



Report to the Secretaries of State for Communities and Local Government and Transport

by David Richards BSocSci DipTP
MRTPI

an Inspector appointed by the Secretaries of State
for Communities and Local Government and
Transport

The Planning Inspectorate
Temple Quay House
2 The Square
Temple Quay
Bristol BS1 6PN
☎ GTN 1371 8000

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TOWN AND COUNTRY PLANNING ACT 1990

APPEAL BY

TAG FARNBOROUGH LTD

FARNBOROUGH AIRPORT

RUSHMOOR BOROUGH COUNCIL

Inquiry opened on 26 May 2010

Farnborough Airport, Farnborough GU14 6XA

File Ref: APP/P1750/A/09/2118357

Glossary, Abbreviations and Acronyms

AQMA	Air Quality Management Area
ANASE	Attitudes to Noise from aviation Sources in England (DfT Report 2007)
ANIS	Aircraft Noise Index Study
ATWP	Air Transport White Paper 2003
BA	Business Aviation
BATM	Business Air Traffic Movements
BBJ	Boeing Business Jet
CAA	Civil Aviation Authority
CATM	Commercial Air Traffic Movements
CBA	Cost benefit analysis
CDA	Continuous Descent Arrangements
CJ	Commercial Jet
CS	Core Strategy (Preferred Approach)
dB(A)	the A weighted decibel to take account of the sensitivity of the ear
$L_{Aeq, 16h}$	the equivalent continuous sound level over 16 hours
$L_{A(max)}$	the highest A weighted noise level recorded during a noise event
ES	Environmental Statement
FA	Farnborough Airport
FAAAP	Farnborough Airport Area Action Plan
FACC	Farnborough Aerodrome Consultative Committee
FARA	Farnborough Aerodrome Residents' Association
FBO	Fixed Base Operator
FN	Footnote
GA	General Aviation
HYENA	Hypertension and Exposure to Noise near Airports study (Dec 2009)
ILS	Instrument Landing System
INM	Integrated Noise Modelling
JS	Mr John Steel QC
LDF	Local Development Framework
MoD	Ministry of Defence
mpa	movements per annum
NPR	noise preferential route
PSZ	Public Safety Zone
RBC	Rushmoor Borough Council
RFI	Radiative Forcing Index
RLPR	Rushmoor Local Plan Review
RX	Re-examination
SB	Mr Simon Bird QC
SOCG	Statement of Common Ground
SEP	South East Plan (Regional Spatial Strategy for the South East)
SIDS	Standard Instrument Departures
STARS	Standard Terminal Arrival Routes
TAG	TAG Farnborough Limited
WFA	Weekend Flights Appeal
WCBV	Western Corridor and Blackwater Valley sub region (of the SEP)
XX	Cross examination

File Ref: APP/P1750/A/09/2118357

Farnborough Airport, Farnborough GU14 6XA

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission under section 73 of the Town and Country Planning Act 1990 for the development of land without complying with conditions subject to which a previous planning permission was granted.
- The appeal is made by TAG Farnborough Airport Limited against the decision of Rushmoor Borough Council.
- The application Ref 09/00313/REVPP, dated 8 June 2009, was refused by notice dated 19 November 2009.
- The application sought the variation of a condition attached to a planning permission Ref APP/P1750/A/06/2024640, dated 13 March 2008, for the erection of new buildings and associated structures, installation of aerodrome, and ancillary infrastructure works, formation of new vehicular access, and use of the aerodrome for business aviation, and related activities.
- The condition in dispute is No 8 which states that: *No more than a total of 28,000 aircraft movements per annum shall take place, of which no more than 4,200 movements shall be at weekends and Bank Holidays during 2008, and no more than 5,000 movements shall be at weekends and Bank Holidays during 2009 and each year beyond. Furthermore no more than 270 aircraft of the 1,500 movements per annum between 50,000 and 80,000 Kg, permitted by condition 12, shall take off or land at weekends and Bank Holidays.*
- The reason given for the condition is: *The Secretaries of State considered the condition to be both necessary and reasonable and that it took account of the advice in Circular 11/95: The use of conditions in planning permissions.*
- The application proposes a variation of the condition to read: *No more than a total of 50,000 aircraft movements per annum shall take place, of which no more than 8,900 movements shall be at weekends and Bank Holidays. Furthermore no more than 270 aircraft of the 1,500 movements per annum between 50,000 and 80,000 Kg, permitted by condition 12, shall take off or land at weekends and Bank Holidays.*
- The reason for refusal is: *The proposed increase in business aviation movements at Farnborough Airport would result in an adverse impact upon the amenities of surrounding residential property, particularly with regard to increased frequency and maximum levels of noise disturbance, air quality and odour problems, and the greater risk from more movements.*
It has not been satisfactorily demonstrated that the economic benefits of the proposal outweigh the adverse environmental consequences to the extent that a departure from Policy FA2.2 (A) of the Rushmoor Local Plan is justified.

Summary of Recommendation: I recommend that the appeal be allowed and planning permission granted.

Procedural Matters

1. At the Inquiry an application for costs was made by TAG Farnborough Airport Ltd against Rushmoor Borough Council. This application is the subject of a separate Report.
2. I was assisted at the Inquiry by Mr Lloyd Rodgers BEng CEng MICE MBA. Mr Rodgers was present for most of the Inquiry and has contributed to the drafting of this report.
3. The application was supported by an Environmental Statement, submitted in accordance with the Environmental Impact Assessment Regulations 1999 as

amended (CD/1 and CD/2). In my opinion the ES meets the requirements of the regulations, and I have taken its contents into account in arriving at the recommendation in this report, together with all the other environmental information considered at the Inquiry and submitted in connection with the appeal.

4. The inquiry opened on 26 May 2010 and sat on 16 days (26 – 28 May, 2 – 4 June, 8 – 11 June, 15 – 17 June, 22 - 23 June and 30 June). An accompanied visit to the Airport was made on Tuesday 25 May, and unaccompanied visits to the surrounding area were made during and after the Inquiry.
5. The appeal was recovered for decision by the Secretaries of State for Communities and Local Government and for Transport jointly by letter dated 22 December 2009.

The Site and Surroundings

6. Farnborough Airport covers some 235 hectares of predominantly open land to the south-west of Farnborough town centre. It forms the largest part of the former Royal Aerospace Establishment site (last occupied by DERA (Defence Evaluation and Research Agency)). It is roughly bounded by Farnborough Road (A325), Elles Road, Iveley Road, the Basingstoke Canal, Shoe Lane and Government House Road.
7. To the south-east is the Farnborough Aerospace Park, a business park principally comprising a number of office buildings and partly occupied by BAE Systems. Immediately to the north, on terraces overlooking the main runway, is the site of the Farnborough International Airshow.
8. The north-east portion of the aerodrome site, formerly known as the Factory Site, is now owned by SEGRO, which has planning permission for a large business park (IQ Farnborough). Some new buildings have been built, with much more floorspace yet to be constructed, and a number of historic buildings on the site have been refurbished. More recently, a number of alternative uses have been permitted on the site, including residential in the far north-east corner. North-west of the site lies the Cody Technology Park, occupied by QinetiQ for research and development purposes.
9. TAG Farnborough Airport Ltd (TAG) occupies the site for its business aviation operation. The site is predominantly open in character, with an enclave of buildings to the north with access from Iveley Road. These include a terminal building, hangars and a control tower, in addition to older hangers and support buildings dating from when the site was used by the MoD.
10. The airport has a single principal runway (runway 06/24) running approximately south-west to north-east across the site. Take-offs and landings occur in either direction, dependent on wind direction. There are Public Safety Zones at each end of the runway.
11. Ground levels rise to the east of the airport perimeter. Farnborough College of Technology (FCOT) lies on the opposite side of Farnborough Road, and there are also established residential areas under the principal take-off and landing routes. To the west there are extensive open areas used for leisure and in part for military training. Residential areas of Church Crookham also lie in this direction.

Planning History

12. Relevant planning history is set out in the SOCG (paragraphs 1.13 – 1.23), from which the following summary is taken.
13. Farnborough was the first operational airfield in the country, dating from 1905. It was used for aviation and defence research and development until the mid 1990s when, in 1991, it was declared surplus to requirements by the Ministry of Defence (MoD).
14. It was government policy that the site should remain as an airfield, principally for business aviation. In 1997 the MoD marketed the site and the Council supported the proposed business aviation use through policies in the Rushmoor Local Plan Review (RLPR), with the public inquiry taking place in 1998.
15. The government appointed TAG as the airport operator, and planning permission was granted in October 2000 for the erection of buildings and associated structures, installation of aerodrome and associated infrastructure works, formation of new vehicular access and use of the aerodrome for business aviation and related activities (planning permission reference no. 99/00658/OUT). This permission was subject to a number of planning conditions, including a restriction on the total number of movements permitted each year and a further restriction on movements at weekends and bank holidays. Accompanying the original planning permission was a legal agreement which imposes additional restrictions on the use and operation of the airport and this remains in use.
16. The current Civil Aviation Authority operating licence was granted in 2003, and the Department for Transport established formal Public Safety Zones (PSZs) at Farnborough in early 2004 (replacing proxy zones which they had indicated in 2001).
17. Farnborough stages the biennial International Airshow, which is dependent on the successful operation of the airport. The Airshow is run by Farnborough International, part of the Society of British Aerospace Companies (SBAC) which is the trade organisation of the UK aerospace industry.
18. Over the past few years, the Council has considered a number of detailed planning applications for new buildings and structures at the airport, including a new control tower, radar mast, hangars, a new terminal building, a hotel and most recently, a second set of hangars.
19. In October 2005, TAG Farnborough Airport submitted a planning application for the variation of one of the planning conditions on the original permission to increase weekend and bank holiday movements from 2,500 per Annum to 5,000 per annum (reference no. 05/00640/FUL). The Council refused planning permission in June 2006 on the grounds of adverse impact upon the amenities of surrounding residential properties, and that it had not been satisfactorily demonstrated that there were overriding economic benefits to the proposal.
20. The decision went to appeal and a public inquiry was held in 2007. The appeal was recovered for determination by the Secretary of State for Communities and Local Government who, together with the Secretary of State for Transport, allowed the appeal and granted planning permission in March 2008. (Hereafter referred to as the weekend flights appeal). A new decision notice was issued

together with a series of planning conditions. Condition 8 of that permission restricts the number of movements per annum.

21. The appeal application was the subject of a report to the Council's Development Control Committee on 11 November 2009 which recommended approval. The applicants sought to address a significant number of planning issues by means of an agreement under Section 106. The agreed draft heads formed part of the report to Committee and informed the Council's decision.

22. Planning permission was refused for the following reason:

"The proposed increase in business aviation movements at Farnborough Airport would result in an adverse impact upon the amenities of the surrounding residential property, particularly with regard to increased frequency and maximum levels of noise disturbance, air quality and odour problems, and the greater risk from more movements.

It has not been satisfactorily demonstrated that the economic benefits of the proposal outweigh the adverse environmental consequences to the extent that a departure from Policy FA2.2(A) of the Rushmoor Local Plan is justified."

23. At a meeting of the Development Control Committee on 10 March 2010 the Council resolved to focus its case in respect of the appeal on three specific matters namely planning issues, noise impact and economic benefits and not to pursue the issues of air quality, odour or risk at the Inquiry.

The proposal

24. The application to which this appeal relates seeks a variation of Condition 8 attached to the 2008 decision by the Secretaries of State to read:

"No more than a total of 50,000 aircraft movements per annum shall take place, of which no more than 8,900 movements shall be at weekends and Bank Holidays during 2009 and each year beyond. Furthermore, no more than 270 aircraft of the 1,500 movements per annum between 50,000 and 80,000 Kg. permitted by condition 12, shall take off or land at weekends and Bank Holidays."

Planning Policy

25. Relevant planning policy is set out in full in the Statement of Common Ground (SOCG) Part 2. The following is a summary of the key considerations.

Air Transport White Paper 2003 (CD/25)

26. The ATWP sets out a strategic framework for the development of airport capacity in the UK. It remains the principal statement of government policy on aviation for the period to 2030. Paragraph 1.4 confirms that all such development proposals will need to be brought forward through the planning system in the normal way. The White Paper does not itself authorise, or preclude, any particular development but sets out policies which will inform and guide the consideration of planning applications.

27. Paragraphs 2.5 and 2.6 deal with the increasing importance of aviation to the economy and paragraph 2.8 states that the latest forecasts suggest that, if sufficient capacity is provided, the demand would be for between 400 and 600 million passengers per year by 2030.

28. Paragraph 2.18 states that the strategy is for a balanced and measured approach which amongst other matters, recognises the importance of air travel to national and regional economic prosperity whilst reducing and minimising the impacts on those who live nearby and on the natural environment.
29. The ATWP states that the starting point should be making the best use of existing airports before supporting the provision of additional capacity. It also states that a sustainable approach entails first making better use of existing infrastructure, wherever possible. At the local level, decisions about the amount and location of future airport capacity must properly reflect environmental concerns, and adverse impacts should be controlled, mitigated and, where relevant, made the subject of suitable compensation (para 3.5).
30. Noise impacts should be limited and, where possible, reduced over time (para 3.6) Paragraph 3.15 sets out the approach to noise impacts which is first to seek to control the scale of the impacts, second to mitigate impacts, and third to compensate for those impacts which cannot be mitigated. (para 3.15). Those smaller airports with less than 50,000 movements a year should use noise contours for the year when the movement threshold is first passed as the base year when applying these measures (para 3.25).
31. The ATWP encourages the growth of business aviation and notes that small airports have an important part to play in the provision of airport capacity in the South East. Para 11.94 states that there is support from a wide range of stakeholders that the small airports in the South East should be allowed to cater for as much demand as they can attract, and it appears that some further development could be possible at any of the smaller airports without insurmountable environmental constraints.
32. Farnborough was one of six existing business aerodromes which were considered to have potential to provide additional capacity to cater for business aviation demand. It was noted that there was a fairly limited but generally positive response.
33. Paragraph 12.7 states that Airport operators are recommended to maintain a master plan document detailing development proposals, and that the level of detail within it is essential to inform the content of the Local Development Framework (LDF).
34. The ATWP was considered by the House of Commons Transport Committee which reported on 7 December 2009. The government's response was published on 24 February 2010, as 'The future of aviation: Government response to the Committee's First Report of Session 2009 – 10.' At paragraph 1 the government welcomes the Committee's conclusion that the ATWP continues to provide a sound basis for aviation policy. More recently, the Coalition Programme of Government, published in May 2010 (SIT9) has cancelled the third runway at Heathrow, and states that planning permission for additional runways at Gatwick and Stansted will be refused. A further indication of the government's intentions was given in a statement by the Rt Hon Philip Hammond, Secretary of State for Transport on 15 June 2010 (SIT61). It announces the establishment of a South East Airports Task Force to explore the scope for other measures (in addition to the reform of economic regulation) to help make the most of existing infrastructure and improve conditions for all users. In doing so it recognises the importance of aviation to the economy and employment, and to UK

competitiveness but states that *"we cannot simply allow growth to continue at levels it has in the past. Doing so risks unacceptable consequences in terms of noise and local air quality, quite apart from the global effects of CO₂ emissions"*.

Rushmoor Local Plan Review (RLPR) (CD/49)

35. The RLPR was adopted in August 2000. All the policies which are relevant to the determination of this appeal have been saved by the Secretary of State.
36. Business aviation is defined in the Plan as *"Business aviation, for the purposes of the policy, includes corporate aircraft, corporate air charter, air taxis, planned maintenance and refitting, medical flights and air work (such as law enforcement and aerial photography)."*
37. Policy FA2 states that *"to retain the capacity for business aviation and the Farnborough airshow, a business aerodrome operational area will be safeguarded for continued aerodrome use. The Council will not permit development unrelated to aviation within the business aerodrome operational area."*
38. Policy FA2.2(A) deals specifically with the number of movements allowed at the airport. *"The Council will permit proposals for flying or engine testing in connection with business aviation requiring planning permission, subject to the following restrictions: (i) the number of aircraft movements shall not result in levels of noise exceeding those that would be generated by 20,000 movements per annum of a mix of aircraft similar to the mix of civil aircraft movements to and from Farnborough Aerodrome in 1997; no more than 28,000 aircraft movements of which no more than 2,500 movements shall be at weekends or bank holidays. (ii) No aircraft exceeding 50,000 Kg maximum take-off weight, or helicopters exceeding 10,000kg. (iii) No more than 700 movements by chapter 2 aircraft per annum. (iv) No flying by aircraft with an average EPNdb greater than 98.9 at maximum takeoff weight; and (v) Civil aircraft movements shall take place only between 07:00 hours and 22:00 hours on weekdays and between 08:00 and 22:00 hours on Saturdays, Sundays and Bank Holidays except in an emergency. There shall be no civil aircraft movements at any other times and at no times on Christmas Day or Boxing Day. The Council will require agreements with the Aerodrome operator limiting the type of aircraft to take off and /land between 21:00 and 22:00 hours on weekdays"*.
39. Policy FA2.2(C) states: *"Proposals for flying or the ground testing of engines, requiring planning permission, will be permitted only if they (i) cause no demonstrable harm to the natural environment and amenities of the surrounding area; (ii) can be served adequately by local transport infrastructure; and (iii) do not adversely affect ambient air quality."*

Emerging Core Strategy (CD/52)

40. The Council published its 'preferred approach' to the Core Strategy in January 2010 for consultation. As such it has very limited weight at present. The Vision and Objective E (CD/25, Section 5) seek to encourage the continuation of viable business aviation flying at Farnborough Airport. The preferred option for Farnborough airport (SP6 – CD/52, page 81) is to safeguard the operational area of the airport for business aviation whilst requiring any change of operations to *"balance the economic benefits of those changes with any environmental consequences, in particular safety, noise and air quality."*

Farnborough Airport Area Action Plan (FAAAP) (CD/56)

41. The Council published its preferred approach in January 2010 for consultation. As such it carries limited weight at present. Preferred approach AAP2 deals with ATMs at weekends and Bank Holidays, seeking a limit on such movements of 18% of all movements. The preferred approach to noise in 2027 is to seek a reduction on the baseline contour when compared with the 2000 noise budget. Any changes to ATMs would only be acceptable if they do not exceed the baseline contour (although views are sought on a level of reduction to 2027) and include helicopter movements in the noise predictions, amongst other things.

Other national guidance

42. I have also taken into account guidance in PPS 1: *Delivering Sustainable Development* (2005) and the *Climate Change Supplement* (2007), PPS 4: *Planning for sustainable economic growth* (2009), PPG 13: *Transport* (2001), PPS 23: *Planning and Pollution Control* (2004), and PPG 24: *Planning and Noise* (1994).

The Case for TAG Farnborough Airport

Introduction

43. There is a substantial degree of common ground and agreement with the Council in this case. The focus on one issue, namely that of air noise, and indeed one part of that issue (namely air noise at weekends in particular) overlooks the highly important point that the expansion of Farnborough Airport is not only accepted by the Council to be justified and needed, albeit there is disagreement of degree, and that there is no demonstrable harm or even adverse effects or criticism in respect of any other issue. This is rare indeed in relation to any airport expansion, let alone one which produces so substantial and significant benefits in particular in economic terms but also with respect to the approach to climate change and sustainability policy generally.
44. It is not disputed that TAG Farnborough Airport is an exemplar airport, both of its kind and generally in terms of the quality of its infrastructure, its management and its approach. As stated by the Local Plan Inspector in 2000, it was accepted that in principle the Council would wish the business aviation facilities developed at the Airport to be the highest quality possible (CD/50, page 11-45, para 11.27.30). Rare it is that an applicant for planning permission at an appeal inquiry (let alone an airport applicant) can point to so much support, including from objectors who recognise its importance in the local community. The Council accepts the need for and has no objection to a significant increase in the level of annual BATMs permitted at the airport. Albeit that the Council has not assessed any figure, there can be no question of the cap remaining at 28,000 movements.
45. In fact, given that its planning witness, Mr Sellwood, accepted that planning permission should be forthcoming if there were some harm, albeit a small amount, there is no reason to withhold planning permission in the event that Appellant's case is rejected and the Council's case accepted in its entirety. The development would be in accordance with the Development Plan. In so far as there is any issue of non-compliance arising in relation to Policy FA2,2(A) of the LP, it is common ground that this is more apparent than real and should not prevent planning permission being granted. The cap in the policy of 28,000 BATMs is not a bar to the development proposed.

46. The Council's case is that there are significant benefits and, when properly assessed, the Council's case reveals no more than a small amount of harm, on its terms. If the Appellant's case is accepted, or even if some doubts exist as to some elements of it, it goes without saying that planning permission should be expected to be granted also. On the evidence, there is no good reason for dismissal of the application and appeal whatever case is accepted on noise grounds as the benefits, in particular the economic benefits, are accepted and recognised at 50,000 movements to be "very significant". Indeed, this is true as the job creation would be (at its lowest) some 960 jobs and more likely to be considerably higher than this i.e. some 1,880 or more jobs especially if the catalytic effects (difficult to quantify but no less real) are taken into account and which would increase the 1,880 figure markedly (TAG/P/6 paras 6.24 – 6.26).
47. The Appellant proposes a revised cap of 50,000 BATMs. It forecasts that it will reach this limit by 2019. There is no particular magic in that date. It is not a constraint or target date for assessment imposed by policy. That much is common ground between the main parties. 2019 is in fact only around the mid-point of the thirty-year time horizon considered in the government's policy on a strategic framework for the development of airport capacity in the United Kingdom (CD/25 para 1.1), as to which the Air Transport White Paper ("ATWP") remains the touchstone. It is reasonable that an application is made for a ten-year horizon; in particular because the growth of the airport is supported by government and development plan policy and it should not be simply frozen in time. It is right that best use be made of the Airport, its infrastructure and runway, within the constraints of acceptable environmental policy and effects.
48. The starting point of government aviation policy is the need, emphasised in the ATWP, to make the best use of the existing capacity of the UK's airports before supporting the provision of additional physical capacity. The ATWP also emphasises the important role of the smaller airports in the South East in helping to relieve pressure on the main (especially London) airports before a new runway in the South East is built, and the importance of Farnborough Airport as a business aviation facility within the South East ('Weekend Flights' Decision Letter, CD/14 para 16).
49. The appeal proposal is fully in accordance with those important statements of government aviation policy. No operational development of any kind is proposed. Indeed, given the recent announcements of a moratorium on new runways within the London airport system (Coalition programme for government - SIT9) and the creation of the South East Airports taskforce informed by the vision for better not bigger airports (Statement by Rt Hon Philip Hammond MP, Secretary of State for Transport - SIT61), government policy now lends even more support to the appeal proposal than was the case immediately prior to those recent announcements. Permitting a lifting of the cap to 50,000 BATMs at Farnborough Airport means not only making best use of existing infrastructure, it also means that the significantly constrained major London airports will be better placed to meet the demand for commercial ATMs without physical expansion and so serve their principal market more effectively. Farnborough Airport in this respect plays an important strategic role in national policy terms.
50. The Airport's exemplar status is reflected in its voluntary commitment to the control of emissions and achieving carbon neutrality (CD/15, para 12.1.2). Allowing the appeal will transform that commitment into an enforceable section 106 obligation for a package of proposals to reduce emissions and to achieve

- carbon neutrality. That section 106 obligation to reduce emissions and achieve carbon neutrality of an airport is understood to be the first of its kind in the United Kingdom. This approach and achievement has been generously commended during the inquiry by the most fervent objector on climate change issues (CX Mr Hugh Sheppard CPRE) and means that the Airport through the appeal proposal can play its part in tackling emissions and climate change (a key government priority for the planning system) consistent with the government's ambition of a lower emission, low-carbon economy (PPS 1).
51. Allowing the appeal will oblige the Appellant through the section 106 agreement to implement the 20-point TAG Farnborough Airport Sustainability and Climate Change Charter to manage and reduce emissions and to introduce a charging scheme for nitrogen dioxide. The issue of meeting mandatory air quality limit values, a constraint on expansion at London Heathrow airport (CD/25, para 11.54), does not arise. In fact, as pointed out in evidence, the effects of emissions on the local area would be negligible (TAG/P/7).
52. It can be seen that by allowing the appeal the Secretaries of State can consider imposing as an achievable benchmark the requirement that there be a Sustainability and Climate Change Charter in effect for the reduction of emissions and the requirement for carbon neutrality, to be addressed by other airports if their proposals for expansion are to be realised.
53. The proposal brings with it the continuation and extension of stringent noise controls, including a ban on all but Chapter IV equivalent or better aircraft, control on hours and numbers of movements at weekends in particular, to a greater extent than pro rata would permit, incorporation of monitoring and an on-site radar complaints procedure, effective ground noise controls and control over reverse thrust, the Quiet Flying Programme, continuation of the Farnborough Airport Consultative Committee (FACC), the offer of the payment of compensation at 60 dBA to owners of residential, academic or health care premises and thus at a lower noise level than that provided for in the ATWP (page 36 - 63 dBA), the phased introduction of increased movements over at least 10 years, the limiting of heavy aircraft to 1,500 per year (3%), a commitment to pursue an airspace change to introduce controlled airspace with the benefits of Standard Instrument Departures (SIDs), Standard Arrival Routes (STARs), Continuous Descent Approaches (CDAs) and the exclusion of extraneous aircraft and contourings for helicopters and aircraft in accordance with Noise Preferential Routes (NPRs) published in the Air Pilot.
54. Sustainable development is the core principle underpinning planning. The appeal proposal meets the aim of effective protection of the environment and the prudent use of natural resources. Moreover, it meets the aim of maintaining high and stable levels of economic growth and employment (PPS 1, para 4). It is common ground between the main parties (and many others including the South East of England Development Agency (SEEDA) and the Confederation of British Industry (CBI)) that allowing the appeal will generate substantial economic benefits in that there will be admittedly a very significant increase in direct, indirect and induced employment at 50,000 movements. That fact is to be welcomed and afforded the highest possible weighting in the balance at a time of high or rising unemployment nationally, regionally and locally. As must be the case, no less weight should be given to the creation of jobs in the South East merely because the region is overall better off than some other areas in the

United Kingdom. Government policy is for the retention and creation of jobs, not diminished in terms of importance by reason of location.

55. There is no demonstrable harm. There was no justifiable reason for refusal by the members who had no sound or evidential basis for their decision. If the Council's case on, and non-conventional approach to, the assessment of air noise is accepted, the amount of harm is, at worst, small. This is clearly outweighed by the very significant benefits in particular economic benefits. If this is so, it is common ground that planning permission should be granted. In any event, the decision lies firmly in favour of granting planning permission.

Noise

56. The question is whether there is any, and, if so, what degree of demonstrable harm there would be to set against the very significant benefits that would accrue by granting planning permission. The Council accepts and agrees that using a conventional or standard analysis of the air noise impact of the proposal the impact is likely to be modest (SCG para 3.7 and RBC/P/3 para 2.2.1). Even on the Council's admittedly non-conventional approach, it accepts that the weekday air noise impact of the appeal proposal would be moderate. The Council effectively confines its objection, it can be concluded, to weekend movements and within the weekend (as will be seen) to Sundays and to one hour on Sundays on only a limited number of days of each year. The evidence does not assist any reasonable conclusion being drawn that the proposal would cause an unacceptable degree of disturbance i.e. demonstrable harm (Mr Fiumicelli evidence in chief 11/06/10). It is to be remembered that PPG 24, to which full weight should be given, makes it clear that much of the development which is necessary for the creation of jobs and the construction and improvement of essential infrastructure will generate noise and that the planning system should not place unjustifiable obstacles in the way of such development (PPG 24, para 10).
57. Although it was not in its written evidence nor supported by any national, regional, local or draft policy of any kind, nor something which was contained within its rule 6 statement, the Council asserted through Mr Fiumicelli that any increase above 1 dBA in the Leq 16h noise level would be harmful and prima facie prevented. Mr Fiumicelli also asserted that demonstrable harm took place for any dwelling which was within the 57 dBA contour. Again, this has no policy basis whatsoever and cannot be gleaned or determined from the use of other decision letters whatever circumstances may arise in other situations. This is because such an approach would be directly contrary to the clear policy in PPG24 Annex 3 paragraph 8. This paragraph is under the heading "Noise from Aircraft" and it states that, "60 Leq dB(A) should be regarded as a desirable upper limit for major new noise sensitive development." It cannot logically be the case that this can be interpreted as being both a desirable upper limit for such development and at the same time being unacceptable. The case made by the Council concerning noise levels in the vicinity of the Airport focused upon external noise in gardens in particular (there being no evidence or allegation of problems of speech interference or otherwise internally even with windows open), and there is no logical difference between the gardens of existing dwellings and the gardens of new dwellings – the effects of aircraft noise would be the same in both cases including to new residents moving into the area and occupying existing dwellings.

58. Therefore, there is no case whatsoever that Mr Fiumicelli and the Council has made out on the basis of harm resulting from the proposal with a cut-off of 57 dBA Leq or an increase of 1 dBA. It may be considered that this was a point made due to the difficulty of proving any harm; however, that is for others to judge. It is also of relevance that the Council accepts that an increase in movements above 28,000 is acceptable, and that this would result in an increase in the noise level. Even if it was limited to 1 dBA (theoretically), a number of additional dwellings within Farnborough would be likely to fall within the 57 dBA noise contour. Again, it cannot for this reason be the case that the 57 dBA noise contour should be taken to be the upper limit of acceptability. Add to this the agreed fact that a correct descriptor of the 57-63 dBA noise level is one of "a low level of community annoyance" and that 63-69 dBA constitutes "moderate levels of community annoyance" with 69 dBA+ being "high levels of community annoyance" (RBC/P/3, para 10.7.11) it cannot be that one has unacceptable levels of noise with low levels of community annoyance and which are within the desirable upper limit for major new noise-sensitive development. This position is untenable, unless there are other factors weighing in the balance against the development. Here there are none.
59. These other factors can include the type of aircraft (for example, if very noisy) which relates to the LMax question, the times involved (for example, if movements would take place at night) and the timescale over which such expansion would take place (if a limited period). The environment, whether urban or countryside with quiet background noise levels, is another factor. A further factor is the degree to which there is intrusive ground noise levels from "the roars from aircraft accelerating or slowing along the runway" which in the Stansted G1 case were observed by the Inspector to be "clearly audible more than 5km away" (CD/191, para 14.111) On these five grounds alone, the Stansted G1 position can be distinguished. As will be clear, however, there is an agreed approach between Inspectors to the Leq question on one issue namely that the 57 dBA contour provides a benchmark for decision-making where relevant (CD/191, para 14.109, CD/13, para 7.42), reflecting the ATWP (CD/25, page 34 (box)) on its being the "approximate onset of significant community annoyance". None of them says that 57 dBA is the limit of acceptability in terms of noise, above which there would be demonstrable harm. It is also particularly important to note the difference between the Stansted situation and this situation; the least noisy aircraft at Stansted (Boeing 737s) would comprise only around 3% maximum of those at Farnborough, and that the observations of the Inspector at Farnborough last time were in clear contrast to those of the Stansted Inspector. The Farnborough Inspector noted, "My observations confirmed that the mainly modern jets of the type that use FA are, for the most part, not very noisy and the noise that they generate builds and recedes relatively quickly, in something like 20-30 seconds" (CD13, para 7.51). In any event, the proposed phased increase in BATMs as set out in the section 106 agreement means that, on any analysis, the annual increase in air noise Leq 16h would rarely exceed 0.2 to 0.4 dBA in any given year (TAG/P/3, page 31, Table 11 and TAG/R/3, page 31 Table R/T1).
60. The Council's approach relies upon the number of movements and seeks to denigrate Leq as a reliable metric. Even though it has been criticised by Inspectors, including at the Heathrow T5 inquiry and at Stansted, it remains the metric within government policy to be applied in relation in particular to daytime noise without amendment or adaptation. This is important. It was considered as

not the sole parameter at the Weekend Appeal because the number of movements at weekends was below that which is regarded as reliable for use of Leq and because it does not segregate weekends from the rest of the week (CD/13 paras 7.39 and 7.43).

61. Where there is a case which concerns the whole of the week, there is no good reason for dispensing with Leq or adapting it in some extraneous way just because it has been previously adapted where it was not able properly to be applied. The Appellant's experienced aviation noise consultant, the officers and the Council's previous noise aviation noise consultants have found that there would be no demonstrable harm. The Council's non-conventional approach is not reliable for a number of reasons, which include the following:

- a) The difference between the 2019/50,000 BATM situation and the 28,000 BATM situation is solely in relation to numbers – the Leq increases solely due to the increase in numbers of aircraft passing overhead. The mix and all other factors and matters remains constant. The Leq T and noise contour approach already takes into account the number of movements, allowing a scientific and policy assessment to be made against a specified benchmark (CD/14, para 27); it is not logical to place more weight upon the number of movements than upon the metric which already takes into account the number of movements, as this would clearly be not only double-counting, but would also depart from government policy which is to use the Leq "method of averaging" (CD/25, page 34 (box)) . Mr Fiumicelli, however, and the Council have an approach which places an excessive weight on the number of movements, which can result in an illogical conclusion to the effect that it is the number of movements that is objectionable not the noise made by aircraft on any particular movement or noise event – which has been determined by the previous Inspector as being "not very noisy".
- b) The concession by Mr Fiumicelli that most people would probably not notice the average increase in movements per hour or the average increase in movements plus or minus 50%; currently the situation is that the weekday arrivals average plus or minus 50% is exceeded on one hour of the day by 0.6 of a movement. In 2019 (50,000 BATMs) this 'exceedence' would increase to approximately one movement per hour. This is clearly negligible.
 - i. All weekend movements would be within the average plus or minus 50% given that the pattern of movements is unlikely to change (SIT 70). Even taking a single day and splitting the weekend into its constituent parts (which would not be in accordance with conventional and legitimate averaging approaches), the maximum impact would be an increase in departures on a Saturday morning by approximately half a movement in excess of the plus or minus 50% in 2019. This would take place solely in one hour on a Saturday morning, 10-11am, when the general activity in Farnborough (shopping etc) is on average significant. For the remainder of the Saturday, all movements would remain at lower levels and within the plus or minus 50% range.

- ii. It is therefore able to be concluded from the evidence (SIT70, Tables) that it is on Saturday mornings (10am-11am) when the maximum number of departures occurs during the weekend, with an average of 2.86. The maximum number of arrivals during the weekend occurs on a Sunday between 5pm and 6pm, with an average of 3.75. This Saturday maximum peak average will increase (50,000 BATMs, a 78% increase) to 5.09 or an increase of only 2.23 movements in that hour. Some Saturdays will be more, some will be less as can be seen on Table 5 of SIT 70.
- iii. On Sundays (with the same caveats and warnings as to departing from policy), the sole excess over plus or minus 50% is 4-5pm. It is 0.3 movements in excess presently, which would become 0.5 in excess in 2019. Further disaggregation of this means that the average would move from 2.31 arrivals to 4.1 per hour, a maximum increase of 1.8 movements per hour for this one hour. The peak (or maximum average) would increase from 3.75 to 6.67, or an increase of less than three movements in this hour in 2019. This represents only one additional movement approximately every 20 minutes. Again, this is negligible. It is, after all, a strategic business aviation airport which is being considered. For all the remainder of the Sunday, the number of movements would be within the plus or minus 50% range. Further disaggregation, as is no doubt to be sought by the Council from Tables 5 and 6 (SIT 70) is seriously doubtful in terms of its scientific and planning worth as opposed to its forensic interest.
- iv. On Sundays, the average will increase to 6.68 or an increase of only 2.93 (say 3) movements in that hour. Therefore the maximum peak average will be fewer than three movements an hour or one every 20 minutes or less.
- v. There is no policy basis for such an approach; it departs from the Leq principle of averaging entirely and concentrates on the number of movements (not noise levels) in one hour of one day in only some weekends of the year, whereas there is variation throughout the year, as can be seen in Table 5. The annual variation is such that it cannot be said that a change of some 3 movements an hour in the maximum hour could be said to be noticeable over a period of 10 years. This would require a memory of supreme recall, and would be a clear departure from the studies that have taken place as to changes over a relatively short period of time. Leq as a metric was used by not only BAP but also by HAL on behalf of the Council, and, as recorded by the Inspector, used at the Manchester, Coventry and Finningley inquiries (CD13, para 7.41).
- vi. The conclusion is therefore able to be drawn that, since landing aircraft are less cause for complaint than departing aircraft, on the evidence of those residents who gave evidence to the Inquiry, there is no reason to conclude that such landing aircraft in so small a number are likely to result in demonstrable harm in terms of noise and disturbance. This is but a further reason for concluding that there is no demonstrable harm as a result of the

weekend movements and none during the week either. There would be none. It is to be noted that the maximum time for movements on a weekday is at 5pm too, during the rush-hour or peak period for many or most persons in the area when activity is at or near to a maximum in the streets and surrounding the airport in any event. The conclusion that the effect would be moderate in the week is in itself probably an overstatement anyway. It certainly is not able to be concluded that there would be any harm during the week.

- c) The concession that the small increase in hourly average movements over 10 years is likely not to be perceptible.
- d) Mr Fiumicelli incorporates parts of the ANASE study into his evidence, yet it is agreed that the ANASE approach has not been accepted or adopted by the government or by the CAA and has been the subject of severe criticism in peer reviews (CD/183).
- e) The fact that the Council has not attempted to compare the difference between that which would cause a small degree of harm on its approach (whatever that might be) and the effects of 50,000 movements; the difference may well be negligible.
- f) The fact that ATM expansion in accordance with government policy, in particular in the South East, simply could not occur if there is an embargo on an increased number of households within the 57 dBA contour. See, for example, SIT4, where it can be seen that Farnborough Airport is predicted to have the minimum noise exposure effects overall, compared with other airports (major, commercial and relatively small business aviation airports), and no dwellings in the medium to high level of noise (CD/25, page 56).
- g) Despite what was first stated in Mr Fiumicelli's Proof, on closer examination there is no tenable objection on grounds of speech interference within buildings or indeed externally. It is accepted that with windows closed the noise would be well below the speech interference threshold; the same applies with windows open and raised voices. There is no objection by Farnborough College which speaks volumes (despite the supposed effects upon the College being taken up by objectors) and no objection by Hampshire County Council education department after full consideration of the matter (CD/9, para 76). No speech interference point was taken by the Head of Planning in his committee report; the same goes for the Council's external consultants. One goes back to the conclusion of the previous Inspector that the aircraft are not particularly noisy and that in the residential areas there exist other masking noises or distractions such as nearby traffic, lawnmowers, voices, a radio or some form of recorded music and numerous other factors which can affect an observer's sensitivity to aircraft noise CD 13, para 7.52).
- h) The introduction by Mr Fiumicelli of a wholly new metric to add 3 dBA or 6 dBA to the Leq value depending upon the time of day or week not only has no policy basis at any level (whether national, regional, local or draft) and is not based upon any applicable research or peer review. It

would mean that Farnborough, with a less noisy airport environment than many if not most significant airports in the United Kingdom, would, for no good reason, have a substantial penalty imposed upon its use without any provenance in policy or expressed support of Members. This approach should clearly be dismissed.

- i) Mr Fiumicelli admits that the 10-year or longer timescale over which the changes would be brought in is "important". Yet he totally excluded from consideration this highly relevant factor in his evidence. He says this was "oversight". His judgment must be brought into doubt. In addition, it was clear that he had not thought through many of the consequences of the points he was making and asserting, for example he omitted from consideration the very important fact that the total number of movements in each hour would affect only half of the population in the area assuming no reversal of runway direction. This is a highly material factor which totally alters the conclusions he sought to make in relation to numbers of movements.
- j) The Farnborough noise budget is a measure of relevance and indeed importance. It is clearly not irrelevant as contended for by the Council. First and foremost, it is a factor expressly contained within Local Plan policy FA2.2(A)(i) insofar as this policy is relevant. It is the base case against which any future proposals post-2000 for the development of Farnborough Airport are to be measured. As stated by the Local Plan Inspector (CD/50, para 11.27.20), the appropriate approach would be to specify a noise contour limit which sets a specified noise level and allows the operator flexibility to increase the number of BATMs by reducing the number of both Chapter II and noisier Chapter III aircraft within the mix. It furthermore sets a baseline upon which significant weight was given by the Secretaries of State in the 2008 decision letter (CD/14, para 29). As seen from the ATWP, it is government policy to impose baselines so as to inform future airport development. Moreover, the original noise budget must have relevance in terms of an approach because it informs the more restrictive noise budget for this case for the future through the section 106 agreement. The improvements achieved or proposed as to Chapter II to Chapter IV aircraft should not be held against the Appellant. The Appellant is to be applauded for causing a reduction in noise levels locally. What is more, the noise budget has been enforced by and monitored by the Council when assessing the noise climate in and around the airport and its vicinity for a long time since 1998 to the present day.
- k) The proposed restrictions agreed to by the Appellant preserve the restriction in relation to weekend movements being no more than 17.8% of the total number of movements (8,900 out of 50,000). This is significantly more restrictive than a pro rata proportion of either the week or the number of hours in a week, as a pro rata proportion would be 30% of days. A pro rata proportion of the hours in a day would be 25% more (15 hours as opposed to 12). Furthermore, the absolute number of heavy aircraft permitted is not sought to be varied from 1,500, with the result that the proportion of permitted heavy aircraft (which tend to be the noisier aircraft) would decrease considerably both

during the week and at weekends if the appeal is allowed compared to the do nothing situation.

- l) There is no evidence whatsoever that the increase in noise level over 10 years (or movements alone, if counted) would be able to be perceived by most people. There is no evidence that an increase of less than 3 dBA Leq 16 hrs is perceived by the community as a significant change in noise level except potentially when considered over a short timescale when the LA max may be able to be differentiated at lower levels. The only evidence of a change being noticeable has indeed been stated to be relative to the LA max and not to the Leq. It is arguably counter-intuitive to think that a change is more likely to be perceived in terms of its average over a longer time period than a change of the maximum noise levels (LA max) over a short time period. There is no basis for departing from government policy here, where the time period is long and the individual noise events do not have a particularly noisy or exceptional LA max or noise signature giving particular cause for annoyance or memory retention over a long time period. Even then, a change over 10 years is only exceptionally likely to be noticeable and is most unlikely with respect to the number of noise events that constitutes the change in this case (i.e. a maximum of three more per hour in the worst-case hour on one day of the week). The only reasonable conclusion is that there may be a measurable change for some households to a low level of significant community annoyance, but that, since the change is less than that normally recognised to be perceptible and which would take place in a regulated and phased way over 10 years, at most the change would result in no or a minimal amount of harm.
- m) The Council at first relied upon and has at times still sought to rely upon complaints as a measure of acceptability of the effect on the community. It is accepted by both sides that the reasons why people make complaints may well be many and various, and that a large measure of care must be attached to reliance upon simply the number of complaints. There are reasons for this as explored in cross-examination. However, the absence of complaints must also be something to which weight should be given as well as the presence of complaints, if weight is to be given to complaints at all.
- n) It has been demonstrated that there has been in effect a doubling of weekend movements between 2007 and 2009 and yet a halving of the number of complaints. This in itself demonstrates that there is no clear relationship between complaints and movements and that it cannot be expected that complaints would increase with movements increasing. The opposite has been found to be true and the conclusions of the Inspector and Secretary of State with respect to the Weekend Appeal seem to have been well founded. With a doubling of weekend movements but a halving of complaints, one is able to conclude that the Council's attempt to place extra weight on weekend movements (and the numbers of them) has no substance when considering the position in relation to demonstrable harm. It cannot be concluded that an increase in movements at weekends is likely to result in an increase in complaints; further, it cannot be concluded that an increase in

movements at weekends results in unacceptable effects let alone that any unacceptable effects would be found at Farnborough, the urban area most affected. Insofar as there is any relationship between annoyance of the community and complaints due to aircraft noise (a position promoted by the Council and Mr Fiumicelli in his evidence-in-chief), it may well be the case at Farnborough that annoyance has decreased in line with complaints due to matters such as the Quiet Flying Programme, the trial of different arrival and departure routes, minimisation of ground noise and reverse thrust upon landing, minimisation of use of APUs and GPUs, management of aircraft taxiing and other measures invoked over the last three years with the assistance of the Council and the FACC by management at TAG, resulting in significant improvements. For this, the Airport should be applauded and encouraged to take further measures, as it has stated it will seek to do.

- o) There is no justification for devising a different standard or approach for each case which may go to public inquiry for airport development. That is not only to result in the potential for subjective decision-making and decisions which have no full or proper justification, but it is also a clear departure from the policy in the ATWP. That policy including in relation to Leq being the metric of assessment for decisions concerning airport expansion was arrived at after many years of research and academic consideration. Put another way, there is no justification in this case for a move away from that which is generally accepted as policy or any justification for a conclusion that the Farnborough situation is different such as to require a departure from the normal approach to airport development found throughout the UK and as set out in the ATWP.
- p) For each public inquiry and application to be based on subjective assessment would be to allow for a lack of rigorous decision-making and introduce unfairness into the system. The decision-maker would be permitted to make up rules for each case based upon the whims and considerations of the evidence of one or other noise consultant and not a peer review. It is not as if there is in Rushmoor any policy justification in the local plan or in the emerging policies for a departure from the standard approach. Standard "rules" should be applied. The focus should be the application of long standing policy approaches.
- q) So if the ATWP for policy reasons, and based upon decision-making and consultation which was widespread prior to its publication, states and makes clear that 57 dBA – 63 dBA Leq in terms of airport development (which includes that of Farnborough, as is agreed) is a measure of a low level of significant community annoyance, it is open to the Council here or anyone at a public inquiry such as this to seek to argue to the contrary but such arguments should be given little weight. If mitigation is to be sought then it should again follow policy. It is not for the Council to determine otherwise without clear justification. They here do not seek to do so either in the existing development plan or in the emerging Local Development Framework. Farnborough and its population and community are no different in this respect to any other area of the UK.

- r) It was accepted that for there to be any potential for harm, not only must the noise level be one which is in itself harmful, but the increased noise level must be as a consequence of a change which is perceptible to the community when considered as a whole. That is clearly the reason why on page 36 of the ATWP the government requires not only that the noise level should be more than 63 (or 69 dBA) before mitigation or compensation is required but that a change of 3 dBA in noise level is also required. That, in accordance with the PPG24 Glossary, is the normal change which is required for there to be a perceived change in noise level. Mr Fiumicelli puts forward the figure of 1 dBA as the threshold of harm. In certain cases a change of 1 dBA is perceptible, such as in a laboratory, but there is no evidence that such a change is perceptible over one year or more for example (recalling that the maximum change at Farnborough would be 0.8 dBA and normally 0.2 to 0.4 dBA in any one year). Mr Fiumicelli's position is an untenable position to adopt both in terms of logic as well as policy. Policy at no stage requires that consideration be given to a change of 1 dBA resulting in harm. That is far too stringent a test. Furthermore, a change of 1 dBA is nowhere stated in policy or elsewhere to result in harm. That is purely a test of Mr Fiumicelli's own making.
- s) If the change which would result is concluded not to be likely to be perceptible over 10 years, there would be no resulting harm. If the change is found to be to a level which, at most, is a low level of significant community annoyance, as is agreed, then again the change as a result of the increase in movements would not result in demonstrable harm. Either way, there would be no demonstrable harm as a result of the proposal.
- t) On a conventional approach, there would be no harm whatsoever. Given these considerations, one turns to Mr Selwood's balance as he accepted and admitted in cross-examination. This is that if there is a small degree of demonstrable harm as a result of the proposals, then the admittedly very significant economic benefits would outweigh such a degree of harm and that planning permission should be expected to be granted.
- u) The situation so far as noise levels is concerned is that there is no good reason why special consideration should be given to the complaints from those at the western end of the airfield at Fleet and Church Crookham and beyond. Both Fleet and Church Crookham lie well beyond the 57 dBA contour and indeed beyond the 54 dBA contour both at weekdays and at weekends. There is no demonstrable harm on policy grounds on any approach able to be found in relation to either of these settlements. As Councillor Riley stated, a preferential approach in his opinion would be to spread the number of flights over the community and not to concentrate them in one place. When this was done as a result of the commendable QFP (Quiet Flying Programme), with an attempt to minimise the amount of disturbance of the local community, it inevitably caused some people to complain. However, spreading the burden over the area is to be preferred by some of those who represent the community and to be preferred to concentrating the noise in one location. That will not change in the future and, as has been stated

previously, every effort will be made to minimise noise and disturbance caused by the airport. TAG's approach to this is to be applauded. That is another factor in its favour.

Demonstrable harm: the balance

62. It is important to note that the reason for the public inquiry is to enquire into the reason for refusal and whether that reason for refusal is sufficient to prevent the development. Based on evidence at the time of the reason for refusal, the answer is clear: there was no technical reason or independent consultant or officer evidence or advice as to why planning permission should not be granted. Given that the aviation noise subject is a highly technical matter not able to be determined by Members without technical expertise, there was at the time of the reason for refusal no good reason why planning permission should be refused. The same error applies, it would seem, to the Members' interpretation of and approach towards the development plan. It was stated and accepted by Mr Selwood in evidence that when the words "adverse effects" are interpreted in the light of government policy, they must be interpreted as meaning adverse effects more than just minor ones and effects which amount to demonstrable harm. This therefore places the decision of the Members in context. There was no evidence of significant or demonstrable harm. Furthermore, they did place weight upon matters including odour and safety which now are no longer pursued by the authority. Therefore, the balance of factors found to be adverse is clearly less now than Members determined even at the time. For this reason, the balance lies even more in favour of the grant of planning permission. Add to that the acceptance by all those concerned with the Council's case that there are significant economic benefits arising from the proposal, and the case in favour of granting permission is undoubtedly strong.
63. In short, there is no measure of alleged demonstrable harm to weigh against the significant benefits of the proposed development. Even if there is such harm, contrary to the Appellant's evidence and case, it is clearly small in the scale of things and confined only to one hour of one day of the week where on average the increase (three movements per hour in 2019) is wholly unlikely to be perceptible compared to the situation 10 years previously. The Council concedes that the balance would head in favour of the economic side of the equation if there is small air noise demonstrable harm. The reality is that the significant benefit would of course easily outweigh it.
64. Little wonder that the Council's Head of Planning, informed by a thorough evaluation of the Appellant's proposal by respected and independent external expert consultants, advised the members of the Development Control Committee that there were no defensible reasons for refusing planning permission (CD/9, para 442). That advice has been borne out and vindicated by the scrutiny of the evidence in the course of the inquiry. It is asked that the Appellant's opening submissions be taken into account and considered at this stage. It will be clear that there has been no material change in case throughout and that indicates the strength of the case. That contrasts with the Council's case, as will be pointed out in the course of these submissions.

