

Heathrow Economics Study

Expansion of Heathrow airport

GLA

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Foreword

GLA Economics commissioned Colin Buchanan and Partners to provide an independent desk-based review of the assumptions and conclusions of the Department for Transport White Paper on the Future of Air Transport in the United Kingdom (published in December 2003). Colin Buchanan and Partners were also asked to review the wider economic benefits of various options for airport expansion in the South East.

This work was commissioned as an input into the consideration of the issues surrounding the expansion of Heathrow.

For further information regarding the findings of this report or to discuss any of the issues under consideration contact Kevin Austin, Head of GLA Transport team via email at Kevin.Austin@london.gov.uk

Summary

Background

In December 2003 the Department for Transport published a White Paper on the Future of Air Transport in the United Kingdom. It stated that there is an urgent need to provide additional runway capacity in the South East in order to cope with future demand for air travel.

The GLA is concerned about the socio-economic consequences of providing additional airport capacity, and questions the statements set out in the Aviation White Paper, notably on the potential benefits of and the need for expansion at Heathrow. Colin Buchanan (CB) was commissioned by the GLA to undertake a brief desk review regarding the conclusions set out in the Aviation White Paper, notably on the potential benefits of expansion of Heathrow airport.

Methodology

The assumptions and conclusions of the transport appraisal as well as the wider economic benefits of the various options for expansion in the South East were reviewed using various official reports, as well as research and technical papers.

The implications of the location of the additional capacity on transport and economic benefits were assessed, as well as the impact of expanding Heathrow, compared to other south east airports, on the aviation industry, and on the local, regional and national economies. Accessibility issues arising from capacity enhancements have also been discussed.

Main Findings

The review of the transport appraisal underlined that benefits of capacity enhancements may have been overestimated by the assumptions made on values of time, demand forecasts, income and fares elasticity, passenger arrival patterns and time penalties, as well as inconsistent appraisal periods, inclusion of benefits to foreign business and leisure passengers, and assumptions regarding interliners. Colin Buchanan recommends that more analysis of these factors be undertaken to assess the degree that benefits have been overstated.

The “predict and provide” approach to airport capacity in the White Paper is clearly at odds with the demand management approach to road and rail in the capital. Moreover, the possibilities of making more efficient use of existing capacity through operational responses to capacity constraints such as the use of larger aircraft, increase in load factors, as well as modifying or introducing rules affecting air travel could influence the scale of the capacity required.

Regarding wider economic benefits, our conclusion is that expansion of airport capacity in the South East will generate similar employment, regeneration and agglomeration benefits irrespective of where that expansion takes place. It is not apparent that expansion will generate net tourism benefits; current evidence suggests that UK tourists spend more overseas than foreign tourists spend in the UK. Colin Buchanan suggested that providing additional capacity in the South East will bring similar transport and wider economic benefits whether capacity enhancements occur at Heathrow or any other airport. Environmental concerns and modifying assumptions used in the economic appraisal, however, weaken the case for Heathrow expansion in relation to expansion at other London airports.

1. Introduction

1.1 Background

1.1.1 In 2000, the Department for Transport produced air passenger forecasts for the United Kingdom¹. These forecasts predicted a significant increase from 160 million passengers per annum (mppa) in 1998 to over 400 mppa by 2020. The 2003 Air Transport White Paper subsequently forecast traffic growing between 400 to 600 mppa by 2030. The majority of these new passengers are projected to pass through airports in the South East of England. Meeting future demand would therefore require substantially more airport capacity, especially in the South East.

1.1.2 The government responded to this by identifying and appraising various options for the development of airport capacity in the South East. *The Future Development of Air Transport in the United Kingdom: South East A National Consultation- 2003* by the Department for Transport sets out the costs, benefits and overall issues raised by the different options. National consultation was launched and in December 2003 the White Paper on *the Future of Air Transport* was published.

1.1.3 The Aviation White Paper outlined:

- The urgent need for additional runway capacity in the South East;
- Making the best use of existing capacity, including the remaining capacity at Stansted and Luton;
- The need for two new runways in the South East by 2030;
- That the first new runway should be at Stansted by 2012. Further development at Heathrow is needed including a new runway, but can only go ahead if stringent environmental limits are met;
- That if the environmental criteria are not met at Heathrow, then the new runway should take place at Gatwick in 2019.

1.2 Objective of the study

1.2.1 The GLA is concerned about the consequences of providing additional airport capacity, and questions the statements set out in the Aviation White Paper, notably on the potential benefits of and the need for additional capacity at Heathrow. Heathrow airport is already busy most of the day, and has been in constant expansion, contributing to serious local and national environmental concerns.

1.2.2 The GLA commissioned Colin Buchanan (CB) to undertake a brief desk review of the economic appraisal of the various options for enhanced airport capacity on the South East, and the conclusions set out in the Aviation White Paper.

1.2.3 This report presents the results of the review, based on various official reports, as well as research and technical papers, a full list of which is included in Annex A.

¹ DETR, Air Traffic Forecasts for the United Kingdom 2000

1.3 Methodology

1.3.1 The appraisal of options to increase capacity in the South East does not follow guidance provided by the Department for Transport in the New Approach to Transport Appraisals (NATA). NATA is based on five government objectives for transport schemes, which are outlined below:

- The Economy objective
- The Environment objective
- The Accessibility objective
- The Safety objective
- The Integration objective

1.3.2 CB was asked to look at the transport appraisal and the wider economic benefits within the Economy objective. The methodology and assumptions used for the appraisal have been analysed in light of the Department for Transport guidance on the appraisal of transport schemes set out in the Transport Analysis Guidance Website (webTAG).

1.4 Structure of report

1.4.1 The report is structured as follows:

- Section 2 reviews the transport appraisal;
- Section 3 examines the wider economic benefits linked to airport expansion in the South East;
- Section 4 assesses the ways in which the findings in the previous sections affect the scale of capacity suggested by the Department for Transport (DfT);
- Section 5 assesses the ways in which the findings in the previous sections affect the decision on the location of the additional capacity;
- Section 6 analyses the impacts of additional capacity at Heathrow on the aviation industry and the local, regional as well as national economies;
- Section 7 sets out possible impacts of accessibility enhancements in the South East arising from increased capacity;
- Conclusion.

2. Transport Costs and Benefits

2.1 Introduction

2.1.1 The objective of this section is to review the methodology and assumptions used to appraise the various South East and East of England Regional Air Services (SERAS) packages, as well as assess the wider economic benefits of increasing airport capacity in the South East.

2.1.2 The transport related impact analysis is mainly based on the SERAS stage 2 appraisal supporting documents relating to the economic appraisal, costs, financial modelling and analysis, as well as contributions from independent led research. Wider benefits are described in SERAS stage two appraisal findings report economic appraisal, and appraisal summary tables by Halcrow. The social and regional impacts are assessed in separate documents.

