

**TOWN AND COUNTRY PLANNING ACT 1990
PLANNING AND COMPULSORY PURCHASE ACT 2004**

**APPEAL BY BAA LTD AND STANSTED AIRPORT LIMITED AGAINST THE REFUSAL
BY UTTLESFORD DISTRICT COUNCIL OF PLANNING PERMISSION FOR
DEVELOPMENT PERMITTED UNDER PLANNING PERMISSION UTT/1000/01/OP
WITHOUT COMPLYING WITH CONDITION MPPA1 AND VARYING CONDITION ATM1**

**LOCAL AUTHORITY REF: UTT/0717/06/FUL
PLANNING INSPECTORATE REF: APP/C1570/A/06/2032278**

CLOSING SUBMISSIONS ON BEHALF OF STOP STANSTED EXPANSION (SSE/39)



Our submissions are set out in seven sections:

- SECTION A: Introduction**
- SECTION B: Issues as to the Proper Approach**
- SECTION C: Review of Main Evidence on the Harms of the Proposed Development**
- SECTION D: Review of the Evidence of the Alleged Benefits of the Proposed Development**
- SECTION E: Consideration of Key Issues and Findings of Fact**
- SECTION F: Scope for Mitigation**
- SECTION G: Summary and Conclusions**

SECTION A: INTRODUCTION

1 The Importance of the Inquiry

- 1.1 We stated in opening that this Inquiry was one of rare importance and so it has turned out to be; its outcome will have profound repercussions - not just locally and immediately, nor even nationally and in the longer term, but globally and irreversibly.
- 1.2 This Inquiry is the first Inquiry of its kind, certainly in this country and we think in the world: an Inquiry into an aviation proposal by which a significant expansion of air traffic movements is proposed, all in order – so the Government argues – to garner net economic benefits¹ for itself and its citizens,² but when that same Government acknowledges both that aviation is a prime cause of climate change³ and that climate change is the gravest challenge facing the world.⁴
- 1.3 This then is an Inquiry of historic moment. It has openly addressed what is an obvious tension in Government policy – simultaneously to cut the need to travel⁵ in order to drive down emissions, while at the same time expanding aviation with all of the consequential increase in emissions that this will cause.⁶ This Inquiry has subjected that tension to forensic scrutiny. It has considered whether, and if so *how*, on a case by case basis that tension might best be resolved and the totality of Government policy best fulfilled; and what role there is in that process for Planning Inquiries such as this.
- 1.4 With the eyes not just of Essex and Hertfordshire upon us but of the world, this Inquiry will therefore set a precedent of profound importance whatever its outcome, and not just in terms of *what* ultimately is decided, but *how* it is decided.
- 1.5 As we will demonstrate in these closing remarks, the Secretaries of State have a stark choice: either to subordinate the undoubted impacts of this proposal on the environment, locally and globally, to mere assertions of economic benefit and need; or

¹ Social benefits are sometimes mentioned alongside economic benefits, e.g. '*The Future of Air Transport: White Paper*', DfT, Dec 2003 (the 'ATWP') [CD/87], Executive Summary at paras 4.36 and 5.17; equally, social impacts are sometimes mentioned alongside environmental impacts, e.g. ATWP [CD/87], Executive Summary at p.10 and paras 2.18 and 9.18.

² ATWP [CD/87] at p.9.

³ ATWP [CD/87] at p.39, para 3.35 and '*Aviation and Global Warming*', DfT, Jan 2004 [CD/152].

⁴ Draft Climate Change Bill, March 2007 [CD/241], p.4, Prime Minister's Foreword.

⁵ For example, DETR, '*A New Deal for Transport White Paper*' (July 1998) [CD/129]; PPG13 [CD/106].

⁶ ATWP [CD/87], Executive Summary.

to take a '*balanced approach*'⁷ and test those economic assertions against the evidence which has been heard, in order to determine – on the balance of that evidence – whether the harms which would be occasioned by this proposal, to both amenity and the environment, are justified by a compelling and proven economic case.

- 1.6 If the Secretaries of State opt for the former approach, however, not only will the gravest threat facing this world inevitably and inexorably be realised, but also the clearest possible of legitimate expectations created by Ministerial statements to both Parliament and the High Court as to how this Inquiry (and others like it) would proceed, will have been broken.
- 1.7 In particular, the question as to what approach to follow has already been answered by Government. They have promised, both to Parliament⁸ and to the High Court,⁹ that in respect of any individual aviation proposal, the apparent tension in Government policy which this proposal exemplifies will be resolved at Planning Inquiries and on the evidence that is heard - testing by evidence and cross-examination the extent of any harm that would be occasioned to either local amenity or the environment by the proposal in question; testing, in the same way, the extent of the asserted or assumed net economic benefits of that particular aviation proposal; and judging – openly, independently, in public and on the balance of that evidence – whether the economic case for the inflicting of that harm has been proven.
- 1.8 It is incumbent upon you, Sir, through your independent recommendation, to make clear to the Secretaries of State what is the correct approach to follow in all of these regards, and to steer them towards a decision based on the evidence and not mere assumption. And it is also incumbent upon you to advise the Secretaries of State as to the balance of that evidence on all of the key issues on which this Inquiry has deliberated over the past months.
- 1.9 It will then be for the Secretaries of State to decide whether they meant what they said about the manner in which aviation proposals such as this would be considered – on the ground, at Inquiries, and upon the evidence. And, ultimately, whether they meant what they said about climate change also – whether they can match their soaring words by brave action, whether they have the courage to face up to the inconvenient truths and take the tough decisions necessary to tackle the gravest threat of them all.

⁷ Ibid at para. 2.1, p21.

⁸ See paras 7.16 – 7.21 below.

⁹ See paras 7.9 – 7.11 below.

2 The Local and Historical Context

- 2.1 Before expanding upon either the correct approach to follow at this Inquiry in terms of law, policy and the evidence, however, it is right to set the *local* context for the consideration of all of those issues, for while their reach is in part global, the impacts will be felt hardest nearest to the airport.
- 2.2 Stansted is unique amongst the London airports because of its rural setting. It is one of the most unspoilt areas in the south east, characterised by centuries-old villages and a degree of social cohesion which is already threatened by the rapid expansion of the airport following the permissions granted for 15 million passengers per annum ('mppa') in 1999 and then for 25mppa in 2003. The district of Uttlesford is home to about 3,500 listed buildings, 40% of which date from the 17th century or earlier. Stansted Airport is adjacent to Hatfield Forest, a rare surviving example of a medieval hunting forest, one of the few remaining in Europe, a National Nature Reserve and Site of Special Scientific Interest.
- 2.3 John Betjeman, writing in 1967 when major expansion of Stansted was first mooted, wrote these words:

*'...it is a quiet, prosperous, agricultural area of old stone and flint churches, pargetted cottages with red tiled roofs, spreading farms and gabled manor houses, little hills, elms, oaks, willowy streams and twisty lanes leading to towns of such renowned beauty as Thaxted and Saffron Walden. The very fact that this country is so gentle, unobvious and typical of the best of England makes it all the more important that, being so near to London, it is preserved from noise and 'development'.*¹⁰

- 2.4 In May of the same year, the sculptor, Sir Henry Moore, writing to the Times about the same expansion proposal, found it:

*'...appalling to contemplate the destruction of this beautiful and irreplaceable part of England.'*¹¹

- 2.5 As to the unique sense of community once felt in the villages around Stansted, John and Rosemary Welch, residents of Cooper's End, stated:¹²

'We married in 1972 and moved into our idyllic thatched cottage, surrounded by fields, peace and tranquillity that year. Within four years we had two children and

¹⁰ Olive Cook, *The Stansted Affair* (1967), pp. 9-10. Foreword by John Betjeman.

¹¹ Quoted in Olive Cook, *The Stansted Affair*, p. 67.

¹² SSE/20/a, para 5.6.2.

joined in village life: playgroups, WEA, church functions and much more. Many friendships were formed and we felt we were living within the heart of a wonderful village community.'

2.6 Similarly, Pim Godwin described the community life in Birchanger:¹³

'Birchanger used to be a village where families lived their whole lives, counting back to several generations. There was a good sense of community, a thriving village club, British Legion, cricket and football teams to name a few of the elements of Birchanger village life.'

2.7 And yet within this quiet agricultural area, this beautiful and irreplaceable place, with its listed buildings, twisty lanes and unique sense of community has been under the threat of a major airport at Stansted for more than forty years, placing immeasurable strain on the local community throughout that period.

2.8 To counter that threat, the local community has had to mount several campaigns over many years. In order to resist the financial might of BAA they have had to raise funds, in the last year alone amounting to some £200,000. In order to challenge BAA's arguments they have had to become knowledgeable on many complex issues, such as demand forecasting, noise, air pollution, the problems of surface access and the dangers of climate change. All of this has required a major effort based almost entirely on the work of countless volunteers, with the support of expert witnesses in particular areas as required.

2.9 And now, more than forty years on from the first threat, hundreds of ordinary members of the public have participated directly in the proceedings of this Inquiry and the local planning process which preceded it. While none may have been able to match the eloquence of Betjeman, certainly not I, few would doubt either the sincerity of their concern or that they are representing the overwhelming majority of the local community, those who stand to suffer most if this proposal goes ahead.

2.10 Moreover, this is not the first Inquiry in which many local residents have participated to consider the question of the expansion of Stansted; neither, it appears, will it be the last, despite the fact that at the last Inquiry, in the early 1980s, Graham Eyre QC tried to put an end to what he described as the *'incrementalism'* of Government policy,¹⁴ attempting both to protect the quiet tranquillity of this precious area and to introduce

¹³ SSE/20/a, para 5.17.2.

¹⁴ The 1981-1983 Airports' Inquiries—The Inspector's Report to the Secretary of State ('the Eyre Report') [CD/31.1], Chapter 50, at para. 6.36.

here ‘a degree of certainty and immutability’¹⁵ so that its ‘belaboured population’ should ‘at least and at last know where it stands’.¹⁶

- 2.11 At that time BAA was applying for a passenger throughput of 15mppa at Stansted. Eyre, however, was being warned repeatedly that if he granted that application he would be granting a ‘blank cheque’ for a two-runway airport. Alert to such worries, Eyre was emphatic. While he recommended that Stansted should be allowed to expand to 15mppa, and said that there could be no objection ultimately to increasing this to 25mppa, i.e. to the full use of the existing runway, he said also that

*‘the development of an airport at Stansted, with a capacity in excess of 25mppa and requiring the construction and operation of a second runway ... would constitute nothing less than a catastrophe in environmental terms.’*¹⁷

- 2.12 Moreover, he recommended that, as a condition for the granting of permission, the Government should make an unequivocal declaration of intent that a second runway would not be constructed. The Government responded to this recommendation in kind:

*‘On current forecasts it is very doubtful whether such a runway would be justified in the foreseeable future, while it is clear that it would give rise to severe environmental pressure. **The Government therefore unreservedly accepts the Inspector’s recommendation in this respect.**’*¹⁸

- 2.13 BAA has argued that Eyre was opposed to expansion beyond 25mppa only because that figure represented the full capacity of the existing runway and any expansion beyond it would necessitate the construction of a second runway. It was this, they say, that he regarded as an ‘environmental catastrophe’. And BAA points out in these regards that the Government’s acceptance of Eyre’s recommendation referred to the construction of a second runway, and not to any increase over 25mppa as such.

- 2.14 There can be no doubt that when Eyre spoke of an ‘environmental catastrophe’ he had in mind a second runway. For him a second runway was unthinkable, and he rejected it in the strongest possible language. He described it as ‘an unprecedented and wholly unacceptable major environmental and visual disaster’.¹⁹ He was convinced, he said, ‘that such a monster cannot and must not be inflicted on this

¹⁵ Eyre Report [CD/31.1], Chapter 28, at para 2.6.

¹⁶ Ibid, Chapter 28, at para 2.6.

¹⁷ Ibid, Chapter 25, at para 12.12.

¹⁸ 1965 Airports White Paper, para. 5.36 (emphasis added).

¹⁹ Eyre Report [CD/31.1], Chapter 25, para. 13.1.

precious landscape'.²⁰ It would be *'an unprecedented and grotesque invasion of a large area of pleasant countryside. It would be wholly unacceptable'*.²¹

- 2.15 However, when Eyre recommended, as a condition for approving an increase to 15mppa, that a second runway should not be built he was, of course, saying that Stansted should not develop beyond the capacity of its existing runway. And that capacity was 25mppa.

*'I would not be debasing the currency if I express my judgement that the development of an airport at Stansted, with a capacity in excess of 25mppa and requiring the construction and operation of a second runway and all the structural and operational paraphernalia of a modern international airport as we know the animal in 1984 ... would constitute nothing less than a catastrophe in environmental terms. ... I take so strong a view on this aspect that if I believed, as many do, that a grant of planning permission at Stansted to a capacity of 15mppa would inexorably lead to unlimited and unidentifiable airport development in the future of an unknown capacity, I would, without hesitation, unequivocally recommend the rejection of BAA's current application...'*²²

- 2.16 Nowhere in his very long report did Eyre explicitly address the possibility that the capacity of the existing runway might be increased. This was not a factor in his consideration. For him the terms *'the capacity of the existing runway'* and *'25mppa'* were interchangeable, so that when he said no more than the capacity of the existing runway he was saying no more than 25mppa. This was the context in which his recommendation was made and the basis upon which Government made their unequivocal declaration of intent that there should never be a second runway.

- 2.17 However, during evidence to this Inquiry, SSE quoted passages from the Eyre report which indicated that on two issues at least, planning and surface access, he considered that there were likely to be serious problems at a passenger throughput of 25mppa or thereabouts, regardless of the need for a second runway.²³ Moreover, on planning at least, BAA's own witness at the Eyre Inquiry – Professor Peter Hall – was of the same mind.²⁴ The threshold of 25mppa therefore assumed for both Graham Eyre QC and Professor Peter Hall a planning significance beyond the consequences of a second runway.

²⁰ Ibid, Chapter 50, para. 6.17.

²¹ Ibid, Chapter 28, para. 2.29.

²² Ibid, Chapter 25, para.12.12.

²³ Ibid, Chapter 50, para. 6.31.

²⁴ Ibid, Chapter 50, para. 6.30.

- 2.18 The bottom line is therefore this. For Eyre the capacity of Stansted was to be set at 25mppa, and a second runway which would have exceeded that throughput was to be ruled out forever. Moreover, that was not just the capacity that Eyre had in mind when he made his recommendation, it was the capacity that the Government had in mind when they endorsed that recommendation. And, most importantly of all, that was the capacity which the local community believed had been set as the limit beyond which no further expansion would ever take place. Moreover, it is surely significant that in 2001, when BAA applied for further planning permission at Stansted, it did not ask for the full use of the existing runway. It did not ask for the limit of 15mppa to be removed and for no other limit to be set in its place. Instead it asked for 241,000 ATMs, which was then regarded as the equivalent of 25mppa.
- 2.19 For all these reasons the community had every reason to believe that 25mppa was established as the threshold beyond which there should be no further expansion. They therefore view both the Government's rejection of this in the 2003 Air Transport White Paper (the ATWP),²⁵ and BAA's present application, as violations of the expectations that they had been encouraged not just to entertain but to rely upon.

3 The Scope of the Inquiry

- 3.1 Whatever view is taken of Eyre's prediction of an environmental catastrophe for a throughput greater than 25mppa, however, the recommendation in Chapter 50, para 9.7 of his report is completely unambiguous:

*'Any decision that expansion should take place at Stansted up to the capacity of a single runway must be entirely contingent upon securing the position that a second runway will not be constructed and that the safeguard and protection over most of the safeguarded area will cease.'*²⁶

- 3.2 And yet BAA does not offer such a condition in return for approval of its present application today. On the contrary, BAA has stated to this Inquiry that it intends to submit a planning application for a second runway at Stansted in November 2007.²⁷
- 3.3 Despite its being BAA's intention to submit an application for a second runway almost immediately after the Inquiry has ended, and before you have even submitted your report for consideration by the relevant Secretaries of State, all implications arising in respect of the second runway have been entirely excluded from the scope of this

²⁵ ATWP [CD/87].

²⁶ Eyre Report [CD/31.1], Chapter 50 at para 9.7.

²⁷ Cross-examination of Mr Rhodes (BAA), 14 June 2007.

Inquiry. We make it clear, albeit respectfully, that in our submission limiting the scope of the Inquiry in this way has been wrong in law for the following three reasons.

- 3.4 First, it flies in the face of Government aviation policy, being fundamentally at odds with one of the principal objectives of the 2003 ATWP²⁸ – the call for long term airport master plans for the period to 2030 and for a strategic approach to airport planning, *'rather than addressing each separate proposal in a piecemeal and uncoordinated fashion'*.²⁹ BAA has still not produced a Stansted Airport master plan setting out its plans for the period to 2030.
- 3.5 Indeed, the ATWP was not even the first time that the need to avoid a short term view of airport planning was emphasised: both Graham Eyre QC (in the last Stansted Inquiry in the early 1980s) and Roy Vandermeer QC (in the Heathrow Terminal 5 Inquiry, 1995-1999) recognised as much, with Eyre addressing the long term prospect of a second Stansted runway and Vandermeer focusing on demand forecasts for 2016,³⁰ some 20 years beyond the baseline he was presented with. But here we are at an Inquiry four years after the ATWP was published, a document which was meant to ensure that airport planning was not undertaken on an *ad hoc* piecemeal basis, and the Inquiry is confined to a short term planning horizon of just seven years.
- 3.6 Second, considering the current application – 'G1' – without reference to the imminent 'G2' application which is waiting in the wings – sits impossibly with the requirement in *Schedule 4 of the Town & Country Planning (EIA) Regulations 1999*³¹ ('the EIA Regulations') for an assessment of the development's:

*'...direct effects **and any indirect, secondary, cumulative, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project.**'* [emphasis added]

- 3.7 The European Commission has defined cumulative impacts to be the:

*'...impacts on the environment that result from incremental changes to environmental parameters when added to changes brought about by other past, present or reasonably foreseeable actions'.*³²

²⁸ ATWP [CD/87].

²⁹ Ibid at para 1.6.

³⁰ Secretary of State's decision letter following the Heathrow T5 Inquiry, November 2001 CD/329.1] at para 33.

³¹ CD/309.

³² 'Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions', European Commission, DG XI, May 1999 [CD/386].

3.8 The G2 application is quite plainly a reasonably foreseeable future change; indeed, BAA tells us an application is pending. It follows that its environmental impacts should have been considered as part of the assessment in respect of the current proposal. By preventing that from happening in the conduct of this Inquiry, BAA has been permitted effectively to side-step the full requirements of the EIA Regulations. We refer you once again in these regards to the case of *R v. Swale Borough Council, ex p. RSPB* (1991) 1 PLR 6, in which Lord Justice Simon Brown held as follows (at 16):

'...The proposal should not... be considered in isolation if in reality it is properly to be regarded as an integral part of an inevitably more substantial development. This approach appears to me to be appropriate on the language of the regulations ...In common sense, moreover, developers could otherwise defeat the object of the regulations by piecemeal development proposals.'

3.9 Third, the consequence of this has been that certain matters of profound importance have not properly been considered at this Inquiry. A sense of unreality has prevailed throughout the proceedings. If the G1 application was submitted barely before the ink was dry on the previous permission, the G2 application is to be submitted before any ink could even be put onto the G1 permission. And yet it must be ignored, leaving us to analyse the planning and environmental impacts of G1 in an artificial, Pythonesque world of surreal make-believe, a situation which has hampered proper consideration of the proposals squarely before the Inquiry: projected environmental impacts are meaningless beyond 2014/15; assessment of the road and rail implications examines only a partial and selective picture; and perhaps most bizarrely of all, BAA proposes conditions for mitigation which it would be seeking to have removed even before they could be implemented.

3.10 Nevertheless, and without prejudice to these submissions, SSE has sought throughout to work within the Inquiry's declared scope and to avoid straying into G2 territory. And on that basis, and as I shall shortly submit, the issue at large is simply this: *has BAA made the case for overturning the November 2006 decision of Uttlesford District Council ('UDC') to refuse permission for the removal of the existing limit on air passenger traffic at Stansted of 25mppa and for an increase in the permitted number of annual air transport movements ('ATMs') to 264,000?*

3.11 It is SSE's contention that BAA has patently failed to make such a case, that BAA has demonstrably failed to show that the benefits of the proposed development would outweigh the harms, and that this is the case despite BAA's having understated those harms in its Environmental Statement ('ES'). Moreover BAA has failed to demonstrate

that the proposed G1 development would satisfy any reasonable definition of the term 'sustainable development', said to be *'the core principle underpinning planning'*.³³

³³ PPS1 [CD/92].

SECTION B: ISSUES AS TO THE PROPER APPROACH

4 The BAA Approach to Government Policy on Aviation

- 4.1 BAA has come to this Inquiry with, in effect, a single planning argument for the proposed development, the ATWP, which it has brandished throughout this Inquiry as its full and final case on the economic justification for its proposed development.
- 4.2 Mr Rhodes, you will recall, told us that since the Government had already published its policy framework for aviation and stated that the first priority was to make the ‘best use’ of the existing runway at Stansted, it was not the place of this Inquiry even to question the ATWP in these regards.³⁴
- 4.3 Mr Rhodes declared that when deciding upon the policies espoused by the ATWP, the Government had already considered both the environmental impact of the proposed expansion, including the noise attendant upon increased movements at Stansted, and the economic case. Having done so, Government had decided that expansion was both needed and beneficial so that the infliction of the resultant environmental harm was justified.³⁵
- 4.4 Sir, if that were true, there would never have been a more blatant case of pre-determination in the history of planning law, and any decision made on that basis would undoubtedly end up in the High Court where it would be quashed.
- 4.5 The law against bias notwithstanding, Mr Rhodes went on to claim that it was not this Inquiry’s function even to question either the Government’s view that there was a ‘need’ for increased aviation activity at Stansted, or its assertion that this would bring ‘significant benefits’.³⁶ If any adverse harm would be caused, whether by noise or otherwise, even if in comprehensive breach of the Development Plan, the Government had already decided that was all justified and we were not at liberty to argue otherwise. Indeed, Mr Rhodes argued, it was inconceivable that the current application could be refused because the Government also supported a second runway, having formed a judgement that even this level of environmental harm would be justified by the benefits.
- 4.6 Moreover, it was on this basis – you will recall – that BAA did not deign to adduce a single word of direct economic evidence to support its contention that the appeal

³⁴ BAA/1/A, para. 9.9 and cross-examination of Mr Rhodes (BAA), 13 June 2007 at p.164 of the transcript.

³⁵ BAA/1/A, paras. 9.9-9 – 9.9.13.

³⁶ Ibid at para. 8.1 and cross-examination of Mr Rhodes (BAA), 12 Jun 2007.

proposal was justified, the harm occasioned by so many more air movements being outweighed either by need or by the alleged overwhelming net economic benefits.

- 4.7 In SSE's submission, however, the entire approach of BAA has been fatally flawed from the outset.

5 The SSE Approach to Government Policy on Aviation

- 5.1 SSE, in both its opening submissions and its extended opening, set out in some detail the correct approach to the determination of *any* planning application. You will forgive us, I hope, if we emphasise just some of those submissions in closing.

- 5.2 The starting-point is, or at least should be, completely non-contentious: this appeal application must be determined in accordance with the Development Plan unless material considerations indicated otherwise.³⁷ The ATWP is not part of the Development Plan. It has not (as envisaged by Sullivan J in *R (Essex County Council and ors) v. Secretary of State for Transport* (2005) EWHC 20³⁸ (hereinafter the *Essex County Council case*)) been incorporated into the RSS. An explicit statement of support for the development of Stansted was removed from the draft plan after the Examination in Public.³⁹ The ATWP is, therefore, just a material consideration, alongside all of the other material considerations, including subsequent statements of Government policy on other cognate issues, including global warming, the greatest challenge of the age.⁴⁰ The ATWP does not, and indeed cannot, permit the statutory test to be sidestepped. This was expressly acknowledged by Mr Rhodes in the course of cross-examination by SSE.⁴¹ Indeed, the ATWP itself emphasises that it does not authorise or preclude any particular development.⁴²

- 5.3 Despite this, however, the way in which BAA has chosen to present its case, calling no direct evidence on the economic justification for its proposed development, relying exclusively on the assertions and assumptions contained within the ATWP is, in effect, attempting precisely the statutory side-step of the Development Plan against which we cautioned in our opening submissions.

³⁷ Planning & Compulsory Purchase Act 2004, s38(6) and Opening Submissions of SSE [SSE/34], paras 13-21.

³⁸ Second Witness Statement by M R Fawcett on behalf of the Secretary of State for Transport, in the *Essex County Council case* [CD/206].

³⁹ East of England Plan, Examination in Public: Report of the Panel [CD/75] at paras 5.99 and 5.100.

⁴⁰ Comments made by Tony Blair (when Prime Minister) in speech presented on 14 September 2004 'Avoiding Dangerous Climate Change', available at www.number-10.gov.uk.

⁴¹ Cross-examination of Mr Rhodes (BAA), 13 June 2007.

⁴² ATWP [CD/87], Executive Summary, page 9.

- 5.4 BAA's argument is threefold: first, that the assertion that expansion at Stansted to 35mppa is economically justified is a statement of Government policy; second, that as it is Government policy, it is not open to this Inquiry to go behind that statement; third, that it inexorably follows that all of the environmental harms flowing from expansion at Stansted to 35mppa are justified and that therefore planning permission for the proposal must be given.
- 5.5 And yet, as a matter of law, that entire argument is manifestly wrong: the ATWP does not 'settle' at all the question of whether expansion at Stansted to 35mppa is economically justified.
- 5.6 First, since it is BAA's apparent case that SSE cannot question Government 'policy', let us understand properly what the law understands a 'policy' to be. 'Policy', as defined by Lord Diplock in *Bushell v. Secretary of State for the Environment* (1981) AC 75),⁴³ is 'descriptive of departmental decisions to pursue a particular course of conduct'. In other words, a 'policy' describes what the Government actually proposes to do; it does not describe the inputs and assumptions that underpin that proposal.
- 5.7 With that critical distinction in mind, let us look at precisely what the Government has said in the ATWP upon which BAA now relies so heavily: *'Making full use of Stansted would generate large net economic benefits. We therefore support growth at Stansted to make full use of the existing runway...'*⁴⁴
- 5.8 The quotation is made up of two sentences. The second sentence is, truly, a statement of Government policy, namely that the Government supports in principle growth at Stansted to make full use of the existing runway. The first sentence is not a statement of policy at all, however. It is but an input into that policy, namely a statement of the Government's belief or assumption, based on the work which had then been undertaken, that full use of Stansted would generate large net economic benefits.
- 5.9 Indeed, it is as nonsensical to describe a statement that the full use of Stansted would generate large net economic benefits as one of government 'policy' as it would be to so describe the similar statement in the ATWP that *'daytime noise impacts would not be greatly worse as a result of an increase to 35mppa'*.⁴⁵ Both are no more than statements of the Government's belief as to the facts, and both have exactly the same status in law at this Inquiry – being identically susceptible to scrutiny and challenge.

⁴³ Extracted from the judgment of Sullivan J in *Essex County Council* [CD/342] at para 60.

⁴⁴ ATWP [CD/87] at para 11.26.

⁴⁵ *Ibid* at para 11.25.

5.10 Accordingly, and just as the ATWP could not in law 'settle' the issue as to the extent of noise impact in the absence of any Environmental Impact Assessment, neither can the ATWP settle the economic case for those impacts being inflicted, especially since the claims made by the ATWP for the economic justification of the expansion of activities at Stansted are the result of nothing more substantial than a high level, generalised review of the economic case. Indeed, in his detailed grounds in the *Essex County Council* case the Secretary of State stated:⁴⁶

'10. For his part, the Secretary of State accepts:

(i) that it is implicit in the concept of environment appraisal under EU law that the decision-maker, before he grants a 'development consent', must consider the content of the Environmental Assessment and decide whether, on the facts, the 'development consent' should be issued notwithstanding any adverse environmental effects revealed by the assessment. This necessarily means balancing those adverse effects against the need for the development;

(ii) on the facts of this case, it will accordingly be possible and legitimate for the Claimants in the present proceedings, or anybody else, to make a case at any inquiry (following an application for planning permission) that the adverse effects revealed by the environment assessment are such that any development consent should be refused notwithstanding the fact that refusal will frustrate national policy;

...

19 ... The ATWP is not, on any reasonable view, a 'development consent'; and as already indicated, the Secretary of State accepts that it will be necessary for subsequent decision-makers to consider the results of environmental assessment before deciding whether or not to issue such a 'development consent.'

5.11 Rather, both issues – the extent of the impacts and the economic case by which those impacts are claimed to be justified – are to be, and can only be, settled by this Inquiry and on the balance of the evidence you have heard.

⁴⁶ *Essex County Council* case [CD/342], Witness Statement of M R Fawcett, 17 September 2004, on behalf of the Secretary of State for Transport.

- 5.12 Moreover, the capacity to undertake such an exercise was expressly confirmed in the Witness Statement of Mr Ash, submitted on behalf of the Government in the *Essex County Council case*.⁴⁷
- 5.13 In that Witness Statement, Mr Ash confirmed that it was important, *not just relevant but important*, to recognise that no statements, even of policy, and whether at the national or regional level, could pre-empt any decision on an application for planning permission.⁴⁸ Indeed, the Witness Statement went on to state expressly that:
- ‘The establishment of need for a type of development in a policy statement does not mean that an Inspector, and ultimately the decision-maker, will be precluded from considering the need for the proposed development, but that this will be done in the context of what is said about need in the national policy statement...’*
- 5.14 This was then expanded upon by Counsel for the Secretary of State, who expressly submitted not only that the ATWP did not authorise any development, but that it *‘merely informed and guided the consideration of planning applications’*.⁴⁹ That was the extent of the weight to be attributed to it. And it followed, Counsel went on to submit, that it was both possible and legitimate to argue at any subsequent Inquiry in respect of Stansted that the adverse environmental impacts were such that planning permission should be refused notwithstanding that this would frustrate national policy.
- 5.15 That submission was rightly made. If it were otherwise, there would be a fundamental breach of the requirement not to grant planning permission for an application requiring an Environmental Impact Assessment unless all of the required environmental information had been taken into consideration – the direct, indirect, secondary and cumulative impacts of the proposal – including all of the impacts on the environment which would result from incremental changes brought about by past, present or reasonably foreseeable actions in the future.
- 5.16 And just as that it is true for the environmental issues at large at this Inquiry, so must it be true for economic issues also, since both are indispensable inputs into the same, and single, planning balance.
- 5.17 Moreover, and consistent with all of the above, it was made absolutely clear in the judgment of Sullivan J in the *Essex County Council case* that any assertion that the ATWP *does* settle the economic case in favour of the maximum use of the existing runway would be unduly prescriptive and would wrongfully encroach on your proper

⁴⁷ *Essex County Council case* [CD/342].

⁴⁸ As extracted in the *Essex County Council case* [CD/342] at para 56.