Policy considerations

65. Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that proposals be determined in accordance with the development plan, unless

material considerations indicate otherwise. In this instance, the development plan comprises the Regional Spatial Strategy for the South East (CD/60), published in May 2009, and the Rushmoor Local Plan Review adopted in 2000 (CD/49). It is common ground that judicial review litigation with respect to parts of the RSS does not affect those parts of the plan relevant to the determination of this appeal (SCG para 2.20). It is likewise common ground that the RSS remains part of the statutory development plan notwithstanding the terms of the letter from the Secretary of State for Communities and Local Government dated 27 May 2010 (SIT19).¹

66. The development plan policies of greatest relevance to this appeal are set out at paragraphs 2.22 and 2.29 of the Statement of Common Ground. Policy T9 of the RSS is of particular note, since it deals specifically with aviation. It supports the development of airports, subject to relevant environmental considerations. The policy includes a requirement at part (iv) to take into account airport Master Plans produced in accordance with the ATWP. Farnborough Airport has produced just such a Master Plan (CD15), following extensive public consultation, and which is a material consideration of significant weight. Paragraph 8.30 of the text accompanying Policy T9 emphasises the valuable role that smaller airports can play in meeting local demand and contributing to regional economic development. Paragraph 8.31 emphasises the need to take into account airport Master Plans. There is agreement that business aviation use of Farnborough Airport is in accordance with the Rushmoor Local Plan Review (RLPR - CD/49).
67. There is an issue as to whether the appeal proposal represents a conflict with or departure from Policy FA2.2(A)(i) (SCG para 2.29). The Council contends that there is such a conflict. The Appellant contends that there is not, arguing that the appeal proposal should be assessed against Policy FA2.2(C) so far as the RLPR is concerned.
68. The issue is largely academic in any event, given that the Council has no objection to an increase in BATMs to a level significantly in excess of the 28,000 cap provided for in Policy FA2.2(A)(i) and given that the Secretaries of State have already and recently granted planning permission for a weekends and Bank Holidays ATM cap, double the 2,500 cap provided for in the self-same policy. On any analysis, Policy FA2.2(A)(i) attracts no or at most very limited weight even if it is relevant. The relevance or weight to be afforded to Policy FA2.2(A)(i) is also abrogated by the fact that (a) its wording does not reflect the recommendation of the Local Plan Inquiry Inspector (TAG/P/10, para 6.3.9); (b) a moratorium cap based approach (as opposed to a criteria-based approach) is in conflict with policies in the RSS on promoting economic development, transport infrastructure (including airports) to service it and the regard to be paid to airport Master Plans (TAG/P/1, para 6.3.25); and (c) a moratorium cap based approach (as opposed to a criteria-based approach) is in conflict with Policy FA2.2(C), the approach prescribed in PPS12 and the policies in the Council's own emerging Local Development Framework (TAG/P/10, paras 6.3.28 – 6.3.21). What is more, it is trite law that a conflict with one aspect of one development plan policy does not necessarily render a proposal not in accordance with the development plan. (See, for example, R v Rochdale MBC, ex p Milne (2001) 81 P&CR 365 and R (Cummins) v Camden LBC [2001] EWHC Admin 1116.)

¹ Closing submissions were delivered before the revocation of RSS for the South East. They are included as delivered for completeness, but see Para 624 below for the bearing of revocation on this appeal.

69. The appeal proposal is fully in accordance with Policy FA2.2(C), the local plan policy that is to be afforded relevance and weight in this case. It will cause no demonstrable harm to the natural environment or amenities of the surrounding area. There is no issue in terms of the adequacy of service by local transport infrastructure (agreement having been reached with the Highways Agency, Hampshire County Council (the local highway authority), Rushmoor Borough Council and Surrey County Council). There will be no material adverse effect in terms of ambient air quality, having regard both to the fact that the proposal falls well within the relevant standards for ambient air quality and to the air quality obligations in the section 106 agreement.
70. Work has begun on the Rushmoor Local Development Framework. In January 2010, the Council published its Core Strategy (CS) Preferred Approach (CD/52) and its Farnborough Airport Area Action Plan (FAAAP) Preferred Approach (CD/56). There is agreement that these are material considerations carrying limited weight (SCG paras 2.33 and 2.37). There is also agreement that the business aviation use of Farnborough Airport is in accordance with the emerging CS and the emerging FAAAP (SCG 2.36 and 2.39).
71. Other material considerations to take into account include PPS1, PPS4, PPG13, PPS23 and PPG24 (SCG paras 2.12 to 2.19). The proposal is in accordance with each. Other principal relevant government guidance comprises: in addition to the ATWP (CD/25), the Future of Transport White Paper (CD/28), The Future of Air Transport progress report 2006 (CD/27), the 'Weekend Flights' Appeal decision (CD/14), the Coalition programme for government (SIT9), the Secretary of State's letter on the future of the RSSs (SIT19) and the Secretary of State's announcement on the South East Airports taskforce (SIT61). Again, the proposals are in accordance with all such policy and guidance.
72. The ATWP and its subsequent policy documents concerning airport development (which should be afforded significant weight) emphasise the need to make best use of the existing capacity of the UK's airports before supporting the provision of additional capacity. The smaller airports in the South East play an important role in helping to relieve pressure on the main airports before a new runway in the South East is built. Farnborough Airport is important as a business aviation facility in the South East. The ATWP lends support, in principle, to the appeal proposal. The Secretaries of State reached all of these conclusions in their recent 13 March 2008 decision (CD/14 para 16). There is no good reason to come to a different conclusion in this case. Indeed, there is all the more reason to reach the same conclusion given the recent announcements of a moratorium on new runways within the London airport system (SIT9) and the creation of the South East Airports taskforce informed by the vision for better not bigger airports (SIT61). The Secretaries of State will appreciate, as did the Council's own planning witness, that consistency of planning decisions is desirable. Indeed, there should not be a departure from a relevant previous decision without good and explained reasons (North Wiltshire DC v SSE (1992) 65 P&CR 137).

Economic Benefits, Need and Alternatives

Economic benefits

73. As has been stated on more than one occasion, it is common ground that Farnborough Airport is of very substantial economic benefit to the Farnborough area and to Rushmoor. That was the conclusion of the Inspector in his report

into the 'Weekend Flights' Appeal (CD/13 para 7.27). The Secretaries of State came to the same conclusion in their decision letter (CD/14 para 19). There is no change in circumstances. There is no reason to come to a different conclusion in this case.

74. It is common ground that Farnborough Airport is an asset of historical and economic significance for the Borough (SIT2 para 3.1). Moreover, "The Airport itself is one of the largest employers in the Borough and, together with the cluster of aerospace, defence related high technology activities and other uses immediately adjoining, is a major employment centre within the wider north Hampshire/Surrey area. The presence of the Airport makes a significant contribution to the general business attractiveness of the area." (CD/115 para 5.40).
75. The Airport currently generates 1,148 direct FTE jobs, together with a further 1,458 indirect FTE jobs and 651 induced FTE jobs (TAG/P/6 Table 5.3). The Council's planning witness agreed that an increase in BATMs to 50,000 would generate a very significant increase in direct, indirect and induced employment and not merely a significant increase as previously accepted (SIT2 para 4.15). The very lowest increase contended for at the inquiry for 50,000 BATMs is the Council's estimate of 960 additional jobs (RBC/R/4 page 8 Table 1). The Appellant's evidence demonstrates that there would actually be 1,880 additional jobs by 2019 (TAG/P/6 page 17 table 5.5). Rounded, the forecast is of some 1,000-2,000 additional jobs not including the catalytic and cluster effect. However, it is clear that the estimate of RBC's witness is based on erroneous and unreliable assumptions, methodology and calculations and that the figures of TAG's witness are robust, reliable and much to be preferred. The upper end of this range is the most reliable estimate.
76. The estimates of job increases are in the main a function of the parties' respective estimates for BATM growth to 2019, as to which there is a divergence of opinion. The Appellant estimates that BATMs will reach 50,000 in 2019, provided, of course, that planning permission is granted. The Council estimates that BATMs will reach 39,500 by 2019 and that it will take the airport a few more years to reach 50,000. Four points throw this divergence of opinion into sharper focus. First, it is clearly common ground that there is a need to lift the BATM cap. Second, there is no magic in the year 2019 and no policy constraint in that regard. Third, estimates of growth can only be judgmental and cannot be more than best estimates. Fourth, the application is for 50,000 BATMs not the number of BATMs which may be reached in 2019. It is number-related, not target or time-dependent.
77. Rather than seeking to resolve the divergence of opinion in terms of the forecasts, which are often inherently uncertain especially if the DfT long-term forecasting methodology is not employed, the Inspectors and Secretaries of State may prefer instead to focus on the extent of the common ground on this issue. The parties' medium forecasts for 2019 are 39,500 and 50,000 BATMs, respectively. The mid-point is thus around 45,000. Two additional years of growth from that mid-point at RBC's growth rate would generate the 50,000 BATMs; the figure on the TAG's approach is only one more year of growth. RBC's witness conceded that the recent Office for Budget Responsibility report (SIT59) focuses upon central forecasts and that one or two additional years to reach 50,000 BATMs would not be significant. It follows, on the central forecast approach (assuming both forecasts to be of equal competence and weight) and

given that there is no particular significance to the year 2019, that the divergence of opinion in terms of the forecasts is of no real or practical consequence. The date of 2019 was chosen by the Appellant for planning purposes (in the broadest sense). Delaying growth for a year or two such that 50,000 ATMs (and hence the associated jobs increase) is reached in, say, 2020 or 2021, has no policy significance (as is agreed) and has no bearing on the strength of the case.

78. Insofar as the Inspectors and the Secretaries of State consider it desirable to make a finding as to BATM growth to 2019, the Appellant's evidence is without doubt preferable. The evidence of Alan Cooke on behalf of the Appellant was clear, cogent and consistent, based upon past trends, current in-depth knowledge of the business aviation market and it uses Department for Transport forecasting methodology (CD/100 paras 2.91 – 2.97, Figures 2.13 and 2.14). The Department for Transport modelling shows that the latest models' (central case) forecasts of constrained demand take into account recent slower growth (2005-2008) and the Department states that, "recent slower growth is a short term result; and, we should expect a return to growth once economic growth picks up again." (CD/100 para 2.96). RBC's witness openly disputed the wisdom of this approach even though it is the Department's accepted methodology.
79. The hallmarks of this evidence were error and inconsistency. RBC's witness has admittedly never managed an airport, nor has he had first-hand experience of business aviation. This inquiry was his first involving a business aviation airport, yet he criticised almost every step that the TAG's consultants took and even made some criticisms of the evidence of TAG's CEO who has extensive first-hand experience in running the airport. He has undertaken no original field work, no surveys or any interviews, he spoke to not one of the Airport's management or operators either in person or on the telephone and he did not speak to the Council's previous economic consultants (Nathaniel Lichfield and Partners) before writing his Proof. He was instructed as recently as February/March 2010, since when he has paid only one visit to the Airport. It is highly regrettable that a witness called on behalf of the local planning authority sought to prefer his own judgment and opinions to those of others without having carried out any research whatsoever. It would not have been difficult to have done this.
80. TAG's consultants predicted in April 2009 that by the year end 2009 the BATMs at the Airport would be 23,000 (CD/15. para 4.6.2). In the event, the actual figure was 22,779 meaning that the forecast was remarkably accurate in that it was within a margin of 1%. Further, it is not as if the growth at the Airport is likely to be less than at other business airports in the South East. The Council's own evidence shows that the Airport's BATM annual growth between 2002 and 2009 was well in excess of average BATM growth in the South East and in fact well in excess of every mature business airport identified. Weekend BATMs grew by 25% in 2009, reaching 4,958 movements and so effectively already reaching the cap provided for by the Weekend Appeal decision. Farnborough is exceptionally well-placed to capitalise upon its location serving the sub-region, which is a principal driver of the South East region which is in turn a principal economic driver of the United Kingdom economy. This was recognised by Nathaniel Lichfield and Partners (CD/115 page ii para 8).
81. TAG's BATM growth forecast for 2010 is consistent with actual BATM growth at the Airport in 2010, leaving aside, as one should, the wholly exceptional heavy snowfall and the effects of the volcanic eruption in Iceland (TAG/R/2 para 8).

- Mott MacDonald forecast two years of significant bounce back of BATM growth in 2009 - 2011, as has Eurocontrol (TAG/R/5 App 2 fig (a)). RBC, by contrast, forecast only one year of bounce back in 2009 followed by much lower growth in 2010. TAG's approach, like that of the Department for Transport (CD100), takes shocks (like recessions) into account. Both forecast a return to the long-term trend line over the next 10 years. RBC, by contrast, wrongly and without good reason rejects the Department's (and hence TAG's) approach.
82. Other support for the Appellant's forecast include recent IATA data on passenger kilometres and freight-tonne-kilometres (TAG/R/5 para 7.18), positive GDP forecasts (TAG/R/5 para 7.20), CATM growth data (TAG/R/5 para 7.28), CATM capacity constraints at the London airports (SIT60) and the forecasts provided at the very recent European Business Aviation Conference and Exhibition, Geneva, 4 to 6 May 2010 (TAG/R/2 App 1). It is also to be observed that the nearer that the forecast of Mott MacDonald is to 50,000 BATMs, the more that it assumes constraint. It follows that if a forecast in the short-term is much lower but increases in the long-term, the difference over time becomes less and less pronounced and "catches up" with the constrained forecast. That is the case here, which is one more reason to prefer the Appellant's forecast for 2019. It is clear that TAG's forecasts are to be preferred to those of RBC.
83. Given the agreement on central forecasting, the only issue of substance in terms of jobs creation is therefore the calculation of and the rate of the multiplier. TAG's multiplier is derived, as a result of extensive research and interviews carried out by its consultants taking into account those of OEF previously, and the output multiplier is 2.8 and fully explained and transparent. RBC's multiplier is applied, it is 1.8. In the Statement of Common Ground and in his Proof RBC's witness accepted the Mott MacDonald work and therefore used the derived multiplier. It was only later in his Rebuttal that he effectively changed this and adopted the OEF multiplier of what he stated to be 1.8 (RBC/R/4). He did not mention Nathaniel Lichfield and Partners in his Rebuttal. He mentioned only the OEF work, but misunderstood and misquoted it. The OEF multiplier was 2.8 (or 2.37, excluding travel agents). The actual details are of no material import in many ways. What is of relevance is the lack of explanation of RBC's mistaken analysis. RBC's witness failed properly his reason for departing from the agreed methodology given that he had open access to TAG's consultants to explain matters, that it was standard methodology and that it had been assessed fully by Nathaniel Lichfield and Partners previously without problems in terms of explanation or otherwise.
84. TAG's approach to future jobs estimates at the Airport, informed by extensive original field work and surveys was wholly reliable. It is much to be preferred to the inadequate approach of Mr Forbes. There is considerable doubt over his work in particular in relation to the compilation of his Table 1, which, as was pointed out in cross-examination, surprisingly remained constant albeit that the parameters which inform it altered materially. Further, he reversed totally the logic and criticisms found in his Proof concerning productivity estimates such that it necessitated Mr Shenfield pointing out errors in his Table 1. Mr Forbes reacted by amending yet again his productivity levels but without altering the figures in his Table 1. The credibility of his position became untenable. In contrast, Mr Shenfield had a consistent and verifiable approach.
85. However one analyses the forecasts and the calculations, the fact remains that the jobs increase at 50,000 BATMs will be of very significant importance

- (CD/115, page ii, para 9 and CD/57, page 34 figure 7.2)). The context for this jobs increase is high national unemployment, rising unemployment within the Council's own area, a claimant count in the Council's own area that now exceeds the South East claimant count, a long-term downward trend in the Council's own area in terms of job vacancies and a substantial recent increase in the Council's own area in terms of the number of claimants per unfilled vacancy (TAG/P/6 pages 20 – 21). The Secretaries of State should in this context acknowledge and give weight to the fact that the South East England Development Agency (SEEDA), amongst many others, fully supports the appeal proposal (Letter dated 24 Feb 2010). This is testimony to the regional benefits of the appeal proposal.
86. Jobs increases are by no means the full extent of the economic benefit generated by the appeal proposal. Those benefits are compounded by the positive cluster and catalytic effects, albeit that these are more difficult to quantify even though clearly recognised by the Council to exist (TAG/P/6 paras 6.17 – 6.26). There is agreement that there will be direct monetary benefits to users, represented by monetarised time savings. The Appellant estimates that this will be £41.3m per year (TAG//P/6 para 7.10). The Council contends for £34.9m based on the Appellant's methodology coupled with the Council's BATM forecast (RBC/P/4 para 4.3.5). Either way, the sum is very significant. The Council's assertion that the figure is likely to be much less can be discounted, as the assertion was never explained or quantified (RBC/P/4 para 4.3.5). It is the Secretaries of States' position, relying upon the Inspector at the 'Weekend Flights' Appeal, that even where the contribution of the appeal proposal to the economy is very difficult to quantify, and reliance in any assessment of benefits must be based on more qualitative factors, they nevertheless were able to conclude that the Airport is of very substantial economic benefit to the Farnborough area and to Rushmoor (CD/14 paras 18 – 19 and 24, 35 and 40). TAG's witnesses explained in detail the productivity and other benefits of business aviation as against commercial aviation (TAG/P/6 paras 7.11 – 7.16, TAG/R/6 section 4, TAG/P/5 section 4).
87. The net effect of user benefits is a conservative estimate of £66.8m per year (TAG/P/6 page 35 Table 7.2). Of further benefit is the positive contribution of the appeal proposal to the United Kingdom as a whole, difficult as it may be to quantify but doubtless of significant qualitative benefit. The evidence of Mr Price and of Mr Marwan Khalek bears witness to that positive benefit. Adopting the approach and conclusions of the Secretaries of State in relation to the previous appeal, the conclusion can be drawn that the contribution of the Airport to the local, sub-regional, regional and national economies is very significant, albeit increasingly more difficult to quantify as the geographical area considered increases in size and more reliance has to be placed upon qualitative considerations.
88. There is no reason, as Mr Forbes asserts, to deduct by reason of the appeal proposal the effect on local house prices and alleged CO₂ disbenefits. First, effects on house prices are not a material planning consideration (PPS 1 General Principles para 29). Additionally, the Council's original economic consultants comprehensively assessed the issue. They concluded that there was no house price effect, leading the Head of Planning to report to Members that, "there is no evidence on which the current planning application could be refused on these grounds, even if it were held to be a material consideration." (CD/9 paras 401 – 406).

89. Mr Forbes's analysis of alleged additional CO₂ disbenefit is wrong in principle, as it is an en-route cost not attributable to the Airport. The London Heathrow 3rd runway situation was entirely different. Furthermore, his "broad-brush estimate" is in error for the reasons given by Mr Thomson in his statement appended to Mr Shenfield's Rebuttal.

Need

90. The Secretaries of State (agreeing with the Inspector) found in favour of the Appellant at the 'Weekend Flights' Appeal in that there was a demand and need for additional weekend movements. They agreed with the Inspector that the impact of the growing shortage of weekend slots included: harm to the image of the Airport and the area; business aviation flights not taking place at a time when businesses require; restricted growth at the Airport; knock-on effects for the economy and employment; the diversion of flights elsewhere, leading to re-positioning movements later and associated staff and transport costs; reduced journey time savings; effect on investment decisions; all as a result of a growing shortage of weekend slots at the airport. There is no reason to conclude other than these same disbenefits will arise in the near future and increasingly so over time both in respect of weekend and weekday movements and slots at the Airport. In such a case, there is no reason to conclude other than in the way that the Secretaries of State previously determined namely that they considered that the growing weekend slot shortage (and future weekday shortage) and its impacts show that there is both a demand and a need for additional weekend (and now future weekday) movements.
91. Weekend BATMs grew by 25% in 2009, reaching 4,958 movements and so effectively already reaching the 5,000 cap provided for by the Weekend Appeal decision. The Council accepts the need for growth at the Airport beyond 28,000 BATMs both at weekdays and at weekends. Its own medium forecast is that the 28,000 cap will be breached (assuming planning permission is granted) as early as 2013 (RBC/P/4 page 20 Table 3.4). The Appellant's forecast is that such a breach will actually occur next year, 2011 (CD/15 page 37 para 4.6.2 and TAG/P/5 page 5 Table 1). The Council's own medium forecast is that BATMs will be 41% in excess of the 28,000 cap by 2019, reaching 78% in excess of that cap (i.e. 50,000 BATMs) a year or two later. For the reasons already explained, the Secretaries of State are invited to conclude that this 78% excess will in fact occur in 2019.
92. Taking a central forecast of the ASA and Mott MacDonald forecasts (contrary to our submissions as to Mott MacDonald's being the more reliable forecast) there is a need now to plan for 45,000 BATMs by 2019 at least and for 50,000 BATMs within 1-2 years after that. Even if one takes the 45,000, there is a need.
93. It is not credible, as RBC's planning witness suggests, for the Appellant to come back and apply for an amount below 50,000 BATMs. It will be recalled that the last time it went before the committee, the 11 Members of the Development Control Committee rejected the unequivocal advice of officers and consultants that there was no demonstrable harm and strong reasons for granting planning permission as sought. It will also be recalled that the decision in November 2009 followed the production of the Master Plan and extensive public consultation throughout the area, the inclusion of significant ameliorative and mitigation effects in relation to noise, climate change and other matters discussed with officers and consultants, and the prediction of significant economic benefits as to

which there was common ground of significance though the estimations varied. The suggestion that the Appellant should return, presumably after a further consultation exercise, seeking a different planning consent but after a further year or two's growth with all the expense, delay uncertainty and blight that would cause is neither in the interests of the Airport, its investors, tenants, users and employees nor in the interests of local residents or the general public within the area who seek certainty and application of policy which is positively in favour of growth. Such an idea strikes of desperation as opposed to having planning merit. Furthermore, it has no grounding in policy or any backing of the Members or any one Member. It should be rejected.

Alternatives

94. The Secretaries of State (in agreement with the Inspector) found in 2008 as a result of the 'Weekend Flights' Appeal that there was no realistic alternative to the appeal proposal if the weekend movements need was to be met and there are no equivalent alternatives for operators or aircraft types currently using Farnborough Airport; that all of the potential alternatives suffer from considerable constraints in terms of operating characteristics; and that, leaving aside the other fully equipped airports that have slot constraints, none has airfield and terminal facilities that can match those at Farnborough (CD/14 paras 23, 35 and 40). There is no reason to come to a different conclusion in this case, having regard not only to the facts but also to the important policy consideration that decision-making in planning should be consistent unless there is clear reason to come to a different conclusion. There is none.
95. The Council through Mr Forbes sought to raise a number of potential alternatives to meet the demand and need in the event that the Airport is full. On Mr Forbes's own growth forecasts, there is a clear and pressing need already for additional weekend movements to be permitted (very similar in terms of need to that discussed in 2008) and within a very short space of time (within 6 months and 2 years on his forecast) a clear and pressing need for additional weekday movements. Therefore it is unrealistic to seek to speculate as to what may or may not happen at other airports in terms of potential growth, which they may or may not wish to accommodate. There is no evidence of any pending planning application or proposed future development at any other airport to assist Mr Forbes's case. Furthermore, ignoring for the moment locational considerations (which Mr Forbes regards as the most important consideration and which are considered to be paramount by Mr O'Reilly, Mr Price, Mr Shenfield and Mr Khalek of Gama Aviation Ltd), there are no comparable alternatives or alternatives which could reasonably accommodate the demand and need of Farnborough Airport either now or in the foreseeable future to any significant degree.
96. Each one of the theoretical 'alternative' airports has significant constraints, either now or by 2019 and cannot be concluded as being able to accommodate in any one case more than a fraction of the demand and need which seeks to locate to or use Farnborough Airport. No single airport is of comparable quality, and every one which is promoted by Mr Forbes has been found to be lacking significantly in terms of facilities. Mr Forbes accepted Appendix 2 (revised) to Mr O'Reilly's Rebuttal to be accurate (TAG/R/2).
97. The conclusion to be reached therefore is that no alternative exists even when location is ignored. However, locational considerations are highly important and often paramount to business aviation users who seek minimum time, point-to-

point, delivery, without any extensive journeys by road or rail to their destination. Albeit not the subject of a survey, the clear conclusion (unchallenged by any contrary evidence at the inquiry) is that the primary catchment area of the Airport includes the sub-region lying to the south-west of London principally within the 45 minute off-peak drive time, including the Thames Valley, West End, south-west London, north Hampshire, north and north-west Surrey areas.

98. Evidence was submitted detailing drive times, including INQ27 and by Mr Forbes himself (RBC/P/4, Table 3.5), which demonstrates the lack of ability of any one of the theoretical alternatives effectively to serve the Airport's catchment area. In addition to distance and time off-peak is the important, indeed vital, consideration (as stated by Mr O'Reilly) of predictability of journey time. Business aviation users require this with some considerable degree of certainty for obvious reasons. Time is not able to be afforded to be wasted, either in a queue on the M25 or arriving early with time wasted if no queue. This effectively rules out all but Northolt and London Heathrow, both of which have significant capacity constraints.
99. No good purpose would be served in considering in final submissions the details of each airport. Suffice it to say that none would serve as a sensible or acceptable let alone equivalent or better alternative.

Other matters

Air quality and odour

100. It is agreed between the Appellant and the Council that there is no issue between them in terms of air quality and odour (SCG para 2.40 (ii)), and the Council did not pursue any objection on these grounds. The full details of the case in relation to air quality and odour is contained in the environmental statement (CD/1 and CD/2) and in the evidence of Alaric Lester (TAG/P/7)
101. The appeal proposal is consistent with policy, particularly PPS23. The development plan policies are also met in full.
102. Local air quality will be maintained well within legal limits across all relevant pollutants, with or without the appeal proposal. The impact of the proposal on NO₂ concentrations would be negligible at all relevant locations, it would not lead to the designation of any new air quality management area (AQMA) or conflict with or render unworkable any elements of the local Air Quality Action Plans in either the Council's area or the neighbouring Hart DC area. The appeal proposal is also consistent with the South East Plan and the Rushmoor Local Plan Review when read in the context of PPS23. Additional information since the publication of the environmental statement supports this conclusion.
103. The appeal proposal is consistent with PPS23 with respect to odour, since emissions will not be seriously detrimental to amenity, with or without an Odour Management Plan in place. It is also consistent with local plan Policy ENV48 when read in the context of PPS23. Odour has been considered further since the publication of the environmental statement. Potential areas where emissions associated with odour have been identified, and a range of mitigation measures proposed. The Odour Management Plan has already reduced emissions, and it will lead to significant further reductions in future. The residual odour impact will be negligible.

104. Other issues of potential concern (oily deposits, fuel jettisoning and health impacts) have been considered further. None is of significance and the proposal is consistent with policy in these respects.
105. Allowing the appeal will oblige the Appellant through the section 106 agreement to implement a charging scheme for emissions of nitrogen dioxide. The issue of meeting mandatory air quality limit values, a constraint on expansion at London Heathrow airport (CD/25 para 11.54), does not arise. The section 106 agreement also imposes obligations on the Appellant in terms of the Odour Management Plan and air quality monitoring.
106. In short, there is no air quality or odour issue that is not overcome by the section 106 agreement (TAG/P/7). The Secretaries of State (like the Inspector) did not find the evidence about odour to be persuasive at the Weekend Appeal (CD/14 para 31).

Surface access

107. It is agreed between the Appellant and the Council that there is no issue between them in terms of surface access (SCG para 2.40 (iii)), and the Council has never pursued any objection on these grounds. Likewise, there has never been any objection which is not capable of being overcome by a section 106 obligation from either the Highways Agency or the highway authority (Hampshire County Council).
108. The environmental statement and Transport Assessment (CD/1 and CD/9 para 410) concluded that, with the implementation of the proposed Airport Travel Plan, there would be negligible residual effect on the local highway network as a result of the appeal proposal. A summary of the surface access issue is set out in Appendix TAG/A/9-5.
109. Allowing the appeal will secure the obligations in the section 106 agreement by way of the Travel Plan and the Highway Contribution to the highway authority in accordance with its Transport Contributions Policy (SIT71). Together, these will reduce the number of traffic movements generated by the Airport and mitigate the impact of the proposal on the local highway network. Surface access and sustainable travel are also addressed in the proposed planning conditions.

Ecology and nature conservation

110. It is agreed between the Appellant and the Council that there is no issue between them in terms of ecology and nature conservation (SCG para 2.40 (iv)), and the Council has never pursued any objection on these grounds.
111. The environmental statement, officer report and the evidence fully addressed this issue (TAG/P/9 section 8). There is no objection from Natural England. The minor adverse effect on part of the Farnborough Airport Site of Importance for Nature Conservation is resolved by the provisions in the section 106 agreement for a community environmental fund and an environmental management system. Ecology and nature conservation is also addressed in the proposed planning conditions.

Landscape and visual effects

112. It is agreed between the Appellant and the Council that there is no issue between them in terms of landscape and visual effects (SCG para 2.40 (iv), and the Council has never pursued any objection on these grounds.
113. An assessment of the visual effects of the proposal was made in the environmental statement CD/1 and CD/9 para 361). This did not find any visual effect of significance. The Secretaries of State (like the Inspector) did not find the evidence about visual impact to be persuasive at the Weekend Appeal (Cd/14 para 31).

Public Safety Zones and Third Party Risk Contours

114. It is agreed between the Appellant and the Council that there is no issue between them in terms of Public Safety Zones and Third Party Risk Contours (SCG para 2.40 (i)), and the Council did not pursue any objection on these grounds.
115. The Inspectors and the Secretaries of State have the benefit of comprehensive, expert, independent and impartial evidence from a representative of NATS Limited on this issue (TAG/P/8 and TAG/R/8). His evidence is that the appeal proposal is fully compliant with safety planning conditions and national Public Safety Zone policy.
116. A safety objection was pursued at the inquiry by Geoffrey Marks of the Farnborough Aerodrome Residents Association (FARA) supported by a small number of third parties including Mr Treadgold. Despite being sought, there is no evidence of the number of paid up members of FARA. Mr Marks conceded that he had no expertise in the matter. He also conceded that he took no issue with the methodology adopted by NATS or with the safety contours they had generated, and that he was content with what NATS had produced insofar as it supported Public Safety Zone policy. Much of the safety objection was based not on policy, but on documents referable to entirely different industries (such as nuclear power (SIT39) or which long pre-dated current Public Safety Zone policy (e.g. SIT 46) or both.
117. Mr Marks's assertion that the Appellant's safety case was somehow undermined for failure to undertake a societal risk assessment was misconceived, and for two main reasons. First, there is no policy basis for undertaking a societal risk assessment and the Department for Transport has unequivocally rejected such an approach as part of Public Safety Zone policy in the context of this very proposal (CD/9 paras 379 to 383). Second, the only societal risk assessment that has been undertaken with respect to the appeal proposal concluded that the risks can unequivocally be shown to be small when compared with the anticipated benefits of the proposal (CD/9 para 383 bullet 3).
118. Mr Marks's other principal issue is as to the crash rates that have been utilised in NATS' assessment. His premise, which is simply wrong, is that NATS should have applied a generic business aviation crash rate to all traffic using the Airport whereby Boeing Business Jets (BBJs) and Airbus A318 Corporate Jets (A318CJs) are categorised as executive variants with a greater crash rate. In fact, NATS has quite properly used updated crash rates and which take account of more recent aircraft accident trend data. It is inappropriate to

model BBJs and A318CJs with the crash rate for executive jet aircraft. The latter is typically intended for modelling the risk to aircraft such as Learjets and Gulfstreams, but not all business aviation traffic can accurately be represented by this crash rate. It is more accurate to assume, as NATS has done, that a BBJ/A318CJ on business operations would have similar crash rate characteristics to a Boeing 737/Airbus 318 on scheduled passenger operations. Further evidence on the Public Safety Zone methodology and crash rates used by NATS was provided during the inquiry (SIT49).

119. In short, there is no safety objection of substance to the appeal proposal. Policy concerning safety is met both at national and local level, and the planning conditions in this respect were proved to be adhered to both currently and as proposed. In point of fact, the safety contours produced by NATS are actually conservative in that they assume the Farnborough Airshow to take place every year whereas it is in reality a biennial event.

Climate change

120. The appeal proposals are an exemplar for airport development generally in terms of implementation of climate change policy. They are fully in accordance with climate change policy in PPS1, its Supplement on climate change issues and all other government policy on this issue including emerging policy. There has been no effective challenge to this proposition.
121. The Appellant is acknowledged by CPRE to be bringing into effect voluntarily a number of proposals of some significance, which cause the Airport and matters within its control to reach carbon neutrality by at the latest 2019 in accordance with the section 106 agreement. This is unique for any UK airport and adds both weight and certainty to such voluntary measures.
122. The approach adopted by Mr Sheppard of CPRE (NE Hants) makes no distinction in terms of climate change between those matters within the Airport's control such as energy reduction on-site and those matters more related to the use of the Airport by aircraft including en-route emissions. The latter are clearly to be the subject of the forthcoming ETS, which will apply to around 80% of the Airport's movements. The government will also be seeking to move towards imposing charges for air traffic movements (SIT9). Again, this is a separate issue relating to the use of the Airport by aircraft operators. It is also outside the ACI Scheme, which has been accredited by bodies including the relevant United Nations organisation.
123. There is no support by the Committee on Climate Change for the use of radiative forcing parameters, and these have been discredited (SIT48, box 6.2). Business aviation is required to be considered separately as it is inherently the case that it has low passenger numbers, yet is an important indeed essential part of the aviation industry as a whole, of great benefit to the United Kingdom economy (TAG/P/4). Its importance and value is recognised in the ATWP, the 'Weekend Flights' Appeal decision, adopted development plan policy and emerging local plan policy. The inherent characteristics of business aviation include the number of passengers per ATM as well as the need for positioning flights. It is no part of government policy to seek to prevent, penalise or criticise business aviation by reason of its inherent characteristics.
124. In addition to the above matters in relation to climate change and carbon neutrality, substantial weight should be placed upon the TAG Farnborough

Airport Sustainability and Climate Change Charter as set out in the section 106 agreement and Master Plan section 12 (CD/15 App 2) which was the subject of the most extensive public consultation. This is fully in accordance with government policy and would materially assist in reducing Airport emissions and increasing its sustainability and would cause it to obtain climate change policy compliance to a greater degree.

Consultation

125. There were 1,800 written responses to the Master Plan consultation exercise (a significant 10% return rate), 95% of which were from local residents. 90% of the respondents considered TAG's commitment to reducing emissions to be important. The written consultation exercise was supplemented by 12 public exhibitions, in 10 locations. Newsletters advertising these were distributed to 96,000 local residents. A further 10,000 residents were directly notified by the Council of the planning application (CD9, page 39 at paragraph 171). The application was also advertised through numerous other media and open meetings in the area.

Conclusions

126. The proposal is fully in accordance with the development plan and government policy. There is no issue of non-compliance which arises in this case. It is accepted by the Council's planning witness that if such an issue arises in relation to local plan Policy FA2.2(A), such non-compliance with this limited aspect of the development plan is more apparent than real and that it should not itself stand in the way of the grant of any planning permission given the overriding material considerations which exist in this case and which "indicate otherwise" using the language of section 38(6) of the 2004 Act.
127. The benefits are agreed to be very significant in economic terms which arise at 50,000 movements. These would be some 1,880 new FTE jobs created in the next few years, plus benefits in terms of climate change, sustainability, noise and other environmental and economic benefits.
128. There is no material change to any of the conclusions drawn in favour of the grant of the Weekend Appeal. All are important material considerations of significant weight.
129. The need is substantial and pressing for increased movements both at weekends and in the week, and will increase over time.
130. The alleged harm is non-existent or negligible in reality, when examined carefully and having regard to all factors. Even on the Council's approach such harm would at most be small. There is strong reason to conclude that the increase in movements would not be perceptible to most persons in the community when considered over a 10-year period. There is no reason to conclude that, even if the period was significantly shorter, the increase in movements would be harmful and unacceptable let alone not outweighed by the very significant economic and other benefits which would flow from the development.
131. The sole consideration to weigh against such very significant benefits is that of air noise at weekends, and in fact, when analysed, two hours on a weekend

one of which is on a Saturday morning when other activities take place, as found by the previous Inspector.

132. The recommendation asked of the Inspectors is to be strongly favourable, both having regard to the merits of the case itself, the ameliorative and mitigating effects found in the conditions and section 106 agreement and the exemplar approach of the Airport to all such relevant matters.
133. There is no good reason for refusal. There is every good reason for the grant of planning permission without delay so the benefits can manifest themselves in as short a time period as possible. We ask that this is the recommendation to be made to the Secretaries of State and that planning permission be granted by them as soon as is reasonably possible.

The Case for Rushmoor Borough Council

Main Issues

134. The main issues as between the Council and the Appellant are:
- a) Whether the appeal proposal would cause such harm to the amenities of the residents of the area by reason of noise from airborne aircraft as would justify the refusal of planning permission; and if so,
 - b) Whether that harm is outweighed by any demand for or benefits flowing from the appeal proposal.
135. Underlying these main issues are a number of sub-issues which will need to be resolved in order to determine the appeal.
136. These submissions are structured under the following headings:
- I Policy
 - II Need/demand
 - III Benefits of the appeal proposal
 - IV Harm by reason of noise impacts
 - V Performance of the appeal proposal against the Development Plan
 - VI Overall balance and conclusions

I Policy

(i) The South East Plan

137. There is agreement between the parties on the approach to be taken to the South East Plan ("SEP") (CD/60) in light of the statement by the Secretary of State for Communities and Local Government setting out his intention to abolish Regional Strategies (SIT19). The SEP remains part of the statutory Development Plan unless and until revoked and it should be treated as such in line with section 38(6) of the Planning and Compulsory Purchase Act 2004 ("PCPA"). The Secretary of State's intention to abolish is also to be treated as a material consideration and this tempers the weight which may be accorded to the SEP. However the policies of the SEP are generic in nature and the weight to be afforded to them will not, in the Council's view, be determinative

of this appeal in any event. Should the SEP be revoked prior to the Secretaries of State's decision that step will not, for the reasons we will outline, materially affect the essential balance which needs to be performed in order to determine this appeal².

138. The support which the SEP provides for growth at Farnborough Airport ("FA") is extremely limited. WCBV4 is the only sub-regional policy relating to the Blackwater Valley (in which Farnborough sits) and there is no mention of FA or its continued growth. Such growth is noticeably outside the scope of the transport subsection of WCBV4, which concerns only "improvements to the quality, and the increased integration of the local transport network". Farnborough is not identified as a "Regional Hub" or even "Sub-regional hub" under policy WCBV1 and on Diagram T1 the town is identified as a "Transport Interchange" which reflects its importance for public transport but is the lowest designation of transport importance. FA is not specifically recognised at all, either as a nationally significant or regionally significant airport.
139. Policy T9 is the only policy expressly dealing with aviation in the region and similarly makes no mention of FA. Only in the supporting text do smaller airports feature, and even there FA is not mentioned by name. This is despite representations made by the Appellant in support of inclusion of reference to the Airport (CD/15 para 2.5.6 p.21; examination in chief of IS (JS) 10.6.2010). Paragraph 8.30 notes that "Other smaller airports could play a valuable role in meeting local demand and contributing to regional economic development. Subject to relevant environmental considerations, their development should be supported" Importantly for this appeal, the growth is not quantified and the support is subject to environmental considerations. The SEP in reality does no more than recognise the ATWP's support in principle for some growth at the smaller airports in the South East.
140. The Appellant through Mr Shrubsall seeks to rely on several other SEP policies, namely RE1 – RE3, CC1, CC7 and WCBV2. These are at best of peripheral relevance to this appeal and add little of substance. CC7 states that sufficient infrastructure capacity is required to meet the needs of new development (TAG/P/10 para 6.2.4ff), but Mr Shrubsall does not identify what new development needs additional capacity at FA. He can point only to demand for flights at the airport, which is hardly new development within the meaning of the policy. Finding no specific support, he resorts to over-interpreting the policies in order to garner support which he clearly feels the appeal proposal otherwise lacks. Reliance on RE1 is equally misplaced. It provides encouragement "to be sufficiently flexible to respond positively to changes in the global economy and the changing economic needs of the region" (TAG/P/10 Proof para 6.2.7). This is a policy of the most general nature but sits within the context of the need for sustainable development respectful of its environmental limits. CC1 similarly is a policy which is capable of being read as either supporting or being contrary to the appeal proposal depending on its environmental effects. WCBV2 is an employment policy with no particular relevance to the appeal proposal at all.

² Closing submissions were delivered before the revocation of RSS for the South East. They are included as delivered for completeness, but see Para 624 below for the bearing of revocation on this appeal.

141. The SEP therefore adds little in terms of support for the appeal proposal other than generalised and high level support for development which will help the economy provided that it properly respects the environment. There is no policy which on its face refers to FA and therefore no policy capable of conflicting with the FA specific policies in the Local Plan Review. Indeed, the absence of such a policy reference highlights the SEP's principal interest in this appeal, namely that it does not identify FA as having any regional let alone national significance. This will be relevant to assessing the weight to be accorded to the various claims made by the Appellant and its witnesses as to the weight which should be accorded to FA's value to the UK. It would be surprising indeed, if an economic driver of more than minor regional significance failed to achieve any specific reference in the SEP.

(ii) Rushmoor Local Plan Review

142. The Rushmoor Local Plan Review (RLPR)(CD/49) strikes a balance between support for the Airport and limiting its environmental impacts. FA2 requires a business aerodrome operational area to be safeguarded so as to retain capacity for business aviation. FA2.2(A) then provides a specific dual restriction to address noise, based both on a noise contour approach and the number of movements. As the Council has demonstrated, this is entirely consistent with the approach to aircraft noise adopted by the Secretaries of State at other airports (e.g. Stansted G1 CD/172).

143. FA2.2(C) is a more general policy within which the business aviation policy, FA2.2(A), operates. This reflects the history of the policy and the fact that, originally, flying other than business aviation was carried out from FA and the policy framework needed to be in place to govern changes in this or any other non business aviation proposals for flying.

144. Finally ENV48 provides that development will not be permitted if it results in an adverse affect, including in relation to noise.

145. The Appellant seeks to argue that the RLPR conflicts in material respects with the SEP, in particular due to the 28,000 cap in FA2.2(A) (TAG/P/10 para 6.3.25). That is not arguable. There is no conflict within the meaning of section 38(5) of the PCPA which provides that:

(5) If to any extent a policy contained in a development plan for an area conflicts with another policy in the development plan the conflict must be resolved in favour of the policy which is contained in the last document to be adopted, approved or published (as the case may be).

146. The subsection, as the wording makes clear and as was conceded by Mr Shrubshall (XX (SB) 10.6.2010), applies only to conflict on the face of a policy; explanatory text is irrelevant for the purposes of the statute. The subsection therefore has no relevance to this appeal given the lack of conflict on the face of any relevant policies. None of the SEP policies relied upon by Mr Shrubshall refer to FA specifically, and none provide for unlimited growth in airport capacity. Mr Shrubshall relied in particular on CC1(i), which refers to "achieving sustainable levels of resource use"; but sustainability of course requires consideration of environmental considerations (PPS1 para 4 (CD/29)), which the cap reflects, and as Mr Shrubshall was driven to accept, there would be no inevitable conflict between a decision by a local planning authority to refuse planning permission for growth at a smaller South East Airport on

environmental grounds (e.g. at Blackbushe) and any policy of the SEP (or the ATWP). Section 38(5) of the PCPA has no relevance in such circumstances.

147. There are factors which do affect the weight to be accorded to the 28,000 movement cap. Firstly, the grant of permission in the 'Weekend Flights' Appeal for 5,000 movements at weekends and Bank Holidays per annum was a departure from the restriction to 2,500 such movements in FA2.2(A)(i). Further, in the emerging Local Development Framework the Council have indicated a preferred option to allow growth above the 28,000 cap. This is set out in the Core Strategy Preferred Approach (CD/52) and the Farnborough Airport Area Action Plan Preferred Approach (CD/56) (FAAAP) (The consultation on both the Core Strategy and FAAAP ended on 1st March 2010). Neither document is at a stage at which it can carry any material weight (agreed by Mr Shrubbsall in XX (SB) 10.6.2010) as the Council has yet to consider the representations made on the consultation. However the Council has thus signalled its preparedness to contemplate growth above the 28,000 cap. The extent of any such growth which the Council would find acceptable, having regard to the balance of considerations, has yet to be determined by and is a matter to be resolved through the LDF process. Until that occurs, growth in BATMs above the 28,000 cap involves a departure from the development plan and other material considerations will need to be identified which indicate that the plan should not be followed.
148. Within that context, acceptance of the principle of some growth is not to be taken as acceptance of any growth. The principles underlying the policy remain unchanged and applicable, i.e. that the number of movements require control in the interests of the protection of the inhabitants of the area and growth must be balanced against environmental impacts. Within this balance, there is a particular concern in relation to weekend flights, reflected in the separate movement cap and operating hours for weekends. Whilst the Secretaries of State were satisfied in the Weekend Flights Appeal that departure from that element of policy FA2.2(A) was justified up to a limit of 5,000 weekend flights, it would be wrong to conclude that that signalled any decision at Secretary of State level that there was any less need for weekend flight numbers to be limited at FA than at the point of adoption of the policy. As is quite clear from the reasoning of the Weekend Flights decision, the continuing need for weekday / weekend differentiation was endorsed.
149. TAG attempts to bypass FA2.2(A) altogether by suggesting that it establishes only a presumption in favour of proposals below the 28,000 figure and that the policy does not apply to proposals above 28,000; on this analysis such proposals need only be tested against FA2.2(C) (TAG/P/10 para 6.3.20). This approach is fanciful and bears no relation to the policy wording, as FA2.2(A) unambiguously prohibits more than 28,000 movements, referring to a "restriction" of "No more than 28,000 aircraft movements". This point should not have needed argument, especially given that the context is equally clear. FA2.2(A) contains other restrictions relating to the noise budget, aircraft weight, aircraft type, noise output and operating hours. The logical consequence of TAG's approach is to free the airport operator from all those restrictions for any proposal for BATMs in excess of 28,000. That is an absurd position to take and amounts to nothing more than an assertion that FA2.2(A) serves no meaningful purpose. The Secretaries of State should be resistant to

give a development plan a meaning which leads to a conclusion that a policy is otiose.

150. The correct relationship is an obvious one. FA2.2(A) deals with all and any proposals for business aviation flying at FA. Any proposal for in excess of 28,000 BATMs involves a departure from policy. However, proposals which accord with FA2.2(A) as well as other flying proposals need also to satisfy FA2.2(C) and (D). FA2.2(A) is to that limited extent only not self-contained. This was ultimately conceded by Mr Shruballs (XX (SB) 10.6.2010). The proper approach is therefore a cumulative one and FA2.2(A) and (C) are to be taken together. This was the approach adopted by the Inspector at the Weekend Flights Appeal when explaining that, "Whereas FA2.2(C) is of general application, Policy FA2.2(A) is of very direct relevance to the appeal. It provides guidance for the application of the more general policy." (CD/13 para 7.16). The Secretaries of State in 2008 also agreed with this approach in deciding that the then proposal conflicted with the Development Plan by reason only of exceeding the movement figures specified in FA2.2(A)(i) (CD/14 para 34); on TAG's approach that could never in itself amount to a conflict. Indeed, Mr Shruballs was reduced to saying that the Secretaries of State had got it wrong (XX (SB) 10.6.2010). There is no need to give the policies such a constrained and artificial interpretation. The purposive approach adopted by RBC's witness is eminently to be preferred.

(iii) The ATWP

151. The ATWP remains the only comprehensive statement of national policy on aviation. But its policies are being reviewed by the new government which to date have included adoption of a policy of refusing permission for new runways at both Heathrow and Stansted as set out in the Coalition Agreement (SIT9 p.16) and the signalling of the intent to recognise that the environmental cost of aviation will see growth in the industry checked. The 15th June 2010 statement of the Secretary of State for Transport (SIT61) has confirmed that this revised approach does not relate just to Heathrow, Stansted and Gatwick, but applies to the aviation industry as a whole. The decision regarding those airports is said to be just the beginning. "A new chapter in aviation policy" is to be started which, while supporting aviation's contribution to the economy, recognises "the need for restraint" and does not "simply allow growth to continue at the levels it has in the past". It is thus clear that the balance has shifted and will shift further towards environmental concerns and that the appeal proposal, and in particular the growth forecasts, must be considered against this backdrop.
152. The new government's policies thus adjust but build on the balanced approach which is found throughout the ATWP. Chapter 2 of the ATWP "emphasises the need for a balanced approach, recognising both the costs and benefits of air travel" and concludes by setting out "A balanced strategy" (CD/25 para 2.1; para 2.17). Chapter 3 recognises that "one of the features of air travel is that while many of the benefits are spread across society as a whole, many of the adverse impacts are distributed unevenly", disproportionately affecting those living near airports.
153. There is in principle support for the development of smaller airports in the South East, but only so far as that is compatible with relevant environmental considerations (CD/25 para 11.11). The capacity which those airports could

provide for business aviation is also recognised, and Farnborough is mentioned amongst those which were felt at the time of writing, to have potential to provide additional capacity to cater for business aviation demand (CD/25 para 11.101). The support is in principle only: no capacity figures or time scales are provided and it is merely said that "some further development" could be possible at any of the smaller airports. The ATWP is not prescriptive either in terms of quantum or timing. It follows that, to the extent that the appeal proposal contributes towards making more efficient use of existing runway capacity, there is a benefit and the issue is whether on a local determination that benefit and the other benefits are outweighed.

154. Mr Shrubsall was wrong to suggest otherwise and to contend that the ATWP established a "presumption" in favour of development at Farnborough (XX (SB) 10.6.2010), given that the language of presumption appears nowhere in the ATWP and its purpose is rather to "inform and guide" (CD/25 para 1.4). He was also wrong to argue that only the "final detail and final checking" (apparently of as much growth as the smaller airports could physically accommodate) was to occur at a local level (XX (SB) 10.6.2010). The ATWP does not authorise or preclude any particular development and what is appropriate at each airport is expressly left to be determined at a local level through the planning system (CD/24 para 1.4). Nowhere is that local determination restricted to a limited form of 'fine tuning'.
155. Mr Shrubsall also interpreted the ATWP as creating a test of "insurmountable environmental constraints" for the consideration of proposals for further development at the smaller airports (Examination in Chief 10.6.2010; TAG/P/10 7.1.9). It does nothing of the sort. Initial consideration of the consultation on the ATWP has led to the conclusion that "some further development could be possible at any of the smaller airports that have been assessed without insurmountable environmental constraints" (CD/25 11.94). This is simply an expression of an overarching view of growth at all of the identified smaller airports in combination, indicating that the benefits of such growth were capable of outweighing the harms. There is no judgement as to what would be acceptable at FA and the expression "insurmountable environmental constraints" is nowhere used by the ATWP as a test. Even if it was a test it can mean nothing other than "without the benefits being outweighed by the demonstrable harm" and therefore it adds nothing to the Local Plan policy FA2.2(C).
156. ATWP's approach to noise is addressed in section IV.
157. Finally in this opening section we turn to the issue of the weight to be accorded to the Airport's Masterplan. It is a material consideration at this appeal, but not one which attracts considerable weight (para 12.7 of the ATWP deals with Masterplans). It has been produced for the Airport, by the Airport and subjected to no independent scrutiny. It has to an extent been consulted upon, but the central proposal adopted, expansion to 50,000 movements, was opposed by 66% of consultees. Further, the consultation itself was inadequate given that it did not set out the Appellant's proposals for increased weekend flying despite the fact the subject is well-known as being particularly contentious. As Mr Sellwood rightly pointed out, the document is overly self-serving (XX (JS) 17.6.2010) and this must affect the weight to be accorded to it. Its true status is part of the evidence base for the LDF process which has yet to be examined.

(iv) Conclusion on policy

158. The overall policy approach to the appeal is one of striking a fair balance between demand and environmental considerations within the existing context of a national need to make the most efficient use of existing physical capacity. That national need is not such as to require national policy to prescribe either any necessary level of growth at smaller airports in the South East or a timescale within which any growth is to be provided. Those are left for local determination. This demonstrates that there is no inconsistency between a local rejection of growth on the grounds of local impact and the in principle support provided by the ATWP.
159. The ATWP signals no weakening of the need for environmental protection, indeed it seeks where possible to reduce environmental impacts. Emerging government policy signals an intention to give greater weight to environmental considerations in the balance.