2.1.3 SERAS was undertaken for the DfT. We must therefore assume that it represents their view on how to appraise airport expansion schemes. This review tries to compare the approach taken to that applied by the DfT to the appraisal of rail and highway schemes as set out in webTAG. There is no published guidance on the appraisal of airport expansions.

2.1.4 This review of the transport appraisal of additional airport capacity in the South East considers the assumptions used on demand growth and forecasts, the calculation of benefits to existing travellers and new users, costs, the value of time used, as well as revenue.

2.2 General Assumptions

Value of Time (VOT)

2.2.2 The VOT used to calculate benefits is not explained in the appraisal documents. However, a paper written by Halcrow for the Department for Transport on the economic impact of business aviation assumes working VOT for business travellers is £62 per hour during work time and £31 during non working time².

2.2.3 The value of working time in this document is based on the passenger's wage, reflecting the value of the passenger to the economy. This value is assumed to grow in line with real increases in GDP per capita. Regarding trips made for leisure or commuting, VOT is based on individual incomes. Non-working VOT is assumed to be half working VOT, and presumably applied to the proportion of air trips that are undertaken for work purposes but are outside the standard working day and for which the employee is not compensated.

2.2.4 The high values used are justified by the fact that a vast majority of business aviation users are high level management and thus have higher incomes on which value of time is calculated. However, with the reduction in airfares and large projected growth in passenger volumes, the assumption that over 80% of business travellers are high level management may not be true anymore. This would mean that the VOT used for business travellers is too high.

² Halcrow, 1999, Business Aviation in the South East Part 2: The economic Impact of business aviation

- 2.2.5 The ratio between the in work VOT and that applied to travel outside of work hours is very different to the VOT rates used in the DfT's WebTAG guidance. In webTAG, commuting trips, which seems the most appropriate proxy for non-work time, are valued at £4.17 an hour compared to an average in work rate of £22.11, a ratio of 5.3:1 instead of 2:1. Applying a ratio of 5.3 instead of 2 for leisure trips and assuming the split between leisure and business trips remains constant would reduce existing and generated user benefits by roughly 40%.
- 2.2.6 The European Organisation for the safety of air navigation published a document in 2005 which provides a set of "standard inputs" for commonly used data items in Eurocontrol cost-benefit analyses³. It sets out different values of time used for air travel. The recommended average VOT is lower than VOT for business passengers calculated in the Halcrow paper, but the background to these values is unclear and again the ratio between business and leisure is different to that of other modes.

Table 2.1: Average VOT recommended by Eurocontrol

Purpose	Eurocontrol Value of Time (VOT) per hour (€)	
	low	high
Business	47	63
Personal convenience	28	33
Tourism	20	23
Weighted average	34	44

Appraisal period

- 2.2.7 Benefits and costs are calculated up to 30 years after the last investment for each package. The period varies between packages. The appraisal period used for comparison of different packages is 2000-2060. This is inconsistent with DfT guidance of a 60 year appraisal period for major infrastructure projects, from date of opening.
- 2.2.8 It is unclear whether all options are appraised from 2000 to 2060, even though the various options allow for different opening dates for the airports. Having a fixed appraisal period would artificially reduce the case for expansion at Gatwick, as it will open at a later date, and thus benefits will be calculated over a shorter period of time.
- 2.2.9 Moreover, the transport appraisal for an additional runway at Gatwick should not take into account the assumption that the agreement preventing construction of new runways until after 2019 will remain in place. Gatwick options should be assessed with construction starting at the same date as for the other airports.

³ EUROCONTROL, 2005, Standard inputs for EUROCONTROL cost benefit analyses

2.3 Passenger Demand Forecasts

Assumptions

- 2.3.2 Passenger forecasts used in the appraisal were calculated by the DETR in *Air Traffic Forecasts for the United Kingdom 2000*. The numbers are fed into another model that allocates passengers to existing and future airports. It is based on the current costs and habits (origin-destination surveys) of accessing the airports and the range of services provided at each airport.
- 2.3.3 The model allows for growth of demand right through the appraisal period, though there is a reduction in the rate of passenger growth over time. Growth is held constant as soon as an airport reaches capacity. The model predicts passenger growth at 3.6% and 4.9% per annum under the low and high growth scenarios respectively up till 2020. Demand grows until capacity at airports is reached. Growth rates after 2030 are based on the annual average growth rate of 2000-2030. The model is based on unconstrained demand growth.
- 2.3.4 The model allocates air passenger demand to and from all UK airports according to the overall costs faced by the passengers. This includes surface access costs, number and range of flights, flight times and fares on specific routes from that airport, and, at any airport where demand exceeds capacity, the fare premium which would be required to bring demand into line with the available capacity, exchange rates (which have been held constant) and economic growth at home and abroad. The table below shows the forecasts used by passenger type.

Table 2.2: DETR 2000 forecasts by category (mppa)

	1998	2005	2010	2015	2020	1998-2020 % Change
UK leisure	50.1	71.6	84.1	98.1	114.1	128%
UK business	10.9	14.6	19.4	25.7	34	212%
foreign leisure	23.6	35.4	44.3	54.9	67.2	185%
foreign business	12.6	18.1	22.9	31.2	40.6	222%
Low cost airlines	6.9	18.7	21.5	24.6	28.2	309%
misc	21.2	28.1	32.8	38.7	45.7	116%
domestic	33.6	42.2	50.2	59.8	71	111%
TOTAL	158.9	228.7	275.2	333	400.8	152%

Source: Berkeley Hanover Consulting⁴

- 2.3.5 The 2000 forecasts estimate that in 2030 the number of air passengers will reach 500 mppa in the UK. More than half of those are concentrated in the South East. The significant increase in the number of trips means that people would spend more time and possibly money travelling. However, it is unclear whether the residents of the United Kingdom will have enough time and money to fly as much as is predicted. The SASIG (strategic aviation special interest group) believes that it may not be realistic to expect so many passengers to travel⁵.

⁴ Berkeley Hanover Consulting, 2000, The impacts of future aviation growth in the UK

⁵ Strategic Aviation Special Interest Group (SASIG), 2003, Aviation Policy for the UK, the need for a fresh start

- 2.3.6 Moreover, DETR Air Transport Movements (ATM) forecasts are significantly higher than forecasts made by Eurocontrol. Whereas DETR forecast 2.6% to 3.9% annual growth in ATMs, Eurocontrol only projects ATM growth of 1.6% to 1.9% in the region for 2003 to 2025.
- 2.3.7 No account has been made of a switch of demand to other European airports e.g. hubs such as Amsterdam, Paris and Frankfurt, as well as other modes of transport which are in competition with air travel to domestic and European destinations (Paris, Amsterdam, Brussels etc). These impacts are, however, likely to be marginal.