⁴⁹ *Essex County Council case* [CD/342], at para 223.

role at this Inquiry. In particular, and having earlier identified the meaning of ‘policy’ as described by Lord Diplock in *Bushell*, Mr Justice Sullivan went on to state, implicit in the following quote:⁵⁰

*‘Views may differ as to whether the White Paper does live up to the promise on page 164 of the Consultation Document to make clear, or even to give a ‘clear indication’, of the weight Ministers attached to the provision of new airport capacity. **Whatever view is taken, it is one thing to give such an ‘indication’ at national level, and quite another to give policy support in a White Paper for a particular form of runway, with a particular capacity, at a particular airport, upon the basis of an unpublicised decision that the advantages of obtaining a capacity gain of up to 46mppa outweigh the environmental impacts described in a desk-top study. The adoption of such a prescriptive policy does encroach upon the proper role of an Inspector at a public inquiry, assisted by the detailed information contained in an EIA.’***

- 5.18 Sullivan J clearly considered, therefore, that the balance of the advantages of any requested capacity gain against the environmental impacts (as assessed in a full Environmental Statement) was a matter to be determined at an Inquiry, and not pre-emptively decided by any statement of Government policy. If it were otherwise, that policy would be impermissibly over-prescriptive, wrongly encroaching upon the proper role of the Inspector at that Inquiry, wrongly fettering that Inquiry’s capacity to consider and scrutinise the detailed information contained within the EIA. And just as that is true for the particular form of runway which Mr Justice Sullivan was then considering, so it must be true for the particular proposal before you – the existing runway and its contemplated capacity of 35mppa.
- 5.19 Just as the Secretary of State was at pains to reassure Mr Justice Sullivan that nothing in the ATWP indicated that there was any ‘done deal’ over aviation expansion, that a subsequent Inquiry would be free both to consider the harms caused thereby and to test the economic case assumed by the ATWP, so the then Minister – Yvette Cooper MP – was at equal pains to reassure the House of Commons.
- 5.20 In particular, and during the passage of the Planning and Compulsory Purchase Bill on 19th April 2004, the Minister was obliged to deal with Lords’ Amendments requiring, first, that economic impact assessments be required on major infrastructure proposals; and second, that an Inspector be always at liberty to consider the need for

⁵⁰ *Essex County Council* case [CD/342], at para 222 (emphasis added).

a development even though it was specifically proposed within a White Paper. In both aspects, so Ms Yvette Cooper MP said, the Lords' Amendments were unnecessary.⁵¹

5.21 So far as the economics were concerned the Minister stated as follows:

'... the Inspector will consider the economic effects, along with all the other aspects of the application as part of the Inquiry. Those would also include environmental and any other impacts, and local people would have a further opportunity to raise their concerns, including any concerns on economic aspects, at the Inquiry. If the economic impact is disputed, concerns can be raised about that, too... The Government do not want to predetermine through the legislation which issues the Inspector should consider or focus on at an Inquiry. The Inspector will need to be able to consider what the particular issues to be resolved are, and what to devote Inquiry time to, in each particular case.'

5.22 The Minister went on to state:

*'... the Inspector will still need to consider the balance between a project's economic impact and other benefits, and will still be able to consider the rigour of different analyses and assessments that are put forward, as is the case at the moment. We in no way dispute the importance of rigorous economic assessment and its role in any analysis of a major infrastructure project and in the debates that are necessary **at the planning level**. Material considerations that are disputed, whether economic, environmental, social, even aesthetic, will obviously be the territory of the Inquiry.'*⁵²

5.23 And as for the issue of 'need', the Minister confirmed:

'Again, we do not think that that requirement is necessary. Throughout the progress of the Bill, the Government have said that where there is a national policy statement White Paper, it should help to reduce the argument at a Planning Inquiry about the need for a specific development at a particular site—but that of course, the Inspector is likely to have to consider the balance between need and other factors. Those who oppose a specific development will be able to present their arguments against it, and it is right that they should have the opportunity to do so. It has never been the Government's intention to rule out the possibility of the Inspector spending some time considering need, but that will be done in the context of what is said about need in the national policy statement. The Inspector must ensure that all relevant impacts of a specific development are considered during an Inquiry, and

⁵¹ Hansard, 19 April 2004 [CD/381].

⁵² Ibid (emphasis added).

*that means all material considerations, together with relevant impacts such as the economic or environmental impact.*⁵³

- 5.24 Those statements are clear and they were deliberate. The Minister was telling Parliament, just as those speaking on the Secretary of State's behalf told the High Court, that SSE and others were *not* to be prevented from arguing either that the environmental harms of this proposal made it unacceptable even though it was supported by the ATWP or that those harms were not outweighed by economic need or benefit. They also made it clear that if these arguments prevailed, this proposal should not go ahead, even though this would frustrate one aspect of Government policy.
- 5.25 Moreover, these are not just moot points. These are fundamentally important issues of high constitutional and legal principle: Ministers cannot mislead Parliament; and to mislead the Court is a contempt of court.
- 5.26 We are not suggesting, of course, either that Yvette Cooper MP misled Parliament in the extracts set out above, or that the Secretary of State for Transport was in contempt of court as a result of the statements he made to the High Court in the *Essex County Council* case. Quite the opposite. We hold them to their word. Indeed, we are astonished that BAA seeks to go behind these statements and that it invites the Inquiry to conclude that Yvette Cooper MP did not mean what she said to Parliament – that she misled Parliament – and that the Secretary of State for Transport did not mean what he said to the High Court in the *Essex County Council* – that he was in contempt.
- 5.27 Moreover, insofar as there may have been a concern that this argument undermines the purpose of the ATWP – to settle certain matters and so reduce Inquiry time – the conduct of SSE's case at this Inquiry has proven otherwise. We have accepted that certain matters are settled by the ATWP and we have not wasted Inquiry time arguing about them. You will be able to report to the Secretaries of State earlier than you anticipated when this Inquiry opened. We have accepted, for example, that the ATWP provides an affirmative answer to the question of whether aviation expansion is supported in principle and for reasons of securing economic prosperity. We have accepted that the statements within the ATWP on this issue are the starting-point and backcloth to deliberations at the Inquiry, or – in terminology with which we are all familiar – that they are 'material considerations' which must be taken into account and given such weight as is appropriate.

⁵³ Hansard, 19 April 2004 [CD/381].

- 5.28 Moreover, we have not disputed that considerable weight has to be given to the Government policy statement to the effect that its preliminary view was that best use must be made of the existing runway at Stansted.⁵⁴
- 5.29 Nonetheless, the *actual* weight to be attached to that material planning consideration must – in the end – depend upon the extent to which the assumptions upon which it is based accord with the balance of the evidence adduced at this Inquiry, tested by cross-examination. If it were otherwise, the Government's reassurances to both the High Court and to Parliament, to the effect that all matters would be tested at Inquiry, will have been utterly meaningless and would have caused both to have been misled.
- 5.30 So it is that if the economic evidence at this Inquiry does *not* demonstrate that there is a compelling economic need to inflict harm either to amenity or to the environment, or if such harm is not outweighed by net economic benefits, then planning permission should be refused even if it does frustrate *one* aspect of stated Government policy – the asserted priority of making more use of the existing runway at Stansted.⁵⁵

6 The Correct Approach to Government Policy on Climate Change

- 6.1 SSE identified at the outset of this Inquiry, and in the beginning of these closing remarks, that there was a tension in Government policy between, on the one hand, the policy to expand aviation contained in the ATWP and, on the other, the Government's commitment to tackle the threat of global warming. SSE has emphasised on a number of occasions that the ATWP cannot be read alone and in isolation of those other pronouncements of Government policy, especially those subsequent to the publication of the ATWP in December 2003, and especially those which seek to deal with climate change, proclaimed by Government to be the biggest single issue we now face.⁵⁶
- 6.2 There has been a dramatic shift in the Government's appreciation of the threat posed by global warming and carbon emissions since the publication of the ATWP in 2003, which in these regards reads now as from another age – *before* the Government's Chief Scientist, Sir David King, advised the threat from climate change to be *far more*

⁵⁴ For example, SSE/3.1/a, at para 6.1.6.

⁵⁵ ATWP [CD/87] at para. 11.26.

⁵⁶ *The Future of Air Transport Progress Report (the 'Progress Report')* [CD/88] at para 2.1.

serious than that of terrorism,⁵⁷ and before the Prime Minister, Tony Blair, asserted climate challenge was *'the world's greatest environmental challenge'*.⁵⁸

- 6.3 The new appreciation of the threat posed by climate change is reflected in all of the following actions taken *after* the publication of the ATWP in December 2003: the publication in February 2005 of *PPS1 paragraph 13*, with the effect that Local Planning Authorities must promulgate and apply policies which drive down the need to use energy and so reduce emissions;⁵⁹ the publication in March 2005 of Government's *Sustainable Development Strategy*, starkly warning in respect of climate change that wrong choices now would prejudice future generations;⁶⁰ the publication in October 2006 of the *Stern Review on the Economics of Climate Change*,⁶¹ recognising that henceforth international aviation must be included in any meaningful climate change policy and action; the publication thereafter, in December 2006, of the draft *Planning and Climate Change Supplement to PPS1*,⁶² setting down the target of reducing carbon emissions by 60% by 2050,⁶³ and culminating in the publication in March 2007 of the *Draft Climate Change Bill 2007*,⁶⁴ a flagship of new Governmental policy in this crucial and challenging area.
- 6.4 The ATWP *must*, therefore, be read in light of these subsequent statements of Government policy. The material question is *how* it is possible to do so, when it is openly acknowledged that aviation is a major contributor to global warming.
- 6.5 The answer lies in the words of the ATWP itself, where it calls for a *'balanced and measured approach'*,⁶⁵ and in the statements made by the Government to both Parliament⁶⁶ and the High Court.⁶⁷ In particular, the ATWP assumes, *but without settling the issue*, that making greater use of the existing runway at Stansted is justified, in spite of the attendant harms which will be occasioned – *including* the millions of tonnes of global warming gases which will be emitted – because economic prosperity depends upon it. As we have seen, however, the Minister has confirmed

⁵⁷ 'Climate Change Science: Adapt, Mitigate, or Ignore?' (2004) 303 *Science* 176-177.

⁵⁸ Speech presented on 14 September 2004 at the Exeter Conference, 'Avoiding Dangerous Climate Change', available at www.number-10.gov.uk.

⁵⁹ PPS1 [CD/92].

⁶⁰ 'Securing the Future: The UK Sustainable Development Strategy', DEFRA, 2005 [CD/91].

⁶¹ Report of the Stern Review - Economics of Climate Change, HMT, Oct 2006 [CD/157].

⁶² Draft Climate Change Supplement to PPS1 [CD/93].

⁶³ 'Our Energy Future: Creating a Low Carbon Economy', DTI, Feb 2003 [CD/239].

⁶⁴ Draft Climate Change Bill 2007 [CD/241].

⁶⁵ ATWP para 2.18 [CD/87].

⁶⁶ See para 5.22 above, Yvette Cooper 19 April 2004.

⁶⁷ See para 5.14 above and CD/342, para 223.

that this assumption is to be tested on the ground at this Planning Inquiry, where the evidence on both harm and benefit will be weighed and balanced.⁶⁸

- 6.6 And yet BAA, argue that – despite all of the above proclamations of Government policy on climate change, despite the targets Government has set, despite Government's assertions as to the extent of the threat that we face – despite all of this, we should simply ignore the carbon emissions of this proposal at this Inquiry.
- 6.7 The unhappy task of arguing the unarguable fell to Mr Rhodes. Essentially, it contained two assertions: first that even the massive carbon emissions of the appeal proposal would make no discernible difference to global temperatures; and second that such emissions can safely be ignored in any event because, in *'The Future of Air Transport Progress Report'*,⁶⁹ the Government has made it clear that it intends to deal with the emissions from aviation by other means, including them within the international trading of carbon. Both arguments are entirely misconceived, however.
- 6.8 As to the second argument, the Progress Report is what it says on the cover, merely a *'Progress Report'*, not a statement of Government policy. Indeed this was confirmed by the then Secretary of State for Transport, Douglas Alexander, in evidence given to the Environmental Audit Committee on 14 June 2006. In response to a question posed as to the remit of the forthcoming review of the ATWP, Mr Alexander stated that the purpose of the Air Transport Progress Report was only to 'report progress in implementing the policy commitments set out in the White Paper'.⁷⁰ It is not and neither has it ever been stated to be a policy review of the ATWP. None of the consultation processes necessary for such a review have taken place. Moreover, and as I shall make clear in these closing submissions, no-one can be remotely certain that the mechanisms for reducing the carbon emissions from aviation anticipated by the Progress Report will even be established, let alone be effective any progress actually achieved.
- 6.9 If the second argument is wrong, however, the first – that the increase in emissions would make no discernible difference – is not just wrong but dangerous: the epitome of an incrementalist argument which, taken to its logical conclusion, would mean that carbon emissions are never taken into account on *any* planning application, not even for the most energy-intensive of development proposals. That cannot possibly be right, and indeed it is not the approach that has been taken in other Inquiries – as Mr

⁶⁸ Hansard, 19 April 2004 [CD/381].

⁶⁹ ATPR [CD/88].

⁷⁰ Evidence to the Environmental Audit Committee on 14 June 2006, HC 981-viii at question 702.

Levett was able to demonstrate when he quoted the extract from the Inspector's report in respect of the Thames Gateway Bridge proposal.⁷¹ In short, if – in planning terms – global warming is the accumulative result of energy emitted from countless development proposals, it is to be addressed by taking those emissions into account in respect of *all* of those proposals, not *none* of them.

6.10 At its core, then, the argument made by SSE in this regard is, we respectfully submit, modest. We do not suggest that the Government's policy on climate change trumps the Government's policy on the expansion of aviation. *All that we ask* is that the carbon emissions from the proposed development, undisputedly an environmental harm and a material planning consideration, are weighed in the balance.

6.11 In the ATWP *Progress Report*, published in December 2006, the DfT announced:

*'We propose to consult on the development of a new emissions cost assessment to inform Ministers' decisions on major increases in aviation capacity.'*⁷²

and, accordingly, in August 2007, DfT published a consultation document⁷³ seeking views on the way in which the proposed emissions cost assessment(s) should be carried out. This states:

*'We do not believe it should be carried out on an ad-hoc basis to inform the consideration by the planning system of individual airport development proposals'*⁷⁴

We believe the DfT's preliminary view on this is untenable. A planning inquiry cannot be prevented from examining all material considerations and from seeking to weigh these as best it can. In the case of a planning application such as the one being considered at this Inquiry, where a massive increase in carbon emissions would ensue if the development were to be approved, the issue must be weighed, and the best tools available should be used to do that. And SSE notes that the proposed methodology for carrying out emissions cost assessment,⁷⁵ as shown in the DfT consultation document, is the same methodology as that used by SSE for the purposes of quantifying the additional emissions that would arise from the G1 development.

⁷¹ Oral evidence of Mr Levett, 27 July 2007, transcript p.26.

⁷² CD/88 at para 1.6.

⁷³ CD/438.

⁷⁴ Ibid at page 12.

⁷⁵ Ibid at page 30.

- 6.12 SSE submit that the environmental harm caused by the additional carbon emissions should attract significant weight, derived from the Government's own characterisation of climate change as being the biggest single issue that we confront.
- 6.13 And so we are faced, as we are in every Planning Inquiry, with a balancing exercise. On the one side will be the evidence of all of the environmental and other harms occasioned by the proposal – its direct, indirect, secondary and cumulative impacts, including all of the incremental impacts which are reasonably foreseeable⁷⁶ – and on the other will be the economic evidence on both need and benefit. The question that the Inquiry is charged with answering is that posed in any planning inquiry, namely, *what does the balance of the evidence indicate?*

7 The Correct Approach to the Economic Evidence

- 7.1 In order to weigh the economic case for the expansion of Stansted in the balance against the environmental harms, as the proper planning approach to this proposal requires, one has to quantify the predicted economic effects. This is precisely what the evidence of SSE has done and precisely what the evidence of BAA, taken as a whole, fails even to attempt.
- 7.2 Because of the way in which BAA has chosen to conduct its case – in the face of the above statements made by or on behalf of Government to both the High Court and Parliament that economic issues were at large and for consideration at Inquiries such as this – the *only* evidence *tested* before this Inquiry of the economic effects of the proposed development is that adduced by SSE.⁷⁷
- 7.3 Moreover, and as we will make good later in these closing remarks, that evidence has demonstrated quite clearly that the proposed expansion of Stansted will result not in economic benefit as the Government anticipated and assumed, but in economic detriment.
- 7.4 That being so, there *is no* evidence before this Inquiry on which you can either conclude, or recommend that the Secretaries of State can conclude, that the expansion of Stansted as proposed by this application would deliver positive economic benefits on either a local basis or a national basis. The appeal proposal would not garner economic benefits for the citizens of this country.

⁷⁶ Town & Country Planning (EIA) (England & Wales) Regulations 1999, Sched 4, para 4 [CD/309].

⁷⁷ The appendices to Mr Rhodes' proof of evidence included some economic material that had been prepared for him by economic consultants, Tribal, but we were unable to test this evidence. SSE submitted a detailed rebuttal of that report exposing significant errors within the material [SSE/31].

- 7.5 SSE invites you to draw the necessary adverse inference from BAA's failure to adduce any evidence as to the alleged economic impacts of the proposed development in contrast to the detailed evidence adduced by SSE as envisaged in the cases of *R v. Inland Revenue Commissioners, ex p. Coombs & Co* (1991) 2 AC 283⁷⁸ and *Wisniewski v. Central Manchester Health Authority* (1988) Lloyd's Med Rep 223.⁷⁹
- 7.6 Both cases make it clear that adverse inferences are to be drawn where there is no credible explanation whatsoever for a failure to call a witness to give evidence on an issue in dispute.⁸⁰ BAA could have called Tribal to give evidence but failed to do so. There is no credible explanation for that failure other than that it was too afraid to have its economic case subjected to cross-examination, and perhaps understandably so in light of the criticisms of the House of Commons Environmental Audit Committee⁸¹ and the evidence which was adduced by Mr Ross on behalf of SSE, and which we consider later on in these closing remarks.

8 The Correct Approach to the NO_x Critical Levels in Hatfield Forest

- 8.1 We set out in some detail below our evidence on the effects of the appeal proposal on air quality, particularly in relation to NO_x levels in Hatfield Forest. Before looking at the substantive case advanced by SSE, however, it is necessary to deal with a matter of approach to that evidence.
- 8.2 BAA asserts that the NO_x limit value for the protection of vegetation (namely an annual mean NO_x concentration of 30 µg m⁻³) does not apply to areas which lie within 5km of motorways ('an Exclusion Zone'). As such, BAA alleges, the limit value of 30 µg m⁻³ does not apply to Hatfield Forest as it falls within an Exclusion Zone.⁸²
- 8.3 This argument is misconceived. In short, it conflates the process by which measurements of the concentration of nitrous oxides are to be taken with substantive limit values. I set out the reasons advanced by SSE for this below.
- 8.4 The relevant European legislation is the Air Quality Framework Directive on ambient air quality assessment and management (96/62/EC) and the First Daughter Directive

⁷⁸ Per Lord Lowry at 300.

⁷⁹ Per Brooke LJ at 240.

⁸⁰ See SSE's Legal Submissions [SSE/36/a].

⁸¹ CD/365.

⁸² BAA asserts that its position on this is consistent with the position of Government, see, for example, Volume II of DEFRA's '*Air Quality Strategy for England, Scotland, Wales and Northern Ireland*' (2007) [CD/427.2], at para 308.

- (99/30/EC).⁸³ These directives set limit values on the concentration of a number of air pollutants, which include oxides of nitrogen.
- 8.5 The substantive aim of the Framework Directive is set down in Article 1, *inter alia* to ‘define and establish objectives for ambient air quality in the Community designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole’, and to ‘assess the ambient air quality in Member States on the basis of common methods and criteria’.
- 8.6 Just as the Framework Directive sets out in broad terms its substantive aims, it also sets out the mechanism by which compliance with those aims is to be assessed. Article 4(3) provides that when limit values are set, criteria and techniques shall be established for the measurement to be used, the location of sampling points, the minimum number of sampling points and so on. Article 6 of the Framework Directive notes that ‘*once limit values... have been set, ambient air quality shall be assessed throughout the territory of the Member States*’.
- 8.7 Turning to the Daughter Directive, Article 4(1) requires Member States to ‘take the measures necessary to ensure that the concentrations of nitrogen dioxide, and where applicable, of oxides of nitrogen, in ambient air... do not exceed the limit values laid down in Section I of Annex II’. Section I of Annex II provides the limit for vegetation of 30 µg m⁻³.
- 8.8 Article 7(2) of the Daughter Directive states that the criteria for determining the location of sampling points for the measurement of, *inter alia*, oxides of nitrogen are those listed in Annex VI. Annex VI provides that sampling points targeted at the protection of the ecosystems or vegetation should be sited, *inter alia*, more than 5km from motorways. In short, this is dealing with where representative measurement of ambient air quality should be taken (i.e. measurements which are unaffected by proximity to a motorway); there is no suggestion that the substantive limit values do not apply within 5km from a motorway.
- 8.9 Indeed, nowhere in the Framework Directive or the Daughter Directive is the type of Exclusion Zone advanced by BAA expressly referred to. Neither should the existence of an Exclusion Zone be implied. Given the total lack of legislative support for the concept of an Exclusion Zone, it is plain that the limit value of 30 µg m⁻³ applies to Hatfield Forest, notwithstanding its location in close proximity to the M11.

⁸³ CD/421.

- 8.10 Even if SSE are wrong, however, and Hatfield Forest falls within an Exclusion Zone, the evidence adduced below in relation to the likely exceedence of the limit value for NO_x in Hatfield Forest is a material planning consideration. Indeed, given the very special and unique nature of Hatfield Forest, SSE urges the Inquiry to place the greatest of weight on the potential damage that would be caused to Hatfield Forest should this development be permitted.

9 The Correct Approach to the Models

- 9.1 Before we leave the questions of the approach to take in the light of the evidence we have heard, we wish to make certain salient observations as to the approach to take to the modelling evidence adduced by BAA, especially in the light of the highly regrettable way in which BAA chose to conduct that part of its case which concerned vehicle occupancy.
- 9.2 At all Inquiries of the nature and complexity of this one, the Appellant will come replete with proofs of evidence containing the results of 'black box' modelling exercises that have been undertaken for them, which they claim to have been validated, but which are – for reasons of commercial confidentiality – never available for full forensic interrogation by opposing parties.
- 9.3 The most that opposing parties can usually do is to point out where the outcomes of those exercises seem hopelessly counter-intuitive, for example where 10 million more air passengers every year yield just two additional passengers on the most over-crowded trains; or where the greater proportion of new air passengers (conveniently, for the purposes of the BAA Transport Assessment) come from East Anglia rather than from London and through the congested M11 corridor, even though the case for expansion is largely to meet the needs of the Heathrow-Gatwick spill-over.⁸⁴
- 9.4 The most that opposing parties usually ask of the Appellant in these regards is sufficient transparency at least, as well as it can, to explain why those counter-intuitive outcomes might have occurred, especially where they are a result of input assumptions in the modelling exercises being radically different from known data or past trends.
- 9.5 In this case, however, there has been a lamentable lack of transparency shown by BAA.⁸⁵ SSE have experienced considerable difficulty in testing the input assumptions made by BAA because of gaps in the information provided. However, in one notable

⁸⁴ SSE/13.1/a at paras 5.1.18 to 5.1.23.

⁸⁵ SSE/13.1/a, section 5.

case, SSE were able to test forensically the accuracy of that input by interrogating the source material – and that was in respect of vehicle occupancy where BAA declared its source to be CAA surveys 2002-2004.⁸⁶

- 9.6 However, when we tested the BAA input against that data, the two did not tally. The BAA input was 30% out, twice the threshold of its supposed sensitivity tests by reason of this factor alone, and for no good reason whatsoever.⁸⁷ We leave for later the detailed explanation of that lamentable failure on BAA's part, but we do not shirk from stating now its implications. In short, it is a matter of trust; and sadly BAA has demonstrated its modelling to be untrustworthy.

10 The Correct Approach to the Proposed 35mppa Limit

- 10.1 I come, finally, in respect of matters of approach to the suggestion by BAA that its application be somehow treated as one not to remove the condition which currently limits the throughput of passengers at Stansted to 25mppa, but to increase it incrementally instead to 35mppa.
- 10.2 The starting point to this appeal is, of course, the application – for that determines the extent of development for which permission has been sought. In its material part, that application was not to modify the existing limit on passenger throughput at Stansted, increasing it from 25mppa to 35mppa, but to remove that limit altogether.
- 10.3 As we are all by now aware, however, BAA is proposing that even though it has applied to remove the limitation on the number of passenger movements per annum, it now volunteers a cap by condition at 35mppa. Thus, BAA has argued, any environmental impact beyond that figure need not even be considered. As we made clear in our extended opening submissions,⁸⁸ however, there are three points to make about this proposed condition.
- 10.4 First, it was admitted by Mr Rhodes when he was cross-examined that the environmental effects of expansion of Stansted beyond 35mppa had not been fully assessed.⁸⁹ That must mean that planning permission cannot be granted for any more than 35mppa because the work necessary to gauge the environmental impact of such a passenger throughput has simply not been undertaken.

⁸⁶ See SSE/13.1/d where SSE set out relevant correspondence between SSE and BAA. See also CD/326 p.48, at para 2.7.1.

⁸⁷ SSE/13.1/a at Annex 1.

⁸⁸ SSE/34.

⁸⁹ Cross-examination of Mr Rhodes (BAA), 12 June 2007.

- 10.5 Second, the suggested condition limiting passenger throughput at Stansted to 35mppa was proposed by BAA in the full knowledge that it could be imposed only if justified on the weighing of the planning balance between environmental harm and economic need or benefit. It is in these regards to be noted that Mr Maiden gave evidence to the effect that 35mppa was not the capacity of the existing runway, which he viewed as being about, or a little in excess of, 40mppa,⁹⁰ and so we know that BAA is seeking to justify a condition, on the basis of that planning balance, limiting the use of this runway to *below* its capacity. BAA has conceded, moreover, through the evidence of Mr Rhodes under cross-examination⁹¹ that '*best use*' of the runway, as sought by the ATWP,⁹² does not necessarily mean the *maximum use*. It follows that, whereas it is not open to this Inquiry to sanction a use *in excess* of 35mppa, it is open to the Inquiry – on weighing the same balance but in the light all of the evidence heard – to determine that '*best use of the existing runway*' is *below* 35mppa, be it 30mppa as suggested by the ACC, or the existing limit of 25mppa as contended by SSE.
- 10.6 Third, we need to look at this proposed development in the context of all of the development which we know is proposed by BAA, or can reasonably foresee being proposed, for only then can we assess the entirety of the cumulative impact of the proposal which is before us today – a point to which I have already alluded in my critical remarks about the excessively limited scope of the Inquiry within which we have been compelled to work.
- 10.7 It will in this regard be recalled that:
- (i) In the course of cross-examination by SSE, Mr Maiden conceded that BAA had undertaken forecasting work for the scenario that Stansted remained a single runway airport and increased its passenger numbers to 40mppa by 2030;⁹³
 - (ii) Mr Maiden further conceded that if the current timetable for the G2 development slipped there might well be a further G1 expansion application;⁹⁴
 - (iii) Indeed, in the course of the same cross-examination of Mr Maiden, Mr Humphries QC stated on behalf of BAA that '*...it has never been hidden, that in the context where there was no second runway, at the point where the planning consent of a 35 MPPA condition was reached or about to be reached,*

⁹⁰ Cross-examination of Mr Maiden, 22 June 2007.

⁹¹ Cross-examination of Mr Rhodes (BAA), 13 June 2007.

⁹² ATWP [CD/87], Executive Summary, p13 and paras 2.11, 2.18, 11.7, 11.11 and 11.108.

⁹³ Cross-examination of Mr Maiden 22 June 2007.

⁹⁴ Ibid.

the company would obviously have to consider coming back for another application;⁹⁵

- (iv) The same point can be derived from the letter from Cameron McKenna to the Programme Officer dated 20 March 2007;⁹⁶
- (v) BAA will shortly put in an application for G2.⁹⁷

10.8 The offer of a conditional cap on passenger movements is, therefore, just as we asserted in our earlier openings, no more than a ruse to prevent the cumulative environmental impacts of BAA's real proposals from being assessed. Indeed, for local residents, BAA's offer of a cap of 35mppa, cynically made, typifies the incrementalist approach to development at Stansted which has so bedevilled its recent planning history.

11 Inspector's provisional list of main issues

11.1 At the Pre-Inquiry Meeting held on 5 March 2007 you issued a provisional list of ten issues which, on the basis of what you had seen and heard at that time, seemed to be the main issues to be considered in this Inquiry. These (not in order of importance) were:

- i. Whether or not it would be premature to make a decision on the appeal at this time;*
- ii. The extent to which the proposals accord in principle with current Government policy, with the statutory development plan and with the emerging Regional Spatial Strategy for the East of England;*
- iii. The effects of the proposals on the living conditions and health of residents in the area, particularly in terms of aircraft noise and air pollution;*
- iv. The effects of aircraft noise on the quality of life of the area in terms of the educational, cultural and leisure activities of communities;*
- v. The effects of increased housing pressures arising from expansion of the airport on the nature and character of communities in the area;*
- vi. The effects of increased air pollution from aircraft and surface traffic on nearby woodlands;*
- vii. The effects of expansion of the airport on the demand for water;*

⁹⁵ Ibid.

⁹⁶ Letter from CMS Cameron McKenna to Programme Officer, 20/3/07 [CD/507].

⁹⁷ Cross-examination of Mr Rhodes (BAA), 14 June 2007 at transcript p.31.

- viii. The adequacy of the road network to accommodate increased road traffic arising from expansion of the airport without detriment to its safe and efficient operation;**
- ix. The adequacy and capacity of the rail access to the airport to accommodate demand arising from expansion of the airport without increasing reliance on use of the private car; and**
- x. Whether the economic (including employment) benefits of the proposals are sufficient to outweigh their social and environmental effects.**

11.2 We respectfully submit that two other significant issues have emerged during the course of the Inquiry which merit being added to the above list, namely:

11.3 xi. The effects of the expansion of the airport on emissions of carbon dioxide and the implications in relation to climate change.

xi. The effects of the expansion of the airport on emissions of carbon dioxide and the implications in relation to climate change

xii. The level of trust which can be placed in the documents produced by BAA for this Inquiry.

11.4 Before looking at these 12 key issues, however, we will first review the evidence, and then, within the framework of the 12 key issues, invite you to make certain findings of fact in the light of that evidence. It will be in the context of those two exercises that we will proceed to analyse the key issues in the order in which I have set them out.

SECTION C: Review of Main Evidence on the Harms of the Proposed Development

12 Introduction

- 12.1 In what follows below, I summarise the evidence that we have heard at this Inquiry in respect of the main harms that SSE alleges would arise if planning permission for the appeal proposal was granted. I then turn to the alleged economic benefits which are said by BAA to arise from the appeal proposal.
- 12.2 I shall not review, however, the evidence adduced on behalf of SSE by Mr Gardner in respect of the planning and policy backcloth against which this Inquiry has taken place since I have covered much of that material in my legal submissions as to the proper approach to take to this appeal proposal and the ATWP. I shall, however, include all of the relevant references to his substantive evidence when inviting you to make certain findings of fact in respect of planning and policy matters.
- 12.3 I set the context for the sortie through the evidence on harm and benefit by looking first at the evidence on the strategic environmental issues to which the appeal proposal has given rise.

13 Strategic Environmental Issues

- 13.1 The Inquiry heard evidence on behalf of SSE from Professor Therivel, an expert witness on strategic environmental assessment,⁹⁸ who was highly critical of BAA's environmental statement on a number of counts: BAA had equated 264,000 ATMs to 35mppa plus cargo flights. However, with growing aircraft sizes, she said it was not unreasonable to assume that 264,000 ATMs could, in time, represent 40-45mppa, and potentially up to 50mppa. Clearly, the impact of 45-50mppa would be far more serious than that at 35mppa. The ES assessed the impacts of 35mppa, with some limited sensitivity testing at 40mppa, but did not assess impacts at 45 or 50mppa. Indeed, BAA has acknowledged that, in the absence of proper environmental assessment above 35mppa there is insufficient evidence to demonstrate that a higher throughput would be environmentally acceptable.⁹⁹
- 13.2 Professor Therivel described BAA's approach, in not looking at what full use of the runway implied or at longer timescales, as part of a continuing drip-feed of proposals and impacts none of which on its own seemed overly onerous, but the sum total was

⁹⁸ Professor Riki Therivel of Levett-Therivel, Environmental Consultants.

⁹⁹ Cross-examination of Mr Rhodes (BAA), 12 June 2007, transcript p.206, line 1.

one of significant cumulative impacts. In addition she was critical of BAA for not adequately assessing cumulative impacts and she cited five specific examples of this (e.g. considering ground and air noise separately despite their having a cumulative impact on listeners). This fragmentation of impacts contributed to her conclusion that BAA had underestimated the proposal's cumulative impacts.