II Need/Demand

(i) Context

160. It is important to note in the context of this case that the sole need advanced for the appeal proposal is that of meeting demand for BATMs in the South East of England, in furtherance of the ATWP's objective of making effective use of existing runway capacity. It is no part of the Appellant's case that the appeal proposal is needed in order to secure the viability of FA, that any further investment in this high quality facility is dependent on the appeal proposal being allowed or that, without approval being given, any existing tenant or operator at the airport would be likely to leave their existing premises. Equally, TAG remain committed to their high quality management of FA and to running it as an exemplar airport, including the introduction of enhanced environmental controls, irrespective of the outcome of this appeal (Mr O'Reilly XX (SB) 26.5.2010). Whilst such voluntary enhancements may, at worst, be delivered one or two years after the timetable secured by the section 106 agreement before this inquiry, there is no reason to doubt that they will occur without the grant of any further planning permissions. The Secretaries of State may therefore conclude that no investment decisions relating to FA or its estate turn on this appeal and that it will continue to operate as an exemplar business aviation airport.
161. In so far as the Appellant makes claims as to the existing economic value of the airport and the benefits of the increased numbers of BATMs, those need to be scrutinised with care in order to assess what weight should be accorded to them. The key issue is to identify, to the extent that is possible, the net benefits in terms of demand met, the employment which will result and the likely level of investment in and other benefits to the local economy. This is not a precise exercise, each of the issues of demand, employment and economic benefits involve a host of assumptions on which reasonable people can differ and the objective must be to form a conclusion on the likely broad measure of each so as to weigh that in the overall balance.
162. However, tempting though it may be to identify the disputed range and to take a middle projection, the starting position must be to explore to what extent each end of the range is in fact supportable by assumptions reasonably based on the evidence. We purposively stress evidence to distinguish it from

repeated anecdote or hype. The need for a qualitative appraisal of evidence is an enhanced one in this case where there is an obvious and stark mismatch between the claimed significance of FA in terms of its contribution to the national and regional economy and the extent of hard evidence which the Appellant has been able to produce to support that claim. There is a need, despite the subject matter of the inquiry, to keep one's feet on the ground.

(ii) BATM demand

163. The areas of dispute in relation to BATM demand are:

- i) Forecast growth to 2019 in CATMs
- ii) The likely capacity available for BATMs at relevant South East airports in 2019
- iii) Forecast growth in BATMs to 2019
- iv) Whether demand will exceed the available capacity in 2019

164. In each case we have identified the dispute as relating to the period to 2019. This is the date which the Appellant used for the purpose of its Masterplan (CD/15 para 1.1.12 p.15), it has formed the basis for the assessment of the appeal proposal within the environmental statement (CD/1 para 2.1.4 p.A2.3) and it provides a realistic forecasting period, given the uncertainties involved in the forecasting exercise. Although the Appellant has sought at this inquiry to argue that the 2019 date has no significance and that, if Mr Forbes' assumptions are correct, demand for 50,000 BATMs at FA will exist by 2022 or 2023 (if not earlier) and nothing therefore turns on the demand issues, that of course ignores two key points.

165. Firstly, there is no dispute between Mott MacDonald (MM) and Alan Stratford Associates (ASA) that the demand for weekend flights will exist in order for all of the proposed 8,900 capacity to be taken up by 2019. The significant adverse effect from weekend flights identified by Mr Fiumicelli will therefore be experienced by 2019 if planning permission is granted. Secondly, it is unrealistic in what is plainly a competitive market, to assume that if TAG's forecasts are wrong that they and their operators will not take steps to seek to attract trade so as to make use of the permitted capacity in the period to 2019. There is an inherent tension in the Appellant's case in that it seeks to argue that FA is unique (to the extent that there are no suitable alternatives for the BATMs being made there) whilst also recognising that there is competition within its catchment; an issue to which we will return in due course.

(iii) Forecast growth in CATMs

166. For the Appellant, MM have prepared their forecasts by the "cascade principle" under which it is assumed that business aviation will have "first call" after allocation of CATMs to relevant airports. The forecasted demand for business aviation in the South East is then allocated to individual airports (including Farnborough) based on their attractiveness to potential users, apparently informed or supplemented by a Farnborough specific market assessment mentioned for the first time in the rebuttal evidence of Mr Cooke (TAG/R/5 section 4 pp.6-7).

167. MM's analysis assumes that the unconstrained demand for CATMs in the South East will increase by some 4.2% pa between 2009 and 2019 (CD/1 Appx 5.1 Table 8.1 p.19), as CATMs return to the long term trend following the recession. It assumes a significant "bounce back" in the period 2010 to 2013 and that the DfT's national growth figure for CATMs will be replicated at the South East airports. These assumptions have a number of inherent weaknesses.
168. Firstly, the government has stated that it believes that climate change is one of the gravest threats we face and that urgent action at home and abroad is required (SIT9). It is therefore inherently implausible that the previous government's commitment, announced in 2009, to bring aviation emissions in 2050 to below 2005 levels (see RBC/P/4 para 2.1.5 p.6) will lack support. This target is supported by the Committee for Climate Change's "Meeting the UK Aviation Target – Options for Reducing Emissions to 2050" which sets out the maximum levels of air traffic demand required to stay within the 2050 target (SIT48). That report concludes that a rising carbon price (through the EU Emissions Trading Scheme and other measures such as taxes and slot constraints) would be needed to reduce passenger demand growth by 2050 to 115% over 2005 levels. That equates to an annual growth rate of 1.7% pa. In terms of ATMs at UK airports, demand would need to increase from 2.16m in 2005 to just 3.4m in 2050; equivalent to an annual growth of only 1.0% pa.
169. The recent statement of the Secretary of State for Transport establishing the South East Airports Task Force demonstrates the commitment to early action and importantly recognises that "...we cannot simply allow growth to continue at the levels it has in the past. Doing so risks unacceptable consequences in terms of noise and local air quality, quite apart from the global impacts of CO₂ emissions" (SIT61). This signals a recognition that the undoubted economic benefits of aviation are coming at too a high a price and an urgent rebalancing is required. It is therefore wholly unsound to proceed, as MM have done, using the CATM growth forecasts produced in January 2009 as the starting point for demand forecasts. This is to ignore key changes in circumstances.
170. The second weakness in the Appellant's CATM forecasting is the timing of the bounce back. The DfT January 2009 forecasts (CD/100) relied upon HM Treasury Budget 2008 GDP forecasts and the more recent independent forecasts produced by the Office for Budget Responsibility (SIT67) show a slower recovery from the present deep recession.
171. The third weakness in the Appellant's assumptions is that it assumes that airports in the South East will achieve the same rate of growth as the DfT's national 3.2% growth rate. In fact, the forecasted growth at other UK airports is slightly higher than at the South East airports and therefore use of the 3.2% figure over-estimates likely growth in ATMs in the South East.
172. The overwhelming likelihood is that the DfT will further reduce its forecasts of CATM demand in their next set of forecasts as demand will need to be suppressed by suitable policy measures (e.g. the non-provision of additional airport capacity, higher aviation taxes (as signalled in the Budget Speech) etc) to stay within the 2050 Emissions Target. ASA's assessment is that a constrained growth figure of 1.75% to 2019 (which is still substantially higher than the 2050 Emission Target figure of 1.0% p.a.) is a realistic assumption to make. In contrast, MM seek to ignore the issue altogether, relying instead on

the assertion that "The [DfT 2009] forecasts should remain unless and until revised." (TAG/R/5 para 5.9 p.12) All that need be said about that, is that it rather defeats the object of a forecast to refuse to have regard to the future simply because you do not like what you see.

173. Looking at the evidence and the inevitable direction of travel of government policy, it is clear that ASA's forecasts of CATM are to be preferred to those of MM. This has significant implications for forecast BATM demand at FA in 2019.

(iv) South East airport capacity 2019

174. The parties agree on the probable level of capacity at all airports through to 2019, except Luton. The difference is as between MM's 144,000 ATMs and ASA's 165,000. The difference is not great and does not have a significant bearing on the analysis of available slots in 2019 for BATMs. The key issue, as is clear from SIT60, is the different forecasts of demand for CATMs. However, to the extent that the Secretaries of State consider it necessary to resolve this issue, Mr Forbes' knowledge of Luton Airport enabled him to conclude that there is greater scope for runway utilisation than allowed for by MM, so as to increase capacity and in addition, there is no dispute that construction of a full length parallel taxiway before 2019 would also provide yet further additional capacity. There is however agreement between the parties that the DfT capacity figure for Luton of 135,000 (CD/100 Table 2.7 p.40) is too low.

(v) The cascade of CATMs

175. The respective positions of the parties are set out below.

MM Forecast Allocation of CATMs and Slots Available for Business Aviation

Airport	Demand	LGW	LHR	LCY	LTN	SOU	SEN	STN	Total	Unplaced
Capacity	-	282,000	480,000	115,000	144,000	165,000	175,000	241,000	1,602,000	-
2009 (CATMs)	1,044,136	245,377	460,178	66,907	75,094	40,520	75	155,985	1,044,136	-
2019 (CATMs)	1,655,900	280,000	478,000	110,500	137,500	90,000	22,000	236,500	1,354,500	-301,400
2019 (Slots Av)	-	2,000	2,000	4,500	6,500	75,000	153,000	4,500	247,500	-

ASA Forecast Allocation of CATMs and Slots Available for Business Aviation

Airport	Demand ¹	LGW	LHR	LCY	LTN	SOU	SEN	STN	Total	Unplaced ¹
Capacity	-	282,000	480,000	115,000	165,000	165,000	175,000	241,000	1,602,000	-
2009 (CATMs)	1,044,136	245,377	460,178	66,907	75,094	40,520	75	155,985	1,044,136	-
2009 (Slots Av)		36,623	19,822	48,093	89,906	124,480	174,925	85,015	557,864	
2019 (CATMs)	-	280,000	478,000	90,900	102,000	55,000	10,000	226,000	1,241,900	-
2019 (Slots Av)		2,000	2,000	24,100	63,000	110,000	165,000	15,000	360,100	-

¹ Not calculated (not relevant to analysis)

176. In addition to the issue of the CATM growth rate, ASA remain of the view that the MM growth rates shown for Luton, Southampton and London City are too high. Each of these airports has a constricted runway length which will prevent the transfer of a high proportion of traffic (e.g. long haul) from Heathrow and Gatwick. Such passengers are likely to travel to regional

airports offering such services or will not travel at all (RBC/P/4 para 3.2.25 p.17). This will result in enhanced BATM capacity.

177. There is no dispute that Heathrow and Gatwick are virtually at capacity and that business aviation will continue to be constrained at these airports, however at Stansted, Luton and London City there are currently a significant number of runway slots available, even at peak times, as is indicated on the Airport Coordinator reports for Summer 2010 (RBC/R/4 Appx C and SIT22). There is still significant scope for the expansion of business aviation at these airports even if commercial aviation is given first priority for slots over the next 10 years. It must also be noted that the profile of business aviation movements is such that it is more likely that a business user will obtain an available slot at the requested time. Whilst these slots will need to be allocated through Airport Coordination Limited, this is a relatively minor administration requirement and does not present a major problem for most users (RBC/P/4 para 2.13 p.6).
178. As is clear from this analysis as tabulated above, it is the extent to which slots are available for business aviation at Luton and London City which is crucial to the analysis and is the key reason why MM's forecasts for BATMs at FA are significantly overestimated.

(vi) Forecast BATM demand

179. The key areas of difference between the parties are the forecast growth rates for BATM and FA's market share.

(a) Growth rates

180. There are no recent published forecasts for growth in business aviation demand whether for the UK or the South East of England (Cooke XX SB). There is, however, no dispute that growth in business aviation is correlated to GDP (Cooke XX SB and CD/99 p.11), that as an aviation sector it is highly cyclical (see CD/99 p.7) and has been more badly affected by the current recession than commercial air traffic.
181. MM's air traffic forecasts (CD/1 Appx 5.1) are those which were produced in late 2008 and early 2009 in support of the planning application and have not been the subject of any revision since. At the time of their preparation, these were supplemented by reliance on Eurocontrol's report "Getting to the Point: Business Aviation in Europe in 2007" (CD/98) which was published in 2008 before the full onset of the current recession. This contrasts with Eurocontrol's April 2010 report, "Business Aviation in Europe 2009" (TAG/INQ/4) which includes forecasts of growth in BATMs across Europe which are significantly more pessimistic than their earlier report, both as to the pace of recovery from the recession and the annual rate of growth. We will return to this more recent report below but note that notwithstanding this and other material changes of circumstance which should have led MM to revise their forecasts downwards, they have stuck doggedly to a set of forecasts which now appear dated and unreliable.
182. In addition, Mr Cooke's rebuttal evidence was that, in fact, the forecasts for FA were not prepared as the ES says they were prepared (by forecasting South East BATM demand and use of a cascade), but instead relied upon "its own

geographical and segment catchment areas and historic trends." (TAG/R/5 para 4.12)

183. However, no evidence was produced as to how the claimed catchment informed the growth rates used in the assessment, indeed given the absence of any credible evidential basis for drawing a 45 minute drive time isochrone to forecast future growth at an airport or for contending that the increased growth could be supported from within the existing catchment (whatever it might be), no weight can be accorded to that part of the growth rate analysis. It is also fairly obvious from Mr Cooke's rebuttal that in fact there is very little difference between his growth rate assumptions for FA and those for the other airports in the South East, save in respect of the constraining effect of the planning permission cap at FA (see TAG/R/5 p.32 Graph (a)).
184. The key areas of difference between ASA and MM on BATM growth are:
- i) The realism of MM's growth rate forecasts given their evidential basis;
 - ii) The timing and rate of recovery from the recession; and
 - iii) Whether it is appropriate, having regard to the particular circumstances of business aviation and likely future government policy to assume a "return to trend".
185. MM's forecasts of South Eastern business aviation growth rely heavily on four factors:
- a) That business aviation in the South East grew by an average annual rate of 10.2% between 2002-2007;
 - b) That the DfT unconstrained forecast for the number of business air travellers in the UK is for an average of 3.5% pa until 2020;
 - c) That Eurocontrol (as at 2009) expected an increase of 4% p.a. in the number of business aircraft on the European register; and
 - d) That there would be an indeterminate additional factor relating to the increasing utilisation of such aircraft.
186. MM's medium growth forecast (agreed by Mr Cooke and Mr Forbes to be the appropriate basis of assessment, reflecting their respective opinions of the most likely scenario) assumes growth at 8% per annum over the period 2009-2019 (see RBC/P/4 Table 3.2 p.11), reflecting their view that growth in business aviation will exceed the growth in the number of business travellers by 1.5%, with an increment of 3% to account for their view that many business travellers will be unable to meet their itineraries from existing airports and the general inconvenience of flying from congested airports which are subject to delays.
187. However, there is no sound evidence base to support this level of growth being either achieved or sustained across the period to 2019.
188. Although the rate of growth of business aviation was 10.2% p.a. between 2002-2007, analysis of this figure discloses that it is heavily influenced as an average growth rate by the overheated boom years of 2006 and 2007 (CD/1 Appx 5.1 Table 3.1 p.5). For example growth at FA in 2007 was 24%, at Biggin Hill 31% and overall across the South East in between 2006 and 2007

some 34%. As Mr Cooke conceded (XX SB), no credible economic forecaster is forecasting a return to such economic conditions in the period to 2019. Leaving aside governmental measures to limit growth in aviation movements in the interests of protection of the environment, there is no earthly prospect of such boom years forming any part of future economic cycles.

189. Mr Cooke's "return to trend" approach, which underlies his growth forecasts, is a flawed one because in identifying "the trend", he seeks to exclude the recent recessionary years as "abnormal" whilst including the equally abnormal overheated boom years. That cannot be the right approach to this cyclical sector. The DfT's approach to forecasting CATMs (see CD/100 figure 2.1 p.12) which allows the trend and short term variations from it to be observed. There is no such evidential base supporting a trend for business aviation. To the extent that there is any evidence and taking the cycle as a whole it discloses an annual growth rate of just 3.7% over the period 2002 to 2009.

'Business Aviation' Movements at SE Airports – 2002-2009

	2002	2003	2004	2005	2006	2007	2008	2009	Ann Gwth %
Farnborough	15,015	16,188	17,175	18,469	21,365	26,507	25,504	22,779	6.1%
Luton	14,928	15,690	18,878	20,783	25,265	29,034	25,130	18,408	3.0%
Biggin Hill	7,221	6,975	8,109	8,579	10,901	14,277	13,970	10,141	5.0%
Gatwick	2,560	1,886	2,372	2,212	2,302	1,974	2,023	1,674	-5.9%
Heathrow	2,606	2,600	3,129	2,874	3,165	2,943	2,908	3,325	3.5%
London City	2,184	2,731	4,910	6,467	8,240	8,638	6,475	7,018	18.1%
Northolt	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	0.0%
Southampton	2,649	2,744	2,784	2,650	3,099	3,354	3,008	2,537	-0.6%
Southend	1,487	1,090	1,714	1,785	2,258	3,162	2,815	2,302	6.4%
Stansted	9,630	9,277	8,462	8,318	8,898	9,263	8,772	6,299	-5.9%
Oxford	NA	NA	NA	NA	NA	NA	N/A	2,569	-
Total	65,333	66,181	74,533	79,137	92,493	106,152	97,605	84,052	3.7%
Ann Gwth %		1.3%	12.6%	6.2%	16.9%	14.8%	-8.1%	-13.9%	3.7%

Source: CAA and TAG statistics and MM estimates

190. The growth rate also needs to take account of the fact that the current DfT forecasts show a 3.5% growth in business air travellers in the UK to 2020. As we have indicated this is likely to be revised significantly downwards in the DfT's future forecasts in order to take account of the necessary policy changes to meet the UK's 2050 emissions target (which imply a 1.7% growth in all UK passengers to 2050). There is a further uncertainty in terms of the impact of the Emissions Trading Scheme (ETS) on business aviation. Operating costs are likely to increase and whilst the Appellant has been at considerable pains to stress at this inquiry that their market is almost wholly cost insensitive, there must be the potential for the ETS to affect growth at the more price sensitive end of the market (e.g. fractional ownership/day charters). There must also be an element of cost sensitivity or the Appellant's much vaunted NOx charging scheme would not be worth the paper it is printed on.
191. There is in addition no sound evidential basis for the ad hoc addition to the annual rate of growth of some 3% to reflect the fact that some business itineraries could not be met from Heathrow and the general costs associated with flying from congested airports. This is an unjustified increment given that nearly all major destinations worldwide are served by one of the three main London airports and overall door-to-door journey times are improving due to a

combination of factors, including better surface access and new terminals. The CAA's UK Business Air Travel Traffic Trends and Characteristics (CD/101) highlights that in fact the main growth in business travel is in passengers travelling in economy cabins, often to short-haul destinations and using no frills carriers (CD/101 para 2.20 p.27) from secondary and less congested airports. It is this competition which has led network airlines to focus on the long-haul services to capture the higher yield business passengers (CD/101 para 2.18 p.26). Whilst no doubt this trend will lead to an element of growth in those looking to make use of business aviation, there is no evidence that it will support a near doubling of the 2002-2009 annual growth rate. London airports other than Heathrow have gained destinations and frequencies and there have been and continue to be improvements to the UK (and Eurostar) rail networks which make travel by train increasingly more attractive to air particularly for journeys to central London.

192. ASA's more considered view is that it is likely that business aviation may grow at a slightly higher rate than business air travellers in the UK. However, even assuming that the long term growth in UK business travel is 2.5% p.a. to 2050, there is simply no credible evidence to support a business aviation growth rate of more than 4-5% p.a. in the South East over this period.
193. It is very telling that no drivers to support MM's level of growth have been identified in terms of new markets. For example, until very recently, very light jets (VLJs) were expected to deliver significant growth by providing a lower cost option for those interested in owning their own jets or in fractional ownership. However, that growth has not occurred and there is no evidence that it is likely to occur in the period to 2019. Furthermore, there is no evidence of increased pre-orders or aircraft sales for corporate aircraft in the UK or overseas. No attempt has been made by the Appellant, as Mr Cooke conceded, to disaggregate the growth in terms of the likely sources of demand i.e. commercial, corporate or individual in order to add weight to the MM growth forecasts. As to MM's reliance on the increased utilisation of existing aircraft, Eurocontrol have confirmed that utilisation rates are, if anything, in fact declining (from 1.1 flights/day in 2005 to 0.8 flights/day in 2007: see CD/98 p.40 second column).
194. Mr Forbes was criticised for his concern that the reduced number of billionaires might have some relevance to the growth rate. However, that criticism was unfair. One of the two documents relied upon by Mr Cooke as support for his analysis was Bombardier's "Leading the way" (CD/99) which has a whole section on high net worth individuals under the heading "economic market drivers" within which there is particular mention of the 30% decrease in the number of world billionaires between 2008 and 2009. Without MM having undertaken any proper analysis of the future sources of growth the Appellant is in no position to judge how significant this will be to the forecasts to 2019. However, it is a small point. The more important point is that none of the other economic market drivers which would support MM's forecasts have been identified. As we have stressed above, where is the evidence that the high growth rates relied upon by the Appellant will be supported from within the catchment? There may be wealthy companies and wealthy individuals in the catchment but where is the evidence that their propensity to own, operate or use a business aviation aircraft is going to increase or that there will be a growing number of people able to aspire to such travel in the period to 2019?

Where is the Appellant's business plan to show how it will grow the business by reference to the identified markets?

195. Mr Cooke also relies on a very significant element of bounce back in the years 2010 to 2012 (see TAG/R/5 Appx 2 Graph (a) BATMs – Historic and Forecast Growth rates). However, once again this had no sound evidence to support it. Growth rates in passenger kilometres flown in IATA airlines and growth in freight-tonne-kilometres as indicators of global economic activity relied upon by Mr Cooke in his rebuttal (TAG/R/5 p.17) are of little relevance. There is no evidence that there is any link between these indices and the performance of business aviation in the UK and it is noteworthy that there is no dispute that business aviation has been hit far harder by the recession than commercial air travel (see CD/101 p.2 para 7).
196. Whilst 5 months data from the airport may show a welcome return to growth (TAG/P/5 para 3.11 p.6), this data must be treated with extreme caution. It has been adjusted to take account of the snow in January 2010 and the effects of the volcanic ash cloud. It is too short and too unreliable a period to draw any conclusions and certainly not a sufficient basis to found forecasts to 2019.
197. Having regard to the most recent GDP forecasts (SIT67 June 2010 Budget forecast from the Office for Budget Responsibility p.85 Table C3), there is nothing which would lend support to Mr Cooke's "bounce back". He also acknowledges that the most recent Eurocontrol report does not support him (TAG/R/5 p.26 paras 9.8 and 9.11). For Europe as a whole, and the Appellant has been at pains to stress the international nature of business aviation, there is a recovery in 2011 to positive growth but at a sustained rate of about 5%. ASA's forecasts are consistent with the Eurocontrol forecast in terms of the period to 2011 and slightly more optimistic thereafter. FA grows quickly in the period 2012-2014 but stabilises to a long-term growth rate of 5.4% pa from 2016 onwards and to 3.9% p.a. by 2019 (RBC/P/4 para 3.3.4). These rates remain significantly higher than the long-term forecasted DfT passenger growth for business travel by air and may be optimistic.
198. It follows that this is not a case where a "split the difference" approach would be justified by the evidence. ASA's medium forecasts are the most likely. MM's forecasts are not remotely likely. The Secretaries of State will need to decide which of the two sets of forecasts they prefer but ASA's are demonstrably better supported by evidence and independent reports.

(b) Catchment and Market Share

199. We deal with this as a discrete issue simply because the extent to which it can properly be said to have informed the forecasts and to have any relevance to the inquiry beyond informing the travel time savings benefit calculation is entirely unclear. If it has informed the analysis, it is even less clear how sound that influence can have been, given that the evidence to support the claimed catchment is woefully thin. A robust assessment of the "catchment" of the airport is of course a pre-requisite for identifying the net benefit which would flow from the appeal proposal. Unless a basis is provided which enables a sound judgement to be made as to whether the identified demand cannot and/or will not be met at another South East airport, it is not possible to quantify these benefits of the appeal proposal, particularly to the regional and national economy which will not in any event occur.

200. The need for some survey base was plainly recognised by the Appellant, as it was revealed by Mr O'Reilly that there was an attempt to conduct an origin and destination survey of those making business aviation flights but the return rate was too small to be meaningful. In consequence Mr Cooke was obliged to volunteer in his rebuttal evidence that there are no data which confirm the origin and destination of business aviation passengers travelling to or from FA (or indeed any of the other ten airports accepted by him to be competitors) (Para 4.14 p.8). Reliance was instead placed on "the evidence of TAG management and their discussions with NetJets, TAG Aviation and Gama" which was said strongly to suggest that FA attracts most of its passengers from the 45 minute drive time catchment.
201. In an attempt to bolster this, we had anecdotal evidence from Mr O'Reilly, assertion from Mr Khalek (see SIT64 Doc 2 - in any event Gama's BATMs represent less than 5% of the total FA BATMs) and an e-mail from Munro Chauffeur Cars (SIT50) stating that "the large majority of our clients with an origin and destination in the London Area go to and from the West End, very largely to places in Westminster, Kensington and Chelsea." This latter information does not of course support the claimed catchment, as each of these locations lies beyond it and strangely, there is no reference in the e-mail to the percentage of trade which relates to the identified 45 minute isochrone (if any).
202. Mr Price's evidence was no more satisfactory on the extent of the catchment. It is of very little value to state that a review of companies in the sub-region will reveal companies who appear in a list of users of the airport (TAG/P/4 para 3.10.4), without knowing the proportion of the BATMs from FA made by those companies or others in the sub-region. The claims for the need for confidentiality advanced in justification of the inadequate information are unconvincing. No one has sought to require that the users be named or that information capable of leading to their identification be provided and it would have been a straightforward exercise for the Airport and the operators of aircraft to have compiled a catchment plan setting out the origin and destinations of those flying from the airport if they possessed sufficient knowledge and information to do so. The absence of anything meaningful of this kind is telling.
203. The overwhelming likelihood is that the Appellant has overplayed the sub-regional dimension at the expense of the London part of the airport's catchment. In this respect, it is helpful to compare the contents of the Master Plan with the evidence adduced before the inquiry. It stresses FA's links to Central London (CD/15 para 4.3.2), the importance of London as a leading financial centre (CD/15 para 4.3.3) and the ease of access to London CD/15 para 4.3.4). The economic statement submitted in support of the application likewise identifies the main reason for the success of both FA and Luton as being the continuing lack of runway capacity at airports closer to the centre of London (CD/7 para 3-15).
204. As Mr O'Reilly accepted (XX SB) the 45 minute isochrone approach had been advanced at the Weekend Flights Appeal on the Appellant's behalf in terms and with supporting evidence not materially different to that before this inquiry (see CD/114 para 4.35 p.39), the Weekend Flights Inspector found it interesting but unconvincing (CD/13 para 7.20 p.48) and there is no reason for the Secretaries of State to be any more persuaded now.

205. A more convincingly defined catchment would enable proper judgements to be made as to the weightings attached by those using FA to the factors which influence the choice of airport. It would also guide the making of judgements as to whether those weightings will hold true for the likely growth areas. It would also enable a judgement to be formed as to the extent of the overlapping catchments for business aviation of the South East Airports. Given that assessing future market share and the effect of restricting future growth at FA are ultimately, at their highest, informed guesses, it is important that they are properly informed.
206. That the Appellant recognised the weakness in its position is well demonstrated by its approach to alternative airports. Because it is unable to show that FA does not compete for business over a wide area with other airports in the South East, the inquiry had the privilege of hearing from no less than three of the Appellant's witnesses (O'Reilly, Price & Cooke) as to the claimed disadvantages of other airports and their ability to serve the same demand as FA. Those assessments were in large measure exaggerated and do not support the assertion that there are no reasonable alternatives to FA. The assessments also made not a single allowance for any potential improvements at competing airports notwithstanding MM's forecasts showing very substantial demand for BATMs. That is at the very least counter-intuitive.
207. Biggin Hill was criticised for its runway length, absence of ILS on one approach, the quality of its facilities and its surface access, yet MM's own forecasts attribute a higher level of growth to the airport than ASA (CD/1 Appx 5.1 Table 12.3 p.34). That is consistent with its attraction to significant growth in BATMs in the period 2002 to 2007 (CD/1 Table 3.1 p.5). The improvements which are presently underway and planned in the form of the Rizon Jets FBO facility and the hotel will further enhance its attraction (RBC/R/4 Appx B). The ILS issue appears to have been exaggerated as a constraint (see SIT56), its runway would on Mr O'Reilly's admission be of sufficient length to accommodate 75%+ of FA's traffic and in terms of surface access to Central London, Biggin Hill compares favourably with FA in terms of travel time (INQ/TAG/27). It may not presently have the overall quality of FA but in terms of the essential attributes of a business aviation airport (ground transport, fuel, maintenance, catering and customs (see CD/98 p.19)) it possesses them.
208. In terms of London City, it attained the highest growth rate in BATMs in the period 2002-2007 of any South East Airport notwithstanding its runway length and steep approach. With its runway length it can handle many of the larger business aviation aircraft but not non-stop to North America (only a tiny fraction of BATMs are made between the UK and the US: see CD/114 Table 4.7 p.31), and slots are and will continue to be available at the flight times most used by business aviation.
209. At Luton, additional stands have recently been made available for business aviation, with Harrods Aviation moving from the Southern Bank stands to former cargo stands. In its place a new business aviation FBO, Ocean Sky, has taken over the use of the Southern Bank stands. Unlike FA which has just one FBO (TAG Aviation), Luton now has three independent FBO operators i.e. Harrods Aviation, Ocean Sky and Signature Flight Support, all competing for business aviation users at the Airport. Whilst there may be some constraints to growth to be resolved as one would expect with any airport, there is no

evidence that the levels of growth which ASA forecast for Luton could not be handled. It is interesting to compare the evidence of Mr Price in this respect with the views of the author of the Economic Statement (CD/7 p.3-16) who identified that the only constraint to BATM growth at the airport was one of runway capacity in the face of competing CATM demand. That demand will not be as forecast by MM and furthermore, there is the commercial incentive for the operator Albertis to promote and protect business aviation at the airport given the revenue from the FBOs not just in terms of landing fees but also rents (RBC/P/4 para 3.2.25 p.17 and Mr Forbes' evidence in chief. Mr Price's rebuttal appx 5 (TAG/R/4) assumes that the 'no-frills carriers' pay the published landing charge which as Mr Forbes explained is not the case in practice).

210. In relation to Oxford, it clearly has aspirations to expand its already growing BATM business (see CD/113) and see themselves as a competitor to at least some of the FA business. To exclude it from the capacity analysis is unrealistic and, even with its operational constraints it has the potential to be able to contribute to meeting demand to 2019. ASA's analysis assumes a modest contribution of 4,400 BATMs in 2019 and there was no evidence that that would be unachievable. It is worth noting in passing that it is clearly the view of those concerned in developing the business at Oxford that there is no future capacity issue in the South East in relation to BATMs. That is consistent with ASA's analysis.
211. There is no need to address any other airports either because they do not materially affect the analysis or because they have not featured in the ASA analysis. For example, Blackbushe and Bournemouth would be capable of serving some of the catchment business but ASA assume no contribution. The ASA assessment may be seen as conservative in that respect. Whilst the Appellant and its witnesses may claim that these and others cannot be compared with the bells and whistles operation at FA, that is very far from being able to demonstrate that they are not suitable alternatives for at least part of the anticipated growth in the business.
212. Without being able to demonstrate that the growth will be at the price insensitive, quality end of the market, it is not possible to rule such airports out. In this context, it is to be noted that the government in the ATWP identified a number of these airports as in principle suitable to accommodate displaced business aviation demand (see CD/25 para 11.101 p.132). As Mr Steel was at pains to stress on more than one occasion in cross examination of witnesses at the inquiry, the government must be assumed to have known what business aviation was and what its requirements are in identifying these potentially suitable airports. It would therefore be contrary to government policy to conclude that FA was the only suitable airport in the South East capable of meeting business aviation demand (on this issue Mr Price on behalf of TAG disowned the ATWP) and it was no doubt for that reason that, in the context of additional weekend flights at FA necessary to sustain its existing operators, the Secretaries of State concluded that there was no equivalent alternative. They did not conclude that all BATM demand displaced from Heathrow and Gatwick had to be met at FA. The available evidence shows that these other airports can and do meet the demand and can be expected to continue to do so in the future.

213. In summary on the demand case, the Council accepts that there will be demand for increased BATMs at FA and that without the existing cap, the 28,000 BATM limit would be exceeded in 2013/14. The weekend cap would be exceeded sooner (TAG/P/4 appx A: 2011). However, the Appellant's forecasts are grossly over-optimistic and there is no justification for an increase in movements of up to 50,000 BATMs by 2019. Whilst a straight extrapolation of ASA's forecasts would suggest that there might be demand for 50,000 BATMs by 2022 or 2023, there are many uncertainties in the forecasting of BATMs, not least the review of government aviation policy, which make it imprudent to rely on forecasts beyond the 10 year period.
214. The ASA demand forecast is just that, a forecast. It is not an acceptance that that demand be met at FA, because that decision requires a planning judgement. The planning judgement in this appeal must take account of the fact that the demand is nowhere near as substantial as the Appellant contends for (save in relation to weekends), and the effect of this imbalanced weekday/weekend growth is that by 2019 on ASA's forecasts the weekends would represent some 22% of the BATMs compared to the originally permitted 9% and the 17.8% proposed in this appeal (assuming that TAG did not succeed in attracting demand from elsewhere). The planning judgement also needs to take account of the fact that the overstated growth affects the extent of the claimed benefits which must be weighed against the harms.
215. Overall, the evidence demonstrates that less growth, less quickly is capable of meeting the majority of the demand save the weekend demand which is the most contentious and harmful in terms of its environmental impact.

III Benefits

216. It is not disputed that the airport is a significant economic asset to the local area (defined as Rushmoor, Hart and Surrey Heath), but it is important that in undertaking the balance this benefit is properly gauged and not exaggerated. The benefit of the airport in terms of expenditure at a local level is, as noted by NLP, moderate (CD/115 para 8.29). The airport is an important source of employment, but provides only around 1,500 jobs of a total of 122,800 jobs in the area (CD/115 para 4.14; 5.30). Beyond this, its impact is image-based and unquantifiable.
217. The net economic benefit to be obtained from the appeal proposal is similarly limited, especially in light of the fact that not all these economic impacts are movement sensitive. It is important to confine the assessment to the net benefit. For the very large part, dismissal of the appeal will leave the current benefits which the Airport provides in place. Further, if the appeal is dismissed it is likely that the demand will simply be met at other airports in the South East. In consequence, the regional and national benefits will accrue in any event and the lost opportunity which dismissal of the appeal would result in will be the local benefit to Rushmoor. In the case of many of the benefits, this local element is limited.

(i) Employment benefits

218. It is common ground that the appeal proposal will result in a significant increase in direct, indirect and induced employment (PF Proof (Amended) para 5.6; confirmed in XX (JS) 16.6.2010). ASA forecast a total increase of 960 jobs at 50,000 ATMs (PF Rebuttal (Amended) Table 1). NLP forecast a similar

increase of between 680 – 900 jobs (CD/128 para 2.20). These are figures for national employment. At a local level, NLP forecast an increase of between 400 – 590 jobs at 50,000 ATMs (CD/115 para 6.49), which they describe as only a “moderate gain” (CD/115 para 11.17).

219. The Appellant disputes the Council’s employment forecasts. They suggest a total increase of 1,884 jobs at 50,000 ATMs, of which 892 are expected to be in the local area (TAG/P/6 para 5.21). There are two reasons for the disparity: productivity gains and the scale of the multiplier derived from the Appellant’s impenetrable methodology. The first can be disregarded. The parties’ productivity gains are very similar (ASA applied gains of 3.5% p.a. from 2011 – 2014 and 2.5% from 2015 – 2019 (RBC/R/4 Table 1); MM applied gains of 4% from 2011 – 2014 and 1% from 2015 onwards (TAG/R/6 Table 2.1)) and Mr Shenfield accepted that any differences were not significant (Tag/R/6 para 2.13; confirmed in XX (SB) 4.6.2010).
220. As to multipliers, ASA apply a national multiplier of 1.8, derived from the 2006 OEF study, as applied by NLP (RBC/R/4 para 3.5; OEF: CD/117 para 2.3; NLP: CD/115 para 5.17 – 5.24). MM’s derived national multiplier is 2.8 (TAG/P/6 Table 5.5 (a total of 4618 jobs from 1622 direct jobs)). NLP, whose work the Appellants rely upon in many other respects, explain that the 1.8 multiplier was not a direct lift straight from the 2006 study (SIT27; SIT57), but needed adjustment. The OEF figure for total jobs supported by the aviation industry produces a multiplier of 2.37 (excluding travel agents, who are not relevant to the business aviation analysis), which is itself significantly lower than Mr Shenfield’s 2.8 (CD/117 Table 2.4, pg.15; XX (SB) 4.6.2010). NLP then made adjustments for the fact that the OEF employment figures included elements relevant to larger commercial airports but not to FA, in particular jobs related to retail sales, meals served on airlines, and construction. NLP also took account of their telephone survey of FA tenants, from which it was clear that tenant spending levels were fairly low generally, and that much of this was spent locally or regionally.
221. Finally, NLP cross checked with multipliers derived from studies of other airports. TAG emphasised that those other multipliers (listed in CD/115 at para 5.17ff) were local and regional level multipliers, but as NLP point out local and regional multipliers provide guidance on an appropriate national multiplier. On the facts, the use of a national multiplier of 1.8 is consistent with the local and regional level multipliers identified for other airports of around 1.2 and 1.5 respectively, especially in light of the lack of much spending by FA or its tenants outside the South East, the fact that the South East is likely to be the region of the UK where most economic impacts will be captured and, as Mr Forbes noted, the significant job growth from airport development will principally be at the local and regional level rather than the national level.
222. Mr Shenfield also emphasised that the multipliers from these other studies were derived. That is undeniable but is not much of a criticism unless his derived multiplier bears some resemblance to experience of what has happened elsewhere or, if it does not, it is clear from the workings of the model why a significantly elevated multiplier is justified. Mr Shenfield was unable to provide any reason why an applied multiplier based on reasonable judgements in terms of relevant comparators should not be used to see if a modelled output is reasonable, as NLP has done. Indeed, it was only when Mr Shenfield appreciated that he would have to defend his multiplier, which he

was very obviously and understandably hugely sensitive about, that criticisms of NLP's assessment (which is embraced in his evidence and that of the Appellant's other witnesses) came to be made.

223. The Appellant's multiplier was a derived output of a model adapted from that used in the 2005 OEF study (CD/125). ASA on the other hand, used multipliers as an input with which to produce their forecasts. The MM methodology is in fact a reason to doubt rather than rely on their forecasts. No explanation of the workings of the model was provided, either in the OEF study itself, the Economic Statement (CD/7), or any of Mr Shenfield's evidence. The model as applied in the OEF study produces a remarkably high national employment multiplier of 3.8 (CD/125 Table 6-2 (a total of 3230 jobs from 850 direct jobs)). Unhappy with this, Mr Shenfield adapted the model, but his forecasts still result in an extremely high multiplier of 2.8.
224. There is no objective justification for such a high multiplier. No reason was put forward why FA should generate so much employment relative to other airports. Indeed the evidence points in the other direction: the multiplier for FA might be expected to be lower than commercial passenger airports due to the streamlined nature of the Airport's operation, in particular less catering for business aviation flights and the absence of retail outlets in the terminal (as argued by NLP: CD/115 para 5.25).
225. Also of concern is the Appellant's use of a ratio of £1 million of expenditure supporting 20 jobs in the supply chain (CD/125 para 5.1). This is at odds with NLP's ratio of 12.5 jobs per £1 million of expenditure, which is reliably sourced from the UK National Accounts Blue Book (CD/115 para 5.26 and fn.16). Mr Shenfield was again unable to explain the reason for this discrepancy, having simply applied a model of which he was not the creator (XX (SB) 4.6.2010). Whilst he may have re-surveyed the employers at FA to inform his analysis, no relationship (whether direct or indirect) is provided in the evidence between that re-survey and the employment forecasts and unless NLP's similar survey got things very badly wrong, it would not support a multiplier of this scale.
226. Scrabbling around for support for his multiplier, Mr Shenfield sought to rely on PwC's Economic Impact of Business Aviation in Europe (CD/118). That reliance was misplaced. The employment figures in that report, for operations and maintenance in the UK business aviation industry, provide a multiplier for total employment of 2.5 (CD/118 Table 13 p.51), again below Mr Shenfield's 2.8. The 2.5 figure is distorted, however, by an extremely high induced employment figure, giving an induced multiplier of 0.49. Mr Shenfield himself, in agreement with ASA and NLP, applies an induced multiplier of just 0.25 (XX (SB) 4.6.2010; NLP: CD/125 para 5.4). If this multiplier were applied to the PwC direct and indirect figures, it would produce an overall multiplier of 2.1 (Total of direct and indirect jobs: $4673 + 3230 = 7903$. 25% of $7903 = 1975.75$. Total direct, indirect and induced: 9878.75 . $9878.75 / 4673 = 2.1$), significantly closer to ASA's 1.8 than Mr Shenfield's 2.8.
227. A final reason to doubt the Appellants' forecasts is NLP's activity-based estimate of the increased employment resulting from extra movements. After discussions with TAG airport management, aviation operators, aircraft maintenance and other firms based on the Airport, NLP estimated that direct employment would result in a net employment gain of 325 jobs (CD/115 para 6.11 – 6.30). This is substantially lower than the 595 forecast by the

Appellants, who have applied only a productivity gain approach to estimating future direct employment.

228. In short, the MM employment forecasts are opaque in their evidence base and unconvincing in their outputs. ASA's forecasts, corroborated by NLP and the product of a broad and transparent evidence base, should be preferred. The increase in employment arising from the appeal proposal would on ASA's analysis be some 960 jobs (RBC/R/4 Table 1 p.8) compared to MM's 1884 (TAG/P/6 Table 5.5). Of MM's claimed increase, 595 would be the direct increase, with the indirect and induced in Rushmoor, Hart and Surrey Heath adding a further 297 (RBC/R/4 Table 5.6 p.18). That is a local benefit of some 892 jobs to be weighed in the balance against the local environmental impact (were MM's figures to be accepted). There is no evidence that the remaining job growth would not occur in any event as use is made of competitor airports.
229. Within this context, it is worth noting that the ES assesses the effects of the appeal proposal on the economy as "moderate beneficial" for the District and the indirect and induced employment effect as "minor beneficial" (CD/1 Chapter 8 p.8-18 and Table 8.14). Moderate beneficial in this context is defined by the ES as "A beneficial effect at the local level, but the gains are less pronounced/measurable at the regional or district level" and minor beneficial as "The effects may be raised as local issues but are unlikely to be of importance in the decision making process" (CD/1 Table 8.3 p.8-5). That is an assessment which sits well with NLP's and ASA's conclusions and appropriately gauges the true significance of the employment benefits of the appeal proposal.

(ii) Benefit by way of investment in the economy

230. The benefit by way of investment in the economy is already taken into account through the assessment of indirect and induced job creation, as those are jobs generated by supplier and wage spending. The benefit can be used, however, as another way of assessing the impact of the proposal. NLP calculate that total supplier and wage spending in the local area by the Airport and its tenant firms, taking account also of "spin-off" effects, currently amounts to around £25.9 million p.a., rising to £33.4 - £37.0 million p.a. with 50,000 movements (CD/115 Table 8.4 p.44). They note that for both supplier and wage spending there is a high level of leakage outside the local area. In particular, FA tenants' spending with local suppliers was found to be "quite limited and in some cases negligible" and generally a significant amount of supplier spending by TAG and its tenants is with more specialist suppliers based outside the region (CD/115 para 8.7; 8.14). For wage spending, there is likely to be high leakage as a result of the FA's relatively small local labour catchment area, the lack of major service centres in the local area and the proximity to the major service centre of Greater London (CD/115 para 8.15). It is again apparent that the benefit to the local area is limited.

(iii) Cluster / catalytic effect

231. The Council does not dispute, but does not overstate, the significance of the economic cluster which has grown up around the Airport or the catalytic effect of the Airport on some businesses in the area. The effect is impossible to quantify and NLP's view of the evidence to support the benefit was somewhat equivocal. They found little actual evidence for any cluster or catalytic impact:

discussions with commercial property agents in the area suggested that neither FA nor its business aviation services have been a significant factor influencing demand for industrial or office property (CD/115 para 9.23). They also note that SEEDA could provide no examples of companies locating in Farnborough or the wider area specifically to make use of business aviation services at FA. As a result, they consider the conclusion that business aviation facilities at Farnborough are “not obviously a strong factor in attracting business investment to the local area and region” (CD/115 para 9.28). On balance, however, they find that they can say, “it would be reasonable to conclude that Farnborough Airport makes a significant contribution to the general business attractiveness of the area that it serves” (CD/115 para 9.31).

232. Their view is more tempered still when it comes to the effect on this benefit of increased movements, which is of course the issue raised by this appeal. They state that “it is not clear that increased movements at the Airport would necessarily have substantial economic effects” (CD/115 para 9.32). Any disbenefit of retaining the 28,000 cap is largely one of preventing consolidation by sending out “a generally negative message about Farnborough compared with other airports with fewer constraints” (CD/115 para 9.33). Benefits will accrue from expansion, but they are modest compared with the increase required to generate them: “significantly increased movements would be likely to provide some wider benefits to the area that would modestly enhance its attractions to business investment” (CD/115 para 9.35). In similar vein, ASA conclude that any cluster and catalytic benefits will be confined to the aviation and aerospace industries (RBC/P/4 (Amended) para 5.6).
233. It is common ground that these effects are largely unquantifiable, but even in that context it is notable that the Appellant does not identify a single individual or company who says an investment decision hinges on this appeal being allowed (XX (SB) of Mr Price 2.6.2010). Flight Safety International state only that growth in movements would provide “an added impetus” to their growth potential (TAG/P/6 para 6.19). BAE Systems say that any constraint to continue with “their current level of movements at the Airport” would adversely affect their local operations; they do not suggest they need more movements (TAG/P/6 para 6.44). The high point of the Appellant’s case is QinetiQ, who state they are concerned that a failure to increase movements will “have a knock-on impact on [QinetiQ’s] ability to fully develop the high technology potential of unoccupied parts of [their] site at Cody Technology Park.” No reason is given, however, for why this might be the case (TAG/P/6 para 6.47) and it is not supported by NLP’s interviews with commercial agents (see CD/115 para 9.22 p.52). Still less do any of the consultees suggest that 50,000 movements as opposed to a lesser number are necessary and thus the Appellant does not show whether the cluster and catalytic benefits would occur on a lesser number of additional movements. Nor do they produce any evidence of a direct or proportionate relationship between movements and cluster or catalytic benefits. Given this dearth of evidence, the net benefit must be confined to a limited image-based enhancement.

(iv) Regional and national benefit

234. The same applies to the claimed regional and national benefit (other than expenditure and job creation) of the proposal. This was again generalised and unquantified. Mr Price, clearly an ardent pilot and salesman for aviation in the UK, suggests that failure to allow the appeal would lead to “an erosion of the

UK's ability to compete in world markets" (TAG/P/4 para 9.5) but supports this by no specific evidence: no examples are provided of businesses requiring the increase to compete effectively; no examples of businesses that would relocate if the 28,000 cap remained. It is notable that although the Inspector and Secretaries of State in the Weekend Flights Appeal concluded that the Airport is of very substantial economic benefit to the Farnborough area and Rushmoor, they did not find it provided any significant regional or national benefit (Inspector: CD/13 para 7.25; Secretaries of State: CD/14 para 24). The SEP does not identify FA as a nationally or regionally significant airport (CD/60 Policy T9 and Diagram T1) nor does the ATWP or any of its subsequent updates make reference to FA having any regional or national economic importance.

(v) Benefits to business users

235. The Appellant estimates monetary benefits to users of business aviation resulting from the appeal proposal in the sum of £66.8 million per year (TAG/P/6 Table 7.2). This analysis is flawed on a number of bases but in particular by reason of the fact that there is no reliable basis for any of the inputs. Fundamentally, MM take no account of the likelihood that any demand which Farnborough cannot accommodate if the appeal is dismissed will simply go to other business aviation airports. The vast majority of the benefits will therefore occur in any event. The only benefit which will be lost is the "ground access (departure)" saving in travel time, because if users are unable to go to FA they may have to travel to a business aviation airport further afield. MM takes this saving as the time saved accessing FA compared with Heathrow and estimates it to be 1/3 hour on average. This is only 11.7% of the total purported time savings of £41.3 million, i.e. £4.83 million, which is only 7.2% of MM's total user benefits of £66.8 million.
236. Even assuming that it is valid in principle to take account of the other benefits claimed, they have been vastly over-estimated. MM assume a value of £308 per hour for business travellers, which they base on an assumed average salary of £520,000 per year (MS Proof para 7.8). This figure was not derived from any survey of the identities or income levels of users of FA, but rather from extrapolating the upper tail end of the high income bracket of passengers on standard commercial air services. As ASA point out (RBC/P/4 (Amended) 4.3.3), users of business aviation and commercial air services are quite separate passenger groups and it is not safe to apply income data from one to the other. MM use remuneration statistics for directors of FTSE 100 companies to support their figures (MS Rebuttal para 4.2; SIT/55). While there may be some such earners on business aviation flights, it is highly likely that many other passengers are lower earners, for example personal assistants, middle-ranking employees or family members. Finally, it is notable that MM's figure is over five times that applied by the economic expert for FA in the Weekend Flights Appeal, of £53.16 per hour for UK business travellers and £60.97 per hour for foreign business travellers (CD/114 para 5.26).
237. The Appellant bases its calculation of these benefits on an average passenger number per movement of 2.53. The figure is far from robust. In the written evidence it only appears in a footnote in the Economic Statement referring to "the 2009 average loading of 2.53 passengers/flight", which is repeated verbatim in Mr Shenfield's proof (CD/7 p.5-38 fn.36; MS Proof p.33 fn.34). In cross-examination, Mr Shenfield explained that its provenance was a

conversation with Mr Walker of the Airport, but that no record of this conversation existed nor could it be remembered to what period the figure related. Further, Mr O'Reilly appeared to contradict this explanation, stating that he was asked for average passenger numbers and on the day he was asked the figure was 2.53 (XX (SB) 26.5.2010). The Appellant's evidence base here is woefully insufficient.

238. A final problem is double-counting. In particular, the economic expert for FA in the Weekend Flights Inquiry noted that, in light of the difficulty of quantifying catalytic impact, journey time savings could be used as a proxy (CD/114 para 5.25). Despite the fact that catalytic benefits are in this way partly represented by time savings, the Appellant now counts them both, ignoring the overlap (MS in XX (SB) 4.6.2010 conceded that there may be an element of overlap between the economic benefits he quantified).
239. Very little weight if any should be accorded to this analysis in the overall balance.