Airfare changes and income elasticity

- 2.3.8 In order to forecast passenger demand, assumptions are made with regards to airfare and income elasticity. Income elasticity is assumed to be greater than airfare elasticity (1.5 and 1 respectively). The model also allows greater price elasticity for leisure compared to business passengers. Sensitivity runs have been conducted on airfare and income, but not on the potential change in elasticities over time.
- 2.3.9 Income elasticity may have been overstated over time: as the market matures, income elasticity is likely to reduce⁶. Allowing for a reduction of income elasticity over time would reduce demand for air travel.
- 2.3.10 Airfares are assumed to drop by 1% per annum. This estimate takes into account the movement in the price of oil (10% of total costs), the impact of aircraft technology on airline costs as well as competition and deregulation. Fuel prices are assumed to stabilise around \$25 a barrel. However, since 2000 there has been a very significant increase in oil prices, which have gone over \$70 a barrel. Other issues such as carbon trading and pressures for increased environmental taxation may also tend to offset these cost reductions.

2.4 Capacity Constraint

- 2.4.1 It is not clear how capacity levels and constraints are assessed at the various airports. Airport operators have been involved in estimating capacity needs. The influence of airport operators in the decisions may skew the analysis, as for the regulated airports the greater the level of investment in infrastructure, the more revenues they obtain. It would be interesting to know the level of involvement of the different airports operators in the forecasting and estimation of existing and future terminal and runway capacity.
- 2.4.2 In the past, capacity has been understated. For example, Heathrow's capacity in the early nineties was set at a maximum of 50 million passengers. However, it is now handling 68 million, with Terminal Five taking it to 80 million. Stansted's capacity was estimated at 18 million in 2002, and is now handling 21 million passengers per annum.
- 2.4.3 The appraisal does not seem to include other operational responses to capacity constraint, such as better utilisation of existing capacity or demand management.
- 2.4.4 Moreover, it is not clear whether the model fully allows for an increase in the size of aircraft in order to deal with higher demand. Assuming wake vortex-related aircraft separation requirements do not outweigh the extra seating capacity per aircraft, allowing for bigger planes would help reduce the needs for

⁶ ibid footnote 4

additional runway capacity. Passenger ATMs have grown around 1% less than growth in passenger numbers due to increases in aircraft size.

2.4.5 The emergence of low cost airlines has also increased load factors, which tend to be higher than on full service airlines. For example, in 2005, Ryanair had a load factor of 84%, compared to 74% for British Airways or American Airlines. Increasing load factors and aircraft size could increase capacity significantly.

2.4.6 The tables below show that by increasing load factors on planes to an average of 85%, Heathrow would increase capacity by 9 million passengers per annum. A total of 12.3 million additional passengers would be able to travel via the four main London airports. In addition to this, increasing average aircraft size increases the number of potential passengers to 32 million at Heathrow, increasing by around 50% the existing number of passengers at all airports.

2.4.7 However it is acknowledged that markets may not support the use of the largest aircrafts on all routes, particularly if the range of different destinations served is an issue, rather than just the sheer volume. Also, bigger planes tend to be noisier, although they will typically be more carbon-efficient in terms of emissions per seat at appropriate load factors.

Table 2.3: Additional capacity arising from enhanced load factors

Airport	Scheduled ATM 2005 ⁷	Terminal Scheduled Passengers (Millions) 2005 ⁸	Average Number Of People By Plane	Average Assumed Load Factor	Average Size Of Plane	85% Load Factor	Number Of Passengers With Average 85% Load Factor (Millions)	Additional Number Of Passengers With Increased Load Factor (Millions)
GATWICK	203,796	23.2	114	78%	146	124	25.3	2.1
HEATHROW	470,303	67.6	144	75%	192	163	76.6	9.0
LUTON	69,645	8.4	120	78%	154	131	9.1	0.8
STANSTED	165,894	21.0	127	80%	158	135	22.3	1.3

Table 2.4: Additional capacity due to 85% load factors and larger aircraft size

Airport	Scheduled ATM 2005	Terminal Scheduled Passengers (Millions) 2005	Average Plane Size	New Passenger Numbers (millions)	Additional Capacity (millions)
GATWICK	203,796	23.2	210	36.4	13.2
HEATHROW	470,303	67.6	250	99.9	32.3
LUTON	69,645	8.4	210	12.4	4.1
STANSTED	165,894	21.0	210	29.6	8.6

2.4.8 Table 2.5 goes further and calculates additional capacity if maximum ATM at all the airports was reached, and assumes an 85% average load factor and larger aircraft size. Enhanced capacity with a mixed mode use of runways at Heathrow

⁷ <http://www.caa.co.uk/default.aspx?categoryid=80&pagetype=88&pageid=3&sglid=3>

⁸ ibid footnote 7

has been included, although environmental disbenefits of this particular measure are acknowledged. In total, without providing an additional runway, around 80 million extra passengers could go through London airports.

2.4.9 Assuming the proportion of UK air transport passengers passing through London airports remains constant, the need for expansion in the South East will be postponed. Indeed, additional capacity introduced by operational enhancements will cope with passenger flows up till 2013 according to high point demand forecast estimates, and until 2019 assuming low point forecasts. However, this would require surface access improvements and other investments to accommodate the increase in passenger throughput.

Table 2.5: Additional capacity with maximum ATM, 85% load factor and larger aircraft sizes.

Airport	maximum ATM	Terminal Scheduled Passengers (Millions) 2005	Average Plane Size	New Passenger Numbers	Additional Capacity (millions)
GATWICK	280,000	23.2	210	50.0	26.8
HEATHROW	480,000	67.6	250	102.0	34.4
HEATHROW with mixed mode	515,000	/	250	109.4	35.4
LUTON	83,230	8.4	210	14.9	6.5
STANSTED	185,000	21.0	210	33.0	12.0

2.4.10 Therefore, capacity constraints could be at least partially overcome by:

- Using larger planes;
- Increasing load factors;
- Reducing international interlining passengers passing through London airports;
- More efficient use of existing runways;
- More expansion of other regional airports within the South East and other regions. The DfT consultation paper on the future development of air transport in the UK states that secondary airports in the South East could play an important role in the future notably by:

“Catering for a proportion of the passenger and freight traffic displaced by capacity constraints at larger airports”

2.5 Benefits

2.5.1 The Green Book Appraisal highlights the fact that benefits to foreign tourists and business users should not be included in the appraisal:

“In principle, appraisals should take account of all benefits to the UK”

“All impacts (including costs and benefits, both direct and indirect) on non-UK residents and firms should be identified and quantified separately where it is reasonable to do so, and if such impacts might affect the conclusions of the appraisal.”⁹

⁹ HM Treasury, The Green Book, appraisal and evaluation in central government, 2003

- 2.5.2 However the SERAS appraisal includes benefits to existing and new users for non-UK residents. Taking out benefits to foreign passengers would reduce user benefits by around a quarter for all the options.