- 13.3 Professor Therivel was also critical of BAA for being selective in its comparisons of the 35mppa case and for its use of 'careful wording' – sometimes comparing the 35mppa case to the 25mppa base case, sometimes to the '15mppa+' permission and sometimes to the 2004 baseline or some other 'questionable' baseline. In her view this prevented easy identification of impact significance.
- 13.4 She pointed to a number of instances where the conclusions in the BAA ES about impact significance did not fully reflect the data, for example describing a 20dB(A) increase in ground noise – from virtual silence to the equivalent of a business office – as 'moderate'.
- 13.5 Professor Therivel considered that the impacts of the proposed development seemed 'to massively outweigh the proposed mitigation'. She noted that BAA proposed no new mitigation for noise, air quality or surface access, all of which would significantly affect local residents, and she was critical of the absence of a Quality of Life Assessment (QoLA) as requested by Uttlesford District Council.
- 13.6 In Professor Therivel's judgement, BAA's ES did not comply with the requirement to consider cumulative impacts under the Town and Country (Environmental Impact Assessment) Regulations 1999 (Schedule 4) [CD/309].

14 BAA Sustainability Appraisal

- 14.1 RPS, commissioned by BAA, produced a document which they called a Sustainability Appraisal ('SA').¹⁰⁰ SSE adduced evidence to indicate, however, that the BAA SA was conceptually misconceived. Indeed, SSE adduced evidence that suggested that the SA was actually predetermined.
- 14.2 In particular, in July 2004 – when RPS was appointed to carry out work in connection with the proposed second runway at Stansted – it issued a statement in which John Rhodes, Chairman of the RPS Planning, Transport and Environment Division, was quoted as follows:

'RPS has a long track record with BAA in particular at Stansted. RPS provided

¹⁰⁰ CD/21/1.

*advice upon agricultural matters during the Airports Inquiries (1981-83) and subsequent to the inquiries managed 350 hectares of agricultural land on behalf of BAA prior to disposal of the land to the private sector. We believe our key role on this important commission is to ensure that discussion and decisions are targeted on when and how to deliver the planning consent rather than if. The Government has tasked BAA with delivering the second runway at Stansted. RPS will do all in its power to ensure that our client can meet this objective.'*¹⁰¹

- 14.3 If Mr Rhodes (or RPS) saw fit to make those comments in respect of G2 **in advance** of assessing whether that proposal was sustainable, it is both convenient and unsurprising, though perhaps not persuasive, that Mr Rhodes (or RPS) could not thereafter identify any significant sustainability problems arising in respect of G1.
- 14.4 The concerns of SSE as to predetermination were underlined by what happened thereafter and during the process of production of the SA. In particular, as part of that process, two workshops were held. Mr Paul Garland, who gave evidence for SSE on this topic (jointly with Mr Sanders), had been a participant in these workshops. He told the Inquiry that after the second workshop a draft report was drawn up and submitted to the participants for comment. Mr Garland suggested that a final (third) workshop should be held to discuss any changes that were made but he received no reply, and indeed was not even sent a copy of the final report.
- 14.5 Moreover, Mr Garland told the Inquiry that there were startling differences between the draft SA and the SA that was finally published. The scoring system was changed and, in many cases, even the objectives. The details of this are set out in some detail in SSE/17/A but just to give two examples.
- (i) The first question under objective 4 was 'What is the overall predicted change of greenhouse gas emissions from aircraft movements?' The response was changed from 'Air Traffic Movements to increase by 29% therefore CO₂ emissions will increase by a similar proportion' (score 'double negative' i.e. very poor) to a claim that the proposed development would lead to no more or less emissions than recognised in the Integrated Policy Appraisal of the ATWP (score '0' i.e. objective met).
 - (ii) Objective 11 was changed from 'Reduce detrimental effect of noise pollution' to 'Minimise detrimental effect of noise pollution'. The nine original appraisal

¹⁰¹ SSE/17/a at Annex 2.

questions under this objective had produced six negative and three positive scores. In the published SA these had been reduced to three questions which produced two '0' scores, i.e. objective met, and one '++' score, i.e. objective exceeded.

- 14.6 Moreover, the end result of these changes was to make the report as published radically different, unrecognisable almost, from the draft which preceded it. Whereas the draft report contained 29 scores of poor or very poor alignment and 41 scores of good or very good alignment – in the final report, 28 objectives were identified, and of these 14 were met, 10 exceeded and in only 4 cases were enhancements even recommended.
- 14.7 Further, the entire approach to the SA was, SSE submits, wrong. An SA should, as the title indicates, appraise the sustainability of the proposed development. The question to be asked is, quite simply, whether or not the development is sustainable. RPS adopted a completely different starting point, however. The question they asked was: given that this development is going to go ahead, is BAA doing everything that it can to mitigate its harmful effects and to maximise its benefits? That is not so much asking the relevant question, as begging it.
- 14.8 As far as the harmful effects are concerned, what they provided was not so much a sustainability assessment, therefore, as a mitigation assessment. Take the example of noise, which is RPS's eleventh objective. We know that there will be more noise if this development goes through and so we would expect a negative score. But under the objective of 'Minimise the noise from ground operations, the noise during construction, and the noise from aircraft', the answer, as recorded in the SA, on page 12, is 'Objective met'.
- 14.9 The corollary of this is that the SA concentrates solely on what BAA can do. The knock-on effects of the development are ignored, e.g. the extra journeys that will be undertaken by the families of the new employees, the energy and the water that will be consumed by those employees and their families. Let us take the example of noise once again: all that comes within the purview of the SA is what BAA can do to reduce noise, and so it even ignores the extra noise which is produced by planes for which, it is argued, BAA is not responsible. We are therefore left with the absurdity of a sustainability appraisal of an airport expansion which fails to take into account the extra noise that will result from that expansion.
- 14.10 There is a similar disclaimer of responsibility for climate change. We are told that BAA cannot be held responsible for the extra carbon emissions that would result. All

that BAA can do is to reduce carbon emissions in those areas over which it has some control and influence and these do not include emissions from aircraft. This ignores the fact that it is BAA that is making this planning application and is responsible, for the purposes of the planning process, for addressing all of the adverse impacts that would ensue from the proposed development. In this regard additional carbon emissions from aircraft are no different from additional aircraft noise. BAA must address both. Notably, more than a year later, accepting that carbon emissions could not logically be disregarded, BAA provided projections.¹⁰²

- 14.11 SSE summed up RPS's approach to the SA rather schematically in SSE/17/A, para 5.1 as follows. Let us say that we have a development that results in ten units of damage. RPS argues that if BAA reduces this by one unit and if this is the most that can be done, the sustainability objectives have been met, and for the purposes of the SA the nine remaining units of damage can be ignored. While we commend any mitigation, we are still left with nine units of net additional damage and these are far more significant in terms of sustainability than the one unit that is saved.
- 14.12 In concluding his evidence to the Inquiry on behalf of SSE, Mr Sanders presented a colourful analogy of Henry VIII commissioning a matrimonial happiness appraisal as a means of justifying his intended execution of Ann Boleyn. The appraisers promised that in carrying out this exercise they would not focus upon whether or not the unfortunate Ann Boleyn should be beheaded, but simply upon the when and the how and upon such appropriate mitigation as might be possible.

Air Traffic Forecasts

- 14.13 BAA's air traffic forecasts are of crucial importance to the entire Environmental Statement ('ES') because these are the starting point for assessing the impacts in every area, including noise, air quality and surface access impacts. In turn, the ES outputs provided the input data for the Health Impact Assessment ('HIA') and the SA. Thus, if BAA's air traffic forecasts are unreliable, there is a knock-on effect upon the reliability of the environmental impacts and upon the HIA and SA.
- 14.14 The evidence on forecasting presented by Mr Maiden on behalf of BAA (BAA/6/A) did not instil confidence in the reliability of BAA's forecasts or the robustness of the analysis that underpinned them. Moreover, it was acknowledged that BAA's forecasting record at Stansted was not good, and no evidence was offered to suggest that it had put in place changes to its forecasting methodology to avoid repetition of its

¹⁰² BAA/4/C at Volume 3, Table 5.3.

tendency to underestimate growth that had characterised all its Stansted forecasts since the early 1990s.

14.15 SSE presented considerable evidence highlighting the implausibility of BAA air traffic forecasts and numerous inconsistencies. In particular SSE contended that BAA had significantly understated the difference between the 35mppa case and the 25mppa case. Cross-examination of BAA's forecasting evidence by SSE and other parties reinforced our own evidence on the unreliability of BAA's air traffic forecasts, for example:

- (i) BAA's past record of consistently underestimating the rate of growth in passenger traffic at Stansted;
- (ii) the implausibility of forecasts for cargo air transport movements ('CATMs');
- (iii) the conservative nature of BAA's assumptions for the increase in the average number of passengers per passenger air transport movement ('PATM');
- (iv) the conservative nature of BAA's forecasts for non-ATMs
- (v) the implausibility of a reduced proportion of passengers to or from Greater London given projected capacity constraints at Heathrow and Gatwick;
- (vi) the unreliability of BAA forecasts for long haul passenger traffic;
- (vii) the counter-intuitive forecast that the proportion of transfer passengers will fall (in line with the trend of recent years) to 10% at 25mppa, but rise to 17% at 35mppa;
- (viii) the assumptions of average vehicle occupancy, significantly at variance with data produced by the CAA and hopelessly explained by BAA when challenged;
- (ix) the over-generous forecast of need for car parking spaces, mirroring the over-provision allowed in the 2003 25mppa planning approval;
- (x) the assumption that recent, potentially short term, falls in coach prices will continue, thereby maintaining a pricing advantage over rail; and
- (xi) the extent to which the forecasts were ultimately based on subjective judgement.

14.16 Since the forecasts are of such fundamental importance in assessing the comparative environmental impacts between the proposed development and the 25mppa base case, which BAA presents as the 'fall-back' position, it is essential to deal with forecasting issues in some detail - all the more so because, as Mr Maiden accepted in

cross-examination, BAA's forecasts for Stansted, going back to the early 1990s, had consistently underestimated Stansted's rate of growth.

- 14.17 Over the past seven years the average number of passengers per PATM at Stansted has increased by 71% (from 77.3 in 1999 to 132.3 in 2006)¹⁰³ but, in projecting its 25mppa base case, BAA predicts that this rate of increase will decline to less than 5% over the next seven years (from 132.3 in 2006 to 138.9 in 2014). BAA was unable to provide any reasonable explanation as to why there should be such a dramatic slowdown. In our evidence in chief we were able to show that average aircraft size was increasing year by year – a trend not only apparent at Stansted but at almost every major airport in the world. In cross-examination BAA acknowledged that there were six airports in the world where the average number of passengers per aircraft was already 200 or more.
- 14.18 SSE argued that, in a capacity-constrained scenario, carriers would achieve higher load factors and there would be an incentive to introduce larger aircraft to make best use of limited slot availability. We also pointed out that carriers – especially low cost carriers – were becoming ever more efficient at filling the available seats during off-peak periods, using pricing and other marketing initiatives to achieve this.
- 14.19 BAA's conservative projections for the average number of passengers per aircraft in relation to Stansted were also shown to be implausible by comparison with the projections made by the other major airports in the south east. The effect of such a modest projected increase in the number of passengers per PATM was substantially to overstate the number of PATMs required to handle 25mppa in the base case and so to exaggerate the environmental impacts associated with the base case. It also had the effect of understating the difference in impacts between the base case and the proposed development.
- 14.20 This ploy would not have been so effective for BAA if it had provided projections for the full potential of 243,500 PATMs. BAA chose not to do that. It capped its projections at 35mppa and it did not provide projections beyond 2014.
- 14.21 It has been clear to SSE from the outset (since first examining the forecasts submitted by BAA with its planning application in April 2006) that the environmental impacts of the 25mppa case are significantly overstated not only because BAA assumes far more PATMs than will reasonably be required to handle 25mppa but also because

¹⁰³ CAA Airport Statistics. 2004, 2005 and 2006 CAA airport statistics are included in the Inquiry library as [CD/207], [CD/208] and [CD/209], respectively. See Table 6 for PATMs and Table 9 for mppa. Prior years can be accessed at <http://www.caa.co.uk/default.aspx?catid=80&pagetype=88&pageid=3&sglid=3>.

BAA has assumed the maximum CATMs permissible under the present planning permission (22,500). The overstatement of CATMs in the 25mppa case increases its environmental impacts disproportionately because CATMs tend to be of older, larger and noisier aircraft.

- 14.22 The total number of CATMs at all airports in the south east was 17,019 last year and Stansted handled 10,964 (64%) of these.¹⁰⁴ Cargo traffic has declined in recent years at Stansted and in the south east as a whole. The decline has been both in tonnage terms and in terms of the number of CATMs. Mr Maiden, in cross-examination, indicated that BAA cargo forecasts would in due course be revised downwards to reflect the recent decline in volumes (the reasons for which were not yet clear) and the only reason this had not yet been done was that BAA's cargo forecasts were not updated as frequently as its passenger forecasts.¹⁰⁵
- 14.23 The decline in cargo tonnage and CATMs has continued in 2007. The latest figures show an 11.8% decline in Stansted's cargo tonnage in the 12 months to September and an 8% reduction in CATMs – pointing to a total of less than 10,000 CATMs for 2007. This will be the lowest number of CATMs in the past ten years, which is as far back as we can trace.
- 14.24 For the 35mppa case BAA projects fewer CATMs and fewer non-ATMs compared to the 25mppa case. The effect is to offset the growth in PATMs between the two cases and thereby narrow the differential between the proposed development and the fall-back position.
- 14.25 BAA has not provided air passenger forecasts beyond 2014/15. Had it done so, the difference between the impacts of its proposed development and the base case would have been far greater. The offer of an interim 35mppa cap does not negate the requirement to properly assess the impact of the full use of the existing runway, which was the basis for BAA's 2006 application for outright removal of the mppa condition. In our view this is merely a ploy by BAA to avoid exposing the full impacts of maximum use of the existing runway. Surface access implications are the most obvious example but larger aircraft would also generate greater noise and emissions.
- 14.26 SSE explained to the Inquiry that its forecasting methodology was based on the overall DfT forecasts for the south east. These predicted buoyant demand and tight capacity and that the long haul market would grow faster than short haul. In the light of the DfT forecasts, SSE estimated that long haul would account for about 15% of

¹⁰⁴ CD/207, CD/208 and CD/209, in each case Tables 6 and 13.2.

¹⁰⁵ Cross-examination of Mr Maiden, 22 June 2007.

Stansted passengers by 2014, 24% by 2021 and 32% by 2030, this being the **2005** average for BAA's three London airports.¹⁰⁶

- 14.27 By comparison, BAA projected that long haul would account for just 8% of Stansted passengers by 2014/15 in the 35mppa case and provided no projections beyond 2014/15. This 8% figure equates to just 2.8m long haul passengers and is implausibly low in the context of an estimated 60mppa long haul passenger movements in the south east in 2015, based on the DfT forecasts,¹⁰⁷ and DfT's projection that Stansted would be handling 12m long haul passengers by 2015, although this assumed a second runway.¹⁰⁸
- 14.28 When submitting its 15mppa+ planning application in 2001, BAA projected that long haul would account for 17% of Stansted's 25 million passengers by 2010¹⁰⁹ and, in cross-examination, BAA was unable to provide a plausible explanation for the very much lower projection now being made. SSE's long haul projection for 2014 lies between BAA's 2001 projection and its 2006 projection and within the range which SH&E considered reasonable. Conversely, BAA's long haul projection is beneath that range.¹¹⁰
- 14.29 The significance of underprojecting long haul traffic at Stansted is, of course, that this results in an understatement of the number of passengers which can be handled with 243,500 PATMs – and therefore an understatement of the surface access implications. It also understates the noise and emissions impact of 243,500 PATMs because long haul aircraft tend to be significantly larger than short haul aircraft and often have four engines.
- 14.30 It is not only in relation to long haul that we consider BAA has underprojected the potential passenger throughput of Stansted. In para 14.18 above we referred to the general trend towards larger aircraft and higher load factors and this is particularly relevant with regard to the short haul, low-cost sector of the market.
- 14.31 We presented evidence to the Inquiry to underpin our assessment that, with 243,500 PATMs, Stansted would be capable of handling 39.8mppa by 2014/15, 44.6mppa by 2021 (the planning horizon for the East of England RSS) and 49.7mppa by 2030 (the planning horizon for the ATWP). SSE also presented forecasting evidence prepared by consultants Alan Stratford & Associates. This did not entirely support SSE's own

¹⁰⁶ SSE/4/a at Tables 5 and 6.

¹⁰⁷ Review of BAA Traffic Forecasts for Stansted Airport, SH&E, Feb 2006 [CD/133], para 3.35.

¹⁰⁸ Passenger Forecasts: Additional Analysis, DfT, 2003. [CD/232], page 36.

¹⁰⁹ Vol 2 of the 2001 BAA ES [CD/28], Table 2.2.

¹¹⁰ Review of BAA Traffic Forecasts for Stansted Airport, SH&E, Feb 2006 [CD/133], para 3.37.

forecasts, concluding that Stansted's potential passenger throughput was 45.7mppa. BAA questioned the difference between SSE's forecasts and its consultants' forecasts and it was explained that SSE had appointed Alan Stratford & Associates to provide a genuinely independent expert view, had not sought to exert any influence over their findings and had no editorial control over their report.

- 14.32 In addition, Alan Stratford & Associates related 45.7mppa to 248,500 PATMs i.e. they 're-allocated' 5,000 CATMs to PATMs, having assumed that this could comfortably be done because they would not be required for cargo traffic. If this is a legitimate approach (bearing in mind that BAA offered a condition limiting PATMs to 243,500), it is likely that there would be greater scope to re-allocate CATMs, perhaps as many as 10,000. If 10,000 had been assumed Alan Stratford & Associates would have arrived at a throughput of about 47mppa.
- 14.33 The differences between our own projections and our consultants' projections are also an indication of the uncertainties in long term forecasting. In cross-examination BAA described its forecasts as being based on a complex set of top down models but acknowledged that ultimately it was down to the judgement of the forecaster. The key task therefore is to test the reasonableness of the underlying assumptions and judgments in this case we contend that BAA's key assumptions are implausible. In addition they conveniently (from BAA's point of view) have the consistent effect of understating the impacts of the permission sought both in absolute terms and relative to the base case. We submit that the credibility of BAA's forecasts should be judged on its past record and the fact that erring on the high side in relation to the fall back position, and on the low side in relation to the proposed development, serves BAA's interests in the context of an environmental impact assessment which compares the two scenarios.¹¹¹

15 Surface Access - Forecasting Issues

- 15.1 Our concerns regarding forecasting feed inexorably into issues arising in respect of surface access also, for while BAA has presented this planning application as a proposal that would enable Stansted to handle 'about 35mppa' in 2014, as we have already shown the reality is that, if the application as submitted were to be approved, Stansted would be capable of handling almost 45mppa by 2021, increasing to about 50mppa in 2030.

¹¹¹ Letter from CMS Cameron McKenna to SSE, 6 July 2007 [CD/544].

- 15.2 Moreover, it is vital to recognize the scale of the surface access challenge which Stansted would face if the existing runway were ever to be used to its full capacity. The challenge would be of a similar magnitude to that facing Heathrow today, a hub airport at which 35% of passengers are transfer passengers and therefore do not require surface access, which is nonetheless served from Central London by frequent London Underground trains, a 15-minute dedicated Heathrow Express rail service and a stopping rail service. In addition, a new rail service, 'Airtrack', backed by BAA, is planned for Heathrow by 2013-2015, connecting Staines to Heathrow and providing direct rail access to Heathrow for passengers from Waterloo, Guildford and Reading. By way of stark contrast, Stansted is served only by a 45-50 minute rail connection with Liverpool Street – a service which is shared with other rail users along the Cambridge / Lea Valley corridor, including large numbers of commuters to Central London.
- 15.3 It is also vital to appreciate that BAA surface access modelling studies have consistently underestimated the impacts of increased air movements. Worse still, it is this which has resulted in significant under-investment in infrastructure. The chronic road congestion and traffic pollution around Heathrow today – despite its London Underground and rail connections – are the result of a lack of proper planning and investment in the past. It would be inexcusable if the same mistakes were repeated at Stansted.
- 15.4 Here, Junction 8 of the M11 was regularly gridlocked a few years ago as airport traffic expanded and before corrective action was belatedly taken; while improved rail services for airport passengers have been achieved through constraining the growth of other rail services, especially for the growing number of commuters. Essex County Council, in its Local Transport Plan.¹¹² states:

'Serious concerns remain that there will be a repeat of the previous three phases of growth at Stansted which have each been based on forecasts and planning assumptions that later transpired to be so different in reality that the transport impacts were seriously misunderstood and not properly planned for.'

Those who live locally have all endured the consequences of BAA's past underestimations. The failings of the past should not be allowed to be repeated into the future.

¹¹² CD/86 at para 4.84.

- 15.5 Just like the trend over the last fifteen years, Stansted's future growth, if permitted, will continue on a steadily increasing basis. Yet the forecasts presented by BAA seek to deny this. They focus almost entirely on the case for a 35 mppa throughput in the year 2014: a single point in time and a single case, and without addressing the consequences of the gradual build up of passengers before that date against the anticipated timing of delivery of mitigation measures.
- 15.6 That BAA could have prepared forecasts for a longer period and for several key years during this period is not in doubt. It did so for the Highways Agency: the Transport Assessments include 2023 road forecasts, and also 2020 and 2030 tables in some instances. It also did so for the Rail Utilisation Strategy¹¹³ which includes BAA forecasts based on throughput of 40.5mppa for 2015 and 62mppa for 2020.¹¹⁴ The narrow adherence to one year and one level of throughput simply glosses over the gradual but continuous development of the airport and its surface access demand.
- 15.7 Evidence on surface access forecasting was given for SSE mainly by Mr Ken McDonald,¹¹⁵ a retired Chartered Accountant whose career included business planning and investigative auditing. Experience of finding and analysing what is not declared, as opposed to what is declared, was of benefit as it was a constant challenge when dealing with the Transport Assessment ('TA') and the later Updates. Mr McDonald's approach to reviewing the TA helped to identify issues whose significance might not have been entirely appreciated by the planners from the various transport authorities, although the evidence presented by Mr Wang (for Essex CC) and Mr Humby (Herts CC) did point to considerable unease over the work presented by BAA in the Addendum Update.
- 15.8 In Mr McDonald's opinion, had the TA been subject to audit like a set of accounts, it would have been extremely difficult for an auditor to sign it off as presenting a true and fair view, even on a heavily qualified basis. The analysis and forecasting in the TA suffered from a lack of transparency and a lack of audit trail, such that it was difficult and often impossible to see how one set of numbers was derived from another, or to see how forecasts compared with historic trends. Section 5 of Mr McDonald's proof¹¹⁶ lists many examples of misleading or selective presentations and unjustified assumptions.

¹¹³ CD/312.

¹¹⁴ SSE/15.1/d, at page 4.

¹¹⁵ Reg Harman provided evidence on the context of the forecasts and their implications, see SSE/15.1/a.

¹¹⁶ SSE/13.1/a.

- 15.9 We have no comment on the planning models themselves, other than to express surprise that none come with a declared level of confidence. However, we do have serious concerns about the validity of assumptions and data that have been fed into the models. The fact that results could be so varied between the original TA, the Addendum and the Addendum Update, without adequate explanation, has only served to heighten that concern.
- 15.10 Of particular concern are the assumptions in four areas: transfer passengers, origins and destinations, coach service expansion and vehicle occupancy. I deal with them in turn.
- 15.11 First, the proportion of transfer passengers (those not requiring surface access at all) is assumed to be 10% at 25mppa, much as today, but 17% at 35mppa. However, this goes against the declining trend of recent years – and also against the view expressed by Ms Congdon for the Stansted Airlines Consultative Committee. BAA's surface access witness, Mr Forshew, was unable to comment on BAA's forecast. Earlier in the Inquiry, BAA's Mr Maiden had failed to produce a plausible explanation of why the trend should be ignored.
- 15.12 Moreover, the difference is significant. Should transfer passengers continue to be around 10% of all passengers, then an additional 2 million will require surface access at 35mppa.
- 15.13 Secondly, the mix of passenger origins and destinations is also forecast to change dramatically from the trend of recent years. Specifically, BAA assumes that the number of passengers coming from or going to London will grow much more slowly than elsewhere, despite the fact that London's share has tended to grow in recent years. Table 6.2 in the TA shows that total non-transfer passengers are forecast to grow 59% between 2004 and 35mppa, while those travelling to or from Central London are forecast to grow by only 33%. At the other extreme, passengers travelling to or from East Anglia are forecast to grow by 103%.
- 15.14 Not only do the origins and destinations assumptions go against the trend, they also go against BAA's expectation that Stansted will benefit from a spill-over from London Heathrow and London Gatwick. Mr Forshew, however, was simply unable to comment. During earlier cross-examination, Mr Maiden suggested that a major factor affecting his assumption was that London's hotels would not be able to absorb more overseas tourists.¹¹⁷ The suggestion that our capital city, the major tourist attraction

¹¹⁷ Transcript 22 June 2007, pages 142-143.

of our nation, will be allowed to reach hotel capacity is, you might think, not just highly implausible but bizarre.

- 15.15 Moreover, once again the difference is significant. If the Central London share of passengers were to continue as now, then at 35mppa an extra 1 million journeys would be added to the already heavily laden Stansted – London road and rail corridor.
- 15.16 Our third area of concern was explained to the Inquiry by Mr Harman, who expressed doubts on several aspects of the forecast levels of coach service under the 35mppa (enhanced) scenario.
- 15.17 You will have noted, in particular, that the ‘enhanced’ scenario assumed the provision of improved public transport, and was then compared with a 25 mppa scenario in which enhanced public transport was *not* provided. From the very outset, therefore, the exercise was designed to ensure that the enhancements would appear to have a more positive impact than in reality they would.
- 15.18 Further, the suggested enhancements do not consist of greatly improved rail services, but of more coach services. In particular, the TA assumes – and in a mere three lines – that London bound coach services would continue to grow on a commercial basis, while the TA and the Addendum Update describe the other expanded coach routes in perhaps surprising detail.
- 15.19 Provision of further coach services – and indeed retention of those that already exist – face two complementary challenges, however: the uncertainties inherent to the deregulated bus and coach regime; and the continual increases in congestion from forecast traffic growth generally.
- 15.20 The London coach market at Stansted accounted for about 5,200 passengers per day in 2004 out of 7,300 per day for the total network. The rest of the coach network carried about 2,100 passengers per day. The total number of trips operating to/from places other than London was about 120. It follows that the average number of passengers per coach was about 17, about one third of the capacity of a standard coach.
- 15.21 This suggests that current coach links with destinations other than London may not be very successful in commercial terms. And this poses, in turn, questions over not only their long term survival, but also the potential for substantial expansion as modelled in the ‘enhanced’ 35 mppa scenario.
- 15.22 Again, the issue is – potentially – very significant in numerical terms. In particular, Tables C2 and C3 in Appendix C of the Addendum Update show the anticipated

bus/coach passengers with and without enhanced services at 35mppa. The 'enhancement' is forecast to increase bus and coach passengers from 4 million to 5 million. If this fails to be achieved, however, those 1 million passengers could become an extra 700,000 car journeys.

- 15.23 It is also apparent from the coach forecasts in both the Addendum and the Addendum Update that coach services between the airport and Central London are there assumed to be considerably higher than they were in the TA. This meant that forecasts for rail traffic on the Stansted Express were rather lower when compared to those in the TA. Very conveniently for BAA, this meant that STEX services had a lower impact on peak period rail commuting services and thus the need for mitigation was less. This change between the TA and the Addendum was caused by the assumption in the Addendum of a lower level of average coach fares on London routes, while the trend from 2006 to 2014 was assumed to be the same, the starting point was far lower, reflecting an actual fall in coach fares between 2003 and 2006.
- 15.24 However, this fall in historic coach fares was caused by a period of sharp competition between existing and new operators, each seeking to gain a firm position in the expanding market. There is, however, no reason to assume that this short term pricing advantage over rail will continue. A closing of the gap between coach and rail fares would be normal business behaviour once the market stabilises. Indeed, BAA's own forecasts of increased traffic on the M11 could well increase operating costs and difficulties, requiring higher fares to maintain operation. This would mean that the balance of traffic between STEX and coach/bus services in the 35 mppa enhanced scenario in the original TA (8,077,000 versus 4,524,000, a difference of 3,554,000) might be more appropriate than that in the Addendum Update (7,185,000 versus 4,973,000, a difference of 2,212,000).
- 15.25 There is, accordingly, a significant risk associated with BAA's more recent and rather optimistic coach forecasts.
- 15.26 Our fourth major area of concern is of critical importance for reasons of trust that we have already outlined earlier in this closing submission, that in forecasting airport-related road traffic BAA has assumed levels of average vehicle occupancy which have been shown to be simply indefensible.
- 15.27 The CAA produces an annual passenger survey report, based on analysis of its regular, large-scale passenger surveys at Stansted and other airports. This includes a calculation of the average travel group size. The size of the average group using Stansted in 2002 – 2004 was 1.37 people. BAA claims to have used this data as the

basis for the assumed average vehicle occupancy for different types of passenger travelling to the airport by car, whether park and fly, kiss and fly or taxi. BAA, however, has actually used much higher figures, typically around 1.80.

- 15.28 The result is that airport-related road traffic has been significantly understated. We estimate that the number of car journeys in the TA should be increased by over 30%, the number in the Addendum Update by 40%, and in both cases the number of taxis by 50%.
- 15.29 It is not yet known whether BAA's understatement relates only to the 10 million extra passengers between 25mppa and 35mppa or whether it relates to all 35 million. If it applies just to the 10 million, then it translates into an extra 1 million car journeys.
- 15.30 BAA's claim that the vehicle occupancy ratios were confirmed by its own sampling (the basis for which is not explained, other than the short sample period) does not support its adjustment of the CAA survey data and BAA has declined to respond to our various requests for its precise calculations and justifications. This casts doubt on the validity of BAA's adjustments to the CAA data. This is an issue I shall return to a little later in these closing remarks.
- 15.31 The significance of these, and indeed other assumptions, was not always apparent from the TA however. While Vehicle Occupancy is perhaps the most high profile of these, there are other assumptions whose significance became apparent only during the Inquiry. For example, it was a surprise to learn that the assumed phasing of traffic lights could be such a significant factor when modelling predictions of local traffic. And before Mr Humby raised the matter of employees travelling at peak times we had failed to notice that the different percentage assumptions for 25mppa and 35mppa resulted in no increase in peak hour employee travel, despite the fact that there is expected to be a significant increase in the number of employees. The more we looked, the more we became concerned about the modelling assumptions.
- 15.32 Moreover, and given that it is difficult to analyse something that is not apparent, we cannot be sure we have found or reviewed all the critical assumptions.
- 15.33 For present purposes, however, it need merely be noted that each of these four areas of doubt (transfer passengers, origins and destinations, coach service expansion and vehicle occupancy) individually has a significant effect on the predicted impact on road and rail use and hence on the assessment of need for mitigation measures; and accumulatively, of course, the impact could be more significant still.
- 15.34 In particular, while there was some debate during Mr Forshew's evidence as to whether errors might be cumulative or compensating, it is noteworthy that all the

areas of doubt we have identified have led in one direction – to an extraordinarily convenient understatement of the forecast impact. The consistency of understatement reinforces the need for caution when determining this appeal.

- 15.35 Moreover, these areas of doubt have arisen in the first place because BAA chose to use assumptions that ran counter to established trends or reliable data sources; then failed to highlight these counter-intuitive assumptions; and, finally, failed to demonstrate how its new assumptions had been calculated. It should not have been left to SSE to prise them out, nor to try to explain them, nor to estimate the scale of impacts – a task made particularly difficult by the lack of transparency. But it was; and having undertaken those exercises, SSE have shown both that some of these assumptions are unrealistic and that they are likely to have produced significant under-statements of impact.
- 15.36 If these faults had been corrected, we might have arrived at a fair starting point from which to start sensitivity-testing. But we have not got to a fair starting point. For example, not one of the so-called ‘sensitivity tests’ has been based on the CAA data for vehicle occupancy.
- 15.37 Furthermore, these various flawed assumptions do not translate into something as simple as needing to add, say, 15% to all the answers for surface access. For example, a correction of vehicle occupancy alone will add over 30% to airport-related road traffic. That, in turn, will have serious implications beyond surface access – for example in the forecasts of carbon emissions and air quality and on the assessment of quality of life.
- 15.38 Most worrying of all – and as I have already alluded to in my opening remarks on issues of approach – the issue of vehicle occupancy also raises serious concerns about the trustworthiness of the modelling exercise which underpins BAA’s case. There was no mention of vehicle occupancy in the original TA.¹¹⁸ When it was mentioned thereafter in the Addendum.¹¹⁹ a series of requests was made to BAA for details of its calculations of the assumed vehicle occupancy ratios. None were satisfactorily answered.¹²⁰ Finally, SSE produced its own calculations¹²¹ - prompting the late appearance during the Inquiry of a short proof from BAA (BAA/3/K),

¹¹⁸ If these faults had been corrected we might have arrived at a fair starting point from which to start testing.

