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2

Wednesday, 20th June 2007

3 (10.00 am)

4 MR PHILLIMORE: Good morning, everybody. The inquiry is now  
5 resumed. Just to give you a reminder about signing the  
6 attendance list, making sure mobile phones are switched  
7 off, please.

8 We received a list of documents that Mr Holgate will  
9 be referring to during cross-examination. Has that be  
10 circulated, gentlemen?

11 MR HUMPHRIES: Yes.

12 MR PHILLIMORE: Thank you. Anything else of a procedural  
13 nature before Mr Stinchcombe continues?

14 MR HILL: Just to continue what I said informally to you  
15 yesterday, I am prepared to cede first place in the line  
16 of cross-examiners when we get to Mr Maiden, to ensure  
17 Mr Holgate completes within his time.

18 MR PHILLIMORE: Thank you Mr Hill. Anything else?  
19 Mr Stinchcombe.

20 Mr Charles (continued)

21

22 Cross-examination by MR STINCHCOMBE (continued)

23 MR STINCHCOMBE: Thank you very much, good morning  
24 Mr Charles.

25 A. Good morning.

1 MR STINCHCOMBE: I wonder if we might briefly remind  
2 ourselves where we got to in yesterday's brief session.  
3 I put to you a number of common sense factors, which we  
4 agreed contributed to a sense of annoyance or  
5 disturbance by aviation noise.  
6 A. That's correct.  
7 MR STINCHCOMBE: In respect of each individual departure and  
8 arrival; and they included sound level, tonality,  
9 duration, the time of the event, the prevailing weather  
10 conditions, the activity which was being undertaken and  
11 the frequency of disturbance.  
12 A. That's my list.  
13 MR STINCHCOMBE: I just wonder if we can agree an addition  
14 to those factors. It would be the pattern and  
15 distribution of flights as well, wouldn't it, the  
16 propensity for bunching?  
17 A. They would have some local effect, yes.  
18 MR STINCHCOMBE: Yes. It may mean, for example, that there  
19 is a higher concentration of movements in a particular  
20 hour or two?  
21 A. Yes, this happens with quite a few airports, where there  
22 is a lot of activity some hours and not so much others.  
23 With large airports like this it tends, unfortunately,  
24 to go on for most of the day.  
25 MR STINCHCOMBE: Right. Then, we identified together three

1 of the principal factors in your approach to the  
2 assessment of noise, and they were, in terms, the  
3 reliance on the 16-hour Leq, the reliance on the  
4 57 decibel contour within that Leq, and the reliance of  
5 three decibel threshold of perceptibility for that Leq?

6 A. Yes. On the first two, of course, all I am relying on  
7 is effectively what the Government has told me to do, so  
8 that's why I rely on 16-hour Leq and 57, because of  
9 CD 87. With regard to the DB change, to be accurate,  
10 the change actually here is 1 DB during the day and 0.5  
11 at night.

12 MR STINCHCOMBE: We will come on to those details in  
13 a little while. And I foreshadowed with you yesterday  
14 that I would be going through those three aspects of  
15 your approach in turn.

16 A. You did say that you would be asking, like Mr Hill,  
17 questions on those three methods, yes.

18 MR STINCHCOMBE: I hope I will not be asking the same  
19 questions, although doubtless there will be certain  
20 common features, and when we come to the same passages  
21 in the documents, perhaps rather than repeat what has  
22 been said before, we will use that passage as  
23 a departure point to go somewhere slightly different if  
24 we might, to look at it in a different way.

25 So far as the first issue is concerned, the Leq

1           contour itself, you will recall yesterday that Mr Hill  
2           asked you certain questions about your reliance on the  
3           Manchester decision letter, rather than the Heathrow  
4           decision letter, in justifying the application of that  
5           contour or that measurement. Can you remember?  
6   A. I can remember debating the T5 matters with Mr Hill,  
7           yes.  
8   MR STINCHCOMBE: And it was put to you that you hadn't  
9           quoted from T5, but you had quoted from Manchester?  
10   A. Yes. I, like Mr Hill's witness, in my proof of evidence  
11           did not quote from the T5 inquiry.  
12   MR STINCHCOMBE: But you did quote from Manchester?  
13   A. Yes, because I was there.  
14   MR STINCHCOMBE: And that preceded by some years the  
15           Manchester inquiry, didn't it?  
16   A. Yes, it was before.  
17   MR STINCHCOMBE: Let's just see what we said in respect of  
18           Manchester, because we haven't been there yet, just  
19           understand the context. I think it is in  
20           paragraph 6.25, and also in your appendix C. And you  
21           tell us that the Inspector there -- well, he tells us  
22           that he was satisfied that it was the best available  
23           method for assessing the level of annoyance as well as  
24           being promoted in PPG 24?  
25   A. Yes. I think to be fair, the paragraph I quoted also

1 points out that he had concerns. Which I hope is a fair  
2 way of putting it.

3 MR STINCHCOMBE: And the concerns were that the use of  
4 the LAeq unit concealed localised impacts?

5 A. That's right. That's why I put that in, so everyone  
6 could see it.

7 MR STINCHCOMBE: And you agreed with me yesterday that we  
8 had to be astute to supplement our methodologies in  
9 order to reveal concealed impacts.

10 A. No, I don't think I actually agreed that. I don't  
11 remember either the question or me giving such an  
12 answer.

13 MR STINCHCOMBE: Well, I think you did agree with it.  
14 I will put it to you again in any event. I did put to  
15 you that we had to be astute to ensure we did not  
16 minimise the impacts?

17 A. That is definitely correct.

18 MR STINCHCOMBE: And that we had to make sure that if our  
19 methodologies concealed any localised impacts, then we  
20 had to do something else to make sure that we revealed  
21 them, so we can take them all into account.

22 A. Right.

23 MR STINCHCOMBE: That must be right, mustn't it?

24 A. Yes, if there is some missing thing within the contours,  
25 then we should have pointed them out.

1 MR STINCHCOMBE: That must mean, must it not, that even if  
2 the Leq is the best available method, if it conceals  
3 localised impacts, we have to be careful to uncover what  
4 those impacts are?

5 A. Indeed, we have to use it with care.

6 MR STINCHCOMBE: Indeed. You were thereafter taken at some  
7 length to the contents of Mr Vandermeer's report of  
8 the T5 inquiry.

9 A. I was indeed.

10 MR STINCHCOMBE: I will revisit some of that in a little  
11 while, but not at any great length, I hope. However, in  
12 anticipation of and response to some of the criticisms  
13 of your failure to quote from those passages of  
14 the report, you said you were much more interested in  
15 what Mr Vandermeer did than what he said?

16 A. Indeed. I particularly, in producing the evidence that  
17 I produced, rather than the ES which was produced by  
18 others, my interest was: this is a public inquiry, they  
19 want information to make a decision, how do we make  
20 decisions about airports in the UK? And I have guidance  
21 from PPG 24 and CD 87. And I thought that was the  
22 essential information we must get correctly together so  
23 that it can be considered by the Inspector and the  
24 Secretary of State when they make their decisions.  
25 That's what I tried to do. I wasn't repeating the

1 environmental statement, or doing an environmental  
2 evaluation on my own. I was addressing the matter in  
3 front of the Inquiry.

4 MR STINCHCOMBE: Sorry, I was asking a slightly more focused  
5 question than that.

6 A. Sorry.

7 MR STINCHCOMBE: It was in respect I think of your comment  
8 yesterday, that Mr Vandermeer said all sorts of  
9 important and interesting things, but you were more  
10 interested in what he actually did in his decision?

11 A. Yes, that's what I said.

12 MR STINCHCOMBE: You referred in particular I think to your  
13 paragraph 6.26 and your fifth bullet point.

14 A. That's right.

15 MR STINCHCOMBE: If we look at that on the same page of your  
16 proof, you said that:

17 "From 1990 aircraft noise has been ...(Reading to  
18 the words)... noise controls at Heathrow, following the  
19 T5 inquiry."

20 That is the doing rather than the saying point, is  
21 it not?

22 A. That's right, because I am always interested in what  
23 people do rather than what they say.

24 MR STINCHCOMBE: We should be interested in what they say as  
25 well, because it might help us to do something different

1           in the future, mightn't it?

2    A.   One can hope.

3    MR STINCHCOMBE:  Yes, one can hope.  Let's look at the

4           seventh bullet point, at the top of the next page.  You

5           were fully aware, were you not, by reference to that

6           bullet point, that the index had been considered during

7           noise evaluations at the Heathrow inquiry?

8    A.   Yes.

9    MR STINCHCOMBE:  It had been the subject of some

10          considerable debate, hadn't it?

11   A.   It had indeed.

12   MR STINCHCOMBE:  And you were fully aware of the extent and

13          nature of that debate, weren't you, as an expert in the

14          field?

15   A.   Not as well as somebody like Mr Turner, who was actually

16          there and gave evidence, but I have, because of

17          subsequent planning inquiries, read -- is it chapter 21

18          where they discuss air noise.  But I wasn't there, and

19          therefore I haven't heard all the different experts.

20          I think you have kindly put in -- is it core

21          document 395, where Mr Cobbing gives extracts from what

22          different people said at T5.  I wasn't there, so

23          I really don't really know what this is.

24   MR STINCHCOMBE:  I see.  We will come on to --

25   A.   I haven't read the transcripts of T5.

1 MR STINCHCOMBE: I see. We will come on to it in due  
2 course. I don't seek to embarrass you by reference to  
3 issues about which you have no knowledge, and I don't  
4 seek to spend time asking the same questions that  
5 Mr Hill did.

6 A. Thank you.

7 MR STINCHCOMBE: But I do want to cover some of the areas of  
8 concern. Because we can note, can we not, that just as  
9 the Inspector in the Manchester Runway 2 Inquiry  
10 expressed concerns, so did Mr Vandermeer at the T5?

11 A. Indeed he did.

12 MR STINCHCOMBE: Perhaps rather than going to the full  
13 document, although we can do if need be, but with a view  
14 to just picking out some of the passages, or having in  
15 mind some of the passages about which you were  
16 questioned yesterday, perhaps you can just turn to  
17 SSE/6/C which should be on the list. That is the  
18 appendices to our air noise proof of evidence.

19 A. Yes, I have the document.

20 MR STINCHCOMBE: Right.

21 MR PHILLIMORE: Sorry, Mr Stinchcombe, we are not quite  
22 there at the moment. (Pause).

23 Thank you very much.

24 MR STINCHCOMBE: Right. If you turn to appendix 2, you will  
25 see a short extract which is from chapter 21.3, and you

1           were taken to large passages from that chapter by  
2           Mr Hill yesterday.

3    A.   That's correct.

4    MR STINCHCOMBE:  As I say, I will be astute, I hope, not to  
5           repeat questions, but it would be helpful for you to  
6           have that just in front of you so that we can identify  
7           certain matters and then consider them in a little more  
8           detail.

9           First of all, we can see, can we not, that one of  
10          the localised impacts which have been concealed and  
11          about which Mr Vandermeer was concerned was that within  
12          paragraph 21.3.31, about which you were asked some  
13          questions yesterday, that it didn't indicate the maximum  
14          noise of individual events and couldn't indicate  
15          therefore how many times conversation was interrupted in  
16          a particular location?

17   A.   That's correct.

18   MR STINCHCOMBE:  You recall those questions?  And in the  
19          context of Heathrow, the concerns there were whether  
20          those conversations might be at a school or a public  
21          place such as Kew Gardens, or a private house or garden.  
22          And that might be equally true in respect of this  
23          proposal, albeit we might be concerned with the forest  
24          instead of Kew Gardens.

25   A.   Yes, the parameter does not indicate the maximum noise

1 level.

2 MR STINCHCOMBE: Right. Can you turn up in that regard

3 document SSE/6/A, the main proof of evidence on air

4 noise?

5 A. Yes, I have the document.

6 MR STINCHCOMBE: And in particular paragraph 3.2.7. Just to

7 see whether you agree whether the sentences within the

8 paragraph are correct and where it takes us.

9 Recalling the concern of Mr Vandermeer that the Leq

10 doesn't indicate maximum noise of individual events, so

11 cannot indicate how any conversations might be

12 interrupted, the assessment in respect of noise only

13 provided for L<sub>Amax</sub> levels at certain levels, didn't it?

14 A. That's right. It basically, as far as I understand it,

15 picked locations around the 57 Leq contour, which

16 Her Majesty's Government has to sign as the onset of

17 community annoyance.

18 MR STINCHCOMBE: Is it right that it was only six locations

19 that were chosen?

20 A. I believe so, yes. Do you want to go to CD 5?

21 MR STINCHCOMBE: Well --

22 A. I think it is 6.

23 MR STINCHCOMBE: You think it is 6. We've got that right.

24 A. I will check.

25 MR STINCHCOMBE: So insofar as we are seeking to supplement

1 the Leq analysis to make sure that we find all of  
2 the concealed localised impacts, this assessment only  
3 looks at Lmax levels at six locations?

4 A. Yes. Figure 24 has the six locations which the  
5 information was provided for.

6 MR STINCHCOMBE: And therefore it would only give a view as  
7 to how many conversations might be impacted upon in  
8 those few locations that were chosen?

9 A. Yes, it gives an indication for the locations on the  
10 57 Leq area.

11 MR STINCHCOMBE: If we read on:

12 "The assessments of the numbers of noise events at  
13 specific Lmax levels are presented in the form of a bell  
14 curve [bell curve graphs]. These show the numbers of  
15 aircraft exceeding specific decibel levels ...(Reading  
16 to the words)... not easy for a lay reader to  
17 interpret."

18 Then it goes on:

19 "But a close study reveals that in the 35 MPPA case  
20 ...(Reading to the words)... 300 noise events above  
21 64 decibels."

22 Is that right? Can you check that for me? CD 5,  
23 figure 27.

24 We are looking at Thaxted, 35 MPPA case, Lmax, and  
25 the suggestion is that there would be 300 noise events

1           above 64 decibels.

2   A.   Well, we know there's a total of 354.  And presumably

3           what we are taking out is the bottom of the bell curve,

4           below 64.  I would think it was somewhere of that order.

5   MR STINCHCOMBE:  Because you have seen this proof of

6           evidence and you haven't sought to rebut that, have you?

7   A.   This is the volume 2, CD 5.

8   MR STINCHCOMBE:  No, you have seen the proof of evidence, in

9           which we analysed, albeit as lay people, what it seemed

10          to indicate, put it in our proof of evidence.  You have

11          had that for some months, you have not sought to rebut

12          it, have you?

13  A.   Not particularly that, no.

14  MR STINCHCOMBE:  That is the noise level at which

15          conversation can be interrupted; isn't it?

16  A.   Above 60.  I think Mr Turner used 65, but around that

17          sort of order it would have some effect.

18  MR STINCHCOMBE:  And that means, does it not, that --

19          just look at it, it is just one location, just one

20          location, where there is an interruption once every

21          three or four minutes of a level sufficient to disturb

22          conversation?

23  A.   Outside, yes.

24  MR STINCHCOMBE:  Did you mention that at all in your proof

25          of evidence?

1 A. I didn't need to, because basically that area is just on  
2 the 57 where, using the criteria that were given by  
3 Her Majesty's Government, we are saying that is the  
4 onset of significant community annoyance. And I think  
5 what you have described would be described as  
6 significant community noise; would it not?

7 MR STINCHCOMBE: I am obliged. That is significant  
8 community noise?

9 A. That is an illustration of it. There will be other  
10 things that affect people. But if you want it in regard  
11 to conversation, that illustrates it quite well, I would  
12 have thought.

13 MR STINCHCOMBE: Illustrates the kind of significant  
14 community annoyance by aviation quite well. Let's go  
15 back to 6C. I hope I have illustrated, by reference to  
16 the first few questions, I'm not trying to put to you  
17 all the points that Mr Vandermeer makes, but trying to  
18 apply some of them to the circumstances of this appeal.  
19 Paragraph 21.3.33. The greatest single criticism, it's  
20 not a conclusion yet, this is just a criticism, of  
21 the Leq approach was:

22 " ... it failed to give adequate weight to the  
23 number of aircraft movements as the department accepted  
24 the addition of a further 400 movements ...(Reading to  
25 the words)... aircraft would increase the Laq by only

1           1 decibel."

2           Do you see that?

3    A.   I read the text, yes.

4    MR STINCHCOMBE:  That means, does it not, by applying your

5           3 decibel threshold, that those additional 400 movements

6           would be considered insignificant and immaterial.

7    A.   I think, yes, they probably would.  And --

8    MR STINCHCOMBE:  On your approach?

9    A.   On the Government's approach which I am using, yes.

10   MR STINCHCOMBE:  Indeed, I think your approach would be that

11           those additional 400 movements would not even be

12           discernible; is that right?

13   A.   That's right.  That's right.

14   MR STINCHCOMBE:  So people would not discern the fact that

15           they were overflowed 400 more times a day?

16   A.   By light(?), chapter 3, at Heathrow, where the main

17           carrier uses Boeing 747 aircraft of various vintage,

18           which are roughly 8 to 10 decibels noisier during the

19           day.  Because people seem to react if you go into more

20           detail, the worry has always been about the noisy ones

21           that turn up from time to time rather than the light

22           ones.

23   MR STINCHCOMBE:  Well, let's just apply the concern and

24           consider it in a context of this particular inquiry.

25           Can you turn to your paragraph 4.10, please.

1 A. I have that.

2 MR HUMPHRIES: Page, sorry?

3 A. Page 11.

4 MR STINCHCOMBE: And your table 2. Let's see if I can  
5 understand the figures that we've got here, so do some  
6 simple maths with them. Are you saying you are  
7 concerned about doing some maths with me?

8 A. Mr Hill did some maths with me yesterday, so I'm hoping  
9 you will get the same percentages, if that's what you  
10 are going to work out.

11 MR STINCHCOMBE: I am very simply trying to look at a couple  
12 of things here. As I understand it --

13 A. These are figures from the part of the matter to do with  
14 forecasts, which I think Mr Maiden is going to talk  
15 about later. All I am doing was helping everyone by  
16 trying to bring them forward.

17 MR STINCHCOMBE: I am hoping you can help me a little  
18 further by telling me the implication of these figures  
19 in terms of decibels.

