised with us.

12 List of drawings

- Drawing 1: 2005 Airport Land Use
- Drawing 2: 2005 Airport Layout
- Drawing 3: Airport Land take Boundaries
- Drawing 4: 2013 Indicative Land Use
- Drawing 5: 2020 Indicative Land Use
- Drawing 6: 2030 Indicative Land Use
 - Twin Parallel Runways
- Drawing 7: 2002 Noise contours
- Drawing 8: 2015 Indicative Noise Contours
- Drawing 9: 2030 Indicative Noise Contours
 - Twin Parallel Runways

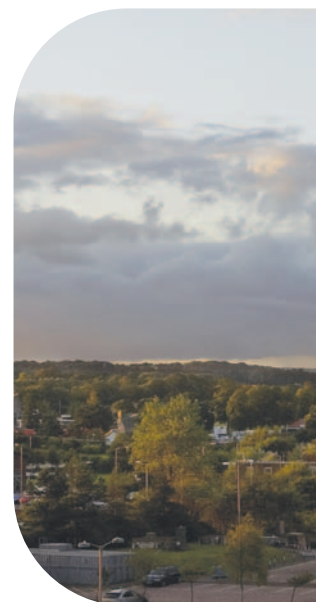
Appendix 1: City of Edinburgh Council Planning Committee Report 08/04

Appendix 2: Consultation Comments and BAA's Response.

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→ www.baa.com



This master plan has been produced following a public consultation exercise during 2005. It will be reviewed every five years in line with Government advice. If you have any queries about the content of this document, or wish to discuss any aspect of the airport's future development, please contact:

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