¹¹⁹ CD/14.1.

¹²⁰ Some of the email correspondence appears in [SSE/15.1/d].

¹²¹ SSE/13.1/a, Annex 1.

purporting to rebut SSE's calculations, but merely confirming that BAA had made a major error.

15.39 The arguments in BAA/3/K were flawed and unquantified, but based on the claim that the CAA passenger surveys were unreliable. And yet we now know that BAA did not raise any of these supposed concerns with the CAA in writing. Moreover, all of them were flatly contradicted by the CAA in the email which we obtained on the final day in which evidence was heard at this Inquiry.¹²²

15.40 Given the many failings of the TA, and its widespread understatement of surface access demands, it is not possible to reach any conclusion as to whether the proposed mitigation measures are adequate, either in scale or in speed of delivery. And that is of critical significance in the light of the Government's guidelines on Environmental Impact Assessments, issued by the ODPM in 2000,¹²³ which states at paragraph 51: '*... if the developer fails to provide enough information to complete the environmental statement, the application can be determined only by refusal.*'

15.41 In this case, even after three attempts, we still do not have an adequate or reliable assessment of the surface access impacts. To allow this expansion to go ahead with little but blind faith in BAA's forecasts and promises would not just be foolhardy, it would breach the Government's own guidelines.

16 Surface Access – Road Issues

16.1 SSE's evidence on the effects of the proposed expansion on the road network was given by Mr McDonald and also by transport consultant, Mr Reg Harman.

16.2 Road provision in the area is dominated by the M11, which provides the key link to London and also to Cambridge, and by the A120, which provides regional links east and west. The airport now has a major and growing influence on both these arteries. As Figure 5.9 of the TA shows nearly a quarter of all traffic on the A120 between the M11 and Great Dunmow and on the A130 south of Great Dunmow is currently generated by airport related trips, while one seventh of all traffic on the M11 south of Stansted is airport-related traffic.

16.3 The BAA forecasts show an even higher impact on the A120 adjacent to the airport in 2014, accounting for half the total traffic during the eastbound AM and westbound PM periods. The Faber Maunsell study of future road traffic growth reflecting the Draft

¹²² [SSE/13.1/e].

¹²³ CD/237.

East of England Plan¹²⁴ saw overall road traffic rising by around 40% over 20 years, i.e. about 1.7% p.a. compound. However the forecast in the Addendum Update of airport-related road traffic growth for 35 mppa, even under the enhanced public transport scenario, is for about 48% growth in 10 years (11.5 million in 2004 to 17.0 million in 2014); an annual growth rate of about 4% compound, and much higher than the rate of growth of all other traffic. This confirms both that the M11 and the A120 are very important for access to and from the airport and that the airport has a major impact on them, an impact which will only grow if the airport is allowed to expand.

- 16.4 There is already very high usage of many roads in the vicinity of the airport, for example the M11 south, M11 Junction 8, the A120 weaving section, the A120 west of the airport especially at roundabouts and through Little Hadham, and the B1383 through Stansted Mountfitchet. Traffic at these pressure points either already exceeds design capacity at peak times or is expected to do so by 2014 without mitigation.¹²⁵ This level of expectation is based, however, on forecasting assumptions which we have already shown are unreliable and understate the impact. In addition, many local roads – country lanes and village streets that are simply not suited to heavy traffic - have become busy ‘rat runs’ for airport-bound traffic for around 20 hours a day.
- 16.5 Despite these pressures and despite also Government transport and planning policies aimed at reducing the need to travel by car, BAA’s proposals suffer from a general lack of initiative to achieve any modal shift. Initiatives suggested by SSE in its ‘Lo Car Strategy’ have been brusquely rejected.
- 16.6 Moreover, during the discussion of conditions and obligations, BAA vigorously opposed the idea of reducing the over-generous approval for car parking spaces which it obtained in 2003. The background to that refusal is of course that, as the Inquiry heard from evidence from SSE, Stansted Airport Ltd is dependent on car parking income for a high proportion of its revenue. Put shortly, notwithstanding the imperative of Government policy to cut the need to travel especially by car, it is not in BAA’s commercial interest to reduce car parking.
- 16.7 In evidence, SSE also recorded its concern at the proposed closure of the Coopers End entrance to all but PSV and employee traffic without any consultation with local residents or Parish Councils. Our concern was heightened during the discussion of obligations when the Highways Agency declared that closure of the Coopers End

¹²⁴ CD/314.

¹²⁵ Highlighted in paras 10.5.16 to 10.5.18 of the TA [CD/14].

entrance had been the assumption in all transport modelling and alternatives had not been considered or assessed. In SSE's view, the fact that the closure of Coopers End has been in prospect since the mid-1980s should not have precluded a re-examination of the implications, including for road safety, in the light of the major changes to the A120 and to local traffic levels since that time.

- 16.8 It should be noted in particular that the Addendum Update states as follows in this regard:¹²⁶ *'there are other smaller forecast changes on local roads within the vicinity of the airport which occur as a result of closing the Coopers End entrance'*. These changes are not illustrated and may be significant for local residents and local road users. Addendum Update Tables 5.1 and 5.2 show a significant reduction in traffic on the weaving section of the A120 as a consequence of this closure, sufficient to avoid expensive work to alleviate potential problems on that weaving section. It appears that the proposed Coopers End closure is motivated by cost, which would probably fall upon BAA. The anticipated impacts on road safety, local traffic flows, and on construction traffic flows, should have been properly assessed and consulted upon with the local community.
- 16.9 I conclude this commentary on roads by repeating, however, that all of the above evidence on traffic conditions in the area, has to be read against the background described in the preceding section of these closing remarks.
- 16.10 In particular, all the assessments of the impact on roads undertaken within the TA or its various updates are understated because of the unrealistic assumptions used for modelling, with airport-related car and taxi movements understated by around 30% because of the invalid vehicle occupancy assumptions, on top of which there are additional understatements of demand on the M11 corridor to London because of the unfounded assumptions for transfer passengers and origins and destinations of non-transfer passengers.
- 16.11 It follows both that the various mitigation measures are not based on adequate testing, and that the agreement to them by the Highways Authorities has been based on their erroneous acceptance of the manifestly unreliable results from BAA's modelling, coupled with the temptation to compromise in order to gain some financial support from BAA for necessary works.
- 16.12 Even this approach has failed in places, however, notably with the minimal funding offered to Hertfordshire CC for the Little Hadham bypass, despite the substantial

¹²⁶ CD/14.2 at para 5.2.6.

impact that the airport is increasingly having on A120 traffic. Indeed, and as you have heard, most mitigation consists simply of lining and signing (on the trunk roads) and junction works (on the local authority roads) which, intuitively, seems wholly inadequate for the growth of at least 10 million passengers per annum, the equivalent of adding the throughput of Birmingham Airport onto Stansted as it now is. It is certainly far below what would be required if the appeal were to be granted without restricting the number of passengers.

17 Surface Access – Rail Issues

- 17.1 SSE's evidence on rail was given by Mr John Andrew Rhodes and transport consultant Mr Reg Harman.
- 17.2 The Stansted Express (STEX) service now forms an influential part of the West Anglia rail corridor's services. The present hourly service comprises four STEX trains each way between Stansted and Liverpool Street and a stopping train between the airport and Stratford. These now form part of an intense service on this complex corridor which also serves Cambridge. Service reliability is at risk throughout the day, however, and little scope exists for service expansion or even improved reliability without substantial investment. Moreover, and as I will shortly explain, peak loadings are already high, with many passengers already compelled to stand.
- 17.3 Both the rail network (with very few passing places) and the stations (most not long enough for twelve coaches) are constrained, so that excess demand for non-airport services cannot be satisfied by running longer trains. Without investment in track and platform lengthening improved commuter service could be achieved only by replacing some STEX services with more frequent peak period trains to other destinations or by introducing more intermediate stops into STEX services.
- 17.4 The material questions are therefore as follows: what will be the impact on those overburdened trains of this proposal unless mitigation measures are taken; what are the mitigation measures which are needed; and what guarantees are there that those mitigation measures will be taken as and when required?
- 17.5 To retain the current service pattern to the airport and provide an adequate service to other destinations, additional passing loops would need to be built between Tottenham Hale and Broxbourne (most of this was originally a four track railway and there is room to reinstate the tracks). In addition, platforms could be lengthened so that 12 coach trains could call at all of them.

- 17.6 So far as the first question is concerned, the extent of need, the Department for Transport (DfT) has an established standard for measuring over-crowding on weekday commuting services to and from London during the peak 3 hour periods of demand. It is known as the PIXC standard and is expressed as the percentage of passengers in excess of carrying capacity, where the carrying capacity allows for standing passengers equal to 35% of seats on journeys of less than 20 minutes.
- 17.7 The Greater Anglia Draft Route Utilisation Strategy, published by Network Rail in April 2007 ('the RUS')¹²⁷ shows at Table 5.5 that West Anglia outer services (including STEX) were at 3% PIXC (i.e. 3% in excess of the seating capacity plus permitted standing) in 2004. The RUS notes in para 5.2.8 that crowding affects more passengers on each train on West Anglia than the other parts of the Greater Anglia network. Overcrowding was confirmed by an informal passenger count undertaken by Essex County Council and reported to the Inquiry. The RUS forecasts that nearly 3,000 daily journeys will be crowded off the route by 2016 unless there is investment to increase capacity.
- 17.8 Mr Forsheew said in answer to cross-examination that he had used the current timetable to produce his 2014 forecasts. For most STEX services which stop at Harlow, the timetabled journey time from Harlow to Tottenham Hale today is less than 20 minutes, and he has therefore assumed that PIXC would apply as it does today – i.e. allowing up to 35% of passengers standing. He has concluded from this that even without train lengthening, STEX services would only exceed Government crowding standards in one of the tested scenarios, 35 mppa + 15%.
- 17.9 What he should have used, however, was the expected journey time from Harlow to Tottenham Hale in 2014. Table 5.6 of the RUS anticipates that in 2016 this will be over 20 minutes and it can safely be assumed that it will be over 20 minutes in 2014 too. So Mr Forsheew should have assumed that the PIXC 'get out' would not apply to STEX services and that every passenger should get a seat.
- 17.10 In short, without train lengthening, STEX services would be in breach of Government crowding standards under all scenarios. Moreover, it was confirmed by the letter from Mr Stuart Baker of the DfT (Rail) to Essex CC on 23 April 2007¹²⁸ that the G1 strategy should be based on the principle of one passenger per seat in the peak hour.
- 17.11 Let us turn, then, to the second question: what strategy is needed to fulfil the above imperative, and what measures must be included?

¹²⁷ CD/312.

¹²⁸ ECC/1/E, Appendix A.

- 17.12 It is in this regard to be noted that the RUS describes two options for tackling the problems of the West Anglia Main Line: Option 8 which is confined to work associated with train lengthening; and Option 12 which outlines increased track capacity. It is worth emphasising, however, that this is a consultation document. We do not know what conclusions Network Rail will reach or the timescales for any scheme to be implemented.
- 17.13 Most of the discussion at the Inquiry focussed on Option 8. However, this looks very much like rail's equivalent of the re-phasing of Little Hadham traffic lights – a sticking plaster solution which only keeps crowding at the current level until 2016. Moreover, Option 8 has other weaknesses. It provides too much capacity north of Stansted but not enough from Stansted to London, a conclusion borne out by BAA's forecasts. Further, although it has a capital cost of £100m it has a relatively poor benefit to cost ratio compared with Option 12.
- 17.14 BAA seems to think that Option 8 can be promoted now, and that Option 12 can follow along in due course, if needed, and after Option 8 train lengthening has been implemented.
- 17.15 However, some of the investment in Option 8 would become redundant if Option 12 were thereafter implemented. For example, Option 8 contemplates platform lengthening at Cheshunt and Broxbourne as selective door opening (to allow the cost of platform lengthening to be avoided) is unlikely to be permitted at such busy stations. Option 12 would mean, however, digging up the platforms at Cheshunt so that they could be realigned to take extra tracks, and one version of Option 12 would redesign the stopping patterns in the timetable to make it possible to avoid the expensive platform lengthening at Broxbourne which is a necessity under Option 8.
- 17.16 At the very least, therefore, Network Rail would need to have formed a view about the way in which Option 12 should be taken forward before committing itself to Option 8. And since the benefit to cost ratio is so much better than for Option 8, it might decide to go straight for Option 12 instead of Option 8. However, being a more complex solution, Option 12 would take longer to deliver and delay the time at which 12 coach trains could run on the route.
- 17.17 Further, BAA's preferred strategy of train-lengthening would only work if more trains are available. However, there is no spare rolling stock which could be used to lengthen STEX services at the moment and SSE's evidence explained why, even if 'One' places an order for new trains, they were not likely to be used on the West Anglia route to provide longer STEX services but introduced instead onto One's Great

Eastern network, thereby allowing 20 year old class 321s to be released on to the West Anglia route. However, 321s would be a short term solution only. Units of this class will be reaching the end of their life expectancy by 2020 and the rest of the West Anglia fleet would be over 40 years old by then.

- 17.18 Even assuming that rolling stock can be made available on a long-term basis, the next question is the extent to which BAA can guarantee that such works as are necessary to accommodate those trains will be undertaken in time.
- 17.19 Mr Forshew said in evidence that it would take two years to extend the airport station to take longer trains and the work on other stations which need extending is more complex and would be likely to take longer. However, no authorisation for the work is likely to be given until the Office of the Rail Regulator (ORR) has completed its periodic review next year, and so these considerations also support SSE's suggestion that the earliest possible introduction of longer STEX trains is likely to be December 2011.
- 17.20 Although BAA argued at the inquiry that the HLOS¹²⁹ (the schedule of outputs the Government expects to see delivered between 2009 and 2014) represents a 'commitment' by the Government to providing for a substantial increase in demand on the route and meeting it with longer trains, the reality is rather different.
- 17.21 The HLOS sets out not only the Government's targets for passenger volumes and load factors, it also sets out safety requirements and an improved punctuality target. In the accompanying Statement of Funds Available (SoFA) the Government sets out the maximum amount of taxpayers' money it is willing to put into the railway and this is predicated on passengers' meeting three quarters of the costs of the railway rather than half as they do today. However, it is replete with uncertainties.
- 17.22 First, whether the safety, passenger growth, load factor and punctuality targets assumed within the HLOS are mutually compatible with each other and whether any of them are compatible with the SoFA remains to be seen. Secondly, the West Anglia priorities will compete with others around the country for available funds. Third, the process is subject to independent scrutiny by the ORR, who are not scheduled to publish their final conclusions until October 2008. Indeed, the letter of 1 October 2007 from Stuart Baker of the DfT¹³⁰ makes it clear that what the Government has said about increases in capacity inevitably falls short of a firm commitment at this stage. It would more accurately be described as an aspiration.

¹²⁹ High Level Output Specification.

¹³⁰ CD/586.

- 17.23 BAA could, of course, secure more certainty of delivery of its preferred option for meeting the needs of this overburdened rail network by offering a voluntary third party contribution but it has chosen not to do so. This is in stark contrast to BAA's position in relation to Crossrail and Airtrack, both of which will serve Heathrow.
- 17.24 Moreover, BAA's stance in these regards is completely inconsistent with the stance it took in 2003 when persuading the Local Planning Authority to increase the passenger limit at Stansted to 25mppa. At that time BAA signed up to a Section 106 Agreement ('s106 Agreement') whereby it appeared to commit itself to the financing of platform lengthening at Stansted Mountfitchet and Broxbourne, the acquisition of new trains, and an operating subsidy resulting from the running of longer trains.
- 17.25 And yet that s106 Agreement is not what it seems. The above contributions were to be triggered not by implementation of the permission to increase passenger numbers, which would have been the only sensible trigger, but by the implementation instead of certain airport terminal facilities which Mr Forsheew said BAA has no intention whatsoever of developing.
- 17.26 Regrettably then, the reality is this. The railway network is over capacity already. BAA asserts that train lengthening can accommodate the additional demands of its proposed increase of passenger throughput to 35mppa. There is no certainty that this will be secured, however. In particular, while BAA appeared to have committed itself to financing the necessary works and purchases when obtaining planning permission for an increase in passenger throughput at Stansted to 25mppa, that commitment has turned out to be completely hollow. And now BAA makes no such offer at all when seeking permission to remove that limitation altogether.

18 Air Noise

- 18.1 SSE has provided considerable evidence to the Inquiry to show that the analysis of the impact of air noise presented in support of BAA's application as contained in BAA ES Vol 2¹³¹ is incomplete and selective. However, even from the information supplied, it is clear that increased noise at 35mppa would have very significant impacts. There would be over 50% more households in the 57dBA_{Leq} area when compared to the projected 25mppa scenario in 2014.
- 18.2 The May 2003 planning permission 'limited' the 57dBA_{Leq} noise contour to an area of 43.6 sq km, which represented a massive overprovision. Comparisons against the May 2003 permission are therefore wholly artificial. There is no prospect of anything

¹³¹ CD/5.

approaching a 43.6sq km 57dBA_{Leq} contour arising from the 25mppa base case, even if BAA's implausible projection for 22,500 CATMs in 2014 were to be achieved.

18.3 Giving evidence on behalf of SSE, Mr Martin Peachey and Mr Chris Bennett provided the Inquiry with examples of BAA's inadequate, missing or misleading information including:

- (i) the lack of supplementary air noise analyses and associated relevant impact data;
- (ii) the inadequate noise contours which did not disaggregate the effects of runway modal split (i.e. to show the effects of an all-westerly day and all-easterly day);
- (iii) that the noise contours at 50dBA_{Leq} and 54dBA_{Leq} were inadequately addressed and noise contours below 50dBA_{Leq} were not provided;
- (iv) BAA's apparent inference that the two noise-sensitive premises located in contours greater than 60dBA_{Leq} can be discounted on the grounds that one is airport-related and the other 'is supported by STAL' when there is no proper basis for such an inference;
- (v) the inadequacy of BAA providing L_{MAX} levels for only six locations, all inside the 57dBA_{Leq} area, when it is the noise from each aircraft that causes community annoyance. In the 35mppa case at Thaxted, for example, which is just on the 57dBA_{Leq} contour line, there would be nearly 300 noise events per day above 64 decibels – a level which would interrupt conversation on average every three to four minutes;
- (vi) the glossing over by BAA of the increase in aircraft movements during the sensitive morning shoulder period of 0600-0700 hours, an increase in these noise sensitive hours equating to 140% when the 35mppa case is compared with the 2004 baseline;
- (vii) BAA's failure adequately to address noise contours at 50dBA_{Leq} and 54dBA_{Leq};
- (viii) BAA's failure also to provide information on L_{MAX} night levels, even though the DfT recognises, on the basis of research, that '*...the incidence of sleep disturbance is especially associated with the loudest noise events*'.¹³²

¹³² 'Night Flying Restrictions at Heathrow, Gatwick and Stansted Airports: Stage 2 Consultation', DfT, June 2005, [CD/115] para 8.7. (DfT footnote states: 'In particular, in the UK, the 1992 Report of a Field Study of Aircraft Noise and Sleep Disturbance').

- 18.4 The latter two failures - the exclusive reliance by BAA on the 57dBA_{Leq} contour for the assessment of the day time impact of air noise and its failure to provide sufficient information on maximum noise levels for the assessment at night - are especially to be regretted.
- 18.5 So far as the first failure is concerned, SSE ask you to note as follows.
- 18.6 First, the predominantly rural environment around Stansted Airport is quite different from the 26 urban areas chosen for the noise surveys used in the ANIS report,¹³³ which originally suggested that 57dBA_{Leq} represented the threshold of the onset of annoyance. They are simply incomparable.
- 18.7 Second, the WHO 'Guidelines for Community Noise'¹³⁴ state that daytime outdoor noise levels of less than 55dBA_{Leq} are desirable to avoid serious community annoyance and that levels above 50dBA_{Leq} will cause moderate annoyance. Exclusive reliance on the 57dBA_{Leq} contour, therefore, fails to comply with those guidelines.
- 18.8 Third, it is only by producing contours below 50dB_{Leq} that the degree by which air noise exceeds ambient noise levels in tranquil areas beyond the vicinity of the airport can be demonstrated. You will recall that SSE provided a map showing that the area where residents are complaining about airport noise is very much larger than that contained within the 57dB_{Leq} contour. Indeed, the Inquiry heard considerable evidence from other parties to the effect that serious aircraft noise disturbance extends far beyond the 57dB_{Leq} contour.
- 18.9 It is in this context that SSE (and in particular, the residents of Ware, Harlow and surrounding areas) has expressed great concern as to the lack of Continuous Descent Approach ('CDA') on approaches to Runway 05. CDA enables arriving aircraft to fly higher for longer typically reducing the noise impact by 5dBA in the last 25 miles to 10 miles out from the runway. The lack of CDA on Runway 05 also results in a more circuitous routes for arriving aircraft thus increasing the area of noise disturbance, and it is contrary to the Industry Code of Practice for Heathrow, Gatwick and Stansted airports.¹³⁵
- 18.10 Further, we note that the ANASE study report¹³⁶ was commissioned by the Secretary of State for Transport following the Heathrow T5 Inquiry, in view of the Inspector's

¹³³ Survey Areas around Gatwick, Luton, Manchester, Aberdeen and Heathrow Airports [CD/400].

¹³⁴ CD/286.

¹³⁵ 'Noise from Arriving Aircraft; An Industry Code of Practice', November 2006, para 20 [CD/414].

¹³⁶ Study into Attitudes to Noise from Aviation Sources in England.

criticisms of the 57dB_A_{Leq} contour as an inadequate method for assessing community annoyance from aircraft noise. The ANASE report has been six years in gestation but is expected to be published very soon. A recent article in *the Times*, reported to be based on seeing a draft copy of the report, said as follows:

'The existing method of measuring aircraft noise, adopted a quarter of a century ago, is too narrow and outdated', the study concludes.

'It fails to take account either of the huge growth in the number of flights or the public's growing demand for quietness'.

'the new study suggests that significant annoyance starts at around 50 decibels'.

- 18.11 In SSE's evidence, based on noise modelling for Stansted, we showed that the 50dB_A_{Leq} contour covered an area of between 2.5 and 3 times larger than that covered by the 57dB_A_{Leq} contour.¹³⁷
- 18.12 Fourth, and most importantly, it is the increased frequency of peak noise events (i.e. the number of flights) which is the major cause of community annoyance, including sleep disturbance, and not average noise levels over a lengthy period of time. A marginal reduction in the average amount of noise produced by each aircraft does not compensate for the increased number of aircraft. There is no such thing as a quiet aircraft; all are noisy, some more so than others.
- 18.13 It is for this reason above all others that the Leq system in general, and the 57dB_A_{Leq} contour in particular, is an inadequate indicator of likely annoyance from aircraft noise.
- 18.14 In particular, the Inquiry has heard very considerable evidence that it is the increase in the *number* of flights over recent years which has caused disturbance, even if there has been a reduction in the average noise levels of aircraft. The Leq metric completely masks this reality, however: while it is a good method for measuring the impact of continuous sounds, such as freely flowing road traffic or a generator, it is not a good method for assessing the impact of aircraft noise, which is characterised by a series of loud sound events with quiet periods in between.
- 18.15 Moreover, SSE's reservations concerning the Leq metric are completely consistent with the views expressed by the Inspector at the Heathrow T5 Public Inquiry, whose report made it clear that the Leq metric was an insufficient tool to assess air noise precisely because it under-valued the disturbance caused by an increase in the number of movements. Even the DfT recognised the deficiencies of the Leq system at the Heathrow T5 Inquiry.

¹³⁷ SSE/6/a at para 3.4.10.

- 18.16 The absurdity of Mr Charles' denial of all of this on behalf of BAA can easily be demonstrated by reference to his own assertion that a change of 3dBA was the minimum perceptible under normal circumstances.
- 18.17 As SSE pointed out, however, this was a blatant misinterpretation 'a change of 3dBA' in PPG24 in that this was clearly referring to a single event and not a multiple series of events averaged over a period of time such as was the basis for Leq measurements. The former would, as stated by PPG24, not normally be perceptible.
- 18.18 However, as used by Mr Charles and applied over a 16 hour period, the 3dBA threshold has bizarre consequences. Imagine, for example, a four-fold increase in movements coupled with a 3dBA decrease in the noise of each air movement. Each flight would be imperceptibly quieter to all of those overflown, sounding just as loud as a flight which was 3dBA louder. There would be four times as many such flights, all of them sounding just as loud as a flight which was 3dBA louder. And yet since the average noise level would result in an overall 3dBA increase, Mr Charles would have us believe that such a four-fold increase in those peak noise events would be at the margins even of being perceived. That is simply ludicrous.
- 18.19 It follows that both the 57 dB_{Leq} threshold as the exclusive basis for the assessment of day time noise should be rejected; and that the misuse of the 3dBA threshold of perceptibility should be rejected also.
- 18.20 The lack of provision of noise contours at lower levels than 57dB_{Leq} has had particular significance in assessing the noise impacts on schools. BAA only provided an assessment of noise levels at ten local primary schools in north west Essex carried out in 2004. No schools from Hertfordshire, no secondary schools and no independent schools were assessed. Of these ten schools, the assessed noise levels were understated by BAA in four of the ten schools (compared with the original technical reports). The correct noise levels showed that five of the ten schools already exceeded the BB93 Building Bulletin limits for new school buildings for indoor classrooms and outdoor areas, and so any proposed extensions to these schools would not be able to comply with BB93 and presumably could not therefore be approved.
- 18.21 More recent measurements taken by Uttlesford District Council at eight local primary schools this summer showed four schools over the BB93 figures for indoor classrooms and three for outside areas.
- 18.22 This is clearly an unacceptable noise climate today in which to teach young children and would worsen if the predicted increase of aircraft movements associated with

35mppa were to take place. BAA's own projections show that the majority of the increased aircraft movements arising from expansion to 35mppa would be during the school day. In particular, the increase in the number of aircraft movements between 9am and 4pm would in fact be 53% if permission was granted for 35mppa, compared to 2004 levels, the year in which BAA carried out the assessments of the local schools.

18.23 BAA argues, however, that no additional noise mitigation is necessary and none is proposed,¹³⁸ other than the 43.6 sq km limit on the 57dBA_{Leq} noise contour arising from the 2003 planning permission. There is no hint here of the 'measured and balanced' approach referred to repeatedly in the ATWP, or its emphasis on limiting, and where possible reducing, noise impacts, including through the use of local controls:

*'to manage the environmental impact of aviation and airport development so that ... noise impacts are limited, and where possible reduced over time.'*¹³⁹

18.24 In reality of course, BAA's position in these regards simply reflects the fact that the noise impacts of expanding the airport to 35mppa are fundamentally beyond the reach of any mitigation. For despite its attempts to underplay the noise impacts, BAA acknowledges that 35mppa would lead to significantly more noise. Indeed a proper analysis of the noise impacts of 35mppa and associated movements, taking full account of the points we have raised, would show a totally unacceptable increase in the amount of noise nuisance, contrary to Policy ENV11 of the Local Plan¹⁴⁰ and Policy BIW9 in the Essex and Southend Structure Plan.¹⁴¹

19 Ground Noise

19.1 SSE has also provided considerable evidence to the Inquiry to demonstrate that the analysis of the impact of ground noise presented in ES Volume 8¹⁴² is, as with air noise, incomplete and unreliable; and that there are numerous shortcomings in BAA's analysis resulting in an underestimation of the scale of the adverse ground noise impacts that would arise from the proposed development.

19.2 This is of genuine significance. In particular, while disturbance from ground noise is a much more local impact than disturbance from air noise, and affects fewer people, for

¹³⁸ ES Vol 2 [CD/5] at para 13.1.1.

¹³⁹ ATWP [CD/87] at para 3.6.

¹⁴⁰ [CD/57].

¹⁴¹ [CD/59].

¹⁴² [CD/11].

- those who are affected the impact of expansion to 35mppa would be severe – especially during the noise-sensitive shoulder periods and at night.
- 19.3 Moreover, there are obvious omissions from the BAA analysis. For example, reverse thrust on landing, and the noise from aircraft powering up for take off, are both excluded from ground noise assessments and are therefore 'lost' within the 57dBA_{Leq} air noise contour.
- 19.4 So far as aircraft engine ground noise is concerned, we have the same criticisms of the Leq method of assessment of noise annoyance and the perceptibility of a change of 3dBA as we have in relation to air noise.
- 19.5 Further, no information has been provided by BAA on the cumulative impacts of air and ground noise taken together. BAA argued, in cross-examination, that this would make very little difference to the noise contours, but that is a subjective judgement and, in any case, there is more to assessing noise impacts than simply looking at noise contours.
- 19.6 Further, under cross-examination, BAA's witness Dr Flindell said that there would be no technical difficulty in combining different noise levels from different sources and, when pressed, agreed that it was possible to have the separate sources and then carry out a mathematical combination. And yet BAA has not done this work and so we cannot assess the combined impact.¹⁴³ SSE also established during cross examination of Dr Flindell that during quiet background noise periods, the impact of any one of the ground noise sources excluded could potentially be disturbing to the amenity of local people.
- 19.7 BAA also failed to provide combined contours for airport activity and noise generated by surface access activity.¹⁴⁴ Road traffic noise is only assessed for specific locations and it appears the focus has been only on the morning peak.
- 19.8 Of greatest concern, however, is the fundamental exercise which was undertaken by Dr Flindell on behalf of BAA. In particular, he compared ground noise for its 25mppa and 35mppa scenarios in 2014, but then manipulated the information in a way which made it virtually impossible for those who would be affected to get any meaningful impression of the increase in impacts.

¹⁴³ Ibid, para 5.2.11.

¹⁴⁴ CD/11 at para 3.1.2.

- 19.9 First, Dr Flindell used a 'fall back' 25mppa scenario which was entirely hypothetical and markedly worse than the position today, not least as a result of an assumed 125% increase in the number of noisy cargo aircraft over today's levels.
- 19.10 Second, Dr Flindell's method of calculating ground noise impacts used three comparators - namely the difference between 25mppa and 35mppa, the baseline background sound level comparison and the benchmark exceedance comparison – but subjected all of them to a series of a purely subjective assessments 'based on his own experience' to decide whether the 'combined significance criteria' amounted to a minor, moderate or major impact. The result was to convert hard data into soft assertion.
- 19.11 The most telling example of the inadequacy of this exercise is Dr Flindell's subjective judgement in respect of Molehill Green, one of BAA's chosen ten locations around the airport, which would suffer a 21.7dBA_{Leq} noise increase at night above background sound levels. That is an increase of over one hundred fold and yet Dr Flindell classified its impact as only 'moderate'. And this is despite the maximum night noise level at this location being 64.8dBA_{LMAX}, nearly 5dBA above the WHO Guideline for sleep disturbance.
- 19.12 We established in cross-examination that Dr Flindell used benchmark figures 5dBA higher than the WHO Guidelines for day and evening moderate annoyance¹⁴⁵ and for night sleep disturbance.¹⁴⁶ This results in the 35mppa benchmark exceedance being understated by 5dBA in these cases. This was because Dr Flindell considered that the WHO Guidelines had been set too low.
- 19.13 A further consequence of using the calculated noise difference between the 25mppa and 35mppa cases as a starting point is that BAA has excluded the additional adverse impacts of the tonality of aircraft noise and downwind effects. The use of BAA's method of assessment means that since tonality and wind effects are common to both the 25mppa and 35mppa cases, they are cancelled out in the calculations. The consequence is that the calculated noise levels for 35mppa can be understated by as much as 5dBA and 3dBA respectively for tonality and downwind effects depending on the location. The use of BS4142¹⁴⁷ by SSE to add the 5dBA penalty for tonality was challenged by BAA as being inappropriate for airports, and yet BAA used this same

¹⁴⁵ WHO Guidelines for Community Noise, Chapter 4, Table 4.1 [CD/286].