(vi) Economic Disbenefits

240. The Appellants make no allowance for the economic disbenefits of increased movements. In terms of image, while the Airport has a positive influence in casting Rushmoor as a place to do business, the noise from flights makes the town a less attractive environment for people to live and work in, a disbenefit which will be exacerbated by more movements. Further, although FA has buildings of architectural merit and has served to enhance the image of the town, no new built development at the airport is dependent upon increased flights and the increased impact from noise on the environment will erode the image benefit.
241. Significant disbenefit also attaches to increased emissions resulting from increased movements. The Appellant states that it is inappropriate to include this in a cost-benefit analysis when the cost of emissions is spread over a much wider area than the locality. The cost of emissions was taken into account by the government in a cost-benefit analysis of expansion at Heathrow, but the Appellant argues that this was driven by different considerations which apply to national infrastructure projects. The Council disagrees. The Appellant is asking that the purported benefit of their proposal to the UK as a whole be taken into account, as is clear from Mr Price's evidence regarding the implications of the proposal for 'UK Plc' (see e.g. TAG/P/4 para 2.2; CD7 para 8.2). The necessary flip-side of this is that wider disbenefits also be accounted for.
242. As to quantifying this disbenefit, aviation will be included in the EU ETS from 1 January 2012 and approximately 80% of movements at FA will be covered by the Scheme. Applying this 80:20 ratio to the traded and non-traded cost of carbon, a disbenefit of £8.17 million accrues with 50,000 ATMs as opposed to £4.73 million with 28,000 ATMs, i.e. an increase of £3.44 million (MS Rebuttal Appendix A para 3.1).
243. The parties are agreed this far; but this takes account only of CO₂ emissions. The Council says that the cost of non-CO₂ emissions should also be included, while the Appellant wishes to exclude them (MS Rebuttal Appendix A para 2.6). Although the appropriate way to include these emissions is contentious and not yet settled, there is consensus that it is appropriate in principle. The

DfT account for these costs and do so by means of a radiative forcing ("RF") factor of 1.9 (CD/100 para 4.9 p.87 & J6 p.167). The Appellant's own ES applies the RF approach and moreover uses a greater factor than the DfT:

244. "As the emissions for the cruise phase are emitted at altitude, a Radiative Forcing (RF) factor was applied to determine the full impacts of these emissions at altitude. For the purposes of the calculations, a RF factor of 4 was applied." (CD/1 chapter 6 para 6.5.7).
245. The Committee on Climate Change also recognise that non- CO₂ emissions need to be taken into account, but prefers metrics such as Global Warming Potential ("GWP") and Global Temperature Potential ("GTP") to RF (SIT48 p.126). Even using these metrics, however, the Committee recognise that "the total effect [of emissions] could be up to two times greater than that from CO₂ emissions alone." (SIT48 p.127) Thus regardless of which metric is used, a multiplier of about two appears appropriate. The disbenefit in the present case is better estimated at £6.88 million than £3.44 million.
246. In overall summary on economic benefits, the Appellant has attempted to exaggerate at every step the benefits of the proposal, while remaining blinkered to the disbenefits. The figures at the heart of the Appellant's economic benefit case, those for job creation, are doubly unreliable by being both distant from those of ASA and NLP and based on methodology which MM either did not want to explain or were unable to explain. When MM did dare to expose their methodology to scrutiny, as was the case for benefits to business users, it was found to be entirely wanting. The true net benefits of the proposal are on the whole modest, which is at odds with the extent of the movement growth required to bring them about.

IV Harm by reason of Noise Impacts

The basis for comparison

247. In contending that the appeal proposal will not result in demonstrable harm, the Appellant seeks to place significant reliance on the fact that the noise contours resulting from the appeal proposal would be within the noise budget set on the grant of planning permission in 2000. There is no dispute that had the Local Plan Inspector's recommended approach of controlling noise by means of a noise contour alone been adopted, then the approximate number of dwellings within the 57dB contour would have been 1030 compared to the 561 which would be so exposed if the appeal proposal were permitted (See TAG/P/3 Table 3). However, that does not support the contention that no demonstrable harm would result from the appeal proposal.
248. It is quite inappropriate to seek to utilise the historic noise budget to assess what is acceptable or unacceptable now. The Local Plan Inspector's recommended approach of using a noise budget alone as the means of control at FA was rejected by the Council who, through policy FA2.2(A) of the Local Plan Review and in the conditions attached to the planning permission for FA, established a dual control mechanism of numbers of BATMs and the noise contour. There was no criticism of this approach made by the Secretaries of State in the Weekend Flights Appeal decision and as a general approach it is one which has been increasingly supported by them in relation to the noise impacts of other airports. It follows that the "fall-back" position and, in consequence, the baseline for comparison of the acceptability of the effects of

the appeal proposal is the 2019 without consent scenario. No planning permission exists or has ever existed for operation of FA in accordance with the noise budget alone.

249. There are a number of good reasons why little if any weight should now be attached to that historic noise budget. Firstly, the contours were a notional set of noise contours that would occur if the 1997 fleet mix was upped to 20,000 movements per annum. However, these contours did not actually occur in 1997 or any year thereafter and the fleet mix was based on a number of Chapter II aircraft which were banned from FA in 2001 and phased out in the UK by 2006 (CD/70 para 8.3 p.18). These aircraft had a disproportionate effect on the size of the noise contour (Ibid Table 6 p.19), in effect nearly doubling the size of the contours that were predicted for 28,000 movements with no Chapter II aircraft.
250. As the Council were advised subsequent to receipt of the Local Plan Inspector's Report (CD/72 Acoustic Technology Limited Technical Report AT4749/1 Rev 0), if just Chapter II aircraft had been used at FA only 1,600-1,900 BATMs would have been permissible under the noise budget but with a large corporate aircraft (a Gulfstream IV), some 90,000 BATMs would have been achievable within the noise budget (CD/72 1.3). This may be contrasted with TAG's then objective which was to achieve BATM growth at FA up to 25,000 BATMs within the noise budget by means of the phasing out of Chapter II aircraft (CD/73 Environmental Statement 1999 section 4.6 p.18). This was the level necessary to secure the viable future of the airport.
251. It can therefore be seen that the noise budget was absurdly generous; viability was secure and sufficient incentive existed to phase out noisier aircraft with a noise contour of nearly half the size of that set by policy FA2.2(A). Furthermore, there is no evidence that the Local Plan Inspector appreciated that the effect of his recommended noise budget would have been to permit potentially in excess of 100,000 BATMs.
252. This weakness is compounded by the reliance in the modelling used to derive the original contour on an integrated noise model (INM) program which has since been superseded. The new version uses the results of a validation exercise based on actual aircraft measurements and takes account of local terrain. The up to date modelling using INM v.7 has the effect of reducing the size of the noise contours compared with the earlier predictions (CD/70 Table 5 p.17).
253. Secondly, the basic aim of the ATWP in terms of the noise impacts is that they should be limited and, where possible, reduced (CD/25 para 3.11 p.32). To seek to rely on an inflated noise budget established a decade ago, conflicts with this basic aim and it is important to note in this context that not even the Appellant considers operating to the extent permitted by the noise budget would be acceptable (CD/15 p.10: "Whilst the physical capacity of the Airport could accommodate up to approximately 100,000 ATMs, approximately 50,000 ATMs to 2019 is being considered in the light of current safety and environmental constraints". Mr O'Reilly confirmed in XX that these constraints were not limited to the PSZ issue).
254. In this context, it is simply wrong to contend as Mr Charles sought to do that operating to the extent permitted by the noise contour alone would involve no

demonstrable harm. It is noteworthy that the Secretaries of State in their decision on the Weekend Flights Appeal did not regard the fact that the effects of the proposal would be within the approved noise budget as determinative of the appeal (CD/14 para 29) and, whilst it is undeniable that they treated that fact as lending some weight to the proposal, the issue of whether continued reliance on that contour remained appropriate was not a matter in dispute between the parties and was not investigated at that appeal.

255. Little if any weight should now be attached to the noise budget. Its sole present relevance is to highlight both the danger of reliance on a noise budget alone as a method of noise control and the fact that the imposition of a cap on movements, sensitively judged, is in no way inconsistent with the need to incentivise operators to phase out noisier aircraft; all of the relevant objectives for FA have been met within the current BATM cap.
256. As the Inquiry heard from Mr O'Reilly (XX SB), irrespective of the outcome of this appeal it is TAG's intention to phase out all but Chapter IV aircraft (whilst a benefit this is limited as all but 2% of aircraft using FA in 2008 were Chapter IV aircraft in any event and the effect of a ban on Chapter III aircraft would decrease the 2019 With New Consent Contour by just 0.7% - see TAG/P/3 para 5.20 p.37). The likelihood of further advances in aircraft design producing any material benefits in noise impact terms beyond those secured with Chapter IV aircraft is at best uncertain (Charles Evidence in Chief; RBC/P/3 p.12 Fn 5; and the evidence of Mr Milne (SIT64 Doc 14)).
257. It follows that the appropriate approach to the assessment of the noise effects of the proposal is to compare the 2019 without consent scenario with the 2019 with consent scenario; each scenario being considered against the 2008 baseline in order to assess the effects of the change which will be experienced by the affected community.

Noise assessment methodology

258. The principal issues in dispute in terms of noise assessment methodology are:
- a) The appropriateness of exclusive reliance on the LAeq16hr metric as the basis for assessment;
 - b) The relevance of the numbers of ATMs and LAmx levels to the assessment;
 - c) Whether demonstrable harm can exist where noise levels of less than 63dB(A) will result from a proposed airport development.
259. These issues should in reality not have been in dispute. It should have been obvious to TAG's noise witness (Mr Charles) given his airport related experience, his involvement in the Stansted G1 Inquiry and in the Weekend Flights Appeal and from the content of the ATWP that his approach was a flawed one and simply to repeat arguments which have been rejected by the Secretaries of State provides an unsound basis for assessment of the appeal proposal. It is also unreasonable behaviour.

The LAeq16hr metric

260. The ATWP and PPG24 advise that aircraft noise can be assessed in terms of the LAeqT, however neither advise sole reliance on the metric in order to

assess the impact of any given proposal to increase ATMs. Such sole reliance has rightly been criticised on the ground that the time averaging element of the index disguises or underestimates the true impact of aircraft noise which is experienced as a series of discrete noise events with quiet periods in between rather than as part of a continuous but fluctuating noise.

261. Whilst the LAeq16hr noise index is conventionally used and was reasonably correlated to the overall subjective impact of aircraft noise at certain airports through the ANIS Study (CD/77), sole reliance on it is inappropriate. The ANIS Study was dominated by Heathrow in terms of the survey areas utilised (CD/77 Figs 5.1 – 5.5 pp.92-97: 18 of the 23 survey areas were around Heathrow), which even in the early 1980s was operating close to capacity, with little variation between hours of the day or diurnal variation even between weekdays and weekends (CD/77 para 7.26 p.36). Its conclusions cannot sensibly be assumed to apply to a business aviation airport such as FA which for good reason operates below its physical capacity and where weekend movements have, even before TAG's involvement, always been very limited.
262. The need for caution in assuming that the ANIS conclusions can simply be transferred from one airport to another irrespective of the nature of their operations is demonstrated by reference to the DORA Report 8203 "Reaction to Aircraft Noise near General Aviation Airfields" (CD/67) which concluded that reactions to aircraft noise at Leavesden (then largely a "business" GA airfield with 25,000 of its 30,000 ATMs executive flights) (CD/67 para 2.11 p.7) contrasts markedly in almost every respect with reactions at the four other general aviation airfields studied (CD/67 para 6.4 p.33) and, importantly, that above 55 dB(A) LAeq respondents were more annoyed than comparably exposed people at Heathrow (CD/67 para 6.7(iii) p.35).
263. Whilst the subsequent "A Study of Annoyance Due to General and Business Aviation Noise" (CD/76) concluded that, in 1989, no distinction could be drawn between air transport, business aviation and flying school activities as predictors of noise annoyance, this was at a time when there was a much starker distinction between the types of aircraft utilised for air transport operations (both heavier and noisier) (Fiumicelli XX) and the use of jets in business aviation was far more limited than it is today (see CD/67 para 4.15 p.16 e.g. just 6% of non-circuit movements at Leavesden). This report also importantly concluded that the majority of respondents found noise worse at weekends, with weekend annoyance driving the overall annoyance reactions (CD/76 p.332 results), which was recognised by the Weekend Flights Appeal Inspector (CD/13 para 7.44 p.53) who saw no reason why this would have changed in the intervening period. It is a considerable weakness in the LAeq16hr metric that, although the standard 92 day measurement period includes weekends, sole reliance on it requires an assumption to be made that the community's response to noise is the same whatever the hour of the day or day of the week. None of the underlying or subsequent studies support such an assumption.
264. There is also evidence that sensitivity to aircraft noise has increased since the 1980s when the social surveys underlying the use of the LAeqT metric were undertaken. Whilst the ANASE Study was not endorsed by the reviewing peer group or the then government, it did provide sufficient foundation for the DfT's Chief Economist to conclude that people may be more concerned about the

numbers of aircraft (and slightly less concerned about the sound level of an individual aircraft) than the present LAeq indicator assumes and that:

265. "The evidence in ANASE indicates, in my view, that it is highly probable that concern (or annoyance) with a particular level of aircraft noise is higher than found in the ANIS Study in the early 1980s. This finding is in line with the emerging findings from the European Commission's HYENA Study. It is also consistent with the more general finding that people's valuations of environmental impacts tend to increase over time as average incomes (or GDP) grow, a finding which is reflected in DfT's approach to the valuation of noise impacts from road and rail." (CD/188)
266. The weaknesses of the LAeq16hr metric as a sole method of assessment have been identified on a number of occasions. The Weekend Flights Inspector in his report on the Manchester Airport Second Runway, whilst accepting that the metric was the best available method recognised that it can conceal localised impacts (see TAG/P/3 para 3.36 p.14 quotation of para 28.17.8). The limitations of the LAeq16hr metric were more recently recognised by the Stansted G1 Inspector whose reasoning and conclusions on use of the metric were accepted in their entirety by the Secretaries of State (see CD/191 para 14.103 and CD/172). Despite the fact that Mr Charles appeared for BAA at that Inquiry and must have been aware of the Inspector's report and the Secretaries of State's acceptance of it, for reasons which are not clear he chose not to refer to it in his evidence):
267. "...I share the views expressed by many that the Leq metric has limitations in the representation of aircraft noise which is generally experienced as a series of discrete noise events with quiet periods in between rather than as part of a continuous but fluctuating noise and so Lmax and the number of aircraft are also significant parameters. I recognise that these have not been correlated to community annoyance and that there is no current guidance on action to take on such data, though I am aware that there was formerly guidance on the use of NNI and such guidance may emerge from ANASE. In any event, that does not necessarily indicate that there is no causal link".
268. The acceptance of this reasoning by the Secretaries of State is entirely consistent with their decision on the Weekend Flights Appeal, a decision which it is clear that the Appellant and its advisers had not properly understood. It is clear from that decision that the Secretaries of State well appreciated that the noise contours derived by use of the LAeq16hr metric took account of the number of movements, the noise from each and its duration (see CD/14 para 27) but nevertheless concluded that account must be taken of both the noise contour approach and the numbers of movements (CD/14 para 25). Whilst it is undeniable that that appeal was concerned with the BATM balance between weekdays and weekends within the existing 28,000 cap, that has no bearing on the issue of the appropriate methodology.
269. If Mr Charles is right, there is no escaping the conclusion that the Secretaries of State were wrong to do anything other than consider the LAeq16hr contour (because on his view it is sufficient that the metric is based on the 92 day measurement period inclusive of weekends). His belated and somewhat lame attempt to argue that the approach taken by the Inspector was required because the existing weekend BATMs at FA fell below the 30 movements per day level and PPG24 advises against sole reliance on the metric in such

circumstances (CD/35 Annex 3 para 7) reflected a further misreading of the Inspector's report (CD/13 para 7.39 p.52). It is quite clear from the context and the Inspector's recognition that the proposal involved 44 BATMs per day at weekends and 77 per weekday, that it was not PPG24 advice which persuaded him that sole reliance on the LAeq16hr metric was inappropriate but rather the well known concerns relating to the LAeq16hr metric and, of special relevance in that case, its failure to reflect increased sensitivity to aircraft noise at weekends.

270. Properly understood and despite Mr Charles' valiant attempts to persuade the Secretaries of State otherwise, there is now a clear line of authority that the weaknesses in the LAeq metric require it to be supplemented by additional assessment tools. Those tools need to ensure that each of the factors likely to affect the community's response to a change in noise environment are assessed in a way which realistically reflects their likely impact. This requires consideration of the number of noise events, how noisy they are, their character and tonality, duration, frequency, propensity for grouping, the time at which and season in which they occur. Where as here, the proposal includes increased flying at weekends, the increased sensitivity towards that also needs to be reflected. As Mr Charles conceded, that can only be done by applying subjective judgement, as was done in 2008. It follows that the LAeq16hr metric is part of the assessment but it cannot be determinative.
271. The failure by Mr Charles and indeed the Council's previous acoustic advisers to recognise the need for this supplementing of the metric is a serious flaw in their respective analyses.

Demonstrable harm

272. On the written evidence there was a marked divergence of view between the Appellant's witnesses and the Council's on what does and does not equate to demonstrable harm. Fortunately, that difference narrowed significantly with Mr Charles' cross-examination.
273. The Appellant's claimed absence of harm rested principally on two equally flawed assumptions, namely:
- a) Provided that the noise from flights remains within the contours established by the 2000 deed, no demonstrable harm can arise in principle; and
 - b) The ATWP provides that it is only at noise levels in excess of 63dB(A) and above and where that cannot be mitigated or the relevant affected properties acquired, (in the case of properties exposed to noise levels in excess of 69dB(A)) that demonstrable harm arises.
274. It is of course only by means of these two assumptions that the Appellant can seek to argue that the increased size of the population exposed to noise levels in excess of 57db(A) (which it is agreed will result from the appeal proposal) does not in itself amount to demonstrable harm which would have to be outweighed by the benefits of the appeal proposal if the appeal is to be allowed.
275. The starting point for ascertaining what amounts to demonstrable harm is the Local Plan Review which provides that proposals for flying should "cause no demonstrable harm to ... the amenities of the surrounding area." (CD/49 Policy

FA2.2(C) p.148). What the Appellant was apparently unaware of is that the wording of the policy, and in particular the stringency of the test set by it, was the subject of specific consideration by the Local Plan Inspector. The MoD had argued that the demonstrable harm test was unduly restrictive and should be replaced with a test of significant harm. That was rejected by the Local Plan Inspector who correctly recognised that "... in the normal use of the word "significant", the harm resulting from such development could have a marked detrimental impact on the environment and amenities of the surrounding area before it became contrary to the policy." (See CD/50 para 11.33.19 p.11) He also recognised that such a change in the wording would be inconsistent with the evidence given that TAG wished to be seen as "good neighbours" and to demonstrate their "environmental credentials." It follows therefore that the policy has built into it a requirement for an exemplar approach, no doubt reflecting the specific context of the airport, and sets a policy test which requires that a "marked detrimental impact" be treated as in conflict with policy.

276. It is difficult to see in that context how it can sensibly be argued that exposing increased numbers of people to noise from airborne aircraft to a level which is capable of disturbing speech both indoors and outdoors of their homes does not amount to demonstrable harm. It would be at the very least highly surprising if the proper interpretation of the ATWP required such a conclusion to be reached. It does not.
277. As is quite clear, the ATWP uses the 57dB(A) Leq level as the level of daytime noise marking the approximate onset of "significant community annoyance" i.e. the level at which a significant proportion of the community is exposed to levels of noise at which they are significantly annoyed (CD/25 para 3.14 p.34). Recognising the relationship between noise and annoyance is not an exact one; the consultation document for the South East also showed the 54dB(A) Leq contours as a sensitivity indicator, an issue to which we will return but which demonstrates the government's acceptance that demonstrable harm can result where noise levels do not exceed 57dB(A). As is to be expected, the ATWP consultation responses identified the significance of aircraft noise as a key environmental impact in the public mind.
278. It is evident from a reading of the ATWP that the use the government makes of the 57dB(A) level is to identify the size of the increase in population exposed to levels at 57dB(A) as a result of the specific proposal made for the major airports and to weigh that increased exposure, as demonstrable harm, in the balance with other harms against the benefits of increased ATMs at those airports. That balance is undertaken for example at Stansted (CD/25 para 11.30, 11.31, 11.44 & 11.46), Heathrow (CD/25 para 11.53) and Gatwick (CD/25 para 11.74). For the smaller south east airports, the balance is one for local determination but there is no logic in an argument that the threshold for the onset of demonstrable harm should be higher than that utilised at a strategic level for the nationally important public transport airports.
279. The Appellant's sole contrary argument rests with paragraph 3.24 of the ATWP (CD/25 p.36) which they interpret as meaning that, provided that an operator offers to purchase properties which will suffer from both high noise levels of 69dB(A) or more and an increase in noise of 3dB or more and offers acoustic insulation to any residential property suffering from levels of 63dB(A) and a

large increase of 3dB(A) or more, no question of demonstrable harm arises. That is absurd on a number of levels.

280. Firstly, it assumes that no demonstrable harm can be caused to amenity other than indoor residential amenity. Secondly, it is based on a fundamental misunderstanding of the function of paragraph 3.24 of the ATWP. It operates to ensure that, if the increased population exposed to levels of 57dB(A) or more is outweighed by the particular airport proposal then where there are properties exposed to the higher levels, the airport operator is required to take the requisite steps to acquire or offer insulation. It is for this reason that there is no reference in the sections of the ATWP dealing with the particular airports making use of either the 63dB(A) or 69dB(A) levels.
281. This interpretation is entirely consistent with the approach taken by the Secretaries of State at the Weekend Flights Appeal in which the fact that the area within the resulting 57dB(A) contour would not affect residential properties was a factor which weighed in favour of the then appeal proposal (CD/13 para 29). It is also consistent with the Secretaries of State's decision on the Stansted G1 appeal. They endorsed their Inspector's reasons and recommendations on the noise issues which included his appraisal of the validity of using the 57dB(A) contour as the threshold of harm. It was his analysis that:
282. "Notwithstanding the policy support for use of the 57 dBA_{Leq} contour in this context, and the importance that BAA suggests should be attached to it, it seems to me that more significance is being ascribed to it here than it warrants. I say this because of the significance of L_{max} and the number of movements as discussed above and because I have seen no evidence that that particular contour (or indeed any other) marks a "step change" in the community response to aircraft noise rather than being just one point in the noise/annoyance relationship. As also indicated above, it is undisputed that there is annoyance beyond the contour and account has to be had to the impacts wherever they are felt. I share the view of the T5 Inspector that the 57 dB(A) Leq contours provide a starting point in the assessment of noise impact, and it seems to me that their main value lies in the fact that they facilitate comparisons between scenarios rather than as absolute indicators of impacts." (See CD/191 para 14.109 p.595).
283. This of course was precisely the concern of the Council's Members in refusing planning permission in this case. The Appellant's analysis and that of their own consultants did not get past the starting point or progress beyond the comparison of scenarios. The Appellant, whose witnesses have doggedly persisted in their approach, notwithstanding the clear ministerial decisions which indicate that it is of itself insufficient properly to assess noise impact, have still failed to provide any meaningful assessment of the acceptability of the impacts of their proposal; Mr Shrubsall on behalf of TAG was entirely reliant for his balance on Mr Charles' flawed approach. Only Mr Fiumicelli on behalf of RBC has done what is required properly to assess the noise impacts in this case.
284. We need also to touch on one final policy matter relating to the use of the 57dB(A) level which is Mr Charles' attempt to use the PPG24 NEC categories in reverse, in order to support the argument that it is not a demonstrably harmful noise level. A number of points need to be made. Firstly, such an approach

does not accord with the ATWP. Secondly, in the context of aviation noise, the LAeq16hr metric does not accurately reflect the true extent of noise impact. Thirdly, PPG24 itself explains why "...the NEC procedure cannot be used in the reverse context for proposals which would introduce new noise sources into areas of existing residential development." (CD/35 PPG24 para 8 and Annex 1 para 4). Levels of 57dB(A) and above fall within NEC category B and are levels which need to be taken into account when determining a planning application and are at a level at which, in principle, conditions may be needed on permissions for new dwellings to ensure an adequate level of protection. The noise impacts are therefore capable of mitigation, unlike the impacts on existing dwellings and other development. Fourthly, it is quite wrong to equate the noise impact of new development on a settled population with what occupiers of new development may be prepared to accept as a matter of choice.

285. Whilst it is undeniable that the Inspectors who conducted the Finningley and Coventry Airports inquiries did consider that reverse use of the PPG24 NEC categories was of assistance, these considerations predated the Stansted G1 decision of the Secretaries of State and for the above reasons should now be given little weight. (TAG/P/3 paras 3.34 & 3.35 p.13)
286. The correct approach is therefore to treat the 57dB(A) contour as a starting point. It must then be supplemented by reference to the particular circumstances and the context under consideration which will in the context of FA require consideration of the number of movements, the Lmax and the fact that there will be a 79% increase in the number of BATMs at the sensitive weekend periods.
287. In terms of those means of supplementing the LAeq16hr metric, the effect of the increase in the number of ATMs has to be seen in the context of their loudness, frequency and duration. In terms of noise level, there is an issue in this case as to what weight should be attached to noise impacts beyond the 57 dB(A) contour. Mr Charles accepts that there are those beyond that contour who are annoyed by noise from FA and indeed the Inquiry has heard from and has before it many representations from individuals who reside in areas some distance outside its boundaries (see e.g. SIT17). Mr Charles further accepted that the impact on them was a material consideration which needed to be taken into account.
288. That was a fair concession, as Mr Fiumicelli's analysis of the Lmax and its potential to cause speech disturbance outdoors demonstrates that, assuming no dispersal, outdoor speech disturbance is likely down to the 48dBA contour, because the typical Lmax is still likely to exceed 65dB (SIT53: 75dB Lmax minus 9dBA = 66 dB Lmax and the 48dBA contour is 9dBA lower than the 57dBA contour). Allowing for dispersal would reduce the Lmax by 3dB but Mr Fiumicelli has allowed for this in his calculation by assuming a 10dBA differential between the Lmax and the SEL whereas the Airport's data suggests a differential of just 6-7dBA (i.e. the Lmax is in fact only 6-7dBA lower than the sound exposure level (SEL) but Mr Fiumicelli has assumed that it is 10dBA lower). The WHO Guidelines for Community Noise (CD/69) identify a value to avoid serious annoyance in outdoor living areas during the daytime and evening of 55dBA Leq and a value marking the onset of significant speech disturbance of 65Lmax (see SIT53). There is also the potential for indoor speech disturbance within the 57dBA contour with partially open windows.

289. The extent of the 48dBA contour has not been mapped but it is clear from Figures 11.6 and 11.7 of the ES (CD/1 Chapter 11) by extrapolation that (a) it already covers parts of Fleet and Mytchett and (b) with the new consent large parts of those settlements would fall within it. This serves to confirm that the extent of noise objection to the appeal proposal is justified and that the likelihood of complaint from areas beyond the 57dBA contour will legitimately increase if the appeal is allowed.
290. There is the additional factor of the effect of suspension of the noise preferential routes by reason of the congested airspace and the absence of controlled airspace. This is a known issue which gives rise to significant complaint as the Inquiry has heard (see e.g. Mr Parsons' submission SIT64 Doc 1). It is accepted by the Appellant that the effect of this is greatest at weekends and has a greater impact away from the Airport. As the number of weekend movements increases, the potential for conflicting movements increases and the greater the need for suspension of the NPRs. This will have a significant impact on those who live beyond the 57dBA contour. An advantage of permitting less movements at weekends phased over the period to 2019 is that it will allow the feasibility of an application for Class D airspace (on which, see TAG/P/2 para 2.11 p.5) to be properly investigated by the airport and, hopefully, secured, with materially less impact on amenity.
291. This brings us to the issue of weekend sensitivity which, as the Weekend Flights decision makes clear must be taken into account in the assessment. As is clear from the policy history for FA, weekends and bank holidays have consistently been treated as having a greater sensitivity than weekdays hence the specific weekend BATM restriction representing originally 9% of the overall BATMs, which was increased to 18% of the overall BATMs by the 2008 decision. This approach reflects the history of the use of the Airport. When under MoD control, the extent of weekend flying was minimal, (see e.g. SIT64 Doc 14 Mr Milne's submission) the 2000 planning permission permitted just 2,500 movements, a highly contentious weekend increase was permitted as recently as 2008 and just two years later an increase of 79% is sought. Whilst phased, a matter to which we will return, this is, on any assessment a significant increase in the amount of weekend activity.
292. Indeed, the increase was clearly regarded as so significant and likely to prove so contentious, that TAG chose not to refer to it in their consultation on their Master Plan, indeed, they had apparently not even decided to pursue a weekend increase given its likely sensitivity (O'Reilly XX SB). The issue raised by this appeal is how this increased sensitivity is properly reflected in the assessment.
293. The CAA report DORA 9023 (CD/79) on the use of LAeq as an Aircraft Noise Index reacts to consultee responses on the question of increased weekend aviation noise sensitivity shown by the ANIS study by commenting: "In other words, a particular weekend exposure annoys to the same extent as a weekday exposure which is some 2.5dB higher" (Para 2.5.6). Based on the information in ANIS, a rationally-based decision by the DETR to use weightings in the UK noise index, would have been 3dB for evening movements and 3dB for weekend movements i.e. a weekend exposure would annoy to the same extent as a weekday exposure 3dB higher. Using the equal energy principle and assuming the same fleet mix of aircraft and their operation, a noise exposure at weekends 2.5dB higher than on weekdays is equivalent to an

approximately 78% increase in flights at weekends compared to weekdays and a noise exposure at weekends 3dB higher than on weekdays is equivalent to an approximately 100% increase in flights at weekends compared to weekdays.

294. An alternative way of viewing the enhanced sensitivity to aviation noise at weekends is that the equivalent to an overall onset of significant impact criterion of LAeq16hr for weekdays of 57dB from the ATWP would be a weekend noise contour of approximately LAeq16hr 54dB (RBC/P/3 para 4.1.7 p.18). Scrutiny of the LAeq16hr 54dB weekend contour for the 2019 with consent scenario in this appeal shows that it covers approximately twice the area compared to the weekend 57dB LAeq16hr contour (see CD/1 ES Figure 11.11).
295. The Appellant has sought, through Mr Charles and in cross examination, to argue that because the number of complaints has declined (see TAP/A/3 Ch.4.3) as the BATMs have increased in accordance with the 2008 planning permission, it may be concluded that there is no evidence of increased weekend sensitivity. However, that is misguided. It is agreed between the experts that the complaints record has to be used with caution given that while many factors contribute to a complaint just as many factors contribute to an individual not making a complaint even when significantly annoyed.
296. As a number of local residents who appeared at the inquiry attested (see e.g. Mr Milne SIT64 Doc 14), despite being significantly disturbed by the BATMs associated with FA they have not complained to FA because they saw no point in doing so; planning permission exists for the flights from the Airport and complaining, whilst resulting in an explanation of the details of the overflight of the relevant aircraft from TAG results in no practical relief. Councillor Radley most accurately described the propensity to complain; people react to the change (XX by JS 23.6.2010). As they become resigned to a changed environment, their propensity to complain reduces although they remain significantly annoyed by the noise. Where a new change occurs e.g. a pilot uses his/her discretion when the NPRs are suspended, then a spike in complaints is anticipated. It follows that increased numbers of complaints indicate a change which those observing it find sufficiently annoying to justify a complaint, but it does not follow that decreasing complaints reflects any reduced annoyance.
297. Treating the complaint record with the necessary degree of caution, it does establish a number of trends. Firstly, there is a seasonal trend with the highest numbers of complaint in the months May to August. This reflects the peak flying months from the Airport (CD/1 Appx 5.1 table 4.1) combined with those months when affected residents are most likely to be enjoying their properties with windows open or their gardens and external amenity spaces. Mr Fiumicelli's analysis of complaints (RBC/P/3 Figure 1 p.6) demonstrates that movements at weekends provoked an approximately similar complaint rate on a weekday from September 2006 until early 2009, but in 2009 proportionately significantly more complaints were made at weekends during spring and summer than on weekdays. That is consistent with Mr Charles' analysis in terms of the numbers of complaints (TAG/R/3 Ch.5.4 pp.56/57), although he sought to draw a distinction between complaints primarily made on noise grounds and those made primarily on the grounds of track keeping (see also CD/1 Table 11-15 p.11-20). As Mr Fiumicelli pointed out, that is a false

distinction; there would be little point in complaining just because a plane is off track or at lower height unless it is causing some noticeable deterioration in amenity i.e. through noise. That was confirmed by the evidence of affected residents to the inquiry, indeed it appears that one, Mr Hunter, may consistently have had the primary cause of his complaints recorded by the Airport as one of track keeping when in fact the grounds of complaint were noise and visual intrusion (see SIT64 Doc 17 and XX by TAG). Ultimately Mr Charles' claimed distinction came to nothing because even he accepted that track keeping and noise complaints were related (XX RBC).

298. This evidence of sensitivity is important because it must inform the inevitably subjective judgement which will be required to assess how the change now proposed by the Airport in the number of weekend flights will in fact be regarded by the community. Mr Steel rightly failed to secure Mr Fiumicelli's and Mr Sellwood's agreement to the proposition that the Weekend Flight Appeal Inspector's subjective judgement expressed in paragraph 7.51 of his report (CD/13 p.54) was in some sense binding on the decision makers in this case. It is not; it was an expression of that particular Inspector's view in the context of an entirely different proposal; one appositely described by Mr Sellwood as "rearranging the balls in the box". That may be contrasted with the present proposal which proposes a 79% increase in both the weekday and weekend caps.
299. In any event, that subjective judgment needs re-visiting. The notion that aircraft noise can be almost completely masked by a passing vehicle might be relevant at certain weekday times when standing on Farnborough Road itself, but it is far less relevant at weekends in the residential streets to the east which will all fall in the 57dBA contour at weekends for the first time with this appeal proposal.

The extent of noise impact

(a) The 57dB LAeq16hr contour

300. There is no dispute as to the effect of the appeal proposal in terms of exposure to noise levels at and above 57dB(A). From the current (2008 baseline) there would be an increase from 67 dwellings currently exposed to 561 dwellings (an increase of 494 dwellings), reflective of an increase of 3.1dB (TAG/P/3 Table 5). The increase over the fallback position (2019 without new consent) is an increase of 364 dwellings or +2.2 dB (561-197 = 364). These are substantial increases in the population exposed to levels of noise which many of them will find significantly annoying.
301. The position at the weekend is more stark. At present, as the Weekend Flights Appeal concluded, there is no weekend exposure to levels of noise at or above 57dB(A). With the appeal proposal some 164 dwellings will be exposed (an increase of 3.5 dB) compared to an increase of just 5 dwellings when compared to the fallback position (TAG/P/3 Table 9). These are properties exposed to harmful noise levels at the most sensitive times.

(b) The 54dB LAeq16hr Noise Contour

302. More accurately to reflect a combination of the Heathrow domination of the ANIS Study, increasing sensitivity to aviation noise and increased sensitivity at weekends, regard needs to be had to the 54dB(A) contour. This increases in

area from just 3.95 sq km in 2008 to 7.24 sq km with the appeal proposal, an increase of some 3.29 sq km with an increased exposure in population terms of in excess of 2,200 people (see CD/1 Table 11.18 showing increased exposure in population in relation to the 55-60 dB LAeq16h from 770 to 3060). Looking at the weekend alone, the increased exposure in population terms is in excess of some 827 people (CD/1 Table 11.22 again showing increased exposure within the 55-60 dB LAeq16h contour). These are substantial increases in the population exposed to levels of noise which a significant proportion of them are likely to find significantly disturbing.

(c) The Numbers of BATMs and LAm_{ax}

303. Consistent with its overall approach to the noise issue, the Appellant has sought to do all that it can to play down the 79% increase in the number of BATMs. The most recent manifestation of this is SIT69 entitled "Average Number of Movements per Hour Weekday/Weekend for 28,000 and 50,000 Business Aviation Movements". This formed no part of Mr Charles' evidence before the Inquiry, is not supported by any evidence that it reflects any actual single day's operation of the airport and it has no status other than as an arithmetical exercise. It certainly cannot be used as a realistic measure to assess the noise impacts of the appeal proposal any more than the averaging approach of the LAeq.
304. As Mr O'Reilly confirmed in evidence, the Airport has no meaningful control nor does it seek to exercise any control over when its users fly from or to FA. The flying is opportunistic as Mr Shenfield confirmed. What evidence of observations of the airport and the evidence of those who are affected by it demonstrates is that there are peaks and there is the bunching of movements. The peak hourly movement in 2009 was some 20 movements per hour on a weekday and the weekend peak hourly movement was 17 BATMs (see footnotes to SIT69). As Mr O'Reilly confirmed, if the appeal proposal is permitted, the peaks will increase in both size and frequency, with the capacity of the runway at 30-40 ATMs per hour providing no constraint (see CD/114 para 4.31 p.23 and O'Reilly XX SB).
305. The histograms which appear at Annex 1 to SIT70 confirm the variability in the hourly BATMs over the year which is not accurately represented by the averages. Unsurprisingly given the pattern of movements, the evidence of the local community is that the aircraft noise is perceived as individual, or bunched disturbing noise events and not part of an averaged continuum.
306. At the weekends, the data shows that in 2009 Sundays were noticeably busier than Saturdays. There was a pronounced peak in arrivals in the evening on Sundays (between 1600 and 2000). On Saturdays, there was a pronounced morning peak but a more even spread across the remainder of the day.
307. As the Council has demonstrated (SIT53), the LAm_{ax} at the 57dB(A) contour is approximately 75dB(A), which will cause speech disturbance outside and inside with a partially open window. The increased movements whether landings over Farnborough or take-offs over Church Crookham and Fleet will all lead to increased noise and disturbance particularly at the sensitive weekends.
308. That conclusion is not in any sense affected by the final means adopted by Mr Charles to airbrush out the noise impacts of the appeal proposal: misuse of

the PPG24 glossary explanation of perceptibility in the context of the proposed phasing of the increase. The glossary states that "A change of 3dB is the minimum perceptible under normal conditions" thus making it quite clear that it is used to describe a change in decibels and not a change on the LAeq16hr noise index. Changes in long term noise indices such as LAeq16hr of less than 3dBA can be readily discernible (see RBC/P/3 para 5.1.7 p.21 et seq) and the evidence of the peakiness of the operation of Farnborough Airport now before the Inquiry supports this; the use of the longer averaging time will lead to an underestimation of the noise impacts.

309. The key problem with using the 3dB rule of thumb from the glossary is that aircraft movements are individually noisy in the vicinity of an airport and unlike a steady noise from constantly running plant or the persistent flow of traffic on a motorway, there are significantly quieter and longer gaps between each ATM even at airports busier than FA. The Appellant's noise consultant's own evidence demonstrates the fallacy of their approach. By means of a schematic, (TAG/R/3 Schematic B) he sought to show how different combinations of individual noise events at different SELs could give rise to a 57dB LAeq16h contour i.e. no change at all. However, this schematic shows e.g. that a combined LAeq16hr of 57 is achieved with 182 daily movements at 82dB or 46 at 88dB. On Mr Charles' approach to the PPG24 glossary, a resident under the flight path would not notice the difference between 182 movements in a day and 46; that is simply incredible and demonstrates why this key plank of his case is flawed.
310. He knew that it was flawed because the Secretaries of State have already rejected it in the acceptance of their Inspector's report into the Stansted G1 appeal. The Inspector there concluded:
311. "The glossary to PPG24 does not explicitly state whether the reference to the perceptibility of a 3 dBA change relates to Lmax or to Leq, but from the context I understand it to be the former. In any case, as I have indicated, I consider that changes in the noise levels of individual aircraft noise events and the number of such events are important. I share the view of UDC that it is straining credulity to suggest that the noise from an additional 170 ATMs per day (on average, more in summer) would not be perceptible even though the Leq would increase by less than 1.5 dBA."
312. Whilst the increase in the number of ATMs at FA will be less, it cannot sensibly be contended that the 79% increase would go unnoticed. Even assuming the unrealistic average day, there would be an increase of 71 BATMs (10.8 movements per hour x 15 = 162 less 6.1 movements per hour x 15 = 71. See SIT 53 for average figures), and this according to Mr O'Reilly would increase the size of the existing peaks and lead to a degree of peak spreading (XX RBC). It is incredible to contend that the local community would not notice the difference between the present maximum hourly movement of 20 and the 36 which would result from the appeal proposal. Whilst this is the most extreme example, the evidence from local residents to the inquiry is that they do perceive small changes in hourly patterns, particularly at sensitive times.
313. The issue then arises as to whether the proposed phasing (TAG/P/3 Tables 7 & 11) of the increase will so mitigate the effect of the change as to render it imperceptible overall. The Appellant maintains that each step in the increase would be imperceptible and that the human response to noise is not so

sensitive that the difference between the 2008 baseline and the 2019 with consent scenario would be recalled. This argument suffers from “the perceptibility flaw”. It takes no account of how the increase in numbers will in fact be perceived nor of the fact that each increase in the dBLAeq16hr noise contour will mean additional residential properties exposed to noise levels in excess of 57dB LAeq16hr. Whilst the full impact of the increase in the contour in terms of persons exposed to those harmful noise levels will not result until 2019, that cannot alter the fact that the increased exposure is sustained and relentless. The notion that the affected residents will not be able to appreciate in 2019 that their noise environment has been significantly altered compared to 2008 is incredible.

314. The Council’s overall conclusion on the noise issue is that the effect of the appeal proposal would be moderately adverse in terms of the weekday impact and substantially adverse in terms of the impact of the increased weekend flights. It is these adverse effects which need to be weighed against the claimed benefits.
315. We should add a brief word on the principle of growth at FA. The Council are, through the emerging Core Strategy (CD/52) and Farnborough Airport Area Action Plan (CD/56) investigating the potential for growth in BATMs beyond the present 28,000 limit. That remains work in progress but the Council has signalled that it is not opposed in principle to the cap being revised to allow an increase in BATMs beyond the present cap. The demand forecasting demonstrates that the Appellant’s forecasts are at best unrealistically optimistic and a lesser number of ATMs would be capable of meeting the identified demand if to do so is environmentally acceptable. Mr Fiumicelli’s professional opinion is that an increase in ATMs of 25% is the point at which residents would be able to detect adverse noise impacts. Such an increase would lead to a small increase in the annual 57dB(A) contour but no increase in the weekend 57dB(A) contour into residential areas. The Council has not considered this advice and it has no status but it serves to support their position that there is scope for a more measured level of growth which strikes a more appropriate balance between the benefits and the disbenefits of FA.

V Performance of the Appeal Proposal Against the Development Plan

316. Properly interpreted there can be no sensible dispute that the appeal proposal is in material conflict with the development plan. It offends the specific Local Plan Review policy FA2.2(A) by proposing an increase in BATMs beyond the 28,000 overall policy cap with a further increase in the weekend movements beyond that permitted contrary to policy in 2008. Furthermore, the appeal proposal would result in significant demonstrable harm to the amenities of the area by reason of noise. It is therefore in material conflict with Policy FA2.2(C) of the Local Plan Review. These are the principally relevant policies and govern whether the appeal proposal is in conformity with the development plan.
317. Whilst there are other generic policies both within the SEP and the RLPR itself which lend support for the appeal proposal in terms of the benefits it would deliver, it is usual to find policies pulling in different directions in cases such as these and the judgement in terms of accordance with the development plan must be made by reference to the proposal specific policies.

318. However, it is important to note that the generic policies lend only general and caveated support for the appeal proposal. The SEP seeks a sustainable balance between economic, environmental and social benefits within the context of helping to improve the quality of life overall (CD/60 Core Objectives). The emphasis on a shared vision for the area and on environmental improvement finds local emphasis in policy WCBV4 of the SEP relating to the Blackwater Valley which specifically includes Farnborough and which makes no reference to continued growth at FA. FA is not identified as a "Regional Hub" (Policy SP2 and Table at para 4.11) or a "Sub-regional hub" under Policy WCBV1. Farnborough the town is identified as a "Transport Interchange" on diagram T1 (P.60) reflecting its importance for public transport.
319. The Airports specific policy T9 does not refer either to business aviation in general or FA in particular although there is a cross reference to the ATWP view on smaller airports in paragraph 8.30 and simply repeats the in principle support for growth subject to relevant environmental considerations. Whilst it is thus clear that the RSS is supportive of growth at smaller airports, this is not quantified and is subject to the caveat of relevant environmental considerations.
320. Mr Shrubsall strained through a process of over-interpretation to find other material policy support in the SEP for the appeal proposal but in reality there is nothing there. It is unsurprising that the SEP has strategic policies encouraging sustainable development (CC1), which seek to ensure that development is phased together with its supporting infrastructure (CC7), that encourage competitiveness in the economy (RE1) and the development of sectors and clusters (RE2). However those lend only most general support to the appeal proposal and would lend similar support to less harmful growth levels. They do not override the site specific policy.
321. Ultimately, how the appeal proposal performs against the development plan will turn on the conclusion reached on the main issues identified above. On the Council's evidence, there is a significant conflict and the appeal proposal should only be permitted if that is outweighed by the benefits of the appeal proposal.

VI Overall Balance

322. The appeal proposal would, if permitted, contribute to the ATWP objective of making more effective use of runway capacity in the South East in order to cater for the general demand for aviation in the period to 2030. It will lead to the creation of jobs including jobs in the local area. The number of jobs created is significant but modest when viewed in context and, were the appeal to be dismissed, much of that benefit would occur in the UK in any event, albeit elsewhere. The local economy will benefit in terms of the image of the locality to do business but there is no evidence that that benefit is other than modest. Some businesses would benefit in terms of cost savings from the increased capacity of the airport but the extent of that benefit is not adequately supported by evidence to enable proper quantification. Assessed overall, the net benefit of the proposed additional movements is at best modest.

323. To be weighed against that modest benefit are the disbenefits. The Council has focused its evidence on noise in recognition that the other issues (safety, air quality, odour) will not be determinative whether viewed in isolation or cumulatively. Others take a different view on these and other issues such as climate change and the Secretaries of State will need to weigh these in the balance as they deem appropriate.
324. In relation to the noise impacts, properly assessed i.e. by taking proper account both of the noise contours and number of movements in the context of the LAmx, the weekday impact is moderately adverse but the weekend impact is substantially adverse. The residential areas affected and the size of the community affected is substantial and the harm which would result outweighs the modest benefits which in large measure could be secured by a less substantial change at the airport, more sensitively phased in conjunction with progressing Class D controlled airspace.
325. For all these reasons, the harm outweighs the benefits and there are therefore no material considerations which outweigh the conflict with the development plan and the Inspector is invited to recommend dismissal of the appeal and the Secretaries of State invited to dismiss the appeal.

The Case for the Farnborough Aerodrome Residents Association (FARA) (Rule 6 Party)

326. FARA's evidence before this Inquiry raises issues surrounding the establishment and subsequent interpretation of current Local Plan policies, the impact of noise on resident's amenity, and concerns over the approach taken by both Rushmoor and TAG in assessing third party risk, and its weighing in the balance with the economic benefits of an increase in the level of flying.
327. The Association is confident that its concerns regarding the current local plan have been registered and that Mr Bird, on behalf of Rushmoor, has made its case with respect to the noise issues. This statement therefore focuses on the issue of third party risk. We understand TAG's position to be as follows:
- (a) The NATS generic model, which is applied to generate the annual individual risk contours within which PSZ land use policy advice applies, relies on algorithms and methodology that remain unchanged.
- (b) In support of the DfT's PSZ refreshment programme, or otherwise in order to meet its obligations under a commercial contract placed by TAG, NATS amended (lowered) statistical crash rates in 2007/8 to allow for certain of the aircraft types that they had been advised would be operating at Farnborough over the next 15 years. The changes in the assumed crash rates that NATS have applied have been withheld from the public domain on the grounds of commercial confidentiality.
- (c) The DfT did not use the decrease in the risk contours to refresh the PSZs at Farnborough when they became available in 2007/8 (corresponding to the 'no development' case). The 2 year delay in doing so is said to be because the refreshment of Farnborough's Annual Individual Risk contours was not scheduled to take place until 2011, which is coincident with the scheduled replacement of the Local Plan by the Local Development Framework.

(d) Should TAG's appeal be granted, the increase in the level of flying would not result in a significant change in the area of the present PSZs, within which Rushmoor had judged, when granting the current permission, that an unacceptable societal risk was not posed to the existing population when weighed in the balance with the economic benefits accruing from the current permission.

328. The evidence submitted by the Association shows:

(a) In weighing risk and benefits when determining the current planning approval, the only disbenefit Rushmoor identified was the land use restrictions PSZ policy would impose upon the Farnborough College of Technology. (CD/205 page 47 sub para b.) It therefore must follow that Rushmoor wrongly concluded that the DfT had regard for the risk to the existing population by virtue of its PSZ policy. This conclusion was contrary to advice Rushmoor had received from the DfT and from its own legal Advisor.

(b) In formulating their advice and recommendations to the Development Control Committee (CD/9) it is clear that Rushmoor's officers place weight on TAG's view that a quantitative societal risk assessment is impracticable. This position of the officers is consistent with their response to questions posed through the FACC (App/FARA/19).

(c) Having taken the view that quantitative assessment of societal risk is impracticable, TAG and Rushmoor's officers now rely on a quantitative assessment undertaken by Dr Eddowes on behalf of the Council. He concludes that the societal risk is significant, but not exceptional when compared with other airports, and is acceptable when weighed in the balance with the economic benefits of the proposal (CD/157 para 3.6). Dr Eddowes presents no evidence to support either assertion. The facts are that the conurbation close to the eastern end of the runway at Farnborough compares most unfavourably with that existing at other airports, and Dr Eddowes is not the decision taker.

(d) It is also important to note that Dr Eddowes has previously recognised that the tolerability criterion he has applied is inappropriate in the case of aircraft flying operations. In his submission to the Queen Elizabeth II Barracks Inquiry in 2007 (CD/206 page 20 para 6.11) he notes "... such criteria have been employed in the assessment of risk estimates in a number of contexts but have not been explicitly recognised as appropriate for determining the tolerability of third party risks associated with aircraft crash." Inspector Smith, in his report on the Manchester R2 Inquiry (SIT/36 paragraph 26.20.3), also notes that comparing risks with non-airport activities 'does not suffice'.

329. Professor Evans and his fellow authors of the 'Green Book' (CD/198 para 2.12) note that societal risk is probably best taken into account on an informal basis. In other words, that decision makers should have the licence to make decisions regarding tolerability on a case by case basis, and in doing so they should not rely wholly on the results of quantitative analysis. This advice is reflected in the HSE report 'Quantified Risk Assessment; Its input to decision making'. This publication (CD/214 pages 17 to 21) identifies factors that are important in judging the tolerability of societal risk. One of these factors is the public's confidence in the decision making process. This must be high on the list in this case, given the lack of transparency and inconsistency on the part of

Rushmoor, TAG, and the DfT that FARA's evidence clearly shows has prevailed over the past decade.

330. The Rushmoor Chief Executive's letter (CD/210) recognises the uncertainties inherent in the NATS quantitative generic analysis, and consequently considered it prudent and comforting that the generic executive jet statistical Crash Rate had been applied given the advice that this was likely to overestimate the predicted frequency of a catastrophic event occurring. Clearly, the Chief Executive recognises that the statistical frequency of a crash occurring is simply a function of statistical crash rates and the number of annual movements; a fact that TAG's risk expert, Mr Maclaren, repeatedly failed to accept under cross examination – insisting upon referring to the more complex relationship between the statistical crash frequency and the Annual Individual Risk metric derived through the modelling process.
331. SIT/49 confirms that NATS had not applied the Business aircraft statistical crash rate across the board, and therefore the full margin for error associated with a generic statistical crash rate that Rushmoor assumed it had secured did not, in fact, exist. It is clear that if the proposed level of flying results in a minimal change to the area contained within the Annual Individual Risk contours, as modelled by NATS, this could only be accommodated through the application of downward revisions of the statistical Crash Rates. Dr Eddowes asserts "that reduced crash rates are a modelling assumption and no real improvement in the safety record of the aircraft fleet has been demonstrated"(CD/157 para. 2.15).
332. Given the uncertainties in the statistical base, only orders of magnitude changes in assumed Crash Rates can be regarded as a sound basis for planning decision making. Incremental changes, such as those made by NATS, need to be underpinned by evidence which has been accumulated over a very much longer time frame.
333. It is very clear that if the Secretaries of State allow the Appeal they will be eroding the margin for error that Rushmoor had believed it had secured when considering public safety in granting the current approval.
334. In that case, local residents would expect the Secretaries of State, in their decision letter, to clearly present the evidence that justifies the erosion of the safety margin that Rushmoor's members had sought to maintain in refusing TAG's application. The criticism of members for having done so, voiced in evidence to this Inquiry, is entirely misplaced.

