



BAA Heathrow 

Heathrow Airport interim Master Plan

Draft for Consultation
June 2005



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This interim master plan has been issued for consultation, as a precursor to the preparation of an updated version of the plan, which we aim to publish during the course of 2006. If you have any comments please send them to us as soon as practicable, and in any event no later than 31 October 2005, addressed to:

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Foreword

Heathrow is the world's airport. It handles more international passengers than any other and is one of the UK's most important economic assets.

As Chairman of BAA Heathrow I want to ensure that Heathrow maintains its competitive position by planning for the future in an effective, sustainable and responsible manner.

My view is that we have the opportunity to continue to grow our airport so it reinforces its status as a leading international hub – one that our passengers like using and our airlines want to use. The opening of Terminal 5 in 2008 is a major step in that direction.

However, for Heathrow to grow and maintain its competitive position within Europe, the question of additional runway capacity needs to be debated. I view this document as the start of that journey to maintaining Heathrow's leading position within the international aviation industry.

I am proud of the fact that Heathrow offers enormous benefits to the local and national economies, but am also keenly aware that its operations have a significant impact on the surrounding communities. The challenge will be to secure the continued growth and benefits of Heathrow in a way which is both socially and environmentally responsible.

The Government's 2003 White Paper *"The Future of Air Transport"* recognises that expansion of Heathrow is desirable, but not at any cost. I fully endorse this sentiment and am committed to ensuring that we make every effort to minimise the impact on our local communities, as we explore the possibility of building a third runway.

At this stage, I do not know whether we will be able to meet the strict environmental conditions required for us to increase runway capacity at Heathrow. Government studies into air quality, surface access and noise are already underway, but will not be complete until the second half of 2006.

This draft interim master plan outlines how the airport could develop within existing planning permissions. It also defines a land boundary to safeguard for a potential third runway and a possible terminal complex. The plan contains nothing that has not already been in the public

domain, but for the first time it is all contained within one document.

History tells us that in the aviation industry nothing is predictable. New airlines open for business, new routes become available and the lifestyles and tastes of people change. The recent revolution in low-cost travel clearly illustrates this.

Change is therefore one of the things that we need to take account of in our future thinking. This draft interim master plan incorporates the necessary flexibility to enable Heathrow to respond to the inevitable fluctuations in future demand.

This plan has been prepared as a consultation document so that we can get your feedback on our plans for the future. We understand the importance airlines attach to scrutinising our proposals. Equally, from a community perspective, we fully appreciate the ways in which aviation can impinge on residents' lives.

The consultation period continues until the end of October 2005 and I look forward to hearing your views.

Janis Kong
Chairman
BAA Heathrow

Executive summary

The world's airport

Heathrow is synonymous with international travel and is one of the UK's most important economic assets. Not only is it London's airport, but it is the world's airport. In a very real sense, it is where the world meets.

Heathrow currently operates and manages two runways and four terminals, handling about 67 million passengers a year. Some 90 scheduled airlines use the airport, flying to 170 destinations around the world. Heathrow supports nearly 100,000 direct and indirect jobs in the local area, of which 68,400 are directly on-airport.

The Government's view

The 2003 *"Future of Air Transport"* White Paper (White Paper) reinforces the view that Heathrow is much more than "just an airport for London", recognising that it delivers significant direct and indirect benefits to the local and national economies.

The White Paper also acknowledges that Heathrow is the UK's only international hub airport, and that, over time, it is likely to lose out to its European counterparts if it is not able to generate additional runway capacity.

The economic case for an additional runway is persuasive. The Government calculates that the proposal for a third runway at Heathrow would generate over £6 billion in direct net economic benefits - the most of any new runway option that was considered.

At the same time, the Government recognises that "these strong economic arguments must be weighed against serious environmental disadvantages." The White Paper sets some stringent air quality targets which must be met before the Government could support any proposal for a third runway.

The White Paper also recognises BAA's arguments for further terminal capacity to support a third runway and says that a new runway could not come into operation before 2015-20, and then only provided that stringent environmental conditions can first be met.

Purpose of the interim master plan

This draft interim master plan is an important document in both setting out the potential plans for Heathrow in the medium and longer term and in stimulating consultation regarding the potential impacts of these plans for Heathrow's key stakeholders – in particular, our local communities.

Once the consultation period has finished, an updated interim plan will be published during the course of 2006. Following consultations during 2006 on mixed mode and a possible sixth terminal, it is envisaged that the Government will undertake a review of progress in implementing the White Paper.

Our aim for Heathrow

Our aim is to give passengers a great experience and allow our airlines to thrive and grow their businesses. In this way, Heathrow will be better positioned to handle increasing competition from its European rivals and so reinforce its status as a leading international network hub airport.

This interim master plan considers how this might be achieved for Heathrow and outlines how the airport might grow, in the context of: ongoing passenger growth; a constantly evolving aviation industry; and a firm commitment to sustainable and responsible development.

Delivery is crucial for Heathrow's passengers and airlines. It is also essential if Heathrow is to maintain its international hub status and continue to act as a catalyst for future economic growth on a local, regional and national level.

Heathrow in 2005

Heathrow, as a two runway, four terminal airport, is one of the world's leading airports in terms of passenger throughput per hectare of land.

As a responsible airport operator, we fully recognise the airport's impact on the surrounding environment and communities, particularly with regard to noise, air quality and congestion.

We work very closely with airlines and aircraft manufacturers to minimise the noise inflicted upon the local community. For many years, we have also operated voluntary schemes to insulate homes and schools against aircraft noise. Following on from the White Paper, two new schemes will be introduced later this year: one to provide insulation to

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noise-sensitive community buildings; and another to help people relocate from the area with the highest level of noise.

We are doing everything we can which is within our control to improve air quality. Our air quality strategy is designed to help develop an integrated approach for the local area; manage effectively on-the-ground aircraft emissions; ensure airport vehicles are environmentally-friendly; encourage staff car-sharing schemes; and encourage aircraft manufacturers to research and adopt new low-emission technologies.

We are committed to working closely with the Government and other relevant organisations, such as the Highways Agency, to ensure emissions are controlled and comply with the 2010 EU Directive limits.

The aim of our surface access strategy is to provide efficient and effective public transport access to the airport for both passengers and staff, in a manner that enables the airport to meet its aspirations for sustainable growth.

We have also been working hard to ensure non-transfer passengers and airport staff reduce the use of private cars through a series of initiatives. These include: Heathrow Express; the car parking levy; the M4 spur bus lane; funding of local bus routes; and car sharing initiatives.

The introduction of Heathrow Connect in summer 2005 will also provide a stopping train service from Heathrow to Paddington, which has been designed chiefly to benefit passengers and staff living within west London and to provide a viable alternative to using the car.

Other future rail schemes with significant implications for Heathrow include CrossRail and Airtrack.

Responding to growth in passenger travel

Air travel is now much more accessible, affordable and popular for the majority of the population. People are demanding more, not less, air travel.

Across the South East, demand could rise from 117 million passengers a year in 2000, to around 200 million in 2015 and 300 million in 2030. This represents an average annual growth rate of 3.2%, significantly below the 5% growth rate experienced over the last 30 years.

If Heathrow is to maintain its competitive position within Europe, it is essential that the airport is able to continue to develop and be able to deliver high quality facilities. This will enable airlines operating from Heathrow to enhance their route network and compete effectively with airlines operating from other European airports.

Developing Heathrow within existing limits

Against a background of ongoing traffic growth and the need to ensure facilities remain competitive, Heathrow's first priority is to develop the airport within its current boundary and planning limits. The development strategy must be capable of maximising passenger throughput on its existing runways, in a manner which delivers high levels of service to passengers and airlines; allows key projects to be completed as quickly and effectively as possible; and is responsible and sustainable.

If Heathrow continues to operate within its existing limits, it is forecast that the airport will handle 87 million passengers a year by 2015 and thereafter 90-95 million passengers a year. This assumes that:

- air traffic movements will be capped at 480,000 a year;
- five terminals will operate within a cap of 42,000 car parking spaces;
- the Government consultation on night noise supports the continuation of night movements and does not extend the night quota beyond current hours;
- the A380 comes into service from 2006;
- Terminal 5 (phase 1) comes into service in 2008, allowing for increased growth until capacity constraints re-emerge in 2010/11;
- phase 2 of Terminal 5 comes into operation in 2011;
- airlines maximise slot use; and
- the structure of the airline industry remains similar to today.

The opening of Terminal 5 will not only deliver a very high quality extension to the airport, it will also provide a wider opportunity for Heathrow to achieve this in collaboration with airline alliances, so that both passengers and airlines are able to make the best use of airport facilities.

The airport is also adopting a strategy of investing in additional facilities in an incremental manner to accommodate the trend towards larger aircraft.

Heathrow with additional runway capacity

The White Paper concludes that the demand for air travel in the South East of England will continue to remain high, principally because of the nature and strength of the economy in the South East, and particularly in London.

In order to address this demand in the London system as a whole, the White Paper proposes that a second runway be built at Stansted as soon as is practical. BAA is working hard to implement this objective.

The White Paper also recognises and supports the economic case for a third runway at Heathrow - "once we can be confident that the key condition relating to compliance with air quality limits can be met," - and acknowledges the case for a sixth terminal to serve a third runway.

With three runways, the Department for Transport has estimated that Heathrow could be capable of handling around 116 million passengers by 2030.

The White Paper also asks us to identify and safeguard a boundary for the development of additional runway capacity. At this stage, the proposed safeguarded land boundary for a third runway does not define any land uses.

We recognise that identifying a boundary for a potential third runway is a critical issue for our local communities. At the same time, it is important that we safeguard for the possibility of future economic growth, recognising that strict social and environmental conditions will have to be met before any further steps can be considered.

As any potential development is still several years away and we are some way from developing detailed plans, we have included a map which amalgamates all previously published boundaries. We are sensitive to the fact that this would include the loss of up to 700 houses, as previously stated in BAA's 2003 *"Responsible Growth"*.

It is not possible to say that this is a finalised boundary, because further work is required and a detailed planning application is many years away.

The White Paper also considers the possibility of securing increased capacity from the existing runway system – ie mixed mode (using each runway for both take-offs and landings). Government White Paper studies around the implications of mixed mode operation are still ongoing, so we are not currently in a position to

provide traffic forecasts or discuss potential impacts. However, we recognise that alternation is an extremely important consideration for our communities. A full public consultation on mixed mode is likely to take place in 2006.

Developing the airport responsibly

The White Paper requires airport operators to develop and implement noise mitigation schemes for households subject to high levels of current airport noise, as well as noise-sensitive buildings exposed to medium to high levels of noise. In response, Heathrow undertook a detailed consultation during 2004, the results of which will be published in the near future.

As suggested in the White Paper, and mindful that airport expansion proposals have a wider impact on property values and marketability before statutory provisions become available, Heathrow is also preparing two property blight schemes. These are the Property Market Support Bond and the Home Owner Support Scheme.

The Property Market Support Bond means that if, and when BAA announces its intention to proceed with a planning application for a new runway eligible property-owners located within the proposed new airport boundary will have the option of selling to BAA at unblighted prices.

The forthcoming Home Owners Support Scheme means that for eligible properties within the 66 Leq noise contour for the new runway BAA will introduce a voluntary scheme to buy residential homes that could lose significant value as a result of any new runway proposal.

Further details of these noise and blight schemes will be published in the near future and incorporated into the updated version of this interim master plan.

Listening to your views

The publication of this draft interim master plan is designed to elicit your thoughts about the growth of Heathrow. You may be reading a copy of the document that we have formally sent you, or you may have obtained it from our website, but in either case we would welcome any comments you may have, no later than 31 October 2005.

If any aspects of the plan puzzle you, or if you are wondering whether we can provide any additional information on particular matters, please ask, using the postal or email address that appears at the bottom of the contents page for this interim plan.

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We will also be pleased to meet and discuss this plan with representatives of local authorities and organisations or businesses with an interest in Heathrow's future.

1 Introduction

Heathrow's position

1.1 Heathrow handles more international passengers than any other airport in the world. It is acknowledged to be the gateway to the UK and is an integral part of London.

1.2 However, Heathrow's European competitors are currently experiencing strong growth rates and have the scope to grow faster than Heathrow can grow in future years.

1.3 Heathrow is important to both the UK economy and the aviation industry. Consequently, where it can be done sustainably, there is a real need for the competitive position of Heathrow to be protected.

Government policy

1.4 The publication of the Government's White Paper "*The Future of Air Transport*" on 16 December 2003 marked a new era for the aviation industry. The White Paper clarified the need for new runway capacity in the South East. As well as explaining that the priority for London airports is to maximise the use of existing runways, it concluded that two new runways should be built in the South East, the first at Stansted in Essex. The White Paper also supported the subsequent construction of a third runway at Heathrow, but only if stringent environmental limits can first be met.

1.5 The White Paper recognised the "economic strength of Heathrow and the direct and wider benefits to the national economy that will be lost if additional capacity cannot be provided there for many years". It highlighted the importance of Heathrow in providing a focus on business travellers (particularly the finance and business services sectors which are reliant on global markets and good international communication) and in providing and maintaining a global route network with excellent connections - a recognised factor in attracting foreign investment. Furthermore, it strongly supported the need to perpetuate Heathrow's unique role within the UK as a major hub, especially as it was recognised that additional capacity at Heathrow would generate the largest direct net economic benefits of any new runway option.

1.6 The White Paper, however, also highlighted the "environmental disadvantages of Heathrow" and accepted that, at the time the White Paper was produced, it could not be confident that the

key condition relating to compliance with air quality limits could be met. Therefore, Government-led studies have been established to consider how this could be addressed. The White Paper also acknowledged that the impacts and benefits of mixed mode would need to be the subject of a full public consultation by Government, including a review of existing procedures such as westerly preference and the Cranford Agreement, as required by its Terminal 5 decision. In addition, the White Paper called for BAA to "take steps to safeguard the land for the option of a third runway at Heathrow."

1.7 As well as tackling growth, the White Paper provides a policy framework which applies to all airport operations. For example, all major airports are required to implement new noise schemes for their current operations and develop blight compensation schemes at airports where Government policy has identified there is potential for additional runway capacity.

1.8 The Government also requested that major airports should aim to set out future development proposals, including the context and vision, in a master plan for the airport concerned. These master plans do not have development plan status and are not in themselves statutory documents which require Government approval (paragraph 12.7 of the White Paper). In this respect, master plans do not replace the need for planning applications.

Objectives/purpose of Interim master plan

1.9 At Heathrow, the existence and duration of the Government studies means that any airport master plan published in the interim will be unable to show future airport layouts associated with additional runway capacity proposals. Indeed, further clarity on the key environmental issues associated with new runway capacity, together with future airspace and surface access capacities, will be required in order to inform future airport master plans.

1.10 This draft interim master plan contains development proposals and supporting information that will enable Heathrow to ultimately grow and operate as a five-terminal airport within the airport-wide planning conditions¹ attached to the Terminal 5 permission. This is referred to in this document as 'Heathrow within existing limits'. It also includes information on the potential land take that might be required for airport facilities to support a third runway, together with some information on the blight compensation scheme.

1 Introduction

1.11 During the course of the next year, we will be developing mitigation strategies to support proposals for additional runway capacity as part of the Government studies. There will also be a consultation on layout options for a sixth terminal. However, we do not anticipate that we would be in a position to publish master plans for additional runway capacity options until some time after the publication of the Government's White Paper review.

Style of interim master plan

1.12 The concept of an airport master plan is not a new one. Indeed most international airports around the world have, at some point in their history, produced such a document.

1.13 However, it is important to stress at the outset that our draft interim master plan aims to outline our strategy for growth, including protecting options for future development, rather than presenting a definitive and detailed plan of the future, about which there is still a high degree of uncertainty.

1.14 This draft interim master plan has been prepared so that we can consult on our future proposals in a manner that allows all of our stakeholders to consider how it might impact upon their lives and future plans. The consultation period runs until 31 October 2005 and we look forward to receiving your thoughts and comments.

Relationship to other BAA documents

1.15 This draft interim master plan replaces "*Heathrow into the 21st Century*". It has been informed by "*Responsible Growth*" published in May 2003, which was BAA's response to the Government's South East and East of England Regional Air Services Study (SERAS) consultation.

1.16 It is consistent with, and should be read alongside, the BAA Sustainable Development Strategy. It also has the following supporting documents for Heathrow within existing limits:

- BAA Heathrow Capital Investment Plan
- BAA Heathrow Surface Access Strategy
- BAA Heathrow Air Quality Strategy
- BAA Heathrow Noise Strategy
- BAA Heathrow Waste Strategy
- BAA Heathrow Biodiversity Strategy
- BAA Heathrow Energy Strategy

All of these documents can be accessed through the BAA website at www.baa.com.

1 Condition A4 of the Terminal 5 Decision restricts the number of Air Transport Movements (ATMs) at Heathrow to 480,000 ATMs a year once Terminal 5 becomes operational.

Condition A5 of the Terminal 5 Decision states that the 57dB(A) Leq 16 hour noise contour for Heathrow should not exceed 145 square kilometres.

Condition A88 of the Terminal 5 Decision restricts the number of Heathrow Airport Limited controlled car parking spaces to 42,000 in total of which no more than 17,500 are to be for employee parking.

2 Heathrow's economic importance

2.1 As the UK's only truly global hub, Heathrow is vital to the economic prospects of the country. In a modern economy, its presence provides companies based in the South East with a competitive advantage by providing an accessible link to the world; it facilitates tourism; and supports other vital industries.

2.2 Heathrow is currently the busiest international airport in the world, in terms of international passenger volumes. However, without significant future development, Heathrow will lose this position in the next 10 years. This, in turn, will have a significant negative impact on both the national and local economies, as well as the aviation industry.

Heathrow's current position

2.3 Heathrow is the world's busiest international airport currently handling some 67 mppa (million passengers per annum). Its two runways and four terminals accommodate approximately 90 of the world's scheduled airlines which fly to around 170 destinations.

2.4 In 2003, Heathrow passengers typically represented:

- 83% of BA's traffic;
- 71% of bmi's traffic; and
- 68% of Virgin Atlantic's traffic.

Heathrow is used by over 10% of the world's airline traffic. The majority of this is accounted for by the three major worldwide airline alliances (Oneworld, Star Alliance and Skyteam).

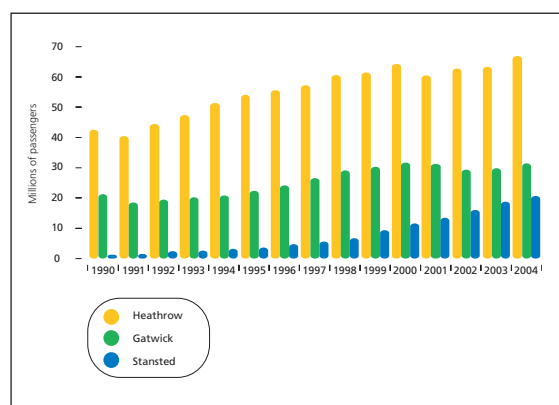
2.5 In order for Heathrow to maintain its competitive position, we must continue to develop high quality facilities which will enable the airlines operating from the airport to enhance their route network and compete freely with airlines operating from other European airports. If this cannot be achieved, there is a serious risk that both the UK aviation industry and future growth in the UK economy would be negatively affected.

Traffic trends

2.6 Passenger growth at Heathrow from 1970 to 2004 has been steady. Perhaps the most significant exceptions were in the early 1980s as a result of the oil crisis; in 1991 when the first Gulf War occurred; and more recently in 2001/02, following September 11 and in 2003 after the second Gulf War and the SARS epidemic. In all cases the downturn at Heathrow was not prolonged.

2.7 Stansted airport has continued to experience strong passenger growth as a result of the success of the low cost airlines. Despite the capacity constraints, Heathrow has been able to grow its passenger figures by around 1 mppa over the 1990-2004 period. As a result Heathrow remains the dominant airport in the South East (see Figure 1).

Figure 1: South East Airports- passenger trends 1990-2004



2.8 Figures 2 and 3 below show Heathrow's position relative to its principal European competitor airports since 1990. During this period of time, Heathrow has continued to maintain a differential of 15mppa from its nearest competitors. Paris CDG has recently emerged as the second busiest European airport in terms of passenger throughput following the building of an additional runway and increased terminal capacity. Although Heathrow does not have the most air transport movements (ATMs), it consistently has around 30% more passengers per ATM than its closest competitor, which for this metric has historically been Frankfurt.