¹⁴⁶ Ibid.

¹⁴⁷ BS 4142 Method for rating industrial noise affecting mixed residential and industrial areas [CD/411].

British Standard to support its approach for the measurements of airport background noise in its calculations.¹⁴⁸

- 19.14 In fact, BS4142 goes on to provide an assessment method for the likelihood of complaints when background noise levels are exceeded. It states that an increase of 10dBA or more above background noise indicates that complaints are likely.¹⁴⁹ By taking the 35mppa calculated Leq figures provided by BAA and adjusting them for tonality and wind direction, six of BAA's ten chosen locations around the airport would suffer a level of noise of more than 10dBA above background levels, depending on the runway in use. Six out of ten locations likely to complain is a much worse impact than that painted by BAA in its conclusions.
- 19.15 By way of final criticism in respect of ground noise, SSE point out that ground noise is particularly disturbing at night against the generally lower background noise levels of a largely rural community around Stansted. The effective nightly respite from airport-related activity, including road traffic noise, is less than four hours.¹⁵⁰ No assessment has been provided, however, of the impact of such a short nightly respite period, or of the forecast increase in airport-related activity during the night. The more than doubling of cargo flights would have a significant impact upon night noise. Conveniently for itself, BAA incorporates this doubling in its 25mppa base case.
- 19.16 Indeed, BAA made no attempt in its evidence to address either the need to reduce night noise or to explain the apparent conflict between the proposals and the promise given in the ATWP that the Government would 'bear down' on night noise. BAA's position was that these matters were entirely for the DfT and not relevant to this Inquiry or matters which could or should be subject to any additional local controls. That is simply unacceptable.
- 19.17 In summary, SSE have shown that BAA has provided inadequate information, omitted significant noise sources and used impaired assessments in its consideration of ground noise. This has made it impossible for a proper judgement to be made on the ground noise impacts of the proposed development.
- 19.18 It is however common ground that the volume of activity both on the airport and from surface access movements would increase significantly if the proposed development were to be approved and that such increases would occur 24 hours a day. This would increase the amount of disturbance and annoyance experienced by the airport's

¹⁴⁸ ES Volume 8, para 5.3.19 [CD/11].

¹⁴⁹ BS 4142 Method for rating industrial noise affecting mixed residential and industrial areas, para 9 [CD/411].

¹⁵⁰ SSE/13.1/a, Annex

neighbouring community generally and, at night, when a greater number of people suffer disturbance, the level of intensity would increase.

- 19.19 If those matters excluded by BAA were included, the assessment of ground noise impacts would show an even more pronounced impact on the people living in the villages closest to the airport. And if the passenger throughput were to increase to levels even higher than 35mppa, the impacts would be greater still because this would mean larger and noisier aircraft and more road traffic and other airport-related noise.

20 Water Impacts

- 20.1 SSE's concern with regards to the water implications of the proposal find their root in the difference between BAA's assessment of the water implications of its G1 proposal in ES Vol 14,¹⁵¹ when compared with the 2002 SERAS Environmental Impact Study of Stansted¹⁵², carried out by Halcrow and for the DfT.

- 20.2 In particular, the 2002 study highlighted water supply as a major issue in relation to full use of the Stansted runway. It concluded:

*'It may be difficult to meet the significant increase in demand even through supply and demand management and water saving technology.'*¹⁵³

It categorised the impact of full use of Stansted's existing runway on water resources as '**high adverse**'. And yet, in ES Vol 14, BAA concluded that the water impacts of G1 would only be '**minor adverse**'.¹⁵⁴

- 20.3 This change in the assessment from 'high adverse' to 'minor adverse' can only be seen as highly incongruous: in particular, since the previous assessment in 2002, the scale of housing development planned for the Region has increased, while the predictions for lower rainfall in future have become firmer. In other words, the wider supply and demand issues have become more critical, not less.
- 20.4 And SSE's concerns in these regards only multiplied when it emerged in the course of cross examination of BAA's witness, Mr Squires, that BAA was completely unable to provide any explanation of the large increase in Stansted's water usage over the past two years (including increased usage per passenger). Mr Squires told the inquiry that a staggering 40% of Stansted's water usage simply could not be accounted for, despite metering of most major facilities and relatively new water infrastructure.

¹⁵¹ CD/17.

¹⁵² 'SERAS Stage Two Appraisal Findings Report'. Halcrow, April 2002, [CD/235].

¹⁵³ Ibid, Table 9.20, p302.

¹⁵⁴ CD/17 at para 8.6.1. See also [BAA/5/A] at para 3.1.3.

- 20.5 In SSE's view this admission undermines entirely the value of the conditions which BAA is prepared to accept in relation to Stansted's water usage. SSE also have doubts about the scope for enforcing conditions on Stansted's water consumption. Would water supply to the airport be curtailed or even turned off in the event of a breach? Our understanding is that there are statutory obstacles to taking such action.
- 20.6 Moreover, the context in which to consider SSE's concerns as to the credibility, enforceability and effectiveness of BAA's suggested conditions in these regards is one of considerable water-stress. The East of England is the driest region in the UK and Essex the driest county.
- 20.7 And the extent of water-stress is predicted to get worse, not better. In particular, it is predicted that, as a result of climate change, the Region will experience a 19% reduction in annual rainfall by 2050. In cross-examination, moreover, it was acknowledged by Mr Squires¹⁵⁵ that the most immediate pressures were in the south of the region, in Essex and Hertfordshire.
- 20.8 Worse still, this reduction in supply is taking place against a background of rising demand. More than half a million new homes are planned for the Region by 2021, an increase of 17% on the present number of homes in the Region and a 16% increase in its population.¹⁵⁶
- 20.9 It is in the light of all of this that the Government's Proposed Changes to the Draft East of England Plan support a water efficiency target of 'at least 25%' for all new development and 'at least 8%' for existing development.
- 20.10 BAA has not even come close to demonstrating that it would be capable of meeting these efficiency targets, despite the following advice from the Environment Agency ('EA') emphasising the need for urgency in implementing the water efficiency targets.

'The success of a water efficiency policy has the biggest impact in the later years of the planning periods. It relies on the accumulation of measures being installed in all new properties over the complete planning horizon, starting immediately. The effectiveness of water efficiency will therefore be diminished should there be a delay in the implementation, or some dilution of the scenarios presented here. Similarly to install retrofit water efficiency on all existing homes would take more than a decade to deliver and will not resolve short to medium term water supply

¹⁵⁵ Cross-examination of Mr Squires, 6 July 2007.

¹⁵⁶ SSE/16/a at para 3.1.2.

*needs. It will however contribute to long term sustainable water management.*¹⁵⁷

20.11 In cross-examination by SSE, Mr Squires stated that BAA anticipated achieving a '14 to 16 per cent improvement in water efficiency across the Airport' compared to 2005/2006 and that this was 'mid-way between 25 per cent and 8 per cent, which is exactly what you would want to expect from a mixed age development and ... absolutely in line with the policy WAT/1' [from the Draft RSS].

20.12 However, it is important to note that BAA changed its baseline for the purposes of this assertion. Had BAA compared future water usage against the 2004/05 baseline, as elsewhere in its assessment of water impacts, the projected efficiency saving would be 8.6%¹⁵⁸. The alternative basis for comparison is the 25mppa base case (the fall-back position) with the projection for 35mppa. On this basis the projected efficiency saving (co-incidentally) is also 8.6% as the concluding paragraph of BAA's proof of evidence on water impacts confirms:

*'Overall this shows a potential improvement in water efficiency from 29.4 l/Pax for 25mppa to 26.9 l/Pax for 35mppa.'*¹⁵⁹

20.13 BAA is therefore incapable of achieving the required level of water efficiency gains for the proposed development to be consistent with Policy WAT1.

20.14 Moreover, no confidence can in these regards be placed in BAA's claims that '*The Airport has experienced significant improvements in water efficiency in recent years*'.¹⁶⁰ This was true until 2004/05, which is the year that BAA used as its baseline. However, the efficiency improvements went into reverse in 2005/06 and airport water consumption rose 14% compared to only a 5% increase in passengers over the previous year.¹⁶¹

20.15 That was why SSE pressed, in cross-examination, for the 2006/07 data which BAA had not at that time published. The 2006/07 data was subsequently made available and showed that the airport's water consumption had increased by a further 9.3% in 2006/07, again higher than the passenger growth.¹⁶²

¹⁵⁷ 'A Report to Inform the Environment Agency's Response to RSS14 Consultations', EA, July 2005, Section 4.2, p42 [CD/319].

¹⁵⁸ 26.9 MI/d projected for 35mppa vs 29.4 MI/d actual in 2004/05.

¹⁵⁹ BAA/5/A at para 10.4.4.

¹⁶⁰ CD/17 at para 6.1.1.

¹⁶¹ BAA Stansted Corporate Responsibility Report, 2005/06, Table 6, p19 [CD/161].

¹⁶² BAA Stansted Corporate Responsibility Report, 2006/07, p44 [CD/448].

Stansted Airport	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Water usage (m ³)	514,840	563,731	623,362	625,275	714,918	781,569
Litres per passenger	36.56	33.66	32.12	29.42	32.15	32.78

20.16 For all of these reasons, SSE's case on the water impact of the appeal proposal is both short and simple: BAA's assessment of the issue in the ES was woefully incomplete and inadequate; and no confidence whatsoever can now be attached to the suggestion that all these matters can be resolved by condition.

21 Air Quality

21.1 The Inquiry heard considerable evidence, among others from UDC and the National Trust, as well as from SSE, which questioned the reliability of BAA's predictions of the impacts on air quality in the 35mppa case.

21.2 Our concerns about the reliability of BAA's air quality predictions have been greatly heightened following our cross-examination of BAA's expert witness on the surface access projections. The use of vehicle occupancy ratios which are far higher than those published by the CAA unquestionably means that road traffic has been significantly understated and therefore its emissions have also been significantly understated. In addition, the implausibly high proportion of transfer passengers assumed by BAA further reduces the assessed impact of emissions from road traffic. BAA's 15% sensitivity test went only part way towards addressing the underestimation in road traffic and in any event was not even applied to the air quality projections. In an area of such importance to the health and wellbeing of the community and local ecosystems, it is wholly unacceptable for BAA to use assumptions which systematically understate the impacts. This is in effect the very opposite of the precautionary principle.

21.3 Dr Patricia Elliott gave evidence to the Inquiry jointly on behalf of SSE and Saffron Walden Friends of the Earth based on her submitted proof of evidence.¹⁶³ She was formerly Medical Director of Harlow Occupational Health Service and Occupational Health Adviser to Kings College Hospital, London and had considerable experience in air quality matters.

21.4 Dr Elliott told the Inquiry that the main pollutants of concern at Stansted were nitrogen oxides (NO_x), especially nitrogen dioxide (NO₂), and PM₁₀ particles. Both were

¹⁶³ SSE/7/a.

subject to statutory limit values for the protection of human health and, in the case of NO_x, for vegetation. The latter was of particular importance in relation to Hatfield Forest, an ancient woodland SSSI.

- 21.5 BAA modelled air quality impacts for its 25mppa base case and its 35mppa scenario. The model used by BAA predicted that the limit value for NO_x would be very close to being breached at the north west perimeter of Hatfield Forest in the 35mppa scenario and BAA's sensitivity test for 40mppa predicted a breach. The number of uncertainties in the modelling process increases the probability that levels would be exceeded over a significant section of the forest.
- 21.6 Dr Elliott told the Inquiry that, in carrying out its modelling, BAA had assumed a significant increase in new aircraft types with reduced fuel use and therefore reduced emissions. She did not offer a view on the reasonableness of those assumptions but made the general point that modelling airports for future air quality had many uncertainties.
- 21.7 In 2004, the Government commissioned three panels of experts to examine how future air quality at Heathrow could best be modelled, with a view to obtaining a better estimate of the air quality impacts should an extra runway be built. This was part of a major study known as the Project for the Sustainable Development of Heathrow ('the PSDH') and its first technical report, published in July 2006, gave best practice advice for air quality modelling.¹⁶⁴ The work of the three technical panels was subject to an external independent and rigorous peer review process¹⁶⁵ and the findings are equally applicable to Stansted.
- 21.8 In cross-examination BAA accepted that the panels were commissioned as a result of governmental concern over the accuracy of existing air quality models.¹⁶⁶
- 21.9 The PSDH Technical Report concluded that of all the models that were compared, the one that was most suitable for studying air quality at airports was the new model, '*ADMS Airport*'. This was not the model used by BAA for its assessment of future air quality impacts at Stansted as reported in ES Vol 3¹⁶⁷ as it was not at that time commercially available.

¹⁶⁴ 'The Report of the Airport Air Quality Technical Panels', PSDH, DfT, July 2006 [CD/280].

¹⁶⁵ *Ibid*, Executive Summary, para 14.

¹⁶⁶ Cross-examination of Mr Pratt, 5 July 2007.

¹⁶⁷ CD/6.

- 21.10 The reference documents describing the methodology used by BAA for its 25mppa and 35mppa projections have been made available to the Inquiry,¹⁶⁸ and a study of these confirms our original conclusions that BAA has underestimated future NO_x values for Stansted in ES Vol 3.¹⁶⁹
- 21.11 A number of shortcomings in BAA's modelling have been demonstrated. BAA did not carry out a full monitoring survey of air quality in and around the airport. It has been unable to produce a year's monitoring and has relied upon results from only one continuous analyser (the type of monitor accepted as the most reliable way to monitor NO_x) and this only for a period of seven months. BAA also relied upon the results from four diffusion tubes and has acknowledged that these could be subject to more than 30% deviation. The PSDH considered it essential that modelling should be validated against a set of real time monitoring points using automatic analysers for at least a year in order to obtain a reliable annual mean.
- 21.12 Mr Pratt gave evidence on air quality impacts on behalf of BAA. During cross-examination he said that one of the reasons why there were so many monitors at Heathrow was in order to verify the model, rather than to verify the outputs from the model. Nowhere in the PSDH report does it suggest that this is correct. Dr Elliott said that the PSDH recommended that there should be a sufficient number of continuous analysers (she understood that 12 were used for monitoring air quality at Heathrow) so that there are actual real-time measurements that show exactly what is going on at points all around the airport, enabling a thorough review, ideally over a period of a full year.
- 21.13 Dr Elliot referred to a letter from Dr Carruthers, appended to her rebuttal proof of evidence,¹⁷⁰ which rebutted statements made by Mr Pratt concerning the model ADMS Airport.
- 21.14 The PSDH also gave advice on the need for an accurate emissions inventory for aircraft operations, airside vehicles and landside traffic. These should include allowances for engine deterioration, speed of aircraft, APU use, accurate times-in-mode and engine testing. The report of the modelling carried out for Stansted¹⁷¹ tells us that there are limited records at Stansted as to a number of emission-producing activities, namely for:

¹⁶⁸ CD/277 to CD/279.

¹⁶⁹ CD/6.

¹⁷⁰ SSE/33.

¹⁷¹ CD/278.

- (i) Times in Mode;¹⁷²
- (ii) Engine testing times;¹⁷³
- (iii) APU running times.¹⁷⁴

21.15 BAA's estimation of landside road network emissions is also questionable. We have already dealt with the understatement of road traffic volumes and the failure even to apply the 15% sensitivity test to the air quality projections. Another major uncertainty arises from BAA's using 2003 as its base year for air quality modelling. The new A120 trunk road – the main road serving the airport – did not open until the end of October 2003 and in Dr Elliott's view this meant that BAA's traffic flow assumptions were '*largely guesswork*'. It is not clear why BAA used a 2003 baseline. In cross-examination Mr Pratt said that it would have been impracticable to use a 2005 baseline for a planning application to be submitted in April 2006 and we agree with this, but he acknowledged that a 2004 baseline would have been practicable and more appropriate. We suspect that 2004 would have shown higher emissions as a result of the new road.

21.16 For the 35mppa case in 2014 BAA has assumed that 45% of the aircraft operating from Stansted will conform to CAEP4-30% and therefore have significantly lower NO_x emission rate compared to older aircraft. However, no allowances have been made for engine deterioration in the remaining 55%. The recommendation in the PSDH for such older aircraft is that there should be an assumption of a 4.3% increase in fuel use and a 4.5% increase in NO_x emissions per unit of fuel compared to the original design specifications.¹⁷⁵

21.17 The PSDH also warns that new aircraft models may, as a result of improvements in fuel use, actually emit more NO_x than older models and has reserved advice pending a further investigation.¹⁷⁶

21.18 In cross-examination BAA accepted that its air quality modelling was subject to considerable uncertainties but said that these '*could go either way*'. However, the specific points in paras 21.14 to 21.17 above could, if allowed for in the modelling, all increase the projected emissions.

¹⁷² SSE/7/a at para 4.2.6.

¹⁷³ SSE/7/a at para 4.2.8.

¹⁷⁴ SSE/7/a at para 4.2.9.

¹⁷⁵ CD/280 at para 3.50.

¹⁷⁶ SSE/7/a at para 4.2.5.

- 21.19 The significance of the modelling uncertainties and the likelihood of underestimation is that even a small increase in the size of the predicted $30\mu\text{gms}/\text{m}^3$ NO_x contour would result in this encroaching upon Hatfield Forest in the 35mppa case. In addition, in the new UK Air Quality Regulations (2007)¹⁷⁷ the critical level for NO_x remains $30\mu\text{gms}/\text{m}^3$.
- 21.20 The degree of uncertainty in the BAA air quality predictions is heightened because BAA, by failing to institute proper monitoring, has failed to provide enough evidence to satisfy the planning requirement that air quality legislation should not be breached by new developments. Nor can the possibility of mitigation be properly assessed.
- 21.21 Dr Elliott considered that it was not possible for BAA to conclude with any degree of confidence that the limits for vegetation would not be breached in Hatfield Forest SSSI, causing irreparable damage to a unique and precious nature reserve. In addition the emerging East of England Plan, Environment Policy ENV1, specifically includes Hatfield Forest as one of the '*assets of particular regional significance of green infrastructure*' which must be protected and policy ENV5 gives protection to '*aged or ancient trees*'.¹⁷⁸ All of this is reinforced by the Government's new Air Quality Strategy, published in July 2007, which includes a target 'to get 95% of SSSIs into a favourable condition by 2010'.¹⁷⁹ This of course means that measurement will need to take place within Hatfield Forest (and other SSSIs within the Government's 'exclusion zones') to ascertain whether the limit values have been achieved.
- 21.22 UDC has recently submitted (UDC/7/E) the latest results of the current monitoring at Shell House, Hatfield Forest. The results have been interrupted by a number of technical problems but annualised values of NO_x concentrations have been calculated for the six months operation and to a certain degree validated against two other real time monitoring stations. The results show that the annual mean for NO_x for vegetation at that site was exceeded in 2006 and would be in 2007. We recognise that reliable annual means must be calculated on the basis of a year's monitoring but the results strongly suggest that BAA has underpredicted NO_x levels for the site just outside the north west edge of Hatfield Forest, since Shell House is some distance further east and further from the runway. We are not surprised by this outcome

¹⁷⁷ CD/190.

¹⁷⁸ Government's Proposed Changes to the Draft East of England Plan, Dec-06 [CD/76], pages 152 and 160.

¹⁷⁹ 'The Air Quality Strategy for England, Scotland, Wales and Northern Ireland', DEFRA, July 2007 [CD/427.1] at Volume 2, para 301, p103.

because, for the reasons set out above, we believe that BAA has underpredicted, NOx levels in relation to aircraft and road traffic emissions.

- 21.23 Evidence was presented to the Inquiry by SSE and others on the problem of kerosene odours from the airport. BAA denied that odours caused any problems, both in the Air Quality Volume of its ES¹⁸⁰ and in its response to the UDC Regulation 19 Notice.¹⁸¹ The problem of airport-related odours was discussed at some length with BAA at the time of the 2001 planning application and at that time BAA agreed through a s106 obligation to carry out an odour survey. The results of this survey were not published until late last year and, in short, BAA claimed that it showed no hard evidence of any serious concerns. SSE totally disagrees with this conclusion. SSE and others provided evidence of public concern and complaints about kerosene odours from the airport. In addition to the reviewing the evidence presented, SSE suggests that an early morning walk in the vicinity of the airport, downwind, may assist in forming a judgment on this issue.

22 Landscape, Loss of Tranquillity and Light Pollution

- 22.1 Contrary to the assertions of BAA, it is quite clear that the proposed development will have an impact on the landscape within and without the airport boundary in a number of ways. This is the case notwithstanding that the current application does not include an application for physical development.
- 22.2 First, giving evidence for BAA on air traffic forecasting, Mr Maiden acknowledged that BAA would not implement its existing planning consent for car parking if the 25mppa cap remained in place.¹⁸² Refusal of this application would therefore enable existing areas of undeveloped landscape to remain pristine rather than being concreted over for car parking.
- 22.3 Second, the proposed development would affect landscape outside the airport perimeter – both in a physical sense (e.g. damage to verges) and in the sense of the diminished enjoyment of landscape (e.g. Hatfield Forest). Yet the environmental statement only addresses landscape within the airport boundary.¹⁸³
- 22.4 SSE does not accept that landscaping issues can be dealt with by way of condition. SSE accepts, however, that some of the worst impacts may be capable of some degree of mitigation.

¹⁸⁰ CD/6 at para 8.2.

¹⁸¹ CD/22 at Appx 2.

¹⁸² Cross-examination of Mr Maiden, 21 June 2007.

¹⁸³ ES Volume 9 [CD/12].

- 22.5 Turning to tranquillity,¹⁸⁴ while SSE accepts tranquillity is a qualitative concept, research studies carried out by the CPRE, working with Northumbria University, on '*tranquillity evaluation*' enable quantification.¹⁸⁵ Tranquillity evaluation uses as its key input a set of some 40 tranquillity parameters which rank positive and negative impacts upon tranquillity based on a large national interview sample. Thus, the technique has a subjective base but, by modelling the assessments of positive and negative impacts upon tranquillity based on a representative sample of the population, objective yardsticks can be developed and the key negative impacts upon tranquillity can be identified. It transpired that these correspond quite closely to the impacts of airports and (it follows) of airport development.¹⁸⁶
- 22.6 The balance of the evidence before the Inquiry from SSE and local residents demonstrates that the proposed development would significantly increase these impacts and thereby reduce tranquillity.
- 22.7 It was clear from the evidence presented by SSE and others that light pollution is one of the most intrusive impacts of the airport, curtailing the enjoyment of the countryside and its tranquillity at night. In SSE's 'Erosion of the Community Report' (SSE/20/A) a local resident wrote in March 1982 that:
- 'The quiet is tangible. Walking the lanes at night, I can sense the crops growing. You can hear the stream running its course a quarter of a mile away. The air is so clear that at night you can often see the Milky Way in detail.'*
- 22.8 Writing in 2006, that same resident said:
- 'Another change is the loss of the bright starry sky. A previous Managing Director of the airport referred to it as 'a rosy glow' when I said I regretted the loss of starlight. He failed to understand.'*
- 22.9 In ES Vol 9¹⁸⁷ BAA assessed those aspects of the proposed development where impacts would arise from new lighting. The methodology is built around an assessment of the impacts by comparing the baseline with BAA's predicted 25mppa and 35mppa scenarios. The unsurprising result is a series of predicted incremental changes in light pollution impacts mostly assessed subjectively as 'slight' or 'no change'.

¹⁸⁴ See the evidence of John Drake and Lady Suzanne Walker [SSE/18/a].

¹⁸⁵ SSE/18/c at appendices 6 and 7.

¹⁸⁶ SSE/18/a, Table 1 at page 6.

¹⁸⁷ CD/12.

22.10 SSE reviewed BAA's assessment for each of the 12 viewpoints, in each case for the baseline and the 25mppa and 35mppa scenarios.¹⁸⁸ The main themes that emerged were:

- (i) That many of the assessments were inadequate;
- (ii) That terms such as '*a marked glow*' to describe the baseline case were euphemisms for significant light pollution;
- (iii) That clear cases of light nuisance existed;
- (iv) That additional adverse impacts were described in several cases as '*no change*'.

22.11 BAA's own photographs in ES Vol 9, Appx A1, Figures 3 and 10 show the current extent of light pollution from the airport and demonstrate its severity. Any worsening of this current impact is unacceptable.

23 Quality of Life

23.1 Very substantial evidence about the threat to quality of life was presented to the Inquiry at the hearings in Sudbury, Ware and Great Hallingbury, as well as by many local Parish Councils, individuals and other organisations at the main Inquiry venue. Common themes were the increasing disturbance to rural tranquillity caused by aircraft noise and the adverse impact on quality of life of constant over-flying aircraft. The evidence given on behalf of the Dedham Vale Society, the Colne-Stour Countryside Association, the Stour and Orwell Society and by residents from Ware and its surrounding villages demonstrated that the adverse impacts upon tranquillity and quality of life were not confined to residents in the immediate vicinity of the airport.

23.2 The Inquiry has heard powerful evidence from many witnesses on the issue of quality of life. They were not able to quantify their feelings or concerns but that was because the issues at stake are not capable of mathematical quantification or valuation in financial terms.

23.3 Although it is virtually impossible to provide facts and figures or any form of hard data to underpin people's concerns about the impact of the proposed development upon the quality of life there can be little doubt (unless we dismiss all their evidence as irrational) that to permit the lifting of the 25mppa cap would adversely affect the day-to-day lives of real people in the real world, their enjoyment of their homes, gardens,

¹⁸⁸ SSE/18/c.

local countryside, the night sky – adverse impacts that would be very real in terms of what is seen, heard and experienced.

23.4 The current levels of activity at Stansted is already intolerable to many. Many witnesses, some of whom did not oppose BAA's last planning application five years ago, now take the view, in hindsight, that 25mppa was a bridge too far.

23.5 By way of some brief examples:

- (i) Cllr Richard Cheetham gave evidence on behalf of Takeley Parish Council¹⁸⁹ that *'our parish's way of life and values are being undermined by the current expansion of Stansted Airport and will suffer further as a result of the G1 expansion plans. The prospect of any further expansion beyond the existing limit of 25mppa will only serve to accelerate the process of the break up of our community'*.
- (ii) Michael Fairchild gave evidence on behalf of Little Hadham Parish Council and stated that the greatest threat to the stated need to build a stronger community spirit for the present population and quality of life was airport expansion and the associated impacts of increased traffic and urbanisation.
- (iii) Vincent Thompson gave evidence on behalf of Little Easton Parish Council. He stated that *'the area around Stansted airport is one of exceptional beauty... The area is widely appreciated both by residents and by many visitors who seek its tranquillity. At a limit of 25 million passengers it is just possible that this unique character can be protected. If the 25 million barrier is breached it will be lost for future generations under a weight of noise, pollution, infrastructure warehousing and the rest.'*

23.6 BAA now seeks permission for further expansion which is equivalent to adding the entire passenger volume of Birmingham Airport or Luton Airport and this is presented as a mere relaxation of a couple of planning conditions. Exceeding the current limits is not an option if further erosion of quality of life is to be avoided. Further expansion would put at risk the all-too-short periods of respite currently enjoyed over a wide area as well as threatening the tranquillity of an even wider area as increased traffic leads inexorably to additional flight paths and more stacking areas. Tranquillity is an enduring benefit that should be available to all, a benefit easily taken for granted until it is too late.

¹⁸⁹ TPC/1A.

24 Community Cohesion

24.1 SSE's evidence in relation to community cohesion was largely based on the '*Erosion of the Community*' report submitted to UDC in August 2006. This report had its origins in the consultative process instigated by UDC as part of its consideration of BAA's planning application in 2006. During the first week of July 2006, in addition to representations from councils, public bodies, industry and environmental groups and various 'experts', approximately 50 members of the public gave oral evidence to UDC's Development Control Committee. These presentations (on 5 and 6 July) were recorded and have been submitted to the Inquiry on CD Rom.¹⁹⁰ These presentations are an important source of evidence for this Inquiry, in assessing the impacts of the proposed development on the local community.

24.2 The Department of Communities and Local Government ('DCLG') describes a cohesive community as one where '*there is a common vision and a sense of belonging for all communities*' and goes on to say that: '*community cohesion cannot be forcibly imposed by external agencies but has to be achieved through community members working together for the benefit of all.*'

24.3 Maggie Sutton gave evidence on this topic for SSE, a mother of five from Broxton whose home was just two miles from the airport and less than a mile from the flightpath.

24.4 She described the changes that had taken place since permission was granted for growth from 15mppa to 25mppa explaining that the airport was now very rarely still with constant noise throughout the day and for much of the night. She went on:

'We are awoken repeatedly by airport activity and large, noisy cargo flights. Bed and breakfast establishments have begun to spring up around us together with airport related industrial units. We suffer air and light pollution, fly parking and increased road traffic. There are a great many accidents on our tiny lanes because the roads are so busy now. Airport cabs and other vehicles cut through our villages constantly and at speed at all times of the day and night.'

24.5 Mrs Sutton said that there had been a great loss to the local community through people leaving because of the fears of what may come with further expansion and that BAA had repeatedly refused to recognise the extent of the blight caused by the threat of expansion and the widespread worry and stress caused by this, taking its toll on people's wellbeing and quality of life. She spoke of local properties falling into

¹⁹⁰ SSE/20/c.

disrepair because of neglect by BAA which now owned many homes in the area and rented them to short term tenants who took less care of the properties, who were not generally interested in getting involved in local activities and generally did not have children at the local schools.

- 24.6 The *'Erosion of the Community'* report consisted of a series of personal accounts by local people explaining the impacts of the airport upon their communities and their fears in relation to further expansion. It was not only the *'hard'* issues that people focused upon, like noise and road traffic, but also the soft issues such as community *'spirit'*, village activities and social cohesion.
- 24.7 The suggestion from BAA, that the little weight should be placed on the report on the basis that several of the contributors were members of SSE, should be firmly resisted. While this is true as a matter of fact, as another witness to the Inquiry put it: *'I am a member of SSE because I am opposed to BAA's expansion plans – and not the other way around.'*¹⁹¹ Indeed, in taking a sample of people from those communities around the airport most directly affected by the airport's operations, it is almost inevitable that a significant proportion would be members of SSE. In addition, the Inquiry has heard evidence from a large number of members of the public – some who are members of SSE and some who are not – and the thrust of that evidence has generally been consistent with the thrust of the *'Erosion of the Community'* report.
- 24.8 Mrs Sutton concluded her evidence by expressing her fear about the impact of an additional 10mppa based on her experience of what had happened since the last tranche of expansion had been approved:

'So if this can happen now, what is 10 million more passengers going to do to us? And not just us, it is people further afield. It will affect more and more people. It will ripple out into more and more areas, there is no doubt in my mind about that.'

25 Housing Market

- 25.1 The Inquiry heard evidence from Mr Ken McDonald on behalf of SSE on the economic impacts of airport expansion on the local housing market.
- 25.2 Relying on data published by HM Land Registry, he showed that homeowners in Uttlesford had experienced significant devaluation in the value of their homes over the period since June 2002, when plans to expand Stansted Airport were announced. In total, the devaluation relative to house prices in Essex as a whole amounts to more

¹⁹¹ Mr Derek Connell.

than £1 billion. The effect has been felt especially in the southern half of the District, where the average home has lost over £50,000 in value relative to its Essex counterpart.

- 25.3 The loss of asset value has crystallised only in the case of those who have left the area, died or been a party to a divorce or a similar asset separation procedure. Further losses will be realised by current residents unless the threat of expansion and consequent blight are lifted. Conversely, a recovery in property values might be expected if the threat of expansion beyond 25mppa were to be reduced or removed.
- 25.4 BAA's economic assessment fails to recognise the community's loss of asset value and BAA has not offered compensation to the vast majority of homeowners who have suffered from this blight.
- 25.5 The significant relative fall in house prices, particularly in the southern part of Uttlesford, might be viewed as an indicator of a decline in the quality of life of the area – a decline which this Inquiry has the power to stall reverse.
- 25.6 BAA neither disputed nor faulted the facts of this evidence, although it did not share our view that the housing market decline is due primarily to airport expansion, either actual or threatened, since 2002.
- 25.7 SSE has not relied upon the economic losses to local homeowners as part of its central economic case against the expansion of Stansted and indeed, as the Inspector suggested, there may be no decline in the overall value of the UK housing stock. The 'closed market' of a finite supply of houses and a finite number of buyers and sellers is likely to see the concentrated losses for Stansted area homeowners being offset by a scattering of price gains wherever buyers, including 'refugee' buyers from the Stansted area, put upward pressure on another area's house prices. Thus, house prices may be a 'zero sum game' whereby house prices in neighbouring districts such as South Cambridgeshire and South Suffolk may have been inflated as a consequence of the threat of airport expansion within Uttlesford.
- 25.8 The economic logic of the housing market being ultimately ruled by the zero sum game cannot be doubted but this is unlikely to be of any comfort to Uttlesford homeowners who have seen their principal asset lose a great deal of its value as a direct result of the expansion plans for Stansted Airport, and through no fault of their own.