Inquiry appearances by other Supporters

The material points are:

335. **Mr Marwan Khalek** (SIT 64/2) is the CEO of Gama Aviation Ltd, a Farnborough based company providing business aviation services. Gama Aviation operates over three continents and has a fleet of 70 aircraft worldwide (of which 50% are based at or regularly use Farnborough) and over 300 employees of which more than 150 are based at Farnborough. His evidence represented the views of several other aircraft operators and support businesses.

336. The airport is operating near to capacity and irrespective of any debate over its magnitude there is no doubt about the increased demand for business aviation. The need for additional movements at Farnborough is to provide certainty of access for Business Aviation into a vital market. Farnborough airport is well located and has the right infrastructure in terms of runway, landing aids, hangars, offices and terminal buildings all of which complement and aid a high level of service delivery.
337. For business aviation in the south-east the market is London centric with demand biased towards west London, the Thames Valley corridor and Surrey (M3/M4 corridors). Gama's research suggests that 40-50% of SE, London centric demand is from the west/southwest sector with between 65-80% being served from Farnborough. Business aircraft are a productivity tool with the most tangible benefit to users being time saving; the location, ease of access and certainty of operations at Farnborough mean that, added to the facilities, there is no suitable alternative. There are cheaper airports but if they were as suitable, customers would be using them today. Without the increased capacity, demand would fade, not re-locate.
338. Environmentally, Gama supports TAG's drive for carbon neutrality, is part of the EU ETS and mitigates noise through best practice and modern aircraft. The increased movements would be within the noise quota and the ability to demonstrate harm is dependent on the single noise event. However, retaining the same movement limits would be a disincentive to move to quieter aircraft. Economic benefits would arise as, through increased productivity, executives generate more business to the UK and regional economy through new jobs and inward investment. Locally there would be new jobs and direct and indirect spend, a relationship highlighted by the submitted Gama statistics which show the historical relationship of movements to staff and turnover.
339. Conversely, if there were to be no expansion, there would be a reduction in Farnborough's market share through dilution and Farnborough's attractiveness as a main base would fade. As TAG's pricing becomes capacity driven and gives operators an increased cost base, a relocation of ancillary services would lead to a significant loss of existing jobs.
340. In summary, the expansion is needed to meet demand, there are no suitable alternatives to Farnborough and it is not clear if there would be any demonstrable harm - but at worst, any effects would be minor. There are clear economic benefits nationally, regionally and locally if the increased movements were to be allowed and risks to local jobs if they were not.
341. **Mr Norman Lambert** (SIT 64/16) is a lifelong Crondall resident and author of the Farnborough Aerodrome Consultative Committee website. Although a parish councillor he spoke in support of the proposal as a resident. Mr Lambert questioned whether the consultation process was reliable or whether it was the few trying to influence the many; despite objections to the proposal from the Crondall Parish Council, Hart District Council and other local organisations only TAG had actually consulted residents. Although the increased movements will have some impact it will not be enough to detract from everyday life in Crondall, already affected by noisier flights from Odiham. TAG have produced an award winning airport which has benefited the local community and it is not believed that there is an overwhelming opinion from Crondall residents against developing the airfield.

Inquiry appearances by other Objectors

The material points are:

342. **Mr Hugh Sheppard** made representations to the Inquiry on behalf of Campaign to Protect Rural England (CPRE) Hampshire (SIT 16). While CPRE acknowledges that on economic grounds the business aviation industry punches above its weight, it should also be acknowledged that the industry punches above its weight in the emission of greenhouse gases, which the government recognises as the main cause of climate change. It is the very few passengers per plane allied to the way in which business jets guzzle fuel that leads to extraordinarily high emissions on an individual basis, that is per person per trip. This is one way in which DEFRA and DfT assess emissions generated by scheduled services and it is entirely reasonable for CPRE to draw comparisons.
343. While the ATWP 2003 is still an important foundation of policy, the judicial review into the Heathrow third runway showed that subsequent policies must also be taken into account by government, particularly under the Climate Change Act 2008. The Committee on Climate Change, set up under the Act says in its report on aviation (CD/183) that UK ATMs should be held to an increase of 55% of the 2005 total by 2050. The appeal proposal is for a 170 % increase in ATMs between 2005 and 2050.
344. Decision takers are also obliged to take into account the Climate Change Supplement to PPS 1 as a material consideration. This has the intention of cutting greenhouse gas emissions and not just mitigating them as preferred by TAG. From the Judicial Review into the Heathrow third runway, CPRE also contends that the precedent arising at a major airport such as Stansted should not automatically apply in the context of a local planning proposal for a minor airport such as Farnborough.
345. The Inquiry heard differences of opinion on the validity of a Radiative Forcing Index (RFI) in the assessment of aircraft emissions on the upper atmosphere when compared to the equivalent impact of CO₂ at ground level. Factors of 4 (from TAG's consultants RPS), 2.7 (from the Intergovernmental Panel on Climate Change) and 1.9 (from the DfT and DEFRA) have been quoted as variables, with 'up to two times greater' from the Committee on Climate Change. Whatever factors are applied, two aspects are incontrovertible: (a) that there is a significant increase in the impact of emissions when they are discharged into the upper atmosphere and (b) that using any of these factors consistently allows comparisons to be legitimately made between different classes of aviation.
346. Anomalies such as the 15% of aircraft that will not come under the EU ETS, the fact that mitigation of the carbon impact of aircraft emissions by the purchase of credits is only voluntary and the assessment of only a few passengers as travelling for leisure – simply because they are the ones not wearing suits – gives rise to further doubts and questions.
347. To avoid confusion over the assessment of emissions, it is appropriate to choose an RFI that Ministers of State will recognise as meaningful when quoting aviation emissions in terms of equivalent CO₂ at ground level. For this

reason the calculation below is within plus or minus 10% of the DfT preferred RFI of 1.9. This includes halving the previous calculations base on RPS's 'worst case scenario' of an RFI of 4. As aircraft emissions are (by convention) only related to departures, it follows that emissions per return trip are double the assessment per departure. Evidence has been heard that airport emissions are some 2% of total emissions, so that within the plus or minus 10% scenario they may be ignored. CPRE's statement of evidence showed that emissions for the baseline year of 2008 amounted to some 18.6 tonnes per passenger with RFI = 4. This represents over 18 tonnes CO₂ per passenger per return trip with RFI = 1.9

348. CPRE's rebuttal evidence showed an assessment on a similar basis for the proposed increase of 11,000 departures, after potential efficiency improvements. This represents between 15.4 and 16 tonnes CO₂ per passenger per return trip with RFI = 1.9. This may be compared with the assessment of average UK emissions per head of population as 12 tonnes per year – including flights). CPRE's evidence showed that such figures represent between 10 and 20 times the equivalent emissions at ground level for a similar journey by a scheduled flight. Using figures provided by the consultants RPS we showed that in the baseline year for planning proposals, London City Airport generated some 1.6 times the emissions for Farnborough, but had 1.36 million passengers rather than under 100,000.
349. TAG's consultant made a comparison for emissions generated by a Learjet flying from Farnborough to Frankfurt with those of an Airbus A318 from London City Airport, suggesting that the Learjet would generate less than 75% of the Airbus CO₂ emissions (TAG/R/9 para 3.5). Assuming 2.5 passengers in the Learjet and say 80 in the airbus, it would take 32 Learjets to carry these 80 people at a standard payload of 2.5 passengers, who would thereby generate 24 times the emissions of the Airbus.
350. A turbo-prop business aircraft flying to Geneva would generate only 15% of the emissions but take 40 minutes longer – an example of how greater environmental responsibility could be achieved in Business Aviation.
351. CPRE does not accept that there are not any reasonable alternatives to the expansion of Farnborough Airport for business aviation. In particular, London City Airport anticipates an expansion in corporate and scheduled aircraft capacity to cater for another 1.5 million passengers, the majority of whom are predicted to be travelling for business reasons. Bristol and Lydd airports also seem intent on expansion. Greater use of video-conferencing technology could also substantially reduce the need to travel in future.
352. Irrespective of climate change considerations, the adverse environmental consequences outweigh the economic benefits of the proposal.
353. **Mr David Parsons** (SIT 64/1) is a long standing resident of Church Crookham living approximately 2.6km from the end of the main runway in a high density residential area. He states that his property does not lie within the normal flight path agreed as part of the updated Farnborough Airport Quiet Flying Programme and as such no aircraft should, under normal operating procedures, pass over his property and the surrounding residential area. However, he has recently noticed an increase in overflying, particularly at weekends. This is understood from TAG to be as a result of departing aircraft

being authorised to turn early in order to keep clear of glider activity at nearby Odiham airport. As such, Mr Parsons considers that the airport does not have a satisfactory or viable southerly take-off and approach route and the proposed increase in flights would affect the peace and quiet of Fleet and Church Crookham residents, particularly at weekends.

354. **Mr Brian Fyfe** (SIT 64/3) lives to the north of the runway under what is usually the flight path of incoming aircraft. His concerns with the proposal include the impact on the health of local residents and the global impact of business aviation in general. In particular he is concerned over air quality and the fact that no investigation has been undertaken as to whether the growth of air traffic into the airport has led to increases in respiratory disease. The lack of objections from local health authorities does not mean there is no problem; further studies are required. The noise of planes is also oppressive, particularly as each event is a spike of noise at an irregular frequency. This is especially wearing and schoolchildren can become distracted. The proposal may be seen as a business necessity for TAG but the Council, having listened to public opinion, concluded that the proposal was not in the public interest. Public opinion should be heeded.
355. This application is divergent with the overriding public intent to reduce global emissions of CO₂, NO_x gases and harmful particulates. Each flight benefits a very small number of people who could fly in the commercial world. Increase the capacity of the airport and, despite the question marks over demand from local firms, it will surely be taken up.
356. **Mr Roger Panter** (SIT 64/4), a long term local resident, is concerned that the planning process is fair to local residents as well as to TAG. In 2000 an agreement was reached between TAG and the community (represented by the Council) that accepted some adverse impact in return for new jobs and other economic benefits. This was seen as a lasting agreement, not something that TAG would seek to vary as soon as it began to impact on TAG's potential to maximise profit. Following the Council's rejection of the current scheme on behalf of the local community there has been no attempt at compromise, rather the company has taken legal action in pursuit of its objective; action which the community now has to pay through its Council Tax to resist.
357. In terms of the core debate, harm v economic benefits, a recent report by the CAA criticised the Environmental Statement of the George Best Belfast City Airport suggesting that 'it is likely that a change of 3dB will be of greater significance than that stated in the Environmental Statement'. TAG's logic, that a change would not be harmful if it occurred over a long period of time, is also questionable. Would it apply to global warming? The local community has already concluded that the local benefits do not outweigh the disadvantages, a matter which it is surely up to local people to judge. Possible regional and national economic benefits are not quantified.
358. There may be a demand for more flights from Farnborough but the need has not been demonstrated. The demand for business aviation is driven by convenience but it has not been demonstrated that the convenience of the few outweighs the inconvenience of the many – particularly when it comes at a high price in terms of energy and emissions.

359. **Mr Kevin Daley** (SIT 64/5) spoke as a local resident and on behalf of the Mytchett, Frimley Green and Deepcut Society (MFGDS) raising matters of noise, safety and the strength of public opposition.
360. Noise has three aspects; loudness, duration and frequency. The increased frequency is of concern as if the noise events become too frequent the nuisance becomes almost continuous and much more annoying. A particular concern is Mytchett Primary and Nursery School in Hamesmoor Road where noise could be distracting and adversely affect teaching standards. TAG has already accepted that there is an adverse noise effect by approving a grant of £3000 to the school. The increased noise at weekends does more harm as it is more noticeable against lower background noise and it would impact on leisure pursuits in open areas. Historically, there has been little disturbance at weekends and residents may not be aware that the current level of movements is below that already permitted and cannot be taken as representative of the current permission or a predictor for the future.
361. Farnborough is very built up in the immediate vicinity of the airport and there are many surrounding villages and airfields. There are concerns over the safety of residents were such a large increase in flights to be permitted.
362. The Council refused the application on behalf of local residents and it remains unwelcome to the majority. TAG and its consultants seem to have ignored the views of local communities as the consultation exercise on TAG's Master Plan indicated little or no stomach amongst respondents for any proposal to increase the number of ATMs or the permitted flying hours. The economic benefits are overstated and it is noted that the government's view encourages a switch from short-haul flights to rail. Concerns over the application were raised by virtually every local council and the submissions made in respect of the application were in the ratio of 77/1 against.
363. **Miss Daphne Knowles** (SIT 64/6) is a resident of Mytchett, a committee member of the MFGDS, the society's representative on the Farnborough Airport Consultative Committee (FACC) and one of three residents' representatives on the TAG Quiet Flying Programme (QFP) Working Group.
364. The work of the QFP is still in progress and it was a surprise to find that an application for more flights had been submitted which included a copy of the recent QFP report to the FACC. The data as presented requires further analysis and clarification and the representatives have not agreed for the QFP interim report to be used in support of the planning application. Several trials have failed to reduce the noise nuisance for those under the flight path. The concerns of the residents' representatives have been shared with the Council and it is considered that the application is premature and should be put on hold until sufficient noise data has been collected and analysed. The proposal could ruin the local area.
365. **Mr H.W.Halls** is a resident of Mytchett. He is of the clear view that there should be no further increase in movements as flights from Farnborough are mainly for pleasure and the aircraft emissions are unnecessary. Low flying over Mytchett is highly detrimental to residents and has ruined his quality of life. Low flying on the 2 July 2009 led to significant noise and pollution at the Mytchett School sports day. His own noise measurements show that aircraft noise at his residence rises to over 80dB compared to background levels of 35-

40dB. Together with the number of flights, (Mr Halls read out his record of flights on the 23 May 2010), this results in unacceptable levels of noise and disturbance.

366. **Cllr Richard Appleton** (SIT 64/7) is a councillor for Fleet West and portfolio holder for planning at Hart District Council. He spoke on behalf of Hart District Council to oppose the proposal.
367. The UK is a contracting state to the International Civil Aviation Organisation (ICAO), the UN body overseeing worldwide aviation. ICAO promotes a 'balanced approach' to noise issues at airports and the four elements of their approach provide a useful framework for assessment of this application. These are; reduction of noise at source, land use planning and management, noise abatement operational procedures and operating restrictions on aircraft.
368. Noise reduction at source will, due to the capital cost of replacing fleet aircraft with quieter types, take many years – although the timescales can be reduced by regulatory and economic measures such as that following government action on night flying at Heathrow, Gatwick and Stansted and the introduction of landing charges dependent on the noise classification of each aircraft. "TAG do not propose measures along these lines."
369. A lot of land around the airport lies within Hart District and constraints on development in other areas such as infrastructure availability, sustainability and environmental issues make it difficult to avoid housing development in the vicinity of the airport. The removal of central government targets could lead to an increased requirement for housing compared to the South East Plan targets and any expansion at Farnborough Airport should take account of all these factors and should be a matter for the Local Development Framework process rather than being pre-empted by a single planning application.
370. Noise abatement operational procedures should aim to reduce or redistribute noise around the airport. TAG has initiated the Quiet Flying Programme (QFP) but any route agreed as an output of the QFP is only advisory and airspace conflicts, particularly with glider activity at weekends, means that aircraft deviate from the recognised flight paths. Many people are annoyed by planes off the flight paths but do not see the point in complaining. Overflying of many of the settlements could be minimised by the establishment of mandatory noise preferential routes but this would require the establishment of controlled airspace around Farnborough. TAG should have obtained controlled airspace before making this application and, due to the involvement of third parties, it is not a matter that could be dealt with by condition.
371. Operating restrictions would include movement caps such as those that already exist at Farnborough. However, if when a movement limit is reached it is then increased it ceases to be a limit. Its presence is misleading to those who purchased local properties based on the limit.
372. In addition to the above, TAG have given no consideration to the impact on the Queen Elizabeth Barracks site, a strategic housing allocation lying within the immediate western end of the Public Safety Zone (PSZ). Expansion at Farnborough also has economic costs to residents in the loss of property values.

373. A proper consideration of the Human Rights of residents around the airport would ensure that any removal or reduction of those rights is minimised and mitigated as much as possible. The current application has the barest nod towards effective mitigation and gives the benefits of source noise reduction to the operator. That is not proportionate, does not comply with government policy to minimise impacts and does not properly consider the Human Rights of those affected.
374. If the appeal were allowed, conditions would be required; noise contours should take account of all movements (excluding the Air Show) and should include helicopters, movements should be included in the EU emissions trading scheme, mechanisms should be included to ensure only the most modern and quietest aircraft use the airport (eg shrinking contours, landing charges etc), there should be controlled airspace, NOx, particulate and fuel emissions should be monitored, carbon emissions should be capped at the levels generated by 28,000 movements and TAG should offer to buy all properties falling within the expanded PSZ.
375. **Mr Bev Gerrard** (SIT 64/8) a local resident, raised issues in respect of noise, PSZs and pollution. In respect of noise he suggests that whilst the industry standard method would mean that the proposed increase to 50,000 movements would equate to +2.2dB compared to 28,000 movements, this does not take full account of the noise disturbance and annoyance caused by increased aircraft movements. If a single plane produced 90 dB(A), two identical planes flying simultaneously overhead would produce a noise event of 93dB(A). However, this would be less noticeable than the two planes flying overhead when separated by, say, 30 seconds. However, each situation would be regarded as the same in terms of noise value and annoyance when using the industry standard method. In this case, the benefit arising from the development of quieter planes is seen as allowing more movements within the noise budget and all benefit would accrue to the aircraft industry. Whilst the preferred solution is not to have any increase in movements, the benefits should at least be shared in the form of reduced noise budgets or a compensation scheme for those affected. The fact that any changes would be gradual would not mean that they are not happening.
376. Mr Gerrard has no faith in a system where PSZs are calculated by an organisation within the aircraft industry, where it alone implements the rules, where it is paid for in part by the industry, where the results cannot be independently verified and where the work is commissioned using confidential data provided by the Appellant. The projected aircraft mix and their safety records are important, but confidential, factors. If the projected mix were to change then the 1:10,000 PSZ could extend outside the airfield; it is unclear what would happen were this to be the case. It was also disconcerting to hear that doubling aircraft movements would double the risk of a crash but not third party risk; that although air show movements were taken into account, display aircraft were not; that PSZ results take no account of land usage, and; that safety improvements could lead to more movements.
377. In terms of local pollution, it is likely that those living closest (eg Kempton Court) would suffer air pollution on a regular basis and are more likely to complain. Personal experience would suggest that, despite the inherent physical and operational difficulties and the lack of records by TAG, fuel jettisoning has occurred. Although TAG says it will give a commitment to be

carbon neutral by 2019 if it wins this appeal that applies only to the ground activities which represent just 2% of the airfield's CO₂, the other 98% being produced by taxiing aircraft. On a global scale it is understood that government policy is still to reduce UK emissions to 20% of the 1990 level by 2050 and even further to allow for increased aircraft movements. The EU ETS is a conscience easer.

378. The economic benefits of the proposal could be widely spread but so could the adverse consequences - including global warming. There are many alternatives for executives to do business without meeting face to face and any unavoidable flights could be taken on scheduled airlines. However, if supply continues to exceed demand there will be no incentive for change.
379. **Mrs Antonia Chambers** (SIT 64/9) is a long term local resident who says that local roads cannot cope with additional traffic. Institutions varying from nursing homes to nursery schools are under the flight path and sooner or later an accident will happen. Students in the 6th Form College and Farnborough Technical College are also in danger. The proposal also raises issues for global warming, noise and pollution – especially at weekends, and it is questionable whether the extra jobs would materialise.
380. **Cllr James Radley** (SIT 64/10) is a Hart District Councillor for the Church Crookham East ward and his statements represent the concerns of the vast majority of his electorate as well as residents in the wider Fleet & Church Crookham area where these have been made known.
381. Three mechanisms constrain flying at Farnborough; the movement limits, keeping the 1:10,000 PSZ within the airport boundary and the 57dB(A) noise contour. It is natural that one 'bites' before the others and the noise contour is seen as a historical artefact and not a reasonable basis to assess the impact on residents. Even though the area of the contour is vast, changes made as part of the QFP extended the contour beyond its prescribed envelope and even with 28k movements the contour's envelope is close to being breached at its tip. It is therefore a weak planning tool to protect local amenity.
382. Although TAG relies on the 57dB(A) contour in trying to establish that its proposal has minimal adverse impact, a demonstrable degree of annoyance already occurs - witness the wide area beyond the contour from which complaints are received. The sporadic movements at Farnborough mean that use of the LAeq metric to gauge the impact on local residents is disingenuous. At Farnborough it is 'that' aircraft which annoys; at Heathrow it is 'those' aircraft. Amendments made as part of the QFP which funnelled flights over a small area clearly illustrated that whilst a few aircraft may not annoy, there is a threshold at which the annoyance registers.
383. The PSZ is an important consideration to be weighed in the balance as, whilst it does not inform understanding of third party risk, it becomes a blight to those owners having property within it. Irrespective of the elevated risk levels, additional planning constraints must be considered a loss of amenity. It is unclear whether the Department for Transport (DfT) has endorsed a change in the model used to calculate the PSZ and it is likely that the PSZ would increase were this appeal allowed. The detrimental effect of this should be taken into account. Even if the model change was to be approved, the PSZ would include properties that would not have been included had the 28k

movements been calculated on the same basis - again a detriment to amenity. The PSZ should be calculated based on the number and type of movements that can be expected 15 years hence. TAG's Master Plan alludes to growth beyond 50,000 movements and it is therefore the 2025 flight numbers that should be used in any calculation.

384. TAG's witness on PSZs points out that the 1:100,000 risk contour represents the individual level of risk in a static location. It is not obvious that this risk also applies to others standing in their own crash consequence zones and whilst 'our' individual is waiting to be hit once every 100,000 years, he will see one of his fellow statistical people being hit on a fairly regular basis, approximately once every 38 years. This third party risk has hardly been addressed, the Council assuming that PSZ policy also addressed third party risk. The appeal cannot be allowed without a full third party risk assessment.
385. Any variance in the conditions governing the airport operation should take place via the Local Development Framework process in order to allow the right levels of community involvement and consultation. It is suspected that achieving controlled airspace would be expensive and would have only a limited chance of success; if controlled air space is deemed necessary to make the movement increase acceptable then the appeal should be dismissed rather than a condition being imposed.
386. Were the appeal to be allowed it is suggested that conditions be imposed to ensure; that the 57dB(A) contour is measured for all phases of flight, not just initial take-off and final landing; that a mechanism be provided such that the Council may address excursions beyond the 57db(A) envelope, and; that there is noise monitoring at education sites under the flight paths with mechanisms to ensure that noise events do not impact on the effectiveness of pupils' education.
387. **Cllr Chris Axaam** (SIT 64/12), although a member of Hart District Council, spoke against the proposal as a resident of Church Crookham. Prior to the development of Farnborough Airport he was able to enjoy summer evenings in his garden and would not be woken at weekends by aircraft noise. Initial consultations on proposals for development of the airport suggested it would be a modest enterprise; this did not ring true at the time and if this appeal is approved it will simply be a precursor to subsequent applications. It is understood that the airport could accommodate up to 100,000 movements and given the operational fixed costs it is clear that more movements leads to higher profits. The answer is to charge higher fees and retain the capacity limit at 28,000. The airport is only used by those who find it attractive to their lifestyles and can afford it. Any over investment by TAG should not be recouped at the expense of local residents.
388. **Mr Des Treadgold** (SIT 64/13), a local resident, is concerned about public safety and sees that the increasing number of aircraft movements will seriously reduce the margin of safety for those near the flight paths. This margin of safety is vital at Farnborough for reasons which include the nature of the obstacles under the flight path, the consequences of a crash involving the Farnborough College of Technology and the level of uncertainty attached to the calculation of risks using a generic methodology. The highly significant uncertainties surrounding the NATS Crash Consequence Model are concerns already shared with the DfT.

389. Granting permission to increase the number of movements to 50,000 is premature as TAG is yet to demonstrate that the assumed crash rate of 2.23 crashes per million business movements assumed in the calculation of individual risk was ill founded. Although reaching different conclusions, Mr Treadgold considers his analysis largely consistent with that of Dr Eddowes (CD/157).
390. **Mr Charles Milne** (SIT 64/14) lives approximately a mile away from touchdown on Runway 24, just north of the extended runway centre line. He is concerned about the noise of aircraft which interrupts thought, speech and listening and is very different to the MoD flying which gave quiet evenings and weekends. In light winds, it is not infrequent that aircraft both land on Runway 24 and take off on Runway 06. Even if the LAeq were to stay below 57 dB(A), doubling the number of movements would be noticeable, even after 10 years. The cessation in flying due to the volcanic ash cloud really lifted spirits and the absence of complaints does not mean that there are no concerns.
391. PSZ policy is clear and is intended to prevent more development in a dangerous area; it does nothing for those already in the area. The risk is tolerated only because moving people would cost more than the compensation that could arise in the case of an accident. Changing crash rates historically led to significant growth in the size of the PSZ. Now NATS, as TAG's consultant, has "refreshed" the crash rates and it is understood that the crash rates of larger aircraft have been reduced from business aircraft levels to scheduled airline levels. Western-built jets have an almost unchanged accident rate over the last 30 years and the number of large business aircraft is statistically quite small; many years of evidence are needed to justify changes and small organisations do not have the same capability to monitor pilot performance.
392. Calculation of PSZs assumes a flat plain with no account taken of people, hills, buildings or trees. Farnborough's geography requires a steeper than normal approach and with its technical college and heavily populated PSZ, Farnborough is not a typical airfield and it is wrong to treat it as such. Even if the assumptions can be altered to show no increased risk when flying is doubled this does not mean that the increase should be allowed - particularly when the assumptions are confidential and cannot be checked.
393. **Mr Gordon Keyte** (SIT 64/15) spoke against the proposal on behalf of the Crondall Society. Crondall is a village lying some 7km from Farnborough airport just south of the line of Runway 24. Overflying of the village takes place every day and can be made worse by the QFP, particularly at times when the uncontrolled airspace is busy. The Society is concerned about both noise, which adds to that of RAF flights from Odiham, and the risk of a mid-air collision. Despite the claimed benefits the proposed movement increase cannot be justified when set against the increased risk, noise and higher CO₂ emissions per passenger inherent in business flying.
394. **Mr William Hunter** (SIT 64/17) is a resident of Fleet living some 2.3 miles from the airfield by plane and some 1.5 miles from the extended runway axis. He is concerned that Farnborough flights have become considerably more intrusive over the last few years and are low and more frequent over Church Crookham, Crookham Village and Fleet. Reverse thrust on landing also has a

huge attendant increase in noise which can be heard even from Fleet. Many aircraft fly at less than 2000 feet above his property and activity is sporadic with some movements occurring every 4 minutes over a 40 minute period. Aircraft can climb quickly and there is no reason to fly so low. The primary explanation given is that noise abatement procedures (NAP) have been suspended.

395. It is understood that once NAP is cancelled, pilots are free to choose the course and rate of climb accounting for the very low and noisy flights over the Fleet area. A remedy must be found to reduce the number of NAP cancellations. Were RAF Odiham to close as part of the new government's Defence Review there may be more weekday gliding leading to more low flights over Fleet; any increase in numbers would only make this worse.
396. The PSZ is intended to restrict development in areas of land "to protect the public" yet the contour is shown to enter the agreed QEB development. There is no evidence of any societal or third party risk analysis and, in view of the many NAP cancellations and the associated low flying over residential areas, it is queried as to why the PSZ only considers landing and take-off along the runway axis.
397. Engine testing takes place in the NE corner of the airfield, adjacent to the golf course, and the enormous noise and smell of unburnt fuel is experienced right across the golf course. The new hangars will increase the amount of maintenance and the pollution experienced from the testing area. Noise and odour controls must be put in place.

Written Representations

Application stage

398. A large number of representations (3147) were received in response to the planning application. These, together with arrangements made for notification, are summarised in RBCs Committee Report (CD/9, paras 171 – 207 inclusive and Table 1)). The large majority of responses were objections (3029) although there were also some representations in support (39). Paragraphs 179 – 207 of CD/9 summarise all the points made. The key issues raised, i.e. noise and disturbance, safety, climate change, environmental effects (including air quality, pollution, odour), weekend flights and economic effects reflect the matters raised at the Inquiry and are dealt with elsewhere in this report.

Appeal stage

399. Some 128 written representations were received at the appeal stage. Of these, some 98 were from objectors, and some 30 from supporters. A further 4 letters of objection were received during the course of the Inquiry (SIT 18, Docs 1 – 4).
400. **Jeremy Hunt**, MP for South West Surrey, raised concerns on behalf of residents of his constituency, particularly in Farnham. He is particularly concerned by disturbance by aircraft flying overhead, increase in road traffic, and questions whether climate change has properly been taken into account.
401. **Caroline Lucas**, Green Party MEP for SE England, supports the submissions of CPRE, and argues that government efforts to reduce CO₂ emissions would be seriously undermined by giving consent to this level of ATMs.

402. **Hart District Council** objects on the following main grounds: need has not been demonstrated; inadequate controls over the mitigation proposed, particularly in respect of noise and carbon emissions; noise assessment methodology; inadequate controls over routing of aircraft on arrival and departure; highway capacity in relation to proposed developments at Queen Elizabeth Barracks and Pyestock; inadequate consideration of future demands for housing and social infrastructure services, especially in relation to Hart; safety; effect on SSSIs and SPA. Several matters are recommended to be addressed via a s 106 obligation in the event of the appeal being allowed, including revised noise contours with royal, diplomatic and military flights and helicopters to be included, inclusion of aircraft movements within the EU emissions trading scheme, phasing out of older and noisier aircraft, requirement to apply for controlled airspace, capping of carbon emissions, inclusion of NOx and particulates in monitoring data, and a scheme for TAG to buy up properties affected by any extension to the PSZ.
403. **Ms Jenny Radley** (SIT 64/11) was unable, due to family illness, to appear at the Inquiry. Consequently there was no opportunity for cross examination of her evidence or questions and the weight that can be attached to her evidence must thereby be reduced. Nevertheless, her written statement was accepted and the material points are reproduced below. She was authorised to present evidence on behalf of the Fleet and Church Crookham Society (approximately 284 members).
404. The change of use from military to business flight operations has brought about a significant increase in noise and disturbance. The communities of Fleet and Church Crookham are the first residential areas under the main flight path for westerly departing aircraft. They are located to the south west of the airport, the direction of the prevailing wind. The main concern of residents is the effect of aircraft noise on their quality of life. The unscheduled nature of flights at Farnborough means that noise events are not reliable or predictable and each event is more disturbing than would be experienced at a busier airport.
405. Farnborough has a large residential population in proximity to the airport (perhaps the largest in the UK) and there is growing pressure for more development such as at the Queen Elizabeth Barracks in Church Crookham. Local residents were part of a strong response to TAG's Master Plan which made it clear that the majority were not in favour of further expansion, the major issue being noise.
406. A significant increase in noise complaints in 2007 occurred due to high levels of movements and the start of the QFP trials which directed flights along the runway centre line rather than allowing them to turn over residential areas. This clearly demonstrated that an increase in noise events had led to individuals becoming more sensitive and had increased their propensity to complain. It is not correct to say that people will tolerate noise generated by a gradual increase in movements; rather there is a threshold above which people notice the flights and find them disturbing. Many more people are disturbed than complain as they feel complaining makes no difference. However, the huge response to this application is testament to the disturbance suffered by residents.

407. The noise of aircraft is intrusive and unpredictable, particularly in spring and summer when doors and windows are more likely to be open. People are also more likely to enjoy their gardens and whilst the previous Inspector found that road traffic noise was more disturbing, this is much less of a factor in residents' homes and gardens. The application is premature without satisfactory controls to mitigate the impact on residents. The LAeq measure is inappropriate for Farnborough.
408. Suspension of the noise abatement procedures often occurs because of other airborne activity in the area. Whilst TAG claim that an extension to controlled airspace would help them to reduce noise impact this is not yet in place. The fact that demand for flights has fallen in recent years suggests that it will be another few years before the airport reaches its current movement limit; this would allow an application for controlled airspace enabling TAG to prove that they can reduce the noise impact on residents before granting any increase in flight movements.
409. The 'heavy' flights are currently at a third of the agreed limit. As they cause a much greater disturbance, particularly at weekends, the combination of more flights and an increase in the ratio of heavy flights would be very disturbing.
410. There is a need to consider vulnerable people such as the frail and elderly as well as the learning environment for infant and junior school children. Some children at Tweseldown Infant School are said to be particularly sensitive to noise and the County Council Education department is already in talks with TAG about what needs to be done. Several other schools in the Fleet and Church Crookham area may be affected by noise. Permission to build a nursing home on the 'Shotts' site in Church Crookham seems incredible when it is so close to the airport PSZ.
411. Noise monitoring should be improved, moved closer to the problem areas and put on a more permanent basis. If noise mitigation measures are not possible, residents should be compensated for any loss of value on their property or helped to cover the cost of moving away.
412. **Surrey Heath Borough Council** supports the stance of Rushmoor Council and drew attention to concerns in respect of the effect of increased movements on Mytchett, Deepcut and parts of Frimley Green.
413. **The Crondall Society** is concerned that the Quiet Flying Programme has resulted in increased numbers of flights affecting Crondall and Ewshot. Disturbance will add to that from RAF Odiham. There is also growing potential for air-safety conflicts and wasteful CO₂ emissions. These effects are not outweighed by economic benefits.
414. Numerous residents expressed objections based on concern for noise and disturbance, pollution, and climate change effects. It is argued that the proposal would be in direct contravention of government policy regarding the reduction of carbon emissions in an effort to mitigate global warming. There is a widely held view that any benefits of the scheme would be to TAG, its tenants and customers, while the environmental costs would be borne by residents. The bulk of objections came from residential areas lying directly under flight paths to the east and west of the runway, particularly Farnborough, Frimley, Mytchett, Deepcut, Church Crookham and Fleet, but

there were also a number of objections from further afield, including Farnham and Hog's Back.

415. Noise and disturbance objections embraced the following concerns: pilots failing to climb sufficiently before reaching Church Crookham; deviation from agreed flight paths; loudness and frequency of individual noise events; concentration of flights at the beginning of the day and early evening; devaluation of properties and lack of any compensation; disturbance in gardens during periods of settled weather; increase in numbers of helicopters; increased sensitivity at weekends due to lower background traffic noise; loss of sleep and relaxation at weekends.
416. Resident members of the **Farnborough Airport Consultative Committee** point out that noise data as presented requires further analysis in order to draw any reliable recommendations. This has been requested by residents' representatives who have not agreed the report of the Quiet Flying Programme (QFP), presented in support of the planning application.
417. **Churt Parish Council** is concerned that the proposal would lead to an increase in aircraft noise affecting Churt. **Chobham, Bisley and Worplesdon Parish Councils** have similar concerns for their areas. **The Chair of Tweseldown Infant School Governing Body** states that all classrooms are affected by the noise of overhead aircraft and teaching sometimes has to be suspended until the noise has passed. In summer with open windows and doors, the noise nuisance is more acute. When children are engaged in outdoor learning pursuits, noise causes disruption and distress amongst pupils. Children with special needs may in addition have noise sensitivity issues. The additional flights would undoubtedly have a negative impact on the learning and well being of children. **Nokia Workplace Resources** expressed concerns over increased traffic congestion in the locality.
418. Other concerns raised by objectors are:
- the effect of aircraft pollution on Eelmore Marsh SSSI which is part of the Thames Basin Heaths Special Protection Area.
 - pollution and NOx from increased road traffic affecting Ancells Meadow SSSI, adjoining the Minley Link Road.
 - deposit of oil on pools and ponds
 - ground noise and smells from sources at the airport such as taxiing aircraft, aircraft emissions tests or airside vehicles giving rise to pollution and breathing difficulties.
 - Increased traffic and congestion on local roads.
 - effects of downturn not properly taken into account in predicting future demand
 - local residents do not benefit from the extra travellers that pass through Farnborough
 - The additional greenhouse gases have not been taken into account. Rushmoor Borough Council needs to promote collective action to reduce carbon emissions by 40%.
 - cumulative effects on noise, safety and pollution of increase in movements at FA and other airports, e.g. Chinook helicopters at RAF Odiham and private flying from other airfields.
 - increased stress and hypertension.
 - effect on surrounding leisure areas

- potential for conflict with general aviation based at Lasham
 - application for Class D controlled airspace could kill off gliding at Lasham and Odiham, with a negative effect on the economy
419. Support for the scheme on the grounds of its potential contribution to economic activity and business growth came from a number of businesses operating in the locality, including **Air Routing International, Emily's In-Flight Food Services, Fluor (Engineering), NATS (Air Traffic Control), The Aviator Hotel, Munro Chauffeur Cars, The Full Wax (Aviation detailing specialist), A-Line Taxis and Chauffeur Cars, GX Aviation, Macdonald Hotels, Exclusive Hotels, VistaJet, Village Prem, CBI South East, Farnborough Aerospace Consortium, Absolute Taste, Netjets and QinetiQ. The North Hampshire Chamber of Commerce and Industry** say that TAG's involvement and investment has benefited not only Farnborough and Rushmoor but also the wider region. The airport has become an iconic beacon in the south-east. An increase in activity at the airport can only have a positive economic impact, in terms of job creation and attracting business to the area.
420. **The South East England Development Agency (SEEDA)** has consistently supported the increase on BATMs. It considers that the increase will support its aims of encouraging high value international businesses to locate in the region, supporting innovation, and prioritising high growth sectors including aerospace and defence. The UK trade body representing British Business and General Aviation (BBGA) considers that the expansion of capacity at FA is an issue of national importance as larger airports become more and more difficult to access, and smaller airports are developed into housing and industrial estates.
421. **Lawrence Alexander**, Licensee of the Swan Inn, states that that the majority of his customers enjoy the view of the airport. Many customers have expressed the view that they are in favour of the increase in flights, which give them great delight and are not seen as a nuisance. The management of the **Falcon Hotel** takes a similar view, welcoming the contribution of the airport to business, and expressing the view that noise and safety concerns are exaggerated.
422. **Mr Parkin**, a retired air traffic management executive, lives some 300 metres to the right of the final approach to runway 24. He can see most arriving and departing aircraft and "can just hear what I know to be some of the quietest aircraft flying in the world today." He also states that the quiet business jets of today cause far less disturbance than the noisy military aircraft that used to be seen at Farnborough. Strong support was expressed by Farnborough International Ltd, organisers of the biennial airshow, which relies on the successful operation of the airport. BAE Systems state that the use of the airport for private commercial flying was one of the prime reasons for locating a significant part of its UK business at Farnborough. That still holds true today and the company is able to continue to employ highly skilled aerospace engineers and support staff at Farnborough, and manage them as part of their wider UK resource because of the communications advantage offered by the airport. ExxonMobil supplies fuel to FA. Based on their assessment of growth opportunities they say they have made significant investment in the airport, and that further growth opportunities exist, for example the 2012 Olympics.

423. **London Executive Aviation** (an aircraft charter operator at FA) considers that the increase in movements is vital for its business and employees, as well as the airport and its tenants. Keeping the present restriction on movements means that the company will not be able to operate its current business and will certainly prevent expansion. Woodford Chauffeur Cars consider that the proposal will help the prospects of the local economy. First Partnership welcome the support of TAG in developing projects that support local school students and consider that expansion would benefit young people, opening up opportunities for future employment and aspirations.
424. Several residents of Farnborough supported the proposal. Among the views expressed were: noise from aircraft is far lower than when it was an MoD airfield; they have not experienced any pollution; flying is anyway a long standing feature of the area and part of its historic heritage; the proposal represents a fair compromise between safeguarding the local environment and allowing the airport to maintain a fair and appropriate level of business growth, which is absolutely vital for the regeneration of the Borough; the latest business jets are extremely quiet, and the largest examples operating into the airport are the quietest of all; compared to the level of continuous road traffic background rumble the aircraft noise is infrequent and minimal; the airport represents a centre of excellence for the aviation sector and the UK as a whole; further controlled, carefully managed expansion should be encouraged to maintain the airport's contribution to the local economy; noise from aircraft not based at Farnborough may have coloured the views of some objectors; concerns about noise are exaggerated.

Conditions and Obligations

Conditions

425. A schedule of conditions is set out in the Annex to this report, in the event of the appeal being allowed. Draft conditions were put forward in the SOCG. These conditions were agreed between the Appellant and the Council. A number have been amended following discussion at the Inquiry (SIT76). The following discussion of conditions and obligations is without prejudice to the outcome of the appeal.
426. The suggested conditions are for the most part a re-statement of those attached to the operative permission, i.e. the "Weekend Flights Decision" of the Secretaries of State (CD/14). At the Inquiry there was discussion on whether it was necessary to include a condition setting an upper limit on the number of flights, as this matter is covered in the Section 106 Agreement. (See paragraph 433 below, under the heading 'New Obligations'.) The principal parties to the appeal agreed to rely on the S106 Obligation. However, as the planning application to which the appeal relates sought a variation to the original condition attached by the Secretaries of State, I consider that it would be appropriate for the conditions to include an upper limit of 50,000 movements and a limit of 8,900 at weekends in accordance with the application (Annex: Condition 7). The upper limits are also set out in the S106 Agreement, together with a binding obligation to phase the growth in movements over the period to 2019. A number of the other conditions relate to the approval of reserved matters, and it is possible that further reserved matters could be brought forward under their terms, so it is necessary to include them for the sake of completeness. Some of the original conditions

however contain discretionary elements. Minor amendments were canvassed at the Inquiry to align them more closely with advice in paragraph 32 of Circular 11/95: The use of conditions in planning permissions. I have not commented on individual conditions where this applies, but I consider that it is appropriate to remove the discretionary elements in accordance with government guidance.

427. The following discussion relates to the conditions as numbered in the Annex. I have only commented on those conditions where I consider change is necessary if the appeal is allowed. Condition 1 is the time limiting condition. It is agreed between the parties that a further 5 years from the date of any permission granted is necessary to allow any outstanding reserved matters to be brought forward. Condition 2 is needed to define the permission and to facilitate applications for minor material amendments. Condition 3 defines the reserved matters, some of which remain to be brought forward. Conditions 4, 5, 6, 14 and 22 are needed in the interests of precision and to ensure that any material changes to the layout or operation of the Airport would be subject to standard consultation procedures through the planning system. Conditions 7, 8, 9, 10 and 11 are necessary to protect the amenities of surrounding residential, academic and healthcare premises. Conditions 12 and 13 are necessary to ensure safety. (12 has been amended to correct what appears to have been a drafting error). Conditions 15 to 18 are necessary to ensure that development is carried out in a manner which affords reasonable protection to the amenity of nearby residents as well as other environmental and safety considerations. Conditions 19 and 20 are needed to ensure that arrangements are made for the proper drainage of the site, and Condition 21 defines the agreed means of access.
428. Condition 23 is needed to ensure mitigation works are carried out in respect of the Farnborough Airport Site of Importance for Nature Conservation. Rather than link it to an increase in aircraft movements, I consider it would be reasonable to require a scheme to be approved and works to be carried out within a specific period of time. I consider that a period of 6 months from the date of decision for the submission of a scheme would be reasonable, the scheme to include a timetable for completion of the works in accordance with the approved details.
429. Condition 24 is needed to ensure provision for the use of alternative means of transport, principally by staff of the airport, in accordance with the Travel Plan. I do not consider that it would be unduly onerous to require this provision to be made before aircraft movements exceed 28,000 per year.
430. In addition to their necessity I consider that all the suggested conditions would meet the other tests for conditions set out in Circular 11/95.
431. A number of objectors put forward additional matters designed to mitigate potential impacts, which could be addressed by conditions or alternatively through a Section 106 Agreement. I consider that some of these matters would be satisfactorily addressed by the conditions included in the Annex, or by the Section 106 Agreement. For example helicopter movements would be included in the noise control arrangements set out in the Agreement. I also consider that the proposed arrangements for noise monitoring, the complaints charter, the noise and track monitoring scheme, and the commitment to produce a noise action plan to be satisfactory, offering a reasonable approach

to mitigating disturbance from noise. Noisier aircraft would be phased out within a specific timescale. However I do not consider it would be necessary or reasonable to seek to include 'other aviation' activity, for example royal and diplomatic flights, within the noise control arrangements.

432. A number of other suggested mitigation measures would not meet the tests set out in Circular 11/95: The use of conditions in planning permissions. For example a suggestion that carbon emissions should be limited to those arising from 28,000 movements would effectively take away the benefit of the grant of permission, contrary to the advice in the Circular. I conclude elsewhere that the EU ETS is the appropriate means of addressing climate change issues. Similarly, a requirement to achieve controlled airspace would not be reasonable, as there may well be objection, and in any event it is not within the control of the Appellant. Nor would it be reasonable to require the Appellant to buy all properties affected by any extension to the PSZ or increased noise. There is no evidence of a significant effect on property values, and in my view the Section 106 makes satisfactory provision for insulation from the effects of noise.

Section 106 Agreement (SIT77)

433. A signed Agreement dated 29th June 2010 was submitted before the end of the Inquiry. The deed is conditional upon the grant of permission under section 73 of the TCPA 1990. It is a replacement of the original planning obligations and the parties agree that upon grant of the S73 permission they will not seek to enforce the provisions of the original planning obligations. It includes obligations updated from the original obligations and certain new provisions. The principal provisions of the Agreement are:

Aircraft Movement

- maintenance of electronic records of aviation movements (including business aviation, military, diplomatic, DERA club and helicopter), access to computer records, reporting requirements, publication of preferred noise routes and operation of a track monitoring system, compliance with preferred routes except when safety considerations arise, annual review of departure and arrival routes.

Noise control

- a specific provision that aircraft movements (other than movements included within the definition of "Other Aviation Activity") shall not exceed the areas within the annual noise budget, and that spare capacity within one year's budget shall not be carried forward to a future year. It also contains a further provision for changes to the land areas affected by the noise contours by agreement, where a noise benefit can be demonstrated.
- discouragement of the use of reverse thrust; banning of Chapter 2 aircraft; use of reasonable endeavours to ensure that pilots seek to minimise noise and disturbance; avoidance of ground running/ testing where possible and restrictions on hours; restrictions on the use of auxiliary power units (APUs); publication of advice to helicopter pilots on operation in accordance with minimum noise procedures;

- a scheme for sound insulation of residential academic or healthcare premises which are predicted to be subject to noise levels of 60dB(A) Leq (16 hour annual average) or above.
- a scheme for predictive modelling to produce noise contours and to monitor and compare predicted levels with measured levels, together with a commitment to comply with the noise monitoring system, arrangements for audit on behalf of the Council, reporting and access to monitoring data.

Air Quality and Odour

- a commitment to operate an Air Quality Monitoring Scheme to record and report on air quality including NO₂, and where possible to address air quality issues that are identified.
- a commitment to operate an Odour Management Plan which identifies a hierarchy of measures to manage emissions from aircraft on the ground, and an Odour Monitoring Scheme to inform procedures and where possible address odour impacts.
- In addition there are restrictions on the weight of aircraft able to take off and land, and on freight, an undertaking to use reasonable endeavours to improve levels of third party safety, encouragement for training opportunities and an environmental levy on movements to be used for environmental enhancement of areas around the site, a complaints system, and arrangements for performance monitoring of the Section 106 Agreement.

New Obligations

- Section 12.1 provides for a reduction in the areas within the annual noise budget to 72.5% of the 55 dB(A) Leq contour, and 60 % within the 60dB(A) Leq contour.
- Section 12.2 makes a commitment to ban fixed wing aircraft which are not compliant with Chapter 4 or above of the ICAO numerical standards by a deadline date (1st January following the passing of one year after grant of permission).
- Section 12.3 provides for the production of a noise action plan.
- Section 13 provides for a maximum of 50,000 aircraft movements and the phased increase in permitted movements up to 2019. Any excess in any one year shall be deducted from the total permitted in the following year.
- Section 14 provides for the preparation and approval of Schemes designed to mitigate emissions related to the operation of the airport. A charging scheme related to NO_x emissions on landings and take-offs will be introduced, with the proceeds to be used for environmental enhancements. Reasonable endeavours shall be used to obtain ISO 14001 certification or equivalent recognised standard.
- Section 15 provides for a carbon neutrality scheme, which proposes staged progress towards carbon neutrality in respect of airport operations.
- Schedule 2 undertakes to operate the airport in accordance with an agreed travel plan, and to make highway contributions to mitigate the effect of the proposal on the transport network. Schedules 3 and 4 set out Council covenants and arrangement for repayment of the highways contribution in the event that it remains unspent or uncommitted.

Inspector's conclusions

434. The Reason for Refusal states that the proposed increase in business aviation movements at Farnborough Airport would result in an adverse impact upon the amenities of surrounding residential property, particularly with regard to increased frequency and maximum levels of noise disturbance, air quality and odour problems, and the greater risk from more movements. It goes on to say that it has not been satisfactorily demonstrated that the economic benefits of the proposal outweigh the adverse environmental consequences to the extent that a departure from Policy FA2.2 (A) of the Rushmoor Local Plan is justified.
435. Subsequent to the issuing of the reason for refusal Rushmoor Borough Council (RBC) has chosen not to pursue matters of air quality, odour and risk and therefore noise is left as the sole issue which, in RBC's view, would lead to adverse impacts on the amenities of the surrounding residential property "particularly with regard to increased frequency and maximum levels of noise disturbance".
436. Taking into account the policy context for the proposal and the representations made to the Inquiry, including written representations, it would appear that the main considerations to be addressed in the determination of this appeal are:
- i) the effect of the proposal on the living conditions of residents by reasons of noise;
 - ii) if harm in respect of noise is identified, whether the proposal would give rise to economic and employment benefits which would outweigh that harm.
437. The Inquiry also heard evidence on safety presented by the Rule 6 Party (FARA) and others, and from other objectors on climate change, odour and air quality. These matters are addressed in my conclusions below, and have been fully taken into account in arriving at my recommendation.

Noise

Background

438. It is agreed between the main parties that the noise contour information prepared by Acoustic Technology Ltd (Technical Report No AT 4769/1 Rev 0 May 2000) (CD/71), and referred to by the WFA Inspector at IR1.32 (CD/13), constitutes the noise budget within which the airport is required to operate under the first part of FA2.2(A)(i). This annual noise budget is set out in the submitted s106 Agreement as being defined by the total land within both the 55dB(A) Leq contour (being 9.09 km²) and the total land within the 60dB(A) Leq contour (being 4.01 km²). According to Technical Report No AT 4769/1 Rev 0 (CD/71 page 6, Section 2.3.1 sub para. (iv) and Table 1,) these figures represent the "1997 full year mix, weighted for 20,000 annual movements plus DERA flying club activity in the full year of 1997 (plus military movements over full year of 1997)". The report confirms that all noise contours are expressed as 16 hour LAeq values.
439. Regarding noise prediction methods, it is noted in the Council's committee report that the methodology used by the Appellant's consultants differed from that used in the past to monitor and predict noise in the current legal

agreement and that some of the noise contours in the Environmental Statement were smaller than TAG contours for the same aircraft movements (CD/9, p85, para. 343).