20 A. Ah, right.

21 MR STINCHCOMBE: Because if I look at, just approximately,  
22 the 25 MPPA case for 2014, we have 550 day and  
23 evening time movements, haven't we? 420 plus 130.

24 A. This is the day and the evening together, is it?

25 MR STINCHCOMBE: Yes. 420 plus 130 is approximately 550,

1           isn't it?

2    A.   Right, good.

3    MR STINCHCOMBE:  Is that right?

4    A.   Sounds right to me.

5    MR STINCHCOMBE:  And that is roughly equating, if not

6           exactly equating, to the 16 hours Leq daytime period?

7    A.   That's right.

8    MR STINCHCOMBE:  Then we can see beneath it the change in

9           terms of the 35 MPPA case, it goes up to approximately

10          540 plus 175; yes?  Something like 715?

11   A.   Bear with me, and then we will have them agreed.  And

12          then we won't have to fuss ... hang on, I don't get the

13          same as you.  Why not?  713, do I get?

14   MR STINCHCOMBE:  We are two out.  I did some rounding.

15   A.   About that.

16   MR STINCHCOMBE:  So the percentage increase is what,

17          roughly?

18   A.   We were helped by Mr Hill yesterday, because he was --

19   MR STINCHCOMBE:  30 per cent, something like that?

20   A.   I think it is about 30 per cent.  Are we doing 713 and

21          550?  29.6; or 30 per cent in practical terms.

22          30 per cent.

23   MR STINCHCOMBE:  And a 30 per cent increase in movements

24          equates to what increase in decibels, in terms of Leq?

25   A.   Hang on.  Go slow with me and I will get it right,

1           perhaps. 1.1.

2   MR STINCHCOMBE: 1.1. Just pausing there, we are here

3           contemplating an additional 170 or so flights,

4           departures and arrivals every day, yes?

5   A. Yes, shared between -- these are total numbers, so

6           shared between landings and arrivals.

7   MR STINCHCOMBE: Each one a noise event?

8   A. Yes.

9   MR STINCHCOMBE: Each one containing the potential, for the

10          reasons we have indicated, to cause annoyance and

11          disturbance to individuals and to communities?

12   A. Yes.

13   MR STINCHCOMBE: A 30 per cent increase on the existing,

14          yes?

15   A. I think we worked it out on the 25 MPPA case. I think

16          it you will find it is more --

17   MR STINCHCOMBE: From the baseline.

18   A. -- if you do it on the present date.

19   MR STINCHCOMBE: More if on the present date, but

20          30 per cent on the baseline?

21   A. Yes.

22   MR STINCHCOMBE: And leading to an increase in LAeq decibels

23          of more than 1?

24   A. Yes, about 1.

25   MR STINCHCOMBE: You can recall the questions that Mr Hill

1           asked you yesterday in respect of Mr Vandermeer's report  
2           and the evidence from the DFT to him, that even an  
3           increase in half a decibel in terms of contours could be  
4           significant.

5   A.   That's what he put to me, yes.

6   MR STINCHCOMBE:   Because that is what was said at that  
7           inquiry.

8   A.   Well, I wasn't at that inquiry, so I can't help you with  
9           that.  Again you usefully gave me a copy of a paper by  
10          Mr Cobbing --

11  MR STINCHCOMBE:   Well --

12  A.   May I answer the question?

13  MR STINCHCOMBE:   No, we will come on to --

14  A.   I must answer the question or if I am not allowed,  
15          I will not stay.

16  MR PHILLIMORE:   If you put the question again, which was  
17          fairly precise, if you want to qualify your answer,  
18          there is no problem with that.  Not introducing  
19          something that relates to a different question.  Do you  
20          want to ask it again, Mr Stinchcombe.

21  A.   It related to the same question.

22  MR PHILLIMORE:   Within those basic rules, if you could put  
23          the question again, please.

24  MR STINCHCOMBE:   Absolutely sir, and I don't want to cut  
25          across your answer, I really don't, but the question

1 I put to you was that the report itself said that  
2 a difference of half a decibel could be significant, and  
3 you said you couldn't help me on that, but the report is  
4 in front of us. Paragraph 21.3.33. As the department  
5 acknowledged, even a difference of half a decibel could  
6 be significant, so you do know that was what was said at  
7 that inquiry, don't you?

8 A. Well, may I explain my difficulty? I did not put in  
9 CD 0395, a paper by a Mr Cobbing. On page 232 of that,  
10 it says Dr --

11 MR STINCHCOMBE: Well, let us find the document. We are  
12 coming on to this in due course in any event. Which  
13 page are we on now?

14 A. Page 232.

15 MR PHILLIMORE: Just to confirm the CD number we are looking  
16 at, please?

17 A. 395.

18 MR PHILLIMORE: Thank you. Could you just confirm the title  
19 of that, as well, please?

20 A. Sorry. It is Perception and Significance of  
21 Transportation and Noise Changes.

22 It's a paper, I don't know who it was submitted  
23 to -- oh, yes, it does. It says: "Proceedings of  
24 the Institute of Acoustics, volume 20, part 1, 1998, by  
25 Mr Cobbing, and Mr Rickaby, in the London Borough of

1 Hillingdon".

2 MR STINCHCOMBE: We are looking at page 232.

3 A. If we go to 232, bottom paragraph, about the third  
4 sentence we have:

5 "Dr Ollerhead's view was that in terms of annoyance,  
6 changes of ...(Reading to the words)... are probably  
7 insignificant, while an increase of 3 DB and above will  
8 be clearly significant, and is going to be a significant  
9 measurable increase in community noise. Between these  
10 limits it is marginal."

11 That apparently was said by Dr Ollerhead, who  
12 I believe was the department's witness on day 346. But  
13 as I have clarified before, I was not at the inquiry, so  
14 I can't help you. Mr Turner may be able to, but  
15 I can't.

16 MR STINCHCOMBE: I see. We will come back to that document  
17 in due course. We can note, however, can't we, that as  
18 far as we are concerned the decibel level we are looking  
19 at is above 1 DB?

20 A. It is about 1 DB, yes.

21 MR STINCHCOMBE: It was above 1 DB?

22 A. If one wants to quibble about 0.1 DB, yes.

23 MR STINCHCOMBE: Yes, above 1 DB. And we can see what was  
24 reported by the Inspector having heard the evidence, and  
25 we go on to the rest of the evidence, the Inspector's

1 report in 21.33, that even a difference of half  
2 a decibel could be significant?

3 A. That's what is said in the text here.

4 MR STINCHCOMBE: Thank you very much.

5 A. We discussed it yesterday.

6 MR STINCHCOMBE: Let's just to play, if I can, just to test  
7 the logic and appropriateness of your approach, in terms  
8 of the concern that it fails to give adequate weight to  
9 the number of aircraft movements. Looking at your  
10 table 4.10, we have agreed that there is a 550 movement  
11 pattern on the baseline every day?

12 A. On the 25 MPPA, yes.

13 MR STINCHCOMBE: We have looked at what would happen if  
14 there's a 30 per cent increase, because that's what is  
15 proposed?

16 A. That's correct.

17 MR STINCHCOMBE: And you say not perceptible.

18 A. That's right.

19 MR STINCHCOMBE: Would it be perceptible if there was  
20 a 50 per cent increase in the number of movements, if  
21 there were another 270 flying every day? Would that be  
22 perceptible?

23 A. Probably not. Well, is that 50 per cent on top of what  
24 we are talking about?

25 MR STINCHCOMBE: 50 per cent on top of the

1 existing background 550, the baseline 550.

2 A. It would be getting towards my 2 DB. Which --

3 MR STINCHCOMBE: So what does that mean?

4 A. Well, bear with me. Let me find out what does it mean.

5 If you go to my proof, it's somewhere in here. Sorry,

6 I should know it backwards by now but I don't. Yes, if

7 we go to --

8 MR STINCHCOMBE: It is your 642, isn't it?

9 A. Table 5, page 22, then it would still be an

10 imperceptible change.

11 MR STINCHCOMBE: Imperceptible?

12 A. Yes.

13 MR STINCHCOMBE: So we now have an extra 275 movements and

14 it is imperceptible?

15 A. Yes.

16 MR STINCHCOMBE: Let's have another 500 movements, we're

17 going up 90 per cent. What happens then?

18 A. So the total increase is?

19 MR STINCHCOMBE: We have gone up 500 from 550, so we've gone

20 up 1050, gone up 90 per cent. Nearly doubled.

21 A. If we double it, we get to 3 DB. And there we get

22 definitely a perceptible increase, I think it says in my

23 table.

24 MR STINCHCOMBE: I have not quite doubled, I have all but

25 doubled.

1 A. Well, bear with me.

2 MR STINCHCOMBE: I think that is a 2.8 decibel change.

3 A. Excellent. As you notice, my table fails hopelessly  
4 because it leaves a gap between 0 to 2 and 3 to 5.

5 MR STINCHCOMBE: 2.8.

6 A. I would round that to the nearest whole number, and  
7 I would call that 3 DB. And I would say that is  
8 a perceptible change, because I do not believe we can  
9 work to 0.1s and 0.2s.

10 MR STINCHCOMBE: The bottom line of your approach is that  
11 you could all but double --

12 A. That's correct.

13 MR STINCHCOMBE: -- the existing number of movements; and  
14 you say that for local residents that is on the  
15 borderline of perceptibility?

16 A. No, I say it would be perceptible if you doubled the  
17 movements.

18 MR STINCHCOMBE: But marginal impact?

19 A. Yes.

20 MR STINCHCOMBE: Tell me, aircrafts are getting generally  
21 quieter, you have prayed that in aid. You said  
22 yesterday to Mr Hill what a good thing that was, that  
23 they are getting slightly quieter; yes?

24 A. Well, I hope it is a good thing for everyone concerned.

25 MR STINCHCOMBE: Just tell me what would happen, on your

1 approach, in this context: imagine over the 2014 period  
2 that each of the movements becomes 3 decibels quieter.  
3 Would anyone notice the difference in respect of the  
4 noise of any individual flight at all?  
5 A. Yes, it would be perceptible if it there's 3 DB reading.  
6 MR STINCHCOMBE: What about if it's 2.5 decibels?  
7 A. Then it would start to get borderline as to whether they  
8 would know or they wouldn't know.  
9 MR STINCHCOMBE: So they wouldn't necessarily even notice if  
10 the aeroplane got quieter?  
11 A. Not unless they carried around a sound level meter and  
12 accurately recorded it every time, no. I couldn't tell  
13 the difference.  
14 MR STINCHCOMBE: It would have the same propensity to  
15 disturb as any existing movement?  
16 A. If it is 3 DB less, then I suppose it gets under your  
17 criteria on the 65 slightly at some locations, but they  
18 are not going to be materially changed.  
19 MR STINCHCOMBE: Just imagine then on your approach, what  
20 happens then if the aeroplanes become 2.5 decibels  
21 quieter, but you have three times as many movements.  
22 What happens then to the Leq?  
23 A. Three times --  
24 MR STINCHCOMBE: Three times as many movements.  
25 A. Oh my god.

1 MR STINCHCOMBE: Let us say four times as many movements,  
2 does that make it any easier for you? Four times as  
3 many movements, what happens then?  
4 A. If we have four times, we have a plus 6 DB for the  
5 number movements, don't we?  
6 MR STINCHCOMBE: Yes.  
7 A. And you wanted it 3 DB less?  
8 MR STINCHCOMBE: 3 DB less.  
9 A. That's right. So basically it would be perceptible --  
10 MR STINCHCOMBE: Just perceptible?  
11 A. Yes. Well, it would be perceptible, full stop.  
12 MR STINCHCOMBE: Well, it would be just perceptible,  
13 wouldn't it, at the threshold of perceptibility, that's  
14 the very lowest?  
15 A. It would be perceptible.  
16 MR STINCHCOMBE: So what you are telling me, if I understand  
17 the logic of your approach, it is that you could have  
18 aircraft quieter, but barely perceptible in terms of  
19 their maximum increase, in terms of their overall level  
20 of noise, and you could increase them by four-fold, and  
21 you would just get at the thresholds of perceptibility  
22 of the noise impact in the area?  
23 A. Yes.  
24 MR STINCHCOMBE: Yes. That's your approach?  
25 A. Hang on a minute. You are saying the aircraft is 6 DB

1           quieter?

2   MR STINCHCOMBE:  No.

3   A.  The number is 6 DB -- all right, yes.  I agree with you.

4   MR STINCHCOMBE:  Right.  So the local residents --

5   MR PHILLIMORE:  Just to clarify the question and the answer.

6           The figures you were agreeing to, I want to make sure

7           I have those correctly noted down.  Can we just rewind

8           on that, please?

9   A.  My understanding is the hypothesis we were exploring was

10          if we had four times the number of movements in this

11          area, which would mean basically two doublings.  So in

12          the Leq format, that would give you a 6 DB increase, and

13          I think what Mr Stinchcombe was pointing out, well, what

14          happens if the aircraft were quieter by 3 DB?  And the

15          net effect would be an increase of 3 DB in Leq.

16  MR STINCHCOMBE:  Which would be at the margins of

17          perceptibility?

18  A.  It would be perceptible as far as my table says, yes.

19  MR HILL 2:  Because I think you brandished, during the

20          passage when you were standing to give evidence

21          yesterday, the chart at Mr Hill's 2F; was it?

22  A.  I think it was at Thaxted churchyard, I was trying

23          to understand the --

24  MR STINCHCOMBE:  3.  I do apologise, not 2F, 3E.

25  A.  Do I need to get it out?

1 MR STINCHCOMBE: No, if you could recall what you were doing  
2 then, was saying if you shaved less than 3 decibels off  
3 each of these movements the Leq would go down  
4 imperceptibly, but that would be right because the noise  
5 of each aircraft would go down imperceptibly?  
6 A. Yes.  
7 MR STINCHCOMBE: What I have just done is do exactly the  
8 same exercise, but contemplated four times as many  
9 peaks.  
10 A. That's right.  
11 MR STINCHCOMBE: And you are saying that that is the  
12 threshold of perceptibility?  
13 A. That's right, I am saying that it's perceptible.  
14 MR STINCHCOMBE: Four times as many movements?  
15 A. Yes. With the other effect you had.  
16 MR STINCHCOMBE: Right. Thank you very much.  
17 Let's see what other kinds of localised impacts  
18 might be concealed. You recall the concerns that people  
19 might have of bunching, and how that might impact upon  
20 their perception of noise annoyance; yes?  
21 A. Yes, I believe we talked about that, yes.  
22 MR STINCHCOMBE: What happens if there is an increased  
23 concentration, say, for example, a tripling of  
24 the number of movements in one hour within the Leq,  
25 judged by a one hour Leq? What is the perception then

1           in terms of the average noise indices for that one hour?

2    A.   If the movements --

3    MR STINCHCOMBE:   For trebling.

4    A.   Trebled.   Well, they would be somewhere between a 3 and

5           6 DB increase, wouldn't they?

6    MR STINCHCOMBE:   4.8 DB?

7    A.   That sounds right.

8    MR STINCHCOMBE:   Even on your measurements and your indices,

9           that would be clearly noticeable by the community?

10   A.   It would.

11   MR STINCHCOMBE:   It wouldn't be perceptible if you looked at

12           a 16-hour Leq, would it though?

13   A.   If it occurred for every hour during the day then it

14           would be perceptible, but if it only occurred during one

15           hour, then it wouldn't.

16   MR STINCHCOMBE:   Two hours?

17   A.   It depends what happens in the other hours.

18   MR STINCHCOMBE:   But if they stayed the same?

19   A.   If they stayed the same, it probably would not, no.

20   MR STINCHCOMBE:   That is another impact that is concealed by

21           the Leq 16-hour indices; is it not?

22   A.   It is another criticism of the indices, yes.

23   MR STINCHCOMBE:   Right.   What about if there is

24           a concentration of flights over one particular village

25           because of an unusual wind direction, so all departures

1 are in one direction for a period of five, six, seven  
2 days in a row? What happens to the Leq on your  
3 measurements during that period?

4 A. If you take the three month average that we tend to use,  
5 then it probably wouldn't make much difference.

6 MR STINCHCOMBE: Wouldn't make much difference.

7 A. If it occurred, which has been occurring in recent  
8 years, where the summers had slightly different wind  
9 pattern to other months, then you do get a change in the  
10 contour.

11 MR STINCHCOMBE: But over the Leq indices that you are  
12 using, that localised impact on all of the residents in  
13 that area wouldn't be revealed; would it?

14 A. No, I mean, my understanding is we are here discussing  
15 the possibility of an airport developing to carry out  
16 services for 365 days of the year, 24 hours; and  
17 therefore, clearly, one has to allow just for the  
18 average conditions that one would expect. One can't  
19 deal with the fact on one particular day, something  
20 could happen and something will alter, because one is  
21 trying to design a major infrastructure project, and you  
22 have to consider the -- if you like the average, the  
23 norm, all these horrible things that people don't like.  
24 But that's the only way you could do it.

25 MR STINCHCOMBE: Just pausing there, you will understand the

1           purpose of the question that I am putting to you is  
2           this: we know that the Manchester decision that you rely  
3           upon points out that the averaging mechanism conceals  
4           localised impacts. You have identified what some of  
5           those concealed impacts might be through Mr Vandermeer.  
6           And we are testing them, during the questions that  
7           I have asked you, as to what would be concealed by that  
8           averaging at this inquiry.

9           A. Right.

10          MR STINCHCOMBE: And we are doing so because you have agreed  
11           we have to be astute to reveal those impacts.

12          A. We have to be aware of them, yes.

13          MR STINCHCOMBE: And we have to be aware of the concealed  
14           impacts in terms of interruptions of conversations, just  
15           as the disturbance caused by numbers of movements going  
16           up. That's right, isn't it?

17          A. Yes, bear with me a minute. I, to some extent, come  
18           back to the situation which you took me to before, which  
19           is my 6.2.5, of what the Manchester inspector said, that  
20           he was perfectly aware that there were localised  
21           impacts, but even he was satisfied that it's the best  
22           available method for assessing the level of noise. And  
23           like any such indices, there will always be difficulties  
24           with them.