Benefits to Generated trips

- 2.5.3 Benefits to new passengers are normally subject to the “rule of half”, that is benefits from existing passengers are twice those of new passengers. However, this is not the case in the appraisal of the various SERAS packages. Benefits to existing passengers are significantly lower than benefits to new users.
- 2.5.4 The estimation of trip generation is based on the concept of “shadow costs”. Shadow costs are integrated into the passenger model forecast to suppress demand at airports where capacity has reached its maximum level. Shadow costs are calculated according to the additional capacity at a given airport compared to the base case, and are proportionate to the amount of excess demand. Shadow costs thus represent the price of travel including increased costs due to reduced capacity.

Interliners

- 2.5.5 International to international (I to I) interliners are not included in the calculation of user benefits. However, they should be included in the analysis as they have an impact on shadow costs. Indeed, I to I interliners are the first ones to be squeezed out by the operators when capacity is constrained. When an airport reaches full capacity, shadow cost levels for other passengers will not be affected as much, as capacity constraint will first have an impact on I to I interliners. Reducing shadow cost levels in this way would reduce total benefits to generated users.

Benefits to Existing Users

- 2.5.6 The major benefit arising from enhanced capacity is increased frequency. This concerns mostly business passengers with high values of time (less time wasted waiting for a flight). The following formula was used to calculate benefits to existing users¹⁰:

$$\sum_p \text{Existing Pax} \times \text{hours in day} \times \text{wait time factor} \times \text{VOT} \times \text{fare factor} \times \text{days in year} \times \text{difference routes/ATM} + 1000000$$

- 2.5.7 The wait time factor is of 0.5. The appraisal assumes random arrival at an airport, and only takes account of travellers with flexible tickets (16% of business travellers and 8% of leisure pass, included in the fare factor). Benefits are calculated only for people who have flexible tickets.
- 2.5.8 However, unlike other public transport modes, it is difficult to apply a generalised wait time penalty for air transport. At airports people can work, shop, eat, drink and relax while waiting for their flights, which they cannot do whilst waiting for a bus. Time penalties will then depend on user types: some passengers may enjoy airport facilities and will not consider waiting at airports as a cost, but rather as part of their trip, whilst business passengers may consider wait time at airports as a cost.

¹⁰ Halcrow, 2002, SERAS stage 2: SERAS stage 2: appraisal findings report supporting documentation Economic Appraisal, p.11.

- 2.5.9 Moreover, it seems unreasonable to assume that all flexible ticket holders arrive at random times at airports, especially for infrequent flights. Passengers will not arrive randomly if there are only two flights a day for their destination for example. Therefore, even if wait times were included they should surely apply some sort of arrival pattern rather than be random (see the passenger demand forecasting handbook - PDFH - for rail wait times).

Freight

- 2.5.10 Benefits to new freight users are estimated, but not existing freight user benefits. Freight benefits are held constant after 2030. Air freight is carried in either dedicated flights or as bellyhold in passenger flights. Freight traffic has grown slower than passenger traffic in recent years and does not appear to be capacity constrained.

2.6 Costs

Capital and operating costs

- 2.6.2 No information relating to capital and operating costs is provided in the appraisal documents.

Surface Access Costs

- 2.6.3 It is important to include the cost of additional surface access needs incurred by additional capacity of the different options. The appraisal includes surface access schemes in capital costs if their provision is “tied to the provision of additional airport infrastructure”¹¹. However it is not clear which surface access costs are taken into account.
- 2.6.4 Two documents mention that an incomplete account of surface access costs is made in the appraisal: the Mayor’s response to SERAS consultation and the Strategic Aviation Special Interest Group (SASIG)¹².
- 2.6.5 SASIG mention that the appraisal does not estimate sufficient surface access costs, allowing for low overall costs.

2.7 Government Revenue

- 2.7.1 Change in Airport Passenger Duties (APD) is assessed. However, the appraisal assumes that the APD is the only tax implication of airport expansion which is clearly wrong. Without airport expansion, potential passengers would use their money on other goods and services, on which the government would also receive a part through VAT or fuel tax for example. For example, for public transport schemes, it is assumed that 20.9% of the public transport fares would have gone on indirect tax if the same amount of money had been used for other purposes. The full tax implications of changes in orientation of traffic should be assessed.

¹¹ Department for Transport, February 2003, The Future Development of Air Transport in the United Kingdom: South East, a national consultation

¹² Strategic Aviation Special Interest Group (SASIG), 2003, Aviation Policy for the UK, the need for a fresh start

2.8 Conclusions

- 2.8.1 The analysis of the SERAS economic appraisal has underlined that the calculation of benefits provided by capacity enhancements in the different options may have been misled by the use of unrealistic assumptions on VOT, demand forecasts, income and fares elasticity, as well as inconsistent appraisal periods. Moreover, operational responses to capacity constraints should have been taken into account.
- 2.8.2 According to the Green Book Appraisal, benefits to foreign passengers should not have been included. Taking into account interlining passengers and taking out foreign business and leisure passengers would significantly reduce user benefits. Finally, it is inappropriate for benefits to existing passengers to be estimated according to unrealistic random arrival times and set time penalties.
- 2.8.3 Our main concerns on the transport appraisal and areas which require more analysis are:
1. The values of time used. Whereas there are standard values of time for bus, rail, car etc we are unable to verify the values used for air passengers.
 2. The demand growth assumptions, whilst in line with past trends, give rise to concerns over their appropriateness as a basis for scheme appraisal.
 3. The do-minimum scenario does not seem to have allowed for possible improvements to operating efficiency through higher average loads, and reducing interliners. Those possibilities should be explored before resorting to additional infrastructure.
 4. The use of benefits for international passengers, which is incompatible with HM Treasury Green Book.
 5. The scenario that air travel prices continue to fall by 1% each year seems incompatible with escalating fuel prices, increasing environmental concerns and the costs of providing additional airport capacity.

3. Wider Economic Benefits

3.1 Introduction

3.1.1 While conducting our desktop review, we have found little analysis or explanation on the assessment of wider economic benefits of airport capacity for the different options. This section reviews and discusses the employment, regeneration, agglomeration, and tourism issues related to increasing airport capacity in the South East.

3.2 Employment and regeneration

3.2.1 There are four different types of employment created by expansion of an airport, or other investments in a local area: direct, indirect, induced and catalytic employment. Direct employment refers to the jobs directly created on site, such as extra staff. Induced employment is created by spending generated by the additional employment related to the airport. Extra demand for goods and services at the airport creates indirect employment via the suppliers and airport related off site activities. Airport activity creates catalytic employment via the attraction of specific businesses that locate close to the facilities, such as hotels or freight operators or internationally focused businesses.

