

Response to

“The Future Development of Air Transport  
in the United Kingdom: South East”  
Second Edition (February 2003)  
By London Luton Airport Operations Limited  
June 2003

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# Executive Summary

- Government forecasts for future demand for aviation are robust, though shape and structure of demand may be significantly different to forecasts.
- Ultimately, up to three **new** runways are required in the South East.
- However, new runways should be constructed where this demand arises, on an incremental basis and subject to ongoing demand appraisal. Resource efficiency principles must continue to be embraced throughout this process.
- Government needs a framework for the delivery of this additional runway capacity.
- Government must use **existing runway capacity to its 'maximum use'** before committing to the construction of additional runways.
- The utilisation of existing runways to their maximum use will enable Government to complete further detailed assessment essential before delivery of new runways is determined. This assessment should illustrate where future demand/markets for air transport will be and embrace a **plan, monitor and manage** approach.
- 'Maximum use' is recognised as increasing capacity at London Luton Airport to 31million passengers per annum (mppa).
- The **extension of the existing runway** represents the optimum 'maximum use' scenario at London Luton Airport.
- London Luton Airport **must not be used as a stop-gap** whilst development options are planned at other airport(s).
- Government must recognise the interaction between all four airports in the London area, termed the '**Greater London Hub**'. Surface access links should be improved to facilitate connections between these airports.
- Whilst further assessment is required, the development of four, two runway airports (London Luton/Heathrow/Gatwick/Stansted) would 'spread the economic gain and environmental pain' equally across the region whilst embracing the principles of sustainability.
- LLAOL does support, as part of national strategy and once existing airports are utilised to 'maximum use', subject to demand:
  - the development of a second runway at London Luton;
  - the development of a second runway at Stansted; and
  - the development of a second runway at Gatwick.

- LLAOL does not support: the development of a third runway at Heathrow; a three or four runway Stansted nor a new airport at Cliffe.
- All development proposals must be sustainable. Economic growth **must** be balanced against environmental impacts, use of natural resources and social inclusivity.
- All airports must operate independently in open competition but as an integral part of a national strategy. **Shared ownership must end.**
- All development options must include detailed assessment of surface access. Proposals for improved public transport links must be brought forward alongside development options, in partnership with the relevant statutory agencies.
- London Luton Airport is the key economic driver for Luton, Bedfordshire and the wider sub-region.
- London Luton Airport can play a major role in delivering future runway capacity in the South East.

BAA Heathrow's Managing Director stated in a press release dated 12th January 1999:

***"We are very concerned to put people's mind at rest on this issue. The Government – and only the Government – has the authority to make a decision of this sort but in asking them to exercise that authority we are giving the clearest possible indication of our belief that a 'third' runway should never be built at Heathrow"***

To summarise LLAOL's position:

***"We agree with Government that the long-term development of aviation in the UK must be sustainable, balancing the economic benefits to UK plc with, amenity and environmental issues. Resource efficiency must be considered the first step towards delivering a sustainable industry by developing airports to their maximum use, following market demands and creating additional capacity where demand arises. London Luton Airport is ideally placed to meet both of these challenges and can operate as a key economic lever to unlock the potential of Luton and the large catchment area that airport serves"***.

## 1. INTRODUCTION

### **TBI plc & London Luton Airport Operations Ltd**

- 1.1 London Luton Airport (LTN) is currently operated by a private consortium known as London Luton Airport Operations Ltd (LLAOL) under a concession agreement from London Luton Airport Limited, wholly owned by Luton Borough Council. LLAOL are the licensed operators and responsible for the development and management of LTN. TBI plc has a controlling interest in this company with 71.4% of the equity, with 28.6% owned by Bechtel Enterprises (UK) Limited (a joint venture between Alterra Partners, a subsidiary of Bechtel Enterprises and Singapore Changi Airport).
- 1.2 TBI is one of the world's leading airport owners and operators with a proven track record for delivering airport infrastructure. In the UK it owns and operates the airports at LTN, Cardiff International and Belfast International.

### **SERAS – Second Edition**

- 1.3 LLAOL welcomes the consultation being undertaken into the future development of air transport in the UK by the Department for Transport (DfT).
- 1.4 Last year Government published a series of consultation documents seeking views on the future development of air transport in the South East (SERAS). LLAOL submitted a detailed management response to this first consultation document in November 2002, which is available on LLAOL's website ([www.london-luton.com](http://www.london-luton.com)).
- 1.5 However, the High Court held that the consultation document should include options for additional runway development at Gatwick (LGW). Government decided not to appeal the judgement and accordingly published a second edition of the consultation document covering the South East of England in February 2003.
- 1.6 In addition to including options for LGW, Government has also taken the opportunity to provide further clarification where deemed necessary and to correct typographical errors. The consultation period for the second round of consultation (SERAS 2) is open until 30th June 2003.
- 1.7 LLAOL welcomes the following amendments:
  - the inclusion of LGW options in the consultation process;
  - further clarification of the term 'maximum use' with respect to LTN; and
  - further clarification that increased use at LTN could be based on the existing runway alignment (an extension).
- 1.8 The following observations have been completed in response to this second consultation document. It aims to build upon and complement LLAOL's first submission, both re-visiting previous work and provide further amplification where necessary. This response will also include further detailed assessments of options for expansion at LTN.

## 2. TODAY & THE FUTURE FOR UK AVIATION

### Emerging Trends

- 2.1 The air transport industry is going through a period of change, both globally and nationally. Long un-challenged assumptions about the future profitability, size, shape and direction of the industry are being seriously questioned. The continued chronic un-profitability of the traditional airline sector is causing increasing concern to Government and investors alike, despite continued actual and forecast long-term growth.
- 2.2 In addition, the 'No-Frills Carriers' (NFC's), whether UK or European-based, have revolutionised the domestic and short-haul scheduled markets using a variety of strategies, concentrating largely on reducing the operating cost-base; through high utilisation of aircraft, removal of in-flight 'frills' and on-line sales. Initially NFC's have focussed route development through secondary airports, although some securing of slots has now occurred in primary airports.
- 2.3 In recognition of this trend, several traditional carriers have launched low-cost products (with mixed success), or are re-thinking strategies to adopt NFC cost reduction principles (pricing, marketing, overheads, aircraft utilisation), resulting in a convergence of product offer on domestic and European short-haul routes.
- 2.4 Major hub-based carriers are not immune to economic downturn, the economic impact of terrorism, issues of consumer buying power, phenomena such as SARS, and any other issues likely to come. The result is that many traditional scheduled airlines are in serious financial difficulties. Likewise, some NFC's have been showing signs that market conditions can affect them too. BA recorded a pre-tax profit of £135m in 2002/03 following a loss of £200m the previous year. bmi posted a pre-tax loss of £19m in 2002, but Ryanair posted increased profits to over £100 million and recorded double-digit growth in passenger numbers.
- 2.5 Since May 2000, the low-cost sector has shown signs of maturing; some NFC's have failed (including those launched by traditional carriers) and consolidation is taking place – easyJet and Go; Ryanair and Buzz. This consolidation is enabling NFC's secure previously unavailable peak-hour slots at primary airports.
- 2.6 Despite this, the widely held view is that Government forecasts (in terms of actual passenger numbers) remain largely accurate, ... *"though the shape and structure of that demand may be different to that which was previously envisaged"* (DfT - Forecast Advisory Group, May 2003).
- 2.7 Insufficient data for the NFC market was available to inform the development of the national forecasts published in May 2000, particularly the domestic and 'charter substitution' markets. This would imply that the future contribution of these NFC's has been underestimated.

## Future Outlook & Implications for Policy

- 2.8 LLAOL supports the view of the DfT Forecast Advisory Group that the future shape and structure of the aviation industry may be significantly different to that predicted in the May 2000 national forecasts, without significantly altering the overall predictions for passenger numbers. The remainder of this chapter will outline specific issues likely to influence the shape and structure of demand in the South East, and ultimately the provision of new, additional runway capacity.
- 2.9 It is clear that the aviation industry continues to surprise the analysts, forecasters and experts. Progressive airlines continue to demonstrate their flexibility, vitality, dynamism and competitiveness over growing markets, whilst passengers' travel behaviour continues to change. Government policy and airport development must be able to adapt and respond to changes within the industry and deliver the necessary infrastructure to meet the needs of airlines and passengers.
- 2.10 With this in mind, it is imperative that Government forecasts are continually revised and that policy is flexible enough to respond to any variations in the structure, source and location of demand. Policy should enable Government to '**plan, monitor and manage**', so that capacity can be sensibly provided when and where demand arises.

## Airline Industry Structure – Today & the Future

### *Network Carriers*

- 2.11 The 'traditional' network carriers are in transition. We have seen significant consolidation, retrenchment and withdrawal from non-core routes, airports and activities. Previous business models are being reconsidered and refocused. A shift in emphasis has been observed, from connecting traffic to higher yield point-to-point traffic, often at reduced frequencies. Traditional 'hubbing' activities appear to be less prevalent than in recent years and carriers are being forced to adopt low-cost business principles to protect key domestic and short-haul markets. This trend is likely to continue. Indeed in the US, some large scheduled carriers are deconstructing their hub strategies altogether.

### *Alliances*

- 2.12 Much recent activity and focus in the air transport industry has been on international alliances. Alliances are the interim legal associations of airlines that will need to be maintained until all current international ownership and control restrictions have been overcome. However, few alliance carriers have recently reported profits.
- 2.13 In addition, due to the scale of a true hub operation, airports can become dependent on a single airline or alliance, which will dominate the slots, wield unhealthy 'political' power, and ultimately distort the market.

## *No-Frills Carriers*

- 2.14 NFC's now equal 14% of the total UK aviation market. NFC's are rapidly expanding in Europe and are well established in the US. In 2002, 30% of all domestic and short-haul passengers travelled by NFC's. Domestic travel by NFC's increased by 59% (2001 – 2002), whilst international travel increased by 41%. NFC's have revolutionised the domestic and short-haul scheduled markets. Simultaneously, NFC's have voraciously consumed market share historically occupied by the charter market. Key business routes and 'sun and snow' destinations have been a key factor in the NFC success story.
- 2.15 Two dominant NFC's control the majority of the UK NFC market, easyJet a LTN-based operator, and Ryanair, whose main UK base is Stansted (STN). A number of other NFC's have appeared at airports across the UK, and some consolidation has already occurred. Many of these carriers have been delivering consistent double-digit growth.
- 2.16 Government recognised the contribution NFC's may make, and the potential to "*change the forecasts*" (Annex 2, paragraphs A2.15-6, DfT, The Future Development of Air Transport in the United Kingdom: South East). However, this was not quantified due to the lack of econometric data in 1999/2000, when the national forecasts were developed. Clearly, this sector has matured and is here to stay.
- 2.17 A key characteristic of NFC's is the impact upon, and their relationship with, their home base airport. NFC's have yet to demonstrate effective operation from airports designed and operated principally for the traditional airlines. Such facilities are not necessarily designed with fast-turnaround as the main priority. If these airports are slot constrained the integrity of their operation could be adversely affected, utilisation levels reduced and further cost penalties imposed.
- 2.18 Whilst the future of NFC's themselves cannot be confidently predicted, the low-cost principles of air travel are firmly established, and in time may extend to other sectors other than domestic and short-haul international markets. It is essential that Government remains flexible so as to ensure appropriate runway and airport facilities are provided that will match the operational needs of the NFC's. Airports such as LTN already understand these requirements and have a proven track record in delivering this infrastructure.

## *Non-Scheduled Carriers (Charter)*

- 2.19 The 'charter' market has grown at only 2.4% pa in the last five years, half the level of growth in UK leisure traffic. The charter markets share of UK traffic is in slow decline. This decline is undoubtedly as a result of the blossoming NFC market, many having focussed on 'sun and snow' routes.
- 2.20 The traditional non-scheduled carriers are themselves changing and evolving in response to the NFC challenge. Most are now part of large European owned vertically integrated organisations. Many are also "scheduling" their offering and distribution as the traditional distinction between scheduled and charter flights blurs, offering package holidays and one-way, 'seat-only' deals.

- 2.21 Despite this, the non-scheduled carriers are the original low-cost carriers, with lower unit costs. As such the charter airlines can mount a robust defence of their markets, offering a greater range of products and services. Although the non-scheduled carriers will undoubtedly change, they will continue to occupy an important niche, serving specific local markets and niche consumers at the majority of the commercial airports in the UK today.

### *Freight & the Integrators*

- 2.22 Whilst the use of 'bellyhold' in passenger aircraft represents the major proportion of flown freight, the demand by modern business for 'immediate delivery' has translated into the need for dedicated integrators such as FedEx, UPS, DHL and TNT, who continue to dominate the air freight business. They offer confirmed, secure, fixed cost overnight delivery and thus must be in close proximity to principal markets, predominantly London.
- 2.23 Freight/integrators usually require specific modern facilities including runway access, airport infrastructure, labour, night-time operations, surface access links as well as accessibility to markets, much in common with passenger traffic. It is therefore reasonable to assume that their needs have to be addressed in a similar manner when deciding the location of additional runway capacity.

### **Hubs and Connecting Traffic**

- 2.24 The definition of a 'hub' in itself is open to some debate. Although not a 'traditional' hub itself, LHR undoubtedly performs a hubbing role in the UK, with high levels of domestic-international and international-international connecting traffic.
- 2.25 In recent years LHR has seen its position as the main hubbing airport in Europe under threat from Paris Charles de Gaulle, Frankfurt and Amsterdam Schiphol. This position of dominance has largely been lost due to congestion at LHR and the failure to provide the type of runway and general airport infrastructure necessary to allow major airlines or alliances to operate in 'waves', preferable at key 'traditional' hubs.
- 2.26 LHR has recently been faced with the erosion of the crucial US and Asian/Pacific markets resulting in difficulties for the 'hub' airlines, whose business models generally require contraction in demand to be met by capacity reductions rather than by frequency reductions. The connections have to be preserved. Point-to-point carriers can divert capacity from one route to another with greater ease. The costs, delays and relative operational benefits of hub airports, as against point-to-point operation, are increasingly being questioned. American Airlines have just de-peaked their hubs at Dallas Fort Worth and Chicago, while other US carriers are reducing the scale of activity or withdrawing from hubs completely.

2.27 Major airports in the UK already suffer from congestion at peak times, caused by a lack of runway capacity. This is not conducive to the effective operation of the hub model. Compounding delays will cause longer journey times and increase costs. The traditional hub concept will be under threat unless it is confined to specific airports with the capacity and design that will facilitate success. Despite this, BAA stated during the recent public inquiry into Terminal 5 at LHR:

***“ BAA would urge the Government to rule out any additional runway, and BAA would support a recommendation by the inquiry Inspector in his report to the Secretary of State that the Government should rule it out. Indeed, BAA invites the Inspector to make such a recommendation”***

2.28 The combined impact of insufficient infrastructure at LHR and the growth of NFC's is altering the generalised cost of connecting traffic, resulting in new levels of 'inter-lining' between airports in the South East, seeing the informal, organic growth of a '**Greater London Hub**'. Indeed, the DfT - Forecast Advisory Group state in a recent report, 'Air Passenger Growth and Airport Capacity':

***“Connecting traffic will always exist where interchanging reduces the generalised cost of the journey. ...passengers will continue to find transfers or connecting flights if such activities reduce their overall travel costs”.***

2.29 London is uniquely placed with four major airports serving the South East market. This London system must be developed together to ensure that an appropriate network of services is available, and that the necessary surface access links are in place. Otherwise, London will fail to compete against the emerging European super-hubs, built bespoke on green field sites with Government contributing towards surface access and associated infrastructure costs.

2.30 BAA concede in their recent SERAS response to Government (May 2003):

***“...it is also clear that a single airport location is unlikely to be able to provide an extensive network of destinations and offer both high capacity and high frequency on these routes”.***

2.31 BAA further state:

***“This suggests that other airports in the London system, besides LHR, could have an important role in developing a wider range of destinations...”***

2.32 LLAOL supports the BAA view that the current and future shape and structure of demand can only be realistically met across the entire London system. This will require some improvement to surface access links between the four major airports in the South East, building on the strengths of the '**Greater London Hub**'.

2.33 Calculations reported in the DfT's SERAS documents show that the greatest economic benefits accrue from a dispersed pattern of additional airport capacity around the South East. This view is supported by the DfT - Forecast Advisory Group, who question the benefits of a 'mega-hub'.