25          MR STINCHCOMBE: Since then it was reconsidered in T5, and

1 I need not repeat the questions Mr Hill asked you about  
2 that.

3 A. Indeed, you don't need to repeat Mr Hill's questions,  
4 no.

5 MR STINCHCOMBE: I wonder if I could take you on to the  
6 document that you yourself have just referred to, to the  
7 article which is CD 395.

8 A. I have it.

9 MR STINCHCOMBE: It's clear that you have read this article?

10 A. I have read the article once, yes.

11 MR STINCHCOMBE: "Perception is significant ...(Reading to  
12 the words)... volume 20, 1998."

13 And we can see that its authors are officers from  
14 the London Borough of Hillingdon?

15 A. That's correct.

16 MR STINCHCOMBE: Messrs Cobbing and Rickaby. Do you know  
17 Messrs Cobbing and Rickaby?

18 A. I think I know Mr Cobbing, but I believe he is no longer  
19 at Hillingdon.

20 MR STINCHCOMBE: Right. We can see, just to contextualise  
21 what this article concerns, paragraph 2 on the first  
22 page, it concerns the issue which was raised at the  
23 current Heathrow inquiry, the question of the perception  
24 of significance of transportation noise.

25 A. That's correct.

1 MR STINCHCOMBE: So it is quite clear that it is before  
2 Mr Vandermeer's consideration of all of the evidence  
3 before him at that inquiry, because it is the current  
4 inquiry, hasn't reported yet. I'm sorry, I have taken  
5 it too quickly, I do apologise. Go back to the second  
6 paragraph on the first page, page 229:  
7 "The question of the perception and significance of  
8 transportation laws change has been central to the noise  
9 debate at the current Heathrow Terminal 5 inquiry."  
10 A. That's right. My understanding is the London Borough of  
11 Hillingdon were giving evidence at the inquiry. I don't  
12 know whether Mr -- I believe Mr Turner gave the  
13 evidence, but I may be wrong. Perhaps Mr Cobbing did.  
14 MR HUMPHRIES: No, they both did.  
15 A. They both did, sorry.  
16 MR STINCHCOMBE: The simple contextual point I was putting  
17 to you, just to set the scene, was that this was written  
18 whilst the inquiry was going on, the current inquiry,  
19 and not after Mr Vandermeer had reported?  
20 A. I think -- are you able to give me the date of the --  
21 MR STINCHCOMBE: Well, it is 1998, isn't it? We can see  
22 that --  
23 A. Yes. And the Inspector's report was -- I can look it up  
24 just to confirm the answer, but if you can tell me,  
25 I can agree with you, yes.

1 MR STINCHCOMBE: I could tell you, but I can't tell you at  
2 this very moment. In any event, I don't think much will  
3 turn on that.

4 MR HUMPHRIES: Sir, this article was produced during the  
5 Terminal 5 inquiry. There is no dispute about that.

6 MR PHILLIMORE: I think if that refers to the current  
7 inquiry, I think that clarifies the point, thank you.

8 MR STINCHCOMBE: In very much the same way that Mr Hill did  
9 yesterday, I just simply want to put to you some of  
10 the views of other experts in the field, just to  
11 understand whether you agree with them or whether you  
12 don't. And then we can look quickly at Mr Vandermeer's  
13 findings on related issues. I don't want to read out  
14 huge extracts, I just want to see what your view is.  
15 You have taken us already to section 4, The Changes in  
16 Noise Indices and their Effects. And one reference from  
17 Dr Ollerhead at the bottom of page 232.

18 A. Yes, I went to that because there was a question of what  
19 the department's view was, and my understanding is that  
20 he was their noise expert or whatever he was.

21 MR STINCHCOMBE: And we have already set that in its context  
22 so far as Mr Vandermeer's reporting of the evidence is  
23 concerned, by reference to the half decibel possibly  
24 being significant.

25 A. That is what Mr Vandermeer reported. Perhaps he didn't

1 report what happened on this particular day. I don't  
2 know.

3 MR STINCHCOMBE: Then we can read on from the same  
4 paragraph. This is just to set the context. If I am  
5 taking too long over this, sir, please interrupt me, but  
6 I am seeking just to set the context and then see  
7 whether the witness agrees with certain findings, but if  
8 I do take too long, please hurry me up. At the bottom  
9 of page 2, just to set the context:

10 "We know however that Leq ...(Reading to the  
11 words)... report, which is a cross-sectional study. It  
12 is known that the Government at least is content to rely  
13 on the LAeq measure as a measure of annoyance, and as  
14 the foundation for claims that there has been  
15 a substantial improvement in the noise climate around  
16 the airport over the past two decades."

17 That is the context in which the concerns have been  
18 raised and were raised before Mr Vandermeer. Do you see  
19 that?

20 A. I presume so, yes. I wasn't there, so I really can't  
21 help you much.

22 MR STINCHCOMBE: Right. Let's see whether we can go to the  
23 next paragraph, paragraph 233 and the first sentence,  
24 and see whether you agree with this:

25 "There reported that there was nonetheless a growing

1 concern that the ...(Reading to the words)... parameter  
2 should not be used as the sole determinant of assessing  
3 affects and that all parameters, including the number of  
4 events, should be used at least in complex cases."

5 That's right, there was a growing concern, wasn't  
6 there?

7 A. As I understand, especially by the London Borough of  
8 Hillingdon, because as far as I understand, that was  
9 their case.

10 MR STINCHCOMBE: And it is right also, if you look at the  
11 next sentence, that:

12 "At the T5 inquiry, there had been forceful  
13 representations ...(Reading to the words)... climate  
14 around Heathrow had in fact deteriorated, despite the  
15 reductions in the LAeq."

16 And indeed, the same point was touched upon by  
17 Mr Hill yesterday in cross-examination?

18 A. That's what it says.

19 MR STINCHCOMBE: So just there, before we come to  
20 Mr Vandermeer's conclusions, we know that the Leq  
21 16-hour is purporting to reveal an improvement, and yet  
22 there are concerns that the noise climate nonetheless  
23 has deteriorated because of the increase in movements?

24 A. That's correct.

25 MR STINCHCOMBE: Right. And that, for example, just by way

1 of illustration, might be the same kind of scenario if  
2 there's quieter aircraft but more movements?

3 A. Indeed --

4 MR STINCHCOMBE: As illustrated by the graph?

5 A. -- just like you were exploring earlier, yes.

6 MR STINCHCOMBE: Right. Read on to the next paragraph, this  
7 is when it reports what some of the evidence was before  
8 it. And we can see the footnote, who the authors were.  
9 The validity was questioned by Dr Jones. Just see  
10 whether you agree with his view. He pointed out that:

11 "According to the equal energy principle inherent in  
12 Leq, the value doesn't change if the number of planes is  
13 doubled but they are each 3 DB quieter."

14 That is what we just agreed mathematically, isn't  
15 it?

16 A. Yes.

17 MR STINCHCOMBE: Then his evidence stated:

18 "How much credence we should place in this shrinking  
19 ...(Reading to the words)... area, when it goes against  
20 all the evidence of increasing public progress and is  
21 based on the premise ...(Reading to the words)... can  
22 completely offset a doubling of numbers."

23 He wonders how much credibility we can give to that?

24 A. He does. He is wrong, but that's what he says.

25 MR STINCHCOMBE: So he is wrong, that we shouldn't be

1 concerned about the concealing of an impact where you  
2 have a doubling of the number of movements, even though  
3 each of those movements is imperceptibly quieter?

4 A. Yes, basically --

5 MR STINCHCOMBE: We shouldn't be concerned about that?

6 A. He is criticising, as far as I understand it, the  
7 fundamental premise of what an Leq unit is.

8 MR HUMPHRIES: Sir, I do wonder if we are beginning to fall  
9 back into the trap of just reading things and agreeing  
10 with them. What we are considering here at CD 395 is an  
11 article written by two people who were advising one of  
12 the parties at an inquiry before the inquiry had  
13 finished. Now, if the point is that those parties had  
14 criticisms of the Leq matrix, goodness, that's common  
15 ground, and we all know that. The article may be useful  
16 where it actually quotes from what people said, insofar  
17 as one wants to understand what Roy Vandermeer was  
18 looking at, but I do wonder whether just repeating the  
19 fact that there were criticisms helps. The point is,  
20 the Secretary of State made the decision that he did,  
21 and we have the White Paper that gives the advice on  
22 what we should do.

23 MR PHILLIMORE: Thank you. The last question I heard was  
24 when Mr Charles agreed with what you expressed, which I  
25 think was a slightly different point.

1 MR HUMPHRIES: You are right.

2 MR STINCHCOMBE: Sir, I am very aware of the concern, it has  
3 been expressed before in respect of the select committee  
4 reports. I do hope I can move things forward quite  
5 quickly, but usefully, by identifying the concerns and  
6 simply seeing whether this witness agrees with them and  
7 whether he has any evidence or comments that he  
8 disagrees with them, and using that as a basis to go  
9 through to what the Inspector on that occasion decided  
10 and then we can move on.

11 MR PHILLIMORE: Thank you. I think we can proceed  
12 relatively quickly on that basis.

13 MR STINCHCOMBE: I do hope so. So you say you disagree with  
14 him? You see his concern, it is the point I put to you  
15 before, but you say you disagree with him, and we can  
16 give credence to that judgment?

17 A. My understanding is that Dr Jones is criticising the  
18 fundamental principles behind Leq, and I can't accept  
19 his criticisms in the context of this planning inquiry,  
20 where we have to use Leq because that's the Government's  
21 guidance to us. And where I know that Leq has been used  
22 throughout the entire European continent, and therefore  
23 that principle which underlines it, ie the trade off  
24 between numbers and noise levels, is fundamental to the  
25 use of Leq.

1           And if we are saying, well, that's wrong, then all  
2           of Europe is wrong. The UK is wrong, everything we have  
3           done -- in fact, I went in my evidence, where we use  
4           Leq, I think that was in -- was it in 6.26, where I had  
5           to mention the list to Mr Hill. Now, if we are wrong  
6           and we shouldn't be using Leq, fair enough, give me  
7           another unit, I will calculate it in a different way.  
8           But that's what we use; and fundamental to that is this  
9           trade off between numbers and noise level.

10       MR STINCHCOMBE: Forgive me if I just retreat a few steps  
11           and put the point to you again. No one is saying that  
12           Leq is necessarily wrong, but you've agreed with me that  
13           it conceals localised impacts?

14       A. Yes, it is a general planning --

15       MR STINCHCOMBE: Because it averages those impacts out?

16       A. Indeed it does.

17       MR STINCHCOMBE: And you have agreed with me that we have to  
18           be astute to reveal those concealed impacts?

19       A. True.

20       MR STINCHCOMBE: And one of the concealed impacts that  
21           Dr Jones is here indicating is that if you have a barely  
22           perceptible reduction in noise of each peak event and  
23           then double those peak events, the Leq says there has  
24           been no perceptible change at all, and that defies  
25           credulity.

1 A. That is what he says.

2 MR STINCHCOMBE: Yes. You disagree with him. But certainly

3 it hides and conceals the noise impact of a doubling of

4 movements, doesn't it?

5 A. It takes it into account.

6 MR STINCHCOMBE: It hides it. It says it is not

7 perceptible --

8 A. It doesn't hide it at all. It specifically takes it

9 into account in the way that the studies which led to

10 its formulation said was appropriate as to how do you

11 allow for the number of aircraft movements.

12 MR STINCHCOMBE: What it --

13 A. I'm not using Leq as some sort of -- what's the word --

14 some fickle feeling that I should use it. A huge amount

15 of research has been done all around the world to see

16 how we should evaluate environmental noise, and they

17 looked at other parameters. They looked at why do we

18 need to measure the noise at all? Why don't we just say

19 number of events? Why don't we do -- all manner of

20 different things were tried. The net result of them all

21 was to come up -- first of all, in the UK we came up

22 with noise and number index. And then we said, hang on,

23 that allows too much for the effect of aircraft movement

24 numbers, so we changed it to Leq, which we did in 1990.

25 And that's what we use, and that involves this trade

1 off.

2 MR STINCHCOMBE: And that trade off conceals localised  
3 impacts?

4 A. It will conceal localised impacts, it must do. It is  
5 a general planning tool.

6 MR STINCHCOMBE: It will conceal, will it not, I think we  
7 have agreed, an additional 500 movements at Stansted.

8 A. It would take them into account.

9 MR STINCHCOMBE: It would conceal them.

10 A. It would not conceal them at all.

11 MR STINCHCOMBE: It would say they are not perceptible,  
12 because they are less than 3 DB.

13 A. Ah, how you interpret a number when you get it, would  
14 determine whether you consider it hides them or not; but  
15 the actual unit, the Leq unit, fully takes them into  
16 account in accordance with what the research has found.

17 MR STINCHCOMBE: It would mean, would it not, on your  
18 approach, that these local residents so concerned to  
19 attend at this inquiry could have 500 more movements  
20 every single day, with the Lmax levels that we have  
21 contemplated, and the duration that we have  
22 contemplated, and in the wind conditions that we have  
23 contemplated, and your evidence, as an expert to these  
24 inspectors, is that there would be an imperceptible  
25 change in their noise environment. That is your

1 evidence, isn't it?

2 A. No, it is not connected with my evidence. My  
3 understanding is that is all connected with some  
4 hypothesis that you have. My evidence relates to  
5 a rather simple thing, which is, as far as I understand  
6 it, with 25 million, we can do 202,000 movements, and  
7 that the passengers, presumably, are creating a demand  
8 where we need to -- we can do more by 2014, using  
9 roughly the same aircraft as you see out there today.  
10 And that's what it's about. And as you pointed out, it  
11 is about a 30 per cent change. That is what I am giving  
12 evidence about, not about some hypothetical case.

13 MR STINCHCOMBE: I just put to you two further comments of  
14 this sort, in respect of the evidence you have just  
15 given. You see what Dr Ollerhead says in the paragraph  
16 beneath Dr Jones. He was asked whether the level of  
17 events and number of events are interchangeable under  
18 the equal energy principle inherent in Leq, that is what  
19 we have just been going through, isn't it?

20 A. Yes.

21 MR STINCHCOMBE: And he said, yes, they are interchangeable,  
22 that is perfectly correct, but it is a very mechanistic  
23 way of considering noise exposure. It is a very  
24 mechanistic way of measuring noise exposure, isn't it?

25 A. Well, it has the elegance of being relatively

1 straightforward and simple, and if that is what you mean  
2 by very mechanistic. However, it was not derived on the  
3 basis of making it very mechanistic. It was derived  
4 from carrying out a great deal of work to assist central  
5 Government on how should you assess airport noise? And  
6 that in fact looked at various ways they could have  
7 produced an index, and it came up with this index, which  
8 is what we use, and which is now cemented in the EU by  
9 the directive to be something that will be used in the  
10 foreseeable future. Albeit that we will be expressing  
11 it not as Leq 16-hours, but we will be doing L dens and  
12 L nights and L evenings and so on.

13 MR STINCHCOMBE: We will come on to those in due course.

14 A. But they all are based on the Leq unit.

15 MR STINCHCOMBE: Just pausing there, you have said when  
16 I asked you whether it was a mechanistic way of  
17 considering noise exposure, it was nonetheless elegant  
18 and simple, you said?

19 A. That's correct. May I just get a document? (Pause).

20 MR STINCHCOMBE: Is that a document you want to refer to  
21 now?

22 A. Well, it's relevant to the questions you keep putting to  
23 me, and I feel it would be perhaps useful.

24 MR STINCHCOMBE: Which document is it?

25 A. Basically the document I wish to refer to, because we

1           are discussing whether Leq is the right way to do it or  
2           not --

3   MR BOYLAND:   Can you just tell us what the document?

4   A.   It is cap 275.

5   MR HUMPHRIES:   CD 177.

6   MR STINCHCOMBE:   CD 177.  Bear with me a second, Mr Charles,  
7           while I have it retrieved for me.

8   A.   Sorry.  I thought it would be useful to see what the  
9           Department of Transport feel about the Leq matter, and  
10          this is fairly up to date as I understand it, it was  
11          published in March 2007.

12  MR STINCHCOMBE:   Which page are we looking at?

13  A.   Just to clarify, the title page dates this as  
14          30th March 2007.  What I was particularly going to refer  
15          to was the appendix B, where in appendix B, annex 4, the  
16          department gives us what I consider to be a very  
17          reasonable summary of the effects of aircraft noise, and  
18          refers to many of the --

19  MR PHILLIMORE:   Mr Charles, is there a page number?

20  A.   Appendix B, page 41 is the start of the appendix.  And  
21          it addresses many of the matters which we have been  
22          addressing over the last day and a bit.  But in  
23          particular, because I think you were criticising --  
24          maybe I was being oversensitive, but I got the  
25          impression you were criticising my mechanistic way.

1 I just wanted to -- perhaps the words you used for me  
2 earlier, plead in aid.

3 If we go to page 46, we go to what is described as  
4 the attribute of a noise index. Here the authors  
5 explain that it should be simple, practical, unambiguous  
6 and capable of accurate measurement. If we go to  
7 paragraph 34, we go to -- they find that -- or rather  
8 they don't find, they say:

9 "Leq fully meets the requirements of an indicator of  
10 long term environmental noise exposure. It is a simple,  
11 logical and convenient measurement of average sound  
12 energy which is at least as good as any alternative  
13 index as a predictor of adverse effects on community of  
14 noise. It takes account of sound levels of each event,  
15 the duration of those events and the number of events."

16 Then the text then goes on to discuss matters which  
17 in fact Mr Turner relied on, the relationship between  
18 Leqs and community annoyance, et cetera. But on the  
19 matter you were asking me about, that is the  
20 department's advice as of 30th March 2007.

21 I hope that helps to clarify their position, which  
22 to some extent, and I endorse, that that is the unit  
23 that we are using that at the minute. It may well be,  
24 as a result of other studies which we all know are going  
25 on, we may end up with another indices soon, but at

1           the minute, that is all I have to use, so that is all I  
2           can help the inquiry with.