440. The key differences identified in the methodology were that the application contours used a more recent model of the Integrated Noise Model (INM) prediction software (version 7.0A rather than 6.2), used a representation of aircraft tracks taking into account the typical routings and a representation of aircraft dispersion around the modelled tracks, used different aircraft source data based on a validation exercise at Farnborough and used local terrain heights. [252]

Noise policy

441. Policies FA2.2(A) and (C) of the Rushmoor Borough Council Local Plan Review 1996 (RLPR) (CD/49) seek, amongst other matters, to control noise at Farnborough Airport (FA). Policy FA2.2(A) says that the Council will permit proposals for flying or engine testing in connection with business aviation requiring planning permission subject to certain restrictions. The first of these restrictions, FA2.2(A)(i), requires that the levels of noise do not exceed those of a derived 'noise budget'. It also puts ceilings on the overall number of movements and the number of weekend movements. Policy FA2.2(C) says amongst other matters that proposals for flying requiring planning permission will only be permitted if they cause no demonstrable harm to the natural environment and amenities of the surrounding area.
442. TAG argued at the Inquiry that there would be no conflict with Policy FA2.2(A) suggesting that it is a facilitating policy for scenarios of less than 28,000 movements, not a 'cap' to prevent any development in excess of 28,000 movements (TAG/S/10 para 1.1.17). TAG went on to argue that the appeal proposal should be assessed against Policy FA2.2(C) so far as the Rushmoor Local Plan Review is concerned. However, as pointed out by RBC, the logical consequence of TAG's approach would be to free the airport operator from all the other restrictions outlined in FA2.2(A) for any proposal for BATMs in excess of 28,000. Given that Policy FA2.2(A) also limits matters such as the opening hours of the airport that is clearly not the intent of the policy. On this basis it would be reasonable to conclude that Policy FA2.2(A) remains applicable even if BATMS were to exceed 28,000. It is clear that RBC's intent in this respect was that any proposal would need to satisfy both halves of FA2.2(A)(i). (APP/FARA/14 para. 3.6). [45, 67, 149, 150]
443. The Secretaries of State found in their decision on the Weekend Flights Appeal that the change in weekend movements would conflict with the second part of FA2.2(A)(i). This was notwithstanding that the impacts measured and assessed using the noise contour approach remained significantly less than found acceptable at the Local Plan procedure stage (CD/14 para 29). They went on to conclude that this conflict with a specific policy on the number of weekend movements at Farnborough Airport was significant to the appeal proposal and found that the proposal would be in overall conflict with the development plan (CD/14 para 34). The current proposal seeks permission for overall and weekend movements which would both be in excess of those specified in policy FA2.2(A). The evidence shows to my mind that Policy FA2.2(A) is of direct and material relevance to the current proposal, and that the current proposal would be in conflict with FA2.2(A)(i) and in overall conflict

with the development plan, for similar reasons to those given by the Secretaries of State in 2008. [68, 147, 150]

444. In respect of Policy FA2.2(C), the Appellant contends that “the appeal proposal is fully in accordance with Policy FA2.2(C), the local plan policy that is to be afforded relevance and weight in this case. It will cause no demonstrable harm to the natural environment or amenities of the surrounding area”. [69]
445. The appeal proposal seeks permission for flying and, taken at face value, all proposals for flying requiring permission should be tested against Policy FA2.2(C). However, I note that Paragraph 11.90 of the preceding text says that “The Council will expect any proposal for flying to demonstrate that there will be no deterioration in the noise environment from that resulting from 20,000 movements per annum of a mix of civil aircraft as were operating from Farnborough Aerodrome in 1997”. This could be interpreted as saying that the policy deals with harm due to aircraft noise on the basis that harm can occur only after the ‘noise budget’ had been exceeded. Alternatively, Paragraph 11.90 could also be interpreted as an absolute limit on noise and therefore all proposals, including those within the noise budget, should be evaluated against the policy.
446. Given that Policy FA2.2(A)(i) contains a movement limit in addition to a noise budget it was clearly RBC’s intention to have dual controls on noise. In these circumstances it seems to me incorrect to approach FA2.2(C) on the basis that it is applicable only once the noise budget had been exceeded. Policy FA2.2(C) also deals with matters other than noise, such as air quality and transport infrastructure, which are not explicitly dealt with in FA2.2(A). These matters would suggest that Policy FA2.2(C) should not simply apply once the noise budget has been exceeded and, rather than policies FA2.2(A) and (C) being approached on a sequential basis, they should in fact be read together. [150]
447. I note that TAG’s planning witness concluded that “the LP policy to be given weight for considering proposals in excess of the air traffic movements limits found in Policy FA2.2(A), is FA2.2(C).” (TAG/P/10 Para 6.3.32) Although the Weekend Flights Appeal also did not involve any exceedance of the ‘noise budget’ there was no suggestion from the Secretaries of State that policy FA2.2(C) was in any way immaterial. Instead they “had regard to the fact that Policy FA2.2(C) of the RLPR seeks to protect, amongst other things, the amenities of the surrounding area.” (CD/14 Para 33) [67]
448. Had the Local Plan Inspector’s recommended approach of controlling noise by means of a noise contour alone been adopted, then the approximate number of dwellings within the 57dB contour derived from the noise budget would have been approximately 1030 compared to the 561 which would be so exposed if the appeal proposal were permitted (See TAG/P/3 Table 3); consequently it is clear that the noise budget would not be breached if the current proposal were permitted. However, the proposed number of overall and weekend movements would exceed those permitted by the current permission and those specified in RLPR Policy FA2.2(A). This is similar to the situation considered by the Secretaries of State in their decision on the Weekend Flights Appeal. Although in that case it was determined that there was no demonstrable harm, the Secretaries of State did not simply conclude that the noise budget was, of itself, determinative of the appeal. Instead, they had regard to the impact of the proposed changes.

449. Therefore, and notwithstanding that there is no dispute that the proposal would not exceed the noise budget, I consider policy FA2.2(C) applicable. In any event it is incumbent on me to take into account whether the proposed development would cause harm to interests of acknowledged importance, including the living conditions of local residents.
450. Policy FA2.2(C) says that proposals will be permitted only if they cause no 'demonstrable harm' to the amenities of the surrounding area. In common usage, the word 'demonstrable' means "capable of being shown or logically proved" (Concise Oxford Dictionary). The policy can therefore be seen to constitute a particularly stern test. Nevertheless, I note that a proposal to substitute the word 'demonstrable' with the word 'significant' was rejected by the Local Plan Inspector who found that "...in the normal use of the word "significant", the harm resulting from such development could have a marked detrimental impact on the environment and amenities of the surrounding area before it became contrary to the policy." (See CD/50 para 11.33.19 p.11-64) In consequence it is clear that use of the word 'demonstrable' has already been subject to some scrutiny and despite constituting a stern test has not lightly been included in the policy. [275]
451. Although, subsequent to the closure of the Inquiry, the South East Plan has been revoked I do not in any case consider there were any policies of material relevance to the noise issues before me. In respect of national policy I agree with the position established in the SOCG that the appeal should be considered in relation to the Future of Air Transport White Paper (2003)(ATWP) (CD/25) and Planning Policy Guidance Note PPG24 (1994)(CD/35). [65, 137]

Noise Assessment Method

452. The ATWP and PPG24 both advise that aircraft noise can be assessed in terms of LAeqT (i.e. an equivalent continuous 'A' weighted sound level over a time period, T). The ATWP states that "Both in the consultation documents and in the White Paper, the dBA values used relate to the Leq 16 hour daytime period from 7am to 11pm" (Box p34) whilst PPG24 notes that the "Department of Transport.....now expresses noise exposure contours in terms of LeqdB(A) over the period 07.00-23.00." (Annex 3 para 6) The national policy framework therefore places significant reliance on the use of the LAeq16h metric in the assessment of aircraft noise. Although PPG24 does say that for small aerodromes local planning authorities should not rely solely on LAeq where this is based on less than about 30 movements a day, the permission granted at Farnborough by the Secretaries of State following the Weekend Flights Appeal (APP/P1750/A/06/2024640) already permits in excess of 30 movements at Farnborough Airport on both weekends and weekdays. [60, 260, 269]
453. Based on the foregoing there is a prima facie case for assessing the noise impacts of the proposal solely on the basis of LAeq16h. Not only does its use provide an objective measurement which encompasses the number of movements and the noise and duration of each, but its use also enables accurate historic comparators to be established and thereby facilitates consistency in decision making.
454. However, I am conscious that a number of criticisms have been raised over the use of LAeq16h at Farnborough. Whilst the Council accepted that the LAeq16h noise index is conventionally used and was reasonably correlated to

the overall subjective impact of aircraft noise at certain airports through the ANIS Study (CD/77), the Council also points out that the ANIS study was, in terms of survey areas, dominated by Heathrow - which did not experience the variations in the frequency of ATMs seen at Farnborough, particularly between weekdays and weekends. Local residents were particularly concerned over the numbers of ATMs and their 'bunching' at certain times of the day and week. It is also relevant that the FA noise controls in RLPR Policy FA2.2(A)(i) do not rely solely on an overall 'noise budget' based on an LAeqT metric but also utilise the number of aircraft movements. [261, 353, 381, 382, 390]

455. Other Inspectors have previously found limitations in the use of the LAeq metric, particularly the Inspector into the Stansted G1 Inquiry (CD/191 para 14.103). The Inspector's report on the Manchester Airport Second Runway (SIT12 para 26.17.8) also identified some shortcomings in the use of LAeq – although he subsequently noted that he was "satisfied that it is the best available method for assessing the level of annoyance, as well as being the one promoted in PPG24". [60, 266, 267]
456. Notwithstanding this finding on the Manchester Inquiry the same Inspector acknowledged in his report on the Weekend Flights Appeal at Farnborough (CD/13 p52 para 7.40), that the use of Leq had been criticised by the Heathrow T5 Inspector (who noted that the "greatest single criticism of the LAeq approach was that it failed to give adequate weight to the number of aircraft movements"). He then went on to conclude on the question of the noise assessment method at the Weekend Flights Appeal that "the circumstances at Farnborough Airport – particularly the requirements of RLPR Policy FA2.2(A) – are such that account must be taken of both the noise contour approach and the numbers of weekend movements". The Secretaries of State agreed with the Inspector (CD/14 para 25) and in granting permission imposed conditions which embodied a similar approach (CD/14 para 41 conditions 7 & 8). [60, 268]
457. Although TAG suggests that the LAeq metric was not used as the sole parameter at the Weekend Flights Appeal because the number of movements at weekends was below that which is regarded as reliable for the use of LAeq, that is not my reading of the Inspector's report (CD/13 para 7.39). In my view the Inspector was here arguing that the number of flights meant that use of the LAeq metric was indeed appropriate. He also noted (CD/13 para 7.44) in support of the LAeq metric that "I am mindful that the research that led to the use of the 57 dB(A) Leq 16hour contour covered all manner of weekday and weekend use." [60]
458. Nevertheless, despite these arguments in favour of the LAeq metric the Weekend Flights Appeal Inspector concluded, as noted above, that the noise assessment method should take account of the number of movements. Whilst this finding appears to have been influenced to some degree by the nature of the appeal (ie altering the balance between weekday and weekend flights) the requirements of RLPR Policy FA2.2(A), again of direct relevance to this appeal, were clearly a key factor in his finding. [269]
459. TAG argues that the LAeqT and noise contour approach already takes into account the number of movements and "it is not logical to place more weight upon the number of movements than upon the metric which already takes into account the number of movements, as this would clearly be not only double-

counting it would depart from government policy which is to use the Leq "method of averaging" (CD/25, page 34 (box)). However, the ATWP also notes that Leq is the method of averaging recommended (my emphasis) in the government's planning guidance. Nothing has been drawn to my attention which prevents consideration of alternative approaches. [61a]]

460. TAG also argues that there is no justification in this case for a move away from that which is generally accepted as policy or any justification for a conclusion that the Farnborough situation is different such as to require a departure from the normal approach to airport development found throughout the UK and as set out in the ATWP. However, it is my view that an approach which takes account of both the noise contours and the number of movements would not only be consistent with that adopted in the previous Farnborough appeal by the Inspector and the Secretaries of State (whilst noting the changed methodology referred to in paras. 454 & 455 above) but would also be consistent with the philosophy underlying Local Plan policy FA2.2(A). Nevertheless, I accept that any form of double counting should be avoided. [61o), 61p)]
461. Third parties at the Inquiry also raised concerns over the use of the LAeq 16 hour metric pointing out that the airport is only open for 15 hours. However, whilst I accept that use of the 16 hour metric will mean that, at a given contour value, residents at Farnborough will experience higher noise levels during the airport opening hours compared to those living near an airport which is open for 16 hours, the Farnborough residents will also benefit from an hour with no disturbance. There is no suggestion that use of the 16 hour metric would be incompatible with historic contours at Farnborough and I find no convincing reason to use an alternative metric.
462. In all these circumstances I consider that, having regard to the evidence and policy, account should be taken of both the noise contour approach and the number of movements.

Noise impacts of the proposed development

Noise contours

463. The ATWP states that "based on research the Government has used 57dBA Leq as the level of daytime noise marking the approximate onset of significant community annoyance" although it goes on to acknowledge that the relationship between noise and annoyance is not an exact one. This is a point accepted by previous Inspectors including the Weekend Flights Appeal Inspector who pointed out that "not all those within a '57' contour would be annoyed or that none of those outside it would not be; witness the wide area from which objections about noise have been made in the written representations against the appeal proposal". (CD/13 para 7.42) I consider those observations pertinent and relevant to this appeal. [277]
464. Nevertheless, like the Weekend Flights Appeal Inspector I find the 57dBA Leq contour a useful benchmark for decision making. Despite the Stansted G1 Inspector's concerns over the significance being ascribed to the 57 dBA Leq contours, he too felt that the 57 dB(A) Leq contours provide a starting point in the assessment of noise impact - although he also considered that their main value lay in the fact that they facilitate comparisons between scenarios rather than as absolute indicators of impacts. [59, 278, 282]

465. 57dBA represents the onset of significant community annoyance and albeit that this appears to be viewed as a 'low level of community annoyance' (RBC/P/3, para 10.7.11 and TAG/P/3 para 3.35), there will nevertheless be a proportion of the population who will be highly annoyed at this level. Indeed, between 57 and 60dB(A) over 10% of the population are predicted to be highly annoyed and even between 54 and 57 dB(A) more than 5% of people would be highly annoyed (TAG/P/3 Figure 1). [58, 59, 61q), 277]
466. There is no dispute that, were permission to be granted for the proposed development (and the predicted growth realised), the 57db(A) contour would encompass a greater area than currently. It would also increase beyond that predicted for 2019 under the current permission (referred to in the submissions as 2019 ND (ie No Development)).
467. Although TAG's noise witness referred to the historic noise budget embedded in RLPR Policy FA2.2(A) stating that "As this proposal leads to less noise than was found acceptable at the Local Plan procedure stage.....I can only find that it clearly does not constitute demonstrable harm" (TAG/P/3 para 3.3), it seems to me unrealistic to suggest that any mix of aircraft flown within the current permission (CD/14 Para 41 Condition 8) would result in the noise budget being exceeded (CD/72 1.3). Given that any increase beyond the currently permitted numbers of movements would be contrary to Policy FA2.2(A)(i) I do not consider that the noise budget constitutes a true fallback position and it should not be used as the basis for establishing the effect of the proposed development. Notwithstanding that RBC has also drawn some comparators to the 'current' (2008) position it is my view that 2019 ND represents the fallback position and any assessment as to the effects of the proposal against Policy FA2.2(C) should therefore be against the 2019 ND scenario. [61(j), 248, 249, 250]
468. The increase in the size of the 57dB(A) contour over the 2019 ND fallback position would result in some 364 additional dwellings being exposed to noise levels of greater than 57dB(A)(TAG/P/3 Table 5). Whilst the 57dB(A) contour clearly does not represent an instant step change in terms of the numbers being highly annoyed, compared to the fallback position I find that there would be an appreciable number of additional people exposed to levels of noise which some would find highly annoying. [300]
469. With respect to noise at weekends, residents are intuitively more likely to be at home than in the week and are more likely to be involved in leisure pursuits - often out of doors. Consequently they are also likely to be more sensitive to aircraft noise at weekends than in the week. There is some evidence to support this theory (RBC/P/3 Para 4.1.3) and the Secretaries of State agreed with the Weekend Flights Inspector that recognition should be taken of the sensitivity of residents to noise at weekends (CD/14 Para 25). Indeed, had they not, there would have been no basis for limiting weekend movements through Condition 8 and no reason for the Appellant to propose as part of this appeal that weekend and Bank Holiday movements be limited. I therefore find that the weekend and Bank Holiday sensitivity of residents is again a factor to be taken into account. [61h), 61k), 61n), 293, 294]
470. However, whilst the RLPR separately addresses the number of weekend movements, neither PPG24 nor the ATWP specifically deal with noise at weekends and there is no commonly accepted approach to the assessment of

weekend impacts. Indeed, as noted by TAG, the LAeq criteria given in both PPG24 and the ATWP already take account of weekday and weekend noise. [61h)]

471. In terms of the Weekend Flights Appeal the Secretaries of State noted that the area within the 57dB(A) contour would not affect residential properties (CD/14 Para 29) and thereafter reached an overall conclusion that the proposal would not result in demonstrable harm to the amenities of the surrounding area. They attached significant weight to the absence of harm (CD/14 Para 35). The information now submitted as part of this appeal shows that under the 2019 ND scenario some 5 dwellings would be exposed to noise levels greater than 57dB(A) LAeq at weekends whereas the proposed development would result in an additional 164 dwellings being so exposed (TAG/P/3 Table 9). Irrespective of any increased weekend sensitivity to noise, a proportion of those additional dwellings would include people who were highly annoyed. The increased sensitivity of residents at weekends can only add to these levels of annoyance. [301]
472. The increased sensitivity of residents to weekend noise is also likely to mean that a larger proportion of people outside the 57dB(A) contour would be highly annoyed. The Council argues that in terms of annoyance there would be some equivalence between the weekday 57db(A) contour and the weekend 54dB(A) contour (RBC/P/3 para 4.1.7 p.18) and that a noise exposure at weekends 3dB higher than on weekdays is equivalent to an approximately 100% increase in flights at weekends compared to weekdays. This would suggest that levels of weekday and weekend annoyance when measured as LAeq 16h would be similar when the daily number of weekend flights was half that on weekdays. However, whilst there is some evidence to support RBC's view, it is not reflected in the approach of PPG24 or the ATWP and I consider that it can attract no more than limited weight. [61h), 293, 294]
473. In any case, I note that if the proposed movement limits were reached the average daily number of weekend and Bank Holiday Flights would be 79.5 (8,900/112) and the average daily number of weekday flights would be approximately 162.5 (41,100/253). Even adopting the Council's approach, it would appear that the proposed maximum level of weekend flights would be no more (and perhaps marginally less) disturbing than the proposed maximum level of weekday flights.
474. TAG points out that PPG24 (Annex 3 para 8) says that 60 dB(A) Leq should be regarded as a desirable upper limit for major new noise-sensitive development and argues that the 57 dBA noise contour should not therefore be taken to be the upper limit of acceptability. However, I note that the NEC categories state that it is only at daytime levels of less than 57dB(A) that noise need not be considered as a determining factor in granting planning permission. Indeed, PPG24 (Annex 1 Para 1 (box)) goes on to say that the noise level at the high end of the category (ie approaching 57dB(A)) should not be regarded as a desirable level. In any event, I accept that there are good reasons for not using the PPG24 NEC procedure when introducing new noise sources into residential areas (CD/35 PPG24 para 8 and Annex 1 para 4) [57, 284].
475. The proposed development would result in some 60 noise sensitive properties being exposed to noise in excess of 60 dBA (TAG/P/3 Para 4.3.10) and although no residential properties are expected to fall within the 63 dB(A)

contour (TAG/P/3 Para 4.3.6) a number of properties along Farnborough Road would be exposed to levels of around 61.5 dB LAeq 16h. Farnborough College of Technology would fall within the band of 57-60 dB LAeq 16h with parts of the college experiencing 60 dB LAeq 16h. At levels exceeding 60dB(A) LAeq 16h approaching 20% of people would be highly annoyed (TAG/P/3 Figure 1).

476. Notwithstanding the foregoing analysis, I note that the overall noise increase relative to the fallback position is predicted to be +2.2 dB (TAG/P/3 Table 5) and would be similar in respect of weekend noise alone (TAG/P/3 Table 9). TAG's noise witness argues that this level would be less than that perceptible by most people citing the part of the Glossary to PPG24 which states that a "...change of 3dB(A) is the minimum perceptible under normal conditions". However, RBC argues that, in the context of the proposal, this is a misuse of the PPG24 glossary explanation of perceptibility suggesting that it is quite clear that the glossary refers to changes in decibels and not to changes in the LAeq16hr noise index. I share RBC's interpretation of the glossary and my finding in this respect is consistent with that of the Stansted G1 Inspector (CD/191 para 14.106). [61r), 308, 311]
477. That does not, however, necessarily mean that a +2.2db change in the long term noise index would be readily discernible or harmful. Indeed, TAG considers that it is arguably counter-intuitive to think that a change is more likely to be perceived in terms of its average over a longer time period than a change of the maximum noise levels (LA max) over a short time period. TAG's noise witness also referred to a number of semantic interpretations (TAG/A/3 Ch 3.1) concerning the significance previously attached to changes in LAeq noise levels at major public inquiries and in documents with respect to major infrastructure projects. These generally suggest that changes of less than 3db(A) were regarded as having a low significance. Although only some of the examples refer to airport development, others refer to rail noise which would also comprise a series of discrete events. [61l), 61s)]
478. In contrast RBC argues that changes of less than 3dBA in long term noise indices such as LAeq16hr can be readily discernible. It does this in part having analysed the effect of small to moderate changes in overall numbers in discrete short periods of the day (see RBC/P/3 para 5.1.7 p.21 et seq). However, this analysis assumes particular concentrations of movements and, despite TAG having little control over when planes arrive or depart, the Inquiry heard no substantive evidence to suggest that there would be any significant change in the current pattern of movements. Despite the suggested propensity for business aviation to have highly variable traffic flows (Fiumicelli Rebuttal para 2.1.2) there is a high degree of correlation between the pattern of arrivals and departures in 2009 and those averaged out over 2007-9 (SIT 70). TAG in fact suggest that the "mix and all other factors and matters remains constant" and I see no reason to take a different view. Consequently, I do not find RBC's analysis particularly helpful. [61a), 308, 309].
479. Nevertheless, the report on the Heathrow Terminal Five and Associated Public Inquiries (CD/190 para 1.2.21) notes that "BAA's witness made it clear that he would consider that a 2dB change in Leq would probably be discernible" and I am also aware that the ATWP (CD/25 para 3.24) describes 3dB(A) Leq as being a large (my emphasis) increase. These matters lend some weight to the view that the proposed 2.2dB increase would be discernible - but they are not

particularly helpful in establishing whether or not an increase of 2.2dB would be harmful.

480. In this latter respect an insight may be gained from looking at what the practical effects might be. Mr Gerrard, a local resident, put forward a simple exposition. Assuming identical planes, two planes passing simultaneously overhead would represent an approximate 3dB increase compared to the noise of a single plane passing. In this case Mr Gerrard suggested that the increase of 3dB may be difficult to detect - particularly if the resident were indoors. However, he pointed out that if the planes were to pass overhead at different times, this would still represent an increase of 3dB but there would be two distinct noise events, each of which would be disturbing. In these circumstances Mr Gerrard considered the number of movements to be of relevance, a matter to which I shall now turn. [375]

Movement numbers

481. The proposed overall maximum number of BATMs would be around 78% greater than the maximum BATMs permissible under the fallback position. The position would be similar when looking separately at weekdays and at weekends (including Bank Holidays). The maximum number of permissible movements under the 2019 ND fallback scenario would give a weekday average of 6.1 movements/hr. This would rise to an average of 10.8 weekday movements/hr at the proposed limit of 41,100 weekday movements (SIT 69). The comparative figures for the weekends/bank holidays would be an average of 3.7 movements/hr under the 2019 ND scenario potentially rising to an average of 6.6 movements/hr as a result of the proposed development. [61b), 312]
482. The current proposal could therefore lead to an increase in the average hourly weekday movements of 4.7. However, the number of arrivals and departures would tend to balance out over time and it is therefore reasonable to assume that the number of movements is equally split between arrivals and departures. As arrivals and departures would normally use opposite ends of the runway (referred to as runway '06' or runway '24') residents at either end of the runway would, under normal circumstances, only expect to experience half of the increased movements (ie 2.35/hr). (The comparable figure at weekends would be an increase of 1.45 movements/hr). In isolation, these numbers appear low. However, it must be remembered that the 2.35 movements/hr weekday increase would, for instance, be against a base position of just over 3 movements/hr. During the week, the proposed development would mean that a plane would, on average, pass overhead approximately once every 11 minutes rather than approximately once every 20 minutes under the 2019ND scenario. The comparable weekend figures would be one plane approximately every 18 minutes rather than one approximately every 32 minutes. [61i)]
483. The average number of weekday departures in 2009 was 2.87/hr (representing just less than 11,000 annual weekday departures) but the actual numbers varied from 0 up to a maximum of 11 per hour. Numbers of hourly departures equal to or greater than 5 occurred around 500 times during the course of the year – or on average approximately twice per day (SIT 70 - 2009 Weekdays Departures Histogram). The proposed increase in ATMs is therefore likely to mean that departures equal to or greater than 9 per hour (ie more

frequently than one every 7 minutes) would, on average, be experienced twice per day by 2019.

484. RBC suggests (SIT 53) that at the 57dB(A) contour the average L_{Amax} would be around 75dBA and that an L_{Amax} of 65dB(A) would represent the onset of significant speech interference outdoors. In some cases there may also be interference with indoor speech if windows were to be partially open, a situation which would be exacerbated at higher L_{Aeq} 16hr levels closer to the runway. My own experience would bear out that indoor speech interference can occur even at some distance from the runway. It is, however, unlikely that anyone would suffer indoor speech interruption with closed windows. Despite TAG's view that there was no evidence of internal disturbance, there was no substantive challenge to the Council's figures. [57, 61(g), 288]
485. For my part I am clear that, based on the analysis above, the proposed increase in movements would lead to more frequent instances of speech interruption (compared to both today's position and to that of the fallback) and would result in greater annoyance to an appreciable number of residents. Irrespective of whether or not a 2.2db(A) increase is said to be discernible, residents would be very much aware of the noise events consequent on the increased numbers of movements (on average an additional 71 BATMs per weekday). [61(l), 312]

Other noise matters

486. Like the Weekend Flights Inspector, both myself and the Assistant Inspector spent a considerable amount of time walking the residential streets around the airport. Between us, our observations covered both weekends and weekdays and included not only the areas close by and to the east of Farnborough Road but also more distant areas such as Mytchett, Fleet and Church Crookham. Our findings were very similar to those of the previous Inspector and in particular we both considered that the modern jets in use at Farnborough are generally not very noisy. However, there are clearly distinguishable variations in noise dependent on the type and size of aircraft and there is no doubt that some types of plane can easily interrupt conversation at some distance from the airfield. It is also obvious that certain times of the day are particularly busy. Our experience bears out the profiles shown in SIT 70 that the peak movements occur in the early morning and late afternoon; however, in waiting for aircraft to appear we also noted that there were considerable periods of inactivity.
487. It was also our experience that aircraft noise could be almost completely masked by passing traffic - particularly when close to the busier roads in more distant areas such as Church Crookham. However, this masking effect was only obvious when in close proximity to the traffic. In the quieter residential areas, including not only those in Church Crookham but also in areas such as Albert Road and Boundary Road, just behind and to the east of Farnborough Road, the noise of the planes passing overhead was again clearly distinguished. Nevertheless, we both concurred with the previous Inspector's view that the noise builds and recedes quite quickly, usually in less than 30 seconds, and neither of us found it unduly intrusive. This is the case even for landing aircraft which tend to fly lower and straighter over the residential areas of Farnborough. [59, 61(g), 298, 299]

488. We attempted to experience a wide range of conditions in order to make our observations as objective as possible and we varied our observations by location, time of day and day of the week. Whilst there was a high degree of correlation between my opinions and those of the Assistant Inspector, like the Weekend Flights Inspector I accept that some people will be more or less sensitive. Indeed, the Inquiry heard evidence from a number of local residents who considered that the current level of movements already produced unacceptable levels of noise and disturbance which were materially detrimental to their quality of life. (eg Mr Halls) [365]
489. TAG argues that there is no evidence that the increase in noise level over 10 years (or movements alone, if counted) would be able to be perceived by most people and the proposed phasing (TAG/P/3 Tables 7 & 11) shows that with the exception of 2012 (Olympic year) the approximate increase in noise would be less than 0.5 dB LAeq 16h. However, whilst I accept that a slow increase in the level of movements may make the year on year changes less perceptible to local residents and may reduce their propensity to complain, it is unlikely to affect their ultimate level of annoyance. Indeed, taken to the extreme, adopting this approach would suggest that no harm would ever arise provided that any increases in noise simply occurred slowly. My attention has not been drawn to anything in PPG24 or the ATWP that makes any allowance for the rate of change and consequently, despite the phased increase being specified within the submitted s106 agreement, I give it little weight. [59, 61(i), 313]
490. RBC considers the noise budget outdated, absurdly generous and no longer relevant. However, it still forms part of the RLPR and the 2000 Deed. The concept of a noise budget is supported by the ATWP (CD/25 para 3.14) and the use of noise budgets is plainly intended to encourage the development, acquisition and use of quieter aircraft. The Local Plan Inspector considered the noise budget to be acceptable at the time of the Local Plan Review and whilst the Council suggests that there is no evidence that the Local Plan Inspector appreciated that the effect of his recommended noise budget would have been to permit potentially in excess of 100,000 BATMs, the budget was clearly deemed to be acceptable in terms of noise contours. I am also conscious that paragraph 11.80 of the RLPR (CD/49) notes that a movement level of 20,000 "represents a 20% reduction from the 25,000 air movements allowed under the then current licence". [61(j), 247 – 251]
491. I accept that there is some evidence suggesting that concern (or annoyance) with a particular level of aircraft noise is now higher than found in the ANIS Study in the early 1980s. It is therefore possible that people are becoming more sensitive to noise and it may be that there is a case for a reduction in noise budgets over time. Although this is not explicitly embodied in national policy, RBC point out that a basic aim of the ATWP in terms of the noise impacts is that they should be limited and, where possible, reduced (CD/25 para 3.11 p.32). I also note that the up to date modelling using INM v.7 and other changes, published in the ES, has had the effect of reducing the size of the noise contours compared with the methodology used by TAG to demonstrate compliance with their planning obligations (CD/70 Table 3 p.15). [61(d), 252, 253, 264, 265]
492. However, and despite the Council's concerns with the historic noise budget, a planning appeal is not the place to deal with alterations to the local plan. Notwithstanding the changed noise prediction methodology it is not suggested

that the current proposal would do anything other than fall well within the historic noise budget. Whilst I have previously determined that the level of harm should be established by reference to the 2019ND scenario, the fact that the proposed development would be within the noise budget must carry some weight in favour of the proposal. I also note that for 50,000 movements the s106 agreement would impose lower limits on the areas of the 55dB(A) and 60dB(A) contours than were originally included in the noise budget - although as the noise from the proposed development is predicted to be within the newly proposed limits and aircraft are likely to get quieter over time, this carries little weight in favour of the development.

493. The s106 agreement also includes that TAG Farnborough Airport Ltd will offer sound insulation to the owners of residential, academic or health care premises which are predicted by the annual noise modelling exercise to be subject to noise levels of 60 dB LAeq 16h or above due to aviation noise. This is more generous than that sought by the ATWP. Although this provision was also included within the 2000 Deed, it must carry some limited weight in favour of the proposal.
494. The Inquiry heard considerable evidence and debate concerning the levels of complaints received and processed by the airport and whether or not they directly related to noise. However, I consider that complaint records should be treated with a considerable degree of caution - especially when looking at comparators over time. In these circumstances, whilst the complaint records are helpful in indicating the public's areas of concern I find them of less use in assessing long term effects. [61(m), 61(n), 296, 297]
495. I acknowledge concerns about track deviation after take-off, which can occur particularly at weekends due to safety considerations arising from recreational flying at other airports. This can have the effect of causing annoyance over a wider area, particularly in Church Crookham and Fleet. TAG have stated their intention to apply for controlled airspace which would avoid the need to cancel arrangements for noise preferential routes at weekends, and some residents have suggested that this should be done before any increase in movements is considered. However there is likely to be significant opposition to the establishment of controlled airspace, not least from general aviation interests including flying and gliding clubs. While in some respects it could be desirable, there is no certainty that controlled airspace will be approved, and it is not within the control of TAG. I therefore consider that making controlled airspace a condition of approval would be unreasonable. [403, 404]
496. RBC is investigating, through the emerging Core Strategy (CD/52) and the Farnborough Airport Area Action Plan (CD/56), the potential for growth in BATMs beyond the 28,000 limit. Whilst still work in progress, the Council has signalled that it is not averse in principle to the cap being revised to allow an increase in BATMs although it considers a more measured level of growth than that now proposed would strike a better balance between the benefits and disbenefits of FA. The Council accepts that using a standard analysis, ie a long term LAeq, 16h noise index, the increase in noise levels and associated adverse impacts are likely to be modest (SCG para 3.7) RBC/P/3 para 2.2.1). [56, 315]

Overall noise conclusions

497. The increase in the size of the 57dB(A) contour which would result from the proposed development would, compared to the fallback position, encompass 364 additional dwellings. Whilst the 57dB(A) contour is regarded only as the onset of significant community annoyance, an appreciable number of additional people are nevertheless likely to become highly annoyed by aircraft noise. The levels of annoyance are, despite the reduced numbers of movements on weekends and Bank Holidays, likely to be similar on weekdays and weekends/Bank Holidays. A small number of properties along Farnborough Road as well as parts of Farnborough Technical College would be exposed to noise levels in excess of 60dB LAeq 16h. At these levels almost 20% of people would fall into the category of being highly annoyed. I have no doubt that some local residents would consider the proposed increase in movements unacceptable.
498. The proposed increase in aircraft movements would mean that a number of people would suffer more speech interruption than under the fallback scenario. Outdoor speech interruption is likely to occur out to and even beyond the 57dB(A) contour. Although it is unlikely that anyone would suffer indoor speech interruption with closed windows, for some people, particularly those closer to the runway, there is likely to be indoor speech interference with partially open windows. Speech would on average be interrupted approximately once every 11 minutes during the weekday rather than about once every 20 minutes under the 2019ND scenario.
499. I consider these matters show that the proposal would result in demonstrable harm and as such it would be contrary to RLPR Policy FA2.2(C).
500. However, notwithstanding the Council's concerns over the continuing applicability of the historic noise contours, I note that the area within the 57dB(A) contour would be considerably less than that which was deemed acceptable at the Local Plan Inquiry for an equivalent contour. No properties would be exposed to levels exceeding 63dB(A) and the overall noise increase at 2.2dB(A) has been regarded at other inquiries as being of low significance. The Council agrees that on a conventional analysis the impacts would be modest.
501. My own experience, and that of the Assistant Inspector, was that the types of business jet in use at Farnborough were not particularly noisy and, like the previous Inspector we found that the noise builds and recedes quickly.
502. The criteria specified in the ATWP at which airport operators are expected to take action to mitigate the consequences of airport growth would not be breached by the proposed development and in any event, those owners of residential, academic or health care premises predicted to experience noise levels in excess of 60dB(A) Leq 16h would be offered sound insulation by TAG Farnborough under the terms laid out in the s106 agreement. Although this would not address the matter of outdoor noise, the offer of sound insulation is at lower noise levels than required in the ATWP.
503. The increases in overall and weekend movements would be phased in accordance with the schedule laid out in the s106 agreement. This would mean that the maximum year on year noise increase would be less than 1dB(A) Leq 16h (2012) and otherwise, the year on year increases would be

less than 0.3 dB(A) Leq 16h average. Whilst this would not alter the number of people being exposed to higher noise levels it is likely that many people would find the incremental increase less noticeable. The Council has signalled that it is not averse in principle to the cap being revised to allow a more measured growth in BATMs.

504. Whilst none of these matters alters my view that the proposed development would result in demonstrable harm they are nevertheless material considerations that weigh in favour of the proposal.

Safety

505. The SOCG records that the Council will not be pursuing any objections in the matter of Public Safety Zones and Third Party Risk Contours. (Paragraph 2.40 P14). However, safety is a key issue for FARA, the Rule 6 party. It has also been raised by a number of third parties in their statements to the Inquiry and in their written representations. [114]
506. Concern was expressed at the Inquiry that the safety implications of the proposal had not been properly assessed or understood, particularly in matters such as third party risk. To aid clarity, I shall in the text below refer to the individual third party risk used to calculate the Third Party Risk Contours as 'individual risk' and to the wider collective exposure of the public as 'third party risk'. I deal separately with the matter of 'societal risk'. [326, 328(a), 384]
507. Conditions 13 and 14 of the permission granted by the Secretaries of State refer to risk contours (CD/14 Para 41). Condition 13 states that "No flying pursuant to this permission shall take place if the 1:10,000 per annum individual risk contour at either end of runway 06/24 extends to areas where people live, work or congregate or beyond the area at the eastern end of the runway beyond the areas subject to Policies FA1 of the Rushmoor Local Plan (1996-2011) Review." Condition 14 says that "All flying pursuant to this permission shall conform to the agreed 1:100,000 per annum risk contour and the maximum extent of the 1:100,000 risk contour shall not be changed without the prior approval of the Council in writing."
508. Policy FA2.2(D) of the RLPR contains related, although not the same, provisions. In particular, the second part of the policy includes the provision that "Proposals for flying which would result in the 1:100,000 risk contour extending beyond the operational aerodrome will only be permitted where the adverse effects on the safety of the surrounding area are outweighed by reasons of overriding public interest, including any economic and employment benefits.....". There is no doubt that the 1:100,000 risk contours calculated by NATS on the basis of 50,000 movements extend beyond the operational aerodrome. Policy FA2.2(D) is therefore engaged.
509. DfT Circular 01/2010 says that "Public Safety Zones are areas of land at the ends of the runways at the busiest airports within which development is restricted in order to control the number of people on the ground at risk of death or injury in the event of an aircraft accident on takeoff or landing. The basic policy objective governing the restriction on development near civil airports is that there should be no increase in the number of people living, working or congregating in Public Safety Zones. " (CD/160 page 3 Paragraph 1).

510. FARA is clear that PSZ policy is a land use policy (Marks PoE 4.5.7 (a)) and is not intended to deal with airport expansion. The title of Circular 01/2010, 'Control of Development in Airport Public Safety Zones' would support that view. Further reinforcement is given by the DfT letter of the 11 December 2008 to the Aviation Environmental Federation (APP/FARA/21) which says that ".....the policy set out in Circular 1/2002 (Inspector's note: the forerunner to Circular 01/2010) is a land use policy". The letter goes on to say that "The guidance is not intending to inform the discretion of Local Planning Authorities' decision making with regard to any applications from airport operators to increase air transport movements". [328]
511. Government policy expressed in Circular 01/2010 does not therefore seek to deal with airport expansion nor does it seek to control the size of PSZs consequent on such expansion. Instead it seeks to control development within a PSZ once established. Circular 01/2010 paragraph 3 says that ".....the contours will be remodelled in the event that a significant expansion of an airport is approved which has not already been assumed in the modelled risk contours." This clearly shows that remodelling a PSZ is not viewed as a means of quantifying any third party risk inherent in a proposal for expansion and is not seen as being a contributing factor to the determination of any such approval. Rather a PSZ is expected to be produced consequent on an approval to expand airport activities.
512. In a letter to FARA of the 28 May 2002 (APP/FARA/28 paras 5 & 6) the DTLR states that "the establishment of the zones is an entirely separate process from the determination of any planning application for the development of an aerodrome.....". The letter goes on to say that "....third party risk should be a factor to be weighed in the balance by local planning authorities when determining applications for significant airfield development....." but ".....there is no formal requirement to this effect or guidance as to how it might be done, and it is for an individual authority to consider how best to assess questions of public safety, and if necessary to defend its approach."
513. In this case, for both 50,000 and 28,000 movements, NATS, on behalf of TAG, has calculated the individual third party risk contours equivalent to a 1:10,000 and 1:100,000 risk of being killed as a result of an aircraft accident. Based on this information, NATS has also produced remodelled PSZs for both scenarios. However, no CBA or other specific or quantified assessment of third party or societal risk has been produced by TAG to the Inquiry.
514. Despite the absence of any third party or societal risk assessment it seems to me that, notwithstanding the views of the DfT/DTLR, the submitted PSZs do provide some insight into the risk to the public associated with the proposed operations. Circular 01/2010 says that the Secretary of State regards the maximum tolerable level of individual third party risk of being killed as a result of an aircraft accident as 1:10,000 per year and, as a consequence, the Secretary of State wishes to see the emptying of all occupied residential properties, and of all commercial and industrial properties occupied as normal all-day workplaces, within the 1:10,000 individual risk contour. The fact that the Secretary of State expects the operator of an airport to make offers to purchase properties found to be within this contour could, if known prior to the approval of any application to increase movements, be seen as a restraining (although not limiting) factor on airport expansion.

515. In the case of Farnborough, it is said that TAG do not permit the 1:10,000 risk contour to extend beyond the Business Aerodrome Operational Area (RLPR Policy FA2) (McLaren PoE TAG/P/8 P7 para 9.5). However, according to the review of the treatment of safety issues in the ES undertaken by ESR Technology (Author: Dr Mark Eddowes), the proposed development would result in the 1:10,000 risk contour extending beyond the operational boundary (CD/157 p8 Figure 1). I find ESR's analysis consistent with the area shown as being defined by policy FA2 on the RLPR proposals map.
516. Nevertheless, I accept that neither the development plan, nor the conditions imposed on the existing permission impose such strict limits on the extent of the 1:10,000 individual risk contour (CD/162). The eastern 1:10,000 risk contour would not extend beyond the airport site boundary (TAG/P/8 Appendix 11.9.2 Drg. No. GNTGAOP 1581 Rev A) and would not include any occupied development. (TAG/P/8 P14 para 17.1.5). I was given no reason to suggest that people may congregate in the area of the extended 1:10,000 contour and on this basis no one would be exposed by the proposed development to what the Secretary of State deems an intolerable level of risk.
517. However, it does not follow automatically from the fact that the 1:10,000 risk contour would not extend beyond the airport site boundary that there would be no unacceptable adverse effects on safety. Although TAG suggests that the DfT considers that a level of risk of 1 in 100,000, as associated with a PSZ, "is actually a low level of risk compared with many other risks that most people encounter in their daily lives" (TAG/P/8 P4 para 7.8 and Appendix 7.8), Circular 01/2010 is clear that the level of risk in some areas within the Zones may be much higher. (CD/160 p4 para5). Indeed, it would be counter intuitive to expect someone living just outside the 1:10,000 contour to be at the same risk as someone much further from the runway on the 1:100,000 contour. Based on constrained cost-benefit analysis (CBA), Circular 01/2010 restricts new development within a PSZ and aims to prevent any increase in the number of people living, working or congregating within it. This clearly indicates that those people living within a PSZ are regarded as being at an elevated level of risk and that it would not be advisable to expose additional people to that level of risk. Whilst those outside the PSZ may also experience heightened risk from flying activities this is not deemed to be at a level which requires such controls.
518. Taken in reverse, encompassing further people within an expanded PSZ consequent on additional movements must therefore be regarded as an adverse effect on safety. Not only would more people be exposed to a risk of being killed greater than 1:100,000 per annum, but it is also likely that, for most people within the expanded PSZ, their individual level of risk would be higher as a result of the development. Although the risk level of individuals outside the PSZ would also increase, and it is suggested in the ESR Technology report to the Council (CD/157 p14 para 3.3) that risks of 1 in a million have been considered to represent potentially significant harm and should be considered, the fact that the constrained cost benefit analysis underpinning Circular 01/2010 does not require any action at these levels of risk suggests that third party risks outside the PSZ would carry only limited weight.
519. Nevertheless, all of the increased risks would be a factor to be weighed in the balance when considering proposals for flying in accordance with Policy FA2.2(D) of the RLPR. The DETR was clear in writing to RBC in December

1999 (APP/FARA/18) that ".....it regards third party risk as one of the factors to be taken into account by the Council when considering the proposed development of an airport.....".

520. According to the information prepared by NATS on behalf of TAG, the proposed development would, despite the increase in movements to 50,000, result in a PSZ some 7 hectares or 5% smaller than the current PSZ and the number of developments (residential and commercial) within the PSZ would fall from 410 currently to 372. Nevertheless, it must be noted that in calculating the PSZ for the proposed development, NATS has used 'refreshed' parameters. The existing PSZ and the PSZ calculated by NATS for 50,000 movements are not therefore directly comparable - a matter I shall return to later. [327(b), 327(c)]
521. NATS has also modelled 28,000 movements on the basis of the refreshed parameters. This shows that on a 'like for like' basis, the size of the PSZ for 50,000 movements would be around 43 hectares or 49% greater than that for 28,000 movements (the 'No Development' or ND scenario). The number of developments (residential and commercial) falling within the PSZ would more than double from 174 (ND) to 372 (proposed). (TAG/P/8 p10/11 Tables 1,2,3). Circular 01/2010 says that third party individual risk contours around airports will be remodelled at intervals of about seven years. Were permission not to be granted for the current proposal, the size of the PSZ at Farnborough would, assuming that the refreshed parameters remain applicable, significantly reduce in size. Consequently it is likely that the current PSZ is no longer representative of what might be deemed the 'real risk' to individuals on the ground and it seems to me that the 'ND' scenario should be regarded as the fallback position.
522. Compared to this fallback position, the fact that the increased movement level inherent in the proposed development would result in a doubling of the number of residential and commercial developments falling within the PSZ must be indicative of an increase in third party risk. Not only does this appear obvious from a common sense perspective but it is also backed up by the study undertaken for the then DoT in support of its review of PSZ policy. This found that the area subjected to a specific level of risk in the vicinity of an airport was principally determined by the number of movements at the airport. (CD/156 Paragraph 11 page iv). This real increase in third party risk is a matter which must weigh against the proposal.
523. However, TAG maintains that "the existing situation is found to be acceptable and there will be a decrease in the overall PSZ area as a result of the proposal....." (TAG/P/8 p12 para 13.15). Whilst a PSZ is based on individual risk levels it seems to me that, in this case, the number of developments contained within the PSZs can be taken as a rough proxy for the quantum of third party risk. Reducing the size of the PSZ (and the number of developments falling within it), is in my view likely to lead to a reduction in third party risk. The size of the existing PSZ and the number of developments within it represents a level of third party risk exposure previously deemed acceptable by RBC and the PSZ calculated by NATS for 50,000 movements is smaller than that approved by RBC and contains fewer developments. Consequently, in my judgment, the risk associated with the proposed development would also be acceptable, particularly as the benefits to be weighed against any harm are likely to be greater than under the existing

permission. This view is, of course dependent on the refreshed parameters used to calculate the proposed PSZ.

524. FARA argues that in granting permission for the current operations, RBC did not undertake a third party risk assessment that would withstand scrutiny. Indeed, FARA considers that RBC failed to take account of all the disbenefits and that in consequence, the risk of flying at Farnborough has never properly been assessed. That does not, however, accord with the previously expressed views of RBC. In answering questions posed by the Farnborough Airport Consultative Committee, RBC accepted that whilst CBA had not been employed when granting the original planning permission for the business flying operation, third party risk was seen as a material consideration and had been weighed in the balance with other factors. RBC noted that CBA was not used at the Manchester Runway 2 and Heathrow Terminal 5 inquiries, both of which involved increases in the level of airport activity. (APP/FARA/19 Answer to Q4 & Q5) [326, 328 (a)]
525. In respect of the appropriateness of the 'refreshed' modelling parameters, NATS has prepared the proposed PSZ under a commercial arrangement with TAG and has deemed the parameters to be confidential. Consequently they were not before the Inquiry and have not been subject to any independent scrutiny. Despite this current lack of scrutiny, the Inquiry was told that NATS is an agent applying the DfT methodology, that the DfT is continually involved in any update and acceptance process for changes and that the core model data is maintained by NATS on behalf of DfT. Notwithstanding that NATS provide air traffic control services at Farnborough, and gave evidence on risk to the Inquiry on behalf of TAG, I have no basis on which to question the integrity of their assessment. The PSZ assessment was subject to internal peer review and NATS are acknowledged experts in air traffic control and safety. Safety is stated to be their first and foremost priority. [118, 331, 332, 376, 398]
526. In any event, I note that the report of ESR Technology for RBC states that "The ES shows that operations up to the proposed new limit of 50,000 movements per annum would involve no greater risk than was originally anticipated might arise from the current permission for 28,000 movements per annum. These risk estimates are consistent with those made by ESR technology for the Council in support of the emerging Airport AAP [Area Action Plan]. We consider these risks to be significant but not exceptional, when compared with risks encountered at other airports. Such risks are not exceptional when compared with the risks that arise from a range of hazards accepted in society in return for their benefits." (CD/157 p15 para 3.6) Whilst the detail of ESR's work on the emerging Airport AAP was not before the Inquiry and was not subject to cross examination by FARA, the results of ESR's work were clearly taken into account by the Council in determining not to sustain an objection in regard to third party risk.
527. Societal risk has been defined as the relationship between the frequency and the number of people suffering a specified level of harm in a given population from the realisation of specific hazards. A broader definition is the risk of widespread or large scale detriment from the realisation of a defined hazard, the implication being that the consequence would be on such a scale as to provoke a socio-political response (CD/156 p4 para 2.1). FARA suggest that a plane crashing into the Farnborough College of Technology would be one

example of an incident likely to provoke such a socio-political response and in consequence, societal risk should be considered in evaluating any proposals for flying at Farnborough. The ESR Technology report to the Council (CD/157 p14 para 3.4) says that "we believe that the assessment of societal risks associated with the current permission and the application could be beneficial."