2 Heathrow's economic importance

Figure 2: European airports - passenger trends 1990-2004

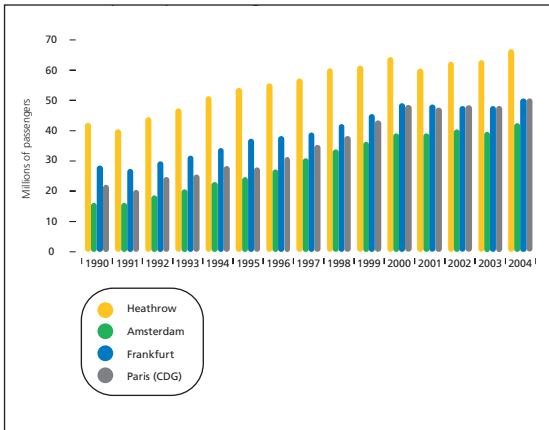
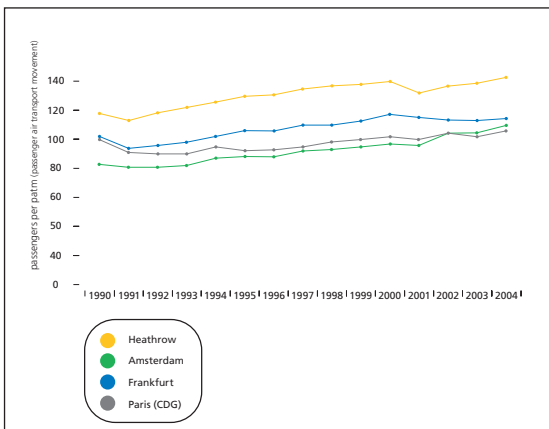


Figure 3: European airports - average load trends 1990-2004



Heathrow's current competitive position

2.9 The Government concluded in its 2003 White Paper that Heathrow is the only airport in the UK capable of being a truly global hub which can compete with Paris, Frankfurt and Amsterdam.

2.10 Over the last ten years, the structure of Heathrow's airlines has changed from a number of independent airlines, to a small group of airline alliances, providing a traditional full service product. Airline alliances now carry over 80% of Heathrow's passengers (see Table 1).

Table 1: Airline Alliances at Heathrow

Heathrow Airline Alliances	2004	% at Heathrow
Oneworld BA, Qantas, American Airlines, Cathay Pacific, Aer Lingus, Iberia [BA share:]	34.5mppa [27.9mppa]	51% [41.6%]
Star British Midland, United Airlines, Singapore, Air Canada, Lufthansa, SAS	16.8mppa	25%
Skyteam Air France, KLM, Alitalia	3.3mppa	5%
non-aligned airlines [Virgin share:]	12.5mppa [3.1mppa]	19% [4.6%]

2.11 There are three principal reasons why airline alliances view Heathrow as being so important to their businesses:

1. Strong local demand

In 2004 some 83% of its direct passengers travelled to/from locations in the South East of England, with 53% to/from inner and outer London locations. Such a high demand from the London area further serves to emphasise Heathrow's importance.

2. Strong route network

The presence of strong local demand enables the airlines to provide an extensive network of domestic, short-haul European and long-haul routes from Heathrow. When compared with its mainland European competitors, Heathrow offers the highest number of flight frequencies to the world's major destinations (see Table 2).

2 Heathrow's economic importance

Table 2: Number of non-stop departures per week – Summer 2004

	LHR	CDG	FRA	AMS
New York	135	60	35	18
Chicago	80	21	38	16
Washington	59	21	28	14
Los Angeles	59	23	17	7
Toronto	53	20	23	20
Singapore	49	17	28	18
Tokyo	42	33	21	14
Bangkok	32	14	30	17
Hong Kong	45	14	14	12
Dubai	55	14	21	7

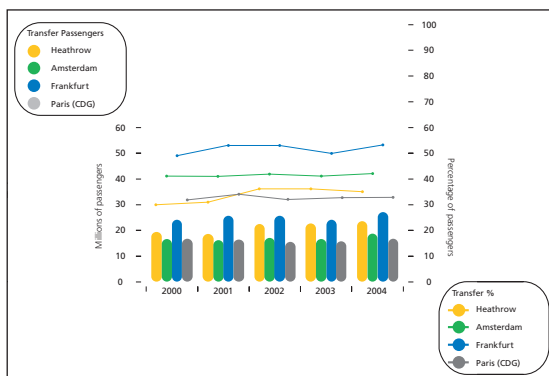
[Source: OAG, July 2004]

3. High number of connections

While a lack of available peak runway slots prevent airlines from operating in a traditional hub² fashion, Heathrow still generates one of the highest transfer passenger volumes of international airports (see Figure 4). This is due to the high number of flight frequencies across the day and a strong route network. Combined, these afford passengers a good choice of connecting flights (hence Heathrow is termed a network hub).

2.12 These points, combined with Heathrow's competitive pricing structure, makes Heathrow attractive for both airlines and passengers. Passengers have a great choice and airlines are able to achieve good yields.

Figure 4: European Airports - transfer passenger trends 2000 - 2004



2 Traditional hub operations are when airlines schedule services in 'waves' or 'banks' timed to enable passengers to transfer from one flight to another.

2.13 In addition, the efficient use of Heathrow's two runways means that its airlines can be productive and profitable. Flights are typically fuller with 30 more passengers per aircraft flying into and out of Heathrow compared to its closest European rival, Frankfurt. Furthermore, in airport terms, Heathrow makes the most efficient use of land, with more passenger throughput per hectare of land (see Table 3), than any other major European airport.

Table 3: Comparison of land-take at major European airports (2004)

	Landtake (ha)	Pax	000 pax / ha
Heathrow*	1,227	67.1 mppa	54.7k
Paris (CDG)	3,309	51.0 mppa	15.4k
Frankfurt	1,397	50.8 mppa	36.4k
Amsterdam	2,147	42.4 mppa	19.7k

*including T5 which is not operational yet

2.14 Such efficiencies have helped Heathrow and its airlines to achieve greater economies of scale than its competitors. The current 67mppa passenger throughput of Heathrow is achieved from a land take consistent with that envisaged for a four terminal 42mppa airport when the Government published its 1985 White Paper.

Heathrow's future competitive position

2.15 While Heathrow currently generates the highest number of passengers from its existing two runways and has a stronger route network compared to its European competitors, this position is set to be usurped by the end of this decade. Given Heathrow's significant contribution to the UK local and national economy, protecting its competitive position is vital to the UK.

2.16 Table 4³ below shows that by 2010 each of Heathrow's European competitor airports will have capacity for significantly more ATMs than Heathrow within its existing limits.

2.17 Consequently, additional runway capacity, whether it be through greater utilisation of the existing runways or a new runway, is the key to the future prosperity of both Heathrow's and the UK's economy.

3 Derived from Table 4.1, page 29 of "The Future Development of Air Transport in the United Kingdom: South East", Second Edition February 2003, Department for Transport.

2 Heathrow's economic importance

Table 4: Comparison of runway capacities at major European airports

	2004 R/ways	2004 ATMs	2006 R/ways (planned)	2010 ATMs (capacity)
Paris CDG	4	516,400	4	710,000
Amsterdam	4	402,700	5	600,000
Frankfurt	3	469,200	4	660,000
Heathrow	2	469,700	2	480,000

Heathrow's economic importance

2.18 Both BAA's response to the SERAS consultation "*Responsible Growth*" and the White Paper explain the national, regional and local economic and social significance of Heathrow. Heathrow currently supports nearly 100,000 direct and indirect jobs in the local area. As part of the 2003 White Paper consultation exercise, the Government calculated that the proposal for a third runway (R3) at Heathrow would generate over £6 billion in direct net economic benefits. This was the most of any new runway option it considered (paragraphs 11.49 & 11.50 of the White Paper).

2.19 Moreover, the Government estimated that if no new runway capacity was provided in the South East, and in particular at Heathrow, around 73 million passengers would be lost to the UK airport system.⁴

Economic development and regeneration

2.20 The scale of aviation activity at Heathrow is such that it generates a large amount of employment. It also facilitates other business activities.

2.21 Overall, the principal economic benefits of Heathrow are:

i. Employment generation

At present, Heathrow supports around 100,000 direct and indirect jobs in the local area, of which around 68,400 are direct on-airport jobs. In addition, it is estimated that Heathrow also supports a further 145,000 jobs across the UK that are either indirectly related to the airport (e.g. supply goods and services to airport companies) or are generated (induced) because people who are directly and indirectly employed purchase goods and services supplied by other industries;

ii. UK competitiveness

Nearly 3.5m foreign business trips are made to the UK through Heathrow every year;

iii. Inward investment

Without Heathrow many industries would either not exist or would choose to locate in other countries. A recent survey⁵ by Think London (the capital's inward investment agency) identified that over 50% of foreign companies that had located in London cited "access to markets" as a primary factor in influencing their decision, with 25% specifically citing "ease of international travel".

iv. Tourism

Heathrow is the gateway to the UK with some 9 million foreign visitors using the airport every year. The expenditure those tourists spend is estimated to be worth about 1.5% of the country's GDP.

2.22 For growth within its existing limits, Heathrow is forecast to have an 87mppa traffic throughout and just under 60,000 direct on-airport jobs by 2015, due to increased productivity. Beyond that, and at 90-95mppa levels of traffic throughout, Heathrow is not forecast to substantially exceed the 61,500 on-airport jobs that the Terminal 5 Inspector concluded it could support in his report.

2.23 We are closely involved in the economic development and regeneration of the areas around the airport. We aim to ensure the surrounding area capitalises on the economic opportunities presented by the airport. Specifically, our economic development and regeneration programme aims to:

- help local businesses to capitalise on the economic advantages provided by Heathrow (e.g. annual Heathrow Meet the Buyers event);
- facilitate the development of skills amongst local people in accordance with employers' needs (e.g. Heathrow Employment Forum has created a number of training and apprenticeship schemes);
- help promote Heathrow as a prime employment option for local people (e.g. "Routes to Work" which equips local people with the skills required for an airport job);

⁴ Table 3.1 page 24 of "The Future Development of Air Transport in the United Kingdom: South East", Second Edition February 2003, Department for Transport.

⁵ "One in Seven – The Economic Impact of Inward Investment on the London Economy."

2 Heathrow's economic importance

- help make the area around Heathrow a better place to live and work (e.g. BAA Heathrow provides £1m per annum to support the Hillingdon Community Trust);
- facilitate collaborative initiatives between business partners (e.g. the Retail Academy was established by BAA and various airport retail and catering companies to improve retention and recruitment of staff by providing employment and training programmes in the Heathrow area).

Conclusion

2.24 Heathrow is the UK's top transport interchange and acts as the catalyst for economic growth on a national, regional and local scale. The large and diverse route network operated by airlines provides travellers with a high degree of choice and provides the justification for businesses to locate in London and the South East of England. In summary, it is one of the UK's most important economic assets.

2.25 However, this position is under threat. When the number of runway movements at Heathrow reaches the T5 cap (480,000 ATMs), there is an increasing likelihood that airlines will look to other European airports to expand. This, in turn, will have a negative effect on both the UK and the London economy.

2.26 We believe it is important that, provided the stringent environmental conditions outlined by the Government can be met, opportunities to increase runway capacity at Heathrow are pursued, for the benefit of passengers, airlines and the local and national economies. Not to do so will present an increased risk to the UK economy.

3 Statutory and regulatory context

3.1 Government's role in the aviation industry is one of 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 system. To regulate existing airport activities, Government acts through its own statutory powers and through a number of independent agencies, such as the Civil Aviation Authority (CAA). This chapter sets out the policy and legislative framework within which Heathrow operates.

Sustainable development

3.2 Heathrow's operation is managed and developed in the context of the Government's strategy for sustainable development⁶. This strategy identified four objectives for sustainable development:

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

3.3 On 7 March 2005, the Government published a new strategy, *'Securing the future'*, which we intend to reflect in future policy development and master plan publications. 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; and
- using sound science responsibly.

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

- sustainable consumption and production;
- climate change and energy;
- natural resource protection and environmental enhancement; and
- sustainable communities.

Airports policy

3.5 The White Paper is the principal policy document with which our future plans need to align. It sets out a strategic framework for the development of airport capacity in the UK over the period to 2030, against the background of wider developments in air transport. Here are some of the Government's principal conclusions for new runway capacity in the South East:

- there is an urgent need for additional runway capacity in the South East;
- there is no strong case for the development of a second international hub airport alongside Heathrow;
- the first priority is to make best use of the existing runways, including the remaining capacity at Stansted and Luton;
- provision should be made for two new runways in the South East by 2030;
- the first new runway should be at Stansted, to be delivered as soon as possible;
- the further development of Heathrow is supported, including a new runway and additional terminal capacity - to be delivered as soon as possible (within the 2015-2020 period) after the new runway at Stansted, but only if stringent environmental limits can be met. An urgent programme of work and consultation will be started to examine this issue further and to consider how best use can be made of the existing airport;
- the Government will not seek to overturn the 1979 planning agreement that prevented construction of a second runway at Gatwick before 2019;
- in case the conditions attached to the construction of a third Heathrow runway cannot be met, and since there is a strong case on its own merits for a new wide-spaced runway at Gatwick after 2019, land should be safeguarded for this;
- the option to develop two or three additional runways at Stansted is not supported;
- the option for two new runways at Gatwick is not supported; and
- no other proposals put forward during the consultation for new airports at alternative locations are supported.

⁶ Cm 4345 "A better quality of life. A strategy for sustainable development for the UK." Department of the Environment, Transport and the Regions, May 1999.

3 Statutory and regulatory context

3.6 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.” (page 15 of the White Paper).

3.7 As a matter of course, we will continue to review any policy documents published by regional bodies, local authorities and other agencies that are relevant to the airport. In formulating our responses, we will seek to ensure that they are consistent with national policy and, in so doing, cater for the interests of the airport, its suppliers and its customers.

Heathrow planning policy framework

3.8 The 2004 Planning Act has adjusted the hierarchy of the development plan process and policy framework, against which individual planning applications must be considered. The 1990 Planning Act provisions will remain in place pending the implementation of the 2004 Planning Act provisions. To help the reader navigate themselves through these provisions, we have included a diagram which illustrates the 2004 Planning Act policy framework in Appendix A.

Regional planning policies

3.9 Heathrow lies within the Greater London Authority (GLA) administrative boundary and, as such, future development at Heathrow would be influenced by policy formulated by the Mayor of London. The Mayor’s policies are subject to consultation with the London Assembly (which comprises the elected representatives for the region), and scrutiny by the Government Office for London (GoL) to ensure conformity with Government policy.

3.10 The GLA Act 1999 sets out the range of duties and powers of the GLA and in turn the Mayor. One of the Mayor’s duties includes producing the Spatial Development Strategy for London – The London Plan.

3.11 The London Plan, published in February 2004, replaced the previous Regional Planning Guidance for London (RPG3), and sets out the strategic social, economic and environmental policy framework for the future development of London over the next 15 – 20 years.

3.12 The objective of The London Plan is to focus development in areas of the region in a manner that is sustainable. It provides the strategic framework for various cross-cutting or supporting regional strategies (see Appendix A).

The box below summarises the Mayor’s relevant policy statements for Heathrow Airport.

London Plan (2004)

- Policy 3C.6 supports the development of a sustainable London airport system recognising the need for further runway capacity in the South East. However, given the timing of the Aviation White Paper and the production of the London Plan, the implications of the White Paper for London will need to be addressed in the review of the London Plan.
- Policy 5D.1 sets out the strategic priorities for the West London sub-region which includes Heathrow. Those priorities affecting Heathrow include capturing the benefits of economic generators; identifying new opportunities for jobs; housing and mixed-use development; and enabling more sustainable access to the airport. The policy notes however that air quality and noise are particular issues in the Heathrow area.
- Policy 5D.2 identifies Heathrow and the surrounding towns of Hounslow, Feltham, West Drayton and Hayes as opportunity areas for employment and housing growth. The policy encourages the formulation of sub-regional planning frameworks to inform UDP reviews and wider regeneration policies for these areas.

3.13 The significance of Heathrow also extends into the South East region. The South East of England Regional Assembly (SEERA) is the representative body for the region responsible for drafting the regional spatial strategy (RSS) which includes the regional transport strategies and other spatial policies. SEERA’s strategies are subject to scrutiny by the Government Office for the South East (GoSE) to ensure that Government policy is delivered in the region.

3 Statutory and regulatory context

3.14 SEERA's draft RSS, "The South East Plan", was published for public consultation on 24 January 2005 with its two-stage submission to the Government programmed for July and November this year. Final approval is expected in 2007, following a public inquiry in 2006. Once it is approved by Government as the South East RSS, "The South East Plan" will replace the current Regional Planning Guidance for the South East (RPG9).

3.15 The draft South East Plan does not address the possibility of further runway development at Heathrow, and in fact includes no new policy references to Heathrow. It restates RPG9's airports policy, albeit with a minor modification to clause (i) of Policy T6⁷, such that the draft policy states:

Draft South East Plan (2005)
Relevant regional strategies, Local Development Documents and Local Transport Plans should include policies and proposals that:

- i support the development of Gatwick and Heathrow Airports within agreed levels of growth;
- ii take account of airport operator master plans produced in accordance with the Aviation White Paper; and
- iii encourage Southampton Airport to sustain and enhance its role as an airport of regional significance.

Airport Surface Access Strategies should set out ways of achieving a modal shift in favour of public transport.

Local planning policies

3.16 The 2004 amendments to the Planning Act require local planning authorities to replace their existing Unitary Development Plans (UDPs) and Local Plans with Local Development Frameworks (LDFs) by 2007 (see Appendix A).

3.17 Heathrow lies within the administrative boundary of the London Borough of Hillingdon. The current UDP for Hillingdon was published in 1998 and needs to be reviewed in light of the T5 decision and the Government's 2003 White Paper. Hillingdon intend to undertake that policy review as part of its LDF process with the first draft Local Development Document (LDD) expected during 2005.

3.18 A number of other neighbouring county councils and local planning authorities have planning and transport policies that relate to Heathrow (see Appendix A).

Development control

3.19 Airport development is subject to the normal processes of development control, as set out in town and country planning legislation, circulars and guidance. In common with owners of other property and airports, we are entitled to undertake various forms of permitted development at the airport⁸, subject to the prior submission of a consultation (rather than a planning application) to the local planning authority. The entitlement does not include:

- development on non-operational land;
- non-operational buildings (i.e. ones unrelated to the movement or maintenance of aircraft, or the embarking, disembarking, loading, discharge or transport of passengers, livestock or goods);
- development falling within the scope of the Environmental Assessment Regulations;
- the construction or extension of a runway; and
- a passenger terminal with a floor space greater than 500m², or the extension of our existing terminals (an entitlement to extend them has been fully exercised).

3.20 In cases where development does not qualify as permitted development, it is, of course, necessary for us to apply for and obtain planning permission before development can proceed.

Airport design

3.21 The UK, as a signatory to the 1944 Chicago Convention, is required to operate its airports in accordance with internationally agreed criteria. In the UK, responsibility for ensuring this takes place is given to 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, they need to 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 developments such as the introduction of new aircraft - for example the A380.

7 Clause (i) of Policy T6, as currently approved in RPG9, is to "support the development of Gatwick and Heathrow Airports within levels of growth agreed prior to the publication of the Aviation White Paper, though these will need to be reassessed in the light of the framework established by the White Paper".

8 The Town and Country Planning (General Permitted Development) Order 1995, Article 2 and Schedule 2 Part 18.

3 Statutory and regulatory context

3.22 Heathrow's facilities meet the CAA's requirements, and future development will continue to do so – indeed some development may be an obligatory response to the introduction of new or revised standards. While it is not appropriate for this plan to explain the standards in fine detail, it is noteworthy that they 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.

Airport security

3.23 Airport security requirements are the subject of separate regulatory control by the Department for Transport (DfT). They too can be a defining influence on the need for development, as well as on the form and character of the airport facilities at Heathrow. A recent example is the requirement for total segregation of departing and arriving air passengers in the airport's airside areas.

Aerodrome safeguarding

3.24 Heathrow, in common with other major airports, is situated at the centre of a series of obstacle limitation surfaces which define, relative to the runways, maximum acceptable heights for buildings and other structures, such as telecommunications masts and wind turbines. Features in an airport's locality, notably higher ground, can constrain and consequently determine the usable length of a runway. The protection of these surfaces is undertaken as part of the Aerodrome Safeguarding process⁹.