3   MR STINCHCOMBE:  Let us take that out a little further,  
4           I don't want to chase every single hare or every single  
5           rabbit, but just to take it a little further.  Firstly  
6           you are well aware, are you not, that there is an  
7           ongoing study, some six years old now, ANASE, into  
8           exactly the adequacy of that --

9   A.  That's correct.

10  MR STINCHCOMBE:  Right.  You are also aware, are you not,  
11           that the two reports that we have referred to, the  
12           Manchester report and the Heathrow report, simply  
13           indicate, the way I put it to you anyway, that we ought  
14           to be astute to reveal those impacts which this  
15           mechanistic approach admittedly conceals.

16  MR PHILLIMORE:  I think we are probably going over ground  
17           now that we have already covered.  I'm not sure you need  
18           to cover that again.  Thank you.

19  MR STINCHCOMBE:  Right.  I just wonder if I can take you to  
20           two further paragraphs within this document, no further,  
21           unless you wish me to take you to them, just to see  
22           whether you agree with these concepts as well.  The  
23           paper by Mr Fastie(?)?

24  A.  I am afraid I don't know the gentleman.

25  MR STINCHCOMBE:  The bottom paragraph, at page 233, we see

1           there his paper and his quotation. I just want to see  
2           whether you agree with these quotations.

3           "If the exchange of old versus modern aircraft goes  
4           with an increase in the number of operations ..."

5           And that is the context in which I asked a number of  
6           mathematical questions of you before:

7           " ... care has to be taken with respect to forecast.  
8           Simple calculations, ie mechanistic calculations, based  
9           on Leq can be or will be completely misleading. The  
10          trading of loudness and numbers of operations of  
11          aircraft cannot be based on a simple equal energy  
12          concept."

13          Just pausing there, do you agree with that --

14         A. No --

15         MR STINCHCOMBE: That they could be -- let me ask the  
16          question first. Do you agree that they could be  
17          completely misleading if you based your assessments on  
18          only that simple calculation?

19         A. No.

20         MR STINCHCOMBE: You don't. I see. Right. Second quote in  
21          the paragraph, his assessment is that:

22          "Equivalent energy noise level measurement  
23          ...(Reading to the words)... both noise surveys and  
24          laboratory experiments prove the inaccuracy of the equal  
25          energy concept to assess ...(Reading to the words)..."

1 noise during the day."

2 Do you agree with that?

3 A. I inherently don't agree with that, no. I have no  
4 choice but not to agree with that, on the grounds that  
5 subsequent to this matter, 1998, the EU Commission set  
6 up working groups to devise how we should assess  
7 environmental noise throughout the 26 Member States, and  
8 they, the working group, have advised, and then the  
9 relevant civil servants and ministers have promulgated,  
10 including in the UK, that we use Leq.

11 MR STINCHCOMBE: I see.

12 A. So I have to reject Mr Fastie or Fastle's assertion,  
13 which --

14 MR STINCHCOMBE: When --

15 A. Hang on, I've got it wrong. It wasn't Mr Fastle, it was  
16 Mr Luton.

17 MR STINCHCOMBE: Maybe I have misread this. Where do we see  
18 that? Oh, you are quite right. Mr Luton.

19 A. It was Mr Luton at the bottom of the page.

20 MR STINCHCOMBE: Footnote 17. I just wondered: do you have  
21 any evidence of psycho-acoustic or of a biological  
22 psycho-acoustic nature that shows a relationship between  
23 equivalent energy level measurements and annoyance?

24 A. Personally, no, I am not a psycho acoustic expert.

25 MR STINCHCOMBE: So much for that report. Let's go back to

1 the conclusions of Mr Vandermeer in the light of  
2 the arguments that were raised before him, what he  
3 actually said on those matters. Firstly, insofar as the  
4 concern that LAeq indices indicated --

5 MR BOYLAND: Are we looking at SSE/6/C?

6 MR STINCHCOMBE: I am looking at SSE/6/C, simply because it  
7 is a smaller document, sir. You can recall, can you  
8 not, the concerns which we have just seen discussed and  
9 which Mr Hill put to you for a little while yesterday,  
10 in paragraph 21.3.34, that the Leq indices indicated  
11 things were getting better, yet the local residents  
12 indicated that things were getting worse.

13 A. They did. They said that at the inquiry, I believe,  
14 when they were opposing the development of the airport,  
15 yes.

16 MR STINCHCOMBE: And what did Mr Vandermeer conclude having  
17 heard all of that evidence?

18 A. He recommended an improvement of the terminal.

19 MR STINCHCOMBE: What was his respect concerning that issue?

20 A. Oh, sorry.

21 MR STINCHCOMBE: He was satisfied --

22 A. At the bottom of the paragraph that you were referring  
23 to, he gives his conclusion.

24 "I also conclude this is not truly reflected in the  
25 Leq 16-hour index."

1 MR STINCHCOMBE: Satisfied that their perceptions must be  
2 based on the substantial increase in the number of  
3 movements. It couldn't have been based on anything  
4 else, could it? It couldn't have been based on anything  
5 else, could it?

6 A. Well, it may well have been based on lots of things  
7 which determine whether people object to airport  
8 developments and also raise the matter of noise.

9 MR STINCHCOMBE: But the energies are quieter, the number of  
10 movements have gone up, and people are more annoyed.  
11 They are not more annoyed because the engines are  
12 quieter, are they?

13 A. But they might be annoyed by the fact that the airport  
14 is proposing to develop itself.

15 MR STINCHCOMBE: Anyway, we will see what the conclusion  
16 is --

17 A. Because as you appreciate, especially if anyone has the  
18 time to read the cap 725, attitude is quite important in  
19 the response you have to any sort of environmental  
20 noise, in fact to any noise. One's neighbour's noise  
21 can be found acceptable on one day, on another day if  
22 you have fallen out with them it becomes totally  
23 unacceptable. So attitude does matter, and as far as  
24 I understand it, this was a matter to do with a heavily  
25 contested public inquiry, three and a half years or

1 something of debate.

2 MR STINCHCOMBE: Anyway, we see what he concludes having  
3 heard all of the evidence:

4 "Satisfied that their perceptions must have been  
5 based on a substantial increase in the number of  
6 movements."

7 That was the greatest single criticism, that it  
8 failed to give weight to those movements of the Leq and  
9 therefore he concluded that it was not truly reflected  
10 in the index, that is his conclusion?

11 A. That is what he concluded.

12 MR STINCHCOMBE: Right. We can pass over, but let's just  
13 noticeably pass over the other criticisms of 21.3.35,  
14 and that is based upon the criticisms of the evidential  
15 basis upon which it was based? We see that, that that's  
16 the concern of the ANIS report expressed at the inquiry,  
17 that:

18 "The department recognised that it was difficult to  
19 establish the true underlying relationship between the  
20 noise of individual events and their number, and accept  
21 it would have been useful if further social surveys had  
22 been carried out."

23 A. That's correct.

24 MR STINCHCOMBE: We have identified that a further survey is  
25 now being carried out?

1 A. Indeed.

2 MR STINCHCOMBE: Just before we leave it completely though,  
3 I wonder if you can agree with me this: when the ANIS  
4 survey was carried out, it didn't have any sample  
5 interviews from residents around a non-mature rural  
6 airport, did it?

7 A. It didn't have any measurements around Stansted.

8 MR STINCHCOMBE: Well, you know --

9 A. It was Heathrow, Luton, Aberdeen, Manchester and  
10 Gatwick; was it not?

11 MR STINCHCOMBE: Yes. All of them urban?

12 A. Well, the environs of Gatwick, where the noise goes is  
13 not urban, either end, if you know what I mean. They  
14 have Crawley to the south and Horley to the north. But  
15 where the aircraft go is -- they themselves would  
16 consider themselves to be rural.

17 In the Manchester case they concentrated -- the two  
18 measurement sites were in the urban area of Manchester  
19 city.

20 Aberdeen, I am afraid I have never been, so I don't  
21 know what it's like near Aberdeen.

22 Luton is also basically -- the aircraft, if you  
23 imagine where -- well, perhaps you don't know it. But  
24 if you imagine Luton town as a circle, the runway is to  
25 the south of that circle, and the aircraft spill into

1 the Hertfordshire rural areas either side. So both of  
2 those are in rural areas, I believe.

3 MR STINCHCOMBE: The ANIS report was based on, amongst other  
4 things, interview samples; wasn't it?

5 A. Yes, I believe so.

6 MR STINCHCOMBE: Within the 57 decibel contour?

7 A. I would imagine so, yes. I don't honestly know about  
8 going in detail through the report. But they had -- was  
9 it something like 26 or was it more common noise areas  
10 which were distributed to try to look at the effect of  
11 people's reaction to how noisy events were, and how they  
12 reacted to how many events there were. So they picked  
13 sites to try to get a considerable range. And in fact  
14 I wrote it down recently. Yes, they did sort of sites  
15 with LAmaks, they were aiming for 70 -- about 77, 83,  
16 89, and with number of events varying from about 30 to  
17 about 316, was their aim. And they tried to pick sites  
18 to cover that, so they were looking to the relationship  
19 to see whether the NNI was wrong. Because that's what  
20 they were looking at at the time, as to whether NNI  
21 should be replaced by Leq.

22 MR STINCHCOMBE: Just to see whether I can understand, as  
23 a matter of planning principle, what weight then should  
24 be given to this ANIS information. It is all about  
25 a quarter of a century old; yes?

1 A. Yes, it must be.

2 MR STINCHCOMBE: It's under review by Government itself as  
3 we speak, and has been for six or seven years?

4 A. That's correct.

5 MR STINCHCOMBE: It is based on survey data concerning urban  
6 airports?

7 A. I think we didn't quite agree on urban airports because  
8 in fact the ones I took you through, which were Luton  
9 and Gatwick, the noise is in the rural areas.

10 MR STINCHCOMBE: And it's not based, is it, on survey  
11 interviews within contours of, for example, 54 decibels  
12 or below?

13 A. I -- I can't help you with that. I don't honestly know  
14 without looking at it.

15 MR STINCHCOMBE: Just moving on to the second area that  
16 I want to touch base with you on, so 57 decibel contour,  
17 let's see if we can finish with respect to Mr Vandermeer  
18 and the Leq. If we read over to 21.3.37, and I need not  
19 labour this, because this I think is common to the  
20 cross-examination you had yesterday. He applied the Leq  
21 only as part of the appropriate test to assess noise  
22 impact, did he not, Mr Vandermeer? Three lines up from  
23 21.3.37.

24 A. That's what he said. He said it should be applied as  
25 part of the test. That's what he said.

1 MR STINCHCOMBE: As part, only part.

2 A. Yes.

3 MR STINCHCOMBE: And if we read on in 21.3.38, that's

4 because it wouldn't be right, indeed it would be wrong,

5 therefore, to rely entirely upon the single measure of

6 Leq, because it suffers from a number of deficiencies

7 which limit its value as a true and complete reflection.

8 A. That's what he said.

9 MR STINCHCOMBE: I am obliged. Sir, is that an appropriate

10 moment to pause?

11 MR PHILLIMORE: I know yesterday you indicated you hoped to

12 conclude before the morning adjournment. That is

13 clearly not the case.

14 MR STINCHCOMBE: Sir, I am not going to finish clearly in

15 the time I anticipated. I would hope to finish by

16 lunch.

17 MR PHILLIMORE: I think if that is a convenient moment to

18 take a break, we will pause now. It is 11.20 am. If we

19 could break for quarter of an hour until 11.35 am. The

20 inquiry is now adjourned.

21 (11.20 am)

22 (A short break)

23 (11.35 am)

24 MR PHILLIMORE: Mr Stinchcombe.

25 MR STINCHCOMBE: Thank you very much, sir. May I check that

1 the parties and yourselves have been handed CD 400 over  
2 the adjournment?

3 MR PHILLIMORE: We have that one, yes.

4 MR STINCHCOMBE: I'm obliged. It just relates to the last  
5 series of questions and answers, Mr Charles, and I don't  
6 know whether you recognise this document, but as  
7 I understand it, what it is, it is from the ANIS report,  
8 and it is the survey areas around the various areas  
9 around the airports we agreed were surveyed. And you  
10 recall the concern was whether the survey areas were  
11 urban or rural, and here we have them identified. Yes?

12 A. My copy doesn't seem to have the Heathrow one. Is there  
13 one missing? Because that's where most of the sites  
14 were, weren't they?

15 MR STINCHCOMBE: It may be missing. I will see if we can  
16 get hold of that. It is missing from my copy as well.  
17 There is nothing sinister about that, I can assure you.

18 A. No, no. It is just for completeness.

19 MR STINCHCOMBE: I see the National Trust have one, we can  
20 see if we can get that photocopied and added to the  
21 bundle.

22 A. So that the Inspectors have all the information.

23 MR STINCHCOMBE: We can see, can we not, so far as Gatwick  
24 is concerned, the survey areas are urban?

25 A. Yes, I feel green -- they might not want to be called

1 urban, but they are, effectively, they are on the  
2 edge of --

3 MR STINCHCOMBE: Suburban, as opposed to conurban.

4 A. Yes, they are not in the centre, but they are on the  
5 edge, yes.

6 MR STINCHCOMBE: Luton is the same, isn't it?

7 A. I think that would be described as part of the town  
8 there.

9 MR STINCHCOMBE: Part of the town. Then we have, I think  
10 that is part of the Mersey Valley, isn't it, near  
11 Stockport?

12 A. Yes, Breadbury(?) has illusions of grandeur, but in  
13 general it is, again, within the main conurbation of  
14 Manchester.

15 MR STINCHCOMBE: Then Aberdeen, that's the urban edge, isn't  
16 it?

17 A. It doesn't look as though it has any houses on it, on  
18 the one that I've ...

19 MR STINCHCOMBE: Outside of the urban edge.

20 A. Yes. But I am afraid I don't know Aberdeen at all.

21 MR STINCHCOMBE: You and I alike. So it is right, isn't it,  
22 looking at this material at least, that all those years  
23 ago there doesn't appear to have been a survey  
24 undertaken in a rural area in respect of a non-mature  
25 rural airport?

1 A. Yes, I mean, subject to the concern over Aberdeen, and  
2 most of them would not be similar to Thaxted or  
3 something like that.

4 MR STINCHCOMBE: And I don't suppose you would expect the  
5 Heathrow survey areas to be in the countryside?

6 A. I would imagine most of those are even more urban.

7 MR STINCHCOMBE: Even more urban.

8 A. We will see when we get a map.

9 MR STINCHCOMBE: We will see in due course, that is helpful.  
10 We are moving to the 57 decibel contour, the second  
11 element of your methodology. I wonder if I hopefully  
12 can take the first two questions quickly in the light of  
13 the cross-examination of Mr Hill yesterday, because to  
14 see whether we can agree these things by reference to  
15 Mr Vandermeer's report and then move on swiftly. The  
16 57 DB contour also finds its routes in the ANIS report,  
17 doesn't it?

18 A. Well, its original roots were in fact in the  
19 Wilson Committee Report in the 1960s. And that led to  
20 the study replacing NNI with Leq, and that's where the  
21 57 was equivalent to the 35 NNI which we used from the  
22 1960s to the 1990s.

23 MR STINCHCOMBE: And certainly, when Mr Vandermeer was  
24 considering the 57 DB contour, he did so by reference to  
25 the evidence in support of it at the ANIS report.

1 A. I presume so, yes.

2 MR STINCHCOMBE: I think that was what was said in the  
3 report passages that were put to you yesterday. Let's  
4 just see if we can identify them. Paragraph 21.3.32,  
5 just as a departure point rather than simply to read  
6 passages out to see what Mr Vandermeer said, a departure  
7 point for certain other questions. You recall the  
8 passage put to you yesterday --

9 A. I have the paragraph.

10 MR STINCHCOMBE: Yes.

11 "The expert witness didn't attempt to hide the  
12 deficiencies, he accepted the relationship between Leq  
13 community ...(Reading to the words)... statistically are  
14 weak, and the ANIS report had not found a rapid increase  
15 in disturbance at 57 DB LAeq, as the press note at the  
16 time had suggested."

17 And Mr Hill took you to that passage and the  
18 supporting evidence of the DFT?

19 A. That's correct, he did.

20 MR STINCHCOMBE: So we can report at least at this stage the  
21 concern expressed by Mr Vandermeer rooted in the  
22 evidence of the department in respect of that indices  
23 and that contour?

24 A. Yes, yes, that's what it says.

25 MR STINCHCOMBE: I am obliged. Right, we will leave those

1 questions aside, because I needn't repeat them insofar  
2 as they have already been asked. You will recall also  
3 I think the conclusion that Mr Hill put to you, that the  
4 weight attributed to that contour would therefore have  
5 been more than the original survey evidence would  
6 support. You recall that question?

7 A. Well, I think he was reading from one of another part of  
8 this document, where the department expert has said  
9 that.

10 MR STINCHCOMBE: And also the conclusion is the last line of  
11 the same paragraph, 21.3.32. It seemed to him that  
12 likely that the weight attached to the 57 DB contour was  
13 greater than the original research would support?

14 A. That's correct.

15 MR STINCHCOMBE: I am obliged. We needn't go back to it,  
16 but we have seen some of the criticisms of that survey  
17 and the relationship in the article which you and I have  
18 both referred to, CD 395.

19 A. That's correct.

20 MR STINCHCOMBE: I am obliged. In the light of all of that,  
21 however, what Mr Vandermeer then reported, and it's this  
22 that we are going to move on to certain questions in  
23 respect of; he then reported that, in paragraph 21.3.36,  
24 that in that inquiry, the LAeq system and the 69 contour  
25 in particular was presented only as a means of

1           indicating those areas in which annoyance were likely to  
2           occur; yes?

3    A.   That's where he reports.  I mean, I wasn't there, so  
4           I can't help you much.

5    MR STINCHCOMBE:  It is just the geographic spread.  And that  
6           there was no suggestion either that everybody within  
7           that contour would be annoyed or that nobody outside  
8           would be annoyed?

9    A.   That's correct.

10   MR STINCHCOMBE:  And you agree, would you not, that that  
11           must be the same for the 57 contour that you proposed,  
12           that not everybody inside will be annoyed, but equally  
13           there are going to be people outside it very annoyed?

14   A.   That's correct.

15   MR STINCHCOMBE:  I am obliged.  We can see, and this is the  
16           last reference I want to take you to in this report,  
17           I think, the department accepted that many complaints  
18           came from people living outside the area exposed to  
19           55 decibels, and we know that to be true in the case of  
20           this inquiry too?