26 Health Impacts

- 26.1 Although there is a statutory obligation to carry out an Environmental Impact Assessment ('EIA') for major developments such as airports, a Health Impact

Assessment ('HIA') is not a statutory obligation. However, it is often impossible to separate health from environmental issues and the ATWP¹⁹² called for airport developers to undertake HIAs in relation to their airport expansion proposals:

*'Airport operators will have to meet the requirements for environmental impact assessment, and will also be expected to undertake appropriate health impact assessments.'*¹⁹³

and

*'The public health impacts of aviation are a matter which the Government takes very seriously. As noted earlier, we must ensure air quality standards around airports are met. Research continues on the effects of noise on human health, and the Government will take account of existing guidelines from the World Health Organisation. We are also supporting research to obtain better evidence on this and, through the European Commission, on whether, for example, aircraft noise exposure in schools can interfere with children's cognitive performance.'*¹⁹⁴

- 26.2 BAA commissioned consultants ERM to carry out an HIA in respect of the G1 planning application and SSE have expressed a number of reservations about the way in which the study was carried out and, indeed, about the independence of the consultants who carried it out. In particular, ERM has a longstanding (and ongoing) commercial relationship with BAA in other areas of the business, unconnected with health impact assessment.
- 26.3 The scope of the HIA was far too narrow to be of value to the population which might be affected by airport expansion. Among key areas which were not included were:
- (i) The wider development planned for the M11 corridor as per the RSS;
 - (ii) Health Service infrastructure planning;
 - (iii) The health effects of night flights;
 - (iv) The climate change impacts of the proposed development. (BAA argues that the climate change impact of the proposed development would be relatively small but the scale of adverse health impacts predicted as a result of climate change is enormous. Both parameters could and should have been factored in).

¹⁹² CD/87.

¹⁹³ CD/87, para 12.2, p139.

¹⁹⁴ Ibid, para 3.32, p38.

- (v) Any consideration of the report from Uttlesford PCT on the *'Health Impact of Expansion of Stansted Airport'*.

- 26.4 ERM stated that the above matters were outside its terms of reference as defined by its client and BAA has provided no proper explanation as to why these matters were excluded.
- 26.5 Moreover, and regrettably, BAA did not present evidence to the Inquiry on health impacts and so we have not been able to cross-examine BAA on the scope, content or conclusions of its HIA.
- 26.6 Professor Banatvala did, however, give evidence on health impacts on behalf of SSE. This took the form of a critique of the HIA produced by ERM for BAA. His extensive credentials are set out in SSE/19/a.
- 26.7 In preparing his critique, Professor Banatvala had consulted a number of experts in the field including: Sir John Lawton, Chairman of RCEP;¹⁹⁵ Sir Andrew Haines, Dean of the London School of Hygiene and Tropical Medicine (author of a number of scientific papers on health and climate change); Dr Finton Hurley from the Institute of Occupational Medicine in Edinburgh; Professor Stephen Holgate, a medical member of the RCEP with expertise in many of the aspects of poor air quality; Professors Stephen Stansfeld and Bridget Shield who were involved in conducting the RANCH and West London noise studies; and Professor Walter Holland, President of the Faculty of Public Health Medicine. Professor Banatvala took account of the views of the foregoing in his evidence and appended copies of relevant correspondence to his proof of evidence.
- 26.8 The starting-point of SSE's concerns with respect to BAA's HIA is common to its concerns in respect of other impacts of the proposed development: its reliance on BAA's air traffic projections. In particular, any under-assessment of those projections will have had a knock-on effect upon the HIA also.
- 26.9 SSE's concerns in respect of the HIA go further, however. In particular, SSE consider that ERM's approach to the HIA has lacked transparency, inevitably raising suspicions amongst the population living in the vicinity of the airport. Health considerations for a major development such as G1 should involve different scientific and social disciplines welded together by independent leadership. This was not the case in relation to the HIA which was carried out.

¹⁹⁵ Royal Commission on Environmental Pollution.

- 26.10 The HIA report should have provided evidence of both the positive and negative aspects of the proposed development, accompanied by a thorough and detailed literature review. It did not. Key reference sources were disregarded or, if included, misrepresented.
- 26.11 *The WHO Charter on Transport and Environmental Health¹⁹⁶ (to which the UK Government is a signatory) states that 'the wellbeing of our communities is put first when preparing and making decisions regarding transport and infrastructure policies'. It emphasises the importance of vulnerable groups such as the elderly, the chronic sick, children and the socially isolated. The HIA identifies the proportion of the population who are elderly, but does not address specific health impacts for the elderly, chronic sick or socially isolated.*
- 26.12 The HIA does discuss the effect of noise on school children (as analysed in the RANCH and Munich studies), but fails to mention other reports, for example the West London studies, conducted near Heathrow. In addition, the HIA misrepresents the RANCH and Munich studies, playing down their significance.
- 26.13 The RANCH study was a cross-national study and together with the West London and Munich studies involved several thousand schoolchildren. Their consistent findings conducted at different places and at different times show a linear association between aircraft noise and delayed cognitive development.
- 26.14 Assessing this on the basis of the 16-hour Leq contours is of limited value, however, because of the shortcomings of relying only upon Leq contours (which I have already covered) and because the school day is generally from around 9am to 4pm – i.e. if any Leq contour was to be used it should be a 7-hour contour. It should be noted, however, that these are the hours during which BAA's proposed development, if approved, would have the greatest impacts according to BAA, because the peak hours at Stansted are virtually fully utilised already.
- 26.15 The HIA states that the Munich studies have shown that the adverse effects on cognitive development can be reversed. This however depends on the airport closing (as happened in Munich) or upon parents transferring their children to a more distant school unaffected by aircraft noise. Even then, the Munich study showed that cognitive development problems persisted for up to two years.
- 26.16 Although the HIA states that only a one or two month delay occurred in cognitive development, it failed to mention that this was cumulative, i.e. during the 6-7 years

¹⁹⁶ CD/285.

- children were at primary school. Clearly, studies should be extended to secondary education. No mention of this was made.
- 26.17 The results provided by BAA¹⁹⁷ of the effects of noise on ten local schools were at variance with the evidence provided by Mr Richard Ellis, a Governor of Howe Green School in Little Hallingbury. His study used more appropriate noise measurements (frequency of noise interruptions and LA_{max}) and showed clearly how noise was disturbing children and staff.
- 26.18 Another area not properly addressed in the HIA is the effect of sleep disturbance on the health of the population. Although there is a wealth of literature on this subject, the HIA completely disregards the health effects of the potential 43% increase¹⁹⁸ in night flights during the night quota period (2330 – 0600 hours), arguing that night flights can be ignored because this is a matter for the DfT. And yet the health impacts of sleep disturbance should never be ignored.
- 26.19 Moreover, it is important to note that the DfT did not carry out an HIA as part of the decision-making process for setting the night flight quotas for Stansted (and Heathrow and Gatwick) in 2004/05. And so, looking again at the statements in the ATWP to the effect that *'the public health impacts of aviation are a matter which the Government takes very seriously'*, and its expectation that *'airport operators undertake appropriate health impact assessments'*, there can be no excuse for the exclusion of the impact of night flights from BAA's HIA. The health impacts of night flights cannot be disregarded simply because they fall between two stools.
- 26.20 Turning to the health impacts associated with climate change, it is not necessary to go into these in detail; it suffices to summarise. They are significant and wide ranging. They include impacts arising from extremes of temperature, flooding, UV exposure as well as vector-borne and water-borne diseases, food poisoning, storms and air pollution.
- 26.21 About 100,000 cases of food poisoning occur annually in the UK and the Department of Health estimates this will increase annually by about 10% as a result of climate change.¹⁹⁹ Climate change will have significant indirect effects, for example on agriculture and on the distribution of disease-carrying insect species. An increase in the frequency and scale of extreme weather events will cause more flooding and

¹⁹⁷ BAA/1/C.

¹⁹⁸ To 12,000 per annum compared to 8,370 in year ended 25 March 2006.

¹⁹⁹ 'Health Effects of Climate Change in the UK', Department of Health, 2001 [CD/291].

instances of infectious diseases, including cholera and dysentery, as well as those which hitherto have not affected temperate climates, such as malaria.

- 26.22 Hotter summers with more frequent and more prolonged heatwaves will result in increased mortality, particularly amongst the elderly and amongst those with pre-existing disease, especially cardiovascular and respiratory disease. The WHO estimates that climate change is already causing 150,000 premature deaths per annum²⁰⁰ and the August 2003 heatwave in Europe resulted in 35,000 deaths, almost 14,800 of these in France and an estimated 2,000 in the UK.²⁰¹
- 26.23 In cross-examination of Professor Banatvala Mr Phillipot sought (several times) to obtain the Professor's acceptance that there could be no measurable health effects arising directly from the climate change impact of the proposed development. The Professor would not accept this. That Professor Banatvala was unable to provide specific quantified evidence or the health impacts arising directly from the climate change impact of the proposed development should not be surprising: it would require detailed study even to produce an estimate of such an impact but the Professor's point is nonetheless self-evident.
- 26.24 In particular, it is not in contention that climate change is taking place as a result of excessive man-made emissions of carbon dioxide and other greenhouse gas emissions; nor is it in contention that climate change is having adverse health impacts and is responsible for a large number of premature deaths and that these health impacts are predicted to worsen if carbon dioxide and other greenhouse gas emissions are not reduced; nor is it in contention that the proposed development would give rise to more than a million additional tonnes of carbon dioxide emissions annually.²⁰²
- 26.25 Turning to the issue of social capital, this was not seriously addressed in the HIA despite a wealth of scientific evidence which shows that communities with a high degree of social capital are more likely to benefit from better health and vice versa. The report carried out by Uttlesford PCT on the *'Health Impact of Expansion of Stansted Airport'* considered the issue of social capital in some detail, but this report is not even mentioned in the HIA, perhaps because its findings do not sit comfortably with the conclusions that ERM wanted to draw.

²⁰⁰ Climate and Health Fact sheet, WHO, July 2005.

²⁰¹ Earth Policy Institute ('EPI'), Washington, published in New Scientist, October 2003.

²⁰² BAA/3/C, Table 5.3.

26.26 As part of the HIA, ERM conducted a community survey to obtain views about the perceived health impacts of airport expansion. The results showed an overwhelmingly negative response with an average positive score over the ten issues of 3.8% and an average negative score of 60.2%. And yet ERM simply dismissed these results as irrational, demonstrating a lack of knowledge on the part of the local community, and concluded:

*The stakeholder engagement identified that **some** people in local communities perceive that health impacts will occur ...²⁰³*

The use of the word 'some' is hardly appropriate in view of the results showing 60.2% negative perceptions compared to only 3.8% positive perceptions, referred to above.

26.27 Perceived fears as to adverse health impacts are a relevant planning consideration, whether wholly based on scientific fact or not.

27 Materiality of Climate Change to this Inquiry

27.1 The climate change impacts of the proposed development *are* a material issue for this Inquiry. As politicians from the Prime Minister down frequently remind us, and as BAA does not dispute²⁰⁴, climate change is the gravest challenge the world faces. The latest IPCC assessment²⁰⁵ increases both the confidence and the pessimism of the scientific case that human activities are largely responsible for the dramatic changes in global climate that are already observable.

27.2 The Stern review²⁰⁶ makes clear that action to stabilise and then begin to reduce human contributions to climate change within the next ten or at most twenty years is likely to prove decisive in determining whether humanity can continue to prosper in relative security, or fall victim to climate driven catastrophes we are unable to halt. The best scientific evidence currently available overwhelmingly indicates that starting to cut emissions as quickly and deeply as possible is likely to be decisive for future human security and an extremely sound investment for future prosperity.

27.3 BAA has provided evidence to the Inquiry showing that its proposed development at Stansted would result in an additional 1.06 million tonnes of carbon dioxide ('CO₂') per annum. This is before any account is taken of the particular global warming effect

²⁰³ HIA, para 8.2.3 [CD/21] (emphasis added).

²⁰⁴ Cross-examination of Aqqaluk Lynge, 27 July 2007.

²⁰⁵ IPCC Fourth Assessment Report, 2007 [CD/337].

²⁰⁶ 'Report of The Stern Review: The Economics of Climate Change', HMT, October 2006 [CD/157].

(radiative forcing) caused by aircraft emissions, including non-CO₂ emissions, at high altitude. Stern considers that a factor of between two and four should be applied for radiative forcing.

*'The level of the carbon price faced by aviation should reflect the full contribution of emissions from aviation to climate change. As outlined in Box 15.6, the impact of aviation on the global warming (radiative forcing) effect is expected to be two to four times higher than the impact of the CO₂ emissions alone by 2050.'*²⁰⁷

27.4 In announcing its recent decision to allow only low-energy light bulbs to be sold in the UK after 2010, the Government stated that this would save 5 million tonnes of CO₂ per annum. By any standards, 5 million tonnes of CO₂ is a material saving along the path to a 60% reduction in the UK's carbon emissions by 2050. And 1.06 million tonnes of CO₂, whether multiplied by two or four, is a material increase.

27.5 One of the most striking messages of the Stern Review is the crucial importance of starting to reduce emissions as early as possible so as to lower the peak that greenhouse gases reach in the atmosphere before they start falling. That is absolutely critical for reducing the risks of triggering really dangerous climate change. Stern uses the word '*urgent*' nine times in his executive summary, warning that '*delay would be costly and dangerous*' and '*a delay of only five years could be significant*', and in his final conclusion states:

'The next few years will be critical. It is still possible to avoid the worst impacts of climate change, through strong collective action starting from now.'

27.6 Stern also warns very strongly against the idea that we can overshoot and then pull back and emphasises again and again the importance of starting to reduce emissions as soon as possible. Stern's call for urgent action is echoed by reports from the Tyndall Centre,²⁰⁸ the Oxford University Environmental Change Institute,²⁰⁹ the Royal Commission on Environmental Pollution,²¹⁰ the Institute of Public Policy Research²¹¹ and the Sustainable Development Commission,²¹² all of which reports specifically singled out the problem of the rapid growth in aviation emissions and the threat this posed to achievement of the Government's laudable target for reducing UK carbon emissions.

²⁰⁷ Stern Review, p341 [CD/157].

²⁰⁸ CD/247, CD/248 and CD/249.

²⁰⁹ CD/155.

²¹⁰ CD/298.

²¹¹ CD/246.

²¹² CD/245.

- 27.7 The Government has strongly endorsed Stern's findings and recommendations, and explicitly recognised that henceforth international aviation must be included in any meaningful climate change policy and action. However the Government has also recently re-confirmed the ATWP's support for major continued expansion of aviation at Stansted and elsewhere (in the Progress Report²¹³).
- 27.8 Aviation is highly damaging to the climate both because it is energy intensive and because plane exhausts in the upper atmosphere cause further warming effects, roughly doubling or quadrupling the effect of the carbon emissions alone. Any further increase in aviation would be disproportionately climate damaging over just the timeframe in which Stern says action is most important and valuable.
- 27.9 On the most favourable (to the industry) credible projections and assumptions, by 2050 aviation's CO₂ emissions alone will equal a quarter of the UK target for greenhouse emissions. On other projections and assumptions from peer reviewed scientific literature, in 2050 aviation could be causing not a quarter of the total of climate impact allowable from all activities in the UK, but up to four times that total.
- 27.10 There is limited potential for improvements in operational practices or technology to reduce the climate impacts of aviation over the first half of this century. Future impact projections already assume such improvements anyway. Rather than hoping things may be better if unanticipated improvements occur, we should be concerned things may be worse if anticipated improvements do not occur .
- 27.11 The Government's main current proposal for reconciling climate change policy with aviation expansion is to include international aviation in the EU Emissions Trading Scheme ('ETS'). We have therefore considered its potential in detail, and conclude that:
- (i) It has not yet happened, and nobody can be certain it will;
 - (ii) It cannot begin to have any beneficial effect for 3½ to 4½ years at the earliest. Disagreements and negotiations about any number of contentious issues could very easily put this back years more, and it may have malign effects until whatever point aviation is included;
 - (iii) Whether including aviation in the ETS will actually secure real emissions reductions is highly dependent on the answers eventually agreed to these currently unresolved and potentially highly controversial implementation questions;

²¹³ CD/88.

- (iv) Phase 1 of the scheme has achieved little, there is no justification for assuming that future phases will be reformed to do significantly better, and there are currently not even proposals to make them do well enough to meet post-2012 emissions targets;
- (v) Emissions trading is anyway only a means to incentivise and share out reductions. The reductions still need to be made somewhere.

27.12 Giving evidence on these matters for SSE, Roger Levett, a founding partner of Levett-Therivel Environmental Consultants, updated the Inquiry with the latest position on the prospects for inclusion of aviation within the EU ETS (quoting from an article in 'European Voice'²¹⁴). He referred to the different negotiating positions taken by a number of EU member states and the fact that the US was strongly opposing any attempt to apply the scheme to American carriers and argues that it would be in breach of international law to do so.

27.13 Mr Levett summarised the position as one where there were many people who are keen to make progress on the EU ETS but there were huge political obstacles and technical complications to be solved and therefore no guarantee or certainty that aviation was going to be included in the EU ETS within any reasonable timescale. It was not within the UK Government's gift to make that happen.

27.14 Mr Levett drew a distinction between a Government policy and a Government claim which purported to be factual but was not supported by the evidence. He provided examples from the ATWP Progress Report,²¹⁵ for example, the statement that *'Inclusion of aviation in the Emissions Trading Scheme is the most efficient and cost-effective way to ensure that the sector plays its part in tackling climate change.'* However, that was a claim of fact rather than a policy statement and one which was not supported by the evidence. The history of the EU ETS and the lack of progress in including aviation in the scheme did not justify the Government's confidence that it would achieve the benefits claimed for it in the ATWP Progress Report. A second example from the ATWP Progress Report was that the claim that *'this approach [inclusion of aviation in the EU ETS] was endorsed by Sir Nicholas Stern in a recent report.'* This implies that the cost of carbon would be high enough to reflect the full social cost of carbon as estimated by Stern so as to 'harmonise' economic and environmental decision making. However, all of the evidence, including the economic impact assessment of including aviation in the EU ETS carried out by the EU

²¹⁴ CD/428.

²¹⁵ CD/88.

Commission, suggests that EU ETS would come nowhere near meeting that objective.

- 27.15 Mr Levett's view was that managerial and technical fixes had no realistic prospect of decoupling climate impacts from aviation enough to make the expansion in aviation of which this application is part compatible with the Government's stated policies on climate change over the period that matters most, the next two decades. There was no basis in evidence for assuming that including aviation in the EU ETS would do so either, given the disappointing performance of the first phase, the complexity and contentiousness of the issues to be resolved not only within the EU but internationally before it could happen, and the high chance that politically acceptable resolutions of these could make the resulting scheme ineffectual. In any case, emissions trading merely moves responsibility for reducing emissions around, and could therefore only genuinely offset the impacts of aviation expansion to the extent that somebody, somewhere, is ready to reduce emissions from existing activities which will already have generally been subject to cuts of the order of 60% or more by 2050 – an assumption that could most politely be described as extremely optimistic.
- 27.16 Thus it is possible to have an evidence-based policy for air traffic expansion or for climate security, but not both together. Indeed, it is only possible to support air traffic expansion and climate security together by replacing a respect for evidence with a vague hope that 'something will turn up' to rescue us from the contradiction to which all current evidence points.
- 27.17 It is therefore not possible for a decision either to allow this Appeal or to refuse it to be consistent with Government policy on air traffic expansion, climate security and respect for evidence simultaneously. It is, accordingly, impossible for the Inquiry to avoid taking a position, implicitly or explicitly, on the relative merits of the three.
- 27.18 The Government has rightly made it clear that tackling climate change is the gravest of all contemporary challenges. That objective must therefore take priority. Mr Levett said that all the guidance documents on environmental assessment and sustainability appraisal – including a number of Government guidance documents which he and his colleague, Riki Therivel, had drafted – emphasised the need to look at the most significant impacts not in terms of whether you can measure effects on particular receptors but in terms of whether they add to an overall trend which is going in the wrong direction. The impact of the rapid growth in aviation emissions upon climate change is a classic case in point and needs to be viewed in this way.

27.19 In the light of the above evidence and analysis, if the Government means what it says about climate change, in aviation there is no realistic and responsible alternative to the simplest and most obvious response of avoiding further increases in aviation emissions by refraining from allowing any further increases in aircraft or passenger movements, and therefore upholding UDC's rejection of the application which concerns this inquiry.

27.20 This is one issue where sustainable development unavoidably entails constraining consumer demands. This should not be assumed to be a bad thing. The ATWP itself states:

*'The Government believes that simply building more and more capacity to meet demand is not a sustainable way forward.'*²¹⁶

and

*'It does not itself authorise or preclude any particular development, but sets out a policy framework against which the relevant public bodies, airport operators and airlines can plan ahead, and which will guide decisions on future planning applications.'*²¹⁷

27.21 There is, accordingly, no compelling reason why this expansion needs to go ahead, and a range of reasons, quite apart from climate change, why it should not.

27.22 Allowing a non-essential increase in climate impacts at just the point when reduction is most urgent and important would seriously undermine the Government's credibility on climate change. The only decision which could potentially reconcile climate security with expansion would be to allow the expansion to proceed if and when – but not until – some combination of technical improvements or emissions trading can be demonstrated to have actually achieved a net reduction of climate change impacts from aviation in line with Government and EU targets for reduction of other categories of emissions.

28 Climate Change Impacts

28.1 The Inquiry heard evidence from Mr Aqqaluk Lyngé, on behalf of SSE, concerning the impact of climate change upon his local environment in Greenland.²¹⁸ Mr Lyngé is President of the Inuit Circumpolar Council, Greenland, Vice-Chairman of the United

²¹⁶ ATWP, page 9.

²¹⁷ Ibid.

²¹⁸ SSE/22/a.

Nations Permanent Forum on Indigenous Issues and a former Greenland Government Minister.

- 28.2 Mr Lyngge told the Inquiry that what happened in countries such as Britain affected his environment, that many of the economic and environmental challenges facing the Inuit resulted from activities well to the south of his homeland and that Inuit traditions were being severely tested by the changing Arctic environment. He gave examples of the types of changes already taking place in the Inuit homelands.

'For generations uncounted Inuit have observed the environment and have accurately predicted weather, enabling us to travel safely on the sea-ice to hunt seals, whales, walrus, and polar bears. We don't hunt for sport or recreation. Hunters put food on the table. You go to the supermarket, we go on the sea-ice. Eating what we hunt is at the very core of what it means to be Inuit. When we can no longer hunt on the sea-ice, and eat what we hunt, we will no longer exist as a people.'

- 28.3 Mr Lyngge said that the Arctic weather was increasingly unpredictable, that the look and feel of the land was different and that the sea-ice was changing. Hunters were now having difficulty navigating and travelling safely and experienced hunters had been lost through the ice in areas that had previously been safe. Melting glaciers were making it difficult and dangerous to travel to many of the traditional Inuit hunting and harvesting sites and polar bears, walrus, ringed seals and likely other species of seals were projected to virtually disappear. He feared that the Arctic ecosystem would be transformed with tragic results. *'Where will we go then for our food? What then will become of Inuit?'*

- 28.4 Mr Lyngge told the Inquiry that climate change in his homeland was not just an environmental issue with unwelcome economic consequences. It was a matter of livelihood, food, and individual and cultural survival – a human issue - and he warned against thinking that current events in the Arctic were not directly relevant to people in Britain: *'what is happening now to the Inuit will happen soon to you in the South. This is why the UNEP²¹⁹ is looking to the Arctic and why you should as well.'* He described the Inuit as *'the canary in the global coal mine'*.

- 28.5 Mr Lyngge emphasised that he was not asking the world to take a backward economic step but he was asking *'his neighbours in the south'* to greatly reduce their emissions

²¹⁹ United Nations Environment Programme.

of greenhouse gases. *'This does not need big sacrifices but it will need some change in people's lifestyles; for example, is that plane trip really necessary?'*

28.6 Mr Lyngé was aware that aircraft emissions were the fastest growing cause of climate change and this was what had prompted him to give evidence to the Inquiry. His view was that if nothing was done to slow down the growth in travel by planes, then the problem of climate change would get worse.

28.7 He concluded his evidence, in eloquent terms, saying:

'You may say that the expansion of London Stansted Airport will play only a small part in increasing climate change but everyone can say that about almost everything they do. It is an excuse for doing nothing. The result of that attitude would be catastrophic. The serious consequences affecting my people today will affect your people tomorrow.

Planes are sometimes necessary. I could not have come here without travelling by plane. But I came here for an important purpose. Most flights from London Stansted Airport are not for an important purpose. They are mostly for holidays and leisure purposes. Is it too much to ask for some moderation for the sake of my people today and your people tomorrow and for the sake of our children? For the sake also of our wildlife and everything else in the world's precious and fragile environment that is more important than holiday flights. I hope you will make the right decision.'

28.8 In cross-examination, BAA drew Mr Lyngé's attention to the steps the UK Government was taking to address the problem of climate change, including pressing for the inclusion of aviation in the EU Emissions Trading Scheme and putting a Climate Change Bill through Parliament. In re-examination it was pointed out to Mr Lyngé that the proposed Climate Change Bill would not (other than by a further regulation in the future) include emissions from international aviation and Mr Lyngé was asked for his view on that exclusion. *'It is a handicapped Bill'* was his brief reply.

28.9 Mr Lyngé accepted, in cross-examination, the general principle that it was for each country, within the framework of agreed national targets, to determine how best to achieve these targets, although he questioned whether the UK's target (a 60% reduction in carbon emissions compared to 1990 levels by 2050) was sufficient. Again, Mr Lyngé was not aware that this target also excluded international aviation.

SECTION D: REVIEW OF THE EVIDENCE OF THE ALLEGED BENEFITS OF THE PROPOSED DEVELOPMENT

29 Introduction

29.1 That then was the harm that would be occasioned by the proposed development. This must be weighed on one side of the planning balance. The evidence of the alleged benefits of the proposed development must be then measured and weighed on the other side of the planning balance.

30 Economic Impacts

- 30.1 As we have been at pains to emphasise in the closing remarks, BAA has resolutely refused to call any direct evidence to justify the assumption within the ATWP that making best use of the existing runway at Stansted is necessary to secure economic prosperity.
- 30.2 Giving evidence for SSE, however, Mr Brian Ross gave compelling evidence that, in the light of the characteristics of Stansted Airport and the forecasts provided by BAA, not only was it difficult to see how any significant direct benefits to business would arise from the proposed development, it was clear that the main purpose of the proposed development was to accommodate more leisure passengers, the great majority of whom would be UK residents, and so, if the application were to be approved, it would have a significant adverse impact upon the UK trade deficit.
- 30.3 By way of short introduction to this vitally important issue, the following pieces of evidence should be noted in particular.
- 30.4 First, business travel presently accounts for 19% of Stansted's passengers and that BAA projects that this would increase to 23% in 2014 if the application were to be refused, but would remain at 19% in 2014 if the application were to be approved. It emerged in cross-examination that BAA's explanation of the higher proportion of business passengers in the 25mppa case was that it would predominantly be growth in leisure travel rather than business travel that would be frustrated if the application was refused. BAA's explanation reinforces the evidence presented by SSE, and the evidence given by the ACC to UDC in July 2006 that, in the market for low-cost flights, it is supply that creates demand. As we shall see, this has important implications relating to the 'need' for the development.

- 30.5 Secondly, outbound UK leisure travellers outnumber incoming foreign visitors by about two to one and BAA projects that this would remain the case whether the application were to be approved or refused.
- 30.6 Third, Stansted currently handles about 11,000 annual cargo flights (5% of air traffic movements) and BAA projects that cargo flights would more than double (22,500) if the application were refused but would be less than this (20,500) if the application were approved, although freight tonnage is constant under both scenarios. Cargo traffic could therefore be ignored in the assessment of economic benefits relating to this application.
- 30.7 Fourth, non-ATMs (including business jets and air taxis) accounted for 16,700 aircraft movements at Stansted in 2006 (8.0% of all traffic). BAA states it would be able to handle a maximum of only 10,000 if its application were approved, fewer than if it were to be refused. This would result in Stansted being able to handle fewer corporate/business jets and to that extent there would be an economic disadvantage in this area if the application were to be approved.
- 30.8 Finally, there would be 65,000 fewer foreign business visitors to Stansted in 2014 if the application were to be approved, but 210,000 additional trips by UK business travellers. In net terms, then, the additional business trips would therefore be 145,000, which shows as 0.29mppa in the BAA forecasts (i.e. inward and outward journeys combined) out of the 10mppa difference between 25mppa and 35mppa.
- 30.9 SSE provided substantial evidence including detailed analysis to demonstrate that the adverse impact of Stansted's operations upon the UK trade deficit was c£1.27bn in 2004, would increase to c£1.51bn in the 25mppa case and to £2.11bn if 35mppa were to be permitted.²²⁰ On a Net Present Value ('NPV') basis, calculated in accordance with the methodology set down in the HM Treasury Green Book,²²¹ the negative impact on the UK trade deficit if the proposed development were to be permitted would be £18.8bn at 35mppa compared to £6.2bn at 25mppa i.e. a net disbenefit of £12.6bn.
- 30.10 SSE used the same NPV methodology to quantify the economic cost of the additional carbon emissions which would be generated by the proposed development. SSE's calculations were based on Stern's estimate of the social cost of carbon.²²² This

²²⁰ SSE/8/a at table 4.2.8.

²²¹ 'Appraisal and Evaluation in Central Government, ('The Green Book'), HMT, 2003, [SSE/8/c].

²²² Report of the Stern Review: The Economics of Climate Change, HMT, Oct 2006 [CD/157] – ref p.xvi of Exec. Summary and Box 13.1 p.288 of main Report. NB: 1 tonne of carbon = 3.67 tonnes of CO₂.

- equates to about £281 per tonne today, or to about £76.50 per tonne of carbon dioxide.²²³
- 30.11 Allowing for phased growth of the proposed development, SSE therefore calculated the economic cost of the carbon emissions (in NPV terms) at between £3.2bn and £6.3bn for growth to 35mppa. This calculation reflects Stern's recommendation that in order to reflect the true economic cost of aviation emissions these should be factored by between 2 and 4 times the cost of the carbon emissions alone.
- 30.12 At the time of making the above calculations, BAA had not provided any projections for the additional carbon dioxide emissions that would arise from the proposed development and SSE had to estimate this and arrived at a figure of 0.99m tonnes per annum.²²⁴ Subsequently BAA did provide projections, however, predicting that an additional 1.06m tonnes would arise from the proposed development²²⁵ – i.e. 7% more than SSE had estimated.
- 30.13 In cross-examination, BAA correctly pointed out that, in addition to Stern's 'headline' figure for the social cost of carbon, which SSE had used, Stern had also provided estimates for the 450ppm and 550ppm trajectories which were of a lower order and BAA seemed to be suggesting these were equally valid. As SSE pointed out by way of response, however, global carbon emissions are still rising very fast: most experts agreed that stabilisation at 450ppm was probably already an unrealistic goal; and we were a very long way from achieving stabilisation at 550ppm.
- 30.14 BAA called, as I have already emphasised, no direct evidence to contradict that of Mr Brian Ross. The extent of its economic case was contained within two papers in the appendices at BAA/1/C.
- 30.15 Without any one to cross examine on those papers, SSE submitted a detailed rebuttal of these papers,²²⁶ pointing out that they largely relied upon broad assertions of wider economic benefits, expressed in generalised terms. SSE pointed out, moreover, that nowhere had BAA presented any evidence – direct or indirect - of the economic benefits specifically attributable to the particular development proposed.
- 30.16 Significantly, it was clear from the evidence which BAA relied upon for its broad assertions that the wider economic benefits of airport expansion arose from business

²²³ Report of the Stern Review: The Economics of Climate Change, HMT, Oct 2006 [CD/157] – ref p.xvi of Exec. Summary and Box 13.1 p.288 of main report. NB: 1 tonne of carbon = 3.67 tonnes of CO₂.