3.2.2 The SERAS Social impacts appraisal estimates that by 2015, using low demand forecasts, generated employment will be significantly higher with the expansion of Heathrow (12,100 jobs, 37,600 jobs using high growth estimate) than at the other airports (1,000 to 5,400 jobs for Gatwick, 500 to 3,000 at Stansted, and 400 to 9,000 at Luton). The semi-skilled and unskilled jobs are then allocated to the deprived districts located within the airport's catchment area, according to the available labour supply.

3.2.3 However, one would expect that direct, indirect, induced and catalytic employment would not vary greatly from expansion at one airport compared to another. The number of jobs created should be broadly the same per passenger throughput at each airport. Expansion at any airport would therefore have the same impact on employment for the South East and London on the whole.

3.2.4 The only difference will be in terms of the take up of jobs in regeneration areas. Stansted has a smaller catchment area than Heathrow. The take up of jobs could therefore be focused on residents of regeneration areas. At Heathrow, where the catchment area is wider, residents from regeneration areas will have to compete for jobs with other more prosperous local areas.

3.2.5 It remains unclear the extent to which investment in airport infrastructure creates regeneration benefits in particular areas. There are various regeneration areas located close to Heathrow airport, such as Hayes and Southall for example, which are still regeneration areas despite close proximity to the airport. Travel to work census data from 2001 shows that around 10% and 15% of the working population in Hayes and Southall respectively are working at Heathrow.

3.2.6 Finally, constraining airport capacity will not necessarily lead to a potential loss of jobs, as the economic effect of slowing down the growth in aviation will be to produce a different distribution of jobs around the UK.

3.3 Agglomeration (Productivity and Business)

- 3.3.1 Agglomeration effects of airport expansion are not included in the appraisal of wider economic benefits. The impact on productivity and foreign direct investment is mentioned but no attempt has been made to quantify or detail these benefits. Only the number of business travellers lost due to constrained capacity is calculated for the different options. Estimating lost domestic and foreign business travel in the South East is not a good indicator for assessing agglomeration effects of airport expansion.
- 3.3.2 Agglomeration impacts of airport expansion whether at Heathrow or elsewhere are likely to be very similar. Agglomeration relates to the fact that by carrying out economic activity in a dense area, production is more efficient. This occurs for a number of reasons – firstly it creates a deeper labour market, with more employees for firms to choose from and therefore job vacancies being filled by more suitable candidates. It also allows greater specialisation in supply. A third advantage is that it will enable knowledge spillovers to occur, with expertise being more widely shared. Agglomeration arising from airport expansion in the South East would benefit London.
- 3.3.3 Agglomeration is linked to accessibility. Airport expansion would have an impact on the number of business passengers coming into and working in London, thus leading to agglomeration benefits. Increasing the number of passengers at Heathrow or another airport will have the same effect on agglomeration. What matters here is not where expansion takes place, but how easy and quickly it is to get from the airport into London. Good surface access links to the centre of London is therefore more the issue.

3.4 Tourism

- 3.4.1 Tourism is mentioned in the appraisal of wider economic benefits. It assesses the additional spend by UK tourists abroad and overseas tourists to the UK, and calculates net benefits of airport expansion on tourism in the UK. However, it is based on the assumption that overseas tourists spend more while visiting the UK than UK tourists spend abroad. ONS 2004 Travel Trends show that, on a national level, in 2001, when taking only visitors using air as their transport mode, foreign tourists spent on average £405 in the UK, whilst UK tourists spent on average £486 when abroad. Therefore, expanding airport capacity would have a negative impact regarding tourism if flows were split equally between in and out bound tourism. By constraining capacity, UK residents that would have spent money travelling abroad are likely to spend it on UK visits or other goods and services.
- 3.4.2 The SERAS appraisal assumes a faster growth in foreign leisure trips than UK leisure trips, which according to the appraisal reduces the tourist expenditure imbalance. It is unclear why this would be the case. A conservative approach would be to base forecasts on past trends. Office of National Statistics (ONS) data on travel and tourism from 1984 to 2004 highlights that in the past ten years, there has been a growth of 82% of outbound trips by air travel, compared to an increase of only 38% of inbound trips by air travel. This contradicts the growth assumptions used in the SERAS appraisal, and would mean the tourism imbalance would on the contrary grow with expansion of airports in the South East.

3.5 Conclusion

- 3.5.1 On the whole, expansion of airport capacity in the South East will generate similar employment, regeneration and agglomeration benefits irrespective of

where expansion takes place. It is unclear whether expansion will net generate tourism benefits.

4. Effects on the scale of capacity required

4.1 Introduction

4.1.1 This section considers the main elements that have an impact on air capacity needs in the South East of England. In order to review the scale of future development suggested by the Air Transport White paper, certain assumptions and methods used in the transport appraisal need to be looked into, as well as the possibility of maximising the use of existing capacity at the London airports.

4.1.2 The review of the transport appraisal and the options for maximising the use of existing airport facilities tends to suggest lower capacity needs.

4.2 Transport appraisal

4.2.1 In order to assess whether benefits have been overestimated, the following points need to be examined further:

Passenger Demand forecasts

4.2.2 The level of demand growth has a significant impact on user benefits. Passenger demand forecasts used date back from 2000. Changes in the air transport sector, and other changes in the economic context such as the recent rise in oil prices, would require updated forecasts. Taking oil prices into account would reduce demand and thus user benefits from additional capacity. A range of sensitivity tests would allow the consideration of various options and scenarios.

User Benefits to foreign passengers

4.2.3 Including benefits to foreign passengers significantly enhances user benefits. Following Treasury guidelines and excluding benefits to non-UK residents would reduce the economic returns for investment in additional capacity. It is recognised that access for all business trips is very important to London as a World City, but they are not valued within the standard appraisal method.

Value of time

4.2.4 From our desktop review, it is unclear what values of time were used and how they were developed. There does not seem to be the same level of transparency or supporting data as there is for values of time on other transport appraisals.

4.3 Making more efficient use of existing capacity

Operating Efficiency

4.3.2 As previously explained in the transport review, it is not clear that all options for making more efficient use of existing capacity have been investigated before suggesting expensive infrastructure investment projects. Ways in which average load factors and size of planes could be increased need to be looked into, as well as the potential to operate at existing ATM limits. Moreover,

reducing international to international interliners would potentially relieve the capacity constraint at busy airports.