3.25 Safeguarding of Aerodromes¹⁰ 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 the aerodrome's obstacle limitation surfaces; protect visual flight paths, eg by ensuring that runway approach lighting is not obscured by development, and that lights elsewhere cannot be a cause of confusion;
- protect the accuracy of radar and other electronic aids to air navigation, eg by opposing wind farm developments whose turbine blades could generate an intermittent return on air traffic controllers' radar screens;

- reduce the hazard from bird strikes to aircraft, associated with such land uses as waste disposal; sewage treatment; and large landscaping schemes.

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

3.27 Safeguarding issues related to the possible development of a third runway at Heathrow are addressed in chapter 9.

Public Safety Zones

3.28 The risk to third parties of air accidents occurring within, and in close proximity to airports has long been the subject of government policy, through the definition of Public Safety Zones (PSZs), which extend backwards from a runway's landing threshold. Airfield design and safeguarding requirements relate to the avoidance of collisions between two aircraft, or between an aircraft and for example, tall telecommunications masts. PSZs are the means of identifying the area where the risk of an aircraft accident, whilst extremely low, may be such as to merit restrictions on the development and use of land.

3.29 The current PSZs date from 2002, and were defined following a thorough government study 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 airports¹¹. 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 circumstances allow.

9 ODPM Circular 01/2003

10 The Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) Direction 2002

3 Statutory and regulatory context

3.30 The areas of Heathrow's PSZs are based on the 1 in 100,000 individual risk contours for the airport, based on forecasts about the numbers and types of aircraft movements in 2015. The PSZs represent a simplified form of the risk contours, close in shape to an isosceles triangle.

3.31 The Secretary of State additionally wishes to see the emptying of all occupied residential properties, and of all commercial and industrial properties occupied as normal all-day workplaces, within an area of greater risk – the 1 in 10,000 contour. There are four such residential properties at Heathrow. In order to fulfil the Secretary of State's requirement, we offered to purchase those properties in June 2003 but to date none of the owners have accepted this offer.

Environmental regulation

3.32 Heathrow operates within the context of a variety of nationally applicable policies and standards relating to the environment. They are described in Chapter 7 of this master plan, which explores the environmental impacts and mitigation strategy for Heathrow within existing limits. By way of example, the airport's operation and development needs to address such matters as:

- air quality, which is subject to a variety of national limits, particularly nitrogen dioxide (NO₂), which is one of the biggest challenges for the airport's operation;
- the water environment, which is the subject of discharge consents relating to airport drainage into the local rivers, set by the Environment Agency; and
- restrictions on the number and noise of flights at night, set by the DfT.

Economic regulation

3.33 Airport charges at BAA's three London airports are regulated by the CAA, and are normally reviewed at five-year intervals. The current regime covers the period until 31 March 2008 and, at Heathrow, permits us in each of five years to increase the airport charges yield by 6.5 percentage points above the Retail Prices Index. The formula is set by the CAA, following detailed investigation and consultation with interested parties (primarily the airlines and BAA), to enable the airports to operate, efficiently and profitably and to encourage a programme of timely capital investment. The existing and potential profit from each airport company's other sources of revenue, notably retailing, is taken into account by the CAA when it decides the formula for setting the airport charges yield to be paid by airlines.

3.34 Listed below are the current airport charges tariff to airlines at Heathrow which reflect the need to remunerate a large programme of capital expenditure for the construction of Terminal 5 and redevelopment of the existing airport:

- a charge for each departing passenger, which in 2005/06 is £6.95 on domestic flights, £9.00 to Eire and £11.90 on other international flights, subject to a minimum of £125 per flight;
- an aircraft weight related charge on landing, including a noise surcharge within the range of £225 - £2,655 in 2005/06. In addition there is an emissions (NO_x) related element. The noise and emission related elements are designed to encourage the use of aircraft that are quieter and more environmentally friendly; and
- an aircraft parking charge.

3.35 In 2005/06 the regulated charges paid by airlines for their use of Heathrow will average around £7.825 per departing/arriving passenger.

3.36 Airlines also pay for the air traffic control services of the authorities responsible for the airspace through which they fly - National Air Traffic Services in the UK.

3.37 A Government tax, Air Passenger Duty, is paid direct to the UK Treasury and currently ranges between £5 and £40 per departing passenger. No portion of this is paid to BAA or the airlines that use the airport and so it does not directly contribute to airport financing.

11 DfT Circular 1/2002 – Control of development in airport Public Safety Zones

4 The airport in 2005

4.1 This chapter paints the picture of Heathrow as it is today. It details existing airport facilities and committed developments, ie those projects either under construction or due to take place by the end of 2005.

2005 airport layout

4.2 Heathrow occupies a site of 1227 hectares (3032 acres) including the site where Terminal 5 is being constructed. This area is legally defined as 'operational land'¹² and is commonly known as 'on-airport land' as it is land that is within our ownership. In addition, other facilities which support Heathrow's on-airport activities are located on land outside of this boundary (ie off-airport). Some of this land is owned by third parties.

4.3 On 11 March 2005, BAA concluded an agreement which transferred some plots of on-airport land which contain ancillary facilities such as cargo sheds, offices and associated car parks into a new company called Airport Property Partnership. BAA has retained a 50% stake in Airport Property Partnership. The transfer arrangements have placed strict controls, in favour of Heathrow, on how this land can be used.

4.4 The following paragraphs describe both the current on-airport facilities and some off-airport facilities, which support the day to day operation of Heathrow. For ease of reference, Drawing 1 shows the existing on-airport layout overlaid with land use categories.

On-airport Airfield

4.5 The airport's airfield facilities extend over an area of approximately 519 hectares. This is approximately 42% of the total on-airport area. It includes the two runways, associated aircraft navigational systems, a system of taxiways and extensive grass areas surrounding these facilities.

4.6 Heathrow has two operational runways:

- Runway 27 Right - 09 Left which is 4041 metres long (northern runway);
- Runway 27 Left - 09 Right which is 3781 metres long (southern runway).

4.7 Runway 23, which is known as the crosswind runway, has been decommissioned with the agreement of Heathrow's airlines and National Air Traffic Services (NATS). Over the last decade the ability of modern aircraft to cope with high crosswind conditions has reduced the need for a crosswind runway.

4.8 Between 0700-2300 hours, the main runways are principally operated in a segregated mode of operation. Segregated mode is the practice of using one runway for take-offs only and the other runway for landings only. During peak periods, particularly in the morning, NATS are able to interleave landings with take-offs on the same runway to ease airspace congestion. This is a practice known as Tactically Enhanced Arrival Measures (TEAM). The triggers for it, as defined by the CAA in their CA/10 document which was submitted to the T5 Public Inquiry, are:

- during certain turbulent wind conditions for westerly operations;
- when excessive arrival demand triggers certain airborne delay criteria;
- reduced visibility conditions; and
- major construction or maintenance of runways. [CA/10, paragraph 2.9.4(b)]

4.9 Runway alternation is a system which switches over the allocated departure and arrival runways at 1500 hours every day to alleviate noise disturbance experienced by local residents along the Heathrow flightpaths.

4.10 In addition to runway alternation, Heathrow also operates a westerly preference system. This nominates the direction of take-off to be to the west, away from the densely populated areas of West London, unless the strength of the easterly winds is 5 knots or more.

4.11 When easterly operations are in force, the Cranford Agreement precludes aircraft, under normal circumstances, taking-off from the northern runway. This is an oral agreement between the Government and the residents of Cranford which has existed since the mid 1950s, and is aimed at protecting the residents of

¹² Sections 262, 263 and 264 of the 1990 Planning Act effectively define operational land as being that which a relevant airport operator uses or has permission to use for the purposes of its role as a statutory undertaker and which it has an interest in as a freeholder or leaseholder.

4 The airport in 2005

Cranford, a residential area very close to the eastern end of the northern runway.

Aprons and Piers

4.12 The airport's apron and pier facilities extend over an area of approximately 188 hectares - 15% of the total on-airport area. It includes aircraft stands, terminal piers, the fuel farm, the airport fire station and fire training ground, two surface water balancing ponds, and various airfield support facilities.

4.13 Heathrow has 166 aircraft stands when operated in non-MARSeD configuration¹³. These stands are principally located adjacent to the passenger terminals and connected to the piers. There are also some operational stands located in apron areas that are remote from the terminals or in the cargo area¹⁴. Table 5 below sets out the 2005 stand size and types.

Table 5 2005 aircraft stand information

Stand sizes	Pier	Remote
Jumbo Extra	0	1
Jumbo Wide	50	50
Large	17	0
Medium	37	9
Small	1	1
Totals	105	61

Key:	
Small	B737, BAE146
Medium	A319, A320, MD80, MD90
Large	B767, MD11, DC10
Jumbo Wide	B747, B777, A330, A340
Jumbo Extra	A380

4.14 There are ten piers at Heathrow which are connected to passenger terminals in the following manner:

- Terminal 1: Pier 3, Pier 4, Pier 4a
- Terminal 2: Pier 1 and Pier 2
- Terminals 1 and 2: Europier
- Terminal 3: Pier 5, Pier 6, Pier 7
- Terminal 4: Victor Pier

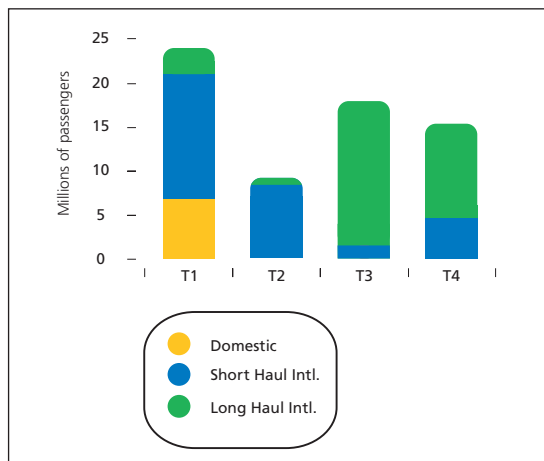
At Terminal 4, the majority of aircraft jetties or loading bridges are directly connected to the airside area of the terminal building.

Passenger Terminals

4.15 Currently, there are four passenger terminal facilities at Heathrow covering an area of approximately 14.4 hectares - 1.2% of the total on-airport area. Passenger terminals include a number of facilities for holding and processing passengers (eg check-in, security, CIP lounges and baggage reclaim), offices and retail outlets.

4.16 Figure 5 below shows the amount of passengers that passed through each of the four terminals in 2004, together with the respective domestic, short and long haul shares.

Figure 5: Heathrow Airport - type of passengers by terminal 2004



13 MARS (multiple aircraft ramp system) is a system that utilises apron space more efficiently through the configuration of: Large and Jumbo sized stands to enable two smaller aircraft to park instead of one larger aircraft; Jumbo Wide sized stands to enable three smaller aircraft to park instead of two larger aircraft.

14 Passengers are transported to and from the terminal to the aircraft parked on a remote stand by use of coaches.

4.17 In addition to handling passengers who start and finish their journeys at Heathrow (non transfer passengers), each of the four terminals also possess the capability to handle passengers who are using Heathrow to transfer from one flight to another (transfer passengers). There is one dedicated transfer passenger facility, the Flight Connections Centre (FCC), located between Terminals 1 and 2. It is the focal point in the Central Terminal Area (CTA) for looking after transfer passengers.

Cargo

4.18 Heathrow's cargo centre occupies an area of 27.5 hectares - 2.2% of the total on-airport area. Transit sheds, which are bonded by HM Customs, provide processing facilities which enable cargo to be consolidated and shipped either to an aircraft located in an airside location or to a container lorry located in a landside location. The transit sheds also contain office accommodation.

4.19 The BA World Cargo Centre, which is located in the cargo terminal area, has 82,000m² of cargo processing space across four floors. It is capable of handling around 1m tonnes of cargo per year.

4.20 In 2004, Heathrow handled 1.3m tonnes of cargo, over 90% of which was carried in the holds of passenger aircraft, rather than by dedicated freighter aircraft.

Aircraft maintenance

4.21 Aircraft maintenance at Heathrow takes place principally in Maintenance Area No.1 (MA1) which is a site of 16.9 hectares (1.4% of the total on-airport area) located at the eastern side of the airport.

4.22 MA1 contains maintenance facilities including aircraft hangars for BA, British Midland and Virgin Atlantic; apron areas to park aircraft, two aircraft engine ground running pens; engineering workshops; and associated office accommodation.

Ancillary

4.23 Heathrow's operation creates the need for a variety of support facilities, the majority of which are located on-airport around the perimeter areas. Overall, these on-airport ancillary facilities occupy an area of approximately 217 hectares - 18% of the total on-airport area.

4.24 Some of the main on-airport ancillary activities are:

- airline flight catering facilities;
- office accommodation;
- crew reporting facilities;
- VIP facilities;
- hotels;
- engineering/motor transport compounds and stores; and
- animal quarantine station.

On-airport surface transport

4.25 Passengers and staff need to access the airport and there is a need for a variety of surface transport infrastructure. Surface access infrastructure occupies an area of 121 hectares - 10% of the total on-airport area.

4.26 On-airport surface transport infrastructure includes:

- **landside airport roads:** 16 miles of an on-airport road system links the off-airport strategic road network to the passenger terminal and other surface transport facilities¹⁵;
- **forecourts:** each of the four passenger terminals have forecourts where vehicles can drop-off passengers;
- **passenger and staff car parking:** in 2005 there were approximately 19,600 passenger and 15,300 staff car parking spaces provided by us, located on-airport. An estimated further 11,600 staff car parking spaces are provided by tenants' within on-airport leased areas;
- **bus/coach stations:** there is a large bus and coach station situated in the central area of Heathrow;
- **coach park:** an area of land on the northside of the airport is set aside for the overnight and long stay parking of buses and coaches;
- **rail/underground stations:** both the central area and Terminal 4 have rail and tube stations located beneath the surface. Another tube station is located beneath the surface at Hatton Cross on the eastern side of the airport; and
- **car rental:** there are five car rental reception centres, predominantly located on the northside of the airport;

¹⁵ By virtue of orders made under Section 65 of the Airports Act 1986, BAA Heathrow is appointed the road traffic authority under the Road Traffic Regulations 1984 for roads within Heathrow Airport which are not public highways.

4 The airport in 2005

- **taxi feeder park:** this is located on the northside of the airport and allows taxis to park pending sufficient space being available for queuing on forecourts in the central terminal area.

Landscape areas

4.27 The main landscape areas are located on the north west and south west side of the airport and occupy an area of approximately 37 hectares - 3% of the total on-airport area. We also maintain some landscaped areas alongside the A4 at the northern side of the airport under an initiative known as 'Green Corridors'.

Air Traffic Control Tower

4.28 We have a contract with National Air Traffic Services (NATS) to supervise aircraft movements on the airfield and in controlled airspace around Heathrow.

4.29 The current Air Traffic Control Tower is located on-airport in the central area of Heathrow. A new control tower has been constructed in an airside location at the end of Pier 7 and will become operational in 2006.

Off-airport

Surface Water Balancing Ponds

4.30 There is one surface water balancing pond located in the north western part of the airfield and another on the southern side of the Cargo area. The airport uses four three further balancing pond systems located at the following off-airport sites:

- Eastern Balancing Reservoir;
- Clockhouse Lane Pit;
- Spout Lane Lagoon; and
- Surface Water Outfall Tunnel

There is a wetland reedbed treatment area / pond system at Mayfield Farm.

Airport related development

4.31 Airport related development was considered at the Terminal 5 Public Inquiry and judged to be defined by the following categories: offices, air cargo transit sheds; car hire facilities; flight catering; freight forwarding; and airport industry/warehousing. Hotels, whilst not solely catering for airline passengers, are concentrated around the airport, particularly in off-airport locations.

4.32 Condition A80 of the T5 planning permission required us to safeguard land on-airport for airport related development and to review the supply of land off-airport that is capable of accommodating such activities. Our review of on-airport land supply in 2002 indicated there is 29.82ha available for

airport-related development.

4.33 Recent data from the surrounding local authorities indicates there is nearly 0.5million m² of vacant and outstanding office floor space (with planning consent but not built) and over 700,000m² of vacant and outstanding industrial and warehousing floor space. This could potentially accommodate any off-airport airport related development requirements within parts of the four surrounding boroughs.

4.34 The Heathrow area currently provides over 8,700 bed spaces in hotels, of which just over 2,700 of these have been constructed since 1996. There are outstanding planning permissions for a further 2,560 bed spaces.

Surface Transport

4.35 Heathrow is served by the following surface transport infrastructure:

- **roads:** M25 and M4/M4 Spur motorways, and the A3113, A4 and A30;
- **rail:** Great Western mainline and Heathrow branch line used by Heathrow Express;
- **underground:** Piccadilly line which loops from Hatton Cross via Terminal 4 and the CTA;
- **off-airport car parking:** Purple Parking located in Southall is the principal off-airport site and contains approximately 7,000 of the overall 11,700 off-airport car parking spaces.

4.36 Drawing 2 shows the location of the off-airport balancing ponds, and the strategic road and rail infrastructure which connects Heathrow.

5 Forecasts

5.1 Air travel is now accessible and readily available to the vast majority of the population. In recent years, the public is demanding more, not less, air travel. The predictions for future air travel in the White Paper do not see this trend reversing. We support this view and this chapter sets out our forecasts for Heathrow over the next 25 years.

South East airport overview – White Paper forecasts

5.2 Across the South East, the DfT forecasts that passenger demand could rise from 117mppa in 2000, to around 200mppa in 2015 and around 300mppa in 2030. This represents an average growth rate of 3.2%, significantly below the 5% average growth rate experienced in the South East over the last 30 years.

5.3 Whenever long term predictions for growth in air travel are made, there is naturally a degree of uncertainty surrounding them. We are aware of the ongoing debate surrounding climate change and the potential impact this could have on future growth. Nevertheless BAA's view remains that the UK and South East traffic forecasts which underpin the 2003 White Paper are a sound basis for Government policy.

Heathrow within existing limits

5.4 Within the South East, the DfT forecasts assume Heathrow will remain the dominant airport, even with the introduction of a second runway at Stansted. Demand for more flights by airlines and their travellers has significantly exceeded supply at Heathrow for a number of years and BAA believes this is set to continue throughout the 30 year period covered by the 2003 White Paper.

5.5 Over 80% of Heathrow's non-transferring passengers either come from, or go to locations in London and the South East of England. Of this figure, nearly two thirds are from inner and outer London locations. These figures illustrate how important Heathrow is to London's business and tourism economies. BAA expect that Heathrow's share of the total of business passengers and of foreign leisure passengers will continue to grow and reinforce Heathrow's significance to London.

5.6 Table 6 below outlines the BAA's forecasts for Heathrow within existing limits up to 2015/16. Beyond that, BAA believes that traffic will continue to grow over the period to 2030, reaching somewhere between 90-95mppa within its existing limits.

Table 6: Heathrow traffic forecasts

	Pax (mppa)	Atms ('000s)		Cargo (m.tonnes)
		Pax	Cargo	
2005/06	69.2	473.0	3.1	1.36
2006/07	70.9	474.0	3.0	1.40
2007/08	72.3	476.0	3.0	1.43
2008/09	75.0	477.0	3.0	1.45
2009/10	78.0	477.0	3.0	1.50
2010/11	80.0	477.0	3.0	1.55
2011/12	81.5	477.0	3.0	1.60
2012/13	83.0	477.0	3.0	1.65
2013/14	84.5	477.0	3.0	1.70
2014/15	86.0	477.0	3.0	1.75
2015/16	87.0	477.0	3.0	1.80

5.7 The key assumptions underlying these forecasts are:

- (i) the 480k ATM cap is assumed to be reached in 2008/09 with no increases in ATMs beyond that date;
- (ii) the A380 enters service in 2006, with a gradual increase in the number of A380s using Heathrow thereafter;
- (iii) the opening of Terminal 5 Phase 1 in March 2008 eases apron and terminal constraints, enabling relatively rapid growth in throughput for the next couple of years until capacity constraints re-emerge from 2010/11 onwards;
- (iv) phase II of Terminal 5 comes into operation in 2011;
- (v) airlines seek to make the best use of their slots through the introduction of larger aircraft types, using more of their short haul slots for long haul flights; and
- (vi) the structure of the airline industry remains similar to today.

Heathrow with additional runway capacity

5.8 New runway capacity at Heathrow could be created by either greater use of the existing runways, which is commonly termed mixed mode,¹⁶ and/or through the addition of a third runway.