21   A.   That's correct.

22   MR STINCHCOMBE:  Right.  I wonder, in the light of that, if  
23           you could look up the WHO guidelines in respect of that  
24           kind of noise environment.  You will find them either in  
25           CD 286, or you might have them more readily available in

1 SSE/12/A, our Ground Noise Proof of Evidence. Let's  
2 look at SSE/12/A, because I know that's on our list, and  
3 it's table 1, which is page 4.

4 It is SSE/12/A, page 4, table 1, paragraph 332.

5 I know this comes from a Ground Noise Proof of  
6 Evidence, but I think it is the easiest tabular form  
7 I've got to hand of the WHO guideline values. And it  
8 would be equally applicable to air noise as to ground  
9 noise, would it not?

10 A. Yes, there is no reason -- as far as I know these are  
11 general for environmental noise. I think they are.

12 MR STINCHCOMBE: Right. I am asking in the context of your  
13 acceptance at this inquiry, and the department's  
14 acceptance at the Heathrow inquiry, that there have been  
15 complaints in both inquiries from people outside of  
16 the 55 decibel contour, yes?

17 A. Yes, I would expect that.

18 MR STINCHCOMBE: You would expect that. And one of  
19 the reasons you would expect it, if we look at these WHO  
20 guideline values at least, is that at 55 DB LAeq, WHO  
21 would use that as a benchmark for serious annoyance in  
22 daytime and evening?

23 A. That's correct.

24 MR STINCHCOMBE: And at 50 decibels, moderate annoyance at  
25 daytime and evening?

1 A. That is what it says in the table.

2 MR STINCHCOMBE: Right. Are we signed up as a nation into  
3 those guidelines?

4 A. No.

5 MR STINCHCOMBE: What's the Government's acceptance or  
6 regard to those guidelines?

7 A. They had considered them, and I think somewhere in my  
8 proof I do deal with them.

9 MR STINCHCOMBE: Do you want to take us to that?

10 A. It is subject to me finding the right place, yes. If we  
11 go in the area we were looking at, because I think we  
12 were looking at absolute levels, in my proof, I tried to  
13 deal with that in section 6.3. And I think here  
14 I report on two recent decisions by Her Majesty's  
15 Government, where the question of using PPG levels or  
16 WHO guidelines was used.

17 And they advised in 634 that it should be based on  
18 PPG 24 in preference to the WHO guidelines. That is in  
19 regard to the Coventry matter.

20 MR STINCHCOMBE: 635, Doncaster as well?

21 A. Sorry, Doncaster is earlier, in fact. These he  
22 usefully(?) sees as being the other way around. So  
23 Doncaster was 2003, and I think they said the same  
24 there. Though they say there there is evidently  
25 a signature to the WHO charter.

1 MR STINCHCOMBE: That is what I wanted to ask you. The  
2 point I put to you was whether we had signed up to these  
3 matters. And you have pointed to the two decision  
4 letters which were in your proof, one of which says  
5 UK Government is a signatory to a WHO charter, which  
6 contains noise guidelines with annoyance levels lower  
7 than PPG 24.

8 A. Yes, my understanding is our Government, or we are,  
9 because they are only doing it for our benefit, they are  
10 signed up as a member of the WHO organisation. The  
11 noise guidelines were not produced as a WA approved  
12 document. They were the authors getting together and  
13 producing their best view, probably because they could  
14 not get consensus agreement among the experts they were  
15 using at the time. And that is the status of that  
16 document as far as I know. I think it says so at the  
17 start of the document. It's the outcome of the WHO  
18 Expert Task Force Meeting held in London, and  
19 Professor Berglund and the others had to produce this  
20 report and then the WHO published it.

21 MR STINCHCOMBE: I think it is right, isn't it, if you look  
22 at SSE/6/A, our proof of evidence, page 8, at the bottom  
23 of the page, you see it is noted that:

24 "The UK is a signatory of the WHO charter on  
25 transport, environment and health ... [and that] that

1 binds signatories to introduce targets that take into  
2 account recommendations contained in WHO guidelines on  
3 noise."

4 That's right, isn't it?

5 A. Yes, so my understanding is that -- that is very useful  
6 because that clarifies where we are at the minute, which  
7 is the guideline documents available, and  
8 Her Majesty's Government now has to sort out what  
9 targets it is going to use taking them into account.

10 MR STINCHCOMBE: And that would be part of the work done by  
11 ANASE.

12 A. No. ANASE is just a research study, and in line with  
13 other research studies --

14 MR STINCHCOMBE: I see. That's helpful. Before we leave  
15 the passage, they would be undertaking that work also in  
16 respect of night-time values, would not? We see that  
17 reference at the bottom of 348 also.

18 A. Yes.

19 MR STINCHCOMBE: We will come on to that in due course.

20 A. The Government did mention the WHO guidelines when they  
21 were considering the night flying restrictions.

22 MR STINCHCOMBE: Indeed. We will come on to that in short  
23 order.

24 A. Right.

25 MR STINCHCOMBE: So it is right, then, that the Government

1 is to introduce targets that take into account these  
2 recommendations?

3 A. Yes. Yes, my understanding -- we have two processes  
4 going on at the minute. One is the revision to Planning  
5 Policy Guidance Note 24, which we have been waiting for  
6 for some time. And the other matter is that under the  
7 EU noise mapping, and what is now our regulations,  
8 Her Majesty's Government by 31st July 2007 has to  
9 produce guidance on action plans for UK airports. That  
10 is the sort of second stage of the noise maps that all  
11 the airports had to produce. Then the Government  
12 produces this advice, and then the airports have about  
13 a year to say what they are going to do in light of  
14 the advice. So we are awaiting that.

15 MR STINCHCOMBE: So we are awaiting, but we are awaiting in  
16 the context of these WHO guideline values being lower  
17 than the PPG 24 levels?

18 A. Well, they are remarkably -- they are not too dissimilar  
19 in some aspects, but we wait to see what they do. They  
20 did take account, to be fair, and I know you are going  
21 to come on to it, in the night flying restrictions up  
22 to -- is it 2012, the Government is already taking into  
23 account the valuation guidelines.

24 MR STINCHCOMBE: I will come on to that. We can wait with,  
25 perhaps not bated breath, but we can wait with patience.

1           And just to finish the point, we can note, can we not,  
2           what the thresholds are here that the Government has to  
3           be working towards, moderate annoyance at 50, serious  
4           annoyance at 55.

5    A.    These are the guideline values given in the  
6           WHO document.  Whether the Government will decide to  
7           adopt them, I am afraid I can't guess.

8    MR STINCHCOMBE:  Just pausing there, the BAA were asked,  
9           were they not, by the Regulation 19 requests, to provide  
10          contours below 54 DB LAeq?

11   A.    I believe so, yes.

12   MR STINCHCOMBE:  And that would have covered this area of  
13          moderate annoyance up to serious annoyance.

14   A.    As indicated in the WHO guideline document, yes.

15   MR STINCHCOMBE:  Did BAA provide those contours?

16   A.    My understanding is they provided contours to 54, but  
17          not to 50.  That is my understanding.

18   MR STINCHCOMBE:  I see.  Even though the WHO guidelines  
19          indicate that that covers the gap between moderate and  
20          serious annoyance?

21   A.    Yes, presumably in knowledge of that.  May I just get  
22          the other document.  (Pause).

23                 I apologise, but going back to this document, it is  
24          useful because --

25   MR STINCHCOMBE:  Which document is this?

1 A. It is CD 0177, cap 725.

2 MR STINCHCOMBE: Yes.

3 A. And again if we go to appendix B, page 13.

4 MR STINCHCOMBE: I think my copy is just being bought over  
5 to me. Which page are we looking at?

6 A. We are looking at appendix B, page 13, paragraph 48.  
7 And this is the department's advice of March 2007.

8 MR STINCHCOMBE: Yes.

9 A. As you will notice at the final sentence:

10 "Contours should not be produced at levels below  
11 54 Leq 16-hours because this corresponds to generally  
12 low disturbance to most people ...(Reading to the  
13 words)... such levels is unlikely to generate accurate  
14 and reliable results."

15 So I think in considering the BAA response, I think  
16 we should bear in mind that advice from the DFT.

17 MR STINCHCOMBE: Which came out of the response, didn't it?

18 A. Well, it could well have done, yes, but that was the  
19 background to it, if that happens.

20 MR STINCHCOMBE: And equally the background at that time was  
21 the WHO guidelines which indicate moderate to serious  
22 noise?

23 A. Yes, the WHO guidelines were available at all that  
24 stage.

25 MR STINCHCOMBE: And of course that document comes from the

1 CAA, not from the DFT; doesn't it?

2 A. Yes, as far as I understand it, it's -- and they explain  
3 at the front.

4 MR STINCHCOMBE: I think you can see it on the front top  
5 right corner.

6 A. Yes, it definitely comes from the CAA, but my  
7 understanding is they are responding to the guidelines  
8 that they have been given by the DFT. But ... well, no,  
9 they haven't. Apparently they have specific  
10 instructions; it says the statutory duties on page 1 of  
11 the document. That explains the background to what  
12 I have had to produce.

13 MR STINCHCOMBE: But it's the Government, and the various  
14 departments of Government, that are obliged to bring in  
15 new guidelines reflecting and respecting and taking  
16 account of the WHO guidelines, isn't it?

17 A. They have said they will take them into account.

18 MR STINCHCOMBE: Right. Can you quickly go to SSE/6/A, the  
19 main proof on air noise, at page 9.SSE/6/A. This charts  
20 in table 1 that the land take within the various contour  
21 areas, 57 Leq and 54?

22 A. This says the land area, yes. There is no taking of  
23 land, but this is the area --

24 MR STINCHCOMBE: Covered?

25 A. Land coverage, yes.

1 MR STINCHCOMBE: Land coverage. It is right, isn't it, that  
2 there is a considerable increase as you move from 57 to  
3 54?  
4 A. That's correct.  
5 MR STINCHCOMBE: Some 73 or 72 per cent?  
6 A. That's correct.  
7 MR STINCHCOMBE: Can you tell me what the increase would be  
8 if you moved to 50 DBA?  
9 A. I can't instantly ...  
10 MR STINCHCOMBE: Any judgment what it might be?  
11 A. Logically it would be at least the numbers we have just  
12 looked at, the 72 per cent. But I honestly don't know  
13 without someone computing the contour.  
14 MR STINCHCOMBE: I should imagine it is notoriously  
15 difficult to compute, isn't it?  
16 A. That's what I am led to believe.  
17 MR STINCHCOMBE: Can you help us as to --  
18 A. I --  
19 MR STINCHCOMBE: I am sorry, I do apologise.  
20 A. I'm sorry, I gave a wrong answer there. It is easy to  
21 compute, but whether it is accurate once you have  
22 computed it is the problem. In other words, to compute  
23 at a different level, you basically tell the computer to  
24 work it out at a different level, so there is no  
25 difficulty in that. It is a question of what is the

1           significance of what you have done and how accurate it  
2           is, which I think is one of their reservations of going  
3           much lower.

4   MR STINCHCOMBE:   So it would have been easy to have done?

5   A.   It is physically possible to do, it is just a computer  
6           and you tell it what to do.

7   MR STINCHCOMBE:   Would that have indicated, had it been  
8           physically done, whether there were, for example,  
9           additional noise sensitive uses within that contour, of  
10          moderate to serious annoyance?  For example at more  
11          schools?

12  A.   It might have done.  I don't know.

13  MR STINCHCOMBE:   Do you know what the serious consultation  
14          in 2003 indicated might be the differential between  
15          a 50 and a 57 DB contour?

16  A.   I don't.

17  MR STINCHCOMBE:   You haven't heard the figures two and  
18          a half to three times larger?  You haven't seen that  
19          anywhere.

20  A.   I haven't --

21  MR STINCHCOMBE:   You don't know.  So be it.  And yet that  
22          expanded contour would have covered the area which the  
23          World Health Organisation tells us would suffer from  
24          moderate annoyance rising to serious annoyance.

25  A.   I think to be accurate, the authors of the report

1           indicated that in their report, that would be it. Ie it  
2           is not a WHO ratified document by all the Member States.

3   MR STINCHCOMBE: Can you turn up quickly SSE/19/A, which is  
4           the Health proof of evidence. Do you have that,  
5           Mr Charles?

6   A. I have it, yes.

7   MR STINCHCOMBE: Can I take you to page 17, please. The  
8           Health and Related Adverse Impacts Including Impact on  
9           Education, which you consider in your proof. Yes?

10   A. To some extent, yes, education.

11   MR STINCHCOMBE: To some extent. Perhaps we can take this  
12           quickly, looking at the ranch study, on which you  
13           make comment in your proof.

14   A. Yes?

15   MR STINCHCOMBE: Just to set the context, and, sir, I do  
16           apologise, this may involve a little bit of reading, but  
17           simply to ask some questions thereafter.

18   MR PHILLIMORE: I am sure you will keep it to the minimum.

19   MR STINCHCOMBE: I will definitely keep it to minimum, sir.  
20           You can see 724, the ranch study, we see what it was: it  
21           was a cross-sectional study involving nearly  
22           3,000 children between the ages of 9 and 10 at nearly  
23           90 schools in three countries, Netherlands, Spain and  
24           the UK.

25   A. That's correct.

1 MR STINCHCOMBE: It is right then that, as a significant  
2 study of a number of schools, a statistically  
3 significant number of students and three nations, that  
4 it will have some credibility and force?  
5 A. I hope so, because a considerable amount of public money  
6 was spent, by myself and other members who pay tax in  
7 this room, on it, so logically it will be good work.  
8 MR STINCHCOMBE: And we can see that it confirms that  
9 aircraft noise was a chronic environmental stressor, and  
10 also impaired cognitive development in children?  
11 A. That's what the authors indicated.  
12 MR STINCHCOMBE: And it did so, did it not, below the  
13 54 decibel contour?  
14 A. I believe so, yes.  
15 MR STINCHCOMBE: I am obliged.  
16 A. I haven't got the document in front of me, so ...  
17 MR STINCHCOMBE: But you have considered it because you gave  
18 evidence on it, didn't you?  
19 A. It was in the Health Impact Study, CD 21, isn't it? It  
20 is in there.  
21 MR STINCHCOMBE: I think you will find that the Health  
22 Impact Study indicated that there were four schools  
23 located within the 54 decibel contour.  
24 A. Bear with me. I'm just trying to make sure that I have  
25 replied correctly on the matter of the 50. I'm sure

1           there's a graph in here that shows it, but I can't find  
2           it instantly, which showed their reading age against  
3           noise. Then I can make sure I have given you the right  
4           answer.

5   MR STINCHCOMBE: Do take your time. (Pause).

6   A. There we are. Yes.

7   MR PHILLIMORE: Sorry, Mr Charles, can you just confirm what  
8           documents you are looking at?

9   A. Yes, I am looking at CD 21, the health impact  
10          assessment. On page 60 it gives a graph: aircraft noise  
11          against regional impairment. And I think that means  
12          I can confirm, yes, it had effects lower than 50.

13   MR STINCHCOMBE: Lower than 50?

14   A. Yes.

15   MR STINCHCOMBE: And we can see that's confirmed also by our  
16          witness, Professor Banatvala, in paragraph 725 of his  
17          proof. That is his reading of it as well. Four lines  
18          in:

19                 "The ranch study showed that children experienced  
20          cognitive defects at a lower sound pressure level, and  
21          ...(Reading to the words)... there are many schools in  
22          and around Bishop's Stortford and elsewhere that have  
23          aircraft noises above 40 DB, but less than 54."

24   A. That's correct.

25   MR STINCHCOMBE: All of those schools in accordance with the

1 ranch study run the risk of exposing their children to  
2 a noise level that would impair cognitive development?  
3 A. That is what this study would suggest, yes.  
4 MR STINCHCOMBE: Your environmental statement on noise, or  
5 the statement to which you are speaking, didn't assess  
6 it, did it?  
7 A. The environmental statement?  
8 MR STINCHCOMBE: The HIA, sorry, I do apologise.  
9 A. The HIA did, yes. It was in the HIA. That was --  
10 MR STINCHCOMBE: Did it assess --  
11 A. The schools, yes.  
12 MR STINCHCOMBE: Did it assess schools below the 54 DBA  
13 contour?  
14 A. I apologise, I didn't listen fully to the question.  
15 MR STINCHCOMBE: I probably didn't ask it accurately.  
16 A. It definitely looked at schools. Bear with me while I  
17 find out where. I'm sure it was in here somewhere.  
18 (Pause).  
19 I think if we go --  
20 MR STINCHCOMBE: Page 81, would it be?  
21 A. I found page 95.  
22 MR STINCHCOMBE: Well, let's take 95 first.  
23 A. Paragraph 6.10.6, which is -- I think, was that their  
24 conclusions?  
25 MR STINCHCOMBE: That refers to four schools, doesn't it?

1 A. That's right. Yes, "Summary of health impact", 6.10,  
2 sorry, page 95. In 6.10.6, they mention the study that  
3 you are interested in, the Ranch study, and they give  
4 their finding there, I think.

5 "There are four schools at which the reading age of  
6 children in the latter years of primary school could  
7 have the point at which they reach optimum reading  
8 potentially delayed by up to approximately two weeks."

9 MR STINCHCOMBE: That is the extent of the health impact  
10 survey on education?

11 A. Well, that is the finding of the survey that they  
12 carried out. They did actually look at other schools,  
13 because there was a map in here which had all the  
14 schools in and the noise contours.

15 MR STINCHCOMBE: Before we go there, I don't want to stop  
16 you going there, let's just see if we can identify those  
17 four schools and what they are. Go back to  
18 the Professor's proof at 725.

19 "The HIA states that there are only four schools  
20 ...(Reading to the words)... located within the 54 DB  
21 contour for both 25 and 35 MPPA."

22 Those are the four schools?

23 A. I presume so, yes.

24 MR STINCHCOMBE: Read on in the paragraph and tell me  
25 whether you disagree with this:

1           "However, the Ranch study showed that children  
2           suffered cognitive defects at a lower sound pressure  
3           level ... "

4           That is what I have put to you already:

5           " ... and the HIA itself draws attention to the fact  
6           that there are many schools in and around Bishop's  
7           Stortford and elsewhere that have aircraft noise  
8           exposures above 40 DB Leq but less than 54."