528. RBC wrote to the DfT seeking clarification and guidance as to what might be an appropriate approach to societal risk as part of the decision making process on this application. Whilst pointing out its quasi-judicial role in the planning process the DfT stated that "Our view is that trying to consider societal risk would involve a subjective judgement, and would significantly reduce the accuracy of the calculations with regards to PSZs and we have no plans to consider societal risk at this time. As you state, there is very little evidence or precedent in the approach to the assessment of societal risk in which the only information the Department has found is from the Health and Safety Executive website." (CD9 p94/95 para 380). R&D Report 9636 'Third Party Risk near Airports and Public Safety Zone Policy' says that "it is arguable that FN criteria are unnecessary when CBA is used, because CBA is itself a 'social' criterion". Whilst the report also goes on to acknowledge that certain sorts of accidents may have wider repercussions than are accounted for by individual risk criteria or CBA, it suggests that such possibilities are better taken into account informally than by quantified criteria. (CD/156 p6/7 para 2.12).
529. TAG's submissions do not address the matter of societal risk in any quantifiable way. Instead, TAG suggests that "an assessment of societal risk would not be in accordance with government policy, would be based on subjective assessment, would depart from policy in DfT Circular 01/2010 and would be of no assistance to the Secretaries of State". (TAG/R/8 p10 para 4.15)
530. The use of societal risk assessment is not required by local or national policy in determining the acceptability or otherwise of an airport expansion. This is not the same as suggesting that an assessment of societal risk would not be in accordance with government policy. However, although ESR Technology found that the use of societal risk assessment could be beneficial, it is acknowledged by the HSE (TAG/INQ/3 p46 para 134) that developing criteria on tolerability of risks for hazards giving rise to societal concerns is difficult. This does suggest that the use of societal risk techniques would rely to some degree on a subjective approach. [117, 329]
531. An assessment undertaken by Mr Treadgold, an informed local resident, appears to suggest that the societal risk within the Farnborough College of Technology and within the residential property in the PSZ would remain outside the intolerable region but would lie within the ALARP (as low as reasonably practicable) zone. TAG's view is that interpretation of the diagram provided by Mr Treadgold "is difficult and currently subjective, as the "intolerable risk region" criterion line in the diagram has not been derived from national policy" (TAG/R/8 p9 para 4.6).
532. Notwithstanding Mr Treadgold's assessment, studies undertaken by ESR Technology for RBC in connection with the Airport AAP using societal risk assessment techniques and CBA, said to be in line with the principles of best approaches outlined by the HSE, appear to indicate that the risks are small compared to the anticipated benefits of the proposal (CD/157 p15 para 3.6).

Therefore, despite the views put before the Inquiry that a societal risk assessment should have been provided by TAG, the available evidence did not suggest that the societal risk would be intolerable should the development proceed. [117, 398]

533. Although FARA suggests that there is no evidence to support ESR's statement that the societal risks are small compared to the benefits, Dr Eddowes confirmed at the Council's Planning Committee of 11 November 2009 that "we have done detailed studies in the context of the Local Development Framework process". (CD/10 p35/36) Whilst I accept that Dr Eddowes is not the decision taker, he was nevertheless responsible for advising the Council - which determined not to pursue any objection in this regard. In light of these matters and the absence of any agreed approach to the use of societal risk assessment I consider that the absence of a formal societal risk assessment by TAG does not weigh heavily against the proposal. I note that the DfT is clear that, in respect of PSZs, it has no plans to consider societal risk at this time. [328 (c)]
534. A number of concerns were also raised by FARA and third parties in respect of the model used by NATS to calculate the PSZ. These include such matters as the fact that the model is a largely generic analysis tool taking no account of local conditions such as topography, population density or buildings. Concerns were also raised that RBC drew misplaced comfort from its understanding that the generic crash rate for BA had been applied to support 28,000 movements. However, TAG suggest (TAG/P/8 p8 para 11.7) that the NATS methodology underpinning PSZ policy is inherently conservative and that the operations at Farnborough are likely to have less risk associated with them as a result of advantages such as the higher proportion of Chapter 4 compliant aircraft using the airport and its navigational aids including the ILS precision approach aids on both runways. [330, 331, 397, 401]
535. I accept that any generic model will have its disadvantages. However, in terms of calculating the PSZ its use is consistent with national policy and I understand that the core methodology has been applied at all major UK airports (TAG/P/8 p4 para 7.3). In any event, I have already noted that ESR Technology consider the risk estimates "consistent with those made by ESR technology for the Council in support of the emerging Airport AAP". In these circumstances I do not consider the shortcomings of using a generic model critical.
536. Although it is also suggested that no consideration has been given to the impact of the proposal on the Queen Elizabeth II Barracks site (a strategic housing allocation lying within the western end of the PSZ), the Council's consultant on risk, Dr Eddowes, reported to the Council's Planning Committee of 11 November 2009 that even if the movement increase were to go ahead it should not compromise the future development of the QEII Barracks site. In particular, the site is large and given that it includes areas of open space, even if the PSZ were to grow there are options to reposition the development within the site confines. (CD/10 p35/36)

Overall conclusions on safety matters

537. There is no policy basis before the Inquiry for considering third party or societal risk in respect of airport expansion. However, although the DfT has

excluded the consideration of societal risk as part of its PSZ policy, it has also made it clear that PSZ policy is not intended to inform the discretion of Local Planning Authorities' decision making with regard to any applications from airport operators to increase air transport movements. The DfT has positively stated that it regards third party risk as one of the factors to be taken into account by the Council when considering airport expansion. The information submitted by TAG in support of its application and appeal does not include any quantified assessments of societal risk and relies on individual risk contours in respect of third party risk.

538. TAG has submitted a PSZ for the proposed development. In my opinion, and notwithstanding the DfT's view that PSZ policy is not intended to inform the discretion of Local Planning Authorities' decision making with regard to proposals to increase air transport movements, the size of the PSZ can be taken as a proxy for third party risk. The PSZ for the proposed development would be smaller in area and would contain less development than that currently existing.
539. I acknowledge that the calculation of the revised PSZ is dependent on the use of 'refreshed' modelling parameters. NATS has prepared the PSZ under a commercial arrangement with TAG and has deemed these parameters to be commercially confidential. I agree that this lack of transparency is unsatisfactory and a considerable factor in the anxieties of FARA and local residents. However, whilst the parameters have not been subject to independent scrutiny I have no basis on which to question the integrity of NATS assessment. The PSZ assessment was subject to internal peer review and NATS are acknowledged experts in air traffic control and safety.
540. FARA considers that, in granting permission for the current operations, RBC did not undertake a third party risk assessment that would withstand scrutiny and failed to consider all the disbenefits. Nevertheless, in reviewing the ES for RBC, ESR Technology found that the risk estimates given in the ES for 50,000 movements were consistent with those made by ESR Technology itself on behalf of the Council in support of the emerging Airport AAP. ESR Technology considered those risks to be significant but not exceptional when compared with risks encountered at other airports or with other risks that arise from a range of hazards accepted in society in return for their benefits.
541. I acknowledge that the proposed development would result in an increase in third party risk, which weighs against the proposal. However, the fact that permission already exists for operations anticipated to result in a larger PSZ is strongly indicative that a greater level of third party risk has already been deemed acceptable. Independent advice to RBC considers the risk of operations to be significant but not exceptional. Taking account of all these matters it is my view that the increase in third party risk should carry no more than limited weight against the proposal.

Air Quality and Odour

542. The SOCG records that the Council will not be pursuing any objections in the matter of Air Quality and Odour. (P14, paragraph 2.40). However, a number of third parties have raised concerns in this respect citing issues including the effect of the proposed development on air quality and health impacts. The matters of fuel jettisoning and oily deposits have also been raised and I note

that residents of Kempton Court raise particular concerns about odour and its effect on their daily lives. [100, 354, 377, 406, 418]

543. RLPR Policy FA2.2(C) (CD/49 p148) says that proposals for flying or the ground testing of engines, requiring planning permission, will be permitted only if they: -..... (iii) do not adversely affect ambient air quality. RLPR Policy ENV48 says, amongst other matters, that the Council will not permit development which is likely to be damaging to the environment or which would adversely affect other land uses through fumes or odours.
544. TAG notes that the "ES predicted that concentrations of NO_x (which converts to NO₂ in the atmosphere) and NO₂ would be lower than in 2008 across the study area, with and without the Proposal" and points out that air quality would be "maintained well within legal limits across all relevant pollutants (and there is no other proposal in the area that will cause such limits to be exceeded in future)". (TAG/P/7 p12 paras 3.5 & 3.6) [102]
545. The Development Control Committee report says that air quality monitoring at the airport has consistently found low concentrations of nitrogen oxides (NO_x) at levels below the national air quality objective. Whilst the concentrations of NO₂ would increase under the proposal, the ES maintains that they would not exceed national air quality objectives and would be regarded as 'negligible'. The Council's Head of Environmental Health (EHO) accepted that the assessment focused on NO₂ emissions as the principal potential problem. In assessing the predictive modelling used to support the application the EHO concluded that the modelling methodology is sound and thorough and the results reasonable. As a result the EHO believed that the conclusions that the development will not have an adverse impact on air quality in the area were realistic and justified. On this basis the EHO raised no objection to the proposal. (CD/9 p96 paras 385 - 387).
546. An independent evaluation by Ove Arup & Partners Ltd (CD/142) also accepted that the identification of annual mean concentrations of NO₂ and odour as the key concerns was valid. Although Arup's report identified areas of the ES evaluation of NO₂ which were not consistent with current guidance, it was not considered that this would have affected the conclusions of the assessment. Arup's report did, however, consider that the assessment of odour impacts was very limited in the ES and that, were the development to proceed, the likely odour impacts would require mitigation.
547. A separate odour assessment, also by Ove Arup & Partners Ltd (CD/146), found that an increase in the number of aircraft movements is likely to increase the number of occasions when odour will be detected at nearby properties, probably in proportion to the increase in aircraft movements. The most critical receptors were identified as being at Kempton Court and Ively Road although the modelling demonstrated that "the operation of the aircraft will result in odour being detected at residential properties on occasion rather than on a regular basis" (CD/146 para 6.3.2). Nevertheless, Arup's report identified the need for mitigation concluding that the most suitable would be "to introduce operational procedures to ensure that aircraft were not waiting with engines running in the apron area or on the taxiway.....with their engines directed towards the housing." Arup's report considered this a relatively simple operational measure that should be effective in reducing odour levels at residential areas. (CD/146 para 7).

548. Despite the concerns of local residents in respect of the health effects of the proposal, and particularly the effects on asthma sufferers, there was no substantive evidence before the Inquiry identifying any causal links between the airport operations and the health of local residents. Given that air quality would be maintained well within legal limits across all relevant pollutants I do not consider adverse health effects likely.
549. Whilst I am in no doubt that local residents have experienced what they believe to be fuel jettisoning and 'oily deposits' from aircraft, I note that very few of the aircraft using Farnborough would have the capability to jettison fuel. In any event such action would only be taken in an emergency. Investigation of 'oily deposits' at Farnborough has not, according to TAG, revealed any links to aviation fuel; other airports investigating reports of oily deposits, including Birmingham, Gatwick and Manchester, have similarly found no linkage to aviation. Notwithstanding this lack of causal evidence, the number of incidents being reported is, in my view, very small. Consequently I find this matter attracts little weight. [377]
550. In looking at the impact on air quality, TAG seeks to argue that there would be no conflict with RLPR Policies FA2.2(C) and ENV 48. However, I consider that the proposed increase in movements is bound to have some adverse impact on air quality. Given the drafting of the policies, there must in consequence be conflict. Nevertheless, it is my view, based on the assessment provided in the ES and the subsequent independent validations that, subject to appropriate odour mitigation measures, any adverse effect is unlikely to be material. Implementation of an 'Odour Management Plan' and an 'Odour Monitoring Scheme' would be assured by the submitted s106 agreement. The section 106 agreement would also oblige the Appellant to implement a charging scheme for emissions of NOx. In these circumstances I find that the conflict with the development plan would carry very little weight in the overall balance. The other policies drawn to my attention by TAG, including the provisions of national policy in PPS23, do not alter my view in this matter. [101, 103, 105]

Economic Benefits, Need and Alternatives

551. As the Secretaries of State concluded in relation to the weekend flights Inquiry, it is very difficult to quantify the contribution of the appeal proposal to the economy (CD/14 para 18).
552. Forecasting is an inherently uncertain activity. It is not disputed by the main parties that there will be a resumption in growth in the market for business aviation, nor that some economic benefit would follow. The key areas of dispute are rates of growth, the extent of employment benefits and whether growth in movements could be accommodated elsewhere [213].

Economic Benefits

553. There is wide acceptance that the existing operation at FA makes a significant contribution to the economic well being of Rushmoor Borough. The Inspector and the Secretaries of State in the 2008 weekend flights appeal concluded that the Airport was of very substantial economic benefit to the Farnborough area and to Rushmoor." (CD/13 para 7.35, CD/14 para 24). In support of this view, the Inspector identified the appreciation by some companies of FA as a major asset, its value to the image of the area, the efficiency savings that are available to businesses, the numbers of major or international companies that

use FA, the first class facilities that are on offer, the growth achieved in just a few years and the support given to the aviation and aerospace high technology in the locality as bearing testament to its importance to the area. [73, 74, 86, 216]

554. TAG estimates that the Airport currently provides some 1148 jobs directly and is estimated to support a further 2109 jobs through indirect and induced employment. This level of provision is supported by the current level of aircraft movements, and is not at risk if the appeal were not successful, although there would be some net loss over time through productivity effects. [75]
555. There was considerable debate at the Inquiry as to the levels of new jobs that would be created and supported if the appeal succeeds, and the number of movements increases to 50,000 by 2019 or thereabouts. The Council does not dispute that there would be an increase in jobs, and that this would benefit the economy of the area. However the Council sought to show that the Appellants' estimates of job creation, and assessment of the economic benefits arising, were very over optimistic.
556. The divergent estimates of job increases and consequent economic benefits are influenced by the parties' respective estimates for BATM growth to 2019. RBC's analysis (medium growth scenario) predicts growth to 39,500 movements by 2019, compared with TAGs projection of 50,000 movements. [76, 213].
557. TAGs employment forecast for 2019 if the current cap of 28,000 movements is retained is that direct employment at the airport would be some 1030 jobs, indirect and induced employment (local impact) would be some 390 jobs, indirect and induced employment (other areas) would be some 1320 jobs, giving a total for the number of jobs supported by the airport of 2740. This represents an implied multiplier of 2.66 (i.e. the total number of jobs in all areas supported by the airport is 2.66 times the number of direct jobs.) (TAG/P/6 para 5.17 and Table 5.4).
558. On the basis of an increase in movements to 50,000 in 2019, TAG predict an increase in direct employment at FA of 590 jobs. A further increase of 1290 jobs would be attributable to indirect employment and induced employment, giving a total increase of 1880 jobs as a consequence of allowing the appeal. Of the indirect and induced jobs, some 300 are predicted to arise locally (i.e. in Rushmoor, Hart and Surrey Heath Districts), in addition to the 590 new jobs at the airport. TAG's overall conclusion was that a doubling of aircraft movements from current levels to 2019 would lead to a 40/45% increase in job creation (TAG/P/6 para 5.18 and Table 5.5). [75]
559. The estimate of an increase of 1880 jobs is for the UK economy as a whole. It implies an employment multiplier of some 2.8, a little higher than that used in the base of analysis 2.66. TAG's predicted employment increase would compare with a predicted decline in jobs by 2019 due to improved productivity if the existing cap of 28,000 movements is retained.
560. RBC's witness considered this analysis to be over-optimistic. On his analysis the employment impact would be significantly reduced. It was suggested that higher productivity factors should be applied for direct employment to take into account potential economies of scale resulting from additional traffic

movements, which in turn would have consequent impact on the levels of direct and induced employment. Using RBC's productivity and BATM growth assumptions, total employment growth would amount to 369 jobs for 39,500 BATMs and 960 for 50,000 BATMs.

561. There was considerable examination of the productivity factors assumed in the analysis, though in the end it was accepted that this was not a major source of difference between the parties. TAG's estimate of direct employment at the airport in 2019 is 1620 jobs with 50,000 movements. The equivalent figure arrived at by RBC's witness is 1520 jobs (RBC/P/4 Table 4.2), some 100 jobs lower than TAG's prediction, or 6% of the total. To my mind the difference is not of great significance in the overall assessment given the uncertainties associated with mid – long term predictions. [219]
562. There was a major difference of opinion between the consultants concerning the appropriate use of multipliers. RBC pressed the view that TAG's implied multiplier of 2.8 was too high and artificially inflated likely growth in employment. A much lower national multiplier was preferred by the RBC witness, as being more consistent with the approach adopted by NLP in their 2009 study (CD/115: The economic impact of business aviation at Farnborough Airport). TAG argued that that is based on a misunderstanding of the implied national multiplier in the OEF study (CD/117: The Economic Contribution of the Aviation Industry in the UK Oct 2006). The OEF analysis of jobs supported in the aviation industry as a whole implies a multiplier of 2.8, similar to that adopted by TAG. (CD/117 table 2.4) [83, 220]
563. I understand that TAG's multiplier was not taken from the OEF analysis, but informed by a previous study undertaken by Oxford Economic Forecasting (OEF) and Mott MacDonald in 2005 (CD/125: Economic Study of Farnborough Airport). In preparing this forecast OEF applied its own proprietary macroeconomic model of the UK economy and its own analysis of UK input-output tables for the air transport industry. OEF also undertook a survey of FA tenants' expenditures. This information has been reviewed on behalf of TAG in the context of the 2008/9 baseline and has been supplemented by further discussion with the airport operator, tenants and other companies in the locality [84].
564. It appears to me that the range of multipliers canvassed is within the scope of honest disagreement, but this only serves to underline the degree to which forecasting outputs are dependent on the assumptions behind the inputs. I do not have the evidence which would enable me to resolve the dispute conclusively. Nevertheless I accept that a multiplier of 2.8 should be treated with some caution in the current case. The 2006 OEF Study (CD/117) is a national study which looks at the aviation industry in aggregate. I accept the view put forward by RBC that as an airport dedicated to Business Aviation FA has significantly different operating characteristics to commercial airports providing in the main for scheduled services. For example, it is not obvious that general travel agencies are widely involved in arranging bookings or itineraries, though I acknowledge that specialist booking agencies may have a role to play. Omitting travel agents from the OEF calculation would produce a multiplier of 2.37 [79, 84, 161, 224].
565. RBC commissioned a study by Nathaniel Lichfield and Partners (NLP) in 2009: Economic Impacts of Business Aviation at Farnborough Airport. It concludes

that if air movements were to increase from about 25,500 to 50,000 p.a. the number of jobs supported within the local area could be expected to be between 1,900 and 2,090, both direct and indirect, This would be an increase of between 400 -600 jobs over the current situation. At the national level, total jobs for that level of movements would be 2,880 – 3,100, an increase of between 660 and 880 jobs over the current levels of jobs related to the airport. (CD/115, Table 6.7 and paras 6.49 – 6.51).

566. While TAG argue that the basis of their assessment is flawed, NLP stated that they did not lift the 1.8 multiplier directly from OEF's work, but adapted it to take account of features not applicable at Farnborough such as on-airport retail facilities and in-flight catering (SIT 27 and SIT 57). Their figures give support to the use of a lower multiplier. [219, 220]
567. Nevertheless RBC acknowledged in closing submissions that 'it is common ground that the appeal proposal will result in a significant increase in direct, indirect and induced employment'. The range of prediction for job creation at 50,000 movements is 960 (RBC) -1880 (TAG). While I accept that the higher figure should be treated with caution, I nevertheless consider that the potential for creation of even some 960 jobs (RBC forecast of new jobs at 50,000 BATMs), many of which would occur in Rushmoor and the locality, would be a significant benefit to the local economy to which I attach substantial weight. [85, 218]
568. I accept that RBC's core position is that growth in BATMs will only reach 39,500 by 2019, and that the employment benefits will be significantly lower in consequence. I give further consideration to the BATM predictions below.

Monetary value of time savings

569. There was little or no systematic evidence before this Inquiry which would allow confident conclusions to be reached about the origin/destination of flights, their principal purpose, number of passengers, usage by major companies or the value of time savings in terms of greater efficiency. TAG have attempted to survey users of the airport, but have met with a poor response from a user group who place a high value on privacy and confidentiality. TAG management's view is that up to 15% of movements may be for leisure purposes, but that the airport is principally used by high earning business leaders for business purposes, for whom time saving, convenience and privacy is at a premium. This view is broadly corroborated by two of the fixed-base operators at FA. For example Marwan Khalek of Gama Aviation states that "based on my knowledge of clients and the frequent interaction I have with them, I would estimate that some 70% of our flights are for purely business purposes, about 20% are for dual business and leisure purposes with the balance being for leisure purposes only." Clare Cronin of NetJets identifies a customer trend of 75% by entrepreneurs and corporates, 25% by individuals for a mixture of business and leisure usage across their European business (TAG/R/6 para 4.7). [200, 201, 236]
570. It is equally difficult to quantify the economic benefit arising from time and efficiency savings to users with any degree of precision. TAG calculates a figure of £41.3 million per year, with a further £18.2 million arising from higher in-flight productivity, and £7.3 million from scheduling flexibility, giving total user benefits of £66.8 million. These calculations assume average

loading of 2.53 passengers per flight, and a value of time of £308 per hour. In the absence of any survey data of passengers at Farnborough it would be unwise to place too much reliance on these figures. While some passengers will undoubtedly be very high earners, they might be accompanied by others with lower hourly rates of pay. Furthermore, while it is argued that the 45 minute isochrone extends to West London, in practice travel times by road are highly sensitive to congestion, and can be much higher at peak times, leading to a reduction in time savings and convenience [87, 236, 237].

571. There is little doubt however that check-in and security procedures are considerably less time consuming than would be the case at a major commercial airport. The opportunity to fly direct to a large number of smaller airports and for putting together bespoke itineraries is a further clear advantage of business aviation. As the 2007 Eurocontrol Study states "Business aviation fills a gap in scheduled services: two thirds of business flights in 2007 were between cities not served by daily scheduled flights." (CD/98 page 6) It goes on to say that the time savings which BA can deliver make it a commercial proposition and not simply an added convenience. Indeed were it not the case that these advantages are highly valued by businesses and individuals it would be difficult to explain the rapid growth of the sector in the past decade, given the substantially higher direct costs of business aviation in comparison with scheduled services and other modes of travel. I agree with the view of the 'weekend flights' Inspector, that "business aviation serves as a highly valuable business tool".

Need

572. TAG forecast that the present cap of 28,000 movements would be exceeded by 2011 (31,000 BATMs), assuming growth of 21.6% over the predicted number of movements in 2010 (25,500 BATMs). Thereafter TAG's consultants predict that movements will continue to grow rapidly to 41,000 in 2013, followed by slower growth to 50,000 movements in 2019. Weekend flights at FA all but reached their permitted limit of 5,000 movements in 2009, despite total flights reaching only some 81% of the total permitted (TAG/P/5 Tables 1 and 2). There is no dispute that demand for weekend flights is likely to materialise by 2019 to absorb all of the 8,900 capacity sought by the appeal proposal [80, 165].
573. TAG's consultants predict a rapid 'bounce-back' from the effects on the 2008/9 downturn, envisaging growth of 21.6% and 19.4% in 2011 and 2012 respectively, with growth slowing thereafter to 10.8% in 2013, and below 5% annually in 2014 – 2016. As the limit of 50,000 BATM's is reached growth would be increasingly constrained, with growth of around 2% annually from 2017 – 2019 (TAG/P/5 page 5 Table 1) [81, 82, 91, 170].
574. RBC considers that TAG has significantly over-estimated the total demand for growth in BATMs to 2019, suggesting a lower figure of 39,500 movements should be used to represent unconstrained growth having regard to the significant down-turn of 2008 – 9. RBC's consultant predicted a slower rate of growth at Farnborough coming out of recession. His medium ('most likely') case indicates growth of 5.5% in 2011, 8.4% in 2012 and 7.8% in 2013, but thereafter stabilising at a long-term growth rate of 5.4%. [172]

575. Growth rates for Business Aviation at Farnborough reached high levels in 2006 (15.7%) and 2007 (24.1%), growth having been less rapid, though still buoyant, from 2003 – 2005. There were declines of 3.8% in 2008 and 10.7% in 2009 as a consequence of the recession. Looking at the market for BATMs in the south-east region as a whole, BATMs grew by 28% from 65,833 in 2002 to 83,958 in 2009, an average annual growth rate of some 3.5%. This includes a strong growth period from 2002 to 2007, followed by two poor years as the recession began to bite. In the period up to 2007 BATMs grew at an average rate of some 10.4% a year (TAG/P/5 para 4.12). [91, 188]
576. In the same period, data collected by Eurocontrol (CD/98, page 15, fig 4) showed that BATMs across Europe grew at an annual average rate of 7.8%. While the datasets are not directly comparable, this gives a reasonable indication of the buoyancy of the business aviation sector in the period up to 2007. Eurocontrol's predictions for growth in the number of business jets registered in Europe in the period 2008 - 2017 imply annual growth of 4.4% (CD/98, page 42). TAG's consultants consider that growth in the southeast of England has been higher than Europe, and that this differential is likely to continue. Combined with better utilisation of individual aircraft they forecast a higher rate of growth in BATMs in the south-east of England [80, 82].
577. In my opinion these estimates should be treated with some caution, as the data on which they are based do not fully take into account the effects of the recession. A subsequent report published by Eurocontrol in April 2010: 'Business Aviation in Europe 2009' is more pessimistic. For Europe there is predicted a return to growth in 2010, stronger growth in 2011, and then 5% growth per year. This is weaker growth than seen in 2004 – 2007, but still faster than that forecast for the main scheduled and chartered passenger flights (TAG/INQ/4 page 12 Fig 19). [181, 188]
578. The DfT forecast is for 3.5% annual growth in business air travel in the UK, which includes business travel on scheduled services. The CAA forecast that the main growth in business travel is in passengers travelling in economy cabins, often to short haul destinations and using no frills carriers from secondary and less congested airports. TAG's view is that growth in BATMs will be stronger, reflecting the far wider range of airport pairs served by business aviation, the opportunity to put together bespoke itineraries, and the growing inconvenience and delay associated with flying from major commercial airports. However, there are other factors which could act as potential constraints on growth in business aviation, including operating costs and the introduction of the European Trading System, which may act as a brake on the ability of the industry to meet unconstrained demand. [80, 81, 172, 185, 190]
579. TAG's forecast assumes a rapid 'bounce-back' and an increase in Farnborough's market share as its suggested locational and quality advantages over other BA airports in the southeast allow it to attract a greater share of Business aviation activity in the south-east. [80, 195]
580. RBC's forecast accepts that there will continue to be growth in BATMs, though at a slower rate of growth than forecast by TAG's consultants. It is also possible that growth in CATMs may be slower than predicted, resulting in more capacity being available at the larger airports in the south-east. For the reasons given above I consider that the more optimistic predictions for growth, particularly the 'bounce back' years of 2011 – 2013, should be treated with

some caution. Nevertheless, accepting that the figure of 50,000 BATMs may take somewhat longer to be achieved, I do not consider it unreasonable to expect growth in demand of this order at Farnborough. [77, 78, 164, 172, 188, 192, 197]

581. The potential for growth in demand does not equate to need. It is, however, common ground that there is no spare capacity at Heathrow and Gatwick. While there is capacity at Stansted, Luton and London City they are busy at peak times, and do not always offer reasonable certainty of being able to land at a particular time and at a particular location, which is an important consideration if the efficiency advantages of using business aviation is to be realised. Other airports in the south east undoubtedly have a role to play in accommodating growth in BATMs and will continue to compete with Farnborough for business, though I consider that they are less well placed to serve the Thames Valley area and West London, and none as yet offer equivalent facilities to Farnborough. [199]
582. To my mind, need must be considered in the context of national policy as set out in the Air Transport White Paper 2003 (ATWP), and more recent statements of government policy. The ATWP emphasises that the UK economy depends on air travel, that it is particularly important for many of the fastest growing sectors of the economy, and supports a large number of jobs (p22). It also recognises that environmental problems cause genuine concern for their impact on people near airports, as well as for the global environment. It aims to set out a measured and balanced approach, providing a strategic framework for the development of air travel over the next 30 years. The starting point is to make best use of existing airports rather than the construction of new airports.
583. The ATWP recognises that the availability of sufficient airport capacity is a constraint on future growth (para 2.11). It identified an urgent need for additional runway capacity in the south-east and supported provision for two new runways by 2030. The government has recently announced that there will be no new runways at Heathrow, Gatwick and Stansted (SIT 9, page 16). In these circumstances, I consider that the policy support for making the best use of existing airport capacity is strengthened rather than diminished. In my view it is likely to increase pressure for airports capable of accepting scheduled commercial flights to utilise available capacity, for this market, as has already happened at Heathrow and Gatwick. This is recognised in the ATWP at paragraph 11.101.
584. The Inquiry heard that TAG considers the unconstrained operational capacity of FA to be some 100,000 movements annually, though recognising that safety and environmental constraints are relevant below this level. The present application is for 50,000 movements annually. While the Company witness would not confirm that there would never be another application for a greater number of movements, there is no intention to apply for more than 50,000 at present. The conditions attached to the present permission prohibit the carrying of freight and the operation of commercial scheduled services, and these provisions would be carried forward in the event of this appeal succeeding. If a further application were to be made in future, the environmental, amenity and safety issues would have to be considered in the light of policy prevailing at the time, along with any economic benefits and other material considerations.

585. Farnborough is one of 6 airports listed in paragraph 11.101 of the ATWP as having “potential to provide additional capacity to cater for business aviation demand.” It goes on to say “the Government recognises the important contribution made by small airports in the South East in providing capacity for business aviation.”
586. This falls far short of a site specific allocation and there are certainly no “presumptions in favour” of development established by the ATWP. It is for airport owners and operators to bring forward such proposals, which will need to be considered through the planning system in the normal way, against the criteria set out in paragraph 2.18, in pursuit of a balanced and measured approach to the future of air transport. Nevertheless it provides a favourable national policy climate for the consideration of additional movements at Farnborough, subject to the ability to meet environmental concerns. I attach significant weight to this.

Alternatives

587. RBC’s view is that if the appeal fails most BATMs would simply move to other airports where there is available capacity to accommodate likely growth in the market. It is argued that growth in CATMs will be lower than forecast by TAG, leaving capacity to accommodate any growth in BATMs without the need to allow additional flights at FA. [172, 175, 178]
588. In my opinion the quality of terminal facilities and hangarage, runway length, availability of multi-directional instrument landing systems (ILS) and position within the sub-region providing relatively quick access to West London and the Thames Valley are significant factors which have made FA an attractive base for business aviation and have supported rapid growth in BATMs using the airport during the last decade.
589. This was acknowledged by the Inspector and the Secretaries of State in the weekend flights appeal (CD/13 and CD/14). To my mind there is no reason why this comparative advantage should not continue to apply in the period to 2019 and beyond, should the appeal succeed [94].
590. This is reinforced by the ability to offer on-demand take-off and landing facilities, something which is becoming increasingly uncommon at the major commercial airports in the region. Heathrow and Gatwick already give priority to scheduled commercial flights, and this tendency is likely to become more pronounced in future, particularly now the government has stated that there will be no new runways at these airports. As the owner of Gama Aviation stated to the Inquiry, business aviation operators have been squeezed out from these airports in the past, and this trend is likely to continue given continued growth in demand for scheduled flights. RBC accept that there is no spare capacity at these major airports to accommodate growth in business aviation movements. [177]
591. There may be some potential for growth in BATMs at Luton, though there are few slots available at peak times, and no committed proposals for measures which might increase capacity such as the construction of a parallel taxiway. Slot approval needs to be sought at Luton, which diminishes flexibility as regards arrival and departure times. [95, 96, 174, 209]

592. I accept that there is likely to be capacity at Biggin Hill and Southend which could absorb some of the predicted growth in the market for business aviation in the south-east. In my view it would be unrealistic to assume that these and other airports will not continue to invest in facilities and compete vigorously for market share, and for some origins and destinations in the south-east they will be more attractively located than FA. However they are significantly less well placed than FA to serve businesses in the Thames Valley and the outer parts of West London where a large number of major companies are located. For these users some of the convenience advantage of business aviation would be lost. [97, 165, 183, 203, 207]
593. There is currently also some spare capacity at Stansted and London City. While these airports could attract some movements which might otherwise choose FA if this appeal is successful, it is likely that they will be under increasing pressure to accommodate predicted growth in scheduled flights in the absence of significant additional capacity being made available at the major airports [96, 208].
594. Of the other airports referred to by RBC I consider that Southampton, Bournemouth and Oxford are less likely to attract users with an origin or destination in London and the Thames Valley, by reason of their relative locations. Nearer to Farnborough, Blackbushe airport is capable of accepting some business aviation movements, but it is subject to operational constraints and does not appear to me to be competing in the same segment of the market as Farnborough. While lower fees may be a consideration for some users, in the overall equation of the costs attributable to business aviation I consider that the higher cost of using Farnborough is unlikely to be a significant deterrent, and that convenience and the quality of facilities provided will continue to be the key considerations for customers of the airport. [96, 97, 210, 211]
595. In summary I accept that some of the predicted growth in BATMs could be accommodated elsewhere in the region. I consider that there is likely to be a degree of overlap in catchment for the various airports serving London, particularly as regards the City and the West End. There are other options for business travellers, including use of scheduled services, another mode of transport or use of some other means of communication such as video conferencing. Nevertheless business aviation is a recognised and accepted segment of the overall market for air travel, which contributes to economic prosperity and national and local income. FA is well placed to serve that market, particularly in relation to the Thames Valley and London, which are accepted as being important to the economy as a whole. [94, 95, 96, 165, 191, 203, 204]
596. While there have been significant changes in prospects for growth, both in air travel and in the wider economy, I do not consider that this has invalidated the conclusions of the Secretaries of State in the weekend movements appeal that "there are no equivalent alternatives for operators or aircraft types currently using FA; that all the potential alternatives suffer from considerable constraints in terms of operating characteristics; and that leaving aside the other fully equipped airports that have slot constraints, none has airfield and terminal facilities that can match those at Farnborough." (CD/14 para 23) [94].

Conclusion on Economic Benefits, Need and Alternative

597. There is no dispute that FA is an asset of historical and economic significance for Rushmoor. This is recognised in the Nathaniel Lichfield and Partners (NLP) study carried out on behalf of RBC in 2009, which concludes that “The airport itself is one of the largest employers in the Borough, and, together with the cluster of aerospace, defence related high technology activities and other uses immediately adjoining, is a major employment centre within the wider north Hampshire/Surrey area. The presence of the Airport makes a significant contribution to the general business attractiveness of the area.” (CD/115, Para 5.40).
598. I acknowledge that some of the assumptions on which TAG’s consultants base their predictions of growth, for both BATMs and jobs, appear over-optimistic in a period of economic uncertainty and retrenchment. The Appellant points out that Treasury forecasts treat downturns as temporary interruptions after which there have historically been a return to trend (CD/100, para 2.96). However the growth trends for business aviation were particularly high prior to 2008, and there is no certainty that these high levels will be achieved or sustained in future. While I accept that users of business aviation may in the main be characterised as ‘high net worth individuals’ who place a high value on time-saving and are less sensitive to issues of cost, there is a real possibility that the ‘bounce-back’ from the effects of recession will be slower than predicted, and the timeframe for reaching 50,000 movements will be correspondingly extended. However I do not consider adopting a more cautious approach to growth in movements and associated jobs would significantly reduce the economic benefits of allowing the appeal. It would simply mean they would take longer to be realised. 2019 is the year to which the Master Plan looks (CD/15 page 7), but no purpose would be served by treating it as a cut off date for the consideration of the capacity of FA to accommodate additional BATMs beyond the present cap of 28,000 [92].
599. NLP’s 2009 study concludes on the general employment situation at Farnborough as follows: “Taken as a whole, the sub-region has a strong local economy which has outperformed regional averages, with reasonable employment growth, strong rates of new business formation, above average skill levels, very low unemployment and high average wages. It is strongly represented in the service sector and in knowledge based firms with a modest manufacturing base. It has also been reasonably successful in attracting inward investment in higher value growth sectors. However, some parts of the area perform better than others, with Rushmoor experiencing higher unemployment and more modest job growth. While unemployment is generally low, there is still demand for jobs in higher skilled occupations, as well as unskilled work. Despite the sub-region’s generally strong economic performance, this suggests that the Rushmoor area in particular would benefit from further employment growth in sectors that provide a range of job opportunities including higher skilled work.”
600. In commenting on the possibility of an increase in aircraft movements the NLP report states: “Allowing a near doubling of air movements to 50,000 p.a. or more would lead to moderate gains in income and employment generation. The ability to operate more flights ought to allow more frequent and convenient air services and help consolidate the airport’s position as a leading Business Aviation airport and potentially attract new operators to base

themselves at Farnborough. This in turn should generally enhance services available to businesses, which, in turn, might be expected to make the area more attractive in terms of attracting or retaining investment. If maintaining the current limit on movements prevented the airport from accommodating the future level of demand and offering a good quality service to corporate users, this could give a generally negative message about Farnborough compared with other airports with fewer constraints, and may send out adverse signals to businesses which could affect decisions on expansion." (CD/115 para 11.17)

601. TAG accept that the appeal proposal is not necessary to secure the viability of FA, and that further investment in facilities, for example the second hangar for which planning permission has been granted, is not dependant on the outcome of the appeal. I acknowledge that in a national context, or even in relation to the total number of jobs in Rushmoor and the neighbouring districts of Hart and Surrey Heath – 122,800 – (CD 115 paras 4.14; 5.30), the employment benefits could be regarded as moderate. Some of the employment benefits would be displaced along with surplus BATMs to other parts of the region if the cap of 28,000 movements is retained. However in my view the potential for creation of even some 960 jobs (RBC forecast of new jobs at 50,000 BATMs), many of which would occur in Rushmoor and the locality, would be a significant benefit to the local economy to which I attach substantial weight. While some of the higher predictions of employment growth should be treated with caution, the benefits of new employment are real and should not be underestimated. If in the event they are justified by the outturn, the economic benefits would be even more substantial. [160, 217, 229, 246]
602. Efficiency and productivity benefits to users are difficult to quantify with any degree of precision. However to my mind the sector would not have developed as it has if it did not facilitate the conduct and management of business, particularly those businesses which operate internationally. While there are many factors contributing to the advantages of the Thames Valley as a location for business and inward investment, the existence of FA as an airport specialising in business aviation must be counted as a significant asset to the locality and the sub-region.
603. The ATWP provides a favourable policy climate for the consideration of growth in BATMs at FA. The RLPR seeks to promote and encourage a buoyant and diverse local economy, enable a range of jobs to be provided to match the skills and needs of local residents and recognises the employment potential of development at FA. I deal with overall compliance with policy below, but insofar as it would contribute to job provision in the area, the proposal would accord with this aspect of development plan policy. [153]

Climate Change

604. CPRE argue that permitting the increase would run directly counter to the government's proposals in the Climate Change Act (CCA) for a reduction in national emissions to 2050. This sets a target to reduce UK greenhouse gas emissions to 20% below their 1990 level by 2050. Within that, the DfT predict that UK aviation CO₂ emissions will grow from 37MtCO₂ in 2005 to 59.4 MtCO₂ in 2030. After 2030 aviation emissions are projected to have stabilised, partly due to market maturity and capacity constraints slowing demand growth. Nevertheless, even with aviation emissions stabilising after 2030 and taking into account assumptions relating to improved fuel efficiency through

technological progress, aviation's share of UK greenhouse gas emissions is predicted to rise until 2050.

605. It is not disputed that aircraft in flight are the dominant source of carbon emissions, and that the application of 'radiative forcing' factors may add significantly to the degree to which flight emissions impact on climate change, though there is currently no consensus on the additional impact resulting from radiative forcing. However, it does not follow that an increase in flights from a particular airport would of necessity result in a breach of the government's commitment to reduce overall carbon emissions by 2050. Increased emissions from one sector are not necessarily incompatible with the achievement of these targets, as major reductions in emissions are predicted from other sectors. Aviation as a whole currently accounts for a relatively small share of overall UK emissions (estimated at 6.4% in 2006 (CD/100 Para 3.13 and Table 3.3)), and within that BA accounts for a small share of all aviation.
606. The government's approach to these matters is clearly set out in the ATWP, which states that 'the international nature of the aviation industry means that action to tackle these problems must be taken in collaboration with governments and institutions world wide. The government will ensure that the UK meets its international commitments and obligations.' (para 3.4).
607. The government's approach to controlling greenhouse gas emissions attributable to aviation includes supporting and encouraging research and development into new technology, improvements in air traffic management, the development and adoption of better operating practices and inclusion of aviation within the European Union Emissions Trading Scheme (ETS). The scheme will apply to aviation from 1 January 2012. It is expected to cover more than 80% of flights from Farnborough, including the main fixed base operators. The effect would be to cap total emissions to a fixed limit. It will require airlines which operate flights into, within or out of the EU to surrender allowances to cover the annual CO₂ emissions. This means that overall emissions from sectors included in the ETS will not be increased by any growth in CO₂ emissions from aviation. Operators wishing to increase their emissions from their share of the overall aviation limit, would be required to buy additional allowances from elsewhere in the system. If fuel efficiency improves significantly as forecast by the industry, aviation emissions could be lower than currently forecast by the DfT. The overall level of emissions from aviation would still be contained within the ETS cap, but within this the aviation industry itself would be making greater CO₂ reductions. (CD/100 para 1.14 - 1 18).
608. A recent (February 2010) government statement (The Government's response to the House of Commons Transport Committee on 'The future of aviation: First report of session 2009 – 2010' (CD/46) confirms the validity of this approach: 'Including aviation in the EU ETS will also have a lesser impact on the economy than if the same environmental improvement were to be achieved through other measures such as a fuel tax or emissions charge. The ETS is not intended to provide a total solution. Instead it is part of a comprehensive European approach, which includes more efficient technology, operations, air traffic management and alternative fuels.' While not a 'total solution', it remains the preferred approach to addressing such matters.

609. With regard to the consideration of 'radiative forcing' factors to account for other pollutants and the effect of emissions at high altitudes, while there is at present no agreement as to how such factors should be applied, it is reasonable to expect that any 'radiative forcing' effect should be addressed on an industry-wide basis rather than in the context of individual planning applications. [123]
610. The ATWP (CD/25) gives clear policy advice that the best use should be made of existing runway capacity subject to any overriding environmental constraints. To that extent better use of existing infrastructure could in principle be considered a sustainable approach to capacity increases. While climate change issues are accorded great weight in government policy, there is a framework in place for addressing these matters on an industry wide basis, which also takes into account the international aspects of aviation, and the need for the UK industry not to be put at a competitive disadvantage. In this context I consider it would be unreasonable to seek to restrict growth in flights where physical capacity exists, on the grounds that additional flights from a specific airport (in this case Farnborough) will contribute directly to climate change. To adopt such an approach would effectively call a halt to any airport expansion, which is clearly not the intention of the ATWP. Government policy recognises that aviation, including business aviation, has an important contribution to make to economic well-being, and demand is predicted to increase. Dismissal of the appeal would displace flights from Farnborough, but would not necessarily prevent them from taking place. Some would be displaced to other airports in the UK and abroad [122].
611. It cannot seriously be disputed that, on a per passenger basis, business aviation is a carbon intensive activity in comparison with other modes of travel. However, the ETS does not distinguish the nature and purpose of flights, but considers charging principally on the basis of tonnes per kilometre flown. Whilst this might be viewed by some as a shortcoming of the ETS, there is no basis in current aviation policy for the decision maker to make such a distinction [123].
612. Carbon emissions attributable to the operation of the airport itself (buildings, ground vehicles, and auxiliary power units) together with activities over which TAG have some control (surface transport emissions and fire training) represent only a small proportion of total emissions. It is predicted that in 2019, with the airport handling 50,000 flights a year, carbon emissions for these operations would total 19,750 tonnes, compared to some 241,000 tonnes attributable to cruise emissions (revised figures TAG/P/9 para 6.7). The Airport Masterplan sets out TAG's objective of achieving carbon neutrality in respect of airport operations, in accordance with the Airport Carbon Accreditation (ACA) scheme operated by Airports Council International (ACI) Europe. The implementation of the scheme is at an early stage, but I consider that this is convincing evidence of a commitment to deliver high environmental standards and minimise those climate change effects which are directly attributable to airport operations. It was widely considered, not least by RBC, that the operators at FA take environmental management very seriously and in many respects adopt an exemplary approach [124].
613. In addition to reduction in carbon emissions arising from airport operations, the S106 obligation provides for the introduction of a charging scheme related to the level of NOx emissions during the landing and take-off cycle. There is

evidence that such schemes have been successful in encouraging reductions in NOx emissions elsewhere. Technological advances in engines and aircraft design are predicted to result in progressive reductions of NOx and other pollutants. TAG's commitment to phase out aircraft which do not meet Chapter IV noise standards within a set period is also likely in my view to result in the progressive phasing out of older, more polluting aircraft. However while these are benefits of the scheme, some are likely to happen anyway through regulation and technological advances, and without quantification little weight can be given to them in the overall balance.

614. In summary, and in the light of national policy on emissions charging, I do not consider that emissions of carbon and other pollutants attributable to aircraft in flight should be treated as a significant factor in the determination of this appeal. The effects of aviation cross national boundaries, and the ETS is designed as far as possible to create a level playing field between operators and between countries. It would be inappropriate to assess the proposal on the basis of en-route cruising emissions, which could arise irrespective of the specific point of take off and landing, and for which responsibility lies primarily with the airline operator. I accept that a proportion of ATMs by lighter aircraft (i.e. aircraft under 5.7 tonnes - estimated at less than 20% of total movements at FA) would not be caught by the ETS. However it is not possible to differentiate such movements in determining an individual planning application for an increase in movements. If it were considered desirable at a later stage to include lighter aircraft in the system on climate change grounds, that would be a matter for national government and international partner governments to determine.

Other matters

Surface access

615. A number of residents were concerned about the potential for increased traffic and congestion on local roads. The Transport Assessment and Addendum identify an increase of some 1,335 additional personal trips daily in 2019 if the proposal is permitted. This represents an increase in traffic on local roads of less than 10%. The S106 Agreement would secure the preparation of a travel plan to identify and encourage use of alternative means of transport to the use of the private car. Although this would primarily apply to people working at the airport, this would be the main source of the growth in trips. No objections to the proposal were lodged on highway grounds by the local highway authorities or the Highways Agency. I agree with the conclusion of the Environmental Assessment that, taking into account the mitigation provided through the travel plan and off-site contributions secured through the Section 106 agreement, the impact of the proposal on the local road network would be negligible. [108, 109, 379, 417, 418]

Biodiversity

616. The Thames Basin Heaths Special Protection Area includes land close to the airport. Constituent parts of the SPA lie to the east and west of the urban areas of Rushmoor and the application site. The nearest components of the SPA which are beneath the main flight paths to and from the airport are: to the north-west, Eelmoor Marsh, part of which follows the airport boundary; to

the south, the Bourley and Long Valley SPA component; and some 2.8 km to the east, the Ash to Brookwood Heaths component.

617. Potential effects on protected species were considered in the Environmental Statement. It concludes in respect of noise and air quality that the proposal is unlikely to have any impact on breeding bird populations or on the quality of the heathland habitat. Natural England (NE) is a statutory consultee. In responding to consultation on the proposal it stated that it had no objection and expressed the view that "...either alone or in combination with other plans or projects, the proposed increase in flights would not be likely to have a significant effect on the interest features of the Thames Basin Heaths SPA." NE also considered that "...there will be no likely significant effect on designated sites around the application site, with regard [to] air pollution. The additional emissions generated by this application are not considered to be significant either alone or in combination with all other plans and projects in the area. As this is the case, Natural England do not feel an Appropriate Assessment is required with regard to air pollution...." (CD/9 paras 312 – 338).
618. No evidence to contradict this view has been put before the Inquiry. Accordingly there is no basis for me to conclude otherwise than in accordance with English Nature, that in the absence of harm it is unnecessary to undertake an Appropriate Assessment. [110, 111, 411, 418]
619. A proposed condition would secure a scheme of compensatory measures in respect of the minor adverse effect on FA Site of Importance for Nature Conservation identified in the ES. I conclude there is no reason to refuse planning permission on grounds of harm to biodiversity.

Property values

620. Although not encompassed by Policy FA2.2(D), Cllr Radley noted that a PSZ becomes a blight to those owners having property within it and suggests that, irrespective of any elevated risk levels, additional planning constraints must be considered a loss of amenity. Whilst the loss of property value is not usually regarded as a planning matter, I accept that the limitations on development of a property consequent upon inclusion within a PSZ would have some harmful effect on residential amenity in its broadest sense. However there is no systematic evidence of property prices being affected adversely by proximity to the airport approach and departure routes and I consider that little weight should be given to this in arriving at the overall balance. [383]

Human Rights

621. A number of representations were made to the effect that the proposed increase in flights would affect human rights. [373]. It was argued that a proper consideration of the Human Rights of residents around the airport would ensure that any removal or reduction of those rights is minimised and mitigated as much as possible. Objectors suggest that the current application fails to provide effective mitigation and gives the benefits of source noise reduction to the operator. They consider that the effects of the scheme would not be proportionate, would not comply with policy to minimise impacts and that the proposal fails to address properly the Human Rights of those affected. [373]

622. Article 1 of the First Protocol of the Human Rights Act deals with the protection of property rights. Article 8 states that everyone has a right to respect for privacy and family life, while article 2 is concerned with risk to life and health. I recognise that there would be some infringement of these rights if the appeal is allowed. However, I have concluded above that the degree of harm in respect of increased noise would be moderate, and that the degree of risk, while greater than under the no development scenario, would be less than what was previously deemed acceptable and should not stand in the way of permission being granted. In the light of this, I consider that the effects would not be disproportionate, and is capable of being outweighed by the economic and employment benefits. This approach accords with my overall conclusion and recommendation below.

Overall conclusions and balancing exercise

Policy

623. The principal policies relevant to the determination of this appeal are the ATWP (CD/25) and Policy FA2 of the Farnborough Local Plan Review.
624. The South East Plan was revoked on 6 July 2010 and thus no longer forms part of the Development Plan for the purposes of Section 38(6) of the Planning and Compulsory Purchase Act 2004. Although this occurred after the Inquiry closed, witnesses were asked to comment on the implications of revocation for the appeal, and Counsel to address the matter in closing submissions. The principal parties both agreed that revocation would not significantly affect the balance of the arguments in respect of their cases. I agree with this and have reached my conclusions on the same basis. No other comment on the issue of revocation was expressed by the Rule 6 party or any other interested person or group.
625. The ATWP dates from 2003 but remains the principal statement of government guidance on aviation and airport capacity. A more recent statement supported the validity of the approach set out in the ATWP. The ATWP was considered by the House of Commons Transport Committee which reported on 7 December 2009. The government's response was published on 24 February 2010, as 'The future of aviation: Government response to the Committee's First Report of Session 2009 – 10.' At paragraph 1 the government welcomed the Committee's conclusion that the ATWP continues to provide a sound basis for aviation policy.
626. The Coalition Programme of Government, published in May 2010 (SIT9) has instituted significant changes to policy, particularly in respect of the cancellation of the third runway at Heathrow, and the statement that planning permission for additional runways at Gatwick and Stansted will be refused. A further indication of the government's intentions was given in a statement by the Rt Hon Philip Hammond, Secretary of State for Transport on 15 June 2010 (SIT61). It announces the establishment of a South East Airports Task Force to explore the scope for other measures (in addition to the reform of economic regulation) to help make the most of existing infrastructure and improve conditions for all users. In doing so it recognises the importance of aviation to the economy and employment, and to UK competitiveness but states that "we cannot simply allow growth to continue at levels it has in the past. Doing so

risks unacceptable consequences in terms of noise and local air quality, quite apart from the global effects of CO₂ emissions". [151, 159]

627. The general principles outlined in the ATWP remain current, however. Amongst other things it:

- recognises that air travel is essential to the UK economy and to continued prosperity, is particularly important for many of the fastest growing sectors of the economy and provides the rapid access that is vital to many businesses.
- concludes against the construction of new airports at a number of locations and takes the starting point as making the best use of existing airport capacity.
- recognises that small airports have an important part to play in the future provision of airport capacity in the South East stating that 'their ability to provide services to meet local demand and thereby help relieve pressures on the main airports will be particularly important before a new runway in the South East is built'.
- recognises that the ability of business aviation to gain access to the main airports in the South East will continue to be problematic as capacity constraints cause airports to focus on more valuable commercial traffic. (Farnborough was one of a number of small airports which it was felt had potential to provide additional capacity for business demand, and on which views were sought in consultation. It reports that there was a limited, but generally positive response. This clearly falls well short of a general public consultation on a specific proposal, and I accept that the ATWP does not authorise or preclude any particular development (Page 9). As such there is no presumption in favour of the appeal proposal, which needs to be considered through the planning system in the normal way (Page 17). Nevertheless the assessment of growth and available capacity in the ATWP do provide a favourable policy climate for making the best use of existing runway capacity, subject to environmental considerations.)
- acknowledges that one of the features of air travel is that while many of the benefits are spread across society as a whole, many of the adverse impacts are distributed unevenly. 'People living near airports have to live with the immediate effects of aircraft noise Action can be taken to mitigate these adverse effects, but it is seldom possible to eliminate them altogether. (para 3.2)'. The balanced approach seeks to reduce and minimise the impact of airports on those who live nearby, and on the natural environment.