¹⁶ Mixed mode is the practice of simultaneously operating arrivals and departures on each runway at Heathrow. This contrasts with the existing use of segregated mode which is the practice of operating one runway for arrivals and the other for departures.

Mixed mode

5.9 The government is examining how mixed mode would operate in practice; what the capacity benefit associated with a new mode of operation would be; and what the environmental impacts would be.

The government intends to undertake a consultation on mixed mode and will ultimately decide on its viability. Until this work has reached some conclusion, further details regarding a mixed mode Heathrow operation cannot be given.

Additional runway capacity

5.10 The DfT had estimated during its SERAS consultation that Heathrow could be capable of handling around 116mppa in 2030 with the addition of a new short runway, 2,000 metres in length, north of the existing airport and with the existing runways operating in segregated mode. In our response to the Government's SERAS consultation, we identified the need to locate aircraft stands and either a terminal or a satellite facility adjacent to the new runway if these capacity levels were to be achieved.

5.11 Various traffic scenarios will be considered throughout the Government studies. These scenarios will examine airspace, air quality, surface access and noise issues to establish whether new runway capacity can be realised in policy terms at Heathrow.

5.12 Finally, the White Paper assessed the potential impact on airport demand of new and improved long distance rail services. It concluded that, whilst new investment in long distance rail capacity could result in some switching of demand from air to rail, it is not expected to affect future passenger demand at the most crowded airports (Heathrow in particular) by more than a few percentage points (paragraph 4.54 of the White Paper).

6 Heathrow development strategy (within existing limits)

6.1 Heathrow is the busiest international airport in the world and is critical to the competitiveness of the UK economy. In a very real sense, it is where the world meets.

6.2 Airlines and airports must continually develop their products and services to reflect the changing tastes and characteristics of air passengers. As the demands of passengers and airlines continue to grow and evolve, it is vital that Heathrow is able to respond by providing a level of service which meets constantly rising expectations.

6.3 If Heathrow is not able to grow its capacity, it is likely that the local and national economies will be negatively affected. Heathrow currently generates over 200,000 jobs across the country and is responsible for £2 billion of local wages.

6.4 Heathrow is not a new, modern purpose-built airport – it is an airport which constantly needs to renew and reinvent itself. As the airport operator, we have a responsibility to continue to develop outstanding facilities and provide our passengers and airlines with an excellent product. The opening of Terminal 5 in March 2008 presents us with an opportunity to transform our airport in a sustainable manner.

6.5 Our aim is to give passengers a great experience and allow our airlines to thrive and grow their businesses. In this way, Heathrow will be better positioned to handle increasing competition from its European rivals and so reinforce its status as a leading international network hub airport.

6.6 Our development strategy, as discussed in this chapter, aims to deliver facilities that are capable of maximising the passenger throughput from the existing runways, within the 480,000 atm cap, so that Heathrow can continue to set the pace in international air travel. Our guiding principle is that facilities are delivered in an affordable manner for airlines and in a way which delivers value to BAA shareholders.

Context

6.7 We have made the following operating assumptions for our development strategy within existing limits:

- the existing two runways operate in segregated mode within the 480,000 atm and 145km² noise caps;

- the five terminals which will exist, once Terminal 5 becomes operational, will operate within the 42,000 spaces car parking cap;
- the existing four trains per hour Heathrow Express non-stop service remains and is supplemented by a two trains per hour Heathrow Connect stopping service and, when Terminal 5 opens, two additional shuttle services;
- the Government consultation on the night noise regime supports the continuation of night movements and does not extend the night quota period beyond its current hours;
- the Government does not impose Public Service Obligations (PSOs) that restrict the future growth in aircraft size;
- any future changes to the European regulation on airport slot allocation have a neutral effect; and
- any future changes to airport security provisions do not require a significant increase in the amount of space required within terminal buildings and associated pier facilities.

6.8 Under these conditions, BAA forecasts that Heathrow would grow to around 87mppa by 2015 and subsequently to between 90 and 95mppa (see Chapter 5) by 2030.

Priorities

Pre Terminal 5 opening (2005 to March 2008)

6.9 Before Terminal 5 opens, the priorities for Heathrow operating within its existing limits are to:

- ensure the airport continues to function and deliver high levels of service to airlines and passengers;
- complete Terminal 5 Phase I as quickly and cost effectively as possible;
- ensure the airport is ready for A380 operations by Spring 2006;
- complete the pier projects to segregate physically departing and arriving passengers, as agreed with the DfT; and
- ensure that some key post Terminal 5 ‘enabling’ projects are delivered.

Post Terminal 5 opening (April 2008 to 2015)

6.10 Phase I of Terminal 5 is due to open in March 2008 and includes the core terminal building and first satellite together with associated landside, airside and surface access facilities.

6 Heathrow development strategy (within existing limits)

6.11 Phase II of Terminal 5 is due to open in Spring 2011. This phase adds more stand capacity by virtue of a second satellite located to the east of the first satellite. Both will be connected to the core terminal building via an underground transit system.

6.12 During this period (April 2008-2015) our main challenges will be to:

- facilitate the growth in larger aircraft;
- enable the three airline alliances to provide competitive services;
- ensure that independent airlines are able to grow their businesses;
- complete Terminal 5 Phase II as cost effectively as possible; and
- ensure there is effective connectivity across the airport.

Development strategy

6.13 Our approach is to make the best use of the airport facilities and satisfy alliance aspirations by co-locating airline alliances in different parts of the airport. The current plan is that:

- British Airways moves to Terminal 5 where the capacity will be available to locate all of its operations, alongside its alliance partner Qantas, which will move from Terminal 4 to Terminal 5;
- Star Alliance airlines locate in Terminal 1 / Eastern Apron in a phased manner;
- One World airlines locate in Terminal 3 / Western Apron in a phased manner;
- Skyteam airlines locate in Terminal 4 as soon as is practicable;
- Virgin Atlantic remain in Terminal 3; and
- Other independent or non-aligned airlines locate on a 'dovetail' basis. Some of the airlines that are planning to operate the A380 or other large aircraft may be better suited to Terminal 4 where there is likely to be more apron and terminal space.

Terminals	Alliance airlines at Heathrow (current members)
T1 and T2	Star Alliance Air Canada Air New Zealand All Nippon Airways Austrian Airlines Asiana bmi LOT Polish Airlines Lufthansa SAS Singapore Airlines South African Airways TAP Air Portugal Thai International United Airlines Varig
T3	Oneworld (excl BA, Qantas) Aer Lingus American Airlines Cathay Pacific Finnair Iberia
T4	Skyteam Air France/KLM Alitalia CSA Czech Korean Air
T5	Oneworld British Airways Qantas

6.14 We have secured agreement with three of the main five alliances/airlines, namely British Airways, Star alliance and Virgin Atlantic. Discussions with the Oneworld and Skyteam alliances are progressing well. In addition we have already had preliminary talks with other non-aligned airlines at Heathrow.

6.15 These discussions, and the subsequent memoranda of understanding MOUs, have focused on how Heathrow can provide airlines with a first class, competitive product in terms of improved facilities, over a three year period from the opening of Terminal 5 Phase I in March 2008 to the opening of Terminal 5 Phase II in Spring 2011.

6 Heathrow development strategy (within existing limits)

6.16 This strategy has the following main features:

- Eastern Apron remodelled to: accommodate more larger aircraft, including the A380; improve congestion associated with aircraft ground movements; achieve physical solutions for the segregation of passengers; and significantly enhance the ambience of piers (through a combination of the construction of new piers and the rejuvenation of existing piers); ;
- Terminal 1 remodelled and refreshed to deliver a competitive product for Star Alliance airlines;
- Western Apron developed to support more A380 and short haul flights;
- Terminal 3 refreshed to deliver a competitive product for One World airlines and Virgin Atlantic;
- Southern Apron reconfigured to accommodate more A380 operations; and
- Terminal 4 refreshed to deliver a competitive product for Skyteam airlines.

6.17 The next section describes in more detail the changes to airport facilities which could arise between 2005 and 2015 as a consequence of this development strategy. Drawing 3 shows an illustrative on-airport layout plan overlaid with land use categories and, as such, represents the current version of a layout in line with a potential 'end game' for Heathrow operating within its existing limits. The character and pace of growth in traffic will dictate the timing, phasing and ultimate shape of this layout. Therefore Drawing 3 should not be construed to be either a final layout or a 2015 layout. As in Chapter 4 and for ease of reference, the airport facilities have been grouped under principal land use category headings.

Land use

Airfield

6.18 One of the most significant changes in the airfield facilities will be the widening of the runways and taxiways to accommodate the introduction of the A380 and other new generation larger aircraft. Heathrow is currently widening the southern runway and associated taxiways ahead of the introduction into commercial service of the A380. The northern runway is already wide enough to handle the A380, with the exception of its western end and this section will be widened shortly. All taxiways will be widened to accommodate the A380, with the exception of those located to the north of the CTA. Widening of the northern CTA taxiways would require the demolition of Piers 4 and 4a and reconfiguration of their associated stands. We consider this work would only be justified if the overall taxiway congestion levels reach unacceptable levels.

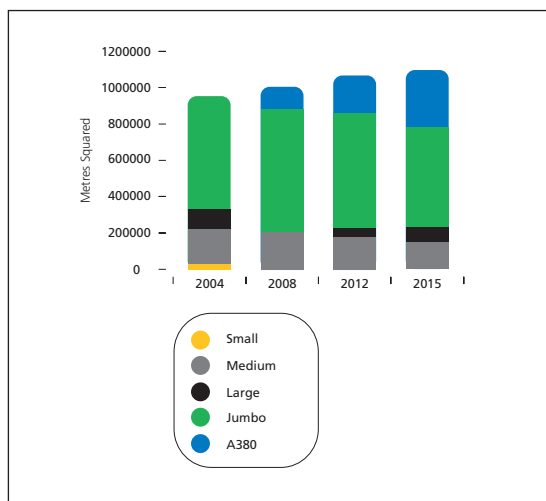
Aprons and Piers

6.19 A gradual trend towards increasing aircraft size and associated taxiway widening will require the progressive redevelopment of apron and pier facilities. Although the number of stands will not increase much above the 166 available in 2005, the area that the stands will occupy in 2015 will be more than in 2005 (see Figure 6 below).

6.20 By 2015, there may be a requirement for between 180-190 stands, depending on various combinations of stand sizes. While Terminal 5 Phases I and II would provide a total of 66 stands, these additional stands are offset by the need for bigger aircraft stands and wider taxiway infrastructure to accommodate the growth in larger aircraft. Table 7 below sets out two ranges of demand for stand sizes in 2015, based on our current forecasts and 90-95% pier service levels for passengers.

6.21 Within these overall numbers there are two categories of stands – pier served or contact stands, which by definition are connected to a pier; and non contact stands, which have no connection to a pier and require the use of coaches to ferry passengers to/from the terminals. Non contact stands play an important part in the overall stand capacity calculations because they allow aircraft with a layover of a few hours to be parked away from pier served or contact stands, releasing pier served stands for other flights.

Figure 6: Heathrow Airport - forecast stand areas



6 Heathrow development strategy (within existing limits)

Table 7: Forecast stand demand (2015)

Stand sizes	Totals	
	Range A	Range B
A380 (JX)	35	37
Jumbo	84	80
Large	31	42
Medium	37	30
Small	--	--

NB. The ranges shown above reflect the fact that highest end is reached for say the A380 (JX) stand size, then it is likely that there will be a lower number for either the Jumbo or large stand sizes.

Eastern Apron

6.22 In order to deliver this development strategy, the Eastern Apron will need to be substantially remodelled after Terminal 5 opens. The piers will need to be remodelled to segregate departing and arriving passengers; and the stands, which are currently sized predominantly for smaller aircraft, will need to be enlarged. Based on the current terminal occupancy strategy, there could be a potential need in 2015 for around 15 additional stands that are jumbo sized or larger on the Eastern Apron, compared to 2005.

6.23 Various concepts have been developed for the Eastern Apron over the last couple of years. Of these, a north-south rectilinear concept (known as the 'Toast Rack') is currently favoured by us and the airlines. This is because its apron and pier design mirrors that of Terminal 5 and enables more efficient north-south taxiway routings for aircraft. This concept is similar to one referred to by the planning inspector in his Terminal 5 report.¹⁷ Drawing 3 shows this concept incorporated into an indicative 'end game' layout for Heathrow within its existing limits. It also shows other possible 'end games' for the concept (Schemes B&C) each of which is driven largely by differences in the pace of growth in aircraft sizes. The 'end game' incorporated into Drawing 3

¹⁷ In accepting that Heathrow Airport could reach a passenger throughput that exceeds 90 mppa with Terminal 5 (paragraph 8.6.3 of the Terminal 5 Main Report), the Terminal 5 Inspector recognised that the provision of additional aircraft stands on the Eastern Apron, which was not part of BAA's Terminal 5 public inquiry 80 mppa case, represented a possible avenue for accommodating such growth (paragraph 8.2.52 of the Terminal 5 Main Report).

(Scheme A) envisages the Europier connector is replaced by a bridge akin to the Pier 6 bridge at Gatwick. We do not currently believe this bridge would be required to support a development strategy for Heathrow within existing limits.

Western Apron

6.24 Prior to Terminal 5 opening, the main focus of work on the Western Apron will be the redevelopment of Pier 6 to create four A380 (JX) stands in time for the introduction of the A380 in Spring 2006. Pier 7 needs to be truncated during that time period to allow for A380 taxiway clearances.

6.25 Following the opening of Terminal 5, the 14 'early release' stands which are located on the Terminal 5 site, but will be in operational use before Terminal 5 opens, will no longer be available for use by Terminal 3 airlines because the Terminal 5 airlines will be using them. Our terminal occupancy strategy seeks to solve this problem by relocating some of the airlines, which contribute to the peak stand demand in the Western Apron, to the Eastern and Southern Aprons, in a phased manner after Terminal 5 opens.

6.26 Initial requirements for further large aircraft stands, including A380, beyond those created before Terminal 5 opens, could be accommodated through some minor alterations to Pier 5.

6.27 Any further demand for large aircraft stands after Terminal 5 opens is likely to require further development of Pier 6, together with some realignment and reconfiguration of Pier 7. A study is underway to develop the Western Apron. At this stage, only the Pier 5 and initial Pier 6 redevelopments are shown on Drawing 3.

Southern Apron

6.28 With a predominant mix of long haul stands, the Southern Apron lends itself to the redevelopment of stands for larger aircraft, particularly the A380. The terminal occupancy strategy outlined above assumes a number of non-aligned airlines which are planning to operate the A380 are located on the Southern Apron after Terminal 5 opens.

6.29 The forecasts associated with the terminal occupancy strategy assume that the Southern Apron would have a surplus of stand supply after Terminal 5 opens. This means that the predominantly short haul operation of the current Heathrow airlines in the Skyteam alliance can be accommodated on the Southern Apron with only minor redevelopment.

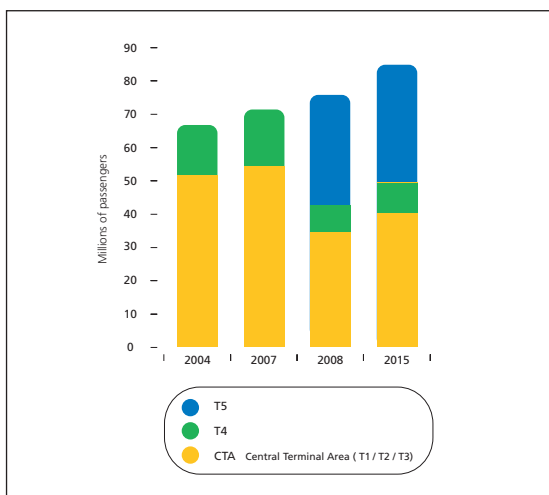
6 Heathrow development strategy (within existing limits)

6.30 For all apron areas, the growth in the numbers of larger aircraft, with associated longer turnaround times, will mean an appropriate supply of remote stands will be essential to the achievement of pier service levels.

Passenger terminals

6.31 The projected distribution of travellers across the five terminals in 2008 and 2015, based on the current terminal occupancy strategy, shows that the terminals located in the Central Terminal Area (CTA) and Terminal 4 are forecast to operate at throughput levels which are below those for 2004 and 2007 (see Figure 7 below).

Figure 7: Heathrow Airport - forecast passengers by terminal



6.32 Some of the terminal processing facilities lend themselves more to achieving future productivity improvements than others. The check-in process is currently being improved through the application of self-service kiosks which will improve productivity. Whilst some space is saved through the reduction in the number of check-in desks, self service kiosks still require space for 'bag drops'. Our current estimates are that check-in could experience a 30-50% productivity improvement over the next 10 years, due, in the main, to substitution by self-service kiosks.

6.33 We have not identified significant productivity improvements for the arrivals baggage reclaim process. The main driver for change in this process is the anticipated increases in the number of large aircraft and, in particular, the introduction of the A380. Reclaim baggage belts will require more space and need to be increased in size to meet traveller needs.

6.34 The rejuvenation of the current terminals at Heathrow will be approached as follows:

Terminals 1 and 2

6.35 Given its age, and the fact that currently it predominantly supports short haul flights, Terminal 1 will be remodelled and refreshed to offer the Star Alliance airlines a premium product. Initially this will require changes to the check-in area to accommodate the self-service product; some additional reclaim belts; and a significant improvement to the terminal environment.

6.36 Options to cater for growth beyond 2011/12 are currently being studied. This will examine how to maximise the utilisation of the terminal and forecourt facilities on the eastern side of the CTA. Pending the results of this study, the existing curtilages of Terminals 1 and 2 and Queens Building are shown on Drawing 3.

Terminal 3

6.37 Terminal 3 should have enough processing capacity to support the Western Apron capacity after Terminal 5 has opened. There are sufficient numbers of check-in desks, although as in Terminal 1, some changes to the check-in hall to accommodate self-service facilities will be required. In addition, the forecourt for Terminal 3 will need to be remodelled. The recently completed arrivals reclaim project which delivered 3 additional reclaim belts will provide enough capacity, up to the point where additional reclaim capacity or belt lengths may need to be provided in support of the above mentioned Western Apron study.

Terminal 4

6.38 Terminal 4's occupancy strategy, after Terminal 5 opens in 2008, can only be explained by an understanding of the high levels of utilisation by BA. BA's current operation accounts for 82% of the total numbers of passengers in Terminal 4, with around 40% of those passengers transferring aircraft at Heathrow. These transfer passengers do not use the landside check-in and reclaim facilities in Terminal 4 and do not require surface access services to get to/from other locations in the UK.

6.39 The aim is to locate the Skyteam alliance and some non-aligned airlines to Terminal 4. This is likely to lead to lower utilisation rates of check-in desks and reclaim belts. It is also likely that there would be lower numbers of transfer passengers.

6 Heathrow development strategy (within existing limits)

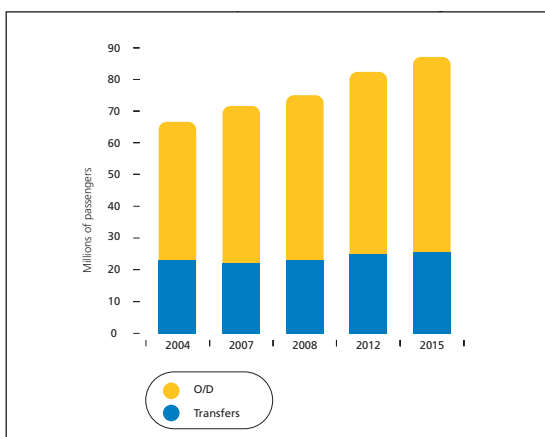
6.40 Although the current numbers of check-in desks should suffice for the terminal occupancy strategy, the main issue is likely to be arrivals reclaim capacity, most of which relates to the operation of A380 aircraft in Terminal 4.

6.41 The rail connections at Terminal 4 will change after the opening of Terminal 5. The plan is outlined in Chapter 8, however we are currently assessing options to provide a suitable rail service to Terminal 4 after Terminal 5 opens.

Connections

6.42 The overall number of transfer passengers is forecast to increase moderately after the opening of Terminal 5 (see Figure 8 below). The distribution of the transfer passenger trips across the airport will change because airlines will be located in different terminals.

Figure 8: Heathrow Airport - forecast transfer passengers



6.43 Alliance aspirations to maximise intra-terminal transfers should allow some passengers and bags to connect with flights in the same terminals. However, there are still likely to be significant volumes of inter-terminal transfer passengers and bags. We need to assess how we can support connections traffic in a manner which ensures that Heathrow continues to be a successful international 'network' hub.