9           So we know there are many more than the four schools  
10          there referred to which have this cognitive impact.  
11          Where are they assessed?

12        A. My understanding is, on the matter of schools, we have  
13          had some discussion with schools, local authorities, ie  
14          Essex and Hertfordshire and UDC, and this has led to  
15          further consideration in detail of the Ranch study, and  
16          has led to an agreement between the parties, which is  
17          given in BAA 20.

18        MR STINCHCOMBE: It has not been agreed by SSE, has it?

19        A. I am afraid I don't know whether it has been agreed by  
20          SSE. My understanding is that somewhere in this  
21          document it clarifies that there is no cognitive effect  
22          on primary schoolchildren. Do you wish me to find  
23          the --

24        MR STINCHCOMBE: Well, I know full well what the statement  
25          of common ground says, but it is a statement of common

1 ground between different parties, and I am asking some  
2 questions about it.

3 A. Right. Well, that's what we have agreed with the local  
4 planning authorities and the education authorities.  
5 Therefore -- I think you are asking, do I agree there  
6 are cognitive defects or effects, and the answer must be  
7 no, because we have agreed there isn't any.

8 MR STINCHCOMBE: In spite of the findings of the Ranch  
9 study?

10 A. Taking into account detailed looking at the Ranch study,  
11 yes.

12 MR STINCHCOMBE: It is right, isn't it, that the WHO  
13 guidelines are always protective of vulnerable groups?

14 A. Yes, they take everybody into account, yes.

15 MR STINCHCOMBE: So for example in noise protection of  
16 the elderly?

17 A. I presume so, but to be fair, they are general  
18 guidelines, so they can't take into account every  
19 circumstance.

20 MR STINCHCOMBE: And the young?

21 A. I presume so, yes. That's the intention, but this is  
22 rather difficult to do, isn't it.

23 MR STINCHCOMBE: I see. Including the young with special  
24 educational needs or with hearing impairment problems?

25 A. I think that's strongly affected some of

1 the considerations of schools in recent years in the UK  
2 in particular. They do take that into account, because  
3 the idea is to put everybody into mainstream schools, so  
4 mainstream schools must be suitable for everybody.

5 MR STINCHCOMBE: I am obliged. I can make submissions from  
6 the answers you have given to me.

7 Before we come on to night noise, and I know that is  
8 something that we flagged up as an area which we have to  
9 cover, I just wonder if I can ask you, since we have  
10 looked at these land areas, at these various contours,  
11 see whether I can ask you a question about it.

12 What land area cap do you propose for the 57 Leq?

13 A. I believe the client is suggesting 37.7.

14 MR STINCHCOMBE: And the basis of that cap is what?

15 A. I understand the basis is that there have been various  
16 contours produced, and that covers the range of  
17 the forecast that has currently been produced.

18 MR STINCHCOMBE: That is predict and provide, isn't it?

19 That's not mitigation at all.

20 A. My understanding is that currently the airport is  
21 restricting to an area of -- is it 43.9? So my  
22 understanding is this is considerably less than it is  
23 today.

24 MR STINCHCOMBE: I'm sorry, I apologise, but that is simply,  
25 is it not, predicting what land area cap you would need

1 to accommodate a provision that you are applying for.

2 A. That would be logical, yes, if you are asking for  
3 planning permission --

4 MR STINCHCOMBE: It is predict and provide.

5 A. -- you obviously would not ask for less than you've  
6 asked for, otherwise it would be a totally inconsistent  
7 planning application.

8 MR STINCHCOMBE: So it is predict and provide.

9 MR HUMPHRIES: Sir, predict and provide is a term that  
10 relates to something completely different. We have  
11 offered a condition which controls the impacts to those  
12 that have been assessed in the application we are  
13 making. We are not predicting something and then  
14 providing.

15 MR PHILLIMORE: I understood the question and the answer  
16 given. Is there something you want to --

17 MR STINCHCOMBE: I will move on. Sir, if you have  
18 understood the question, that's fine.

19 That's a provision for 2014, isn't it, that is being  
20 proposed?

21 A. I believe so, yes.

22 MR STINCHCOMBE: Is there any thought being given -- has any  
23 thought been given to tighter contours in the  
24 intervening period up until that date?

25 A. Not that I'm aware of, but I'm not totally involved with

1 all the discussions, because the parties meet and I'm  
2 not always asked to attend the meetings, so I might not  
3 know.

4 MR STINCHCOMBE: The only proposal so far as I understand it  
5 is for a single cap at the overarching figure of  
6 35 MPPA.

7 A. I believe so, yes. That is my understanding.

8 MR STINCHCOMBE: That is helpful. I can make submissions on  
9 that as well.

10 Quickly on to night-time noise. Again, if we can  
11 firstly look at your proof on night-time noise, where  
12 you quote from PPG 24. I think it is page 18, isn't it?

13 Q. Yes, that's correct. However, table 4 on that page  
14 isn't correct on the grounds that where it says "Night  
15 noise", in the table on the left it says "Leq 16 hours",  
16 and that should read eight.

17 MR STINCHCOMBE: That should be eight?

18 A. Yes, sorry.

19 MR STINCHCOMBE: But it is still an averaging index, isn't  
20 it?

21 A. Yes.

22 MR STINCHCOMBE: This time over the eight night-time hours?

23 A. Yes, 11 o'clock until 7 o'clock in the morning.

24 MR STINCHCOMBE: Do average noise events wake people up?

25 A. No, not usually.

1 MR STINCHCOMBE: No. They get woken up by a peak noise  
2 event, don't they?  
3 A. That's my understanding, yes.  
4 MR STINCHCOMBE: I wonder in the light of that if you could  
5 look at the WHO guidelines for noise awakening, and you  
6 will probably find that again at 12 A, SSE/12/A. The  
7 same table, page 4.  
8 A. I have the table.  
9 MR STINCHCOMBE: People get woken up or sleep disturbance at  
10 night time, 45-decibels indoors, a 60-decibel level  
11 outdoors with windows open.  
12 A. Yes. The table seems to have the -- sorry, I am  
13 misreading --  
14 MR STINCHCOMBE: If it is not an accurate summary then do  
15 correct me. I'm just trying to find what are the  
16 appropriate. WHO guidelines for Lmaxs sleep  
17 disturbance.  
18 A. Yes, bear with me. It was purely that one is Leq and  
19 one is LAmx, but subject to that, the figures you  
20 quoted me are straight out of the table.  
21 MR STINCHCOMBE: I wonder if we could look at CD 286  
22 quickly, just to see what it says about these impacts.  
23 Bear with me, I haven't got my copy, so you will have to  
24 wait until I find it.  
25 A. I am hoping you will tell me which page, because it is

1 a huge document.

2 MR STINCHCOMBE: Yes, paragraph 423. We may find it

3 quicker, actually. I may have it somewhere else.

4 MR BOYLAND: We only have the executive summary in CD 286.

5 MR STINCHCOMBE: Do bear with me, sir. I will see whether

6 I can find a better reference.

7 A. It is a core document.

8 MR STINCHCOMBE: Sir, perhaps if you look at proof 6A.

9 I have found an alternative source, sir; if you look at

10 SSE/6/A, this may be a better place to come to the

11 quote, and then we can check it against the document in

12 due course. Paragraph 328, page 4. Have you found that

13 paragraph, 328?

14 A. Yes, I have the paragraph.

15 MR PHILLIMORE: We are not quite there.

16 MR STINCHCOMBE: I do apologise, sir. It is SSE/6/A,

17 page 4.

18 MR PHILLIMORE: Thank you.

19 MR STINCHCOMBE: I hope this is an accurate quote from the

20 document I was going to take you to. Paragraph 4.2.3.

21 "If the noise is not continuous, Lmax or SEL are

22 used to indicate the probability of noise induced

23 awakenings. Effects have been observed at the

24 individual ...(Reading to the words)... consequently it

25 is important to limit the number of noise events with

1 a Lmax figure exceeding 45-decibels and the guidelines  
2 should be based therefore on a combination of  
3 values ..."

4 And it gives the Leq as eight hours, and Lmax?

5 A. Yes, I can confirm that that's the same as in the WHO  
6 full document, subject to the fact that it is part of  
7 the paragraph.

8 MR STINCHCOMBE: I am obliged.

9 A. But it is the same words.

10 MR STINCHCOMBE: And we can read on rather than hopefully  
11 necessarily look up the document in its entirety at this  
12 stage, although we will come back to it in just a little  
13 while.

14 "The point is echoed by the DFT in its June 2005  
15 night flying restrictions CD 115. Research has  
16 suggested that the incidence of sleep disturbance is  
17 especially associated with the loudest noise events."

18 A. That's correct.

19 MR STINCHCOMBE: Right. Where in your proof do you assess  
20 the sleep disturbance of aviation by reference to the  
21 loudest noise events and Lmax figures?

22 A. I think I don't. I don't, as far as I understand it.

23 MR STINCHCOMBE: Well you wrote your proof, didn't you?

24 A. I did write the proof.

25 MR STINCHCOMBE: I take it you understand your proof?

1 A. My understanding is it is not in my proof.

2 MR STINCHCOMBE: It is not in your proof.

3 A. In terms of SEL footprints, and that is because my proof  
4 relates to my task, which was to present the information  
5 in the environmental statement. I am not aware there is  
6 any noise footprints in the environmental statement.

7 MR STINCHCOMBE: Just pausing there, where does the  
8 Inspector find evidence from BAA at this inquiry as to  
9 the sleep disturbance impact of night noise caused by  
10 the peak noise events of aviation? It is not in your  
11 evidence, is it?

12 A. No, because my evidence was reporting what was in the  
13 ES.

14 MR STINCHCOMBE: I see.

15 A. And therefore if it wasn't in the ES, I wouldn't have  
16 reported it.

17 MR STINCHCOMBE: So it's not there?

18 A. Well, bear with me, I just need to check the HIA. That  
19 definitely looked into night noise. But I think it used  
20 the same relationship that Mr Turner used to do with  
21 percentage reported sleep disturbance as a function of  
22 Leq, I believe. But bear with me, sir.

23 Yes. As far as I understand it, they used the Leq  
24 night noise.

25 MR STINCHCOMBE: So nothing on Lmax figures?

1 A. Not that I'm aware of.

2 MR STINCHCOMBE: Even though research has suggested that  
3 sleep disturbance is especially associated with the  
4 loudest noise events?

5 A. That's right. My understanding is that because Her  
6 Majesty's Government had actually resolved the night  
7 policy for this airport until 2012, taking all of these  
8 things into account, presumably, that was the main  
9 thrust of the evidence.

10 MR STINCHCOMBE: Well that is a very grave weakness, isn't  
11 it, in the noise assessment?

12 A. I think in practical terms, no. In paper terms, it  
13 would have been nice if there was some in.

14 I say "in practical terms" because effectively, if  
15 you consider the question of night noise, the thing is  
16 to address the night noise with the noise mitigation  
17 scheme. And the airport has in place a noise mitigation  
18 scheme, which we can see if we go to my appendix.

19 Sorry, if we go to BAA 2/D, we can see the eligibility  
20 scheme for the people who live around Stansted Airport.

21 MR STINCHCOMBE: Eligibility for what?

22 A. Soundproof. Because we are talking now of indoor, at  
23 night. So we are interested in: are people being  
24 adequately protected so that their sleep can take place.

25 MR STINCHCOMBE: With windows open?

1 A. Well, with windows open, if they want to choose to open  
2 the windows, yes. If they want to --

3 MR STINCHCOMBE: And what would happen then?

4 A. Well, the insulation would obviously be less if the  
5 windows were open, depending on what form of treatment  
6 they had.

7 MR STINCHCOMBE: Of course. Thank you very much.

8 A. But if we consider figure 9 then we will see the  
9 eligibility covers quite a large area, and the black  
10 lines on the figure relate to the 90 SEL footprints, ie  
11 the things you were seeking that were missing, for the  
12 noisiest aircraft. The MD11, the one which we see every  
13 day which sits over there and goes off, a cargo plane.  
14 So the eligibility does address the matter of those  
15 exposed to the noisiest events at night.

16 If we take the smaller aircraft, the ones that we  
17 see all the time, the easyJets and the Ryan Airs, their  
18 noise footprint would be much less than the MD11, so any  
19 effect of night noise, using the Government's criteria,  
20 would be taken fully into account in the current six(?)  
21 scheme.

22 MR STINCHCOMBE: But I see nothing of any Lmax figure for  
23 any night-time hours in your proof of evidence.

24 A. Not for night-time, no.

25 MR STINCHCOMBE: Thank you very much.

1           Just before we leave night-time, let's see if you  
2           can clear something up for us which we are confused by,  
3           and it will involve a quick dip I am afraid into  
4           ES Volume 16, the traffic data volume, which is CD 19,  
5           just to agree some background information, and then  
6           there is a simple question which I would like your  
7           answer on.

8           You have CD 19 in front of you. Can you turn to  
9           paragraph 10.3.3, please, and table 29. I think it is  
10          page 23. Do you have it there?

11         A. I've got -- yes, I've got the document.

12         MR STINCHCOMBE: Right. That is a table for average  
13          aircraft movements per day within the LDN period, and  
14          it's broken down into LDN day, LDN evening, LDN night  
15          and LDN total, yes?

16         A. Yes.

17         MR STINCHCOMBE: LDN night, is that an eight hour night?

18         A. It is.

19         MR STINCHCOMBE: So it is not a six and a half hour, it's an  
20          eight hour night?

21         A. I believe it is -- I'm sure it is the eight hour night.

22         MR STINCHCOMBE: On which Government is currently  
23          consulting? It has been consulting, hasn't it, moving  
24          to an eight hour night?

25         A. No, there's no consultation going on at the minute.

1 MR STINCHCOMBE: Okay. We will come on to that.

2 A. The LDN night and that matter relates to the EU noise  
3 (inaudible).

4 MR STINCHCOMBE: I understand that. Let's take it in  
5 stages. This relates to the EU, it is an eight hour  
6 period, and we can see the number of movements which are  
7 here assumed for those hours for the various years.  
8 2004, then 25 baseline and then 35.

9 A. That's correct.

10 MR STINCHCOMBE: I am obliged. I wonder if you can agree  
11 with me that during those eight hours at night, if we  
12 made the relevant multiplier, adding them together and  
13 multiplying them by 365, do you have a calculator with  
14 you?

15 A. Yes, I have.

16 MR STINCHCOMBE: I wonder if you could agree the projections  
17 as to what numbers of night movements we are  
18 contemplating by these calculations. First of all for  
19 2004. We think that is just over 22,000.

20 A. Let me just do it, and then we can agree it, and then  
21 it's out the way.

22 MR STINCHCOMBE: Yes.

23 (Pause)

24 A. 22,082.

25 MR STINCHCOMBE: 22,082. That's correct, that's what we

1           have. Can you do the exercise for 25 baseline? We  
2           think that is 26,711.

3   MR HUMPHRIES: Don't we have the figures in the previous  
4           table?

5   MR STINCHCOMBE: More rounded. There we go. 26,700.

6   A. You mean I'm redundant again?

7   MR STINCHCOMBE: Well, I have done that exercise as well, so  
8           I am doubly cross. And we can see the figure beneath  
9           that of 30,600, again rounded.

10   A. Right. It is over the page, is it?

11   MR STINCHCOMBE: It is my -- I do apologise. So we can see  
12           the figures going up from 22,000 night movements in  
13           2004, 26,700 under the 25 MPPA case and 30,600 in the  
14           35 MPPA case.

15   A. That's correct.

16   MR STINCHCOMBE: Right. I wonder if I can now take you,  
17           just so that I can understand something which has  
18           confused me at present, to CD 115.

19   MR PHILLIMORE: Could you tell me what 115 is?

20   MR STINCHCOMBE: Yes, this is stage 2 of the consultation  
21           that did take place on eight hour night restrictions.  
22           I think the consultation to which I am referring did  
23           take place but some two years ago, is that right?

24   A. Bear with me. I am not in the document. This is not  
25           one you listed, is it?

1 MR STINCHCOMBE: CD 115.

2 A. Right.

3 MR STINCHCOMBE: Sir, was it on your list?

4 MR BOYLAND: Well, we have it out, so we assume it was.

5 Whether it was on the original list rather than the

6 supplementary one --

7 MR STINCHCOMBE: I think it was on the supplementary.

8 I think you may have corrected it, so I do apologise if

9 we have led anyone into confusion.

10 A. I have 118, the eventual restrictions. But I have the

11 document.

12 MR STINCHCOMBE: You have the 115.

13 A. Yes.

14 MR STINCHCOMBE: So stage 2 of the consultation on night

15 flying restrictions at Heathrow, Gatwick and Stansted,

16 yes?

17 A. I have the document.

18 MR STINCHCOMBE: I just wonder if you can go to page 40,

19 paragraph 7.48. These are the movements, the limits and

20 noise quotas being proposed, then, if they were to

21 extend the night hours to the eight hours in accordance

22 with the European treatise, yes?

23 A. That's correct.

24 MR STINCHCOMBE: If you look at Stansted, the 2012, that is

25 three entries down, 7,100 winter, 14,020 summer.

1 A. That's correct.

2 MR STINCHCOMBE: A total of 21,120.

3 A. That's correct.

4 MR STINCHCOMBE: So that proposal then is a total number of  
5 night movements of just over 21,100, when the  
6 application contemplates more than 30,000.

7 A. That is what it appears, yes.

8 MR STINCHCOMBE: Something approaching a 40 per cent  
9 increase.

10 A. Definitely an increase, yes.

11 MR STINCHCOMBE: I see. Can you explain why?

12 A. No, not instantly.

13 MR STINCHCOMBE: I am obliged.

14 A. But if it would help, I can try and put in an answer for  
15 the numbers, if that would help.

16 MR STINCHCOMBE: That would help. Before we leave this  
17 document, just move on to pages 96 and 97, if you might.  
18 96, and just to remind ourselves of the concerns to look  
19 at Leq and Lmaxes or SEL figures, if you see  
20 paragraph 60, four lines from the bottom:

21 "We have no robust basis on which to interpret  
22 contours ... "

23 This is Leq eight hour contours, for the night  
24 hours.

25 "We have no robust basis on which to interpret these

1 contours in terms of precise levels of noise and/or  
2 sleep disturbance but they can be used to set  
3 objectives."