## Competition

- 2.34 Competition is central to the vibrant UK economy. Despite this, competition is absent in the aviation industry in the South East. BAA operate from a position of strength, both in terms of market share and common ownership. Between 1985 and 1999, Government has concluded on five occasions that the benefits of this ownership structure outweigh the costs. LLAOL believes that the current regulatory framework has stifled competition and in turn influenced the supply of runway capacity and the shape and structure of demand.

### *Airlines*

- 2.35 The airline industry has changed dramatically in recent years, particularly since the national forecasts were published (May 2000). These emerging trends are likely to significantly influence the future shape and structure of demand for aviation in the UK.
- 2.36 The domestic, short-haul and long-haul markets have experienced re-structuring in recent years. 'Full service' travel is proving increasingly unprofitable. The domestic/short-haul market has been revolutionised by the NFC's, forcing traditional scheduled airlines to re-think business strategies, resulting in a convergence in styles. This has been particularly marked in the UK to the extent that some industry experts predict NFC's to eventually control up to 60% of this market (30% in 2002).
- 2.37 The long-haul market has been affected by the performance of major US carriers, September 11th and SARS, and the global market has been suppressed. Despite this, it is likely that the long-haul market will recover, with liberalisation forcing down costs and fares. Further consolidation is also expected through mergers and alliances, centred around so-called 'hubs'.

### *Airports*

- 2.38 The SERAS process itself raises interesting questions with respect to competition and the provision of airport infrastructure. A truly free market would enable such infrastructure to be delivered where the market dictates. However, with wider socio-economic, amenity, surface access and global environmental issues to consider, Government intervention and guidance is essential.
- 2.39 Despite this, there would almost certainly be a competition issue if certain airports were to be constrained and/or additional preference is given to certain airports; whether by prioritisation of developments, prescribed timing for those developments or by consequential restriction of airspace used by other airports. In addition, this argument would apply for any airport perceived as a 'stop-gap' by Government to provide 'temporary' capacity in the South East. The medium and long-term effects upon that airport and the surrounding economy must be given careful consideration.

- 2.40 The **Greater London Hub** includes four airports, three operated by BAA, one by LLAOL. Any decision on future capacity must ensure that one company is not placed in a disadvantageous position in the marketplace. Each airport should be expected to compete independently, but equally should operate as a system, guided by national policy. As a consequence, **common ownership must cease**.

## **Airport Regulation**

### *Dominance*

- 2.41 67% of total UK air traffic currently travels through a BAA airport. In the South East this figure rises to 93%.
- 2.42 Without significant development at other airports, both UK-wide and in the South East, dominance is likely to increase. This virtual monopoly of the South East market has been further strengthened by BAA's ability to operate 'system ownership'. Whilst this system may successfully protect individual airports from fluctuations in the market, it has not guaranteed the provision of infrastructure necessary for a changing industry.
- 2.43 The South East is now deficient in total runway capacity, which in turn creates congestion and reliability issues for airlines and drives up the generalised cost for passengers. The lack of competitive tension within the South East has further reinforced this dominance to the disadvantage of the airlines and their passengers.
- 2.44 The options for additional runways at BAA airports proposed in the SERAS documents will largely perpetuate this dominance, particularly if common ownership is continued.

### *Pricing*

- 2.45 Government has recognised the BAA's dominant position and introduced a dual regulatory framework, involving both the Civil Aviation Authority (CAA) and the Competition Commission. The last review was completed in March 2003 with the CAA and the Competition Commission in disagreement. The review concluded, against the views of the Competition Commission, that BAA could increase its regulated charges at LHR by 40% over the next 5 years (to fund Terminal 5), whilst LGW and STN increases would be restricted to the rate of inflation. The Competition Commission believe that prices should be individually set to reflect the market, costs and assets of each airport.
- 2.46 LLAOL supports the view of the Competition Commission, which recognises the impact such dominance has on other airports in the region. LLAOL would welcome a fundamental review of the regulatory regime as part of the White Paper process.

## *Benchmarking*

- 2.47 LTN is the only major airport in the **Greater London Hub** outside BAA ownership. The existence of LTN, with an ability to grow to some 30 million passengers per annum, and beyond, offers both the industry and Government the opportunity to benchmark BAA performance.
- 2.48 TBI/LLAOL's performance on both unit costs and revenues compare favourably with those of BAA. TBI/LLAOL believes that it can provide new capital projects at a lower cost than developments at BAA airports. This can be achieved by applying aggressive cost management techniques, specific to the needs of the end user on an 'as and when' basis rather presumptive.
- 2.49 In the absence of any domestic benchmark, in terms of provision of airport infrastructure and facilities, BAA's performance can only be realistically compared against other European airports. On this basis, it would appear that the UK air passenger is being short-changed. A dispersed pattern of capacity around the South East, as advocated by the DfT - Forecast Advisory Group, will provide greater economic benefits and may provide the necessary competitive tension and benchmarking the airports sector requires.

## *Conclusion – Competition, Pricing & Benchmarking*

- 2.50 Historically, there is a perception that BAA has been able to cross-subsidise the development and operation of one airport with profits from other airports in the group, particularly the development of STN. This is not an acceptable basis for transparent pricing or effective/efficient regulation, as advocated by national and EU Governments.
- 2.51 There is little doubt that BAA has under-invested in runway capacity. All previous forecasting by BAA has relied on an apparently inexorable rise in the average size of aircraft, to the extent that only three years ago BAA publicly opposed a third runway at LHR, despite planning horizons for airports typically spanning 10-15 years ahead. This misreading of the market has meant that Government has failed to deliver key parts of the 1985 Airports Policy, for example:

***“To foster a strong competitive British airline industry by providing enough airport capacity where it is needed” (CMND 9542 page 5 Section 3 paragraph 3.1).***

- 2.52 The development of runways and associated infrastructure outside the BAA group of companies will provide more competition, better pricing and an effective domestic benchmarking mechanism.

## **Airspace**

### *Introduction*

- 2.53 This subject has not been considered in detail by any of the SERAS reports. National Air Traffic Services has reported briefly on the options but major reworking of the airspace requirements in the South East will be needed.

### *Airspace Today*

- 2.54 The current sectorisation (the airspace operating areas) is at peak times under severe demand loading. The new Air Traffic Control Centre At Swanwick and the Terminal Control Operation in West London are designed to manage the flows in and out of the currently configured London System. However, there have been over the last five years improvements made to the system such as the co-location of terminal radar operations and new technology employed to deliver the capacity to meet the growing demand.
- 2.55 This work will require new Standard Instrument Departure (SID) and arrival routes for the existing and new runway configurations as well as a repositioning of the current holding points (stacks).
- 2.56 It is important to note that the current routes are based on technology largely developed shortly after World War 2. The routes are designated by ground based beacons which radiate signals picked up by the aircraft. However, newer technologies are being developed which will result in the airspace managers' ability to develop new procedures and flight routings.

### *Future Airspace*

- 2.57 The use of the 'global positioning system' linked to an aircraft's flight management system and the introduction of 'microwave landing systems' will allow new flight procedures to be adopted, which could allow precise curved approach and continuous descent approaches to be made to airports.
- 2.58 New technology is increasingly precise and will allow operators to promulgate dispersed flight routings to minimise noise impact on the ground. Despite this, detailed analysis with respect to future airspace will be required.

## **Policy Priorities for Government**

- 2.59 We are entering a crucial period in the future of air transport. Demand for air travel continues to grow against a backdrop of considerable re-structuring within the airline industry. At the same time, many airports are reaching their operational limits.

2.60 As stated in the foreword to 'A Future Development of Air Transport in the United Kingdom: South East':

***“..we need to ensure, as a country, and as individual consumers, we are getting the most from our aviation services ... Aviation has great economic, social and environmental relevance in the UK. We need a long term framework that will maximise the beneficial aspects of aviation and minimise the negative effects.”***

2.61 The White Paper must give due regard to these emerging trends, implementing a dispersed pattern of capacity, encourage competition (amongst airlines and airport operators), achieve maximum economic benefits and minimise adverse environmental impact in any one area. Pursuing these policies will ensure a truly sustainable national aviation strategy, suitably flexible to meet the needs of an ever-changing industry.

### 3. LONDON LUTON'S ROLE IN MEETING FUTURE CAPACITY

#### Introduction

- 3.1 LTN is currently the eighth largest airport in the UK (2002 – 6.6mppa). Of the major airports serving London (the '**Greater London Hub**'), LTN processes 5.5 % of the total passengers and 5.7% of the total air transport movements. This is despite the fact that LTN's catchment area is approximately 7 million persons (one hour drive-time), second only to LHR.
- 3.2 In SERAS 1 (July 2002) Government proposed two options for replacement runways at LTN which would increase runway capacity to a 'maximum use'; the 'southern' and 'realigned' options. Under both options Government assumed a 31mppa capacity, based on LGW's performance from a single runway in 1999.
- 3.3 LLAOL believe Government was correct in proposing 'maximum use' development at LTN. The following chapter outlines our view on the future role of LTN in contributing towards delivering 'maximum use' runway capacity in the South East, building on our submission to Government in November 2002.
- 3.4 In SERAS 2 (February 2003), Government took the opportunity to provide further clarification with respect to runway provision at LTN, stating:
- “Increased use of the airport might, for example, be based on the existing runway alignment”.***
- 3.5 In our view, subject to further detailed appraisal, Government should consider the runway extension option (Option 1, SERAS: Airport Optioneering, Final Report, February 2002) for delivering 'maximum use' at LTN.
- 3.6 Chapters 4 and 5 outline the greater contribution LTN could make to the **Greater London Hub** in terms of runway capacity.

#### Government Options for 'Maximum Use' at LTN

##### *Introduction*

- 3.7 In the SERAS consultation document, Government put forward two options for LTN, both delivering 'maximum use' (31mppa): a new southern runway and a new realigned runway. The southern option proposes the construction of a 3000m replacement runway, 200m south of the existing runway, which would be retained only as a taxiway. Terminal facilities would continue to be constructed to the north of the runway. The realigned option includes the construction of a new 3000m runway (NNE-SSW), a similar alignment to STN's current runway. A parallel taxiway together with connecting taxiways would have be provided and terminal facilities built to the north.

### *'Southern' Replacement Runway*

- 3.8 In our initial response to SERAS 1, LLAOL argued that the southern runway was sub-optimal. After further research our view remains unchanged.
- 3.9 LLAOL believes the decommissioning of a fully operational and serviceable runway represents inefficient utilisation of a resource, although acknowledging that it could be partially utilised as a taxiway. In addition, LLAOL question the impact the southern runway may have on aircraft turn-rounds and the operational viability of associated facilities proposed as part of this option.
- 3.10 In order to gain maximum capacity from the southern runway option, a full parallel taxiway with rapid exit taxiways is essential. This would require similar earthworks to those necessary to deliver the extended runway option in its entirety.

### *'Realigned' Replacement Runway*

- 3.11 In our initial response to SERAS 1, LLAOL argued that the realigned runway was sub-optimal. After further research our view remains unchanged, and we would reiterate the conclusion reached in 6.3.4 of the Sir Frederick Snow Final Optioneering Report that “the option would be expensive to construct and would cause a level of change of environmental impact that it would almost certainly encounter severe adverse community reaction”.
- 3.12 LLAOL believes the decommissioning of a fully operational and serviceable runway represents inefficient utilisation of a resource. In addition, LLAOL question whether additional airspace capacity will be delivered by this option or that the level of environmental benefits are as significant as claimed.

### *Conclusion*

- 3.13 Neither of these options offer, in our view, compelling reasons over and above the idea of extending the existing runway, and would not warrant the additional costs, in terms of capital investment and operating expenses. Furthermore, there are no clear cut environmental advantages to be gained, and even in the short-term, would involve considerable impact upon a wide community during construction.

## LLAOL Option for 'Maximum Use' at LTN

### *Introduction*

- 3.14 Within the SERAS documentation, namely the Final Optioneering reports of February and June 2002, it is evident that Sir Frederick Snow considered a total of five options for LTN to achieve "maximum use". Options 2 and 3, related to the "southern replacement runway, and the realigned runway, referred to above. Option 1a related to an extension of the existing runway, to 3000m, whilst Option 1b related to such an extension but with terminal facilities at Luton Airport Parkway station. Option 4, contained in the appendix to the February report, was for an extension of the runway to 2500m, but accepting that this would only serve 20-25mppa.
- 3.15 No detailed analysis seems to have been given for the favouring of Options 2 and 3, over the options for the extension of the runway, save for "*severe physical restraints*", which we believe is dismissive of the significant benefits derived from such a phased extension, not least of which, is the realistic deliverability of the same.
- 3.16 When considering all of the various options for the South East, the DfT understandably wanted to apply standard planning data for the assessment of airport facilities – runway capacity, average aircraft loads, terminal buildings, costs etc – so as to ensure consistency in comparisons. However, even the consultants in paragraph 1.2 of the Final Optioneering Report, shared our reservations as to this use of "consistency standards", as it assumes all airports will in future cater for operations that perform in the same manner and in the same market, and concluded that this was "*not a valid premise*".
- 3.17 Airports will attempt to maximise profitability with the resources and assets available, and tailor activities to market sectors that are felt and seen to be profitable. It follows therefore that variations in requirements will differ in respect of availability of operational space and aviation market share. In SERAS, for instance, all stand requirements are calculated to the same standards, and will provide the same space for non-essential support functions on the apron. In practice, this is not the case, bearing in mind the point made above. Furthermore, SERAS assumes that the NFC's will use the same turnaround times as the conventional carriers – they do not. We therefore have to question the validity of the assumptions made in respect of LTN, believing that that the same are unrealistic in many cases, which then presents an unbalanced view.
- 3.18 In order to illustrate the benefits of a runway extension, LLAOL completed an appraisal with respect to future fleet mix/aircraft type, environmental impact, airport layout, financial deliverability and surface access. This analysis has involved revisiting some of the underlying SERAS assumptions, based on our knowledge of LTN's current and future operation. We believe the results indicate that the construction of the runway extension is the most cost-effective option with the minimum adverse environmental impact.
- 3.19 A summary of the results of this analysis are detailed below, however, Appendices 2 & 3 present the methodology, calculated assumptions, and conclusions in more detail.

## *History*

- 3.20 Since the Final SERAS Optioneering Report was concluded, improvements to facilities at LTN have already been undertaken, some of which are referred to within paragraph 2.4 of the Report. A passenger walkway has been constructed to the airside front of the original terminal, with improved passenger access to aircraft. Three new 'code D' stands have been built and are now operational, and a connecting link between the original main apron and the North and East aprons is now under construction. Furthermore, works are due to commence in September on the building of a new Northern pier, with passive airbridge provision, the partial fitting out of the first floor of the "new" terminal, a new "immigration hall" and a refurbishment of the arrivals hall.
- 3.21 These works therefore have already increased the number of operational stands to above the 39 identified in SERAS, and consideration is already being given to improvements to car parks, set down etc, demonstrating the ability and willingness of LLAOL to meet customer demands.

### *SERAS Assumptions – Aircraft Type, Fleet Mix & Utilisation*

- 3.22 As with any forecasting exercise, many assumptions must be made in order to develop an accurate pattern of future behaviour, generally based on current or recent trends. This approach can prove problematic if forecasting is taking place during a climate of accelerated change, such as the UK aviation industry today. LLAOL fully support the methodology adopted for the SERAS appraisal but has reservations as to some of the assumptions behind this analysis. This is largely due to the lack of econometric data with respect to the development of NFC's.
- 3.23 LLAOL believe that sufficient data is now available to revisit this methodology, particularly in light of the revolutionary impact the NFC sector has had on the industry as a whole. We have completed a detailed analysis in Appendix 2, based on our understanding and experience of the NFC market and considered views on the future structure of the industry, summarised below.
- 3.24 The SERAS methodology assumes a fleet mix significantly different to that operating at LTN today. Based on our knowledge, LLAOL believe that the aircraft types and mix assumed in SERAS will in fact **never** operate at LTN, particularly due to the current (and likely continuation thereof) re-structuring of the industry. The forecast fleet mix has a significant impact on the resultant noise contours developed for LTN.
- 3.25 The SERAS methodology assumes certain seat capacities by aircraft type. It is important to note that, with the exception of Category 1 (Regional) aircraft the seating capacities of aircraft used for LTN are all significantly higher than those assumed in the SERAS research. For example, a Boeing 737-700, fitted for domestic/European short-haul from LTN will have a seating capacity of 149, not 127 as assumed in SERAS. The SERAS study is therefore over-estimating the number of aircraft movements required to deliver a particular passenger throughput (31mppa). This over-estimation will influence further conclusions with respect to environmental impact, airport layout and provision of associated facilities (e.g stands).