6.44 The key issue for transfer facilities after Terminal 5 is open is the need for an effective transfer baggage product between Terminal 5, Terminal 3 and Terminal 1 to ensure that service levels, as expressed by Minimum Connect Times (MCTs), can be delivered. Discussions continue with the airlines about the options available.

Cargo

6.45 Our approach for the on-airport cargo facilities is to seek to increase the utilisation of the existing facilities and land before considering the need for additional facilities. The new BA premium products facility aims to rationalise BA's cargo operation within the land it currently leases from us. If this is successful and there are no significant changes to the forecasts, we predict that the total area of the 2005 on-airport facilities could cope with a forecast of 1.8 million tonnes of cargo in 2015 - an average annual growth of 3.3% from 2004.

6.46 Whilst the overall amount of on-airport cargo area is unlikely to change significantly, the potential to widen the Southern Outer taxiway to accommodate the A380 will require some cargo facilities adjacent to the airfield boundary to be demolished and re-provided.

Ancillary

6.47 A study, which will examine the potential to release land value in the Central Terminal Area (CTA), will be undertaken. This will review the activities currently located in this area and consider them against future passenger requirements. Given the success of the hotel next to Terminal 4 and the demand for a hotel at Terminal 5, the potential for a hotel development in the CTA is being considered.

6.48 The amount of area required for airport ancillary activities could increase compared to 2005. Our strategy for 2015 is consistent with BAA's case at the Terminal 5 inquiry - namely, that any additional requirement for airport related development will be accommodated without requiring additional non-airport land. We currently estimate that for the airport to operate within its existing limits, there is likely to be approximately 8 hectares of surplus on-airport land available for future ancillary developments in 2015.

Surface transport

6.49 Terminal 5 creates the need for the westwards extension of the Heathrow Express (HEEx) and the Piccadilly Line (Piccex) from the Central Area. In addition, Terminal 5 will be connected to the M25 motorway, via the M25 Terminal 5 Spur road.

6.50 As part of the CTA landside review, we are planning to introduce a high frequency landside bus service providing connections for passengers and staff to travel quickly between the five terminals, and other facilities such as remote car parks and car rental areas. This high frequency bus service could be a forerunner to possible new driverless transport

6 Heathrow development strategy (within existing limits)

systems. One such system BAA is currently investigating is the Personal Rapid Transit (PRT). These systems are not anticipated to require a material increase of the current landside road system.

6.51 We are assuming Heathrow will operate within the 42,000 Terminal 5 car parking cap condition for the airport within existing limits. Currently, there are 34,719 on-airport spaces under our control. In 2016, the 42,000 spaces Heathrow is permitted is likely to be distributed according to the plan contained in Appendix D, which has been approved by the London Borough of Hillingdon.

Surface water

6.52 In addition to using some of the existing on-airport surface water balancing ponds, Terminal 5 will also be connected to the off-airport site at Clockhouse Lane, via a tunnel known as Southern Water Outfall Tunnel (SWOT).

Utilities

6.53 We are currently undertaking a review of the capacity of utility services which might be required to support its development proposals. The conclusions of this review should be available prior to the publication of the full master plan in 2006.

Strategic programmes

6.54 This development strategy provides an overarching strategy within which our annual Capital Investment Programme (CIP) sits.

6.55 We plan to continue publishing our CIP annually. Strategic programmes, which have been derived from the development strategy outlined above, act as a means of bridging the CIP with the master plan. Currently they are:

- Safety & security;
- Asset renewal;
- Larger aircraft;
- Terminal occupancy;
- Connections;
- Sustainability; and
- Commercial.

6.56 More detail about the individual projects which comprise each of these strategic programmes can be found in the 2005 CIP.

Strategic risks

6.57 The development strategy outlined in this section is based on a set of forecasts and associated assumptions that may change. Outlined below are some changes that have most significance or pose most risk to the strategy, together with an overview of BAA's strategic response to them.

Larger aircraft

6.58 A pivotal factor for our traffic forecasts is the future airline acquisition of A380s, 777-300s (stretched version), A340-600s, Boeing's 747 advanced and the new generation '250 seater' aircraft (for which Boeing's 787 and Airbus's A350 are the leading candidates). To a greater or lesser extent, most of these aircraft types have apron facility requirements which differ from today's facilities:

- A380s require increased taxiway clearances and larger stands;
- 777-300s and A340-600s require larger stands than standard jumbo aircraft; and
- some variants of the '250 seater' aircraft (e.g. the long haul 787) have a larger wingspan than the aircraft that it will replace (e.g. B767 & B757) and will require wider stands.

6.59 As well as the impact on stand facilities, the number of new generation larger aircraft (NGLA) that airlines ultimately operate will affect future passenger growth rates at given levels of aircraft movements.

6.60 We are looking to provide additional facilities for larger aircraft in an incremental manner. Further information and greater certainty surrounding future airline acquisitions of larger aircraft will influence the pace and scale of delivery.

Alliance composition

6.61 Changes to the future composition of airline alliances might pose a risk to this approach. We have sought to mitigate this risk by ensuring generic apron and terminal facilities are prioritised above bespoke developments.

'Open Skies' – EU/US bilateral negotiations

6.62 In principle, BAA supports the notion of an 'Open Skies' deal for the EU/US, where it promotes and protects UK consumers' interests. Assuming such a positive outcome, we will look to facilitate, to the extent we can, the outcomes of such an agreement.

6 Heathrow development strategy (within existing limits)

6.63 In undertaking our initial analysis, we have assumed that slots operated by smaller aircraft would either be traded or transferred to the new EU/US services. This is particularly important for Heathrow operating within its existing limits (ie. the 480,000 cap is in place).

6.64 A full study will be undertaken to assess what facilities and what strategies will be required to support this scenario should it occur before Terminal 5 opens.

6.65 Should an EU/US 'Open Skies' deal happen after Terminal 5 opens, we would seek to use the available capacity on the Southern Apron and in Terminal 4. This is particularly pertinent because, assuming the current alliance composition, it is likely that the Skyteam alliance could gain proportionately more flights under this deal, and airlines such as Northwest, Continental and Delta could gain access to Heathrow. Initial estimates suggest that in addition to further development of the stands, check-in and reclaim areas, particularly for the Southern Apron and in Terminal 4, there may also be a need to increase the capacity of the Heathrow Connect service.

7 Environmental impact and mitigation strategy (within existing limits)

7.1 Heathrow generates very positive economic benefits but we fully recognise the social and environmental impact Heathrow has on the local community. As responsible airport operators, we are committed to minimising these impacts. Along with existing mitigation strategies, BAA is currently working closely with the government and other third parties to address longer term air quality, noise and surface access issues.

7.2 We support the Government's core sustainability objectives (see Chapter 2) and, through BAA's Sustainability Policy, have a clear commitment to delivering growth in a sustainable manner.

7.3 The scale and nature of environmental impacts associated with additional runway capacity at Heathrow are not considered in this chapter. Such environmental impacts are the subject of Government studies which are not due to report until towards the end of 2006.

Air quality - context

7.4 Air quality is affected by emissions of chemicals and particles arising from both human activity and natural sources. The most significant of these emissions are fine particulates (PM10) and nitrogen oxides (NOx), particularly nitrogen dioxide (NO₂), which are predominantly by-products of fuel use. The principal sources of these emissions in the Heathrow area are road vehicles and aircraft emissions.

7.5 Within its Sustainable Development Strategy, the Government has identified urban air quality as one of the key challenges. To address this challenge, the Government published its Air Quality Strategy for England, Scotland, Wales and Northern Ireland (UK AQS) in January 2000. This established a series of objectives defined in terms of concentration limits for a set of pollutants in the local environment. The UK AQS is aligned with the requirements of the EU Air Quality Framework Directive (Directive 99/30/EC) and has set limits for exposure to certain emissions, including NO₂ and PM10.

7.6 As part of the UK AQS, local authorities have a statutory responsibility to review and assess air quality in their area and to identify areas of poor air quality, where it is predicted that targets will not be met. The review process undertaken by the local authorities surrounding Heathrow indicates that, along with many other urban areas across the country, the NO₂ objective will not be met in parts of the area

surrounding Heathrow. Consequently, Heathrow is within a designated Air Quality Management Area (AQMA) and is therefore part of local authority action plans to improve air quality in the area.

7.7 Unless they are closely controlled, aircraft emissions, along with vehicle emissions, can have a negative impact on those communities around Heathrow. The EU NO₂ air quality targets which are effective from 1 January 2010 are:

- a one hour mean limit value of 200ug per cubic metre, not to be exceeded more than 18 times per year; and
- an annual mean of 40ug per cubic metre.

The EU PM10 targets which were implemented on 1 January 2005 are:

- PM10 limit values are a 24 hour mean of 50ug per cubic metre, not to be exceeded more than 35 times per year; and
- an annual mean of 40ug per cubic metre.

The EU has also set some provisional Stage 2 limit values for PM10, which apply from 1 January 2010:

- a 24 hour mean restricts the number of times it can be exceeded to 7 times per year; and
- for the annual mean reduces the limit value down to 20ug per cubic metre.

7.8 There are a number of contributors to NO₂ levels in the area, with non-airport related road traffic, particularly on the M25 and M4 motorways, being a significant contributor, along with Heathrow.

7.9 The Government reviewed the Terminal 5 Inspector's report in the context of the EU Air Quality Directive, and reinforced the Inspector's recommendation to impose a condition that requires us to produce and keep under review an air quality action plan.

18 Terminal 5 Condition A93 1. Within one year of the grant of planning permission, an action plan shall be submitted to the Local Planning Authority and to the London Borough of Hounslow. The purpose of the action plan shall be to show how BAA intend to minimise the emission of pollutants from and attributable to Heathrow Airport.

2. This action plan shall cover a five year period and shall be reviewed before the end of that period and subsequent five year periods. The results of those reviews shall be provided to the Local Planning Authority and to the London Borough of Hounslow.

7 Environmental impact and mitigation strategy (within existing limits)

Air quality – BAA response

7.10 As a responsible airport operator, we recognise the impact Heathrow's operations have on air quality. To assist the local authorities on future air quality projections, we prepare airport emissions inventories. The last one in 2002 included data from a new road traffic model which identified the proportion of Heathrow-related vehicles using the local road network.

7.11 Our current air quality strategy aims to:

- help develop an integrated approach for the local area;
- manage aircraft emissions whilst on the ground, from auxiliary power and ground power units;
- promote and implement airport vehicle fleet management policies which requires old vehicles to be replaced by the latest clean technology vehicles;
- promote surface access initiatives for airport staff and passengers to reduce the growth in private car trips; and
- encourage aircraft manufacturers to research and adopt new technology which reduces emissions from aircraft engines.

Examples of such initiatives include:

- the fitting of Pre-Conditioned Air (PCA) on all Terminal 5 and other newly constructed stands;
- an airside vehicle emissions strategy;
- the introduction of an emissions element to airport charges; and
- the use of fixed electrical power units.

7.12 We appreciate the need for the Government to ensure the Heathrow area, like other urban areas, will comply with the 2010 EU Directive limits. However, it is widely recognised these limits cannot be met without the actions of Government and other statutory organisations such as the Highways Agency. We will do what we can, within our control, to minimise airport emissions. BAA's shareholders and customers will inevitably be more willing to support such actions if other parts of the UK are also planning to comply with the EU limits.

7.13 A lot more work is required on air quality in the Heathrow area from both an airport and non-airport perspective. The Government is undertaking a comprehensive review of air quality assessment techniques and appraising potential mitigation initiatives for aircraft and road vehicles as part of a series of studies.

7.14 In the interim, we are planning to review our air quality strategy for Heathrow within existing limits, with a view to publishing a new five year plan by the end of 2006, in line with the Terminal 5 planning condition.

Noise - context

7.15 Heathrow has a direct impact on ambient noise conditions in the local area by virtue of its aircraft operations. Aircraft land and take-off from the two main runways which are orientated in a westerly/easterly direction.

7.16 The Government has responsibility for the control of air noise around Heathrow. The DfT sets the policy for air noise at the airports, within which Heathrow works. One of the DfT's responsibilities involves establishing the location of Noise Preferential Routes (NPRs) and setting noise limits for aircraft departures. The DfT also determines the number of night time aircraft movements and the permitted quota count for night flights at Heathrow.

7.17 While we have no direct ability to determine how future aircraft engine technology can reduce the levels of air noise generated, when aircraft are on the ground, we can and do exert some influence on the start-up, taxiing and engine testing activities to regulate the resultant level of ground noise generated. However, weather conditions and the prevailing wind direction play a part in determining how both air and ground noise is received at locations around the airport.

7.18 Over the years, we have liaised with airlines to develop a number of initiatives which have significantly reduced the levels of air noise surrounding Heathrow. The area of the 57 dBA Leq noise contour surrounding Heathrow, published by the DfT, has reduced from 291 km² in 1990 to 129 km² in 2003¹⁹.

7.19 For Heathrow operating within its existing limits, the Government accepted the Terminal 5 Inspector's recommendation to impose a daytime noise contour cap of no more than 145 km², as part of the overall permission for a two runway, five terminal Heathrow with a 480,000 ATM cap.

¹⁹ Standard noise contour with Concorde included.

7 Environmental impact and mitigation strategy (within existing limits)

In that context, the Government's SERAS studies estimated that a noise contour area of 96 km² for Heathrow within existing limits in 2015. Details of that contour forecast, prepared by the CAA on behalf of the DfT²⁰, is in Table 8 below and the contours are depicted on Drawing 5.

7.20 Our current noise strategy aims to:

- reduce noise generated at source; and
 - ensure aircraft use best practice.
- Examples of initiatives include: aircraft track keeping; continuous descent approach (CDA); code of practice for arrivals; reporting and monetary fines for departing flights which exceed the Government's departure noise limits; and various operational restrictions on aircraft ground engine running; the use of APUs (Auxiliary Power Unit) and the provision of FEGPs (Fixed Electrical Ground Power) to minimise ground noise.

Table 8: DfT noise contours for Heathrow within existing limits (480,000 patms in 2015)

Leq (dBA)	Area (sq km)	Population ('000s)	Households ('000s)
>54	168.1	436.9	188.4
>57	95.8	195.5	81.9
>60	54.5	88.2	35.2
>63	33.7	41.0	16.2
>66	19.9	15.4	6.0
>69	9.8	3.3	1.3
>72	5.0	0.2	0.1

7.21 In paragraph 3.21 of its White Paper, the Government instructed airport operators, with immediate effect, to develop and implement a noise mitigation scheme for those households subject to high levels of noise (69dBA Leq or more) and for noise-sensitive buildings exposed to medium to high levels of noise (63dBA Leq or more).

7.22 We undertook a consultation on a proposed noise mitigation scheme with affected parties during the course of summer 2004. We have been evaluating the responses from this consultation and intend to publish our noise mitigation scheme during summer 2005.

7.23 The Government has begun a two stage consultation on the night flights regime at Heathrow, Gatwick and Stansted airports. When finalised, the new regime will set seasonal controls on night flight movements and noise quota limits from 2005 to 2011, as well as general arrangements, such as the length of the night quota period. BAA responded to the Stage 1 consultation in October 2004, stating that it is not seeking a relaxation in the night flights regime, and that Government needs to more fully understand the impacts of night noise in order to achieve the most appropriate balance between social costs and economic benefits. Publication of the Government's Stage 2 consultation is expected in Summer 2005.

7.24 As part of its consideration of additional runway capacity at Heathrow, the Government studies will be updating air noise modelling and appraising potential mitigation initiatives.

7.25 In the meantime, we will continue to work with airlines and other key stakeholders to identify initiatives which reduce the level of ambient noise caused by Heathrow's operation.

Other mitigation strategies

Visual impact

7.26 As part of the Terminal 5 planning process, we are implementing landscaping schemes at the western edge of the airport boundary and further west in the Colne Valley. Over 450 semi-mature trees, 2,000 semi-mature shrubs and 100,000 evergreen plants were planted around the western edge of the airport between November 2003 and May 2004.

Biodiversity

7.27 We aim to manage our nature conservation areas to maximise the biological diversity of all living things. One exception is the need to prevent specific species of birds, who pose a safety risk to aircraft, settling in areas within a 13.5km radius of the airport.

7.28 We own and manage seven sites identified as having biodiversity interest. We are also involved in a number of local partnership initiatives, including the Green Corridor Partnership, whose aim is to improve the environment along the western road corridors into London (M4/A4, M3/A316 and M40/A40).

7.29 As part of the Terminal 5 planning permission, we recently completed the diversion of the Duke of Northumberland and Longford Rivers, together with a complementary ecological programme. We also relocated some grasslands in the neighbouring Colne Valley.

²⁰ Revised Future Aircraft Noise Exposure Estimates for UK Airports; ERCD Report 0308, CAA, December 2003. Figure 2.1.

7 Environmental impact and mitigation strategy (within existing limits)

Management of the water environment

7.30 The following airport activities have the potential to cause pollution of local watercourses, if not properly managed:

- de-icing of aircraft and apron areas;
- vehicle and aircraft washing;
- aircraft and vehicle maintenance;
- run-off from construction sites;
- aircraft refuelling (spillages);
- waste and cargo handling; and
- fire training.

7.31 We ensure water quality is maintained through the following surface drainage and balancing pond system:

- initial use of interceptors located in the drainage system;
- a system of balancing ponds which provide a further opportunity to remove oily contaminants; and
- an aeration process, where water is conditioned before either being discharged into the surrounding watercourses or, if it is deemed unsuitable, stored and sent to Thames Water's sewage works at Mogden in Twickenham.

This system is being enhanced as part of the Terminal 5 project.

7.32 In addition to treating water, the surface water and balancing system also prevents flooding through the storage of water and subsequent control of its release into the surrounding watercourses. All discharges to the local watercourses are monitored and regulated by the Environment Agency through the use of discharge consents that it grants Heathrow.

Waste management

7.33 Our strategy for the management of waste is based on the three core principles of the Government's sustainable waste management strategy:

- Best Practicable Environment 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) before disposing; and
- The proximity principle - the disposal of waste should be as near to its place of production as possible to avoid the creation of longer road trips which further add to air quality problems.

Energy use and climate change

7.34 It is widely acknowledged that the world is experiencing climate change and that global warming is likely to continue for the foreseeable future. Global warming is principally attributable to an increase in the proportion of carbon dioxide (CO₂) in the atmosphere. This is believed to be caused, in part, by emissions from aircraft engines whilst in flight and, as such, requires multinational government action. BAA is strongly in favour of incorporating aviation into an international emissions trading regime to enable aircraft emissions to be traded against reductions in emissions from other sources such as power generation and heavy industry.

7.35 Our main emphasis is on managing the emissions attributable to the airport operation. Principally these are CO₂ emissions from the burning of fossil fuels in boilers; emissions from road vehicles using the airport; and emissions attributable electricity generation at power stations located further afield. We have set ourselves a target to reduce CO₂ emissions from airport activities by 15% by 2010, compared to 1990 levels.

7.36 This chapter has outlined our environmental impacts and mitigation strategy for growth within its existing limits. Further information on the subjects covered above can be found in the following strategy documents, copies of which can be found on the BAA website:

- Air Quality Strategy and Action Plan: 2001-2006;
- Noise Strategy: 2000-2005;
- Biodiversity Strategy: 2003-2008;
- Water Quality Strategy 2003-2008; and
- Waste Management Strategy 2000-2005.

7.37 Further work will be required to ascertain the environmental impacts and appropriate mitigation strategy for additional runway capacity at Heathrow. Initial work on air quality, air noise and the related surface access impacts is being undertaken through the Government studies. Work on other environmental impacts, including those mentioned above, is more likely to be undertaken as part of a potential planning application, should the Government conclude that additional runway capacity is feasible.

8 Surface access strategy (within existing limits)

8.1 The scale of aviation activity at Heathrow has a direct bearing on the demand for road and rail travel to and from the airport. We recognise that to improve air quality, we have to encourage people out of their cars and on to public transport. We have already invested to deliver good surface access solutions but we know any action we take has to be matched with similar action by the relevant government agencies if "backfilling" from non-airport road trips is to be prevented.

Overall, we have invested some £1.2bn in rail/tube initiatives – Terminal 5 will be served by an extension of both the Heathrow Express and the tube. Other rail schemes are also being considered to better serve the central terminal area and a further £20m has been invested in other forms of public transport to support our approach.