4 So therefore no robust analysis of LEQs leading to  
5 sleep disturbance. That's right, isn't it?

6 A. That's correct.

7 MR STINCHCOMBE: Then paragraph 61:

8 "The effects of night flying upon individuals  
9 relating to sleep disturbance and annoyance has been  
10 extensively researched. Sleep disturbance has been  
11 found to occur to a statistically significant extent in  
12 response to aircraft noise events above 90 DB or SEL."

13 So again pointing to the maximum noise events as  
14 being the statistically relevant ones?

15 A. I think we agreed that.

16 MR STINCHCOMBE: That's helpful. So much for 57 DB daytime  
17 and the Leq for night-time.

18 We come to the third and final stage of  
19 the cross-examination, and that is in respect of your  
20 research, in that we have this threshold of  
21 perceptibility on the Leq of 3 decibels. I think you  
22 probably made the point at several stages in your proof,  
23 but I have the reference at 6.4.4 of your proof. You  
24 say, referring to PPG 24:

25 "The Government advises that a change of 3 DBA is

1           the minimum perceptible under normal conditions."

2    A.   That's correct.  I think that's ...

3    MR STINCHCOMBE:  Is that the glossary of PPG 24?

4    A.   I believe so, yes.  Let me just check.

5    MR STINCHCOMBE:  That is CD 110, so you can check the

6           glossary.

7    A.   That's correct, it is from the glossary.  This document

8           is not paginated.  It is five or six pages in.

9    MR STINCHCOMBE:  In the light of that, can you quickly turn

10           up CD 393, please.

11   A.   Yes, I have it.

12   MR STINCHCOMBE:  This is a letter from Mr Rickaby, we recall

13           him, he was a co-author of that article we looked at,

14           the Scientific Officer at London Borough of Hillingdon,

15           and it is to Mr Joseph of the Air Environment Quality

16           Division of the Department of Environment Transport in

17           the Regions, as it then was, in 1998.

18   A.   That's correct.

19   MR STINCHCOMBE:  You see he is writing with a query

20           specifically in respect of that glossary.

21   A.   Indeed.

22   MR STINCHCOMBE:  "I am writing with an enquiry relating to

23           glossary PPG 24.  My question concerns the

24           interpretation of the statement under the heading 'DBA'

25           that a change of 3 DBA is the minimum perceptible under

1 normal conditions."

2 So he is exactly on point, the same issue of  
3 interpretation with which you have been concerned.

4 A. Indeed. My understanding is this was probably again  
5 related to the Stansted inquiry -- sorry, the Heathrow  
6 inquiry -- because there again there was a question of  
7 a development of an airport which would lead to some  
8 decibel change in the noise level. Presumably there was  
9 an argument about its significance.

10 MR STINCHCOMBE: Let us see what the question was, what the  
11 question was and how it was considered thereafter by the  
12 inspectorate.

13 "Am I correctly interpreting this as stating that  
14 3 DBA is the minimum perceptible change in a sound  
15 level, eg the instantaneous sound level of the heavy  
16 road traffic or the pneumatic drill referred to in the  
17 glossary rather than the minimum perceptible change in a  
18 noise index, eg the noise index ...(Reading to the  
19 words)... 18 hours of road traffic noise or the noise  
20 index LAeq 16H determined over 16 hours for  
21 transportation noise or overall ambient noise."

22 So he is asking the question as to whether this  
23 threshold of perceptibility applies to a single noise  
24 event or to an LAeq 16 hour figure, in terms?

25 A. In effect, yes. He was asking that.

1 MR STINCHCOMBE: And you have seen the reply, haven't you,  
2 which is overleaf? You have read this reply, haven't  
3 you?

4 A. I have read it once, yes.

5 MR STINCHCOMBE: Let us go through, it is a short letter, we  
6 can read through it and make sure we don't miss anything  
7 of importance out.

8 "Thank you for your letter. Laboratory experiments  
9 have shown that we are able to detect relatively small  
10 changes in sound levels, of less than 1DB in some cases,  
11 for specific stimuli under controlled conditions. The  
12 minimum difference in level that we are able to detect  
13 is affected by a variety of acoustical factors such as  
14 frequency, loudness, fluctuation of the sound as well as  
15 psychology and pathology of the individual. The PPG is  
16 not concerned with laboratory situations however and  
17 attempts to take reasonable account of how these factors  
18 are likely to affect people's perception in real life.  
19 It is important to note the PPG refers to 3 DBA as the  
20 minimum perceptible change in level rather than  
21 difference in level at normal conditions. The guidance  
22 is trying to take account of the everyday use to which  
23 it will be put and the characteristics of noises we may  
24 typically encounter to give a general feel for the  
25 meaning of decibel values to the typical users."

1           This is looking at the real world. Taking it out of  
2           the laboratory and putting it in the real world.

3           "In this context, 3 DBA as a rule of thumb minimum  
4           perceptibility change is reasonable, although one may  
5           legitimately question such a rule's usefulness."

6           Do you see that?

7    A. Yes, I saw that.

8    MR STINCHCOMBE: "Indices such as LAeq 16 hour long term  
9           averages are only useful as broad indicators of likely  
10          community annoyance or disturbance. All the details of  
11          the sounds perceived during the average time period and  
12          other factors likely to affect their perception are  
13          necessarily obscured."

14          That is highly localised impacts, isn't it?

15    A. That's what he is saying.

16    MR STINCHCOMBE: Yes, and it is the same concern that was  
17          expressed in Manchester and by Mr Vandermeer, that it  
18          obscures the details of the sounds perceived and other  
19          factors likely to affect their perception? Yes?

20    A. In essence, it's very similar, isn't it?

21    MR STINCHCOMBE: "Therefore, looking at the usefulness of  
22          applying this rule, it is unwise therefore in any given  
23          case to expect a 3 DB change necessarily to reflect the  
24          minimum detectable change in the value of such an  
25          index."

1           So we are looking at index here, Leq 16 hours,  
2           unwise to expect it necessarily to reflect the minimum  
3           detectable change. That's what he says?  
4   A. That's what he is saying.  
5   MR STINCHCOMBE: And you agree with that, it would be  
6           unwise, wouldn't it?  
7   A. Yes, I have said that it would be perceptible,  
8           personally.  
9   MR STINCHCOMBE: But it's unwise, isn't it, to believe that  
10          it would be the threshold of perceptibility, looking at  
11          all the matters that this man has told us?  
12   A. My understanding is he doesn't say -- the sentence,  
13          written clearly by a civil servant, says, "Necessarily  
14          to reflect", so he doesn't say you can't use it.  
15   MR STINCHCOMBE: Right.  
16   A. It has got reasonable words about -- "unwise to  
17          necessarily reflect".  
18   MR STINCHCOMBE: Well let's see how he goes --  
19   A. A lawyer will know how to interpret these sentences.  
20   MR STINCHCOMBE: Let's see how he goes straight to that lack  
21          of wisdom, and let's see how it was applied in rather  
22          more robust (inaudible) terms by the inspectorate. He  
23          writes on:  
24                 "Therefore an increase of say 3 decibels in the LAeq  
25          16-hour level due to noise on a road would imply

1 something like a doubling of traffic flow, just as it  
2 would in respect of aviation."

3 Yes?

4 A. That's correct. He is considering this question by  
5 reference to road noise as well as air noise.

6 MR STINCHCOMBE: So he is looking at whether it is wise or  
7 not to apply it, and he says:

8 "An increase in 3 DB in the Leq level due to noise  
9 from a road would imply something like a doubling of  
10 traffic flow, all other things being equal."

11 Then he says this, does he not:

12 "It might be reasonable to argue that people are  
13 quite likely to detect a moderate change in the traffic  
14 flow if such a change happened abruptly and by extension  
15 might claim to perceive an increase in the noise level  
16 where the LAeq level changed by less than 3 DB."

17 In terms, in terms he advises, does he not, that  
18 where the Leq increase is by 3 DB because of a change in  
19 traffic flow, then it would be clearly perceptible?

20 A. Well, that was the advice in 1998. If you go to my  
21 evidence, if we go to the appendices, beginning at A2/C,  
22 and if we go to appendix -- sorry, appendix D, we have  
23 the latest advice from the Department for Transport  
24 dealing with roads. This I referred to in my proof of  
25 evidence in 6.4.4.

1           If you go to that appendix, to some extent the same  
2 matter is addressed on the significance of changes in  
3 noise levels. And if you read 1.15, it deals with the  
4 question of:

5           "For freely flowing traffic, a difference of about  
6 3 DB in noise levels is required before there is  
7 a statistically significant change in the average  
8 assessment of nuisance. The assessment of nuisance  
9 however could still be affected even if there was only  
10 1 DB in noise level if the change is associated with  
11 changes in the view of traffic, or if the change occurs  
12 suddenly."

13           Now, "changes in the view of traffic", presumably he  
14 has in mind when you are building a new road and you  
15 suddenly see a road where you didn't see it before,  
16 which isn't the case here where we are just talking  
17 about more movements at this airport using the same sort  
18 of aircraft as we have today.

19           And if you take his second qualification, "If the  
20 change occurs suddenly", my understanding is it's not  
21 envisaged, but Mr Maiden will be able to tell you more  
22 about that when he gives his evidence, as to whether  
23 a growth of this sort here is going to occur suddenly.  
24 My understanding is it is a uniform growth.

25           So that's the latest advice I could get hold of,

1           which is the special group set up by Her Majesty's  
2           Government to advise at the Department for Transport on  
3           traffic analysis guidelines. And we think they are  
4           going to do one on air noise as well some time.

5   MR STINCHCOMBE: Well, let us just see if we can agree the  
6           differences between air noise and free flowing traffic.  
7           What we are talking about here are 170 additional highly  
8           noisy movements from aviation.

9   A. Well, I don't like perhaps your adjectives, but we're in  
10          that sort of number of increased aircraft movements, by  
11          all means.

12   MR STINCHCOMBE: Each one of which will be a separate noise  
13          peak event.

14   A. Yes, just like a road.

15   MR STINCHCOMBE: And each one at night might be waking  
16          people up.

17   A. There will be very few woken up by the noise we are  
18          talking about here.

19   MR STINCHCOMBE: Let us have a quick look at how the  
20          Inspector dealt with it when it came before him. Can  
21          you look at CD 394, paragraph 30. Have you seen this  
22          before, Mr Charles?

23   A. Yes, I tried to read it last night, but I must admit,  
24          I was not working well. What was missing was -- I could  
25          have done with a plan, so I could know the juxtaposition

1 of this -- because this is a B & Q store or something?  
2 MR STINCHCOMBE: Don't worry about that, we are dealing with  
3 the principle here. Let's have a look at what he says.

4 Paragraph 30:

5 "The core argument of the appellants was that such  
6 increase in noise levels would not be perceptible  
7 because the glossary of PPG 24 states that a change of  
8 3 decibels was the minimum perceptible change in sound  
9 level under normal conditions, and that this approach  
10 had been accepted in many decision letters on other  
11 appeals. However, for the Council it was argued that  
12 the PPG 24 reference is to a particular sound level .and  
13 not to a change in sound index, in which necessary  
14 averaging masked the individual noise events. I find  
15 the exchange of correspondence ...(Reading to the  
16 words)... compelling evidence that the Council's  
17 interpretation is currently shared by the Department."

18 That is what the Inspector then found?

19 A. That is what this Inspector found, and he pointed out --  
20 and I presume you will in fairness be providing the  
21 other decision letters which said just the opposite,  
22 which he refers to in the first sentence you read out.

23 MR STINCHCOMBE: And with which he obviously disagreed in  
24 the light of this correspondence.

25 A. Yes, one inspector had disagreed with what he says

1           several other inspectors had done.

2   MR STINCHCOMBE:  They didn't have this correspondence before

3           them, did they, Mr Charles?

4   A.  I don't know what they had in front of them.

5   MR STINCHCOMBE:  I am obliged.  Thank you very much indeed.

6   MR PHILLIMORE:  Thank you Mr Stinchcombe.  Are there other

7           parties here that will be giving evidence to the inquiry

8           about any other questions that have not been put to

9           Mr Charles that they wish to ask?

10           Thank you very much.  Mr Humphries.  Before we

11           start, can you give me any idea how long you might

12           require for re-examination?

13   MR HUMPHRIES:  Sir, I can give you an idea, but there is

14           absolutely no guarantee that it will be accurate.

15           I would think something of the order of an hour and

16           a half.  Now, I was asked that question a while ago by

17           Mr Osborn and I said an hour and 15 minutes, but

18           obviously there was still then quite a lot of

19           cross-examination.

20   MR PHILLIMORE:  I think if we take the lunch adjournment

21           now, it is 12.50 pm.  Perhaps after lunch you might be

22           able to give me a more accurate time estimate.

23   MR HUMPHRIES:  Sir, you travel in hope.  I admire that.

24   MR PHILLIMORE:  If we break now, please, until 1.50 pm.

25   (12.50 pm)

1 (The Luncheon Adjournment)

2 (1.50 pm)

3 MR PHILLIMORE: Good afternoon. If we can now resume,  
4 please. Mr Humphries.

5 Re-examination by MR HUMPHRIES

6 MR HUMPHRIES: Good afternoon, Mr Charles.

7 A. Good afternoon.

8 MR HUMPHRIES: Sir, I think this time, and I can't always  
9 promise always to have the number, but I think it is  
10 21 points. I needed something to do over lunch.

11 Sir, the first relates to the reference, Mr Charles,  
12 to the Coventry decision. You have mentioned that, and  
13 you were also, of course, a witness at that, and I don't  
14 think the document has become an inquiry document yet,  
15 and we will all be able to read it in due time. But can  
16 you just assist the Inspectors with the approach that  
17 the Secretary of State took in his decision letter as to  
18 the issue which has arisen in this inquiry,  
19 Mr Stinchcombe, for example, on the applicability of  
20 PPG 24, thresholds as opposed to WHO thresholds?

21 A. The decision letter clarifies, as for the other ones  
22 that I mentioned in my proof, that we should take  
23 cognisance of the PPG 24 criteria as opposed to the WHO  
24 ones.

25 MR HUMPHRIES: And does it help us at all on the issue of

1           whether the PPG 24 criteria are of any assistance to  
2           decision-making where one is considering an increase in  
3           airport capacity as opposed to bringing new residential  
4           development to a noisy area?

5    A.   I think, without having in front of me the decision  
6           letter, which I only saw on Friday, I can't recollect  
7           that part of the letter, so I would be wrong to say.  
8           I would envisage it would be consistent with the two  
9           that are already given in my proof of evidence with  
10          regard to that, and the applicability, ie using the  
11          PPG criteria in what was originally described as the  
12          incorrect way, where you consider them with regard to  
13          noisy development as well as the other way around when  
14          trying to decide land suitable for residential  
15          development.

16   MR PHILLIMORE:  Is it envisaged putting that one in as  
17          a core document?

18   MR HUMPHRIES:  Sir, I imagine it will.  I think when it was  
19          mentioned yesterday, and perhaps everyone thought  
20          someone else was going to do it, it was sort of  
21          envisaged it was going to go in, and when I looked a few  
22          minutes ago and checked, it hadn't been.  I obviously  
23          have a copy and Mr Hill has a copy, but certainly ...

24   MR HILL:  Sir, may I say, I tried to ensure that it was  
25          going to available today, copies were made at Uttlesford

1 offices in Saffron Walden. Unfortunately, because of  
2 problems on the N11, it was not possible to bring them  
3 down, so they are still there. Copies have been made,  
4 so I wouldn't advise anyone to make more copies. We  
5 will try and bring them down for tomorrow.

6 MR HUMPHRIES: Sir, absolutely fine. You can read it as  
7 well as anyone else.

8 MR PHILLIMORE: At our leisure.

9 MR HUMPHRIES: At what is laughingly called, sir, your  
10 leisure.

11 Point number 2, and again, Mr Charles, with a lot of  
12 these points, not necessarily this one, I have tried to  
13 amalgamate where points have arisen in both of the  
14 cross-examinations, I have tried to pull things  
15 together.

16 But point number 2 does relate to things you were  
17 asked by Mr Hill, and he got you, very properly, to  
18 identify the primary assessment, which is the comparison  
19 between the 25 MPPA case and the 35 MPPA case, and in  
20 ATM terms, 264,000 ATMs versus 202,000 ATMs. And you  
21 agreed the other assessments you have carried out are  
22 secondary. I just want you to consider those other  
23 assessments. There are two principal ones in your  
24 evidence and your rebuttal. You made comparison with  
25 the AN 1 contour as currently imposed, and you also make

1 comparison with the permitted level of ATMs under the  
2 current 2003 planning permission.

3 Now, just assist the Inspectors: what aid or  
4 assistance do they get from those secondary comparisons?

5 A. If we take the first one, which was what I, in my terms,  
6 would describe comparison with the noise budget that was  
7 set in 2003 at this airport by the local authority,  
8 taking into account all their knowledge of the local  
9 area, I see that as an important comparison, because  
10 there you have people who know the area thoroughly, they  
11 decided that that particular level of noise was  
12 acceptable, albeit to accommodate a further 10 million  
13 passengers; and in my attempt to find consistent logic,  
14 as we are now asking for another 10 million passengers,  
15 but with less noise, I can't understand why I am even  
16 here at this inquiry, or why we are having this inquiry  
17 in noise terms.

18 If we take the permitted ATMs, my understanding is  
19 the change in permitted ATMs is very small. Between --  
20 is it 241 and 264? Which, although I have been  
21 criticised over the last day and a half about the --  
22 considering the change in noise, that really is a very  
23 minute change in the number of movements. And I would  
24 doubt, if I went to a local person and said, "Oh,  
25 wonderfully I am going to save you 23,000 movements."

1 And they would kiss me and say, "Oh, Messiah, you have  
2 solved the problem."

3 I would imagine if you had a quarter of a million  
4 movements, you would expect some very significant  
5 change, to congratulate your adviser that he had  
6 achieved a wonderful change in your environment.