Noise

628. My detailed conclusions in respect of noise are set out in paragraphs 497 – 504 above.

629. Notwithstanding TAG's view that Policy FA2.2(A) of the RLPR is an enabling policy, I have concluded that the current proposal for an increase in overall and weekend movements in excess of the figure of 28,000 movements would conflict with the movement limits set out in the second part of FA2.2(A)(i). In this respect, the proposal represents a departure from the development plan.

In accordance with Section 38(6) of the Planning and Compulsory Purchase Act 2004, it is therefore necessary to consider whether this conflict is outweighed by other material considerations.

630. I acknowledge that in adopting the plan RBC went against the Local Plan Inspector's recommendation that movements should be controlled by means of a noise budget alone, and that a ceiling figure of 28,000 movements was therefore deemed unnecessary. Nevertheless the cap is part of the plan as adopted, and the current proposal is in conflict with it [142, 149].
631. RBC has signalled that it is not opposed in principle to the cap being revised to allow an increase in BATMs and accepts that there is some scope for growth in movements above 28,000 although they have not specified at what level they consider the advantages would strike a more appropriate balance with any harm. At the Inquiry it was suggested that growth in BATMs of some 25% might be acceptable, but this has not been considered by the Council or its Committees. To my mind, RBC's acceptance that a cap of 28,000 movements is outdated is a material consideration of importance and indicates that the appeal should not be dismissed on this ground [147,148].
632. It is also material to consider the other leg of Policy FA2.2(A)(i), which provides that 'the number of aircraft movements shall not result in levels of noise exceeding those that would be generated by 20,000 movements per annum of a mix of aircraft similar to the mix of civil aircraft movements to and from Farnborough Aerodrome in 1997'. [457]
633. It is common ground between the main parties that the appeal proposal would not exceed the noise budget. Indeed, given advances in technology and the introduction of quieter aircraft in the intervening period it is unlikely that the noise budget would ever be breached within the physical capacity of the runway, estimated at some 100,000 movements.
634. Policy FA2.2(C) is also applicable [464]. It says that proposals will be permitted if they cause no 'demonstrable harm' to the amenities of the surrounding area [465]. For reasons given in paras 497 - 499 I conclude that the degree of harm passes the threshold of demonstrable harm, and thus places the proposal in conflict with this aspect of policy [142].
635. I accept that this is a stern test [465]. Many developments can result in low levels of harm which is demonstrable, but can nevertheless be found acceptable if other considerations outweigh the harm. It is for the decision maker to assess the degree of harm on the evidence presented.
636. There was much discussion at the Inquiry of the appropriate method of noise assessment, and I have set out my conclusions on this matter in full in paras 452 - 462 above. Although the LAeq16h metric is conventionally used in the assessment of aircraft noise and its impact on residents, and this is in accordance with the approach recommended in ATWP and PPG24, I have concluded in this case that account should be taken of both the noise contour approach and the number of movements. [477].
637. The proposed increase in flights would result in some 364 additional dwellings being included within the 57dB(A) contour in 2019 than would be the case if the current limit of 28,000 flights were retained [483]. While 57 db(A) is considered to represent the onset of significant community annoyance, there

will nevertheless be a proportion of the population who will be highly annoyed at this level. A further 60 dwellings would be exposed to levels above 60 dBA [490] It is considered that a proportion of these residents would be highly annoyed by the proposed increase, and that this represents demonstrable harm in the context of Policy FA.2.2(C). It is clear from representations made that a number of residents are already highly annoyed by the existing flights, and it is logical to suppose that they would experience increasing annoyance as the frequency of flights increased.

638. I note concerns about bunching of movements, particularly at peak hours, which some residents reported. It is clear from my own observations and the evidence provided in SIT 70 that this is a feature of the pattern of movements at FA which is not fully taken into account when averages are considered. On the evidence provided I calculate that the proposed increase in ATMs is likely to mean that around 9 departures an hour (or approximately 1 departure every 7 minutes) would, on average be experienced twice per day by 2019.
639. I accept that the increased number of BATMs would be clearly discernable and that residents would be very much aware of the noise events consequent on the increased number of movements. However, in reaching a conclusion on noise impacts it is very important to remember that residents at either end of the runway would, under normal circumstances, only expect to experience half of the total increased movements [497]. On average residents would experience an increase of 2.35 movements/hr on a base position of just over 3 movements/hr on weekdays.
640. Notwithstanding that, compared with the fallback position, the conventional LAeq16 metric assessment indicates that there would be an increase in the number of dwellings exposed to noise levels above 57 dBA, the area within the 57 db(A) contour would be considerably less than that which was deemed acceptable at the Local Plan Inquiry. A relatively small number of properties (60) would be exposed to levels exceeding 60 db(A). No properties would be exposed to levels exceeding 63 db(A) and the overall noise increase of 2.2 db(A) has been regarded at other Inquiries as being of low significance. While the number of properties exposed to noise levels in excess of 57dB LAeq 16h would be significantly greater than now, or than would be the case in 2019 if the appeal is dismissed, the area within the 57db(A) contour remains well within the original noise budget set in the RLPR.
641. I accept that RBC and others consider that the noise budget set in the RLPR is unrealistic in the current circumstances, and that greater weight should be given to the ATWP objective of limiting and where possible reducing the impact of noise over time. Nevertheless the noise budget is clearly material to determination of the appeal. Its use as a benchmark for the assessment of noise effects from flying at Farnborough has been consistently applied in the consideration of Business Aviation. In my view it would be inequitable to depart completely from it now.
642. With regard to the frequency of movements, I accept that the increase would be unwelcome to affected residents. As a proportion of currently permitted movements the increase would be 78%. Nevertheless my impression based on observation, shared with the assistant inspector and the weekend flights inspector, is that individual noise events are of short duration, generally no more than some 30 seconds. While there are undoubtedly periods and

particular times of day when flying activity is quite intense, there can also be significant periods when there is little flying activity.

643. FA has a long history of aviation prior to TAG's involvement. I acknowledge that the airfield was, at that time, operated so as to minimise noise at weekends. Nevertheless it now has an established authorised use for business aviation, including at weekends, and it seems to me that the ability to operate at weekends is crucial to its success as a business airport. While I understand the concerns of RBC and affected residents in respect of noise, the evidence on the basis of the conventional means of assessment, supplemented by subjective judgment, indicates that the noise effects of the proposal would be moderate. This was accepted by RBC in respect of weekday flights, but in my judgment also applies at weekends. Nevertheless, I accept that the effects would amount to demonstrable harm and are a factor to be weighed in the balance with the other considerations. I deal with these below.

Safety

644. The information submitted by TAG in support of the application and appeal does not include any quantified assessments of third party or societal risk. While DfT have indicated that third party risks should be taken into account in assessing the effects of an increase in movements, there is no policy requirement to do so.
645. TAG has provided individual third party risk contours and has calculated a PSZ for the proposed development. Whilst the CAA would be responsible for the review and update of the existing PSZ were the appeal to be successful, the PSZ calculated by NATS for TAG is smaller in area and would contain fewer developments than the existing PSZ. The current risk contours were calculated using accident data that was current in 2002/3 whereas the 50,000 movement scenario has been calculated using 'refreshed' accident data.
646. NATS maintains that data on crash rates is commercially confidential. I acknowledge that there is an unfortunate lack of transparency over how these crash rates, and the resulting PSZ have been arrived at. However, notwithstanding that NATS provide air traffic control services at Farnborough, and gave evidence on risk to the Inquiry on behalf of TAG, I have no basis on which to question the integrity of their assessment. The PSZ assessment was subject to internal peer review. NATS are acknowledged experts in air traffic control and safety, and safety is stated to be their first and foremost priority. I consider that it is reasonable to assume that a modern jet configured for business use would have similar operating and safety characteristics to its commercial counterpart in use on scheduled services, and therefore it is reasonable to rely on identical crash risk assessments.
647. There is no doubt that a distressed aircraft coming down on an educational establishment or in a residential area would be a major disaster. However, the risk to any individual of such an event is remote and begins to merge with other individual risks associated with living in a developed society. In my judgment the size of the PSZ can be treated as a proxy for third party risk, and in this case the size of the PSZ for 50,000 movements would be smaller than that already deemed acceptable in permitting up to 28,000 movements. The likelihood is that an emergency would be contained within the airport perimeter and FA has sophisticated air traffic control facilities. If permission is

granted, all but the most modern aircraft would be banned from the airport within a defined period helping to ensure that operational aircraft comply with the latest safety standards.

648. Independent validation was undertaken by ESR Technology on behalf of RBC at the planning application stage. It found that risk assessments given in the ES for 50,000 movements were consistent with those undertaken by ESR Technology on behalf of RBC in support of the emerging Airport AAP. ESR Technology considered those risks to be significant but not exceptional when compared with risks encountered at other airports or with other risks that arise from a range of hazards accepted in society in return for their benefits.
649. I accept that there would be some increase in third party risk, which has not been fully quantified. Nevertheless I attach considerable weight to the conclusion of ESR Technology that such risks, though significant, are not exceptional. Such risks are to some degree inherent in being part of a developed society, and must be balanced against other considerations.

Air Quality and Odour

650. For the reasons given in paras 542 – 550 above I conclude that there is no evidence that adverse health effects are likely to result from the proposal. With regard to air quality and odour, I accept that there would be some conflict with RLPR policies FA.2.2(C) and ENV 48, given that the policies are drafted in terms of 'no adverse effect'. Nevertheless I conclude that any adverse effect is unlikely to be material. Implementation of an 'Odour Management Plan' and 'Odour Monitoring Scheme' would be assured by the S106 Agreement. The Agreement would also oblige the Appellant to implement a charging scheme for emissions of nitrogen dioxide. In these circumstances I find that the conflict with the development plan would carry very little weight in the overall balance.

Climate Change

651. For the reasons given in paragraphs 604 – 614 above, I conclude that climate change issues relating to aircraft in flight, though of great importance, are properly dealt with through the forthcoming EU ETS scheme. The 'en-route' emissions are the responsibility of aircraft operators, and not attributable to the individual airport. As regards emissions resulting from airport operations, I consider that TAG has demonstrated commitment to a programme of activities and measures which seek a progressive reduction of carbon and other polluting emissions, with the objective of achieving carbon neutrality by 2019 [111]. Details of the TAG Farnborough Sustainability and Climate Change Charter are set out in the S106 agreement and Master Plan section 12 (CD 15 App 2). While this may be the direction in which regulation is progressing, some credit attaches to the airport operator in this case for adopting and progressing measures in advance of regulatory requirements. I conclude that climate change issues arising from the proposal have been satisfactorily addressed in the application and appeal and consequently do not stand in the way of permission being granted.

Economic benefits, need and alternatives

652. My detailed conclusions on these matters are set out in paras 551 - 603. It is widely accepted that the existing operation makes a significant contribution to

the economic well-being of Rushmoor Borough and the surrounding area. While there was considerable dispute over the number of jobs, RBC accept that the appeal proposal will result in a significant increase in direct, indirect and induced employment [567]. The range of prediction for job creation is 960 – 1884.

653. I acknowledge that in a national context, or even in relation to the total number of jobs in Rushmoor and the neighbouring districts of Hart and Surrey Heath (122,800 – (CD 115 paras 4.14; 5.30)), the employment benefits could be regarded as moderate. It is also likely that some of the employment benefits would be displaced along with surplus BATMs to other parts of the region if the cap of 28,000 movements is retained. However in my view the potential for creation of even some 960 jobs (RBC forecast of new jobs at 50,000 BATMs), many of which would occur in Rushmoor and the locality, would be a clear benefit to the local economy to which I consider that significant weight should be attached. While some of the higher predictions of employment growth should be treated with caution, the benefits of new employment are real and should not be underestimated. If in the event the higher estimates are justified by the outturn, the economic benefits would be even more substantial.
654. I acknowledge that a proportion of flights from Farnborough would be for what was termed 'leisure' purposes. Nevertheless, available evidence indicates that most flights would be for business purposes. Business Aviation is recognised as making a valuable contribution to the economy, for example in the ATWP. While there was no direct evidence before the Inquiry of specific businesses which have made decisions to locate in the Rushmoor area being influenced by the availability of BA services at FA, I accept that it is a valuable business tool, and is a factor which would enhance the area as a location for inward investment.
655. While there is no presumption established by the ATWP, and it may in future be subject to a review which affects policy priorities, at the present time it provides a favourable national policy climate for the consideration of additional BATMs at FA, subject to the ability to meet environmental concerns. [153, 154]
656. I accept that some of the predicted growth in BATMs could be accommodated elsewhere in the region. Nevertheless FA is clearly a market leader for BA, and the advantages which have allowed it to grow rapidly in the past decade seem likely to maintain its competitive advantage as regards predicted growth in the BA sector. While growth to 50,000 movements may extend beyond 2019, I do not consider it be unrealistic as an upper limit to the number of movements which could reasonably be accommodated at FA. It would not be fatal to the proposal if the associated economic benefits also took longer to materialise.

Overall Conclusion and Recommendation

657. I have concluded that there would be some harm in respect of increased noise which would involve conflict with the development plan. However, for reasons set out in full above, I consider that the degree of harm would be moderate.
658. Amongst other things the RLPR seeks to promote and encourage a buoyant and diverse local economy, enable a range of jobs to be provided to match the

skills and needs of local residents and recognises the employment potential of development at FA. In my judgment, increasing the limit to 50,000 BATMs would produce significant employment benefits in Rushmoor and the surrounding area which would outweigh the moderate harm identified in respect of noise. [158]

659. There would also be some real increase in third party and societal risk, although I consider that risks to life would remain remote and would not be exceptional. In my judgment this would not be of sufficient weight to stand in the way of permission being granted. Any deterioration in air quality would not be material and climate change effects, though very important, are appropriately addressed through the EU ETS, which are due to include the aviation sector from 2012.
660. I therefore **recommend** that the Secretaries of State allow the appeal and grant planning permission for the erection of new buildings and associated structures, installation of aerodrome, and ancillary infrastructure works, formation of new vehicular access, and use of the aerodrome for business aviation, and related activities in accordance with the application Ref 09/00313/REVPP, dated 8 June 2009, without compliance with Condition 8 attached to planning permission Ref APP/P1750/A/06/2024640, dated 13 March 2008, but subject to new and amended conditions as set out in the Annex to this report.

David Richards

INSPECTOR

Annex: Conditions in the event of the appeal being allowed:

1. Application for the approval of any reserved matters shall be made to the Local Planning Authority before the expiration of 5 years from the date of the grant of this permission.
2. The development hereby permitted shall be carried out in accordance with the details submitted with application number 99/00658/OUT (approved 11th October 2000) including the amended site plan received on 7th December 1999.
3. No works pursuant to this permission shall commence, until plans and particulars showing the detailed proposals for all the following aspects of the development (hereinafter called the "reserved matters") have been submitted to and approved by the Local Planning Authority in writing:
 - landscaping, including a landscaping design showing the planting proposed to be undertaken, the means of forming enclosures, the materials to be used for paved and hard surfaces and the finished levels in relation to existing levels;
 - the siting of all buildings;
 - the design and external appearance of all buildings, plant and tanks, including details of the colour and texture of external materials to be used, together with samples of all external facing and roofing materials;
 - the layout of foul sewers and surface water drains including interceptors;
 - the provision to be made for the parking, turning, loading and unloading of vehicles;
 - the measures to be taken to protect adjacent areas from excessive noise;
 - the alignment, height and materials of all walls, bunds, fences and other means of enclosure;
 - the provision to be made for lighting;
 - the provision to be made for the storage and removal of refuse from the premises; and
 - all other engineering works.

Each of the agreed reserved matters shall be implemented in accordance with the details approved.

4. The development shall be based on and set out in accordance with the illustrative Master Plan, Drawing No. TOR158901.SK 59 Rev A submitted in support of application number 99/00658/OUT.
5. Notwithstanding the provisions of Condition 4 all new aviation building and facilities shall be located generally within the identified Development Area as shown on Drawing No. TOR158901/SK/70.
6. The development shall have a maximum gross floor space on completion of 47,018sq.m. (including the floorspace granted planning permission under the terms of outline permission reference 99/00658/OUT) and this shall comprise in the region of : Hangar space (inclusive of new and existing hangars) 37,162sq.m.; Hangar Office/Administration 3,050sq.m.; Control Tower 806sq.m.;

Terminal Building 6,000sq.m. No new building shall be erected outside of the Development Area as shown on Drawing TOR158901/SK/70.

7. No more than a total of 50,000 aircraft movements per annum shall take place, of which no more than 8,900 movements shall be at weekends and Bank Holidays. Furthermore, no more than 270 of the 1,500 aircraft movements per annum between 50,000 and 80,000 Kg. permitted by condition 11, shall take off or land at weekends and Bank Holidays.
8. All flying pursuant to this permission shall only take place between 07.00-22.00 hours on weekdays and between 08.00-20.00 hours on Saturdays, Sunday and Bank Holidays, except in an emergency. No flying pursuant to this permission shall take place on Christmas Day and Boxing Day.
9. The maintenance of business aviation aircraft shall only take place between 07.00-22.00 hours on weekdays and between, 08.00-20.00 hours on Saturday, Sundays and Bank Holidays, except in an emergency. No maintenance shall take place on Christmas Day and Boxing Day.
10. No bulk freight service, scheduled passenger services, "including tour" charter flying shall take place. No training or recreational flying (other than recreational flying by the DERA Aero Club or essential familiarisation, training and flying checks by aviation crew) shall take place.
11. With the exception of up to 1,500 movements per annum by aircraft not exceeding 80,000 Kg maximum take off weight, no aircraft exceeding 50,000 Kg maximum take-off weight and no helicopters exceeding 10,000 Kg maximum take off weight shall take-off or land at the Aerodrome pursuant to this permission.
12. No flying pursuant to this permission shall take place if the 1:10,000 per annum risk contour at either end of runway 06/24 extends to areas where people live, work or congregate, or beyond the area at the eastern end of the runway where Policy FA1 of the Rushmoor Local Plan (1996-2011) Review applies.
13. All flying pursuant to this permission shall conform to the agreed 1:100,000 per annum risk contour. For the avoidance of doubt, the currently approved plans are: GN TG A OP 1582 rev A; GN TG A OP 1583 rev A; and GN TG A OP 1588 rev A.
14. The proposed runway configuration submitted to and approved in writing by the Local Planning Authority shall be retained thereafter.
15. For any reserved matter no development shall take place until a construction method statement to include the following: Construction activity and traffic, including dust, noise, hours of operation and traffic movements; The monitoring of potential areas of contamination; Protection of water course; and Protection of habitats during construction activity has been submitted to and approved in writing by the Local Planning Authority. The development shall then be carried out in accordance with the approved details.
16. For any reserved matter, site preparation, clearance works, construction works and pile driving within the area covered by the application site shall only take place between the hours of 0730 and 1800 Monday to Friday and 0800 1300 on Saturdays. No works at all shall take place on Sundays or Bank Holidays.

17. For any reserved matter no development shall take place until details of measures to be taken to prevent mud from vehicles leaving the site during the construction works being deposited on the public highway have been submitted to and approved in writing by the Local Planning Authority and the details subsequently approved shall be implemented before the development commences. Such measures shall be retained for the duration of the construction period. No lorry shall leave the site unless its wheels have been cleaned sufficiently to prevent mud being carried onto the highway.
18. For any reserved matter no development shall take place until details of the provision to be made for the parking and turning on site of operatives and construction vehicles during the contract period have been submitted to and approved in writing by the Local Planning Authority. Such measures shall be retained for the duration of the construction period.
19. For any reserved matter, no development shall take place until surface water control measures have first been agreed in writing by the Local Planning Authority.
20. For any reserved matter, no development shall take place until it has been satisfactorily demonstrated that adequate infrastructure is in place to receive foul water discharges from the site. No building shall be occupied until the infrastructure is available in accordance with the approved details.
21. The access from the A327 at Ively Gate shall remain available in accordance with details which have been approved in writing by the Local Planning Authority. All other access to the site, other than the emergency crash gates and the existing site entrance from the A325 Farnborough Road as shown on the illustrative Master Plan, Drawing No. TOR158901.SK 59 Rev A, shall remain closed.
22. Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 1995, (or any order revoking and re-enacting that Order), no development falling within Classes A-D, of Part 8 and Class A, of Part 18 of Schedule 2 shall be carried out.
23. A detailed scheme of measures to mitigate the impact of the additional business aviation movements on the Farnborough Airport Site of Importance for Nature Conservation, including a timetable for the carrying out of the works, shall be submitted to the Local Planning Authority for approval in writing within 6 months of the date of this permission. The scheme of mitigation shall be carried out strictly in accordance with the details and timescale so approved.
24. No business aviation movements above 28,000 per annum shall take place until a scheme detailing the provision to be made on site for cycle parking facilities, including specification and siting, shall be submitted to and approved in writing by the Local Planning Authority. The agreed details shall be fully implemented before business aviation movements exceed 28,000 per annum and the cycle parking facilities thereafter retained for their intended purpose.

APPEARANCES

FOR THE LOCAL PLANNING AUTHORITY:

Mr Simon Bird QC with Mr Hugh Flanagan of Counsel	Instructed by Ms Karen Limmer, Solicitor to the Council
He called	
Mr Peter Forbes BA, CMRAeS, CMILT	Director, Alan Stratford and Associates Ltd
Mr Dani Fiumicelli Dip Env. Health, BSc, MSC, MCIEH, MIOA	Technical Director, Environmental Noise and Vibration, AECOM
Mr Robert Sellwood BA, Dip TP, MRTPI, FRICS	Managing Director, Sellwood Planning Ltd

FOR THE APPELLANT:

Mr John Steel QC with Mr Stephen Whale of Counsel	Instructed by Trowers and Hamlins
He called	
Mr Brandon O'Reilly	CEO, TAG Farnborough Airport Ltd
Mr Jeffrey Charles BSc, MSc, FIOA	Consultant, Bickerdike Allen Partners
Mr Laurence Price	Director of Aviation Strategy, Mott MacDonald Ltd
Mr Alan Cooke BA, MA	Senior Aviation Consultant, Mott MacDonald Ltd
Mr Martin Shenfield BA	Economic Consultant, Mott MacDonald Ltd
Mr Alaric Lester BSc, MSc, MIAQM, MIEEnvSc	Director, Evan Lester Ltd
Mr Mark McLaren PGDip Mgmt Studies	General Manager ATS Southampton International Airport, NATS Ltd
Mr David Thomson MSc	Senior Director RPS Group Plc
Mr Ian Shrubsall BSc, MRICS	Senior Director RPS Group Plc

FOR FARA (RULE 6 PARTY):

Mr Geoffrey Marks OBE	Chairman, Farnborough Aerodrome Residents Association (FARA)
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INTERESTED PERSONS:

Mr Hugh Sheppard	Chairman, CPRE North East Hampshire District Group
Mr David Parsons	Local resident
Mr Marwan Khalek	CEO, Gama Aviation Ltd
Mr Brian Fyfe	Local resident
Mr Roger Panter	Local resident
Mr Kevin Daley	Mytchett, Frimley Green and Deepcut Society
Miss Daphne Knowles	Residents' representative TAG Quiet Flying Programme (QFP) Working Group,
Mr H.W.Halls	Local resident

Cllr Richard Appleton	Portfolio holder for planning, Hart District Council
Mr Bev Gerrard	Local resident
Mrs Antonia Chambers	Local resident
Cllr James Radley	Hart District Councillor
Cllr Chris Axa	Hart District Councillor speaking as a local resident
Mr Des Treadgold	Local resident
Mr Charles Milne	Local resident
Mr Gordon Keyte	Crandall Society
Mr Norman Lambert	Local resident
Mr William Hunter	Local resident

LIST OF CORE DOCUMENTS

Documents related to the planning application

CD/1	Environmental Statement and Appendices(First two binders)
CD/2	Non technical summary of Environmental Statement
CD/3	Statement of Community Involvement
CD/4	Design and access statement
CD/5	Sustainability statement
CD/6	Planning statement
CD/7	Economic statement
CD/8	Rushmoor Borough Council decision letter dated 19 November 2009
CD/9	Development Control Committee Report (2009) Planning Report No. PLN0951
CD/10	Full transcript of Rushmoor Borough DCC meeting on 11 November 2009
CD/11	Note of Rushmoor Borough DCC meeting on 11 November 2009
CD/12	Appellant's grounds of appeal

Planning documents specific to the Appeal Site

CD/13	Inspector's report in respect Weekend ATM Appeal dated 27 June 2007
CD/14	Secretaries of State decision letter in respect of the Weekend ATM Appeal dated 13 March 2008 (Appeal Reference: APP/P1750/A/06/2024640)
CD/15	TAG Farnborough Airport Master Plan
CD/16	Deed dated 11 October 2000 made between Rushmoor Borough Council (1), TAG Farnborough Airport Limited (2), The Secretary of State for Defence (3) and BAE Systems (4)
CD/17	Unilateral Undertaking given by TAG Farnborough Airport Limited dated 5 April 2007 (plan not included)

Statutes and statutory instruments

CD/18	Environment Act 1995, Part IV: Air Quality
CD/19	The Climate Change Act 2008, Part I: Carbon Target and Budgeting
CD/20	Air Quality (England) (Amendment) Regulations 2002 (SI 2002 No. 3043)
CD/21	Air Quality (England) Regulations 2000 (SI 2000 no. 928)
CD/22	Air Quality Standards Regulations 2007 (SI 2007 no. 64)
CD/23	Not used
CD/24	Not used

National policy

CD/25	The Future of Air Transport White Paper (December 2003)
CD/26	Planning White Paper - Planning for a Sustainable Future (CLG 2007) extracts – Chapter 1: Executive Summary (22 pages) and Chapter 3: National policy Statement (15 pages)
CD/27	Future of Air Transport 2006 progress report
CD/28	The Future of Transport White Paper (2004)
CD/29	Planning Policy Statement 1: Delivering Sustainable Development (PPS1, February 2004)
CD/30	Supplement to PPS1: Planning and Climate Change
CD/31	Planning Policy Statement 4: Planning for Sustainable Economic Growth
CD/32	Planning Policy Statement 9: Biodiversity and Geological Conservation
CD/33	Planning Policy Statement 23: Planning and Pollution Control
CD/34	Planning Policy Guidance Note 13: Transport
CD/35	Planning Policy Guidance 24: Planning and Noise

- CD/36 PPS: Planning for a Low Carbon Future in a Changing Climate -
Consultation Paper (March 2010) extracts – Parts 1 and 2 (pages 7 – 26)
- CD/37 Not used

Policy related documents

- CD/38 Securing the Future, the UK Government Sustainable Development Strategy, (2005) extracts – Chapter 1: a new strategy (12 pages) and Chapter 4: Confronting the greatest threat: Climate Change and Energy (24 pages)
- CD/39 Department for Transport: Night Flying Restrictions at Heathrow, Gatwick and Stansted (October 2006)
- CD/40 Stern Review: The Economics of Climate Change, (2006) extracts – Chapter 7: Projecting the growth of greenhouse gas emissions (24 pages) and Chapter 16: Accelerating technological Innovations (30 pages)
- CD/41 The Eddington Report - Transport's role in sustaining the UK's productivity and competitiveness, (DfT, 2006) extracts – volume 3 pages 134, 135 and 200
- CD/42 Towards a Sustainable Transport System - Supporting Economic Growth in a Low Carbon World (CLG 2007) extracts – Chapter 2: clarifying goals (21 pages) and Chapter 3 (16 pages)
- CD/43 The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Defra, 2007) extracts – Chapter 3 current policies and new measures (26 pages)
- CD/44 'Guidance on Transport Assessment' (DCLG / DfT (2007) extract – Chapter 4: preparing transport assessment
- CD/45 Delivering a Sustainable Transport System, Main Report (DfT 2008) extracts – Foreword (2 pages), Section 2 (5 pages) and Section 4 (9 pages)
- CD/46 House of Commons Transport Committee: The Future of Aviation: Government response to the Committee's First Report of Session 2009 – 2010
- CD/47 Not used
- CD/48 Not used

Local Policy documents

- CD/49 Rushmoor Borough Council Local Plan Review (1996-2011) extract – Chapter 11 and pages 19 & 20 in respect of Environmental Policies (ENV 6 – 11)
- CD/50 Extract of Inspector's Report in respect of RBC Local Plan Review Chapter 11
- CD/51 Rushmoor Draft Economic Strategy 2006-2011
- CD/52 Core Strategy Preferred Approach (January 2010)
- CD/53 Core Strategy: Sustainability Appraisal Report Consultation Draft (November 2009)
- CD/54 Core Strategy: Habitat Regulations Assessment Consultation Draft (January 2010)
- CD/55 Proposals Map Changes Preferred Approach (January 2010)
- CD/56 Farnborough Airport Area Action Plan Preferred Approach (January 2010)
- CD/57 FAAAP: Sustainability Appraisal Report Consultation Draft (January 2010)
- CD/58 FAAAP: Habitat Regulations Assessment Consultation Draft (January 2010)
- CD/59 Representations by Appellant on Rushmoor Borough Council Core Strategy/FAAAP (February 2010)
- CD/60 The South East Plan (2006-2026) extracts – Section b, core regional policy para 13.15 page 13 (referred to in the evidence of Martin Shenfield). Section b, pages 43, 65 – 66, 70 – 75 (referred to in the evidence of Ian Shrubsall); Front page and Policy T9: Airports, paras 8.29 – 8.32 and

	diagram T1 (Transport International and Inter-regional corridors); and Page 105
CD/61	Local Transport Plan 2006 – 2011, Hampshire County Council (2006) extract – Chapter 9: North Hampshire Transport Strategy (42 pages)
CD/62	The Future development of Air Transport in the UK: South East (February 2003)
CD/63	Not used
CD/64	Not used

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CD/65	The Assessment and Management of Environmental Noise Directive, (2002/49/EC)
CD/66	The Airports' Inquiries: (1981 – 1983): Report by Graham Eyre Esq. QC (Extracts)
CD/67	Reaction to Aircraft Noise near General Aviation Airfields, DORA Report 8203, May 1982, CAA London
CD/68	Farnborough Airport Area Action Plan: Preferred Approach, Rushmoor Borough Council, January 2010. Final Report: Scott Wilson January 2010
CD/69	WHO Guidelines for Community Noise, April 1999
CD/70	Farnborough Airport, Noise Impacts of Business Aviation, Report 30432-Iv2, October 2009 Hepworth Acoustics
CD/71	Acoustic Technology Ltd. Noise Assessment, Farnborough Aerodrome – Inspector's Recommendations versus Future Projections (28K movements per annum), Technical Report No AT 4769/1 Rev 0, 26 May 2000
CD/72	Letter from Acoustic Technology Limited (B R Wood) to Mark Reed (Rushmoor Borough Council) dated 8 March 2000
CD/73	An Environmental Noise Assessment of a planning application to expand business aviation facilities at Farnborough Aerodrome, Farnborough, Hampshire, 30 September 1999, Sharps Redmore Partnership
CD/74	Environmental Statement: Technical Appendix IV: Noise ERCD report 0705 Revised Future Aircraft Noise Exposure Estimates for Heathrow Airport, November 2007 extract – cover page, contents page and pages 4 – 8
CD/75	Institute of Air Quality Management (IAQM) (November 2009) position on the description of Air quality impacts and the Assessment of their Significance
CD/76	"A Study of Annoyance due to General and Business Aviation Noise" J B Ollerhead, I D Diamond, J G Walker, J B Critchley and S A Bradshaw Proceedings of the Institute of Acoustics Volume 11, Part 5, 1989
CD/77	DR Report 8402 United Kingdom Aircraft Noise Index Study main report by P Brooker et al. Civil Aviation Authority, January 1985 (the ANIS Report)
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CD/84	Attitudes to Noise from Aviation Sources in England, non S P Pear Review (published by the Civil Aviation Authority and Bureau Veritas (October

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CD/88	Defra: Airport Technical Guidance: The Environmental Noise (England) Regulations 2006
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CD/90	Defra: Draft Noise Action Plan – Agglomeration Template, public consultation on draft noise action plans July 2009
CD/91	Defra: Guidance for Airport Operators to Produce airport noise action plans under the terms of the Environmental Noise (England) Regulations 2006 (as amended)
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CD/93	INM 6.2. Noise Assessment 2009, TAG Farnborough Airport, Predictive Contours January to December 2010
CD/94	Environment Report, Quarter 4, 2009, October – December 2009, TAG Farnborough Airport, 2010
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CD/97	'Business Aviation in the South East – Part 1: Demand/Capacity Studies', Halcrow Fox report to the DETR, July 1998 extract – pages 28 – 35 only
CD/98	'More to the Point: Business Aviation in Europe in 2007', Eurocontrol, 2008
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CD/111	Statement in respect of Newham Council's approval of London City planning application
CD/112	Call by London Assembly for Mayor of London to review Newham Council approval, February 24th 2010
CD/113	E-mail to Mott MacDonald from James Dillon-Godfray, March 4th 2010
CD/114	Proof of Evidence of Louise Congdon, in respect of weekend movement appeal, December 2006
CD/115	The Economic Impact of Business Aviation at Farnborough Airport, Nathaniel Lichfield and Partners, May 2009

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CD/117	The Economic Contribution of the Aviation Industry in the UK, Oxford Economic Forecasting, October 2006
CD/118	The Economic Impact of Business Aviation in Europe, PricewaterhouseCoopers LLP for the European Business Aviation Association, 2008
CD/119	What is the contribution of aviation to the UK economy?, final report prepared for UK Airport Operators Association, Oxera, November 2009
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CD/121	'Why Business Aviation?', BBGA leaflet, undated
CD/122	Improving the Air Passenger Experience, An analysis of end-to-end journeys with a focus on Heathrow, Department for Transport, November 2007
CD/123	Regulation (EC) No 793/2004 of the European Parliament and of the Council of 21 April 2004 amending Council Regulation (EEC) No 95/93 on common rules for the allocation of slots at Community airports
CD/124	'Mayor's Transport Strategy – Public Consultation: London First Response', January 2010
CD/125	Economic Study of Farnborough Airport, Mott MacDonald and Oxford Economic Forecasting, November 2005
CD/126	The State of the Economy, RTP, October 2004
CD/127	Update Report – The State of the Economy, RTP April 2008
CD/128	Review of Mott MacDonald Statement for Planning Application Seeking Increased Air Movements at Farnborough Airport, NLP, July 2009
CD/129	Farnborough Airport Area Action Plan, Sustainability Appraisal Scoping Report, Scott Wilson, December 2008

Air quality and odour

CD/130	Defra (July 2007), The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volume 1)
CD/131	Directive 2008/50/EC, European Directive on Ambient Air Quality and Clean Air for Europe
CD/132	Directive 1999/30/EC, 1st Daughter Directive
CD/133	Directive 2000/69/EC, 2nd Daughter Directive
CD/134	Directive 2002/3/EC, 3rd Daughter Directive
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CD/137	RBC (2004), Air Quality Management Area Order 2004
CD/138	RBC (2006), Air Quality Action Plan for Rushmoor Borough Council
CD/139	Surrey Heath BC (June 2005), Air Quality Action Plan for Surrey Heath Borough Council
CD/140	NSCA (September 2006), Development Control: Planning for Air Quality
CD/141	Environmental Protection UK (February 2010), Development Control: Planning for Air Quality (2010 Update), consultation draft
CD/142	Ove Arup and Partners (July 2009), Farnborough Airport Environmental Statement: Review of Air Quality Section
CD/143	Environment Agency (June 2009), H4 – Odour Management – Consultation Draft
CD/144	Defra (April 2006), Code of Practice on Odour Nuisance from Sewage Treatment Works
CD/145	ICAO Engine Emissions Databank Version 16A (edited extracts)
CD/146	Ove Arup and Partners (August 2009), Farnborough Airport Odour Assessment
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	Assessment, Part 2
CD/148	HSE (October 2007), EH40/2005, Table 1: List of approved workplace exposure limits (as consolidated with amendments October 2007)
CD/149	Birmingham International Airport, Community & Environment Report 2007-2008
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CD/151	COMEAP (1995), Asthma and Outdoor Air Pollution
CD/152	EPAQS Terms of Reference
CD/153	Health Council of the Netherlands (September 1999), Public Health Impact of Large Airports
CD/154	Not used
CD/155	Not used

Safety and public safety zone

CD/156	Evans et al (1997) Third Party Risk Near Airports and Public Safety Zone Policy
CD/157	Safety Implications of Business Aviation at Farnborough Airport by ESR Technology, October 2009 Issue 3
CD/158	IATA News Release (18th Feb 2010) Aircraft Accident Rate Drops in 2009
CD/159	Department for Transport Circular 1/2002: Control of Development in Airport Public Safety Zones
CD/160	Department for Transport Circular 1/2010: Control of Development in Airport Public Safety Zones
CD/161	DfT FAQ For Southampton Airport
CD/162	Note from Ian Shrubsall to Keith Holland
CD/163	Not used

Other Airport Master Plans

CD/164	London City Airport Master Plan, 2006
CD/165	London Biggin Hill Airport Master Plan, 2005
CD/166	Southampton Airport Master Plan, November 2006
CD/167	Heathrow Airport Interim Master Plan, June 2005
CD/168	Gatwick Airport Interim Master Plan, 2006
CD/169	Not used
CD/170	Not used
CD/171	Not used

Previous appeal decisions/inspector's reports

CD/172	Stansted Decision Letter dated 8 October 2008 (appeal reference APP/C1570/A/06/032278)
CD/173	Inspector's report on the Manchester Airport Runway 2 Inquiry: 15 January 1997
CD/174	Secretary of State Decision Letter: Reference APP/F4410/V/01/1000266 on conversion of RAF Finningley to Robin Hood Airport, 3 April 2003
CD/175	Secretaries of State Decision Letter: APP/T3725/C/04/1151759 an appeal over alleged breach of planning control, Coventry Airport, 6 April 2006
CD/176	Not used
CD/177	Not used
CD/178	Not used

Additional documents referred to by Rushmoor Borough Council

CD/179	Department for Transport report 2007 - Attitudes to Noise from Aviation Sources in England (ANASE)
CD/180	The Future of Air Transport White Paper (2003) High Court Challenge
CD/181	UK Business Air Travel, Traffic Trends and Characteristics, Civil Aviation Authority, May 2009
CD/182	Airport Traffic Statistics, Civil Aviation Authority, December 2009
CD/183	"Meeting the UK Aviation Target – options for reducing emissions to 2050" Committee on Climate Change December 2009
CD/184	A brief guide to the new carbon values – how they are used in economic appraisal
CD/185	Case report [2010] EWHC 626 (Admin)
CD/186	Hypertension and Exposure to Noise near Airports - the HYENA study (Dec 2007)
CD/187	BEL Executive Summary - Estimating Dose-Response Relationships Between Noise Exposure And Human Health Impacts In The UK (July 2009)
CD/188	Chief Economist Chief Economist Statement on ANASE (undated)
CD/189	Attitudes Towards and Values of Aircraft Annoyance and Noise Nuisance (5A) – Survey Report EUROCONTROL Experimental Centre (July 2003) (extracts – front page, pages 9-11)
CD/190	Topic Report 5 Noise - The Heathrow Terminal Five and Associated Public Inquiries Report by Roy Vandermeer QC to the Secretary of State for the Environment, Transport and the Regions (undated) (extracts – front page and pages 5-9)
CD/191	Inspector's Report - Stansted G1 Inquiry: APP/C1570/A/06/2032278 Chapter 14 (undated)
CD/192	ERCD REPORT 0904 - Environmental Research and Consultancy Department Metrics for Aircraft Noise (January 2009)
CD/193	Hepworth Report (28 August 2009)
CD/194	Not used
CD/195	Not used
CD/196	Not used
CD/197	Not used

Additional documents referred to by FARA

CD/198	R&D Report 9636 Third Party Risk Near airports and Public Safety Zone policy (extracted pages only)
CD/199	Rushmoor Local Plan Inquiry – Final Submission on behalf of TAG (for MOD)
CD/200	Rushmoor Local Plan Inquiry – Final Submission on behalf of Rushmoor
CD/201	Legal Opinion from Michael Bedford
CD/202	Legal Opinion from Robin Purchase QC
CD/203	Legal Opinion from Douglas Edwards
CD/204	Rushmoor Head of Planning Services Report No 17/00
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CD/206	QE II Inquiry – Proof of Evidence of Dr Mark Eddowes
CD/207	Rushmoor Response to Regional Air Transport Consultation – letter ref. 1.E.31 dated 28 November 2002.
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CD/209	Halcrow Fox Report on Risk Contours dated January 2003
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CD/215	NATS R&D Report 9604 (1996) Summary of Risk Assessment for Civil Operations at Farnborough
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CD/219	Safety appraisal criteria – Professor Evans for Royal Academy, April 2007 (extracts)
CD/220	TAG Environmental Statement – January 2000
CD/221	What determines the tolerability of risk? Richard Booth
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CD/223	RMC Report study to determine the effect of 3rd party risk at Farnborough, June 2000
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TAG/INQ/3	Health and Safety Executive – Reducing Risks, Protecting People (2001)
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TAG/INQ/6	Agreement under Section 52 of the Town and Country Planning Act 1971 made between Douglas Arnold (1), Blackbushe Airport Limited (2), Hampshire County Council (3) and Hart District Council (4) dated 1 July 1985
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TAG/INQ/15	Section 154 Greater London Authority Act 1999
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TAG/INQ/18	Part 1, section 1 Civil Aviation Act 1982 - Functions of the Secretary of state
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	Committee on Climate Change
TAG/INQ/20	Transport and Works Act 1992 – chapter 42
TAG/INQ/21	HM Treasury: Forecast for the UK economy – a comparison of independent forecasts (April 2010)
TAG/INQ/22	CAA Statistics in relation to Aircraft Movements (figures from January 2007-March 2010)
TAG/INQ/23	Flight International Articles from the 18-24 May 2010 addition and 11-17 May 2010 addition.
TAG/INQ/24	Black Rock Mills - Noise and Vibration Assessment (February 2008)
TAG/INQ/25	CAA - Aviation Trends (Quarter 4 2009)
TAG/INQ/26	Mott McDonald – Runway Declared Distances
TAG/INQ/27	Table - Journey distances and time

Additional documents submitted during the Inquiry (SIT series)

SIT1	Opening statement on behalf of the Appellant (TAG)
SIT2	Opening statement on behalf of Rushmoor Borough Council (RBC)
SIT3	Queen's speech dated 25 May 2010 from www.number10.gov.uk (TAG)
SIT4	Noise exposure at UK Airports (table produced by Bickerdike Allen Partners) (TAG)
SIT5	Not used
SIT6	"Airport's action to reduce CO ₂ continues to gain momentum" dated 27 January 2010 by ACI Europe (with accompanying attachments) (TAG)
SIT7	Farnborough Airport forecasts of business aviation movements to 2019 dated June 2009 (TAG)
SIT8	Letter dated 25 July 1985 in respect of Blackbushe Airport (TAG)
SIT9	Coalition: Our programme for Government dated May 2010 (TAG)
SIT10	Eurocontrol "Medium term forecast for flight movement 2010 – 2016" (TAG)
SIT11	Not used – See TAG/INQ 27A (TAG)
SIT 12	Manchester Inspector's Report – Noise Conclusions (RBC)
SIT13	Coventry Airport Inquiry (2) – Passages from the Inspector's Report (RBC)
SIT14	Bickerdike Allen Partners – Extract from the Weekend Appeal (FARA)
SIT15	Amendments to the TAG Farnborough Airport Environmental Statement (RBC)
SIT16	Statement of Case and Rebuttal evidence on behalf of CPRE Hampshire – 'Climate change & related issues' (CPRE)
SIT17	Selection of third party representations objecting on noise grounds (RBC)
SIT18	3rd Party Representation (PINS) – See schedule attached
SIT19	Letter relating to the abolition of regional strategies dated 27 May 2010 (TAG)
SIT20	Note on the benefits of on-site radar and ILS precision approaches (TAG)
SIT21	UK Gross Value Added Analysis table (TAG)
SIT22	London Luton Airport – GA and Commercial ATMs Summer 2009 (TAG)
SIT23	Article on large Aircraft Hangars from Aircraft-Hangars.com (TAG)
SIT24	Planning Inspectorate Model Conditions (TAG)
SIT25	Model Planning Conditions: Consultations (TAG)
SIT26	HM Treasury – Forecasts for the UK economy: "a comparison of independent forecasts" dated May 2010 (RBC)
SIT27	Email from Ciaran Gunne-Jones of Nathaniel Lichfield and Partners dated 3 June 2010 (RBC)
SIT28	Letter from DTLR in relation to PSZ Policy and Farnborough Aerodrome dated 28 May 2002 (FARA)
SIT29	Letter from Mr Gillibrand of TAG Aviation dated 9 February 2000 (FARA)
SIT30	Letter from Andrew Lloyd of Rushmoor Borough Council dated 6 April 2009 and a response from John Parkinson of DfT dated 8 May 2009 (FARA)
SIT31	Letter from DfT to Rt Hon James Arbuthnot MP dated 2 April 2008 (FARA)
SIT32	Letter from Rushmoor Borough Council to the DfT dated 1 October 2009

	and a response by DfT dated 5 October 2009 (FARA)
SIT33	Policy AAP5: Safety (FARA)
SIT34	Rushmoor Local Plan Inquiry: Third Party Risk from Farnborough Aerodrome dated 21 July 1998 (FARA)
SIT35	Third Party Risk and Airport Public Safety Zones (Undated) (FARA)
SIT36	Extract from Manchester Inspector's Report in relation to risk (FARA)
SIT37	Plans of PSZ's (no further details on document) (FARA)
SIT38	Extract from the Aviation Safety Review 1998 on Fatal Accidents by Class of Aircraft (FARA)
SIT39	Health and Safety Executive: The tolerability of risk from nuclear power stations (Mr Treadgold)
SIT40	Societal Risk within the Farnborough College of Technology: table extract (Mr Treadgold)
SIT41	Letter from Stuart Voller of the DfT in relation to PSZs dated 4 June 2010 (TAG)
SIT42	TAG Farnborough Airport Climate Change and Emission Scheme (TAG)
SIT43	Comparison of odour related complaints in 2010 with previous years produced by Evan Lester Ltd (TAG)
SIT44	Fuel used by Aircraft at Farnborough Airport produced by Evan Lester (TAG)
SIT45	Email from Mark Eddowes to Louise Piper dated 26 January 2010 (FARA)
SIT46	R&D 9935 – revised third party risk calculation in the vicinity of Farnborough Aerodrome (Mr Treadgold)
SIT47	Email from Ian Shrubsall to Keith Holland dated 8 September 2009 (RBC)
SIT48	Meeting the UK Aviation target – Options for reducing emissions to 2050 dated December 2009 (TAG)
SIT49	Note on Public Safety Zone model methodology from Raymond Lim of NATS dated 9 June 2010 (TAG)
SIT50	Email from Andy Knight of Mott McDonalds to Martin Smith of Munro Chauffeur Cars dated 7 June 2010 and a response dated 7 June 2010 (TAG)
SIT51	Conservatives – Open Source Planning Green Paper (TAG)
SIT52	Advice produced by the Planning Inspectorate for use by its Inspector (TAG)
SIT53	Note relating to LamX and speech interference note (RBC)
SIT54	Email from Jeff Charles of Bickerdike Allen Partners dated 14 June 2010 relating to the Ban on Chapter 2 Aircraft (with attachments) (TAG)
SIT55	Extract from the Report on FTSE 100 Directors' Remuneration (2009) (TAG)
SIT56	Letter from Peter Mirams of London Biggin Hill Airport (undated) (RBC)
SIT57	Email from John Robertson of NLP to Keith Holland of RBC dated 10 June 2010 (RBC)
SIT58	Demand for Business Aviation in SE England to 2019 – Summary of Mott Macdonald's and ASA's Forecasts (RBC)
SIT59	Extract – Office for Budget Responsibility – "Pre-Budget Forecasts (June 2010) (RBC)
SIT60	Note – Mott Macdonald's comments on ASA's paper of 11 June 2010 – "Available Annual Slot Capacity at the Major London Airports (as at 2019) (RBC)
SIT61	Statement by the RT Hon Philip Hammond MP delivered on 15 June 2010 relating to "South England Airports Task Force" (RBC)
SIT62	Full Copy of the office for Budget Responsibility "Pre-Budget Forecasts" (June 2010) (TAG)
SIT63	Maps of Blackbushe Airports (TAG)
SIT64	Public Speaking List and transcripts (Listed on schedule attached) (Programme Officer)
SIT65	FARA Constitution (TAG)
SIT66	Letter from Brandon O'Reilly of TAG to Mr Parsons dated 21 June 2010 (TAG)
SIT67	Office for Budget Responsibility – Budget Forecast (June 2010) (RBC)
SIT68	Quiet Flying Programme meeting notes (4 December 2009) (FARA)
SIT69	Average number of movements per hour 28,000/50,000 movements (TAG)

SIT70	Note in relation to noise – June 2010 (TAG)
SIT71	Transport Contribution Policy – A new approach to calculating Transport Contributions in Hampshire
SIT72	Closing Submission of Farnborough Aerodrome Residents Association (FARA)
SIT73	Closing Submission of CPRE (CPRE)
SIT74	Closing Submission of Rushmoor Borough Council (RBC)
SIT75	Closing Submission of TAG Farnborough Airport (TAG)
SIT76	List of revised conditions following conditions discussion 23.7.10
SIT77	Final version of s106 obligation by Deed of Agreement

Schedule – 3rd Party Representations – SIT18

SIT18/1	Representation from Maximilian Lyons (Chairman – Castle Street Residents Association) dated 27 May 2010
SIT18/2	Email from Christine O'Donoghue dated 1 June 2010
SIT18/3	Various Representations from Mrs Annette Wright
SIT18/4	Representation from Mrs J Peacock dated 17 June 2010

Schedule – Public Speaking Transcripts – SIT64

SIT64/1	David Parsons, local resident
SIT64/2	Marwan Khalek, CEO, Gama Aviation
SIT64/3	Brian Fyfe, local resident
SIT64/4	Roger Panter, local resident
SIT64/5	Kevin Daley, Mytchett, Frimley Green and Deepcut Society
SIT64/6	Daphne Knowles, Quiet Flying Working Group Residents' Representative
SIT64/7	Cllr Richard Appleton, Hart DC, Fleet West
SIT64/8	Bev Gerrard, local resident
SIT64/9	Antonia Chambers, local resident
SIT64/10	Cllr James Radley, on behalf of local residents
SIT64/11	Jenny Radley, Fleet and Church Crookham Society
SIT64/12	Cllr Chris Axam, speaking as a local resident
SIT64/13	Des Treadgold, local resident
SIT64/14	Charles Milne, local resident
SIT64/15	Gordon Keyte, Crondall Society
SIT64/16	Norman Lambert, Parish Councillor, speaking as a local resident
SIT64/17	William Hunter, local resident