8.2 This chapter outlines the surface access strategy for Heathrow within its existing limits. It does not discuss issues surrounding a surface access strategy to support additional runway capacity at Heathrow. These will emerge following further work currently being undertaken as part of the Government studies, which are not due to report until towards the end of 2006.

8.3 At present 112,000 vehicles enter Heathrow every day. Most of those vehicles carry people who are catching a flight (air passengers), or working at the airport (staff). Some of those vehicles support the airport operation (for instance catering trucks) and a small number of vehicles are not undertaking a specific airport activity (e.g. dropping-off people who use the rail and underground services to travel to and from London). BAA's approach is to develop transport solutions which meet the needs of all those who enter Heathrow by private vehicle and we have set ourselves a challenging target to deliver change.

National & Regional transport strategy

8.4 The Government's surface transport strategy is set out in "The Future of Transport – a network for 2030", published in July 2004. The strategy is built around three central themes:

- sustained investment over the long term continuing the programme begun by the 10 year transport plan published in 2000;
- improvements in transport management to lock in the benefits of additional capacity or reductions in car use, brought about by site-specific activities such as travel planning; and

- better long term planning, including a Government-led debate on road pricing, working with stakeholders to establish how and when road pricing could be introduced.

8.5 The White Paper highlighted two specific surface access policy aspects for airports:

- ensuring easy and reliable access for passengers, which minimises environmental, congestion and other local factors; and
- increasing the proportion of passengers who access airports by public transport to help reduce road congestion and air pollution.

The Heathrow Area Transport Forum, which has been in existence for ten years, is the principal forum for communicating our surface access strategy with key stakeholders.

8.6 The Secretary of State published his conclusions of two Multi-Modal Studies in July 2003: the Orbit study, which looked at the M25 transport corridor; and the Thames Valley study, which looked at the M4 and M3 transport corridors. We agree with the broad conclusions of both studies, which were:

- that there should be no unrestrained increase in the motorway capacity beyond current plans (a reference to the current M25 widening project); and
- that there should be a feasibility study to examine the potential for road pricing to achieve a more efficient use of existing capacity and potentially to "lock in" the benefits of additional capacity.

8.7 The Mayor's Transport Strategy was published in 2001 and acts as the basis for the Mayor's London Plan. It identifies an area called the "Western Wedge" stretching west from the centre of London along the M4 corridor which includes Heathrow Airport. Policy 5D.1 of the London Plan seeks to capture the benefits of economic generators, and accommodate 45,000 additional homes and 86,000 new jobs in the area through the provision of improved public transport access in the area, including Crossrail, the West London Tram, and improved bus services.

8.8 Whilst Heathrow is not located in the South East region, its influence extends into that area. The South East Plan draft for consultation, published in January 2005, supports the development of Heathrow within agreed levels of growth (policy T6),

8 Surface access strategy (within existing limits)

while the Regional Transport Strategy promotes the policy of regional hubs and spokes that are fed by the major transport arteries - one of which is Heathrow.

Heathrow surface access strategy

8.9 Our surface access strategy was published in 1999 and was updated in October 2003. Its aim is "to provide efficient and effective public transport access to the airport for both staff and passengers, in a manner that enables the airport to meet its aspirations for sustainable growth."

Airport passengers

8.10 Table 9 below shows the proportion of passengers who used the various modes of surface transport to access Heathrow. Data is shown for the last seven years from the CAA passenger survey (the 2004 figures are provisional):

Table 9: Heathrow Surface Access mode share percentages for passengers

% share	1998	1999	2000	2001	2002	2003	2004
Private car	36.6	35.0	34.2	35.5	36.0	35.9	35.2
Hire car	4.0	3.7	3.6	3.2	3.2	3.1	2.8
/Taxi	26.7	26.2	25.9	26.5	26.1	25.3	25.8
Bus	15.0	13.9	13.9	13.1	12.3	12.6	12.4
/Coach							
Tube	14.8	13.9	13.6	13.1	13.3	14.0	14.2
Rail ²¹	2.7	7.1	8.5	8.4	8.8	8.9	9.2
Total %	32.5	34.9	36.0	34.6	34.4	35.5	35.8
Public Tpt							

8.11 Heathrow's percentage of airport passengers using public transport has oscillated around the 35% mark over the last five years.

8.12 Our surface access strategy set out a target of 40% non-transfer passengers to use public transport. We always knew this would be a challenging target and we have been working hard to achieve it through a number of initiatives. Such as: Heathrow Express; the car parking levy;

M4 spur bus lane; funding for numerous local bus routes; and car sharing initiatives. We remain committed to meeting this target, but we know we will have to develop outstanding, cost effective, solutions to create a significant increase in the use of public transport. Rail schemes, road charging and improved bus services are all currently being considered. Moreover, there are a number of challenges ahead, not all within our control. The principal issues are:

- uncertainty over the future proportions of passengers travelling to/from Inner London and the proportions of foreign passengers, each of which tend to have a higher propensity to use public transport;
- long term difficulties in securing and implementing rail solutions which, in the case of airports, is further compounded by the need for services which cater for the needs of air passengers, who travel at irregular hours and have luggage.

8.13 Given this context, and the scale of the challenge - we are currently researching what circumstances would need to exist to achieve the 40% target. We will produce a revised assessment of how and when it might be met.

Rail

8.14 Rail is an important element of the future growth and success of Heathrow. The successful introduction of Heathrow Express, demonstrates a strong track record in implementing airport rail solutions. However, future rail solutions need to be deliverable and also capable of attracting airport passengers and staff to use them. There are some planned developments which will attract airport passengers and staff and there are others which will have more limited appeal.

8.15 One planned solution, aimed at airport passengers and staff, is Heathrow Connect – a stopping train service from London Paddington to Heathrow. To be launched in Summer 2005, it will run two services per hour and operate from the CTA and will stop at the main stations to London Paddington. This service is aimed primarily at staff and passengers living in catchment areas in Central and West London and to the west of Heathrow, via an interchange at Hayes.

8.16 Further rail capacity, which may be required in the short term, could be created by reconfiguring the Heathrow Express carriages to create more seats

21 Based on a comparison between actual counts of passengers using Heathrow Express, BAA Heathrow believes that the rail figures in the CAA survey could under-represent actual patronage by some 2% to 3%.

8 Surface access strategy (within existing limits)

and increase the number of carriages on the Heathrow Connect service.

8.17 Once Terminal 5 opens, the plan is to operate the four Heathrow Express services per hour to Terminal 5, and the two Heathrow Connect services per hour supported by two shuttle services per hour to Terminal 4. We are assessing other options to provide an efficient and effective rail service to Terminal 4 after Terminal 5 opens.

8.18 Crossrail is a major rail initiative, providing cross London rail services linking locations, such as Maidenhead and Heathrow in the west with the Shenfield and Abbey Wood in the east. The project is currently progressing through the Hybrid Bill process and is planned for implementation in 2015. Crossrail has limited benefit for Heathrow. However it will best serve the airport, attract airport passengers and staff to rail and complement the existing four Heathrow Express services per hour, if it were to serve Terminal 4. We would be concerned if the Crossrail service terminated at Terminal 5 along with the Heathrow Express service. This could compromise platform capacity at Terminal 5.

8.19 Airtrack is a major rail initiative to provide a link from Terminal 5 to the south west network near to Staines. The service would also allow services from Heathrow to London Waterloo, Reading and Woking/Guildford to be operated. Of all the rail schemes currently being considered, this looks the most promising. In its Terminal 5 decision letter, the Government encouraged BAA to consider introducing additional rail services to Heathrow. In this context, we support the principle of creating a new rail access to the south west rail network where it can be provided in a timely fashion and where funding issues can be resolved.

Express coach

8.20 Heathrow is the UK's second busiest coaching hub outside of London and has a comprehensive range of scheduled services providing good links across the country.

8.21 We welcome the conclusions from SEERA and the Thames Valley Multi-Modal Study, which identifies the potential role inter-urban and express coach services could have in delivering improved accessibility for the M4 and M3 corridors. We are working closely with National Express and other commercial coach operators to examine how the coach network can be developed along those lines.

Airport staff

8.22 Approximately 68,400 staff work at Heathrow. Table 10 below shows the proportion of staff that use different types of surface transport taken from the last three employment surveys.

8.23 In common with other BAA airports, we have set some challenging pan-airport staff targets for car sharing and travel plans²². We are currently examining the potential of setting some pan-airport staff targets for particular transport corridors.

Table 10: Heathrow Surface Access mode share percentages for staff

% share	1992	1999	2004
Car driver	78.0	71.5	72.1
Car passenger	4.0	4.0	4.3
Tube	6.0	6.3	4.6
Rail	---	0.8	1.1
Bus/Coach	6.0	11.7	12.0
Cycling	1.0	1.3	1.2
Walking	---	0.6	0.5
Others	---	---	3.8

8.24 The start times of public transport services are a key determinant for airport staff who work shift patterns outside of normal office hours. The recent Transport for London (TfL) proposal to begin London Underground operations an hour later in the morning and cancel early morning trains at the weekend will damage our efforts to encourage more staff to use public transport.

Local bus

8.25 Heathrow is well served by local bus services - particularly to the east of the airport towards Central London through the TfL tendered bus network. Areas to the west of the airport outside of the Greater London Area are less well served, due largely to different public funding arrangements and lower population densities. We have a strong

22 Heathrow pan-airport staff targets:

- reduce single occupancy car use by Heathrow Airport employees by 1% year on year from the 2004 survey baseline until 2008;
- increase the number of registered Airport Carshare members by 1,000 each year and increase the percentage of active members by 1% annually until 2008;
- to achieve pan-airport support by ensuring that 75% of employees at Heathrow work for actively supportive organisations by end of March 2008.

8 Surface access strategy (within existing limits)

track record of supporting bus services either by providing funding to cover a percentage of running costs or to ensure timetabled services cover shift and flight patterns. This has helped secured bus services which are a realistic alternative to the car. These bus services have been funded principally through the transport fund. We have given approx £6m of revenue over the last eight years.

8.26 We are currently consulting on a new bus and coach strategy.

Demand management and car parking

8.27 Our "Changing Direction" document, published in April 2004, set out a number of initiatives aimed at reducing single occupancy car use across the airport.

8.28 Car sharing is the most popular of these initiatives and Heathrow's Airport Carshare scheme, whose incentives include a preferential parking space, is the largest in Europe with around 6,000 members. Other travel modes that carry incentives include walking, cycling and motorcycle/scooter. In addition, we also encourage employees to adopt alternative working styles, such as working from home and flexible working, as well as the use of video conferencing facilities.

8.29 We plan to operate within the 42,000 Terminal 5 car parking cap condition. Currently there are 34,907 on-airport spaces in Heathrow's control. In 2015, the capped 42,000 spaces would be distributed according to the plan approved by Hillingdon (see Appendix D).

Road user charging

8.30 In response to the Government's SERAS consultation, BAA said that it believed surface access strategies to support major airport development may need to manage the level of demand for car users through road user charging. BAA is keen to explore any solutions which will reduce car usage to access the airport and believe that road charging may be an appropriate mechanism, coupled with appropriate investment in alternative solutions, to create a significant transfer of people onto public transport. BAA is currently conducting research into the potential impact of road user charging.

9 Additional runway capacity

9.1 This draft interim plan contains nothing new regarding additional runway capacity which has not already been in the public domain. What is new is that, for the first time, all the key issues have been brought together within one document.

9.2 This chapter outlines our position on additional runway capacity at Heathrow, which includes the identification of land to be safeguarded for a possible third runway; an update on the White Paper studies; and an outline of our non-statutory noise and blight schemes.

9.3 While a third runway would provide additional capacity to meet the increase in passenger growth and ensure the competitiveness of both Heathrow and the UK economy, we accept that there are strict environmental targets which will need to be met before the Government can support a policy proposal for a third runway.

White Paper context

9.4 In its White Paper, the Government asked BAA to safeguard the necessary land that may be required to build a third runway at Heathrow (paragraph 11.67 of the White Paper). It did so on the basis that this could assist the process of incorporating the Government's policy contained in the White Paper into the emerging regional and local development plans being prepared by the neighbouring regional and local planning authorities.

Runway 3 safeguarded land

9.5 In paragraph 11.65 of the White Paper, the Government recognised the force of BAA's arguments that the full potential of a third runway could not be realised without a sixth terminal north of the A4. As such, the Government has said that a consultation regarding the proposals for a sixth terminal should be undertaken. The Government also welcomed BAA's suggestions regarding amendments to the layout for a third runway to reduce impacts on Harmondsworth.

9.6 Drawing 4 contains an interim land boundary to be safeguarded for a three runway development at Heathrow, incorporating the Government's policy assumptions. In line with BAA's SERAS submission "*Responsible Growth*" published in May 2003, this interim boundary for a three runway development contains some 700 properties. Also depicted on the drawing is an illustrative area for a 1:10,000 risk contour for Public Safety Zones (PSZs) at the western

and eastern ends of the third runway. The current land boundary has also been included for ease of reference.

9.7 This interim safeguarded land boundary for a three runway development has been established by amalgamating the Government's White Paper boundary with the boundaries of all of the four layout options that BAA proposed in its SERAS submission (see Appendix C where BAA's four SERAS layout options are reprinted). The interim land boundary for a three runway development replaces the illustrative land boundary contained in the White Paper as being the safeguarded land boundary for the third runway, pending further work by ourselves and the Government's overall policy review at the completion of its studies.

9.8 The existence of the Government's additional runway studies and the uncertainties surrounding technical advances mean that Heathrow cannot at this stage rule out an outcome whereby the final land boundary for a three runway development is different to the interim safeguarded land boundary for a three runway development, depicted in Drawing 4 of this document.

9.9 The interim safeguarded land boundary for a three runway development does not make provision for new road access schemes that may be required to support it. During the forthcoming months, we intend to work with the relevant transport authorities to develop options for these road schemes so that they are able to make the necessary safeguarding provisions.

9.10 As part of the Terminal 5 Heathrow Express Extension Transport and Works Act, BAA obtained agreement from the Strategic Rail Authority (SRA), Network Rail and London Borough of Hillingdon for an on-airport rail safeguarding scheme. We will continue to honour those rail safeguarding provisions at the airport which are:

- an additional two platforms for the CTA rail station, to be located at a lower level to the existing Heathrow Express platforms;
- two further platforms at the Terminal 5 station, in addition to the two platforms required to operate Heathrow Express; and
- routes and connections to enable the westward extension of the Heathrow Express rail infrastructure, both to the south west and to the north west.

9 Additional runway capacity

Runway 3 aerodrome safeguarding

9.11 Given that detailed design of the runway is some way off and flexibility needs to be maintained in case circumstances arise that have not been envisaged, BAA considers it sensible to apply aerodrome safeguarding guidance for a potential runway in accordance with Drawing 4.

9.12 During 2006, we will generate a new aerodrome safeguarding map, including a third runway, endorsed by the CAA, which we will lodge with the local planning authorities. The map will be subject to review every five years, in line with the review process for the master plans, as specified in DfT guidelines.

9.13 Local planning authorities will use the new map as a filter for deciding which planning applications should be sent to us for assessment. We will receive and assess applications against the constraints for the existing runways and against those for a third runway, and the impacts from each will be recorded separately. If there are impacts with the existing runways, these will be dealt with, as is currently the case, in that BAA might object, not object or not object subject to the imposition of appropriate conditions.

9.14 Where either an airport boundary or an aerodrome safeguarding impact with the potential third runway is identified, we will notify the local planning authority of the potential clash and advise whether any changes can be made to remove the conflict. If appropriate, we will work with the local planning authority and developer to explore the issues in more detail. Where Government policy for the third runway has not been determined and its design remains uncertain, because a planning application has not been approved, we do not intend to object to any development proposal which conflicts with the aerodrome safeguarding constraints associated with that runway. Our response will simply seek to inform the local planning authority and developer that, should we proceed with developing a third runway at the airport, then there is a likelihood that it will conflict with the development outlined in their planning application. The aim is to ensure that the developer is fully aware of the timing, implications, risks and potential outcomes if they proceed with their plan. In extreme cases, BAA could still elect to object to a proposal if it considered the overriding circumstances warranted this course of action.

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

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

As definition is reached on the need for a future runway and the detailed design develops, this will be incorporated into the revised master plan and, at the same time, the appropriate safeguarding map can be lodged with the local planning authority.

Runway 3 land use plan

9.16 Drawing 4 which contains the interim safeguarded land boundary for a three runway development does not define any land uses. Land use categories across the whole of a three runway site for the airport could only be defined once more layout work has been undertaken.

9.17 One of the main land use changes between a two runway and three runway airport will occur along the northern boundary of the existing airport. Ancillary facilities located in that area for a layout to support Heathrow within existing limits will need to be relocated to the other areas of the expanded three runway airport to enable the construction of the airfield facilities required to support the north-south taxiway connector.

Runway 3 external impacts

9.18 Current Government studies are examining whether a third runway and/or greater use of the existing runways can meet the stringent environmental limits outlined in the White Paper.

9 Additional runway capacity

Namely, whether:

- levels of nitrogen dioxide could be contained within the 2010 EU directive annual mean limit value;
- there is not a net increase in the total area of the 57 dBA noise contour compared with Summer 2002, a contour area of 127km²; and
- improvements to public transport access (especially rail) together with other measures (for example road user charging) to help reduce the future pressure on the road network surrounding Heathrow can be achieved.

9.19 The aim of the Government's studies is to test whether air quality, air noise and surface access strategies to support additional runway capacity at Heathrow have the potential to comply with these targets and as such are acceptable in overall Government policy terms. The DfT is managing those elements of the studies which are testing the acceptability and compliance with the air quality, air noise and surface access targets. We are managing elements of the studies looking at the surface access and airspace infrastructure required to support mixed mode and/or a third runway.

9.20 These studies are now well underway and the issues around realising Government policy support for additional runway capacity are starting to emerge. We have dedicated significant resources to this project to ensure that robust conclusions are reached in order that the DfT can undertake an overall review of its White Paper by the end of 2006.

9.21 Following the White Paper Review, any proposals for additional runway capacity at Heathrow would be subject, in the same manner as for the new runway at Stansted, to the normal planning permission process. This includes a planning application, public inquiry, issue of compulsory purchase orders, Transport and Works Act procedures for road and rail infrastructure, and the airspace change process.

Air quality

9.22 During the SERAS studies the Government's consultants found that, even after implementing a tough package of measures to tackle emissions from aircraft and road sources, the homes of thousands of people were likely to be exposed to levels of this pollutant in excess of the standard, which is unacceptable. The Government did however recognise the uncertainty associated with techniques for estimating future concentrations of pollutants and therefore the uncertainty associated with these initial results.

9.23 The EU Standard for Nitrogen Dioxide has been set for the protection of human health and must be complied with in relevant areas across the UK. The standard is expressed as an annual mean concentration. This is because the health effects associated with this pollutant are chronic, materialising after long exposure to slightly elevated concentrations rather than a short exposure to a high concentration. The standard does build in a significant protection factor designed to enhance protection for vulnerable groups such as the elderly, the young and those with pre-existing respiratory illness. The standard refers to the total ambient concentration experienced, because this is what is breathed in, and does not differentiate between relative contributions made by different sources.

9.24 The wording of the directive is ambiguous with respect to precisely where this standard applies. How the standard might be applied has been the subject of debate in member states and with the Commission, and it is expected that the EU will clarify its view on applicability during the summer of 2005.

9.25 In order to predict future impacts, assessments must utilise modelling or forecasting techniques for both noise and air quality. Such methods are far from precise, and in recognition of this fact the Government has established three panels of technical experts to review and refine the air quality forecasting methodology and data to enhance precision. In particular, the characterisation and dispersion of aircraft sources were acknowledged to be poorly represented in the Government's early work. Nevertheless, there will still be some degree of uncertainty associated with the results. It is the Government's intention to narrow the uncertainties in the modelling and the data, so far as possible, in order to provide a robust basis on which to base a policy decision.

9.26 It is by no means certain that the air quality standard will remain the same, as new air quality standards are also likely to emerge. The EU is, for instance, currently considering radical new approaches to regulating particles. As a result, new standards may need to be incorporated into the assessment of runway options, as they emerge.

9.27 The assessment work already undertaken as part of SERAS indicates the scale of reductions which would need to be achieved in order to meet the nitrogen dioxide standard. This does not just require reductions from airport operations, but from background traffic from further afield.