Changing The Rules

- 4.3.3 There has been much discussion regarding changes in the principles regulating aviation activity at the national and European level. The current principles governing laws on the allocation of slots, landing and air traffic control charges do not seem to contribute to an efficient usage of capacity of airports, nor to help the reduction of congestion and environmental costs of air transport.
- 4.3.4 Allowing for amendments to current legislation could contribute to the issue of dealing with future demand for air travel and capacity issues in the most congested airports such as Heathrow.
- **Single Till versus dual till**
- 4.3.5 Heathrow and Gatwick have lower landing charges than smaller airports in the South East. This is due to economies of scale, but also to the single till principle. In the South East, the Civil Aviation Authority (CAA) regulates Heathrow, Gatwick and Stansted airport charges. An airport with an annual turnover of at least £1 million requires a "permission to levy airport charges" from the CAA¹³. The single till allows for airport charges to be determined according to aeronautical as well as non-aeronautical (i.e. retail activities services provided by the airport).
- 4.3.6 The single till system which includes non-aeronautical services in the calculation of airport charges makes it possible for airports where revenues from retail activity is important to reduce landing charges for airlines. This makes airports like Heathrow and Gatwick attractive for airlines, as they have lower landing charges than other smaller airports that cannot compensate low landing charges with high retail revenues.
- 4.3.7 The CAA have been advocating a change to a dual till system, which would exclude non aeronautical activities in determining airport charges for airlines. This would have the effect of relating landing charges more closely to airport costs, therefore reducing congestion, pollution and increasing the quality of the service provided at airports such as Heathrow.
- 4.3.8 The single till system encourages airlines to use airports that are already suffering from congestion, and not move to other airports where capacity is not used at its full potential. This would reduce demand at Heathrow and Gatwick.
- 4.3.9 It is difficult to predict the impact of a dual till system on revenue. However, an increase in revenue could be expected as part of the revenues (generated by non-aeronautical services) that would not be subject to regulation.
- **Role of Single European Sky**
- 4.3.10 The single European sky initiative was initiated in 1999 and aims to rationalise and improve air traffic, aircraft positioning and communication technologies. One of the initiatives is to create functional airspace blocks (FABs) to integrate airspace across borders which will enable increased airspace capacity. Rationalising airspace capacity will not only enable more efficient use of airport capacity, but also reduce aircraft emissions and environmental damages. The IATA expects that a cut of 12% of aircraft emissions could be made from changes such as a centralised air-traffic control system at the European-level.
- **Grandfather Rights (slot allocation)**

¹³ <http://www.caa.co.uk/default.aspx?categoryid=78&pagetype=90&pageid=68>

- 4.3.11 The current system rests upon administrative rules which condition the allocation of slots. Grandfather rights make it possible for airlines that previously own certain slots to keep them year on year free of charge if they use them 80% of the time. Otherwise, the slot is allocated to other airlines, according to principles that do not necessarily advantage the companies that value the slots more. The UK Office for Fair Trading and the CAA explain that the current system of slot allocation “creates rigid incumbent slot holdings that are slow to respond to changes in demand conditions and this inertia creates significant barriers to entry and expansion”¹⁴.
- 4.3.12 This system is not effective and does not allocate slots in a way that best reflects airline and passenger demand. There has also been evidence that some airlines keep their slots to keep competition out. There is no clear regulatory framework at the EU level for the exchange of slots. In practice, in the UK, slot swaps are allowed under certain circumstances. For example, BA concluded a deal with Swissair for an exchange of slots and compensation of £35 million at Heathrow.
- 4.3.13 Different options have been discussed at a national and European level in order to switch to a more effective slot allocation mechanism. A market oriented allocation would enable to move the supply of flights closer to demand, and make better use of existing capacity. One of these options is the creation of a clear framework for a secondary market which allows for slot exchanges and buying between airlines and perhaps other bodies.
- 4.3.14 This would lead to a market set rate for slots, removing many marginal flights often offered by smaller planes out of airports such as Heathrow, thereby freeing up capacity. The market rate could incorporate environmental taxes if required.
- **Taxes on air travel**
- 4.3.15 Unlike other transport modes such as rail or car, aviation is exempt from tax on fuel and VAT on ticket sales, and is allowed to sell duty-free products to extra-EU passengers.
- 4.3.16 In order to level aviation with the other modes and to take into account environmental concerns linked to aviation, taxes on fuel could be introduced. This would enable the internalisation of environmental costs as well as reduce passenger demand, since the taxes would have a direct repercussion on air fares. By doing so, the fall in demand would reduce the need for additional capacity in the South East and in the UK. Sensitivity tests carried out on air traffic forecasts¹⁵ concluded that the introduction of an environmental fuel tax would reduce demand by 10%.
- **Price Regulation**
- 4.3.17 The Airports Act 1986 determines the economic regulations of UK airports which have an annual turnover exceeding £1million. This means that Heathrow, Gatwick and Stansted are price regulated by the CAA. The regulatory framework aims to further the reasonable interests of airport users, further efficient and economic operation of airports, and encourage investment in time to satisfy anticipated demand¹⁶. This is done through the setting of five-year price caps and discretionary trading conditions.
- 4.3.18 However, price regulation gives way to perverse effects. BAA is the operator of Gatwick, Heathrow, Stansted and four other regional airports. Due to price

¹⁴ Office for fair trading, 2005, competition issues related with the trading of airport slots

¹⁵ DETR, Air Traffic Forecasts for the United Kingdom 2000

¹⁶ http://www.baa.com/assets/B2CPortal/Static%20Files/Regulatory_transcript_16%20Nov05.pdf

capping, it has little incentive to make its operations more efficient, as the extra gains would be taken away by the next round of price setting.

4.3.19 Getting rid of price capping would enable airport operators to set prices according to demand. This would increase prices at Heathrow encouraging a focus on premium-rate business oriented services most relevant to London's World City role, and would enable redistribution of demand at other London airports according to market-led mechanisms.

▪ **Inclusion of aviation in the EU Emission Trading Scheme**

4.3.20 In September 2005, The European Commission adopted a Communication recommending that the aviation sector be included in the EU Emissions Trading Scheme. A legislative proposal is planned to be set out before the end of this year. The aircraft operators would be responsible for complying to the scheme. It is likely that integrating aviation into the scheme will add costs to airlines, which would lead to higher fares and lower demand.

4.3.21 In recent years the rapid growth in aviation has been on routes into secondary and regional airports. Emissions trading may result in a reduction in low volume routes and smaller aircraft, and a concentration on the higher density routes. The impact on London airports may therefore be marginal. However, a portion of these routes may serve Luton or Stansted, in which case putting cost pressure on these marginal routes may well free up capacity for higher density routes from these airports.

4.4 Conclusion

4.4.1 Passenger demand forecasts, user benefits to foreign passengers as well as values of time used should be reviewed in order to determine whether user benefits have been overstated in the SERAS economic appraisal.

4.4.2 Moreover, other ways of dealing with capacity constraint by increasing operating efficiency, as well as the possibility of introducing or modifying existing market rules governing air travel in the UK and the EU need to be assessed before considering additional runways.

5. Effects on the choice of location

5.1 Introduction

5.1.1 GLA have asked CB to look into arguments that would influence the case for expansion at Heathrow airport. This section examines the findings of the transport appraisal review, analysing how they affect expansion at Heathrow compared to expansion options at the other London airports. Moreover, although environmental issues are not included in the direct focus of this study, they are mentioned as they significantly impact on the future options including runway development opportunities at Heathrow.