²²⁴ SSE/8/A, Annex 1.

²²⁵ BAA/4/C, Volume 3, Table 5.3.

²²⁶ At SSE/33.

travel and air cargo activities. And yet cargo volumes were unchanged in the 25mppa and 35mppa scenarios and the increase in business travel was only a very small part (0.29mppa) of the increment (before any reduction for the fewer number of private business jets that could be accommodated) and so BAA's evidence of economic benefits, such as it was, was very tenuous indeed.

- 30.17 In cross-examination BAA sought to establish that if Stansted were not permitted to expand beyond 25mppa this would damage the UK tourism industry because foreign residents would have a wide choice of other countries to visit. BAA referred to the OEF²²⁷ report for support for this argument.
- 30.18 The relevance, however, of these general points was not clear because throughout the Inquiry BAA has repeatedly emphasised that the focus should be upon the difference between its 25mppa base case and its projections for 35mppa. BAA has provided detailed projections for UK leisure, UK business, foreign leisure and foreign business passengers, thus enabling the Inquiry to focus on actual numbers for the proposed development and making it unnecessary to consider generalised arguments about how these broad market sectors might develop.
- 30.19 At the time of presenting its economic evidence to the Inquiry, SSE had a good understanding of how the DfT had carried out its high-level estimate of the economic benefits but had been unable to obtain a detailed breakdown of the estimates produced by the DfT in 2003. SSE was of course aware that no estimate of economic benefits had been carried out specifically for Stansted but DfT had assessed business and leisure passenger benefits separately and much greater economic benefits arise from a business passenger than from a leisure passenger.
- 30.20 Finally, on 15 October 2007, SSE was able to obtain from the DfT the modelling spreadsheets and working papers underlying their estimated economic benefits. These documents have been submitted to the Inquiry as CD/596.1 and they provide important evidential confirmation of SSE's assertions in relation to the sensitivity of the DfT's estimates to a change in the mix of business and leisure passengers compared to what was assumed at the time of the ATWP.²²⁸
- 30.21 The DfT's estimate of the economic benefits for maximum use of the existing runways in the south east was based on assuming a 165% increase in business passengers compared to a 52% increase in leisure passengers. And five out of every six of the

²²⁷ 'The Economic Contribution of the Aviation Industry in the UK', Oxford Economic Forecasting, October 2006 [CD/120].

²²⁸ CD/87

additional leisure passengers were assumed to be inbound foreign tourists with only one in six as outbound tourists from the UK.²²⁹ However, the market has not developed in the way the DfT anticipated in 2003 and the projections presented by BAA to this Inquiry show a totally different profile for the additional passengers that would be catered for by the G1 development. The position is so markedly different from what was anticipated in 2003 that it is frankly ludicrous for BAA to seek to rely today upon the economic estimates which informed the ATWP.

30.22 Similarly, the moral argument about '*pricing poor people off planes*' does not form part of the economic considerations which are relevant to this Inquiry. As SSE responded in cross-examination, the poor are at a disadvantage in all free markets and the Government does not have a social policy objective to reduce the price of caviar or champagne in order to ensure affordability for all. In any event, however, the evidence in relation to the users of air travel very clearly shows that it is the affluent and not the poor who have been the main beneficiaries from and driving force behind the growth in cheap flights.

30.23 For the approval of a development that would have such significant adverse social and environmental impacts there would need to be substantial and demonstrable economic benefits. And yet on the evidence at this Inquiry, these benefits simply do not exist in this particular case. In fact, the economic impacts are substantially and demonstrably negative.

31 Employment Impacts

31.1 It is common ground that Stansted Airport is located in a healthy regional and sub-regional economy and that the East of England has one of the strongest and fastest growing economies in the UK with the highest employment rate of all English regions. This success is already creating problems with housing, transport, congestion and pressure on services.

31.2 Stansted Airport is already the major employer within the local area and SSE presented evidence to the Inquiry that the employment and housing impacts of the proposed development ran counter to the objective of achieving sustainable development which 'is the core principle underpinning planning' (PPS1).²³⁰

31.3 SSE estimated that 26% to 37% of Uttlesford jobs would be airport-dependent if this application were to be approved and such a high level of dependency upon the airport

²²⁹ 'Passenger Forecasts, Additional Analysis', DfT, Dec 2003 [CD/232]

²³⁰ CD/92.

for employment would be counter to the objective in the Local Plan aimed at making Uttlesford less dependent upon Stansted for job opportunities.

- 31.4 Moreover, Stansted is highly dependent upon Ryanair which accounted for 66% of scheduled passengers in 2006 and Easyjet which accounted for most of the remainder.²³¹ SSE was not predicting the imminent demise of Stansted Airport, Ryanair or Easyjet, but argued that it was prudent to hedge against such risks because, if they were to materialise, there would be serious adverse economic and employment implications over a wide local area. Employment sustainability requires a broadly-based economy and from this standpoint it is not in the interests of long term sustainability to put more eggs into the same basket.
- 31.5 In cross-examination BAA put it to Mr Ross, giving evidence for SSE, that other airports in the world were dominated by a single carrier, such as Paris, Frankfurt and Amsterdam. Mr Ross questioned whether the major carrier accounted for as much as 66% at any of these airports, but said that the more important point was that these airports were all located adjacent to major cities whereas Stansted was located in a rural setting with no major conurbation next to it. Over-dependency on airport employment was therefore a far more significant issue at an airport like Stansted.
- 31.6 BAA did not provide a breakdown of the types of jobs that would be created at the airport and SSE's view is that the great majority of the jobs created would be low-skilled occupations. SSE argued that this would represent a significant mismatch with the local workforce. In particular, 79.6% of the Uttlesford workforce were employed in Standard Job Classifications ('SJC's') 1 to 5 (professional, technical, managerial, administrative/ secretarial and skilled trades). For the Stansted 'Inner Area' the figure was 68.9% and for the 'Outer Area', 69.9%.
- 31.7 Such a jobs mismatch would undoubtedly create a conflict with one of the underlying principles of sustainable development i.e. achieving a balance between employment and housing and reducing/minimising the need to travel. It would exacerbate the problem of 'double commuting', whereby skilled/highly qualified local residents commute to London, while Stansted recruit employees from London and overseas because it cannot find people locally to fill the jobs it has available.
- 31.8 Whereas BAA had not identified any employment displacement impacts for the proposed development (despite being requested by UDC in its Scoping Opinion²³² to

²³¹ BAA statistics at http://www.baa.com/assets/B2CPortal/Static%20Files/Top_airlines2005.pdf.
²³² CD/24.

do so), SSE provided evidence of likely employment displacement impacts in four areas:

- (i) Luton Airport;
- (ii) the impact on domestic/regional tourism;
- (iii) a discouragement of inward investment;
- (iv) a displacement of employees in other industries.

- 31.9 SSE viewed the first two of these as the most significant and the ones for which quantified estimates could be developed with a reasonable degree of confidence, especially so in the case of Luton Airport, which was in direct competition with Stansted.
- 31.10 SSE's evidence clearly showed that employment gains at Stansted would reduce – or at least significantly delay – the creation of additional jobs at Luton, where the employment position was far less favourable than at Stansted.
- 31.11 It was in this regard that, in cross-examination, Mr Ross referred to that part of the ATWP where it was stated that Luton/Dunstable had been identified in regional planning guidance as a priority area for economic regeneration, and along with Bedford is designated as a growth area in the Communities Plan. The continued expansion of Luton Airport would have the potential to play a key role in delivering employment-led growth in this area. Accordingly, the ATWP supported full use of Luton as well as Stansted. However, the logical priority had to place Luton above Stansted, since the employment and regeneration need there was so much greater than at Stansted. So it was that approving G1 would frustrate – or at least significantly delay – the achievement of Government policy in respect of Luton. Mr Ross emphasised, however, that SSE was not seeking to 'pass the parcel' to Luton, but was simply pointing out that the logical reading of Government policy was 'Luton first'.
- 31.12 The employment impact on the domestic and regional tourism industry was less direct and more difficult to quantify but nevertheless SSE was able, drawing upon academic and other studies, to provide evidence of a likely employment substitutional impact. In particular, encouraging the growth in cheap leisure breaks overseas would create jobs at Stansted which at least in part would be at the expense of domestic and regional tourism jobs.
- 31.13 Turning to the issue of employment-related housing, the proposed development would have significant implications. A significant proportion of Stansted Airport's employees

already commute from London and this would increase if the application were approved resulting in more long distance commuting contrary to the objective of reducing the need for travel. This would also accentuate the need for more local affordable housing to reduce the need to travel and to provide opportunities for airport employees to integrate into the local community consistent with '*sustainable communities*' principles. Further, SSE explained that a more recent development at Stansted had been the recruitment of employees from overseas. There needed to be proper (housing) provision for integrating these recent arrivals into the local community. The current arrangements appeared largely to depend upon private rented accommodation, however. Such temporary accommodation was not a sustainable arrangement and is already creating price and availability pressures in this sector. If the proposed development were to be permitted without specific provision for very substantially more affordable homes, the current accommodation problems, both for new arrivals and the established local population would become progressively worse.

- 31.14 A common theme runs through SSE's case with regard to the employment impacts of the proposed development. This is to examine the proposed development against the objective of 'contributing to the achievement of sustainable development' – i.e. the principal objective of planning policy and now also a statutory obligation arising from section 39(2) of the 2004 Planning & Compulsory Purchase Act. On the basis of the evidence presented to the Inquiry, BAA cannot reasonably claim that its proposed development would meet the 'sustainable development' test.

SECTION E: Consideration of Key Issues and Findings of Fact

31.15 I now turn to your list of ten key issues (which we have expanded to twelve) and for each of these issues, we invite you to make a number of findings of fact.

32 Key Issue (i) – Prematurity

Whether or not it would be premature to make a decision on the appeal at this time.

32.1 SSE invites you to make the following findings in relation to prematurity:

- (i) the application is inextricably linked to the G2 application which BAA expects to submit almost immediately after the end of this Inquiry;
- (ii) in submitting its G2 application (expected in November 2007) BAA would seek the removal of such conditions as it has proposed to mitigate the impacts of the proposed G1 development;
- (iii) BAA has not adequately assessed the environmental impacts. Its air traffic and surface access forecasts are unreliable and the predicted impacts of noise, air quality, health etc impacts are understated;
- (iv) Schedule 4 of the 1999 Regulations requires the developer's EIA to include an assessment of the development's

'...direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects resulting from the existence of the development, the use of natural resources and the emission of pollutants, the creation of nuisances and the elimination of waste.'

and requires the developer to provide:

'...an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects.'

- (v) BAA has not complied with these requirements. And that is of critical significance in the light of the Government's guidelines on Environmental Impact Assessments, issued by the ODPM in 2000,²³³ which states at paragraph 51:

²³³ CD/237.

'... if the developer fails to provide enough information to complete the environmental statement, the application can be determined only by refusal.'

- (vi) an environmental statement which projects impacts only to 2014/15 – just seven years from now cannot properly be claimed to be addressing long term cumulative impacts, especially in the context of a development in an area where very significant housing and population growth is planned over the period to 2021. According to DCLG guidelines,²³⁴ where an applicant has failed to provide the information necessary to enable a proper evaluation of the environmental impacts arising from the proposed development, *'the application can be determined only by refusal'*;
- (vii) finally, on the issue of prematurity, the market interaction between Stansted and Luton airports needs to be considered, and done so alongside the relevant policy context. It is not in contention that Stansted and Luton airports are both focused upon outbound budget leisure travel or that there is considerable overlap in their geographical catchment areas.²³⁵ In short, the two airports are in direct competition;
- (viii) the ATWP supports best use of the runways at both airports but in the short to medium term, i.e. until such time as there is sufficient demand to enable both airports to expand to the capacities of their existing runways, it is not possible to achieve both objectives at the same time and so it is reasonable to look for guidance on which should deserve priority. The ATWP provides such guidance (para 11.85) pointing out that Luton is identified in regional planning guidance as a priority area for economic regeneration. SSE's evidence on employment and housing impacts²³⁶ provides comparative unemployment data for the Stansted and Luton areas.²³⁷ This shows that there is a sharp contrast between the two areas. Luton is shown as having a 7.6% unemployment rate – three times the figure for Uttlesford and East Herts. This goes some way towards explaining why Luton is identified as a priority area for economic regeneration and why Stansted airport employers are already being forced to look to Central & Eastern Europe to meet their recruitment needs;

²³⁴ 'Environmental Impact Assessment: A Guide to Procedures', ODPM, 2000, para 51. [CD/237].

²³⁵ 'Airports Review: Policy Issues', CAA, December 2005, Annex C, Figs C-7 and C-8 [CD/256], and (more generally) 'Airports Price Control Review: Initial Proposals for Heathrow, Gatwick & Stansted Airports, Supporting Paper II, Competitive Constraints faced by Stansted Airport', CAA, Dec 2006 [CD/257].

²³⁶ SSE/10/a.

²³⁷ SSE/10/a, Table 4, page 9.

- (ix) it is also relevant to note that the skills profile of local Luton residents more closely matches the needs of an airport. Only 59.6% of the resident Luton workforce falls into SJs²³⁸ 1-5, compared to 79.6% in Uttlesford, 68.9% in the Stansted '*Inner Area*' and 69.9% in the Stansted '*Outer Area*',²³⁹
- (x) the question is whether the ATWP objective of 'best use' would more sensibly be achieved by expanding these two airports in parallel or sequentially. The answer to that question must be that sequential expansion would achieve a better fit with the relevant policy objectives and so it follows that raising the current limits on passenger numbers and aircraft movements at Stansted would be (at best) premature because it would slow Luton's growth. It should also be noted that there is no current planning limit on passenger numbers or aircraft movements at Luton;
- (xi) as previously pointed out, it is not SSE's policy to 'pass the parcel' to Luton but it is not in contention that there is capacity for Luton to accommodate considerable additional traffic over the next few years. With the rate of passenger growth in the budget sector having now slowed considerably in the south east, there is 'breathing space' to defer consideration of G1 until such time as G1 and G2 can be examined together at a future Inquiry rather than having to deal with the unsatisfactory piecemeal approach which BAA is currently attempting to pursue;
- (xii) finally, on the issue of prematurity, we point out that the proposed development is running ahead of the Government's preferred means for mitigating the climate change impacts of aviation through its inclusion in the EU ETS. As part of the '*balanced and measured*' approach which the ATWP claimed to follow, the inclusion of aviation in the EU ETS was expected to take place from the start of 2008. It will not now be included until 2011/12 at the earliest and the eventual timing and substance, will be dependent upon the decision of 27 governments, not just one; agreement may not even be reached;
- (xiii) notwithstanding the widespread reservations as to whether the EU ETS will ever provide an effective means of dealing with aviation's climate change impacts, it would certainly be premature to grant approval for this major tranche of airport expansion (almost entirely to facilitate more cheap leisure flights) before there is any means of mitigating its climate change impacts. To approve this

²³⁸ Standard Job Classifications.

²³⁹ *Ibid*, para 4.3.7.

application ahead of aviation's inclusion in the EU ETS would send out a signal that would be very damaging to the Government's climate change credentials both domestically and internationally.

33 Key Issue (ii) – Policy and Planning Context

The extent to which the proposals accord in principle with current Government policy, with the statutory development plan and with the emerging Regional Spatial Strategy for the East of England.

33.1 SSE invites the Inquiry to make the following findings as the correct approach:

- (i) that the following documents comprise the statutory development plan: the Regional Planning Guidance for the South East (RPG9);²⁴⁰ the Essex and Southend Structure Plan, April 2001;²⁴¹ and the Uttlesford Local Plan, January 2005;²⁴²
- (ii) that the ATWP has not been incorporated into the RSS, and so does not form part of the statutory development plan;
- (iii) that the ATWP does not itself authorise the appeal proposal;
- (iv) that the ATWP is a material planning consideration only, to be considered alongside all other material planning considerations including subsequent statements of Government policy on climate change, which Government has described as the gravest threat;
- (v) that whatever the status of the ATWP Ministers have confirmed both to the High Court and to Parliament that the ATWP doesn't preclude consideration at the Inquiry of all issues relevant to the proper weighing of the planning balance, environmental and economic;
- (vi) that BAA has failed to demonstrate that the proposed G1 development would satisfy any reasonable definition of the term 'sustainable development', which is *'the core principle underpinning planning'*.²⁴³

33.2 As to the compatibility of the appeal proposal with the Structure Plan, SSE invites the Inquiry to conclude:

²⁴⁰ [CD/66]; September 2001.

²⁴¹ [CD/59], April 2001.

²⁴² [CD/57], January 2005.

²⁴³ PPS1 [CD/92].

- (i) that the appeal proposal is contrary to Policy BIW9 in terms of the noise impact of on the local community, the impact on amenity of occupiers of buildings in the vicinity, the effects on the cognitive development of school children, the effects on Quality of Life (including a lack of proper assessment), and the effects on air quality, in particular on Hatfield Forest;
- (ii) that the appeal proposal is contrary to Policies ENV7, NR5, NR6 and NR7 in relation to air quality;
- (iii) that the appeal proposal is contrary to Policies NR12 and EG4 in relation to water conservation.

33.3 As to the compatibility of the appeal proposal with the Uttlesford Local Plan,²⁴⁴ SSE invites the Inquiry to make the following findings:

- (i) that the appeal proposal contravenes Policy GEN2 in relation to the noise impacts generated and the effects on quality of life;
- (ii) that the appeal proposal contravenes Policy ENV7 in relation to the effects on air quality;
- (iii) that the appeal proposal contravenes Policy GEN1 in relation to the effects on water conservation;
- (iv) that the appeal proposal contravenes Policy GEN1 in relation to the effects on surface access, road and rail.

34 Key Issue (iii) – Effect on Living Conditions and Health

The effects of the proposals on the living conditions and health of residents in the area, particularly in terms of aircraft noise and air pollution.

34.1 In relation to the health impacts of the appeal proposal, SSE invites the Inquiry to conclude:

- (i) that the Health Impact Assessment²⁴⁵ failed to properly investigate the effect of the additional aircraft noise on local school children in that it omitted discussion of significant reports (for example, the West London studies), played down the significance of the RANCH²⁴⁶ and Munich studies and failed to extend its study beyond primary school children;

²⁴⁴ CD/57.

²⁴⁵ Health Impact Assessment [CD/21].

²⁴⁶ CD/299.

- (ii) that the Health Impact Assessment failed to properly investigate the health effects of the increase in night flights arising from the proposed development;
- (iii) that the Health Impact Assessment failed to make any investigation of the health impacts arising from the climate change implications of the increased emissions that would arise as a result of the proposed development;
- (iv) that the health implications of the proposed development are perceived by the majority of local residents to be overwhelmingly negative and therefore have stress-related impacts on health.

34.2 Further, SSE invites the Inquiry to make the following findings of fact in relation to issues of landscaping and tranquillity:

- (i) that the proposed development would have negative implications for the landscape around the airport notwithstanding the lack of physical development. If the appeal proposal did not go ahead, BAA would not use its existing consent for car-parking; existing areas of landscape would remain pristine;
- (ii) that the proposed development would have landscape implications beyond the airport perimeter both in a physical sense, for example in the damage to the verges, and in the sense of a diminished enjoyment of the landscape, for example, at Hatfield Forest;
- (iii) that the proposed development would lead to a further reduction in tranquillity for many miles around Stansted Airport.

34.3 In relation to quality of life, SSE asks the Inquiry to reach the following conclusions:

- (i) that the existing level of operations at Stansted is having a significant detrimental effect on the quality of life of local residents and the proposed development would worsen the impacts in the following areas:
 - increased air, ground and traffic noise generated by the airport
 - light pollution
 - increased number of cars on local roads
 - blight from expansion proposals
 - neglect of BAA owned properties
 - falling school numbers and fewer volunteers for community activities due to the changes in the population profile
- (ii) that BAA failed to carry out a Quality of Life Assessment;

- (iii) that in the face of the overwhelming evidence from SSE and other local residents, the inexorable conclusion is that the appeal proposals would worsen the current detrimental impacts on quality of life;
- (iv) that the mitigation offered by BAA by way of a continued contribution to the Community Fund does not adequately address this issue.

34.4 On the basis of these findings of fact, the following conclusions flow:

- (i) that the appeal proposal contravenes Policy BIW9 of the Essex and Southend Structure Plan²⁴⁷ in that it has a detrimental impact on public health and safety, noise pollution levels, environmental conditions and visual amenity for residential areas affected by the appeal proposal;
- (ii) that the appeal proposal is contrary to Policy GEN2 of the Uttlesford and District Local Plan.²⁴⁸

35 Key Issue (iv) – Effects of Aircraft Noise

The effects of aircraft noise on the quality of life of the area in terms of the educational, cultural and leisure activities of communities.

35.1 SSE invites you to make the following findings in relation to air noise:

- (i) that the number of households falling within the 57dBA_{Leq} under the 35mppa/264,000 ATM scenario would be 50% greater than the predicted 25mppa at 2014;
- (ii) that the comparison invited by BAA of the 57dBA_{Leq} contour at 35mppa to the same contour in the May 2003 planning permission is inappropriate, as the latter represented a huge overprovision. Such a comparison would conceal the true impact of the additional noise disturbance arising at 35mppa and 264,000 ATMs;
- (iii) that in considering the air noise disturbance arising from 35mppa and 264,000 ATMs a blinkered focus on the 57dBA_{Leq} contour provides an incomplete picture of the true noise disturbance for the following reasons:
 - the 26 urban areas chosen by the ANIS Report establishing the 57dBA_{Leq} contour onset of annoyance are qualitatively different from the rural environment surrounding Stansted Airport²⁴⁹

²⁴⁷ CD/59.

²⁴⁸ CD/57.

- in any event, the WHO 'Guidelines for Community Noise'²⁵⁰ set levels of less than 57dBA_{Leq} to avoid serious community annoyance and less than 50dBA_{Leq} to avoid moderate community annoyance
- there is an abundance of evidence before the Inquiry to demonstrate that at the moment serious disturbance extends far beyond the 57dBA_{Leq} in the May 2003 planning permission
- the lack of CDA on runway 05 exacerbates the annoyance felt by the wider community
- that the Leq system in general, and the 57dBA_{Leq} contour in particular, are inadequate indicators of likely annoyance from aircraft noise. Rather, the increase in the number of flights by day and by night is the most important issue in terms of assessing the additional noise disturbance
- that greater intensity of flights during the sensitive shoulder periods and at night would be particularly disturbing for the community. (Note that BAA has not provided information on L_{Amax} night levels, or any assessment of the short nightly 'respite' period – effectively less than four hours – nor of the forecast increase in airport-related activity during the night.)
- that the statements in PPG24 that a change of 3db is the minimum perceptible under normal circumstances applies to a single event,²⁵¹ and not to multiple noise events averaged out over a period of time
- that the impact upon local schools can be shown to be far greater than BAA has reported for 2004 and has predicted for 2014. Future expansion of many local schools would not be able to comply with BB93
- that the appeal proposal is contrary to ENV11 of the Local Plan²⁵²

35.2 SSE invites you to make the following findings in relation to ground noise:

- (i) that in assessing the effects of ground noise it is essential to consider the cumulative impact of both air and ground noise;

²⁴⁹ SSE/12/a.

²⁵⁰ CD/286.

²⁵¹ PPG24 Planning and Noise, Glossary [CD/110].

²⁵² CD/57.

- (ii) that BAA has understated the impact of ground noise at 35mppa by comparing the 35mppa case with 25mppa at 2014, rather than with what local residents are currently experiencing;
- (iii) that BAA has understated the impact of ground noise at 35mppa by selecting benchmark figures that are 5dBA_{Leq} higher than WHO Guidelines for day and evening moderate annoyance and 5dBA_{Lmax} higher than the WHO Guidelines for night sleep disturbance;²⁵³
- (iv) that by comparing the ground noise at 25mppa and 35mppa BAA has excluded the additional adverse impacts of the tonality of aircraft noise and downwind effects which could lead to the calculated noise effects for 35mppa to be understated by as much as 5dBA or 3dBA depending on their location;
- (v) that BAA has failed, in Vol 8 of the ES²⁵⁴ or otherwise, to provide sufficient information for the Inquiry to determine the ground noise implications arising from the appeal proposal.

36 Key Issue (v) – Effects of Increased Housing Pressures

The effects of increased housing pressures arising from expansion of the airport on the nature and character of communities in the area.

36.1 SSE invites you to make the following findings in relation to housing pressures and impacts upon the nature and character of local communities:

- (i) the Inquiry has heard evidence from many local residents who have described the decline in their quality of life that has been caused by what they regard as the excessive expansion of this 'airport in the countryside'. Their evidence included many matters which cannot readily be measured, including loss of quality of life and community cohesion. Some of those who gave evidence had already reluctantly moved away. Doubtless more would follow if the application were to be approved;
- (ii) witnesses described how their enjoyment of working in the garden, cycling along country lanes, walking in Hatfield Forest or on local footpaths – even the pleasure of a conversation – was already being despoiled by excessive airport activity and many expressed their fears as to the far greater impacts that would arise if the application were to be approved;

²⁵³ WHO Guidelines for Community Noise, Chapter 4, Table 4.1 [CD/286].

²⁵⁴ CD/11.

- (iii) homeowners in Uttlesford have experienced significant devaluation in the value of their homes over the period since June 2002, when plans to expand Stansted Airport were announced. In total, the devaluation relative to house prices in Essex as a whole amounts to more than £1 billion. The effect has been felt especially in the southern half of the District, where the average home has lost over £50,000 in value relative to its Essex counterpart;
- (iv) contrary to this overall trend, properties closer to the airport in the 'affordable' sector have seen prices keep pace or even outstrip those of Essex as a whole, reflecting the growing demand for low cost accommodation;
- (v) expansion would accentuate the need for more local affordable housing to reduce the need to travel and to provide opportunities for airport employees to integrate into the local community consistent with 'sustainable communities' principles;
- (vi) a more recent development at Stansted has been the recruitment of employees from overseas. Many are housed in private rented accommodation. Such temporary accommodation is not a sustainable arrangement and is already creating price and availability pressures in this sector;
- (vii) there is already an acute shortage of affordable housing in the local area and the proposed development would accentuate that problem (i) because it would require to recruit employees from outside the local area: and (ii) because the rates of pay for the jobs that would be provided would generally be inadequate to finance the purchase of a home in the locality of the airport;
- (viii) there has been a great loss to the local community through people leaving because of their fears of what may come with further expansion. In addition BAA now owns many homes in the area and rents them to short term tenants who take less care of the properties. In addition, those tenants are not generally interested in getting involved in local activities and generally do not have children at the local schools;
- (ix) The Department of Communities and Local Government ('DCLG') describes a cohesive community as one where *'there is a common vision and a sense of belonging for all communities'* and goes on to say that: *'Community cohesion cannot be forcibly imposed by external agencies but has to be achieved through community members working together for the benefit of all.'*

37 Key Issue (vi) – Effects of Air Pollution on Nearby Woodlands

The effects of increased air pollution from aircraft and surface traffic on nearby woodlands.

- 37.1 SSE invites you to make the following findings in relation to air quality impacts upon local woodlands:
- (i) that the evidence now clearly suggests that the statutory limit value for NO_x for vegetation laid down by the Air Quality Regulations 2007 and the First Daughter Directive will be breached at the north west corner of Hatfield Forest at 35mppa, leading to irreversible damage to the ecology of the forest, notably the ancient trees;
 - (ii) that the uncertainties associated with BAA's air quality modelling and optimistic and incomplete modelling assumptions used (both in relation to aircraft emissions and also from road traffic emissions) increase the probability of an exceedances;
 - (iii) that BAA did not carry out a full monitoring survey of air quality in and around the airport. The PDSH²⁵⁵ recommends that modelling should be validated against a set of real time monitoring points using (more than one) automatic analysers for at least one year to obtain a reliable annual mean; BAA relies on one continuous analyser and has results spanning only seven months;
 - (iv) that there are several other substantive factors which render BAA's model unreliable, notably the lack of allowance for engine deterioration in the 55% of aircraft operating from Stansted which do not conform to CAEP4-30%; the limited records available at Stansted for times in mode, engine testing times and APU running times; and the questionable estimation of landside road emissions;
 - (v) that airport related road traffic is likely to be significantly higher at 2014 than BAA's estimate. This increase has not been allowed for in BAA's air quality modelling for 35mppa;
 - (vi) the recent real time monitoring at Shell House in Hatfield Forest has produced annual values for NO_x above the statutory limit.²⁵⁶ While these results are only

²⁵⁵ Project for the Sustainable Development of Heathrow PSDH [CD/280] gives recommendations in Table 1.1 and Stansted Air Quality beyond 25 mppa modelling test [CD/278] details lack of information in sections 2.3, 2.4 and 2.6].

²⁵⁶ UDC/7/E.

for 5 months they have been, to a certain extent, validated against 2 other nearby monitoring stations. All areas to the west and north west of Shell House would be higher as they are nearer to the runway and the road network. The predicted levels at 2014 have been calculated using BAA's emissions data and do not allow for any additional road traffic. In addition, background levels of NO_x in the west of Hatfield Forest are predicted to be higher than at Shell House.²⁵⁷ For these reasons the evidence firmly suggests that the limit values for NO_x will be breached in Hatfield Forest at 35mppa;

- (viii) that the appeal proposals contravene the Framework Directive, the First Daughter Directive and the Air Quality Regulations 2007 and no exclusion zone applies to Hatfield Forest;
- (ix) notwithstanding the legal position, Hatfield Forest is specifically identified in the Development Plan and the East of England Plan as a site requiring special protection. This is further reinforced by the Government's new Air Quality Strategy which sets a target for 95% of all SSSIs to meet the standards in the Framework Directive and First Daughter Directive by 2010.

38 Key Issue (vii) – Effect on Demand for Water

The effects of expansion of the airport on the demand for water

38.1 SSE invites you to make the following findings in relation to water:

- (i) the East of England is the driest region in the UK and the most immediate pressures are in Essex and Hertfordshire;²⁵⁸
- (ii) climate change is predicted to reduce annual rainfall in the Region by 19% by 2050 and this reduction in supply is against a background of rising demand;
- (iii) more than half a million new homes are planned for the East of England by 2021 amounting to a 17% increase in the number of homes in the Region and a 16% increase in its population in the space of the next 14 years;²⁵⁹
- (iv) in 2002, the environmental impact study of Stansted commissioned by the DfT concluded that the impact of full use of Stansted's existing runway on water resources would be **'high adverse'**;²⁶⁰

²⁵⁷ See UDC/7/C at fig. 2.

²⁵⁸ Cross-examination of Mr Squires, 6 July 2007.

²⁵⁹ SSE/16/a, para 3.1.2.

²⁶⁰ Ibid, Table 9.20, p302.

- (v) this contrasts sharply with BAA's assessment that the water impacts of G1 would be '**minor adverse**',²⁶¹
- (vi) the Government's Proposed Changes to the Draft East of England Plan support a water efficiency target of 'at least 25%' for all new development and 'at least 8%' for existing development;
- (vii) BAA projects a '14 to 16 per cent improvement in water efficiency across the airport over 2005/2006'. However, against 2004/05, which is the baseline used by BAA elsewhere in its ES, the projected efficiency improvement is only 8.6%,²⁶²
- (viii) unaccounted-for-water ('UFW') has risen sharply at Stansted in the past two years to 40% in 2006/07, despite relatively new infrastructure and extensive on-site metering;
- (ix) BAA claims that Stansted has seen significant improvements in water efficiency in recent years.²⁶³ This was true until 2004/05 but has not been the case since then. Stansted Airport's water consumption rose 14.3% in 2005/06 compared to only a 5.1% increase in passengers²⁶⁴ and by a further 9.3% in 2006/07 compared to a 7.7% increase in passengers;²⁶⁵
- (x) BAA is opposed to any planning condition which would seek to reflect its projected water usage as a limit upon Stansted's actual water usage;
- (xi) BAA has not demonstrated that the proposed development would be capable of conforming with Structure Plan policies NR12 and EG4 in relation to water conservation.