- 3.26 Fleet mix at LTN will continue to be dominated by the NFC's and the need to achieve fast turn-rounds. SERAS has under-estimated the proportion of overall LTN traffic that will be of NFC-type aircraft. The charter market will remain an important part of LTN's fleet mix, but not to the levels predicted in SERAS.

*Environmental Benefits*

- 3.27 The SERAS environmental appraisal, in particular noise, is under-pinned by assumptions of fleet mix, aircraft type and aircraft capacities.
- 3.28 As illustrated above, LLAOL has examined the input assumptions and believe they do not accurately represent the aircraft type, fleet mix and levels of utilisation envisaged at LTN. This suggests that the 16-hour Leq contours displayed in the SERAS document are exaggerated.
- 3.29 LLAOL has appointed a specialist consultant to re-visit the original SERAS assumptions and conduct various sensitivity tests, assuming a more representative fleet mix and proportion of aircraft types. LLAOL has also developed a revised noise contour for the LTN runway extension, using the SERAS methodology.
- 3.30 This detailed evaluation of options is outlined in Appendix 2, based on our understanding and experience of the NFC market and considered views on the future structure of the industry. The results of this analysis are summarised in Table 3.1 below.
- 3.31 Before conducting any sensitivity tests the LTN model was validated against the original SERAS model, using identical inputs - the results were comparable. A number of sensitivity tests were then conducted, using both LTN's current fleet mix and assumptions of a future fleet mix, based on our knowledge and experience of LTN operations. This assessment would appear to indicate that under the runway extension a significantly smaller area is affected by the 57LAeq noise contour, as at 2030 (Table 3.1).

**TABLE 3.1 – SUMMARY OF LTN SENSITIVITY TEST (see also Appendix 2)**

<b>L<sub>Aeq, 16</sub></b>	<b>SERAS Southern (km<sup>2</sup>)</b>	<b>SERAS Realigned (km<sup>2</sup>)</b>	<b>LLAOL Extension * (km<sup>2</sup>)</b>
<b>&gt; 57</b>	<b>49</b>	<b>47</b>	<b>41</b>
<b>&gt; 60</b>	<b>29</b>	<b>27</b>	<b>24</b>
<b>&gt; 63</b>	<b>17</b>	<b>16</b>	<b>14</b>
<b>&gt; 66</b>	<b>9</b>	<b>9</b>	<b>8</b>
<b>&gt; 69</b>	<b>5</b>	<b>5</b>	<b>4</b>
<b>&gt; 72</b>	<b>3</b>	<b>3</b>	<b>2</b>

*\* analysis based in LLAOL fleet mix, as described in Appendix 2*

<sup>1</sup> NB: for the sake of clarity we would point out that the noise contours shown in the SERAS document for either maximum use option are at 2015, when ATMs would be significantly less than at 2030.

- 3.32 Table 3.1 clearly indicates that the noise impact for a single runway operation at LTN is significantly smaller than assumed in SERAS. The runway extension and associated noise contours are graphically displayed at Figure 3.1 (and Appendix 2).
- 3.33 It is also interesting to note that the areas affected by the higher contour levels are even more reduced compared with either of the SERAS options.<sup>1</sup>
- 3.34 The runway extension has one further advantage over the southern and realigned options, insofar as it would expose the lowest level of residents to new adverse noise impact, thus meeting Governments priority to “*control and reduce the scale of adverse impacts*” (The Future of Air Transport in the UK: South East, July 2002).
- 3.35 Both the SERAS and LLAOL analysis assume existing take-off/landing routes. These may of course change in the future. Indeed, we would maintain that whatever options are finally chosen by Government, at whichever airport, there will be alterations to airspace at local and national level, thus affecting flightpaths. Technological improvements such as MLS will have an impact upon noise contours. Therefore, further modelling would be required, as stated in Chapter 2.
- 3.36 The area of land taken for an extended runway with a second extended parallel taxiway (which may become standard operating procedure), would be only 0.274kms for the first phase of an extended runway [up to 2500m], and a further 0.24kms for the ultimate extension, which is considerably less than for either of Options 2 or 3 put forward by SERAS (see Figure 3.2).
- 3.37 No designated sites or listed buildings would be lost: no significant impacts upon ecology would be encountered, and certainly no additional effects upon water would be forthcoming, over that described for options 2 or 3. Air quality would be marginally affected by all options, including any extension, but of such a minor impact that should be easily mitigated. The majority of the land is of Grade 3 arable type.

#### *Airport Layout*

- 3.38 In the SERAS: Airport Optioneering, London Luton Airport – Final Report (February 2002), budget cost estimates were developed for all four runway options appraised. The provision of infrastructure in each of these options has been based on under-lying assumptions with respect to aircraft type and fleet mix. By re-visiting these assumptions in SERAS with respect to LTN (as detailed above and in Appendices 2 & 3) the resultant provision of infrastructure is also affected.
- 3.39 Detailed analysis indicates that the number of stands required to operate LTN to a maximum use capacity of 31mppa would be less than proposed in the SERAS Airport Optioneering Report, London Luton Airport – Final Report. Even in that report there were some disparities between the numbers stated as necessary by Sir Frederick Snow – at 119 for 20mppa rising to 133 for 30mppa – and those provided by LLAOL at the time of the report, 96 and 107 respectively.
- 3.40 LLAOL’s further assessment as outlined in Appendix 2 of this response, reflects the likely fleet mix and type of traffic, with the ability of NFC’s to achieve higher aircraft utilisation in less aircraft transport movements, and thus less stands.

- 3.41 Furthermore, whilst appreciating, as mentioned above, the assumptions as to planning standards and the need to apply consistency, in practice the likely extent of terminal capacity will reflect the market demand of primarily the NFC's, and thus may not necessarily be based upon an arbitrary IATA standard.
- 3.42 Figure 3.2 illustrates LLAOL's indicative plan for a phased delivery of incremental development both in terms of runway extension and associated facilities, whilst having minimal adverse impact upon airfield operations. It shows the route of the East Luton Corridor, together with "central terminal development" (pink), including a multi-storey car park, and surface parking or land for associated facilities (mauve), all as a natural extension to that already subsisting. Additional stands are shown to meet the first phase of any extension, with capacity to the east for further apronage as necessary to meet demand.
- 3.43 Plainly works would be undertaken in stages, with an extension of the runway to approximately 2500m, and ultimately extended dual parallel taxiways, with runway length to 3000m, but with rapid exit and connecting taxiways, holding areas, RESAs, etc, to meet current and anticipated CAA airfield requirements.
- 3.44 It is recognised that any expansion proposal must be flexible and undoubtedly over the intervening years, development would be on-going but within a "master plan" context as illustrated.

#### *Financial Deliverability*

- 3.45 Within Chapter 7 of the SERAS Final Optioneering Report (June 2002), comparisons between the total costs of the various options for runway capacity are given, which in summary suggest the southern option is cheaper to construct the realigned option and comparable to an extension of the existing runway.
- 3.46 However, a number of common items have been included in all of these cost analyses, which in practice may not to be considered appropriate, e.g. hydrant refuelling systems, at £25,000,000, or would fall within direct airport funding, like many of the support facilities of circa £60,000,000. Of the remaining items, we have serious reservations as to the validity of the basic assumptions, notwithstanding the financial rates per m<sup>2</sup>.
- 3.47 For instance, we cannot understand the references used for the quantity of material for "new runway construction" of 210,000 m<sup>2</sup>, for Option 1 – an extension of circa 900m as opposed to two new runways, each of 3000m in length, with Option 2 of 270,000 m<sup>2</sup>, or Option 3 of 335,000 m<sup>2</sup>. Our own estimates, for all of the "concrete" for the entire extension including holding areas, a second parallel taxiway etc, amount to 274,000 m<sup>2</sup>. Similarly, with the quantum of earthworks of 7,800,000 m<sup>3</sup> for Option 1, 6,300,000 m<sup>3</sup> for Option 2 and 6,500,000 m<sup>3</sup> for Option 3.
- 3.48 Allowances for the number of stands seem to differ in each option, which again affects costs. These unexplained disparities cause us to question the whole validity of the financial appraisals contained within the Final Optioneering Report. In these circumstances we feel that cost comparisons are at best unrealistic and at worst misleading, and thus should not be adopted as any true criteria for choice without further investigation.

- 3.49 Our own indicative appraisal of direct costs for the extended runway, suggests a capital investment spread over a number of years considerably below those estimated within the Final Optioneering Report and even that would be dependent upon detailed analysis of engineering techniques, such as bridging over the public highway at the eastern end of the runway, rather than diversion, which in itself would reduce the extent of landfill required.
- 3.50 A further comment to make with respect to financial deliverability is that not all infrastructure would be delivered in one development stage. Capacity at LTN would be delivered incrementally with costs spread over the next 25 years, providing capacity (particularly terminal and operational capacity) when demand arises, embracing resource efficiency principles.

#### *Surface Access*

- 3.51 For both maximum use scenarios proposed in SERAS 1 it is assumed that no rail infrastructure improvements are necessary outside those already planned for Thameslink, Thameslink 2000 and Midland Mainline. LLAOL support this assessment.
- 3.52 Rail use continues to grow year-on-year at LTN. The location of Luton Airport Parkway Station on the Midland Mainline provides huge potential for increasing rail modal share. Further developments such as Thameslink 2000 and the development of St Pancras 'Eurohub' terminal will further improve this attractiveness. LLAOL is committed to growing rail share at LTN.
- 3.53 LLAOL has developed strong relationships with the existing franchisees. LLAOL and Thameslink are developing the 'Luton Airport Express' product to attract passengers to use rail to access/egress the Airport. This is central to LTN's Airport Surface Access Strategy. However, uncertainty with respect to these rail franchises is affecting planning and programming of future initiatives. Despite this, Thameslink and LLAOL remain committed to developing initiatives aimed at increasing rail modal share, in partnership.
- 3.54 For both maximum use scenarios proposed in SERAS 1 it is assumed that the interface between Luton Airport Parkway Station and the Airport is improved in the form of a 'people mover'. LLAOL anticipate this development proceeding in the near future, subject to demand. In the short-term, the road (A1081) between the station and the airport (*the East Luton Corridor*) is soon to be upgraded to dual carriageway standard, minimising delay and facilitating smoother transit. These road improvements will provide a new multi-modal 'gateway' entrance to LTN.
- 3.55 For both maximum use scenarios proposed in SERAS 1 it is assumed strategic road improvements would be necessary, including: widening of A1081, M1 to Airport (already programmed), a Luton North-East by-pass and the widening of the M1 (Junction 9 – 13). LLAOL support this assessment.
- 3.56 Since SERAS 1 was published, the London to South Midlands Multi Modal Study (LSMMMS) has published its final report. LSMMMS was formed in November 2000 as a result of a commitment in Government's Roads Review (July 1998). LSMMMS is one of the largest transport studies ever commissioned. It is concerned with identifying and resolving travel problems within an area that includes some of the most travelled corridors in the country and LTN and STN airports.

- 3.57 The LSMMMS preferred strategy was developed assuming maximum use at both STN (40mppa) and LTN (31mppa). All schemes proposed for LTN in SERAS 1 are either assumed (will be constructed) or proposed by the LSMMMS study team, in recognition of the strategic importance to the study area.
- 3.58 It is noteworthy that the LSMMMS 'Reference Case' includes the assumption that Thameslink 2000 will be delivered. SERAS makes a similar assumption.
- 3.59 A joint statement by LLAOL/Strategic Rail Authority (SRA) will be submitted separately, which supports the view that sufficient surface access improvements at LTN are already planned or programmed to support a 31mppa airport.

## **Conclusions**

### *Introduction*

- 3.60 LLAOL has taken the opportunity during the extended consultation period to give careful consideration to issues such as future fleet mix/aircraft type, environmental impact, airport layout, financial deliverability and surface access. All of these factors are critical in forecasting future requirements and determining the deliverability of certain options.
- 3.61 LLAOL fully support the methodology adopted for the SERAS appraisal but have some reservations as to some of the assumptions behind this analysis. After detailed examination we believe that, with respect to LTN, the appraisal process is flawed. This is largely due to the lack of econometric data with respect to the development of NFC's.
- 3.62 LLAOL has attempted to update the SERAS appraisal using more recent trend data and our knowledge and professional judgement with respect to the operation at LTN. The results of this analysis (see Appendices 2 & 3) appear to indicate:
- that the environmental impact of maximum use at LTN is less than forecast; and
  - that the extension of the existing runway represents the most deliverable option with a less adverse environmental impact.

### *LTN can deliver for Government*

- 3.63 In Chapter 2, LLAOL outlined why LTN should be developed. The extension of the existing runway represents the optimum solution for the delivery of maximum use at LTN.
- 3.64 LLAOL/TBI has a proven track-record for delivering airport infrastructure in a cost-effective and timely manner. LTN can deliver additional capacity in the South East quickly. Incremental expansion of LTN to the maximum use can begin as soon as required. LLAOL will work with Government to bring forward development plans in conjunction with the local planning authority and other key stakeholders.

### *LTN can deliver for the Consumer*

- 3.65 LTN is increasingly the airport of choice for the discerning business and leisure passenger, predominantly using NFC's. These passengers are attracted to LTN by its varied selection of domestic and European destinations, excellent surface access links, fast turn-rounds and short check-in to gate distances. None of these benefits would be adversely compromised with the construction of a runway extension.
- 3.66 Developing LTN to maximum use will increase its proportion of the London market, introducing greater competitive tension in the airport industry, ultimately beneficial to the consumer.

### *LTN can deliver for the Airlines*

- 3.67 LTN is the original home of the NFC market. Both Ryanair and easyJet commenced operations at LTN. LTN has developed with these NFC's and understands the requirements of these growing airlines, a distinctly different customer than the traditional carriers.
- 3.68 In order to deliver the necessary facilities, LLAOL needs reassurance from Government that **LTN is not an interim measure**, as implied in the SERAS appraisal under certain scenarios.

### **Challenge for Government**

- 3.69 LLAOL welcomes the view of Government that LTN has a role to play in the future provision of runway capacity in the South East. However, LLAOL require re-assurance from Government that **LTN is not merely a stop-gap** whilst development options at other airports are brought forward.
- 3.70 We have consistently maintained that phased development and expansion of existing facilities would achieve one of Government's prime objectives in meeting capacity targets, in the most cost efficient, timely and realistic manner of all of the four major airports, and believe that the above chapter has clearly demonstrated the same.
- 3.71 However, it is accepted that with **all** options contained in the SERAS document, further detailed appraisal and consultation (at the appropriate time) would be necessary to bring forward firm development proposals, including traffic and environmental impact assessments. Due cognisance of these issues would have to be made to ensure a sustainable approach, but the investigations to date suggest that in practical terms, realisation to maximum capacity (at LTN) can be readily achieved.
- 3.72 Subject to these assurances and further detailed assessment, LLAOL can deliver for UK plc.

**Figure 3.1**

**Figure 3.2**

## 4. MEETING FUTURE CAPACITY IN THE SOUTH EAST

### Introduction

- 4.1 Any truly sustainable aviation policy must be under-pinned by resource efficiency. LLAOL support Government's view that 'maximum use' of existing airports should be pursued before the construction of additional runway capacity in the South East.
- 4.2 As stated in Chapter 2, the industry has radically changed since national forecasts were published in May 2000. The shape and structure of the industry has morphed, and in turn, the face of demand. Further re-structuring is likely over future years. The framework, which will be presented in the forthcoming White Paper, must be cognisant of these ongoing changes. The policy must be suitably flexible to deliver airport infrastructure for the aviation industry of the future, not of today or yesterday.
- 4.3 With this in mind, in the first round of consultation, LLAOL proposed a policy of '**plan, monitor and manage**', which would enable Government to complete ongoing forecasting and deliver airport infrastructure when and where it is required.
- 4.4 This view was supported in the original SERAS consultation document (allowing optimum economic benefits to be achieved) and has since been endorsed by the DfT - Forecast Advisory Group, who believe that demand may be best met through a dispersed pattern of capacity around the South East.
- 4.5 LLAOL also supports the view of the DfT - Forecast Advisory Group, that a new runway at each of a number of airports would still enable substantial network 'hubbing', while efficiently serving local demand, including that served by NFC's, for point-to-point trips. This strategy would be preferable to pursuing a single new 'mega-hub', unsustainable in terms of environmental impact and catchment.
- 4.6 LLAOL proposed the "4 x 2" scenario in our response to SERAS 1. LLAOL believes that this approach would further enhance the **Greater London Hub**, serving the South East market where demand arises and facilitating smooth transfer where connections are required.
- 4.7 LLAOL support the incremental delivery of three new runways, in a dispersed pattern of development, where demand arises and when required. With this in mind, LLAOL suggests the following strategy:
  - a second runway at LTN;
  - a second runway at LGW; and
  - a second runway at STN.
- 4.8 The delivery of this infrastructure should be determined by independent and ongoing forecasting. Development plans must be brought forward in conjunction with Government, demonstrating financial deliverability, appropriate surface access links and environmental mitigation measures.
- 4.9 Although LLAOL's position remains unchanged with respect to the provision of new runway capacity (once maximum use has been achieved), new information and further research deem it necessary to make some additional comment.