5.2 Transport benefits

5.2.1 Changing certain assumptions and options in the transport appraisal will not always affect the London airports in the same scale. Lower values of time and reducing the proportion of interlining passengers will reduce benefits at Heathrow more than at Stansted, Gatwick or Luton.

5.2.2 Using lower values of time, notably regarding in work VOT will have a greater effect on benefits at Heathrow, as there is a higher proportion of business trips from Heathrow than at Stansted, Gatwick or Luton. The results of a CAA survey on the pattern of aviation usage by business travellers underlines this:

“66% of the passengers flew from Heathrow, with a further 20% using London City Airport. Gatwick, Stansted and Luton account for 16% of passengers.”¹⁷

5.2.3 As highlighted in the transport appraisal review, there are more I to I interliners at Heathrow. Thus reducing the number of I to I interliners at Heathrow will reduce shadow costs at this airport more than at other airports. Around 28% of Heathrow passengers in 2000 were I to I interliners, compared to 11% at Gatwick and even less at Stansted and Luton¹⁸.

5.2.4 Lowering demand forecasts, and increasing operating efficiency will affect the South East airports roughly equally. Wider economic benefits could be lower at Heathrow because of the wider catchment area which would make it unlikely that residents of regeneration areas benefit from the expansion of the airport.

5.2.5 The table below summarises the various transport and economic factors and how they impact on Heathrow compared to the other London airports.

¹⁷ http://www.cityoflondon.gov.uk/NR/rdonlyres/A49D45D4-E303-4C49-BACC-1EF8A23417E9/0/BC_RS_aviation_0210_ES.pdf

¹⁸ DTLR, 2002, regional air services co-ordination study

Table 5.1: Summary table

Impact On Heathrow Compared To Other Locations	Higher	Equal
Using a lower value of time	√	
Using lower demand forecasts		√
Reducing interliners	√	
Wider economic benefits		√ With policy intervention, expansion at Stansted airport could bring about higher regeneration benefits
Operating efficiency		√

5.3 Environmental issues

5.3.1 It is clearly explained in the Future of Air Transport White Paper that expansion at Heathrow will not be possible unless environmental constraints can be properly addressed. This not only concerns air but also noise pollution, which is far worse already at Heathrow than at the other airports. The future for air transport consultation document acknowledges that:

“Even with concerted effort by the industry to minimise environmental impacts, it might be difficult to make them acceptable.”¹⁹

5.3.2 However, it would be useful to determine how plausible it is for Heathrow to meet the environmental limits required by the European directive for air quality, as well as other requirements for noise, and in time for the third runway to be built.

5.3.3 A scoring system should be applied to enable the weighting of the different transport, economic, social and environmental impacts of airport expansion. If environmental concerns are given a high score, it is very likely that the options including a new runway at Heathrow will score badly compared to the other options.

5.3.4 The DfT 2003 document *The Future Development of Air Transport – South East Consultation Document*, explains that:

“It is Government policy that aviation should meet its external costs, including environmental costs”.”

5.3.5 Sensitivity tests including a tax on air emissions have been run, leading to a negative impact on demand forecasts. However, the environment tax has not been included in the base case. Integrating the environment tax in the analysis might prove to be more realistic and would be more in line with future environmental policies.

5.4 The need for a transport hub

5.4.1 The main argument for a transport hub is that it enables airlines to serve more destinations and run more frequent services due to connecting flights. For the moment Heathrow acts as an important transport hub in the UK and in the EU. Limiting capacity at Heathrow will in time reduce its hub role by squeezing out the number of connecting flights. This will generate a slight disbenefit for UK

¹⁹Department for Transport, 2003, The future of Air transport white paper

passengers due to the reduction in destinations and flight frequencies that might otherwise have occurred. However, only marginal flights would be affected, and over time, the supply of flight destinations and frequency of flights would readjust to demand. Capping Heathrow's hub role would only lead to slight disbenefits to air transport users.

- 5.4.2 Hubs provide benefits to airlines, especially to those who rely on connecting services. However, the White paper stresses that airlines are now looking at developing point to point services which means they would rely less on connecting traffic. A major transport hub in the South East would not be so indispensable. The following paragraph from the White Paper states:

“Our assessment suggests that the greatest economic benefits are obtained by providing capacity in locations which are convenient for as much as possible of the total demand. That is better achieved by a more dispersed pattern of capacity than by concentrating all additional capacity at one location.”

- 5.4.3 This suggests that there would not be a specific need to increase capacity at Heathrow in order for it to maintain its hub role.

5.5 Conclusion

- 5.5.1 Using lower values of times and factoring out the number of interliners, as well as environmental concerns and constraints affect the case for expansion at Heathrow more than expansion at other airports. Moreover, the argument for the need to sustain Heathrow's role as a transport hub does not seem to be consistent.

6. Impact on the aviation industry and regions

6.1 Introduction

6.1.1 This section analyses the impact of providing an additional runway or a mixed mode use of runways at Heathrow on the aviation industry and the local/regional national economies.

6.2 The impact of a third runway at Heathrow compared to an additional runway elsewhere in the South East

6.2.1 Overall, there are no significant arguments for providing additional capacity at Heathrow rather than at other South East airports. With regards to the aviation industry, there is no impact on the industry on the whole, although some particular carriers will lose out, largely due to reduced interlining opportunities.

6.2.2 Although West London and Berkshire would lose potential employment opportunities and increased economic activity if additional capacity was not provided at Heathrow, the scope of the benefits are uncertain as the economy of this part of England is already performing strongly. There would be no difference for the London, South East of England, and UK economies if capacity was provided at Heathrow or elsewhere.

Table 6.1: Regional impacts of providing an additional runway at Heathrow

Impact On:	No Impact	Medium Impact	Significant Impact
West London and Berkshire economy		√	
London and South East economy	√		
National economy	√		

6.3 The impact of providing additional capacity in the South East compared to constrained capacity

- Impact on the aviation industry

6.3.2 The aviation industry has been broken up in four main sectors: airport operators, existing airlines, new entrants, and other industries linked to the aviation industry (suppliers, caterers etc).

6.3.3 The table below compares the possible impacts of providing additional airport capacity in the South East with a constrained capacity scenario. The impact of a mixed mode use of the runways at Heathrow has similar effects to the provision of an additional runway, although on a smaller scale.

6.3.4 If capacity is constrained, the impact on airport operators will, under current CAA regulation, be negative as their profits are regulated out, and would not be able to benefit from increased competition for slots. However, if the regulatory regime were changed, the operator of an airport with the greatest excess demand might be allowed to raise landing charges. Under current regulation,

the operator in charge of an airport accommodating a new runway will gain as they are effectively guaranteed an automatic fixed rate of return.