9 Additional runway capacity

9.28 The Government studies are examining the scale of intervention that would be required to deal with non-airport traffic in order to resolve air quality issues in the locality. This may involve demand management or other restrictions on vehicle type and speed on the regional highway network.

9.29 The solution is not something that can be delivered by the aviation sector alone and is likely to necessitate other stakeholders playing their part in delivering air quality improvements. Some of the measures that may be necessary may be radical and have a long lead time before the benefit can be realised.

Air noise

9.30 Meeting an area cap based on the summer 2002 contour with three runways, as opposed to two, will be challenging. The limit relates to air noise so the only options for mitigation involve aircraft.

9.31 A new runway would require new noise preferential routes and this means that new populations will be exposed to some degree of air noise. In addition, intensification of use of existing routes, through greater numbers of movements or a different mix of aircraft or different operating arrangements, may mean that existing populations will have a different noise experience to that of today. In particular, those living close to the airport are likely to experience a worsening of the noise climate. Modelling undertaken as part of the Government studies will analyse the numbers affected.

9.32 The White Paper has already outlined certain noise mitigation measures which would be required to address future airport growth:

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

Surface access

9.33 The adequacy of surface access infrastructure to serve the needs of an increased number of passengers, alongside other user groups, is known to be a matter of particular concern to many stakeholders over a wide area. The overall scale of airport related demand, and air travellers' choice of transport mode, will be strongly influenced by such

factors as the proportions of transfer and foreign resident air passengers.

9.34 We have commissioned surface access modelling to determine the scale of the shortfall so that the potential contribution of further heavy rail infrastructure such as Airtrack or Crossrail can be evaluated.

9.35 As air quality improvement is one of the key objectives for considering additional public transport infrastructure, any schemes are likely to need to be augmented with demand management measures on the roads to realise this benefit. Otherwise traffic which switches from the road will simply be backfilled and despite significant investment, little or no air quality benefit may be experienced in the area.

9.36 This "locking in the benefits" approach to the surface access strategy requires a joint approach by a number of key stakeholders to make the solutions successful, as most of the background traffic contributing to the air quality issues is not airport-related.

9.37 The Highways Agency has already raised concerns about the capacity of the M4 and congestion in this area. This will need to be addressed.

9.38 A third runway would also require some alteration to the local roads network as well as provision for road and rail access to a sixth terminal, should this prove necessary.

Airspace management

9.39 BAA has appointed NATS as their consultants to develop an understanding of the airspace arrangements which would be required should a third runway at Heathrow be permitted.

9.40 The first issue which presents itself is finding sufficient physical airspace capacity in a highly congested area such as the South East of England. As the airspace is already relatively congested, any changes at Heathrow will inevitably have some impact on other airfields and aerodromes.

9.41 Furthermore the additional complexity associated with operating three parallel runways will require more sophisticated management, both in terms of the technology or tools applied and in the processes and staff utilised.

9 Additional runway capacity

9.42 The degree of change to current procedures will require a significant series of airspace changes and be the subject of a CAA Director of Airspace Policy (DAP) approval process, involving a significant amount of consultation as required under the terms of CAA 725 with those impacted and other airspace users as well as a full and rigorous impact assessment.

9.43 In relation to the regional and local authority statutory duties, as defined by PPG24, Heathrow has included, for information, the original 655,000 patm forecast noise contours for a three runway airport that were prepared by the CAA on behalf of the DfT²³. Details of the forecast contour numbers are in Table 11 below and the contours themselves are depicted on Drawing 6. It must be stressed that these noise contours are only indicative and are not detailed noise contours which would be prepared in support of a planning application. Furthermore, these noise contours do not meet the declared 127km² 57 Leq contour cap. The White Paper studies are currently assessing whether that cap can be met for a three runway development at Heathrow.

Table 11: DfT noise contours for Heathrow with three runways (655,000 patms in 2015)

Leq (dBA)	Area (sq km)	Population ('000s)	Households ('000)
>54	254.0	710.6	308.8
>57	143.3	304.9	126.6
>60	86.3	141.7	57.0
>63	52.6	66.9	26.8
>66	29.0	22.0	8.7
>69	15.2	5.7	2.2
>72	7.3	0.6	0.3

Greater use of existing runways

9.44 Given its assessment that a third runway could not come into operation before some time in the period 2015-2020, the Government is considering the scope for achieving additional runway capacity through greater use of the existing runways at Heathrow. Investigations are currently underway with regards to the impacts and benefits of such a proposal with a view to conducting a full public consultation during 2006. This consultation would also address the merits or otherwise of

retaining the Cranford Agreement and Westerly Preference arrangements, independent of any proposals for greater use of the existing runways. Clearly, all of the external impacts outlined above that are part of the Government's studies are relevant for the greater use of the existing runways, albeit to a lesser extent than for a three runway airport.

9.45 We are unable to produce layout and environmental information for such proposals or confirm whether further land needs to be safeguarded for additional facilities and expanded PSZs, until more information is available regarding the options for greater use of the existing runways.

Heathrow's blight schemes

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

9.47 We are mindful that the prospect of airport expansion proposals can have a wider impact on property values and marketability, before statutory protection becomes available.

9.48 Accordingly, we are preparing two schemes which are based on the schemes already in operation for Stansted and which mirror similar proposals for Gatwick, Edinburgh and Glasgow Airports:

- **Property Market Support Bond:**

We will announce a voluntary scheme in summer 2005 which will allow homeowners and owners of agricultural property and small businesses, whose properties are within the proposed new airport boundary, to sell their properties at unblighted prices to BAA in the period before statutory blight protection becomes available.

The interim safeguarded land boundary for a three runway development illustrated on Drawing 4 identifies the proposed Property Market Support Bond area;

- **Home Owner Support Scheme:**

We will also announce a voluntary scheme in summer 2005 which will allow homeowners and owners of agricultural property and small businesses, whose properties fall within the 66 Leq contour of a proposed new runway, to sell their properties to BAA at unblighted prices in the period before statutory blight protection becomes available. The DfT's 2015 66 Leq forecast noise contour for the third runway illustrated on Drawing 6 identifies the proposed Home Owner Support Scheme area.

23 Revised Future Aircraft Noise Exposure Estimates for UK Airports; ERCD Report 0308, CAA, December 2003. Figure 2.3.

9 Additional runway capacity

9.49 All parties recognise the substantial economic benefits which additional runway capacity at Heathrow could bring, but at the same time are mindful of the challenges ahead in terms of addressing and managing the potential social and environmental consequences.

10 Next steps

Consultation process

10.1 The publication of this draft interim master plan is designed to elicit your thoughts about the growth of Heathrow. You may be reading a copy of the document that we have formally sent you, or you may have obtained it from our website, but in either case we would welcome any comments you may have, no later than 31 October 2005.

10.2 We would particularly like to receive responses to the questions that we pose below so that we can consider all comments we receive in developing our future master plan documents.

10.3 If any aspects of the plan puzzle you, or if you are wondering whether we can provide any additional information on particular matters, please ask, using the postal or email address that appears at the bottom of the contents page for this interim plan.

10.4 We will also be pleased to meet with representatives of local authorities and organisations or businesses with an interest in Heathrow's future, if some form of presentation and discussion would be helpful to their consideration of this interim plan.

Questions to consultees

10.5 As indicated above, we would welcome any comments relevant to the content of the master plan, but it would be particularly helpful if consultees' responses could include answers to the following questions.

1. Do you agree with the plan's overall structure and general level of detail? If not, please explain why.
2. Do you agree with the analysis of Heathrow's current and future importance set out in Chapter 2? If not, please explain why.
3. Do you agree with the analysis of the statutory and regulatory context set out in Chapter 3? If not, please explain why.
4. Does Chapter 4 provide a sufficient description of Heathrow's current operation and facilities? If not, in what respects do you suggest it should be elaborated?
5. Do you have any comments on our expectations for future traffic growth as set out in Chapter 5?
6. Do you agree with our aim for Heathrow as set out in Chapter 6?

Does our development strategy and associated land use plan for Heathrow within its existing limits in Chapter 6 properly reflect Government policy for ensuring Heathrow's hub status is maintained? If not, please explain why.
7. Do you agree with the analysis of the environmental impacts and mitigation strategy for Heathrow within its existing limits as set out in Chapter 7?

Are there any aspects of our air quality and air noise strategy which you specifically disagree with? If so, please give your reasons?
8. Do you agree with the analysis of the surface access strategy for Heathrow within existing limits set out in Chapter 8?

Are there any aspects which you specifically disagree with? If so, please give your reasons?

Do you agree with our position on the Crossrail and Airtrack rail schemes in respect of their relative importance to the airport and to the wider region? If not, please explain why.
9. Do you have any comments on our safeguarding strategy for additional runway capacity set out in Chapter 9?

Are there any locations where you think that our interim land boundary for a third runway might be altered from that depicted on Drawing 4?

10 Next steps

10. Do you agree with our priorities for further work over the course of the coming year as set out in paragraph 10.8 below? If not, please explain why.

Evaluation

10.6 Following the consultation period, we will spend time carefully considering all the comments that we receive in order to reach a considered view as to whether they can be reflected in future versions of the plan. We may wish to meet with some respondents to discuss particular aspects of their comments. If we cannot respond positively to consultees' suggestions we will explain why.

10.7 We will, in any event, wish to maintain a regular dialogue with principal stakeholders, including airlines, local authorities and the Heathrow Airport Consultative Committee (HACC). We will ensure that we keep them informed of progress on the plan throughout the year and ensure that we are familiar with their perspective on matters.

Further work

10.8 Over the coming year, we will be undertaking further work on the following issues to progress our thinking for the layout for Heathrow within existing limits:

- strategies for the further development of passenger processing facilities in the Eastern Terminals (ie Terminal 1 and Terminal 2) of the CTA;
- the future infrastructure requirements and land use of the CTA
- strategies for the further development of aircraft and pier facilities on the Western Apron;
- the future transfer baggage processes and systems;
- the future development of Terminal 4; principally in the context of Open Skies;
- a review of the passenger and staff targets for surface access;
- a review of the air quality strategy; including an assessment of the air quality impacts up to 2015; and
- a review of the noise strategy including an assessment of the air noise impacts up to 2015.

10.9 The Government has begun its programme of work to look at airspace, surface access, air quality and air noise issues associated with additional runway capacity scenarios at Heathrow. It is our understanding that these studies are due to complete during 2006, in time for the Government to conduct a review of progress of its White Paper by the end of 2006.

10.10 During 2006, the Government is intending to undertake a full public consultation on proposals for greater use of the existing runways. The Government has indicated that this consultation would also address the merits or otherwise of retaining the Cranford Agreement and Westerly Preference arrangements.

10.11 In the meantime, we are planning to publish an updated version of this interim master plan taking account of the comments it receives from this consultation, as soon as practical in 2006.

10.12 In addition, a consultation on proposals for a new Terminal 6 to support the development of a third runway needs to be undertaken during 2006 (paragraph 11.65 of the White Paper). As part of that work, we intend to work with the Highways Agency and Transport for London to develop schemes for diverting the M4 spur and local roads, and the Strategic Rail Authority (SRA) to develop rail schemes.

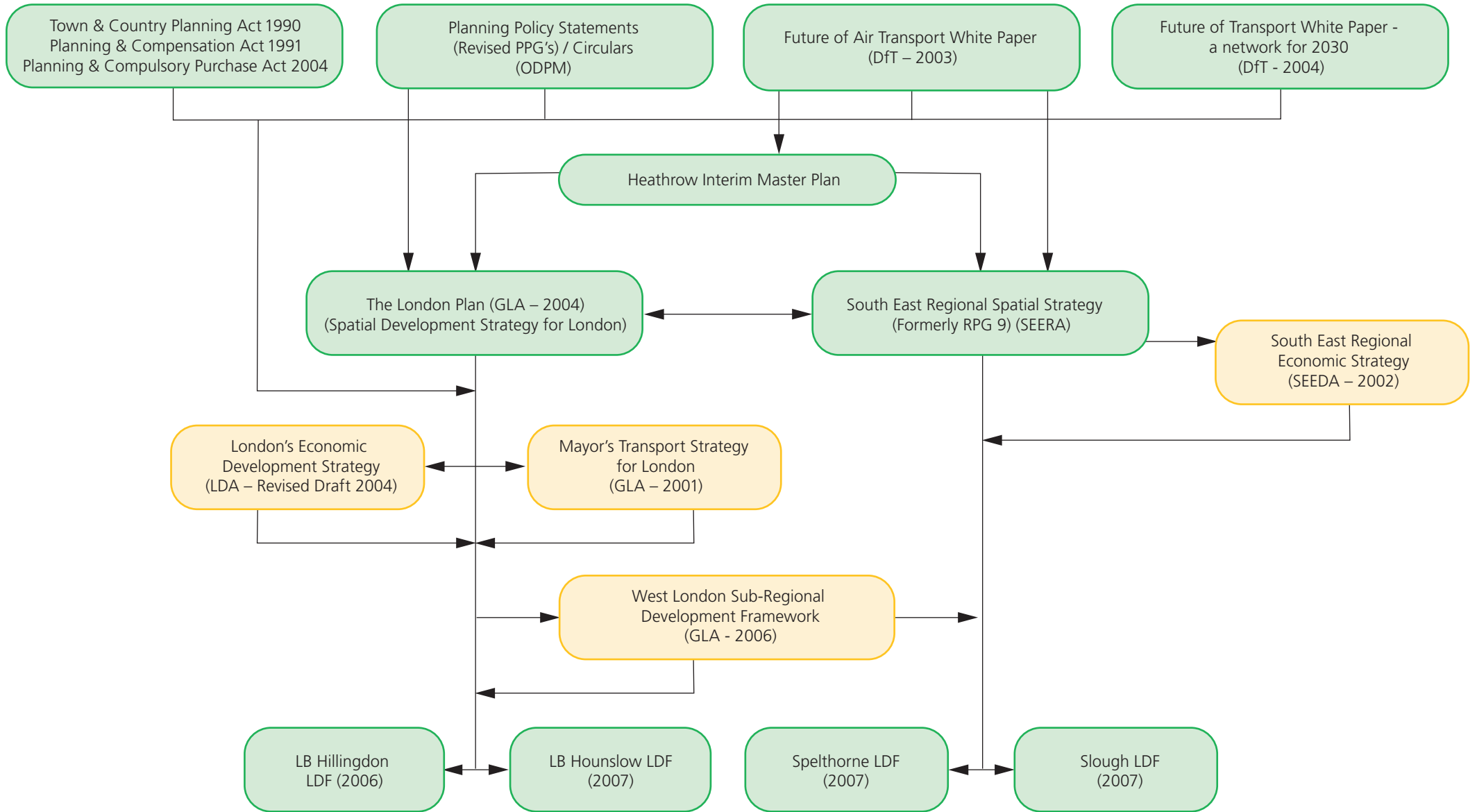
10.13 Throughout this time, we will continue to respond to consultations issued by the government and by regional and local planning authorities, if they have a bearing on how Heathrow would operate either within its existing limits or how additional runway capacity is safeguarded at Heathrow.

Full master plan

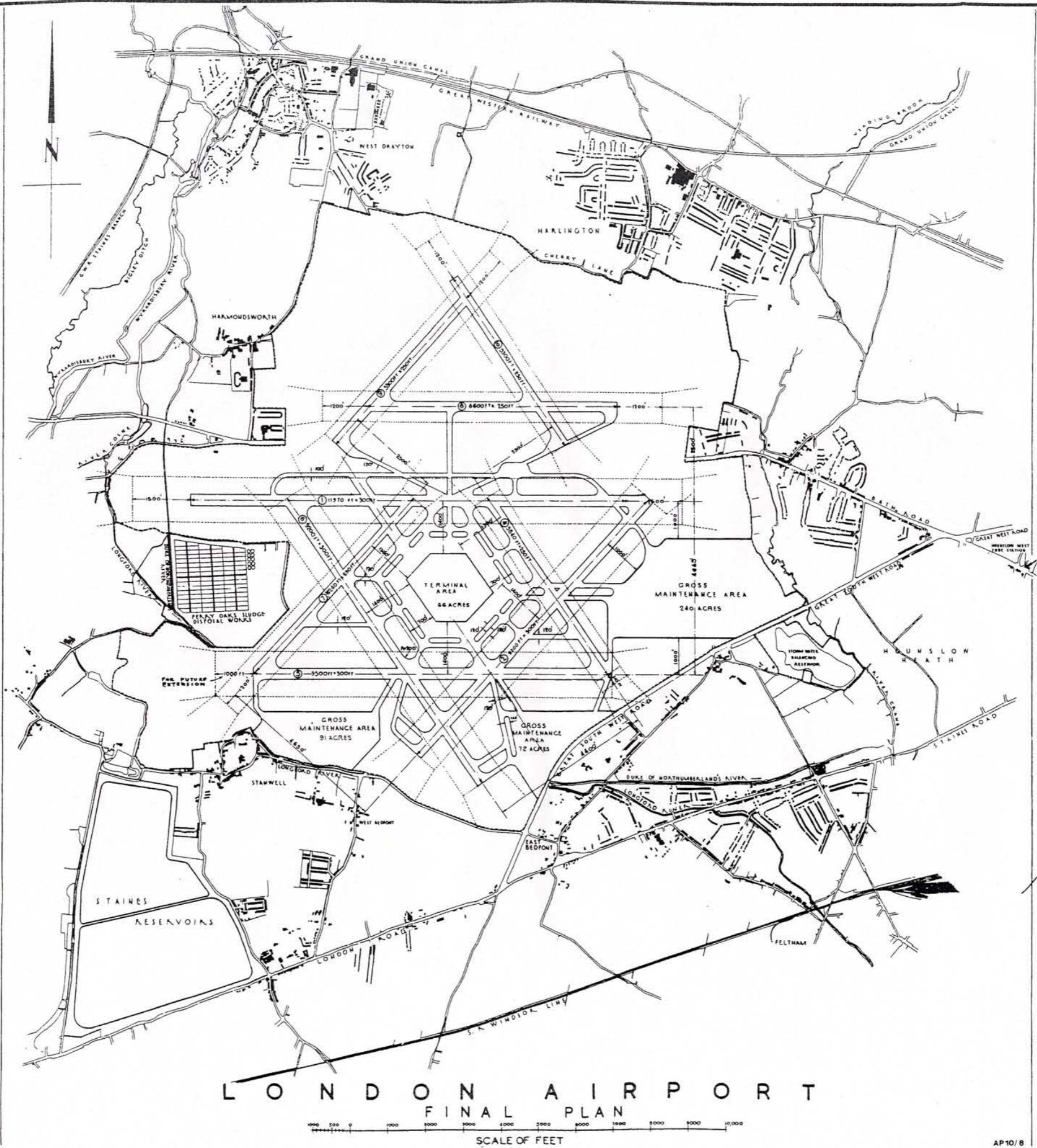
10.14 The main output of the Government studies will be a policy statement that will set out the Government's considered view about the feasibility of additional runway capacity at Heathrow. If the Government was minded to affirm additional runway capacity in policy terms, it will take some time for BAA to prepare and submit a planning application and associated environmental impact assessments. Given that context, we cannot yet be precise about a publication date and indeed the scope of a full master plan. Consequently, we intend to consider issuing further interim master plan documents as the need arises.