## Heathrow

- 4.10 The decision taken by a War Cabinet Special Committee in the closing stages of World War 2 to locate the new civil airport for London at LHR was, in hindsight, wholly incorrect. To locate the capital's principal airport to the west of the city, given the prevailing winds from the west invariably means that approaches to the airport have to cross the city. As has been seen in recent times, these flight paths can be altered to meet specific needs on an ad hoc basis.
- 4.11 LHR is now the world's busiest international airport with 63mppa. The construction of a third 2000m runway could almost double the operational capacity of LHR (116mppa).
- 4.12 In recent years, LHR (and to a lesser extent LGW) has consistently marginalised short-haul and domestic traffic due to increased costs, largely brought about by terminal and runway congestion. Secondary airports, such as STN and LTN have successfully accommodated this traffic, building airport infrastructure more suited to the needs of these customers. LHR has historically constructed facilities aimed at the long-haul airlines and alliances. This development has not reduced 'hubbing' in the South East as passengers have readily utilised the **Greater London Hub** to make connections.
- 4.13 Calculations in the Future Development of Air Transport in the South East demonstrate that the greatest economic benefits accrue from a pattern of dispersed capacity, rather than a concentrated pattern around a single new 'megahub', with a lesser catchment area.
- 4.14 In response to a request from the Inquiry Inspector, Roy Vandermeer, QC at the Terminal 5 Inquiry, when asked to clarify their position, BAA stated:

***"It is the company's view that the local communities around Heathrow should be given assurances in respect to another runway. BAA would urge the Government to rule out any additional runway at Heathrow. BAA invites the Inspector to make such a recommendation"***

- 4.15 BAA/LHR's Managing Director stated in a press release dated 12th January, 1999:

***"We are very concerned to put people's mind at rest on this issue. The Government – and only the Government – has the authority to make a decision of this sort but in asking them to exercise that authority we are giving the clearest possible indication of our belief that a 'third' runway should never be built at Heathrow"***

- 4.16 Other options are available to Government when considering the delivery of runway capacity in the South East suitable for the domestic and short-haul (predominantly European) markets. **LHR should not be an automatic choice for runway development.**

## Gatwick

- 4.17 LLAOL welcomes the decision by the DfT to include LGW options in the SERAS consultation document.

- 4.18 LLAOL supports the concept of a possible additional runway at LGW. The timescale for delivery should be dependent on future forecasting and suitable development plans being brought forward. The cost of the construction of this runway and associated facilities should not be levied upon users of other BAA airports in the South East.

### **Stansted**

- 4.19 LLAOL supports the concept of an additional runway at STN. The timescale for delivery should be dependent on future forecasting and suitable development plans being brought forward. The cost of the construction of this runway and associated facilities should again not be levied upon users of other BAA airports in the South East.

### **Cliffe**

- 4.20 LLAOL doubts the commercial viability of this option when considering the massive costs in infrastructure and effects upon the environment. In addition, recent independent research appears to indicate that constructing an airport in close proximity to a RAMSAR site may have serious aviation safety implications.

### **Luton**

- 4.21 LLAOL strongly advocates the meeting of local demand for air travel where it arises, where possible. LLAOL believes that this principle must underpin the shaping of the future of aviation, both in the South East and in the Regions.
- 4.22 LLAOL believe that LTN can make a greater contribution to the provision of runway capacity in the South East. In SERAS 1, LLAOL developed the concept of the “4 x 2”, based on delivering airport capacity where demand arises, firstly through planned incremental capacity increases to maximum use, followed by (and in some cases alongside) the provision of additional new runway capacity.
- 4.23 As part of this whole exercise, we have undertaken further research as to the feasibility of a second runway, based upon the resources and assets already present, and using, as a base criteria the information relating to the southern runway.
- 4.24 It is apparent however, that simply adopting the precise location of this ‘replacement’ runway would not add any significant capacity. As a consequence, we have taken the view that a ‘close-parallel’ runway would provide the requisite capacity, whilst mitigating adverse impacts upon land take and the environment.
- 4.25 In Figure 4.1, we set out an indicative layout for such a ‘close-parallel’ concept at LTN. This shows a new runway some 400 metres south of the existing runway, slightly offset to the East, with a network of connecting taxiways and associated mixed stands, based on our view of future operational requirements (see Appendix 2).

4.26 We accept that the additional terminal facilities (shown in mauve) would necessitate large-scale infrastructure and surface access improvements, though these would be the subject of further detailed assessment (as with any runway proposal). We have merely put forward a concept which we believe is worthy of further consideration by Government. Indeed, Appendix 3 provides a detailed comparative environmental analysis, demonstrating the benefits of a two-runway option at LTN.

**Figure 4.1**

## 5. TOWARDS A SUSTAINABLE AVIATION POLICY

### Introduction

- 5.1 Any truly sustainable aviation policy must be under-pinned by resource efficiency. LLAOL support Governments view that 'maximum use' of existing airports should be pursued before the construction of additional runway capacity in the South East.
- 5.2 LLAOL welcomes a balanced approach towards the delivery of new airport capacity, giving due consideration to economic, social and environmental factors. The economic benefits of airports per se have been clearly identified within the Consultation Document, with some proposed airport options having differing levels of adverse environmental impacts. We believe these environmental externalities can be minimised through the development of a sustainable aviation policy for the South East, which will be outlined in due course.
- 5.3 Whilst LLAOL is convinced that the national forecasts are realistic, public responses to SERAS 1 suggest many are unconvinced. LLAOL believe that pursuing a policy of '**plan, monitor and manage**' will enable Government policy to remain adaptable and thus able to deliver runway capacity when and where it is required, using a transparent decision-making process which is able to take into consideration recent industry restructuring, and make further changes if required.

### Maximum Use

- 5.4 LLAOL believe Government was correct in proposing 'maximum use' development at the London airports as described in the Consultation Documents. LLAOL fully endorses the following statement from SERAS 1:

***“The Government proposes that maximum use [as described in paragraph 14.8] be made of existing runways at the main South East Airports [LHR, LGW, STN and LTN]. In practice, given the lead time for constructing new runways, this is the only way new capacity could become available for about a decade after the White Paper”.***

- 5.5 LLAOL fully supports the delivery of maximum use capacity at LTN. LLAOL believes the extension of the existing runway represents the most deliverable option with the least adverse environmental impact.
- 5.6 We believe that the development of airports to maximum use potential not only reconciles with key sustainability principles but will present Government with sufficient time to consider further options for the delivery of additional capacity.

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<sup>2</sup> For LHR, the estimate of 550,000 ATMS with 104mppa is taken from Table 7.6, and relates to Option 1, full mixed mode operation on the two existing runways. The figures for STN are for option 5, an additional wide-spaced runway, and are taken from Table 9.6. The figures for LGW are taken from the main SERAS report, Table F.4 and relate to one additional wide-spaced runway.

## Plan, Monitor & Manage

- 5.7 The SERAS consultation has invited accusations from opponents that the forecasts represent a strategy is ‘predict and provide’, and not a truly unconstrained scenario. LLAOL believe this is not the case. **The South East does not require three additional runways today.** LLAOL believe that there is opportunity to conduct more detailed research before committing to firm options for the delivery of three new runways in the South East.
- 5.8 To enable this approach to be successful (*plan, monitor, manage*), the White Paper must be flexible, truly a framework, rather than a prescriptive list of schemes. Such a policy would quickly become outdated in such an effervescent market. Flexibility must be the key to any framework.
- 5.9 In addition, national forecasts must be continually revised and updated. In Chapter 2 (and in Appendix 2) LLAOL has outlined key uncertainties with respect to assumptions under-pinning SERAS forecasting and assessed of impacts of individual schemes.
- 5.10 In order to deliver a ‘*plan, monitor and manage*’ approach, the policy framework must be flexible, but also the planning process to facilitate delivery. A revised planning system must facilitate development once the ‘need’ has been established.

## The “4 x 2” Alternative

- 5.11 Our “4 x 2” proposal offers an alternative solution and a realistic means of achieving the levels of capacity provision required, in a sustainable, planned and equitable manner.
- 5.12 The “4 x 2” consists of:
- a second runway at LTN;
  - a new second runway at STN;
  - maximum utilisation of LHR to 95mppa; and
  - a new runway at LGW (post 2019 and as demand arises).
- 5.13 This could result in four very similar airports, each theoretically capable of handling some 550,000 ATMs and 100-105 mppa by 2030 – or a total of some 420mppa (the maximum ATMs for LHR and STN have been taken from the Stage Two Appraisal Findings Report by Halcrow).<sup>2</sup>
- 5.14 We are not advocating that these airports should be necessarily allowed to develop to such levels – we have reservations as to the sustainability of operating four, two-runway airports to their maximum capacity (in such close proximity). However, a more equitable ‘spread’ of capacity, with LHR operating at circa 95mppa, and the other three London airports sharing the residual runway capacity to circa 300mppa (in 2030), would seem feasible and perhaps more acceptable in political and environmental terms.

- 5.15 For instance, LLAOL estimate that at the very least, LTN could handle up to 480,000 ATMs on two independent runways, resulting in 72mppa at an average load of 150 passengers per flight. If a 'close parallel' option for LTN were constructed (as demonstrated in Chapter 4), this would reduce to 390,000 ATMs (62mppa).
- 5.16 As previously stated, LLAOL believes that the four London airports are operating as a **Greater London Hub**. BAA suggested similar potential is available in their submission to Government.
- 5.17 By promoting four equal-sized airports the **Greater London Hub** could be strengthened, particularly through enhanced surface access links.

## 6. CONCLUSION

### Introduction

- 6.1 LLAOL welcome the second round of consultation launched February 2003, in particular the following amendments:
- the inclusion of LGW options in the consultation process;
  - further clarification of the term 'maximum use' with respect to LTN; and
  - further clarification that increased use at LTN could be based on the existing runway alignment (an extension).
- 6.2 During the period of extended consultation LLAOL has taken the opportunity to complete detailed preliminary appraisals with respect to future fleet mix/aircraft type, environmental impact, airport layout, financial deliverability and surface access.
- 6.3 LLAOL believe that this analysis demonstrates:
- the optimum solution for delivering maximum use at LTN (31mppa) is the runway extension;
  - that underlying assumptions in the SERAS analysis with respect to LTN are over-stated; and
  - that the construction of a second runway at LTN has a lesser adverse environmental impact (in terms of noise) than options for LHR, LGW and STN.
- 6.4 Clearly LTN only represents a part of the solution. However, LLAOL believe that LTN's contribution **should be greater than it is today**.
- 6.5 LLAOL supports the Government view that maximum use should be pursued across the South East **before** the construction of new runways. Any additional runway capacity should be determined after detailed analysis, embracing '**plan, monitor and manage**' principles. National forecasts must be continually revised to reflect the changes taking place in the shape and structure of aviation demand.
- 6.6 The White Paper should be sufficiently flexible to respond to revised national forecasts. The White Paper must not be a prescriptive list, it must be the delivery framework for establishing the need for individual schemes.

## The Challenge for Government

- 6.7 Clearly Government must make forward-looking decisions. The majority of UK residents now enjoy air travel, but few will accept the disbenefits of living in close proximity to an airport.
- 6.8 Government must provide a sound framework for delivering runway capacity which embraces the concepts of resource efficiency and sustainable development. Government must **plan, monitor and manage** runway capacity in the South East.
- 6.9 Government must continue to review national forecasts in light of the re-structuring taking place in the aviation industry. This is likely to continue.
- 6.10 Government must improve competitive tension in the airport sector, for the good of passengers, airlines and other associated businesses. As a bare minimum **shared ownership must end**. Government should recognise the greater role LLAOL can make in correcting this market imbalance.
- 6.11 Government policy must not be based on the structure of the industry yesterday. Traditional hubbing is not the future. The **Greater London Hub** can become a global example of a sustainable aviation strategy, maximising resource efficiency.

## Delivering a Framework

- 6.12 Airports are a national asset and strong national policies are essential to ensure delivery of infrastructure, when and where it is required.
- 6.13 Government must provide 'enabling' planning policies to ensure delivery of airport infrastructure, on time and on budget.
- 6.14 These policies must be transparent and based on reliable national forecasts.

## Embracing Sustainability

- 6.15 Government policy must embrace sustainability principles. Pursuing a maximum use strategy represents the first step. However, Government must continue to demonstrate the new runway capacity is being delivered when and where demand arises, not on a 'predict and provide' basis.
- 6.16 Any runway option must be able to demonstrate its full environmental, economic and social contribution to the local and national economy.

## **For the Good of the Industry**

- 6.17 The UK aviation system was at one stage a jewel in the crown of the economy. This is no longer the case. London airports (in particular LHR) are becoming increasingly congested and unattractive to the detriment of the airlines and ultimately the passengers.
- 6.18 If the aviation industry is to continue to make a valuable contribution to UK plc, greater competitive tension is required. Other airport operators deserve a chance to operate on a level playing field.

## **LTN can Deliver**

- 6.19 LTN is a viable option for both maximum use development and beyond. LTN should be allowed the opportunity to demonstrate it can deliver where BAA has failed.

## 1. APPENDIX 1 - DETAILED RESPONSES TO QUESTIONS FOR CONSULTEES

This section provides detailed responses from LLAOL to the questions posed in the consultation document. In some instances our response repeats the concerns and proposals presented in earlier sections of this overall response but have been included here for the sake of completeness.

### SECTION 1 – HOW MUCH CAPACITY SHOULD BE PROVIDED?

**Q1 *Should new airport capacity be provided in the South East over the next 30 years and, if so, how much? What are the main reasons for your answer and how does it measure against the environmental, economic and social objectives of the Government’s strategy for sustainable development?***

Yes. LLAOL believe that “new airport capacity” should be provided to meet as much of the demand for air travel as possible, where it arises, but within a broad, cohesive, national strategy, which recognises regional realistic and achievable aspirations.

Experience has shown that demand for air travel has grown at a steadily rising pace over the last few decades, and shown no signs of abating, albeit subject to peaks and troughs as a result of specific events, such as those of September 11th 2001, and the more recent impact of SARS. The mid-point forecast total figures contained within the Consultation Documents are, in our view, realistic, by taking into account likely scenarios which prima facie could restrain demand, yet reflect the undoubted trend, notwithstanding the possible variations in the pattern of aviation travel.

To ignore such growth would have disastrous effects upon the economy, in terms of business, investment, employment, leisure and tourism. However, even if all of the existing four major London airports were to be able to grow to their “maximum capacity”, given the assumptions contained within the Consultation Documents of 160mppa, it falls well short of the anticipated unconstrained demand of 202mppa even in the comparative short term, and certainly by 2030 when 300mppa in the South East are predicted. LHR and LGW are already effectively full but air passenger traffic will continue to grow, and thus expansion elsewhere must be considered.

We believe that the **need** for airport expansion has been demonstrated, and certainly the South East because of its strategic position, must meet this requirement if the economy is to survive leave alone grow. Any shortfall in capacity will inevitably be partially met by the major airports on the European Continent representing a net loss to UK plc.

However, **sustainability** considerations are crucial and any decisions that have to be made must address not only the economic and social benefits, but also the environmental issues associated with the physical development of new runways and terminals, giving rise to further aircraft movements, additional passengers and inevitably increased surface traffic. An equitable **balance** must be struck, reflecting local circumstances, and the abilities of the area, in terms of space, availability of labour, and of course a willingness from all interested parties, including the airport operators, business partners and the business community, to cope with a type of development that will have a significant impact upon the same.

In this respect, we are of the view that, as a first phase, a combination of “maximum use” of the existing runways at the four London airports should be pursued. Once in place, the next phase could follow, being a staged, equitable development of up to, ultimately, a maximum of three new runways spread over the whole South East region, rather than any concentration of the same (and thus possible “over-heating”) at one or more existing airports, or the creation of an entirely new airport, such as at Cliffe. In this way, customers would be best served enabling choice based upon location and accessibility, but where the same must be planned as an integral policy, to ensure continuity as well as an equal opportunity for growth of business for each airport.