39 Key Issue (viii) – Road Network

The adequacy of the road network to accommodate increased road traffic arising from expansion of the airport without detriment to its safe and efficient operation.

39.1 SSE invites you to make the following findings in relation to road traffic:

- (i) nowhere is the proposed temporary cut off at 35mppa more risky than in the area of surface access, where long lead times require long term planning in order to avoid compromising road safety and efficient operation;

²⁶¹ CD/17, para 8.6.1. See also BAA/5/A, para 3.1.3.

²⁶² 26.9 MI/d projected for 35mppa vs 29.4 MI/d actual in 2004/05.

²⁶³ CD/17, para 6.1.1.

²⁶⁴ BAA Stansted Corporate Responsibility Report, 2005/06, Table 6, p19 [CD/161].

²⁶⁵ Ibid, p44.

- (iii) narrow adherence to projecting the impact for one point in time, 2014, glosses over the gradual but continuous development of the airport and its surface access demand;
- (iv) historically, BAA surface access modelling studies have consistently underestimated the impacts, and this has resulted in significant under-investment in infrastructure. Major congestion occurred at M11 junction 8 due to under-provision for earlier airport growth;
- (v) surface access forecasts are unreliable and appear to have been modelled or presented so as to minimise the anticipated impact. Numerous key assumptions that are counter-intuitive, contrary to established trends or are in denial of the CAA data have been identified and all point towards an understatement of the impact, for example:
 - the implausibility of a reduced proportion of passengers to or from Greater London given projected capacity constraints at Heathrow and Gatwick;
 - the counter-intuitive forecast that the proportion of transfer passengers will fall (in line with the trend of recent years) to 10% at 25mppa, but rise to 17% at 35mppa;
 - the assumptions of average vehicle occupancy, significantly at variance with data produced by the CAA and hopelessly explained by BAA when challenged;
 - the assumption that recent, potentially short term, falls in coach price will continue, thereby maintaining a pricing advantage over rail.
- (vi) there is already very high usage of many roads in the vicinity of the airport. Traffic at these pressure points either already exceeds design capacity at peak times or is expected to do so by 2014 without mitigation;
- (i) despite these pressures and Government transport and planning policies aimed at reducing the need to travel by car, BAA's proposals suffer from a general lack of initiative to achieve a modal shift;
- (ii) while mitigation has been agreed with highways authorities, the basis for negotiation – the results of BAA's modelling – was flawed. The limited work proposed, mainly lining and signing, intuitively seems modest given the scale of anticipated passenger growth;
- (iii) the closure of the Coopers End entrance to all but airport traffic is proposed without there having been any proper assessment of impacts on road safety or

local traffic flows and without any consultation of local residents or parish councils.

40 Key Issue (ix) – Rail Network

The adequacy and capacity of the rail access to the airport to accommodate demand arising from expansion of the airport without increasing reliance on use of the private car.

40.1 SSE invites you to make the following findings in relation to issues of the rail network:

- (i) even more so than in the case of road infrastructure, the lead times for rail infrastructure require long term planning in order to avoid unacceptable train crowding and delay and the inevitable consequence of passengers switching from rail to road;
- (ii) as in the case of roads planning, narrow adherence to projecting the impact for one point in time, 2014, glosses over the gradual but continuous development of the airport and impact on rail services;
- (iii) historically, BAA surface access modelling studies have consistently underestimated the impacts, and this has resulted in significant under-investment in infrastructure. Airport passengers and commuters already suffer overcrowding at peak times;
- (iv) BAA has failed to commit to a strategy to reverse the trend of recent years of falling rail mode share, seemingly content that the public transport mode share has remained fairly stable around 40% because a growing proportion of passengers is now travelling by coach;
- (v) surface access forecasts are unreliable and appear to have been modelled or presented so as to minimise the anticipated impact. Numerous key assumptions that are counter-intuitive, contrary to established trends or in denial of the CAA data have been identified and all point towards an understatement of the impact. Significant variations in modelling results have not been satisfactorily explained;
- (vi) service reliability is at risk throughout the day and little scope exists for service expansion or even improved reliability without substantial investment;
- (vii) commuter services have been squeezed to make way for an improved STEX service. Even so, the level of standing on STEX is expected to exceed DfT standards;

- (viii) to retain the current service pattern to the airport and provide an adequate service to other destinations, additional coaches would be required and substantial investment would need to be made in infrastructure. This might include additional passing loops built between Tottenham Hale and Broxbourne. Alternatively platforms at other stations could be lengthened so that 12 coach trains could call at all of them;
- (ix) the 2007 RUS suggests two options for improving the rail network infrastructure and 'one' the rail operator has invited tenders for additional rolling stock, but there is no commitment or guarantee that either infrastructure or longer trains will be delivered;
- (x) BAA could secure more certainty of delivery by offering a voluntary third party contribution but have chosen not to do so;
- (xi) in 2003 BAA entered into a s106 agreement associated with its current planning permission for 25 mppa. In addition to works at the airport station this includes financial contributions by BAA to platform lengthening at Stansted Mountfitchet and Broxbourne, financial contributions towards the acquisition of new trains and financial contributions towards any operating subsidy resulting from the running of longer trains. Implementation of this element of the s106 agreement is contingent on BAA exercising its consent to develop certain airport terminal facilities which it now says it has no intention of developing;
- (xii) there is no proposal to improve the limited rail service north from the airport, despite BAA's forecast of exceptional growth in passenger numbers from East Anglia and the East Midlands;
- (xiii) the onus under planning law is on the developer to demonstrate that it has a strategy in place and will secure implementation of that strategy to meet, in a sustainable way, the additional surface access demands which the proposal will generate. BAA has failed to do this in every respect so far as rail services are concerned, failing even to meet the first key objective of its own surface access strategy, an objective established in the Air Transport White Paper which says 'The responsibility for bringing forward proposals and securing funding lies with the airport operator';
- (xiv) BAA has failed to set out a strategy to reverse the falling rail mode share, failed to demonstrate how it will improve the uncomfortable rail experience for its passengers, failed to realistically predict demand, and failed to commit to an

appropriate investment strategy. Even worse, BAA has shown that it cannot be trusted to fulfil its existing commitments.

41 Key Issue (x) – Economic and Employment Impacts

Whether the economic (including employment) benefits of the proposals are sufficient to outweigh their social and environmental effects.

41.1 SSE invites you to make the following findings in relation to economic impacts:

- (i) the high-level assessment of the economic effects of airport expansion undertaken in the course of preparing the ATWP is insufficient for the purposes of assessing the economic effects of this particular application, noting:
 - that there was no specific economic assessment for making full use of Stansted;
 - that the economic benefits identified in the ATWP for making full use of runway capacity in the south east assumed very substantial growth in business passengers. The projections contained in BAA's application demonstrate that G1 would not fulfil that expectation;
 - the broad economic assessment carried out for the ATWP also assumed that the UK leisure passenger sector would grow far more slowly than other sectors. However, the projections contained in BAA's application show that G1 would primarily cater for growth in UK leisure passengers;
 - the assurances given by the Minister to the House of Commons that the economic effects of a major project would need to be weighed against the environmental harms (paras 5.21 to 5.24 above);
 - that without being able to judge the net economic benefits a proposal would bring, there would be no point in assessing whether the environmental impacts were major or slight. Nor could there be any weighing.
- (ii) So far as this particular project is concerned:
 - the economic benefits in relation to passenger traffic would be very small because there would be so few additional business passengers. Indeed if BAA had provided projections beyond 2014/15, more business passengers would be handled at 25mppa because of the tendency BAA described for business passengers to displace leisure passengers if capacity was constrained;
 - there would be no additional economic benefits in relation to cargo traffic;

- there would be negative economic impacts in relation to the reduced capacity for private business aircraft;
- there would be significant employment substitutional impacts which, taken together, outweigh the direct and indirect beneficial employment benefits of the proposed development;
- there would be a requirement to 'import' employees, including from outside the UK, due to shortages in the local labour market;
- there would be a substantial negative impact on the UK trade deficit;
- there would be a substantial negative economic impact arising from the cost of carbon emissions, based on Stern's analysis;
- the threat of the proposed development has had a significant adverse economic impact upon local homeowners.

42 Key Issue (xi) – Climate Change Impacts

The effects of the expansion of the airport on emissions of carbon dioxide and the implications in relation to climate change.

42.1 SSE invites you to make the following findings in relation to climate change impacts:

- (i) climate change is a material issue for this Inquiry and so the impacts of the proposed development in this area must be considered in the weighing of its benefits against its harms;
- (ii) in order to assess the climate change impact of the proposed development the additional emissions that would ensue from approval must be quantified;
- (iii) BAA has quantified the additional carbon emissions arising from the development as being 1.1m tonnes at 35mppa as compared to 25mppa, excluding any factoring for radiative forcing impact of aviation emissions (see para 27.3 above);
- (iv) the most authoritative source for assessing the cost of carbon emissions is the Report of the Stern Review on the Economics of Climate Change,²⁶⁶
- (v) based on the appropriate value of the social cost of carbon shown in the Stern Report, and the standard HM Treasury methodology, SSE has estimated that the climate change cost to be attributed to the proposed development is between £3.2bn and £6.3bn NPV, reflecting Stern's view that because of the

²⁶⁶ CD/157.

radiative forcing effect, aviation's carbon emissions should be increased by a factor of between two and four;

- (vi) SSE's estimate was based on a carbon dioxide emissions figure which turned out to be 7% less than the figure later provided by BAA and is therefore an underestimate;
- (vii) the economic disbenefit of the additional carbon emissions should be included in the weighing of harms and benefits as part of the usual planning process;
- (viii) the fact that climate change is widely regarded as the greatest challenge currently facing the world reinforces the need to take full account of this issue in the planning process;
- (ix) the Government's intention is for aviation to be included in the EU ETS as a means of mitigating its climate change impacts. However desirable this may be, there is no immediate prospect of this and it cannot be relied upon as a means of mitigating the impacts of the development. This is not only for reasons of timing but also because of the considerable uncertainty as to whether any meaningful EU ETS can be agreed for aviation emissions in any reasonable timescale. And at best, the proposed scheme would relate only to EU flights and even this would not be possible before 2011/12 at the earliest;
- (x) we also refer to our comments on the Government's proposed emissions cost assessment for major aviation expansion proposals (see para 6.11 above).

43 Key Issue (xii) – Matters of Trust

The level of trust which can be placed in the documents produced by BAA for this Inquiry.

43.1 SSE invites you to make the following findings in relation to matters of trust:

- (i) production of information by BAA has been selective. Requests for information by UDC within the Scoping Opinion have been either disregarded, declined or inadequately dealt with, and an airport master plan to 2030, in accordance with the expectations of the ATWP, is still awaited, almost four years after the ATWP was published;
- (ii) the 'salami slice' approach to expansion hides the cumulative effect of the airport's impact, both past and future;
- (iii) the offer of a 35mppa condition, by BAA's admission, is only a temporary measure, and a further attempt to salami slice;

- (iv) the assessment focuses on a comparison of a projected 'worst case' scenario at 25mppa and a 'best case' scenario at 35mppa. The effect – and, SSE would argue, the purpose – has been to understate the scale of the additional adverse impacts;
- (v) the assessment is based on a number of counter-intuitive assumptions, compared to the perceived trends and current data, for example in relation to cargo traffic, the number of passengers per aircraft, transfer passengers, air passenger origins and destinations, car parking requirements and average vehicle occupancy. A consistent theme of the counter-intuitive assumptions is that, conveniently, they all result in an understatement of the impacts;
- (vi) SSE's exposure of the overstatement of vehicle occupancy, BAA having initially claimed this was based on CAA data, only emerged after very extensive probing by SSE. We can only wonder at how many more assumptions, which have claimed reliable sources as their origin, have been subject to undeclared and non-transparent 'adjustments' by BAA;
- (vii) RPS's press announcement emphasising their commitment to do 'all in their power' to assist BAA to obtain planning consent (not 'if' – but simply 'how' and 'when') bears testimony to the role of RPS in relation to the Sustainability Appraisal and indeed the entire planning application. Mr Garland's first hand account of how the results of the Sustainability Appraisal were 'massaged' confirms that RPS lived up to the claims made in its press announcement;
- (viii) SSE believes that ERM conducted the Health Impact Assessment ('HIA') in much the same way as RPS conducted the Sustainability Appraisal. Key health impacts were ignored such as those relating to climate change and night flights; the literature review was selective and BAA's input data was accepted unquestioningly. On that basis, the result was never in much doubt;
- (ix) in relation to water usage, no explanation has yet been provided as to how the DfT's 2002 assessment of a 'high adverse' impact on water resources from full use of the existing runway, was re-assessed by BAA as 'minor adverse' in 2006. And this is despite an increase, over the past four years, in the planned housing and population growth for the Region and increased concern also, over the past four years, about the impact of climate change and the implications this has for future levels of rainfall in the Region. Furthermore, in its Environmental Statement, BAA sought to portray a case of progressive year

on year improvements in water efficiency over the years and yet must have been aware at that time, that the past trend had gone into reverse;

- (x) finally, when the Inquiry turned to discussing possible conditions and obligations, we learned from BAA that the rail commitments it had entered into in the 2003 s106 agreement were conditional upon a development that it has no intention of proceeding with. We are left wondering if there was ever an intention to honour that commitment.

SECTION F: Scope for Mitigation

44 Planning Conditions

44.1 SSE's central contention remains that the proposal being considered at this Inquiry represents a development which would be unsustainable, which cannot be justified on the basis of any reasonable weighing of the benefits against the harms, and that many of these harms are incapable of meaningful mitigation.

44.2 Nevertheless, at the invitation of the Inspector and on a 'without prejudice' basis, SSE put forward, in good faith, a series of draft conditions and s106 obligations relating to the means and extent whereby the impacts of the proposed development might be at least partly mitigated. In so doing, SSE paid particular regard to the environmental policies set out in the ATWP.²⁶⁷ In other words, SSE sought to apply the '*balanced and measured*' approach referred to in the ATWP, for example its support:

- (i) for 'stringent environmental conditions';²⁶⁸
- (ii) for measures to 'reduce and minimise the impacts of airports on those who live nearby and on the natural environment';²⁶⁹
- (iii) for an approach which 'respects the rights and interests of those affected by airport development';²⁷⁰
- (iv) for 'local controls... to manage the environmental impact of aviation and airport development';²⁷¹
- (v) for the 'loss of landscape and built heritage ...' to be '...avoided wherever possible, and otherwise minimised and mitigated to the greatest extent possible';²⁷²
- (vi) for surface access to airports to be '...designed to help limit local environmental impacts'.²⁷³
- (vii) for 'encouraging of airport operators, airlines and air traffic managers to adopt the cleanest and quietest operational practices' (note not just 'cleaner and quieter').²⁷⁴

²⁶⁷ CD/87.

²⁶⁸ ATWP, CD/87, at Foreword and Executive Summary, page 10.

²⁶⁹ ATWP, CD/87, Executive Summary at page 10, and at para. 2.18.

²⁷⁰ ATWP, CD/87, Executive Summary at page 10, and at para. 2.18.

²⁷¹ ATWP, CD/87, at para 3.6 (and '*local controls*' referred to also at para 3.5 and 3.11).

²⁷² ATWP, CD/87, at para 3.6.

²⁷³ ATWP, CD/87, at para. 3.6.

- (viii) and for 'the withdrawal of the noisiest and dirtiest aircraft'.²⁷⁵
- 44.3 The publication of the ATWP came after the 2003 planning permission had been approved and, in SSE's view, should be a material consideration in any review of the conditions attaching to the 2003 permission.
- 44.4 It is also SSE's view that the fact that BAA has submitted its application under section 73 of the Town and Country Planning Act 1990, seeking a variation of two conditions, does not preclude a review of all of the conditions, and that such a review must have regard to current circumstances including the policy framework that has evolved since the original application was approved in 2003, in particular, the stricter environmental controls supported by the ATWP and, in general, the greater policy emphasis upon sustainable development.
- 44.5 Our draft proposals in relation to both conditions and obligations were discussed with BAA in advance of the Inquiry dates set aside for their formal consideration, having been circulated to key parties. The resulting exchanges with BAA during the conditions and obligations session demonstrate that BAA itself has so little confidence in many of its own projections that it is unwilling to accept conditions conforming with those projections.
- 44.6 Dealing first with the question of car-parking, SSE proposed a limit of 31,500 car parking spaces. This had been arrived at by a detailed comparison with other airports, including Heathrow which has permission for 2.5 times more passengers than the 35mppa applied for at Stansted and is subject to a limit of 42,700 parking spaces (including staff car parking) as a result of a condition imposed when T5 was approved. Moreover, BAA's projection of a need for 38,800 public car parking spaces²⁷⁶ at Stansted can be shown (by reference to the vehicle throughput data contained in (CD/19), Table 20) to be based on average vehicle occupancy of 1.38. This is, of course, the same vehicle occupancy figure as published by the CAA which BAA claims is wrong by a factor of 30% as a result of the CAA's incompetence.
- 44.7 The application could not be approved on the basis of a vehicle occupancy figure of 1.38 because BAA's road traffic projections (based on average vehicle occupancy of about 1.80) would have been very substantially understated. Therefore, if the application were to be approved, for that reason alone BAA's assessment of 38,800 public car parking spaces would need to be reduced to 29,500 for the sake of

²⁷⁴ ATWP, CD/87, at para 3.7.

²⁷⁵ ATWP, CD/87, at para 3.7.

²⁷⁶ BAA/6/A at table 17.1.

- consistency. BAA cannot have its cake and eat it. Allowing for staff parking, 31,500 is, in our view, a reasonable overall limit.
- 44.8 BAA argued that the problem of 'fly-parking' would become worse if such a limit were applied. However, the problem of fly parking exists here and now. It is not the result of a capacity problem but an affordability problem. When airport parking can cost far more than the price of the air tickets, the problem of fly parking will remain. It can only be tackled by other means such as residents parking schemes and better enforcement.
- 44.9 SSE also proposed that any new car parking development should be located below ground so as to be consistent with the ATWP²⁷⁷ which states: *'loss of landscape is [to be] avoided wherever possible, and otherwise minimised and mitigated to the greatest extent possible'*. The only proviso attaching to this ATWP policy is that it should be applied *'with full regard for safety considerations, international obligations, technical feasibility, and economic reasonableness, including international equity'*. The test of economic reasonableness is the only relevant consideration here and BAA did not seek to present any evidence to suggest that it would not be economically reasonable. Indeed, it would have been impossible for BAA to do so; the additional build cost for underground car parking would not be insignificant in absolute terms but it would be small as a percentage of the project's car parking revenues.
- 44.10 Turning to the question of aircraft noise, SSE contended that a land area limit based on the 57dBA_{Leq} noise contour was meaningless to most people, lacked transparency and was virtually unenforceable. SSE argued instead for an extension (to 24 hours) of the noise quota system favoured by the DfT for controlling night noise. SSE explained the benefits – *'simple, transparent and enforceable'* – and also the basis upon which it had arrived at its proposed annual limit of 137,300 QC points and its proposal that no more than 6% of the annual limit should be used during the sensitive shoulder periods.
- 44.11 BAA rejected the proposal, even in principle, and without providing any reasonable explanation as to its reasons for rejection.
- 44.12 On ground noise, SSE proposed a number of conditions, all of which were based on obligations derived from the 2003 Planning Permission s106 agreement, but updated to be more precise, meaningful and enforceable. In the course of doing this work, SSE had also examined the comparable arrangements at other major airports

²⁷⁷ CD/87 at para 3.6.

worldwide and also the local traffic regulations for Stansted Airport published by NATS on its UK Aeronautical Information Service website.²⁷⁸ The latter failed to make any reference whatsoever to many of the relevant 2003 s106 obligations. In addition, in 2006, SSE had commissioned the Centre for Sustainable Development ('C4S') at Transport Research Laboratories ('TRL') to produce three International Best Practice studies, one of which related to airport controls on ground noise.²⁷⁹ The results of that study also informed SSE's drafting of the ground noise conditions.

- 44.13 BAA rejected outright all of SSE's proposed ground noise conditions although, on this occasion, it was not because they failed any of the six tests for conditions but because BAA considered it more appropriate that they should be matters for the s106 Agreement – and, *'as it happened'* the existing s106 agreement already dealt with SSE's points. As if this in itself was not enough to demonstrate BAA's obduracy (the 2003 s106 obligations were much weaker and very often meaningless because they were imprecisely drafted and contained numerous 'carve-out' exceptions), BAA subsequently made clear that it had no intention of adopting any of SSE's proposed amendments to the 2003 s106 agreement.
- 44.14 SSE's concerns over the weakness of the 2003 agreement can be illustrated by the fact that many of its ground noise obligations aren't even listed within the NATS guidance to pilots using Stansted, a matter which undermines confidence in their adoption and implementation as standard practice through revised obligations now being considered. An example of the 'carve-out' exceptions is the obligation in the 2003 s106 agreement which does not permit 'any cargo aircraft movements using the aircraft's own power upon Echo Apron between the hours of 23.30 and 05.59 save for in cases of emergency or necessity'. What would be the purpose, other than 'necessity'?
- 44.15 A number of SSE's other conditions sought to apply limits to the development which reflected the projections and assessments made by BAA. In other words we were seeking to take BAA at its word on issues where SSE had made clear that it regarded BAA's projections as totally implausible but where BAA had assured the Inquiry that its environmental assessment and projections were robust, having dismissed SSE's counter-arguments. To cite just three examples:

²⁷⁸ www.ais.org.uk/aes/login.jsp. [UK Aeronautical Information Package ('AIP')].

²⁷⁹ CD/202, Section 5.

- (i) BAA equated 35mppa to 29.17m non-transferring passengers and while prepared to accept a cap of 35mppa, it rejected outright SSE's suggestion of a cap of 29.2m non-transferring passengers;
- (ii) giving evidence of water efficiency on behalf of BAA, Mr Squires assured the Inquiry that BAA would satisfy the Region's water efficiency targets by containing water consumption to 2.6m litres per day at 35mppa, i.e. 949m litres per annum. SSE had expressed scepticism about this during cross-examination but, taking BAA at its word, proposed a condition limiting the airport's water consumption to 950m litres per annum. BAA argued that this was unnecessary, unacceptable and potentially seeking to frustrate the implementation of the permission;
- (iii) historically there has been no planning limit on non-ATMs and BAA has forecast a significantly lower number of non-ATMs at 35mppa compared to today (10,000 vs 17,000). The evidence presented by SSE has demonstrated that there is ample '*slack*' in BAA's overestimation of CATMs (20,500 at 35mppa compared to less than 10,000 today) to accommodate all of the non-ATMs that it projects for 35mppa. In addition we have demonstrated a far greater amount of '*slack*' in BAA's projection for the number of PATMs required to handle 35mppa (214,300 vs 242,750). Taking these factors into account, we argued that BAA's proposed ATM cap of 264,000 should instead be an aircraft movements cap of 264,000. We have demonstrated that this would be more than sufficient to handle 35mppa and that it is important to include non-ATMs within the condition. BAA's past record of '*banking*' planning conditions that are surplus to its real requirements has been a key factor in enabling BAA to play '*leapfrog*' with the planning process. In that sense we are not surprised that BAA rejected outright SSE's proposal for including non-ATMs within the movements cap.

44.16 Turning to surface access, SSE proposed a '*Grampian*' condition on rail infrastructure which simply reproduced the obligation BAA had signed up to in the 2003 s106. BAA rejected this outright. This speaks volumes about the weight which BAA attached to the 2003 s106 agreement.

44.17 On the issue of continuous descent approaches ('CDAs') to Runway 05, again BAA adopted a rejectionist approach. The ATWP policy context, the aviation industry's own support for CDAs, the overwhelming support for CDAs from communities in the

Ware area and the encouraging signs from NATS – were all of no consequence to BAA.

- 44.18 SSE proposed that climate change impacts arising from an expanded Stansted needed to be addressed through a condition limiting ATMs to the existing cap of 241,000 until such time as they were capable of being mitigated through the proposed EU ETS (or, as a safety net for BAA – in the event that the EU ETS option was further delayed or even abandoned – by some other independently verified arrangement). SSE pointed out that, at best, the EU ETS would not come into effect until 2011/12 – some 3-4 years later than anticipated by the ATWP. Again, BAA argued that such a condition was unacceptable.
- 44.19 In sum, the cynical approach of BAA to the imposition of conditions, even conditions founded on its own projections, reiterates the questions of trust we have set out above. If BAA has no confidence in its own projections, why should the local community and why should this Inquiry?

45 S106 Obligations

- 45.1 BAA's position was even more unyielding in relation to the 2003 s106 agreement. As soon as the Inquiry discussions moved from planning conditions to s106 obligations BAA declared that it *'had no intention of accepting any of SSE's proposals on the s106 agreement'*. In our view this position was wholly at odds with the guidance set down in the DCLG document, 'Planning Obligations: Practice Guidance', namely that:²⁸⁰

'Community involvement is one of the key principles at the heart of delivering sustainable development. In the context of planning obligations, the community (i.e. business, residents, voluntary sector and other stakeholder bodies), should be involved wherever possible and appropriate in the setting of planning obligations policies and the negotiation of planning obligations for individual applications. They should be given access to all necessary information to help inform their involvement.'

46 Overview of Conditions and Obligations Session

- 46.1 SSE participated in the 'Conditions and Obligations' session with many misgivings but sought to be constructive and to act in good faith. In the event it was a thoroughly depressing experience for SSE and it seemed to have been a futile exercise.

²⁸⁰ CD/180, Chapter 8, at para 8.2 (page 54).

46.2 However, on reflection, SSE considers that BAA has made your job easier, Sir, by arguing that anything more than the insignificant mitigation measures it has proposed would be either impracticable, unnecessary, unreasonable, unenforceable, too imprecise or irrelevant to planning or to the development proposed. In effect BAA is declaring that the proposed development is incapable of any meaningful mitigation. For a development that would be the equivalent of superimposing an airport the size of Birmingham upon Stansted, this is perhaps not a surprising admission but it is an admission of some importance.

SECTION G: Summary and Conclusions

47 Conclusions

- 47.1 At the outset of this Inquiry we forewarned that BAA would brandish the ATWP as the beginning, the middle and the end of their planning case, arguing that policy was settled and that the case for their proposal already made out. And yet we now know from the voice of Ministers themselves, as well as those who speak on their behalf, that this is not so. It is the proper territory of this Inquiry, and your duty, to test the evidence, and to make a recommendation based exclusively upon that evidence, as to how the planning balance should be struck.
- 47.2 The Ministers to whom you are reporting have confirmed that you must test the rigour of all the assessments you have heard, whether on the environment or on the economics, and confirmed also that if the weight of evidence mandates a recommendation that permission be refused, then that should be your recommendation even though it might frustrate one aspect of Government policy.
- 47.3 SSE asks nothing more than you do what Government has instructed: to make your recommendation only on the balance of the evidence you have heard. That is why we have gone to such length in these closing submissions to summarise for you the evidence that you have heard and to summarise also the findings of fact that we invite you to make.
- 47.4 When you consider that evidence and those findings of fact, the conclusion to which they inexorably lead you is the same whichever way you pose the question to which this Inquiry gives rise.
- 47.5 If the question is whether BAA has made the case for overturning the November 2006 decision of UDC to refuse permission for the removal of the existing limit on air passenger traffic at Stansted, then manifestly it has not.
- 47.6 If the question is whether BAA has proven that the economic benefits of expanded aviation at Stansted outweigh or justify the environmental harm that the proposed development would cause, then manifestly it has not - BAA did not even deign to call a single witness to prove the economic case for its proposal.
- 47.7 And if the question is whether the proposal is sustainable, the core principle underpinning the planning system in this country, then manifestly it is not. Far from marrying economic prosperity with environmental regard, this proposal will harm the economy and harm the environment also.

- 47.8 So we invite you to make the only recommendation open to you upon the evidence you have heard, namely that planning permission be refused.
- 47.9 Government asked BAA to prepare a Masterplan to 2030; it has failed to do so.
- 47.10 Government asked BAA to assess the accumulative environmental impacts of *all* of its proposals; it has failed to do so.
- 47.11 *At the very least*, Government asked BAA to properly assess the environmental impacts of this assessment; it has failed to do so.
- 47.12 Government asked BAA to prove by rigorous economic analysis the case for its proposal; it has failed to do so.
- 47.13 You have seen the lack of rigour in BAA's forecasting of future air passenger movements, its record of consistent under-estimation.
- 47.14 You have seen the lack of rigour in BAA's forecasting of surface access movements, where so many counterintuitive and one-sided assumptions have been made, radically different from all past trends.
- 47.15 You have seen that in the one area where BAA's modelling could be properly interrogated by reference to external data – vehicle occupancy – the modelling was untrustworthy - wrong by 30%, twice the threshold of the sensitivity test.
- 47.16 You have seen the lack of rigour in BAA's noise assessment, the ludicrous and misguided reliance on a 3dBA threshold of perceptibility for a 16 hour LAeq metric, by virtue of which no-one even would apparently notice if they were overflown twice as much in the future as they are today, notwithstanding that their sleep might be disturbed or their conversations interrupted twice as often.
- 47.17 You have seen the lack of rigour in BAA's assessment of the water impact of its proposal, with 40% still unaccounted for; the lack of rigour in its health assessment, with sleep disturbance and educational retardation simply ignored; the lack of rigour in its assessment of air quality, with exceedences of NOx emissions at the historic Hatfield Forest glossed over as though they simply do not matter.
- 47.18 You have seen the wholesale refusal of BAA to accept even the materiality of climate change to this Inquiry, notwithstanding that Government proclaims this to be the gravest challenge of them all, and when this proposal will pump millions of tonnes of carbon into our blighted atmosphere.
- 47.19 You have seen not just the lack of rigour in BAA's economic assessment, but the total lack of that assessment.

- 47.20 And, by way of contrast, you have seen the incontrovertible evidence of SSE that this proposal, far from securing economic security for the nation as the ATWP anticipated, would actually cause it very significant economic harm, exporting both wealth and jobs abroad.
- 47.21 In the light of all of these failures by BAA you have but one option – to recommend that planning permission be refused. For having tested matters in exactly the way in which Government have invited you to do, you now can see that the planning balance is not two-sided after all, but one-sided. On that one side is all of the evidence of the environmental harms occasioned by the proposal - its direct, indirect, secondary and cumulative impacts, including all of those which are reasonably foreseeable. And on the same side is all of the evidence of economic harm also.
- 47.22 Since the balance is one-sided, it can yield just one result. SSE invite you, accordingly, to recommend that this appeal be dismissed.
- 47.23 And so on behalf of the local community, may I be forgiven for making a direct address to the Ministers who will have to make the final decision on this proposal.
- 47.24 In 1983, and at the last Stansted Inquiry, Inspector Graham Eyre QC stated that if he believed that a grant of planning permission to raise its passenger capacity to 15mppa would inexorably lead to unlimited airport development in the future of an unknown capacity, he would, without hesitation, unequivocally recommend the rejection of BAA's then application. He asked Government to guarantee that the unlimited expansion of aviation at Stansted would never happen, that throughput would never go beyond 25mppa.
- 47.25 That guarantee was asked for of the Government of the day, and that guarantee was given by the Government of that day. I close my submissions by simply asking for that guarantee to be honoured.
- 47.26 I do so in order that, despite the tides of scepticism to which all of us are sometimes prey, people might be able to place just a little faith in the public utterances of Government. And not just of a Government two decades ago, but of *this* Government, under both the Prime Minister who was in office when this Inquiry opened and the Prime Minister who is in office as this Inquiry closes.
- 47.27 There is the Government on whose behalf the importance of recognising that statements of national policy contained within the ATWP could never pre-empt a decision on an application for planning permission was emphasised to the High Court, confirming that nothing in the ATWP precluded the consideration of need at this Inquiry.

- 47.28 Theirs is the Government whose Minister confirmed to Parliament that at this Inquiry you, the Inspector, would consider the economic effects of this proposal along with all of the environmental and any other impacts; that nothing was pre-determined; that it was for you to test the rigour of the different analyses and assessments that have been put forward, including the economic assessment of the project in question. All of this, the Minister confirmed, was to be determined at the planning level, being the proper territory of this Planning Inquiry.
- 47.29 And now is the time for Government to prove that they meant what they said and to refuse planning permission for this incomplete and unjustified application, unsupported by any economic evidence.