- 6.3.5 It is difficult to assess the impact of additional capacity on airlines. Under a constrained scenario with current regulation, airlines would be able to charge monopoly prices and increase their profit margins, due to a lack of competition. New regulatory options could be looked into to reduce anticipated problems. If additional capacity is provided on the other hand, airlines would be able to increase their offer of flights and destinations, however they could lose out because of increased competition.
- 6.3.6 Finally, with regards to suppliers, constraining capacity would mean they would lose out on potential benefits as they would still be in a competitive market, but with reduced demand. Their returns are largely proportional to the number of flights.

Table 6.2: Impact on the aviation industry

Aviation Industry	No Additional Capacity Provided	Additional Runway In The South East	Mixed Mode Use At Heathrow
airport operators	-	+	+
existing airlines	+	+/-	+/-
new entrants	-	+	+
suppliers	-	+	+

- Impact on local/regional/national economies
- 6.3.7 Regarding the local, regional and national economies, all of these would lose out on additional employment and possible regeneration impacts of additional activity in the South East on the whole. The West London Economy is mostly affected by the constrained capacity at Heathrow airport. On the other hand, other regions of the UK could benefit from constrained capacity in the South East, as it would allow airports in these regions to take over passenger flows that would have otherwise gone through South East airports.

Table 6.3: Regional impacts of constrained capacity

Impact On:	No Impact	Medium Impact	Significant Impact
West London and Berkshire economy		√	
London and South East economy		√	
National economy		√	

6.4 Conclusion

- 6.4.1 On the whole, providing additional capacity in the South East will bring equal benefits to the aviation industry and the regional/national economies, whether capacity enhancements occur at Heathrow or any other airport.

7. Accessibility

7.1 Introduction

7.1.1 The accessibility objective relates to the change in availability of transport services within the study area and the improvement of access to the transport system. Improved accessibility also aims to reduce severance affecting those using non-motorised modes.

7.1.2 The issue here is mostly about surface access. Accessibility will not be improved if capacity enhancements are not made in conjunction with significant surface access investments.

7.2 Surface Access issues

7.2.1 The table below shows the districts that are included within the core and wider catchment areas of the five main airports in the South East of England.

Table 7.1: Districts in the Core and Wider Catchment areas by airport

Airport	Core Catchment Area	Wider Catchment Area
Heathrow	Ealing; Hillingdon; Hounslow; Spelthorne	Harrow; Kingston-Upon-Thames; Richmond-Upon-Thames; Bracknell Forest; Reading; Slough; Windsor; Wokingham; Wycombe; South Buckinghamshire; Hart; Rushmoor; Elmbridge; Surrey Heath; Woking
Gatwick	Reigate&Banstead; Crawley;Mid-Sussex	Brighton&Hove; Croydon; Sutton; Lewes; Wealden; Mole Valley; Tanbridge; Horsham; Worthing
Stansted	East Hertfordshire; Uttlesford	Cambridge; South Cambridgeshire; Braintree; Chelmsford; Harlow; Epping Forest; Enfield; Great Yarmouth; St Edmundsbury
Luton	Luton	South Bedfordshire; Hammersmith&Fulham; Bedford; Mid-Bedfordshire; Dacorum; North Hertfordshire; St Albans; Stevenage; Chiltern; Cambridge; Epping Forest; East Hertfordshire
London City	Newham	Barking&Dagenham; Redbridge; Tower Hamlets; Havering; Waltham Forest; Chelmsford

Source: Arup Economics and Planning, 2002, South East and East of England Air Services Study, Social Impacts Appraisal

7.2.2 As explained above, increasing airport capacity will not create accessibility benefits if access to and from airports, particularly in relation to London, is not improved. Providing adequate surface access will widen the catchment areas of the airports. However, surface access investment, whether it is at Heathrow or other South East airports, will need to be significant if the benefits from increased capacity are to be maximised. It does not seem accessibility has been granted as much importance as it should have had in the Aviation White Paper and other documents.

7.3 Other transport implications

7.3.1 The Mayor of London's response²⁰ explains that SERAS has not considered the impact of increased capacity for airport access on other transport priorities for London and the South East, and explains the possibility that SERAS surface access proposals could be at the expense of local services needed to meet demand for transport in London.

7.3.2 It also highlights the fact that it is not certain whether the surface access improvements as stated in the SERAS report will be able to cope with the expected demand, especially as the rail network is already operating at capacity most of the time. A number of the surface access schemes included in the options have not been agreed on yet, and might not be implemented on time.

²⁰ GLA, 2003, the Mayor of London's response to the consultation document 'the future development of air transport in the United Kingdom: South East'

8. Conclusion

- 8.1.1 By reviewing and analysing the appraisal of the different SERAS packages aiming to increase airport capacity in the South East, this document has highlighted and reviewed the arguments presented in favour of an additional runway at Heathrow.
- 8.1.2 The user benefits, values of time, demand forecasts and existing capacity constraints should be looked into in order to determine whether the benefits of an additional runway in the South East and more particularly at Heathrow airport have been overstated. Also, making more efficient use of existing runways could significantly boost the number of potential passengers South East airports can handle. These factors need to be considered before any assessment of additional runway capacity is undertaken.
- 8.1.3 Regarding wider economic and social benefits, it is unclear how enhanced capacity at Heathrow would create more employment, regeneration and agglomeration benefits than if capacity was increased at another London airport, such as Stansted or Luton. Without airport capacity enhancements, a redistribution rather than a loss of resources in the South East and the UK would occur.
- 8.1.4 On the whole, location does not matter so much: providing additional capacity in the South East will bring equal transport and wider economic benefits whether capacity enhancements occur at Heathrow or any other airport.
- 8.1.5 Analysis has shown that certain factors such as environmental concerns and assumptions used in the economic appraisal affect the case for Heathrow expansion more than expansion at other London airports. Also, the argument for sustaining Heathrow's role as a transport hub does not appear to be very strong.
- 8.1.6 Surface access is essential in order to create accessibility benefits arising from airport expansion at all airports. This issue should be looked into in more detail as it is unclear if these have been fully taken into account in the appraisal.
- 8.1.7 Finally, there are many uncertainties concerning the need for additional capacity in the South East, and more particularly the provision of an additional runway at Heathrow airport. The recent announcement of BAA's takeover by the Spanish company Grupo Ferrovial and the decision of the OFT to launch a market study into UK airports may lead to more competition between Heathrow, Stansted and Gatwick. Indeed, for the moment, BAA owns all of these three airports, and makes use of cross-subsidies in order to sustain Stansted. However, due to the takeover or the possible separation of the operation of BAA airports, more competition and lobbying for expansion for example at Stansted might occur, as it would not receive subsidies from Heathrow's revenues anymore. The main focus on Heathrow may well be scaled down.

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