In order to meet the anticipated demand, over the whole period, each airport must be permitted to maximise its full potential capacity in a planned manner, rather than being exposed or abandoned in favour of another due to timing, before demand has been realised.

Each of the four London airports have an on-going role to play in achieving the objectives of Government, in the short and long term, and development at one must not be allowed to be at the detriment of another, by simply switching resource and market share, but viewed as complementary to meeting demand as it arises.

It is essential therefore, that any development is not treated in isolation, but as an integral part of the regional and national infrastructure, as well as a national asset. As part of this exercise, Regional and Local Planning Authorities need to work with national Government to facilitate the requisite planning process in the national interest. Similarly, a national overview is required to ensure that surface access is available at each major airport of comparable quality, not only to serve that airport and its immediate regional hinterland, but also to formulate links between the airport, the principle conurbations and of course London.

**Q2 *Should the Government aim to maintain at least one large hub airport in the South East? Is a second hub plausible, and if so, should Government seek to promote one, and what would it need to do to achieve this?***

LLAOL would question whether sufficient assessment has been completed to determine the need for a “hub” at all? As expressed earlier in this response, we do not believe that focusing on the creation or maintenance of one or more hub airports for the South East of England is the best way to manage supply and demand for air transport. Given the forecast of demand for 2030 of around 300mppa, it is clear that the South East could be capable of sustaining four airports with a potential capacity in excess of 80mppa. Each one of these airports may be deemed a hub airport by today’s standards. We seriously question whether the creation of “super-hub” airports capable of handling 120mppa or more is necessary, or more to the point, sustainable in terms of infrastructure and environmental impact upon a much wider area than envisaged in the Consultation Documents. At what point does the sheer scale and size of such an airport inhibit connections between flights, and therefore the quality of the hub itself? How large can an airport be without the passenger experience deteriorating?

Furthermore, the structure of the market is changing such that we question the need for major hub operations. Airline alliances, while possibly not permanent but likely to be replaced by genuine consolidation in the industry, are changing the way that passengers connect between flights. Connections from any airline to any airline, the original concept of interlining, are being replaced by connections between airline alliance partners. Similarly, the high growth part of the market, the “no frills carriers” sector, offers purely point-to-point services. If these long-term trends are established in the marketplace as the norm, then the need for even larger hub airports must be questioned.

It is often argued that hubs can sometimes attract and accommodate large numbers of international-to-international connecting passengers. Is this an efficient use of a scarce resource? Should premium capacity be utilised in this manner when development of airports is such a contentious issue with the public? Is it consistent with a sustainable aviation policy? We do not believe that aviation policy should be based around a hub concept that may be outdated and inappropriate.

However, we recognise the historic status and strategic role played by LHR, as perhaps the only “network” hub in the South East, which could remain as the premier inter-continental centre for “interlining”, given that demand for such service remains. It has become established as such, and we would not envisage, without the introduction of inequitable incentives, existing major carriers wishing to relocate per se.

Thus, on the premise that there is already one large hub airport, with a current maximum capacity of circa 95mppa, we question the need for another hub at all, with all of the consequential adverse impacts upon the environment and infrastructure, especially in a region already densely populated such as the South East. It should be noted, that no major city in the world has supported two major “hub” airports, and the concept of what in effect could be two airport locations, possibly within only 100 miles or so of each other, each of potential capacity of 120mppa or so, is inconceivable in terms of sheer scale and size.

However, given the forecast for demand, additional runway capacity must be provided for the region, and it is in these circumstances that LLAOL favour adoption of all of the existing four London airports as an integral system. Our “4 x 2” proposal offers a realistic means of ultimately achieving the levels of capacity provision required, in a sustainable, planned and equitable manner.

The “4 x 2” consists of: a new second runway at LTN; a new second runway at STN; maximum utilisation of LHR to 95mppa; and a new runway at LGW (Post 2019 and if required), which together can respond in a flexible manner to demand and the inevitable changes in the industry. This system of airports serving the South East would, in our opinion, be the optimal solution for meeting the needs of passengers, local communities, and the industry. It would ensure that a balance is achieved between concentrating development in any one location, with all the attendant pressures on the environment and the local community, with the need to provide sufficient new capacity to meet a major portion of the demand for air travel over the next 30 years, and probably beyond.

No single airport need be adopted by Government as the designated hub, the market would dictate that one airport might target these services (e.g. LHR). Rather, competition between airports would be allowed to determine which airports the airlines choose to use. As already stated, in 2000 there were just five airports of this size in the world and therefore all four airports in this proposal could be “hub” airports if airlines chose to designate the same and operate schedules that facilitated hub operations.

We strongly believe that Government should not provide financial assistance through subsidies, or other effective help, to any one airport. Promotion of one, or even two airports as hubs would constitute unfair treatment between airport operators. If business travellers are encouraged to use one airport rather than another, this clearly has an impact on the positioning in the market of those airports.

A particular benefit of the “4 x 2” proposal is that it creates more competition than currently exists between airport operators in that LTN could adopt a greater role in the provision of air transport capacity to the region. If Government were to decide instead, to adopt a two-hub strategy, those airports should have different operators, and thereby introducing a greater degree of competitive tension between operators, and more transparency regarding operating characteristics and pricing policies, as demanded by the industry and in line with national and EU objectives.

**Q3 *Are there any benefits of aviation to passengers, the aviation industry or the wider economy that the Government should aim in particular to secure through its airports policy? Are there any drawbacks it should aim to avoid?***

LLAOL believe that the future expansion of the aviation system in the South East can deliver substantial benefits to all the groups described above.

Benefits for passengers include improvements in journey times and convenience through the provision of air services closer to where they live and through better surface transport. They include a greater choice of airlines and destinations noting that competition among airlines encourages reasonable fare levels.

Benefits for the aviation industry should include new capacity to facilitate new entrants to the market and the creation of a competitive airport environment in which relative performance is transparent and minimises the need for regulation. It would safeguard existing jobs and form the real basis of one of the few potential growth areas in investment and services

Benefits for the economy have been well rehearsed already in so far as the need for air travel is well established, and unless encouraged to grow, could result in a potential loss of confidence in the UK itself, with a downturn in business, employment and national wealth.

Government should avoid any form of “subsidies” to airlines or airports in order to achieve a desired outcome. This would represent a distortion to the marketplace and could unfairly penalise existing operators. Any Government assistance to promote or encourage a new hub, such as “seeding” would have direct adverse implications for other airports who may wish to seek compensatory payments for loss of traffic and thus business. This would of course significantly increase costs and affect the economic viability of any such project, as well as being considered anti-competitive, contrary to UK and EU directives.

It should further avoid spreading airport growth so thinly that real regeneration of local areas, or support for proposed population growth, is insufficient to be of any benefit. Conversely, Government should avoid the ‘over-heating’ of certain parts of the South East. We would argue, for instance, that the provision of a third runway at LHR, at a capacity of over 120mppa, would represent such an example, in an area already suffering from congestion and a number of adverse environmental impacts.

Development of some of the options could also be detrimental to other existing airports, where capacity could have been made readily available, to the disadvantage of local economies and communities, and this situation should be avoided if a national overview to capacity is forthcoming.

**Q4 Should the Government seek to ensure that the potential employment benefits of aviation growth are spread to those people and localities which are most in need of such benefits? If so, what should it do to achieve this?**

An airport primarily is designed to facilitate air transport movements, but in the delivery of such service, it offers a vast diversity of employment opportunities and skills, not only within the airport environs, but also to the region as a whole.

An airport can therefore play an integral role in fostering the economic development, and thus the provision of employment of an area, combining the fulfilment of existing positions with education and training for future demand, across the whole community. It can act as a catalyst in the promotion for the region in economic terms, both for business and tourism.

Ideally, airport development should create jobs where they are most needed, accepting that adding capacity where demand for air travel is greatest should be a higher priority.

LTN for instance, lies within a Priority Area for Economic Regeneration, as identified in RPG 9 (paragraph 10.25). As such the airport is seen as a generator of economic wealth and a focal point for rejuvenation for the whole region. It is appreciated that development must be sustainable, with a competent infrastructure, but Luton has been already recognised within RPG 9 and in a number of current studies, such as the Milton Keynes and South Midlands Study, and the London-Milton Keynes Modal Study as well as the review of Planning Guidance 14, as the subject for further opportunities in housing, transport and industry. Development of the airport would naturally compliment the objectives of these present reports, as well as the national economy as a whole.

## **SECTION 2 – WHERE TO PROVIDE ANY NEW AIRPORT CAPACITY?**

**Q5 To which criteria should the Government attach the most and the least weight in reaching decisions about the location of any new capacity, and why?**

On the premise that Government has no alternative but to adopt a national strategy for air transport, any policy must adopt a number of key criteria, all of which must reflect an ability to be both deliverable and flexible.

Meeting demand where and when it arises must be a key element for criteria for any location. That demand already exists, and is undoubtedly growing, and thus any decision is not so much about which option or combinations of the same within the report give the most capacity, but more as to where and when those locations can deliver that capacity the quickest, and in the most economically beneficial manner. Given that the unconstrained demand profile shows that most demand is for travel to and from LHR, and that the LHR catchment area has almost no overlap with the Cliffe region, it would seem that Cliffe, for example, is probably in the wrong position from a passenger perspective and should be ruled out as a realistic option for providing significant new capacity for the South East. Development must be where the market exists, and is attractive to both passengers and labour.

The next element must be the environmental considerations. Cliffe again, not least due to its RAMSAR designation, and its importance as an area of special interest, seems to fail on this qualification, and LHR would encompass an existing heavily urbanised area, upon which additional intolerable air noise and quality intrusion would arise. Sustainability of any development must be keynote in this regard.

Other criteria that should be given a high priority in reaching decisions about the location of new capacity should include:

- the ability to provide regional economic regeneration, including the availability of local labour and appropriate housing for airport workers, as well as economic benefit to the community at large;
- accessibility, for private and public transport, both for now, and with meaningful realistic potential for the future - high priority must be given to the realistic deliverability of enhanced surface access;
- availability of land, with minimum acquisition of existing properties;
- planning procedures, in the context of local, regional and national relevance, as well as timing;
- cost and funding, as any development must be economically viable, represent value for money, and show a reasonable return, without a burden upon Government or community; and
- competition, by ensuring a “level playing field” amongst all operators, to ensure optimum efficiencies and choice to the end customer, whether that be airline or passenger.

A further criterion worth consideration is the fundamental requirement to maintain and promote the UK aviation industry whilst reflecting the changes in structure of that industry. Given the growth in low cost airlines in the UK over the past five years, some consideration needs to be given to the needs of these airlines as against traditional network carriers. NFC's typically have a lower cost base than their traditional counterparts, and therefore may have different requirements from any new airport development. For instance, they do not usually operate from hub airports or actively facilitate flight connections through interlining (though in the US, 40% of Southwest Airlines' traffic, the leading low cost airline, is now said to connect). Other carriers may have different requirements, and thus locations should therefore be made where airlines may grow from a sound base in a profitable and confident manner.

All of these criteria represent 'need' and must be considered, in an effort to adopt a balanced overview and equitable distribution of the same.

Airspace capacity must also be borne in mind, but here again, any expansion, at any airport, would involve a review by NATS as to the optimum means of managing such capacity, in an equitable manner, without detriment to any one airport, but as an overall policy.

On most of these factors LTN scores highly. Luton has an excellent workforce and with the demise of the Vauxhall car manufacturing plant, there is availability of labour. The local Council is very supportive of the airport and its development plans, understanding the key role the airport plays in the local economy.

LTN is already linked to the motorway network, and boasts three railway stations in Leagrave, Luton Central and the new Luton Airport Parkway Station. There are already transport initiatives and studies supporting improvements to the infrastructure within both the short and medium term, and there is an opportunity with on-going consultations on planning guidance such as the Structure Plan and RPG 14 to incorporate criteria for sustainable, environmentally acceptable and economically beneficial expansion.

Land is available adjacent to LTN, both to the South and East, with minimal effect upon buildings, and LTN has striven to abide by, and indeed improve upon, environmental considerations, and to act as a “good neighbour”. LLAOL has experience of working with new carriers with alternative business models (compared to traditional airlines) and successfully delivers what they need. LLAOL has the ability and capacity to cater for all sectors of the airline industry, offering a mixed use centre for links to London and the region as a whole.

Of the least importance in any “weighting” are the possible physical difficulties of development – topography is not in itself a bar to development, as there are engineering solutions, which would be judged by cost and environmental considerations in any case, and where often mitigation measures can be introduced to minimise any potential adverse effects.

**Q6 *What are the relative merits of these alternative combinations of possible airport development as set out in Chapter 14?***

The first step to achieve the objective, and to ensure initial financial viability, must be to adopt the “maximum use” principle to start to deliver additional capacity in the South East. Until this has been achieved there is little merit in any of the alternative combinations for airport development involving additional runways.

Thereafter, so as to capitalise upon the capacity so provided, on a planned, incremental basis, the various options can be pursued, using the criteria as described above. However, as explained earlier, LLAOL feels that the “alternative combinations of airport development” as contained in SERAS 1 (Chapter 14), do not offer the optimal balance between providing sufficient capacity and ensuring environmental and local objections are met. We feel that the proposal for two runways at each of LTN, LHR, STN and ultimately LGW (post 2019, subject to demand) is worthy of merit and examination especially as it would distribute fairly, benefits as well as impacts throughout the Region, and meet the criteria above.

**Q7 *Giving reasons for your answer, which combinations do you prefer and which do you not favour?***

None of the individual options presented or combinations thereof would be easily delivered, even assuming that ‘maximum use’ is afforded, as a base measure. The criteria we have cited in Q5 above, are not available to any option in their entirety, and in some cases fail in many instances, such as at Cliffe on demand, sustainability and cost, and at LHR on environmental and market/competition grounds, as a third and short runway would only detract from existing airport markets, without adding to capacity, merely redistributing it.

We would seriously question such a development as Cliffe could ever be sustainable in terms of financial return, with not only the cost of the requisite infrastructure to construct an airport of the size envisaged, but also the provision of external surface access, leave alone the multitude of environmental issues surrounding the option. In many ways, similar comments would be applicable with a combination of three or more runways at LGW or STN. Such a scale of development would involve undue intrusion into environmentally sensitive areas, with comparatively little economic benefits to the local communities.

However, the “4 x 2” option we have described would mean that development at Cliffe, with its attendant high costs, is avoided. No one location would be burdened with a saturation of airport development but London and the South East would be provided with four major airports, in geographically accessible and complementary locations, serving their respective regions as well as the entire **‘Greater London Hub’**. Each would be capable of handling anything from 50mppa to 90mppa, all large airports by today’s standards, and each constituting part of the **‘Greater London Hub’**.

We would therefore urge further examination of the various options presented, once maximum use has been exploited, based upon a fairer distribution of all of the benefits and disbenefits to the communities in question, and adopting the criteria already examined.

**Q8** *If you think either Cliffe or Stansted should be developed as a hub airport, should the Government take action to ensure such development can be financed and subsequently fully utilised and if so what form should any action take?*

As already stated, we have reservations as to not only the apparent concept of a ‘hub’ airport, but also the economic viability of the same, in the light of recent changes in the industry. Evidence of varying patterns of business operations elsewhere in the world suggest the concentration of resources in one large mass is not conducive to meet current and indeed foreseeable demands of the market.

Whilst we consider that there is a role for an airport to serve as a network centre, which at present LHR provides, we do not believe that there is any need or justification for any other airport to be singled out as a new hub. Rather, capacity should be provided wherever it is possible in a sustainable and economic manner, and the market allowed to decide which airlines use which airports – a simple market led philosophy, as opposed to what would be an artificial creation. We maintain that a balanced approach across the **‘Greater London Hub’** would fulfil capacity in a far more equitable way.

However, if a new ‘hub’ were to be so created, it would inevitably lead to a distortion in the market place, to the detriment, or even possible closure of other airports in the region. It would have to involve incentives or subsidies, in terms of finance and probably air space, to ‘persuade’ airlines to move to a new hub airport, which obviously would be regarded as unfair to the remaining airports. Should Government decide in favour of ‘seeding’, which may be both contrary to EU directives, and be anti-competitive, recompense would have to be made to the airport ‘losing’ such traffic, which may be translated into extra and unnecessary costs to the end user, namely the passenger, and in turn Government. In essence, massive public sector finance would be required with little tangible benefit to the industry, the local community or indeed the nation.

In short, we cannot see justification for creating what would be an artificial market, for another ‘hub’ airport, wherever it may be, when need cannot be plainly demonstrated.