Appendix A

PLANNING POLICY FRAMEWORK – POST 2004 PLANNING ACT



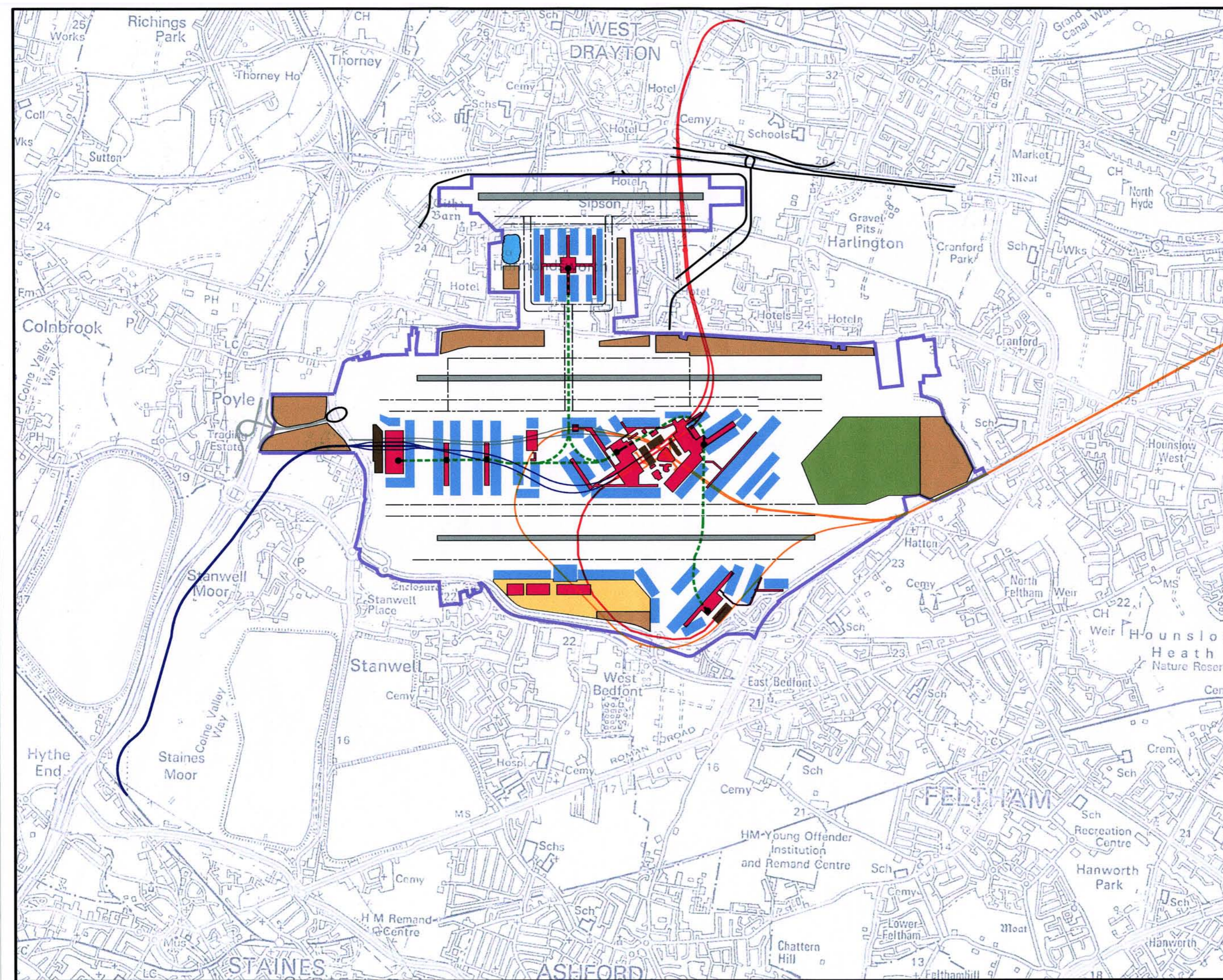
Appendix B



PLAN OF THE ORIGINAL RUNWAY CONFIGURATION AT HEATHROW

FIG. 1

Appendix C



- Legend**
- Terminal and Satellite
 - Gates
 - Cargo
 - Maintenance
 - Support
 - Runway
 - Parking
 - Airport Boundary
 - People Mover
 - People Mover Station
 - Taxiway
 - Heathrow Express
 - Piccadilly Line
 - Heathrow Express (Extension)
 - Piccadilly Line (Extension)
 - Improvements To Main Roads



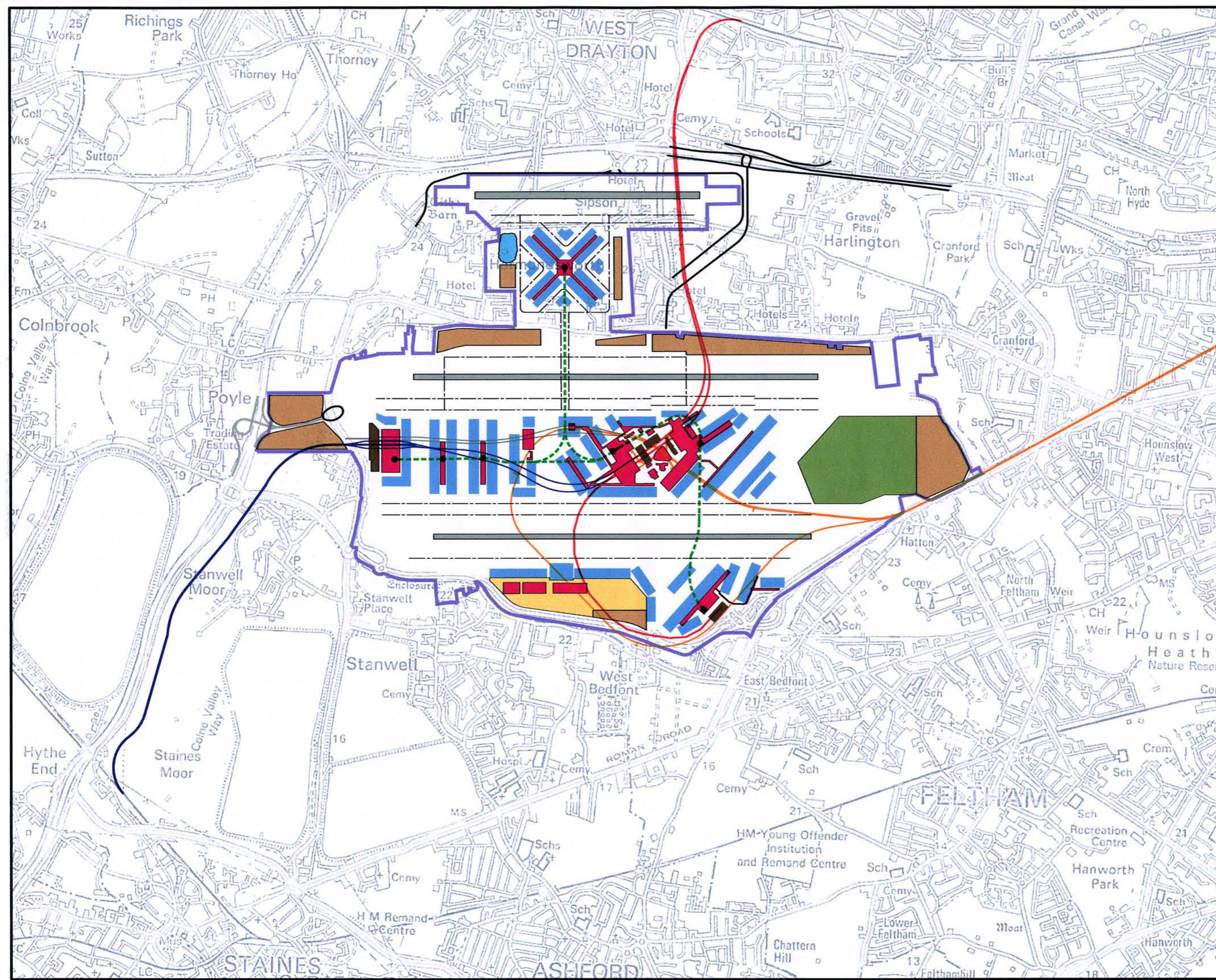
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BAA Illustrative layout 1 with
 satellite but no terminal.





- Legend**
- Terminal and Satellite
 - Gates
 - Cargo
 - Maintenance
 - Support
 - Runway
 - Parking
 - Airport Boundary
 - People Mover
 - People Mover Station
 - Taxiway
 - Heathrow Express
 - Piccadilly Line
 - Heathrow Express (Extension)
 - Piccadilly Line (Extension)
 - Improvements To Main Roads



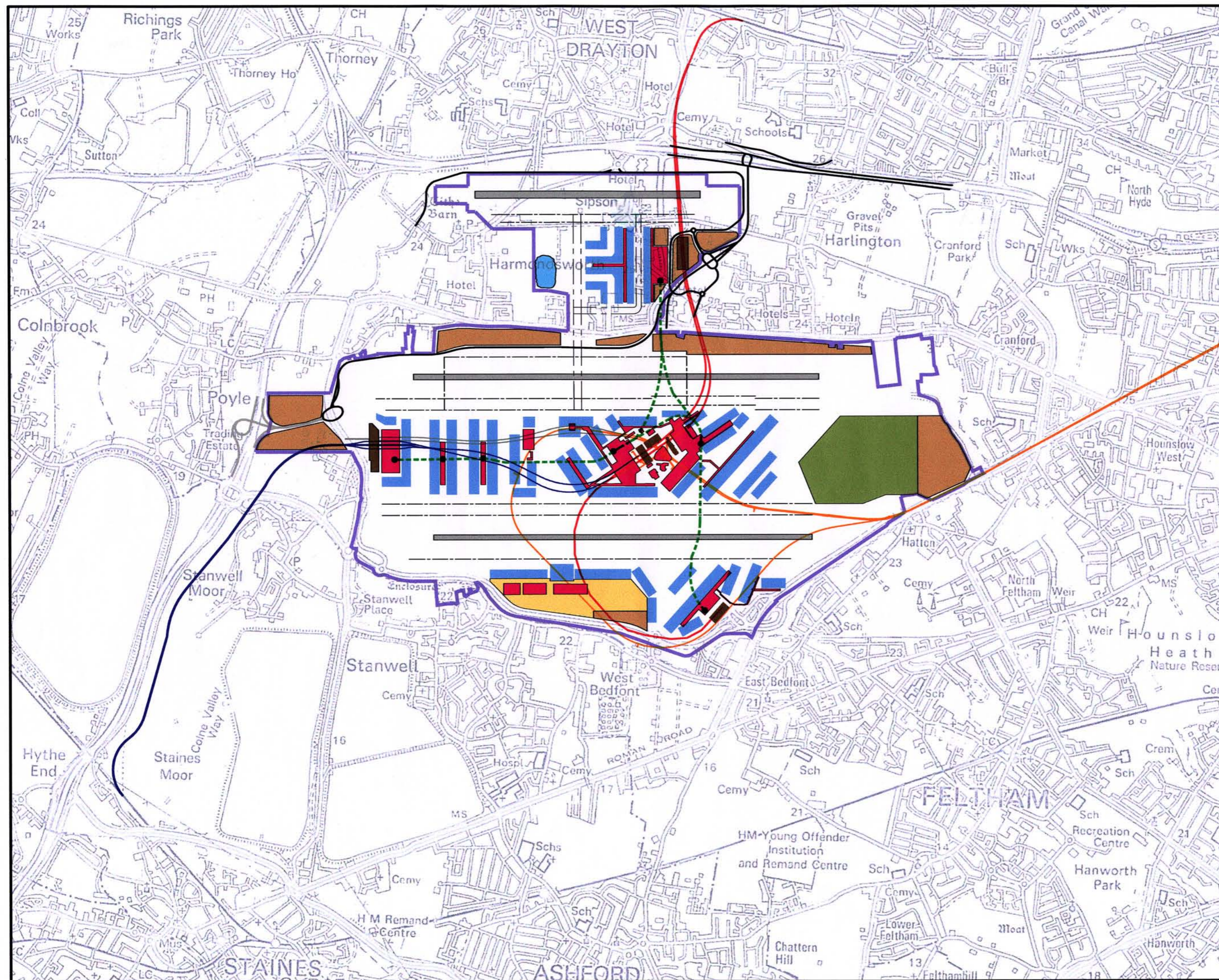
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BAA Illustrative layout 2 with
 satellite but no terminal.





- ### Legend
- Terminal and Satellite
 - Gates
 - Cargo
 - Maintenance
 - Support
 - Runway
 - Parking
 - Airport Boundary
 - People Mover
 - People Mover Station
 - Taxiway
 - Heathrow Express
 - Piccadilly Line
 - Heathrow Express (Extension)
 - Piccadilly Line (Extension)
 - Improvements To Main Roads



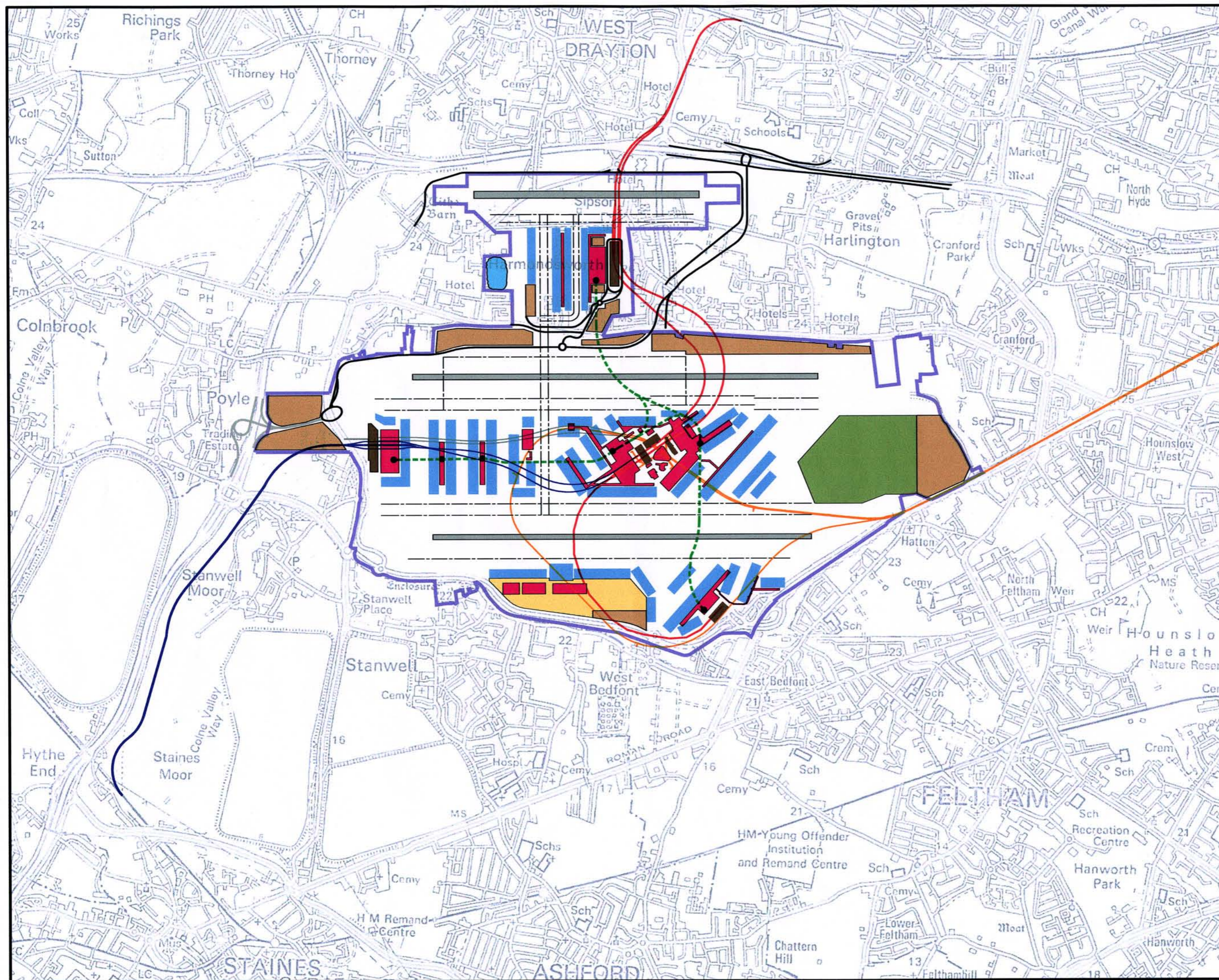
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22/04/2003

1:30000 @ A3

BAA Illustrative layout 3 with
 terminal and satellite.





- Legend**
- Terminal and Satellite
 - Gates
 - Cargo
 - Maintenance
 - Support
 - Runway
 - Parking
 - Airport Boundary
 - People Mover
 - People Mover Station
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 - Heathrow Express
 - Piccadilly Line
 - Heathrow Express (Extension)
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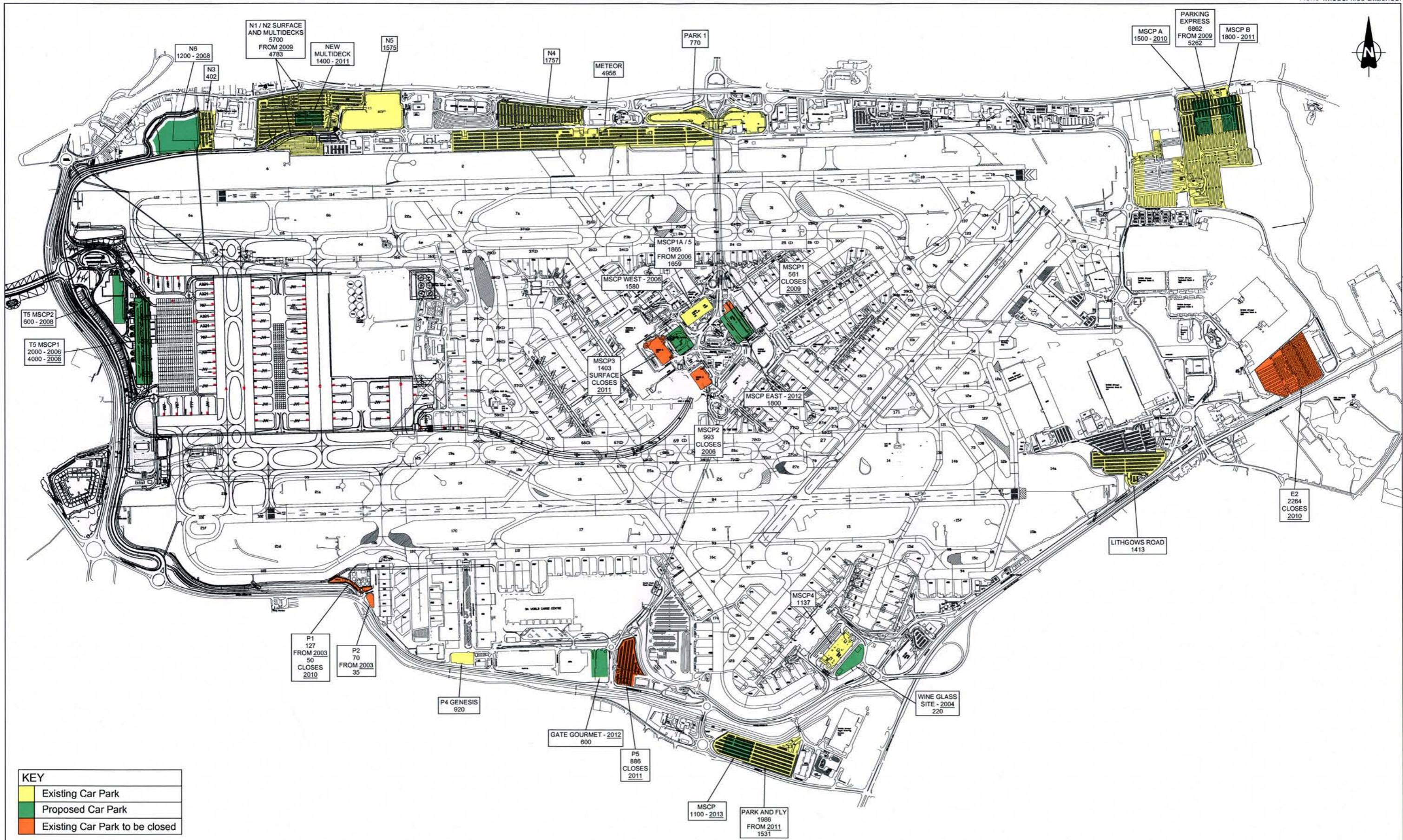
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BAA Illustrative layout 4 with
 terminal and satellite.



Appendix D



KEY	
	Existing Car Park
	Proposed Car Park
	Existing Car Park to be closed



Planning & Environment Department
 Heathrow Airport Limited
 234 Bath Road
 Hayes, Middlesex, UB3 5AP

Airport HEATHROW Project Name		Discipline GENERAL		Project Phase	
Title HEATHROW CAR PARKING SUPPLY 2002 - 2016 (42000 SPACES)		Drawing Originator PLANNING & ENVIRONMENT		Originator's Job No.	
Checked By H.Mc.I.	Checked Date 18.02.04	Drawn By A.L.C.	Drawn Date 18.02.04		
Approved By	Approval Date	Scale N.T.S. @ A2			
Owner LHR	Originator PE	Project Ref. G	Discipline 1035	Drawing No. 1035	Revision V4

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➔ www.baa.com



This interim master plan has been issued for consultation, as a precursor to the preparation of a updated version of the plan, which we aim to publish during the course of 2006.

If you have any comments please send them to us as soon as practicable, and in any event no later than 31 October 2005, addressed to:

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