## **Other South East airports (Chapter 12)**

### **Q9 *Should the Government encourage the development of smaller airports to meet as much of the demand as they can attract?***

Yes, smaller airports should be allowed and encouraged to develop consistent with the principle that demand should be met where it arises, within their own locality and specialist market, but strictly to their limits of environmental capacities.

However, such development must not be allowed to prejudice or adversely affect the abilities of the four major airports to grow, either in environmental or airspace terms, as only these four airports, acting as an integral system, can satisfy the requirement for the total additional capacity for the South East. The smaller airports can play a valuable, but marginal role in such an objective.

### **Q10 *Should support be given for a specialized low cost/freight and maintenance facility at Alconbury?***

LTN, STN and LHR already provides maintenance and cargo facilities and, with a 3,000m runway, would be able to handle much of the freight traffic needs of the region, especially London. Therefore, we do not believe that development for freight traffic at Alconbury is necessary. Furthermore, we would object, should any subsidies or other funding be provided to assist the development at Alconbury or to persuade airlines to move their maintenance to Alconbury as this would constitute a subsidy and unfair competition for LTN, or indeed any other existing airport.

We do not believe that the location of Alconbury is conducive to either freight or "low cost operators". It is further away from the demand locations and we believe that the requisite infrastructure has been substantially under-estimated both in terms of costs and format, especially additional East-West connections located between the M25 and the A14. We believe therefore that much of the cost would have to be publicly funded, contrary to Government's own wishes, especially if little direct benefit will be provided to the region as a whole.

We suspect that there would also be a severe noise impact upon residents, possibly extending to 11-15,000 households, for whilst appearing to be within a rural area is in fact close to major conurbations that have never experienced any noise intrusion before. We would suggest that such development is inappropriate for this area.

We would suggest that the costs of maintenance, and operation of such an airport would, in any case, be prohibitive for such specialised sectors that normally rely upon being able to 'spread' costs and take advantages of economies of scale achieved at the existing four major airports.

We are of the view that there is no market for this proposal, and certainly no need if any of the options contained within the Consultation Documents are pursued.

**Q11 *If so, what conditions, in broad terms, should be attached to this support?***

LLAOL has no further comment to make on this, except in so far as airports that 'lose' traffic or business to Alconbury as a direct result of Government intervention in a free market, should be compensated, and in any case would likely to be in contravention of EU and Competition rules. If conditions were to be made, then an appropriate robust road infrastructure would be necessary, including by-passes to existing towns, to cope with 24-hour HGV activity, which would increase costs beyond the point of economic viability.

**Q12 *What views do you have about the six sites identified in the SERAS study as having the potential to cater for the demand for Business and other General Aviation?***

LTN is the premier airport for Business and GA activity for the South East, and constitutes a valuable sector of business, with two major FBO operators in the form of Signature Flight Support and Harrods Aviation, illustrating the level of demand for LTN featuring upon its proximity to London.

In comparative terms, runway use for GA is not prohibitive and could be managed in conjunction with any expansion as often slots are not dependent upon declared schedules, and can occur off-peak.

However, as at Alconbury, any airport specialising in a particular sector is unlikely to achieve economies of scale necessary to render GA viable, as on-costs of fire cover, navigation aids, security etc as well as accessibility would not be readily available, except at an unacceptable level of cost.

For these reasons, we have reservations as to the viability of any of these sites, although accept that expansion within local environmental constraints should be permitted. We are particularly concerned however, that any such use should not prejudice capacity in terms of airspace of the major airports. For example, Northolt already has an impact on both LHR and LTN.

**Freight (Chapter 13)**

**Q13 *How far should the Government make specific provision for the air freight sector in its decisions about future airport capacity in the South East? What might this involve in practice?***

LLAOL recognise that there is a substantial demand for night dedicated freighter slots at airports in the South East, predominantly for mail and express parcels. The demand for such service shows no signs of diminishing, and must be recognised as a vital element of business, and indeed national wealth, especially serving the London region. Any restriction or constraint in this service would have dramatic effects upon the whole freight industry, and it would be unacceptable to undermine the same especially to the benefit of other airports in other areas or to Europe. Again demand must be appreciated, and the accessibility of airports to major roads or rail distribution centres (a factor which attracts passengers too), is a vital part of the logistical network associated with freight operations.

The creation of a single sector airport, remote from such major road and rail links, to deal with essentially night time “parcel” or integrator operators is likely to lead to diseconomies and excess transport costs, rendering the entire freight industry at risk, and disadvantaging the whole economy.

On the other hand, we also recognise that there are substantial calls for all airports to be closed at night to minimise sleep disturbance, and undoubtedly Government, airport operators, local communities and the freight industry must continue to work in partnership to minimise or mitigate such effects.

LTN would abide by any national policy in this regard, assuming an equal policy were to be adopted throughout the UK and EU, although there is no real distinction between passenger or freight flights in this regard.

However, a substantial proportion of air freight is undertaken as “bellyhold” on scheduled or charter aircraft and provision should continue to be made for such service, and the need for adequate infrastructure remains a priority, together with facilities to undertake requisite Customs treatment of goods, storage and other facilities.

### **SECTION 3 – MANAGING THE IMPACTS OF AIRPORT GROWTH**

#### ***Q14 Are there any specific conditions that you feel should be attached to any or all of the airport options described in Chapters 7-11?***

It is recognised that there must be conditions attached to any expansion, specifically to ensure sustainable development. Environmental issues must be considered, particularly the impact of air noise intrusion, air quality and surface access weighed against economic benefits.

It is essential however, for a consistent approach to restrictions to apply to all airports, whether that applies to measures such as noise contours, air traffic movements, night time bans etc, so as to ensure fair and equitable competition amongst airports, as well as equitable distribution of effects upon communities. However, it must equally be recognised that each airport location will have differing issues to a greater or lesser degree. Government must therefore, appreciate that further detailed local appraisals as well as consultations will be necessary in every case, given that the need for expansion in capacity has already been established at national level.

#### ***Q15 Are there any impacts reported in the chapters on individual airport options that you consider unacceptable?***

Whilst we do have serious reservations as to whether adequate measures could ever be introduced to satisfy the adverse impacts that would arise around any further unscheduled expansion at LHR, we believe that there are none which cannot be mitigated at other locations within the ‘**Greater London Hub**’. Any option presents impacts upon the environment and the local community to a greater or lesser degree as well as more generalised impacts such as CO2 emissions, or climate change. Whilst the former can be the subject of a balanced, consistent view, and be tested on a comparative basis, the latter category would involve national and international concerted action, and in any case the whole question is of a subjective nature.

We would consider that, again, once the need for expansion has been clearly established, the planning process should be able to deal with any real impacts in a balanced sustainable manner.

***Q16 How can local noise and air quality impacts in particular, best be reduced, controlled and mitigated?***

As a responsible airport operator, LLAOL is always examining with other parties how best to restrict local air noise and air quality impacts and is willing to discuss with the DfT and other relevant authorities any additional proposals, which might emerge from the consultation.

However, it is important that any such proposals are realistic and achievable, and are consistent in standards across all airports, subject to local variations that are appropriate. It is accepted that air noise intrusion, and air quality are essentially local issues, usually best dealt with at local level, but, whilst collaboration between the airport operator and local or regional authorities is essential to achieve a balanced consensus, it must be undertaken under clear guidance as on mitigation and control measures from Government level, to recognise the national importance of airports.

It should be borne in mind that technology is already rapidly improving aircraft performance, with substantial reductions in aircraft noise, and it is likely that such improvements will continue, with ever increasing standards imposed at Governmental or indeed international level, which will automatically impose controls, such as the banning of Chapter 2 aircraft, and the introduction of 'noise certification' etc. Flying operation procedures and techniques, such as 'preferential routes', CDA's, MLA's and indeed pilot awareness, also have an effect, and airlines must accept some responsibility in ensuring that optimal operational performance is undertaken, without comprising safety.

Notwithstanding the need to address noise and air pollution at source, there are other measures that could be taken in respect of building techniques and material, which would mitigate effect. Standards of thermal insulation already exist for new or refurbished buildings, and it is feasible that similar standards, some of which already exist, could be introduced to minimise noise effects, and perhaps vortex too, in particular to new dwellings.

LTN has already introduced many of these measures as well as others like rigorous pursuance of noise and air quality violations, voluntary agreements, differential day and night landing and navigation fees, and will continue to monitor and review procedures, where practical and feasible, in an effort to improve performances. Such procedures can be applied to most airport operations, not only to aircraft movements, but also at ground level by ensuring emissions from airport vehicles are controlled, engine runs are restricted, and encouragement of increased use of public transport for both passengers and staff.

## **Noise controls (Chapter 16)**

### **Q17 What are your views on the following points on the control of noise impacts:**

*Do you think that caps on the size of noise contours are the best way to determine a noise limit for an airport? If not, what other limits might you suggest?*

Air noise contour caps are probably the only meaningful measure to determine noise impact. A limit on air traffic movements or passenger numbers is not practical and difficult to enforce. However, when setting such caps, it will be essential to have regard to the uncertainties in the type of aircraft, the fleet mix, and indeed likely market which would affect both predictions in aircraft volume and noise effects.

Furthermore, air noise caps must have regard to not only national policy but also local conditions.

*If you agree with the concept of contour caps, what size of noise contours might be desirable and feasible for each option?*

Whilst local conditions must be considered, it is essential that common criteria, for instance, decibel levels, are adopted for all airports, as a result of detailed assessment, monitoring and full consultation by Government, and possibly EU directives. In the case of the latter, we understand that a change in the measurement standard may be introduced, and thus any policy adopted, after further studies should remain flexible. The size of contours can then be determined after detailed modelling of aircraft operations, fleet mix etc.

*How do you think a contour cap might be regulated and enforced?*

By regular monitoring and consultation between airport operator and the relevant local planning authorities, given common, consistent guidance from national level, and bearing in mind the likely continuing change in flying procedures.

## **Noise mitigation and compensation (Chapter 16)**

### **Q18 What views do you have on the following possible measures:**

*Should any residential property which suffers an increase in noise of 3dBA or more as a result of any of these options, and which would be exposed to a noise level of 63dBA daytime or more, be eligible for acoustic insulation?*

This is an arbitrary standard, and there must be clear evidence to support a real and sustained adverse effect, but where proven, then the option should be given.

There is however, a 'blanket' assumption that noise insulation may be the only means of addressing this aspect, and any other options for mitigation should be pursued at individual level.

*Should acoustic insulation for households be extended to other noise-sensitive buildings not normally eligible, such as schools and hospitals, depending on detailed circumstances?*

If an adverse effect is proven, then yes, the option should be given. However, some caution should be exercised as to the degree of effect and type of mitigation methods adopted, as we suspect the potential impact of air noise will vary considerably, not only due to precise location, but precise use and nature of the establishment in question.

*Should those eligible for insulation be given the choice of either having the insulation work done or accepting a cash payment of an equivalent amount?*

No. Cash payments do not guarantee works would be undertaken, but if paid, they should be registered at the Land Registry to safeguard against repeated claims. Similarly, if insulation, or any alternative mitigation method, is accepted no further claims should be permitted.

*Should assistance with relocation expenses be offered to households subject to very high levels of noise (such as 69dBA or more)?*

Again this is an arbitrary standard, but if adopted as common policy, then normal “rules” of compensation should apply, and only on acquisition should relocation expenses become eligible.

*Should offers be made to purchase those properties which would be subject to both a very high level of noise and a large increase in noise?*

This is a subjective question, and again set national standards must be applied. If such an idea is to be pursued, normal rules of compensation should be adopted. The airport operator should be given the option to utilise buildings or sites thereof for alternative purposes, with sanction of local planning authority, rather than buildings be allowed to deteriorate, which otherwise may have some beneficial use.

*Should cash compensation be offered to those households suffering a significant increase in noise to a level greater than 57dBA but less than 63dBA – and therefore not qualifying for insulation?*

No. There has to be a set standard for qualification, and whilst the airport operator may have discretionary powers to offer acoustic insulation, or other mitigation elements, it would only be as a one-off gesture, not as of right.

The whole question of compensation must be adopted as an integral part of the aviation expansion debate, with particular attention in respect of blight. It would be unreasonable for airport operators to acquire properties in advance of any planning consent, nor equitable upon householders to have to await upon many years of uncertainty. Blight has to be proven, and strict realistic guidelines from Government have to be in place to avoid unnecessary hardship for owners, and/or unnecessary untimely expenditure on the part of airport operators, on schemes that are neither programmed or approved in detail, unless Government and/or the appropriate local authority are able to undertake acquisition direct in anticipation of the advent of any adopted proposal or option.

As we have previously stated, any noise assessment contained within SERAS, can only be regarded as indicative and not necessarily proven, for as we have demonstrated elsewhere, assumptions made as to fleet mix and aircraft technology are open to challenge and may not reflect ever changing circumstances.

Detailed modelling would therefore be necessary at the time of submission of any planning application relating to expansion.

In these circumstances, we do not advocate that there should be any set, or pre-determined levels of either compensation or other measures, unless enshrined in legislation, as precedents would be forthcoming which may not be applicable or appropriate at every airport. Even if statutory provisions were to be introduced, the same should be for guidance only, and must retain flexibility so as to address individual cases and circumstances.

## **Night noise (Chapter 16)**

***Q19 Do you think that a five-yearly review cycle for the night restrictions regime for Heathrow, Gatwick and Stansted is appropriate or should some other review cycle be considered and, if so, what would you suggest? Are specific night noise restrictions needed at any other airport, and if so how should these be determined?***

A five-year review period would seem sensible, bearing in mind the needs of airlines and airports to plan ahead, by applying a common procedure to all relevant airports. LLAOL is not seeking to have night time use restrictions imposed on it by Government, unless it forms part of a comprehensive, national and consistent policy to achieve the long-term objectives for expansion of air travel in the South East.

It would be essential to apply any policy to all airports throughout the South East, not just the four major ones, and equally should reflect EU or international directives, so as to ensure there are consistent standards, to all operators, accepting local variations.

## **Access to airports by rail and road (Chapter 17)**

***Q20 Are there specific surface access improvements that should be made a condition of any airport option and any that should not be included?***

Where plainly there is no existing infrastructure system capable of supporting airport development, such as for Cliffe and even Alconbury, then appropriate surface access provision has to be a condition. We would suspect that the cost of such provision would have to be Government-led, in the absence of which, neither project would be remotely economically viable.

In other instances, and specifically for the four major airports, there will be a need to improve and expand accessibility, both in the immediate vicinity of the airports, as well as on a wider regional basis, such as the M25 motorway, which has links to all four main airports, as well as to London itself. Surface access does mean however, road and rail communications should be integrated into a national grid system if at all possible, and investigations as to the feasibility for reactivation of lines that have been previously abandoned, or under-utilised, should be undertaken. Whilst obviously the major trunk routes would have to be assessed as to capacity, the impact upon local roads within close proximity of the airports would have to be equally addressed jointly between operator and the local highway authorities.

We therefore feel that a comprehensive review of the total transport implications for the 'Greater London Hub' scenario, perhaps in conjunction with existing modal studies, should form part of the final decision process for the long-term requirement for additional runway capacity. This will ensure a cohesive, managed, rather than piecemeal approach.

In our opinion, the provision of adequate surface access infrastructure is an absolute key factor in achieving the objectives of Government to meet the need for additional capacity, and that any option could fail to materialise without this issue being addressed.

We have, for instance, serious misgivings as to scope of works required to meet any further expansion of LHR, already the centre for congestion. Whilst we appreciate that the airport is served by major motorway routes (which in our view should at least be part improved at public expense), equally, significant road and rail traffic is generated as a direct result of the airport activities, and thus must be addressed by the operator in conjunction with Government and all of the relevant authorities. We suspect that this may require the recovery of costs via all users. In the cases of both STN and LGW, the scope of improved surface access is difficult to assess without further detailed studies and would be dependent upon the extent of expansion envisaged.

In respect of LTN, the widening of the M1, a new improved link to the airport, and improvements to West-East connections, by road and rail may be necessary, but many of these projects are already in the design or planning stage, as necessary, notwithstanding airport expansion. The East Luton Corridor is due to be completed 2005/06 and widening of the M1 is programmed. Thameslink 2000 will also bring the requisite improvements to Luton Airport Parkway Station.

***Q21 How should any surface access schemes that are required for a particular airport development option be funded?***

LLAOL recognises that there is a lobby of opinion that is seeking to impose upon airports the full cost of providing the necessary additional surface access infrastructure. However, whilst there may well be specific and local improvements necessary as a direct result of airport expansion, which would be normally associated with Section 106 Agreements in connection with the planning process, it would be unreasonable to assume that the full burden of provision of such improved infrastructure should fall upon an airport operator. Cognisance has to be given that any infrastructure improvement will be of benefit to many other users, and become an integral part of economic regeneration.

Furthermore, as we have indicated above, it must be accepted that the expansion of any airport is in the national interest, and that the possible access costs could render any development uneconomic. In these circumstances we feel that, in most instances, apart from localised specific schemes, Government should initiate and fund requisite infrastructure schemes, possibly in conjunction with EU initiatives in appropriate areas.

It may well be that the cost of such investment may involve various means of recovery, other than simply from national taxes, but we would not, at this stage, advocate that there should be localised road charges unless adopted as part of national policy.

## **2. APPENDIX 2 - LLAOL PROJECTIONS – FUTURE TRENDS**

### **Projections of Traffic Mix (2030)**

- 2.1 LLAOL believe that the traffic projections used in the initial submissions to SERAS do not take sufficient account of the accelerating rate of change in the market structure of the air transport industry both within in Europe and World-wide.
- 2.2 The historic market split in Europe between scheduled full service and charter air service that has been characteristic of the last 30 years is being seriously challenged by the emergence of no frills services on short-medium haul routes. It is the view of LLAOL that the long-term implications of this challenge will mean that the air transport market in the period up to 2030 will be structured radically differently.
- 2.3 Set out below is LLAOL's view of the structure of European Air Transport in 2030 and how this affects the future traffic mix at LTN.

### **Charter Traffic (2030)**

- 2.4 The growth of the European short-haul charter market will be severely curtailed by the encroachment of NFC's such that by 2030 the demand generated by users of common use hotel/beach/entertainment facilities, the ex-patriot and property ownership markets within Europe will have fully transitioned over to NFC's.
- 2.5 The charter market that remains, both short and long-haul, will be differentiated from the 'common-user' market by offering exclusivity and security at private resort complexes. European resorts in particular will offer considerable flexibility of stay length, which will require frequent (i.e. daily as opposed to weekly) air service. The effect will be to focus the charter market on fewer destinations but at a higher frequency. The result will be a market similar to that which currently exists in the US where the charter market is a much smaller percentage of the overall air transport market and is largely focused on Las Vegas, Disney resorts plus key Caribbean and Mexican resorts.

## **Short-Medium Haul NFC Traffic (2030)**

- 2.6 NFC's will dominate short-medium haul mass market air travel in Europe and its bordering states. This market will be focussed on three core elements:
- the free movement of labour and common currency within the EU will have created a significant VFR (visiting friends & relatives) market centred on the weekends and public holidays (similar to that which has developed between the UK and the Republic of Ireland);
  - remote working practices/locations will have developed a market for regular economical business travel to/from key commercial cities centred on the mid-week; and
  - discretionary travel for sporting, educational, shopping, cultural and entertainment events will be commonplace as will special interest and affinity group travel (similar to that which has developed in the trans-Tasman market).
- 2.7 These factors in combination will have brought many smaller population centres (and their associated Regional airports) into the viability net for NFC's. Existing Regional air services from LTN will have transitioned into NFC's. Demand peaks and airport slot constraints will dictate the use of larger aircraft by the no-frills carriers between major city-pairs while services to smaller population centres and off-peak frequencies will still require the retention of existing NFC types. This will result in a greater degree of fleet mix amongst NFC's than is evident today.

## **Full Service Traffic (2030)**

- 2.8 Existing full service airlines will be grouped into global alliances focussed on large connecting hub airports. Historic and developing hub airports such as LHR and Manchester will have become 'alliance fortresses' on which these services will be concentrated. The alliances will focus on high-value (first/business class) travel in the major markets plus those long-haul destinations not suited to, or with insufficient demand for, mass market travel.
- 2.9 LTN is not envisaged to be an Alliance Fortress and full service air traffic is not envisaged to be part of the airports traffic mix. LTN's existing short-haul full service traffic will have transitioned into NFC's.

## **NFC Long Haul traffic (2030)**

- 2.10 With the full service alliance carriers concentrating on high yield traffic a market will have developed for mass-market affordable long haul services. These services will tend to operate away from the "alliance fortress" hubs where alternatives exist in a similar manner to way the short-haul NFC's have developed. Service level will not be completely without-frills in the way that short haul NFC's are recognised but will be more akin to that currently offered by long-haul charter services ex-Europe and ex-Japan.

### **Cargo Traffic (2030)**

- 2.11 An extension of the runway will enable LTN to serve long-haul cargo markets and this will unlock the potential for the airport to operate a fully integrated long-haul/short-haul cargo hub similar to those already in existence at STN and East Midlands.
- 2.12 A ready supply of used 747-400 airframes available for freighter conversion, along with the bulk lifting capabilities and associated economics of these aircraft, will ensure that these will continue to feature prominently in cargo operations world-wide in 2030. They can therefore be expected to feature in cargo operations at LTN.

### **Other Traffic (2030)**

- 2.13 There are currently 22,500 general aviation (GA) and other non-commercial traffic movements per annum at LTN. These are expected to increase in the period to up to 2010 but then to subsequently decrease to 29,000 and 26,000 movements under Scenario 1 and 2 respectively by 2030.
- 2.14 The growth and subsequent decline of this traffic is related to runway slot availability. It is envisaged that slot availability management will be operated similar to that currently in place at LHR to ensure that all availability is offered to this market.
- 2.15 There will be a continued growth in aircraft size, particularly the larger executive jet types and in aircraft visiting for maintenance, which will have a direct impact on the associated aircraft parking areas required.

### **Summary of LTN Forecasts (2030)**

- 2.16 A number of assumptions are presented in Table 2.1 (below). This includes two options - the single runway scenario (LLAOL 1) and the close-parallel runway scenario (LLAOL 2).

**TABLE 2.1 – FUTURE PROPORTION OF ATMS**

	LLAOL (1)	LLAOL (1)	LLAOL (2)	LLAOL (2)
	Passengers (mppa)	ATM's	Passengers	ATM's
Charter	1.5	8,240	3.0	13,270
Short-medium haul no-frills	26.5	219,026	52.0	344,631
Long-haul no-frills	3.0	12,669	6.0	20,270
<b>Total</b>	<b>31.0</b>	<b>239,935</b>	<b>61.0</b>	<b>378,172</b>
	Tonnes '000	ATM's	Tonnes '000	ATM's
Cargo - aircraft	450	12,500	450	12,500
Cargo – belly hold	85	-	170	-
<b>Total</b>	<b>535</b>	<b>12,500</b>	<b>720</b>	<b>12,500</b>
		ATM's		ATM's
Positioning	-	4,917	-	7,796
GA & other	-	28,711	-	25,833
<b>Total</b>	<b>-</b>	<b>286,063</b>	<b>-</b>	<b>424,301</b>

**Comparative Aircraft Fleet Mixes (2030)**

- 2.17 Comparative forecasts for aircraft fleet mix from SPAM N21 (SERAS Optioneering Report, February 2002), Bechtel and LLAOL 1 (single runway) and LLAOL 2 (close parallel runway) are given below.
- 2.18 LLAOL does not foresee any market remaining at Luton for C1 category aircraft by 2030 as the operating economics of these types are not suited to the no-frills airline sector.
- 2.19 LLAOL believes that NFC's will continue with a preference for Category C2 aircraft, but with some use of category D narrow body (757-200/300) on major city-pairs under the LLAOL 2 scenario. Charter airlines will use a mix of Category C2 and D aircraft with the wide-bodied category D aircraft operating a mix of long and short-haul sectors. Long-haul no-frills services will utilise wide-bodied category D aircraft in a relatively dense (all economy) seating configuration.
- 2.20 LLAOL does not foresee the use of Category E aircraft in passenger operations as long-haul services will focus on smaller aircraft types which offer more operating flexibility. LLAOL does foresee some use of Category E aircraft, however, in cargo operations.

**TABLE 2.2 – FLEET MIXES USES IN 2030 SCENARIOS**

Aircraft Type or equivalent	Fleet Mix LLAOL1 31 mppa	Fleet Mix LLAOL2 61 mppa
737-700/A319	66.1 %	29.8 %
737-800/A320	9.5 %	17.6 %
737-900/A321	13.7 %	19.7 %
757-200	2.1 %	1.3 %
757-300/A310	0.5 %	22.7 %
767-300	7.3 %	2.3 %
A300/A330	0.3 %	3.6 %
777-300		2.6 %
747-400	0.5 %	0.3 %
Total	100.0 %	100.0 %

**TABLE 2.3 – COMPARATIVE FLEET MIX AGAINST PREVIOUS 2030 SCENARIOS**

Aircraft Category	SPAM N21*	Bechtel	LLAOL (1)	LLAOL (2)
E	13.3%	6.0%	0.5%	0.3%
D	65.0%	46.0%	10.3%	32.5%
C1	15.0%	38.0%	89.2%	67.1%
C2	6.7%	1.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%

*\*Source: SERAS Optioneering Report, Tables 3.4 and 3.10 (note that SPAM 21 is only 18M ppa)*

### **Aircraft Capacities and Passenger Loads**

2.21 Comparative forecasts for aircraft capacities and passenger loadings are from SPAM N21, Bechtel and LLAOL (1) – single runway and LLAOL (2) – dual runway are given below.

2.22 The average capacities and associated passenger loadings for aircraft under the LLAOL scenarios are significantly higher than under the comparative SPAM N21 and Bechtel Forecasts. This reflects the difference in average passenger loadings already apparent between LTN and traditional flag carrier/alliance hub airports as illustrated by the following examples:

- a 767-300 in the SERAS reference data has a seating capacity of 227 where as a typical 767-300 operating from LTN will have a seating capacity of 326; and
- a 737-700 in the SERAS reference data has a seating capacity of 127 where as a typical 737-700 operating from LTN will have a seating capacity of 149.

2.23 LLAOL expects that this seating differential will continue given the forecast dominance of higher density affordable air services at LTN. Compared to a typical full service hub airport, therefore, for an equivalent number of aircraft movements, LTN will be moving the same volume of passengers but utilising smaller aircraft types.

2.24 LLAOL has been more conservative with its load-factor predictions than the comparative SPAM N21 and Bechtel Forecasts. The figure used by LLAOL is considered to be a more accurate annualised load factor derived from its current and forecast traffic mix (Table 2.4).

**TABLE 2.4 – COMPARATIVE SEATING CAPACITY & PASSENGER LOAD AGAINST PREVIOUS (SERAS) SCENARIOS**

Aircraft Category	SPAM N21*	Bechtel	LLAOL 1	LLAOL 2
E	230	450	n/a	n/a
D	152	180	311	301
C1	95	130	164	179
C2	45	35	n/a	n/a
Average Size	147	163	175	218
Average Load	113	130	129	161
Total Passengers	18M	30M	30M	61M
Load factor	77%	80%	74%	74%

\*Source: Comparison refers to SERAS Table 3.5 and 3.10 (note that SPAM 21 is only 18mppa)

2.25 The average seating capacity for Category D aircraft is lower under the LLAOL (2) dual runway scenario than under the LLAOL 1 scenario because there is a considerable step up in the number of lower-end capacity Category D aircraft (B757-200 and -300) used by NFC's in scenario LLAOL (2).

## Number and Relative Size of Aircraft Stands

- 2.26 Comparative forecasts for aircraft stand numbers and relative sizes from SPAM N21, Bechtel, LLAOL (1) and LLAOL (2) are presented in Table 2.5.
- 2.27 Existing operating profiles for traffic at LTN – short-haul charter, low cost and short-haul cargo have been analysed and projected forward. To these, have been added typical operating profiles for long-haul traffic and an allowance for aircraft positioning movements then the results aggregated to form a combined traffic profile. An element of peak-smoothing has then been applied to ensure that the traffic profile remains within the available runway capacity, and the resultant movement profile has then been used to calculate stand requirements allowing an error margin of 10% in each stand size category.
- 2.28 The operating pattern of NFC's in particular, with their focus on minimum turn-round times and no requirement to schedule traffic in connecting waves tends to reduce the number of aircraft stands required compared to a typical connecting hub airport.
- 2.29 The principal driver of stands at a short-haul no-frills airport is the number of low-cost aircraft parking overnight. This overnight requirement will reduce as longer flight sectors into Eastern Europe and the Eastern Mediterranean begin to feature more in no-frills operations (e.g. overnight NFC's already operates from LTN to Athens). The inclusion of long-haul traffic in the airports traffic mix with its relatively low parking overnight content will also add to efficiency of stand usage.
- 2.30 The number of GA/Other stands in the LLAOL forecasts is lower than the comparative SPAM N21 and Bechtel Forecasts. This is possibly because LTN have included passenger and cargo positioning movements within the total passenger and cargo stand calculations rather than in GA/other movements. Future GA and other stand requirements are driven primarily by increasing aircraft size, as the number of traffic movements while growing initially is forecast to have declined again to a level some 10-12% greater than at present.

**TABLE 2.5 – COMPARATIVE STAND REQUIREMENTS AGAINST PREVIOUS (SERAS) SCENARIOS**

Stand category	SPAM N21	Bechtel	LLAOL 1	LLAOL 2
E		5	2	2
D		38	15	46
C		32	58	54
GA/Other (D)		32	21	21
Total	133	107	96	135

*Note: Comparison refers to SERAS Optioneering Report, Tables 3.12 and 4.4 (SPAM 21 is only 18mppa)*

2.31 The LLAOL stand forecasts (above), assume maximum efficiency of stand use with up to 17 stands (4 x Category C, 11 x Category D and 2 x Category E), operating as dual purpose passenger or cargo stands. Should there be a requirement to segregate passenger and cargo stands then the number of stands in the LLAOL scenarios will be greater. The table below shows the stand requirements with separate passenger and cargo stands.

**TABLE 2.6 – STAND REQUIREMENTS WITH SEPARATE CARGO & PASSENGER**

Stand category	LLAOL 1	LLAOL 1	LLAOL 2	LLAOL 2	LLAOL 1	LLAOL 2
	Passenger	Cargo	Passenger	Cargo	Total	Total
E	0	0.	2	2	2	2
D	9	39	11	11	20	50
C	58	66	4	4	62	70
GA/Other (D)		0	0	0	21	21
Total	67	105	17	17	105	143

## Conclusion

2.32 LLAOL has conducted this assessment based on our key skills, knowledge of the industry today and our forecast of the future shape and structure of LTN's market. This is a preliminary assessment but in summary, indicates the following:

- ***the aviation market is going through a period of significant change. Major re-structuring has taken place in recent years and this process will continue;***
- ***LTN has already become a centre for the NFC market. The NFC market is now opening up at other UK airports;***
- ***LTN can deliver more capacity from less operational infrastructure than assumed in SERAS; and***
- ***Government must urgently re-visit appraisal before any final decision on runway capacity.***

### 3. APPENDIX 3 - NOISE ASSESSMENT – EVALUATION OF OPTIONS

#### Introduction

- 3.1 Casella Stanger has been commissioned by London Luton Airport Operations Ltd (LLAO) to evaluate several options with regard to aircraft noise and the proposals contained with the DfT SERAS document.
- 3.2 The objective of this study was to examine the potential noise implications of other possible future options for London Luton Airport. Within the SERAS document, results had been provided for 'maximum use' of a new single runway to the south of the existing runway and a new runway located to the east and orientated in a more north-easterly / south-westerly direction. The SERAS study had also assumed a certain fleet mix for this maximum use case.
- 3.3 LLAOL wished to explore several issues. These were:
- the extent of the potential noise impact were the existing runway extended and operated at its maximum capability;
  - how differences in the future fleet mix might affect the noise impact; and
  - the possible extent of the impact were a double runway option developed at LTN.
- 3.4 The methodology for this study involved bringing together already published data and carrying out specific noise contouring modelling.
- 3.5 In general terms, aircraft noise contours are determined through combining data on the number and types of aircraft using the airport, the departure routes used and the destinations of the aircraft. From that the noise generated by each aircraft movement is calculated across the areas affected and, for daytime activity, the noise from all the aircraft movements (both departures and arrivals) averaged over the 16 hour period between 0700 and 2300 hours. Account is also taken of the average operational mode of the airport, i.e. the proportion of the time aircraft are arriving and departing to the west and vice-versa. This is known as the modal split.
- 3.6 The standard daytime contours produced annually at Luton and many other airports are based on a 92 day summer period between mid-June and mid-September, giving the results for an average day. It is this period that was used for the results published in SERAS.
- 3.7 The computer model used for SERAS was the so-called ANCON model maintained and operated by the CAA. Only the CAA can use that model and no other organisation can operate it. The widely available alternative to ANCON is the United States Federal Aviation Authority's Integrated Noise Model (INM). This model is used widely in the UK to produce noise contours and has been used now for several years to produce the noise contours for LTN.
- 3.8 In order to be confident that the results from using INM in this study are equivalent to the results that would be obtained from ANCON, one of the options studied used data supplied by the CAA in INM for one of the options published in SERAS which was modelled using ANCON. It will be seen that good agreement was obtained.

- 3.9 Based on the above, results for six options have been compiled. They are:
- i. Luton Summer 2002 actuals.
  - ii. The SERAS 2030 results for the Southern Runway published in Table 10.2 of the main SERAS document.
  - iii. Using the current fleet mix, but increasing the movements to 221,000 ATMs and extending the existing runway to the east so that it is 3km long, i.e. the same length as SERAS shows for the new southern runway.
  - iv. Using the SERAS fleet mix supplied by CAA, but operating from the existing runway that has been extended to 3km. (This is the option used to compare the results between INM and ANCON).
  - v. As 4 but with a fleet mix supplied by LLAOL.
  - vi. Using the extended existing runway and the new southern runway as two close spaced runways, based on a fleet mix supplied by LLAO, with the movements split evenly between them.
- 3.10 As indicated above, the results for Options 1 and 2 have already been published elsewhere. For Options 3 to 6, the contours were produced using INM based upon the various input data supplied.
- 3.11 Assumptions had to be made about the modal split. The split for Summer 2002 was 70%/30% west/east. Consequently, for Option 3, the same modal split was used. For SERAS, it is understood that the modal split assumed by CAA was 76%/24% west/east. Thus for Options 4 - 6, that modal split was used. Consequently, some care is needed when comparing the Options 1 and 3 with options 2 and 4 – 6 as there may be some, albeit small, differences due solely to the different modal splits.

### **Casella Stanger**

- 3.12 Casella Stanger is one of the UK's most highly respected environmental consultancies. It brings together the expertise previously found within Stanger Science and Environment, SGS Environment and Monitor Environmental Consultants. It has a team of over 100 consultants working across the range of environmental disciplines including air quality, ecology, land, water, landscape and noise, acoustics and vibration.
- 3.13 The noise team is one of the largest in the UK and has wide experience of working for the public and private sector. Its experience in addressing aircraft noise issues dates back to the late 1970's when it was involved in the Heathrow Terminal 4 Inquiry. Since then, it was one of the first teams to set up and implement long term, automatic monitoring of aircraft noise using telemetry techniques, and has been involved with many airports including London City, Manchester, Liverpool, Filton and Bristol Lulsgate.

3.14 Casella Stanger has also provided advice to Government officials on aircraft noise issues. This has included:

- being involved in the development of the original South-East and Eastern Appraisal Framework (SEEAF);
- assisting with the implementation of noise mapping in connection with the National Ambient Noise Strategy and the EU Directive on the Assessment and Management of Environmental Noise;
- providing miscellaneous ad-hoc advice; and
- providing training.

3.15 Casella Stanger has been involved with London Luton Airport since about 1996, contributing to the environmental statement for the new terminal building, assisting with the development brief, producing noise contours, undertaking noise monitoring and assisting the Noise and Track Sub-Committee and the London Luton Airport Consultative Committee.

## **Options**

### *Option 1 – Luton Summer 2002 actual*

3.16 Option 1 comprises the Summer 2002 actual contours. These results were presented to the London Luton Airport Consultative Committee on 17th March 2003. The fleet mix for this option is shown in Table 3.1 below:

**TABLE 3.1 – FLEET MIX FOR 2002 SUMMER (92 DAY FIGURES)**

<b>Aircraft Type</b>	<b>Movements</b>
727100	32
727200	54
737300	4316
737400	210
737700	4789
737500	8
737200	930
757RR	1153
A300	63
A320	1171
BAC111	8
BAE146	245
767300	30
767JT9	169
BAE300	77
DC10	4
Other	5577
Total	18836

*Option 2 – The SERAS results for 2030 using the ‘new’ southern runway*

- 3.17 Option 2 is the 2030 southern runway scenario, the results for which were published in Table 10.2 of the main SERAS document and presented graphically in Figures 6.37 and 6.38 of the SERAS Stage 3 Report published by Halcrow.

*Option 3 - Current fleet mix, 3000m extended runway (2030)*

- 3.18 For Option 3, the 2002 movements were increased pro-rata so that the total annual movements were 221,000 ATMs. For simplicity, it was assumed that these movements occurred in the 16 hour period of 0700 – 2300 hours, although in reality there would be probably be some movements outside of this period. Therefore, the results shown here can be regarded as the worst case for the daytime. Importantly, the fleet mix was assumed to be the same as occurred in 2002. In addition, it was assumed that the existing runway had been extended to the east so that the total length was 3km. The consequence of this change was that the start of roll position for westerly departures and the threshold for westerly arrivals would be further to the east than at present, and this could potentially affect the contour sizes. Table 3.2 shows the fleet mix used for Option 3.

**TABLE 3.2 – FLEET MIX FOR OPTION 3 (92 DAY FIGURES)**

<b>Aircraft</b>	<b>Movements</b>
737300	12671
737400	617
737500	24
737700	14060
767300	88
727100	94
727200	159
737200	2730
757RR	3385
767JT9	496
A300	185
A310	38
A320	3438
BAC111	24
BAE146	719
BAE300	226
DC1030	12
Other	16335
Total	55301

*Option 4 - SERAS fleet mix (supplied by CAA), 3000m extended runway*

3.19 As indicated above, the SERAS contour values shown in Option 2 were produced using the CAA ANCON model. There have been issues raised in the past regarding any differences that exist between INM and ANCON and it was felt prudent to use in INM the input data used for the SERAS report. Thus, Option 4 is based on a dataset for 2030 provided by the CAA, corresponding the results shown in Table 10.2 of the main SERAS report. Table 3.3 shows the fleet mix supplied:

**TABLE 3.3 – FLEET MIX FOR OPTION 4 (92 DAY FIGURES)**

Aircraft	Movements
737800	3018
747400	1417
757200	6238
757300	4655
767300	9310
767400	957
777200	1914
717200	3018
737300	734
737700	3018
74720B	1417
767JT9	74
A300	4655
A319	3018
A320	3386
A330	6569
A340	957
BAE146	5428
CL601	3367
LEAR35	184
SF340	147
GASEPF	129
Total	63610

- 3.20 From the various SERAS documentation, information about destinations were obtained and from that a scheme of departure profiles were developed to reflect the likely take-off weights of the aircraft.
- 3.21 For aircraft types not currently in operation, the SERAS surrogates were used, but with no corrections.
- 3.22 Encouragingly, the results from the INM modelling were very similar to those shown in SERAS. Thus, it was concluded that it would be possible to compare the results for the subsequent options with the published SERAS results.

*Option 5 - LLAOL fleet mix, 3000m extended runway*

- 3.23 Option 5 used a fleet mix developed by LLAOL and shown in Appendix 2. It is based on about 252,000 ATMs, but, for simplicity, it was assumed that all movements operated within the 16 hour day (i.e. giving a worst case for the daytime). The modelling methodology used for Option 4 was applied here, so that the results are equivalent.

*Option 6 - LLAOL fleet mix, close parallel runway*

3.24 Option 6 also used a fleet mix developed by LLAOL and shown in Appendix 2, but based on about 390,000 ATMs using two close-spaced runways. The movements were divided evenly between the two runways and again it was assumed that all movements occurred in the 16 hour day (i.e. a worst case for the daytime).

**Results**

3.25 The results are summarised in Table 3.4 below:

**TABLE 3.4 – AREA ENCLOSED BY LAeq,16h FOR VARIOUS OPTIONS**

Option	Description	72 dB(A)	69 dB(A)	66 dB(A)	63 dB(A)	60 dB(A)	57 dB(A)
1	Summer 2002 actuals	1	1	2	4	6	11
2	SERAS results for 221,000 ATMs (2030 Southern Runway Table 10.2 of SERAS report)	3	5	9	17	29	49
3	Current mix but increased to 221,000 ATMs on extended existing runway	2	3	5	9	15	27
4	SERAS mix, 221,000 ATMs (as in Option 2) on extended existing runway	3	6	11	19	31	50
5	Luton mix of about 252,000 ATMs on extended existing runway	2	4	8	14	24	41
6	Luton mix of about 390,000 ATMs on a closed spaced double runways	4	7	12	20	33	56

*Note: all areas in km<sup>2</sup>*

3.26 The contours for Option 3 are shown graphically in Figure 3.1. The results show that making full use of an extended current runway with the current fleet mix could mean that the area within the 57 dB(A) contour could extend to 27 km<sup>2</sup>.

- 3.27 The contours for Option 4 are shown in Figure 3.2. Comparing the results of Option 4 and Option 2 shows that the INM modelling used did produce similar results to that derived by the CAA using ANCON. There are some differences, however, but it must be remembered that there are uncertainties in the assumptions made and, as such, some differences would almost be inevitable. However, this result is encouraging and means that the results for Options 5 and 6 can be regarded as equivalent to the results published in SERAS. (N.B. Figure 10D in the SERAS main document shows the extent of the 57 dB(A) contour for the 2015 southern runway, giving an area enclosed of 36 km<sup>2</sup>. This figure is not comparable to Figure 3.2 of this report (which relates to 2030).
- 3.28 The contours for Option 5 are shown in Figure 3.3. Option 5 is the likely extended single runway capacity but based on the LLAOL view of how the market and fleet mix might develop. Here it can be seen that the area within the 57 dB(A) contour is about 41 km<sup>2</sup> compared with the SERAS value of 49 km<sup>2</sup>, despite the SERAS movements being 221,000 ATMs and the Luton movements being 252,000 ATMs. The difference is primarily to do with fleet mix. On average larger aircraft are assumed by SERAS than is expected by LLAOL. However, LLAOL expect a larger fleet compared with that which currently occurs.
- 3.29 The contours for Option 6 are shown in Figure 3.4. It can be seen that the area within the 57 dB(A) contour is about 56 km<sup>2</sup> compared with 49 km<sup>2</sup> for the SERAS single runway case and 41 km<sup>2</sup> for the LTN single runway case.
- 3.30 For both Options 5 and 6, it should be remembered that the assumed modal split is 76%/24% W/E compared with Options 1 and 3 which have an assumed modal split of 70%/30% W/E. For Options 5 and 6, were the proportion of westerlies reduced, the change the 57 dB(A) contour would not extend quite as far into Stevenage nor quite as far to the south-west of the airport. It would, however, extend slightly further to the west of the airport.

#### *Aircraft Fleet Assumptions*

- 3.31 As indicated above, the size of the noise contours depends on the fleet mix assumption and, in particular, the proportion of larger aircraft within the fleet. For SERAS, aircraft class bands were defined, based on the number of seats, as shown in Table 3.5 below:

**TABLE 3.5 – AIRCRAFT CLASS BANDS**

<b>Aircraft Class Band</b>	<b>Number of Seats</b>
1	< 70
2	70 – 150
3	151 – 250
4	251 – 350
5	351 – 500
6	> 500

<sup>2</sup> Data taken from SERAS Stage 2 Appraisal Findings Report – Aircraft and Surface Access Noise Jan 2002.

<sup>3</sup> The area within the 57 dB(A) contour for this Gatwick option is 87 km<sup>2</sup> (Close Spaced 2030).

3.32 Examples of aircraft types in the different bands are shown in Table 3.6.

**TABLE 3.6 – AIRCRAFT TYPES BY CLASS BANDS**

Aircraft Class Band	EXAMPLE OF AIRCRAFT TYPES	NUMBER OF SEATS
1	Canadair Regional Jet Chapter 3 Executive Jet	50 10
2	A320; Avro 146 B737 – 600/700	149 100 126
3	A310 – 200/300; B757 - 300; B767 – 300	218 220 227
4	A330 - 300; B777-200 B747 cargo	335 305
5	A340 – 500/600; B747 – 400; B777 – 300	380 421 375
6	B747-400D	569

3.33 In understanding the various contour areas and how these relate to aircraft size, Table 3.7 shows the proportion of the fleet for the options according to the Aircraft Class Bands used in SERAS:

**TABLE 3.7 – PROPORTION OF AIRCRAFT FLEET MIX BY AIRCRAFT CLASS BANDS**

Band	Options 1 & 3	Options 2 & 4	Option 5	Option 6	Gatwick (Close-space) <sup>23</sup>
1	30%	1%	0	0	1%
2	60%	36%	66%	30%	22%
3	10%	45%	25%	39%	59%
4	0	18%	8%	29%	8%
5	0	0	0	3%	9%
6	0	0	0	0	1%

3.34 The LGW data has been included to enable comparison with Option 6.

3.35 From the above table it can be seen that the percentage of the fleet at Class 3 and above is:

Options 1 and 3	10%
Options 2 and 4	63%
Option 5	33%
Option 6	71%
LGW (close space)	77%

3.36 Table 3.8 shows this information alongside the area enclosed by the 57 dB(A) contour.

**TABLE 3.8 – AREA WITHIN 57 dB(A) BY AIRCRAFT BAND**

Option	Proportion of Fleet in Aircraft Class Band 3 or higher(%)	Area within 57 dB(A) Contour (km <sup>2</sup> )
1	10	11
2	63	49
3	10	27
4	63	50
5	33	41
6	71	56
LGW	77	87

3.37 It can be seen that when comparing Options 3 – 6, there is a link between increasing aircraft size and increased contour area.

### **Assessment**

3.38 Of necessity, the data contained within the SERAS consultation must be regarded as indicative rather than definitive. There are many uncertainties regarding the actual future fleet mixes and aircraft types and these uncertainties flow through to the noise assessment.

3.39 For the purposes of this assessment, however, considerable efforts have been made to make the comparisons comparable even though some caution must be exercised over the detailed final results.

3.40 Two main conclusions can be drawn from this assessment:

- The extent of the noise impact from a maximum use single extended runway operation at LTN in 2030 is likely to be smaller than that set out in SERAS; and
- The extent of the noise impact from a closed spaced two runway operation at LTN could cause a smaller impact in terms of area than a similar two runway operation at LGW.

3.41 For the single runway option, the difference is due to the relatively smaller aircraft included in the fleet mix that LLAOL expect would occur. For the two runway option, Table 3.9 below compares the two runway options at STN (SERAS Table 9.2, 2030, one new runway), LGW (SERAS Table 8.2, 2030 close parallel), a two runway LHR (SERAS Table 7.2 Base Case /Max use 2030) and a two runway Luton:

**TABLE 3.9 – COMPARISON OF CONTOUR AREA OF LONDON AIRPORTS**

	<b>LTN</b>	<b>LHR</b>	<b>LGW</b>	<b>STN</b>
<b>Area within 57 dB(A) contour (km<sup>2</sup>)</b>	56	130	87	127

3.42 It can be seen that, potentially, LTN could give the smallest impact in terms of area for a two runway option. This is due in part to the runways being close together (the separation between the possible LGW runways is nearly twice that of LTN) and due to the likely fleet mix.

3.43 Of course, the area enclosed by the contour is only one measure of the impact. Of equal importance would be the population living within the contour areas. Nevertheless, on the basis of this assessment, there is merit in considering a two runway option at LTN as a means of providing capacity in the South-East.

## **Conclusion**

3.44 This report describes the results of a study looking at the potential noise impact of possible future options for London Luton Airport in the context of the DfT's SERAS consultation.

3.45 Three main issues were considered:

1. The extent of the potential noise impact were the existing runway extended and operated at its maximum capability;
2. How differences in the future fleet mix might affect the noise impact; and
3. The possible extent of the impact were a double runway option developed at LTN.

3.46 The study also had to take account of the fact that the results published in SERAS were determined using the CAA ANCON model and that this study used the FAA's INM model.

3.47 The main conclusions are:

- *the results obtained using INM were equivalent to those obtained using ANCON (comparing Option 4 with Option 2);*
- *tusing the existing runway, but extended to 3km and with a fleet mix developed by Luton would have a smaller impact than the so-called maximum use impact shown in SERAS (comparing Option 5 with Option 4; and*
- *ta double runway option at Luton could give rise to a smaller impact (in terms of contour area) compared with the two runway options shown n SERAS for the other London airports.*

3.48 On the basis of this assessment, there is merit in considering a two runway option at LTN as a means of providing capacity in the South-East.

**Figure 3.1**  
**Option 3**

**Figure 3.2**  
**Option 4**

**Figure 3.3**  
**Option 5**

**Figure 3.4**  
**Option 6**

## Notes