7 So I think both of those secondary assessments are  
8 a great aid to putting in context what is being sought.

9 MR HUMPHRIES: Move on now, Mr Charles, to the third point.  
10 And I am going to consider points put to you about the  
11 area beyond the 57 contour. I am going to split it into  
12 two parts. So point number 3 relates to existing noise  
13 in the area beyond the 57 contour, and then later I will  
14 come to a point about future noise.

15 The first point to understand: does the Government  
16 recognise that beyond the 57 contour, some people will  
17 be annoyed?

18 A. Yes. Yes.

19 MR HUMPHRIES: And if we look at the Air Transport White  
20 Paper, that is CD 87, and you turn to page 34, as an  
21 example, and we look in the box there, we have looked at  
22 it for different things at different times during this  
23 inquiry, but I look at the last paragraph in the box on  
24 page 34 and it says:

25 "Based on research, the Government has used the

1           57 DBA LAeq as the level of daytime noise marking the  
2           approximate onset of community annoyance. The  
3           relationship between noise and annoyance is, of course,  
4           not an exact one and varies according to individuals and  
5           locations. In the consultation document for the South  
6           East, the 54 DBA LAeq contours were also shown as  
7           a sensitivity indicator."

8           So next point, Mr Charles: is Government aware that  
9           the 57 contour does mark the approximate onset of  
10          significant community annoyance?

11         A. Yes. Yes.

12         MR HUMPHRIES: I want to get some understanding of annoyance  
13          outside the contour. Can we please look at Mr Turner's  
14          evidence. That's DBC 3A.

15         A. I have it.

16         MR HUMPHRIES: And turn, please, to page 17.

17         A. Thank you, I have the page.

18         MR HUMPHRIES: Table 9. That table tells us the percentages  
19          of people highly annoyed for various contour bands based  
20          on research. And we see there for the contour  
21          band 54 to 57 DBA, the percentage of people highly  
22          annoyed is given as 6.6 per cent. If one went beyond  
23          even the 54 contour, what would you expect to happen, in  
24          broad terms, to that percentage figure of people highly  
25          annoyed?

1 A. Well, the trend is clearly that it would be less.

2 MR HUMPHRIES: Right. Now --

3 A. May I just look at a document? (Pause).

4 I am afraid I am going back to my bible. Sorry, the

5 CD 0177, which is cap 725, which gives a relationship

6 between the people highly annoyed -- this is in fact the

7 source of this table, and that shows the trend line

8 reducing as the noise level goes down towards 50.

9 MR HUMPHRIES: Thank you.

10 A. That is on page 51, appendix B, annex 4.

11 MR HUMPHRIES: And is the red line described as the logistic

12 regression --

13 A. Regression curve.

14 MR HUMPHRIES: That is (inaudible) aircraft studies.

15 A. That's right.

16 MR HUMPHRIES: And at 50 it goes to -- well, one can see it

17 is something below 5 per cent?

18 A. Yes, 4 ... perhaps 3 or 4.

19 MR HUMPHRIES: The next part of this point, there was then

20 put to you a selection of letters from CD 166, and very

21 helpful selection, was called CD 166.1. Do you have

22 that?

23 A. Should I get that? (Pause).

24 MR HUMPHRIES: This was put to you also in association with

25 Mr Mitchell's map 1, that is in UDC/2/C. I'm sorry,

1           Mr Charles, I keep getting you to jump up and down.

2    A.   No problem.

3    MR HUMPHRIES:   That's not my purpose.

4    A.   I have both.

5    MR HUMPHRIES:   Now, Mr Mitchell told us, when he was at the

6           inquiry, and indeed it was repeated yesterday, that the

7           population within the broad area covered by the dots on

8           his map 1 was something in the order of a million.

9           Having regard to the Schultz Curve and that large

10          population base of something in the order of a million,

11          are you surprised that there are some people in the

12          wider area who object on the basis of aircraft noise?

13   A.   No.

14   MR HUMPHRIES:   Is that consistent with the data of

15          the research that in fact underlies the LAeq approach?

16   A.   It is, yes.

17   MR HUMPHRIES:   Now, it was pointed out to you by reference

18          to map 1 that there were a number of clusters in the

19          area around Sudbury and Dedham Vale, and I just want to

20          ask you about that.

21   MR HILL:   I'm not sure that was a point I put at all.

22          I don't think I spent time examining the clusters on the

23          map in any way, shape or form.

24   MR HUMPHRIES:   All right, you were asked certainly about the

25          area around Dedham Vale and, indeed, Sudbury, and you

1           were asked about the study that had been undertaken at  
2           Sudbury, and we will come to that in a few moments, but  
3           let me just take you to one of the letters in bundle  
4           CD 166.1.

5           It is the one from the person at Great Cornard near  
6           Sudbury, it is about five or six pages from the front of  
7           the clip of correspondence, and it's an e-mail from to  
8           Lynn Rusling from Wayne Robinson. Do you have that?

9    A. Is it the third page in, "Known to BAA planning  
10       application"? No, it is -- not that page. Rusling,  
11       Lynn; Wayne Robinson. As a resident of Great Cornard.  
12       Is that the one?

13   MR HUMPHRIES: Yes.

14   A. Yes.

15   MR HUMPHRIES: I just want to ask you about that. It says  
16       in that e-mail:

17                "As a resident of Great Cornard near Sudbury in  
18       Suffolk, I am becoming very alarmed about the number of  
19       planes that are now flying over my property. When  
20       I moved to the area six years ago we were told that it  
21       wasn't under any official flight path, and we only  
22       occasionally saw light aircraft from small flying  
23       clubs."

24                Then it goes on to explain how she is now being  
25       woken by low flying commercial aircraft making

1 a horrendous din above her. I want to just focus on  
2 this point, that when she moved a few years ago, there  
3 wasn't any overflying, and there now is. Can I just get  
4 you to look at a plan. I'll show it to you and then  
5 I'll explain what it is. (Handed).

6 MR PHILLIMORE: We need to get a CD number added to that one  
7 at some point.

8 MR HUMPHRIES: Yes. The latest CD I have is 400, so it may  
9 be 401 but I don't know if Mr Osborn has anything --

10 MR PHILLIMORE: He is nodding, so that looks fine. We will  
11 call that one CD 401. Thank you.

12 MR HUMPHRIES: Mr Charles, this is the R Nav, that is  
13 Radar Navigation, STARS, that is Standard Arrival Routes  
14 via Abbott, which is one of the holding stacks to  
15 Stansted. And the Abbott holding stack was introduced  
16 in 1999, and you can see marked on the plan "Abbott",  
17 and the LAPRA holding area was introduced in 2004. That  
18 provoked a legal challenge.

19 What someone has done, and tried to do as accurately  
20 as possible, is to mark on this extract from the UKAIP  
21 the approximate areas of major conurbations underneath,  
22 and the coastline.

23 MR HILL: Just understanding, this is April, April 2004?  
24 From the foot of the page, is that right? Date,  
25 28th April 2004?

1 MR HUMPHRIES: I think that's right.

2 MR HILL: So this was a month after the air space change?

3 MR HUMPHRIES: Yes, I was simply showing it to demonstrate  
4 where Abbott is and where LAPRA is.

5 Now, Mr Charles, what I want to ask you about is  
6 this. We can look at this, and we can see also  
7 Mr Mitchell's plan, and where the complaints have come  
8 from.

9 My understanding is that before LAPRA was introduced  
10 in 2004, the planes approached Abbott from the south,  
11 from Clacton. In 2004 there was a change, an air space  
12 change, unrelated to G1.

13 In those circumstances, is it surprising that in  
14 relation to existing aircraft movements, people would  
15 express the opinion in the Wayne Robinson e-mail?

16 A. I would presume there would be more traffic closer to  
17 Sudbury, yes.

18 MR HUMPHRIES: And if there are air space changes -- again,  
19 I ask you to accept or assume unrelated to G1 -- might  
20 that be a factor in the high level of clusters we see on  
21 Mr Mitchell's plan well to the east of the airport?

22 A. Yes, I mean, obviously, the reaction of people, if it  
23 relates to Stansted operations, will be related to any  
24 air space change which has accommodated Stansted  
25 traffic, where it can be identified by a local person

1           that it is Stansted traffic. Because the aircraft at  
2           these sort of distances are very high up. Luckily  
3           Messrs EasyJet paint their aircraft in a strong colour,  
4           but separating Luton from Stansted traffic may be  
5           slightly difficult.

6 MR HUMPHRIES: Which brings me on to the next point: do in  
7           fact Luton aircraft also approach from this direction?

8 A. They share the Abbott hole(?), and they have recently  
9           had a change in their air space and their arrival  
10          arrangements, to facilitate better arrangements from the  
11          Abbott hole.

12 MR HUMPHRIES: Later, and in a different context, you have  
13          made the point about changes in noise being noticeable  
14          if they come about suddenly.

15 A. That's correct.

16 MR HUMPHRIES: Would these air space changes, which are  
17          unrelated to G 1, have come about suddenly?

18 A. They could have come about quite quickly.

19 MR HUMPHRIES: Now, can we move on slightly from that point  
20          and look at the Sudbury monitoring report to get an  
21          understanding of the actual noise levels at Sudbury.  
22          That is going to be document 398.

23                 This, sir, I suppose, is moving on to my point  
24          number 4.

25                 This is the report of applied acoustic design,

1 a report of monitoring of aircraft noise from Stansted  
2 Airport at Sudbury, Suffolk, between April and July  
3 2005. The Inspectors will be able to read it for  
4 themselves, but I just want to draw on a few points.

5 Can we look first at the summary, which is on page 3  
6 of 19, to get an understanding of the noise climate at  
7 this location in Sudbury. The penultimate paragraph on  
8 page 3 tells us that the number of aircraft noise events  
9 per day vary from zero to 27, with an average of  
10 13 events per day, and a total of 1,008 events over the  
11 three month period.

12 When I asked Mr Turner some questions a few weeks  
13 ago, we discussed the point about dispersal; and  
14 Mr Turner explained the point about vectoring off when  
15 aircraft are departing, and also concentration as they  
16 are coming towards the airport. But at the distance  
17 from the airport, at Sudbury, where this monitoring went  
18 on, what does that data about the number of daily  
19 movements tell you about the comparison remote from the  
20 airport, well beyond 57, as against that closer to the  
21 airport?

22 A. It shows that the number of aircraft we are considering  
23 is much less.

24 MR HUMPHRIES: Right. Now, this study also looked at other  
25 aspects of community noise. If we look at the final

1 paragraph on that page 3 it reports as follows:

2 "Aircraft noise events were outnumbered by a ratio  
3 of about nine to one by non-aircraft noise events,  
4 called community noise events in this report, of which  
5 there were 8,500 during the monitoring period, averaging  
6 112 each day."

7 Now, again, we can see that people clearly in this  
8 area of Sudbury are complaining. But what does this  
9 tell us about the number of events, aircraft events, as  
10 opposed to just ordinary community noise events? Cars  
11 going past, things of that sort?

12 A. Well, it is a ten fold difference between them.

13 MR HUMPHRIES: If we come on to the paragraph at the top of  
14 page 4 to get some idea about the level of the noise  
15 events including the LMax, it tells us the daily  
16 average maximum noise level of aircraft ranged between  
17 55 DBA and 60 DBA, which showed no significant day to  
18 day variation throughout the period, with on average the  
19 maximum noise level of community noise events being  
20 about 3 DBA higher.

21 Now, what conclusion are you able to draw about that  
22 sort of LMax range of noise events?

23 A. If we consider the method we assess, for instance, the  
24 night noise, because the letter you referred to  
25 originally talked about being woken, then the Government

1 studies led to this 90 SEL criteria, which is  
2 effectively equivalent to 80 DBA Max, the same 82 that  
3 is in PPG 24 as a footnote to annex 1. So these levels  
4 are approximately 20 decibels less than the level where  
5 the Government saw the threshold with regard to sleep  
6 effects at night.

7 If we move to the WHO levels that we are talking  
8 about with Mr Stinchcombe this morning, they just reach  
9 up to the 60 DBA that the World Health Organisation was  
10 talking about.

11 And the noise levels from the community, of course,  
12 these community noise events are noisier. And dependent  
13 on what they actually are, they may actually have more  
14 effect, well, they will have more effect because there  
15 is ten times the number of them, as far as the noise  
16 environment for the people living there.

17 MR HUMPHRIES: And if we turn to the final passage to get  
18 a flavour of the document on page 10, and the heading at  
19 the top of the page there, "A typical day's noise  
20 exposure pattern". It tells us that:

21 "Using the information present indeed this report,  
22 it is possible to attempt a description of the noise  
23 climate during a typical daytime hour during which there  
24 might be one or two aircraft noise events and nine or  
25 ten community noise events. During this typical hour,

1 the noise at the site would be as low as or lower than  
2 46 DBA, the LAS 50 value, for 30 minutes, and as low as  
3 or lower than 41 DBA for six minutes, but interrupted by  
4 nine or ten community noise events lasting on average  
5 42 seconds each, and one or two aircraft noise events  
6 which will be recognisably different in character from  
7 the community noise events lasting on average 36 seconds  
8 or less. The level of aircraft noise events will be in  
9 the range of 50 to 55 DBA, and those of community  
10 events, about 3 DB A higher."

11 Mr Charles, obviously the inspectors now have been  
12 informed, from a variety of sources, of the noise events  
13 and the noise climate beyond the 57 contour. This is  
14 just an example. But what assistance can we gain in  
15 the decision-making process, in being told, as in  
16 Mr Mitchell's map 1, that there are clusters of  
17 objections in places like Sudbury? How does it help the  
18 decision-making?

19 A. I don't think it helps decision-making at all.

20 MR HUMPHRIES: Now, I want to move on -- that was point 4 --  
21 to point 5. Again, still on the beyond 57 contour, and  
22 now I want to look at future noise as opposed to  
23 existing noise. You told the inquiry, and we looked at  
24 your table 13, which is the data you had given to  
25 Mr Rhodes. And I just want to look at Mr Rhodes'

1 evidence, if you could have that. That is BAA at 1A.

2 Turn if you will to his paragraph 9.29, which is on  
3 page 46. At paragraph 9.29 he says:

4 "By reference to outdoor, culture and leisure  
5 activities, the conclusion of the noise assessment apply  
6 equally to outdoor areas as they do to built up areas,  
7 ie there is no significant increment in air noise impact  
8 arising from the G1 proposals."

9 You were challenged on the basis that BAA and  
10 Mr Rhodes had not considered the effect on outdoor  
11 culture and leisure activities. What did your  
12 assessment tell the reader about the impact, the  
13 incremental impact between the 25 MPPA case and the  
14 35 MPPA case, at these locations, outside the 54 or 57  
15 contour?

16 A. My evidence indicated that the areas where there would  
17 be increases, which was given in my rebuttal proof as  
18 figure 1 of BAA/2/F, which showed the areas where there  
19 was a 1.1 DB increase, more distant than that any  
20 increases would be even less, dependent on how the  
21 aircraft disperse in the two scenarios. But the  
22 difference would be about 1 DB, maximum, which in my  
23 experience is not material.

24 MR HUMPHRIES: So was there any impact beyond the 57 contour  
25 for Mr Rhodes to examine in particular locations?

1 A. Not with regard to this application.

2 MR HUMPHRIES: Now, if I could just go back for a moment to  
3 the concept of number, which was put to you, and I just  
4 remind you by reference to CD 398, that is the Sudbury  
5 report we looked at, that told us that in Sudbury there  
6 was an average of 13 events per day. It was put to you  
7 on a number of occasions that the effect of the  
8 G1 development would be to increase the number of  
9 movements by 30 per cent?

10 A. That's right.

11 MR HUMPHRIES: Let us assume that the 13 movements per day  
12 becomes 17 movements per day. That is a growth between  
13 now and 2014. Would you expect a growth from 13 events  
14 per day to 17 events per day to materially change levels  
15 of annoyance at Sudbury?

16 A. No.

17 MR HUMPHRIES: And does that same principle apply to other  
18 locations beyond the 57 or 54 contours?

19 A. Yes, it does.

20 MR HUMPHRIES: What in broad terms is the effect of  
21 dispersal, as aircraft are remote from the airport in  
22 terms of distance, and higher in terms of elevation?

23 A. Well, as you get further from the airport, the  
24 dispersal -- if we deal with the vertical distribution,  
25 as the aircraft get higher, obviously the noise levels

1 will get increasingly lower on the ground. And as the  
2 aircraft disperses away from a central track, then the  
3 number of noise levels you hear will reduce as the  
4 aircraft disperses away from the track, that is assuming  
5 if you were in line with the median track, the track it  
6 takes. So the greater the dispersion, the less events  
7 you would hear, and the less noisy they would be, if  
8 they don't fly overhead.

9 MR HUMPHRIES: Let's just see what the environmental  
10 statement said about this. Turn to CD 5, page 27.  
11 Paragraph 10.5.6 refers us to figures 7 and 8. Can we  
12 just briefly look at those. Does this data show the  
13 change in numbers of movements for both arrivals, in  
14 figure 7, and departures, in figure 8, for 2004, and  
15 then the 25 and 35 MPPA cases?

16 A. Yes, that's correct.

17 MR HUMPHRIES: Is this, in fact, the basis of the data that  
18 Mr Turner used in his own evidence?

19 A. I --

20 MR HUMPHRIES: For numbers of events?

21 A. I presume they are.

22 MR HUMPHRIES: If we turn back to page 27, we can see in  
23 10.5.6, comparison is made of a number of events during  
24 shoulder hours. And 10.5.7 again talks about numbers of  
25 movements. And about six lines from the end, makes this

1 point:

2 "Areas such as Harlow, Chelmsford, Colchester,  
3 Hertford, are highly unlikely to perceive a change in  
4 number of movements, hence the forecast increase in  
5 ...(Reading to the words)... periods are only considered  
6 to be relevant for communities close to the specific  
7 arrival or departure flight paths. Furthermore the  
8 overall increase in aircraft movements would occur  
9 gradually."

10 Now, in relation to that, obviously it is talking  
11 about the shoulder periods in particular there. Does  
12 the same principle apply to other hours of the day?

13 A. Yes.

14 MR HUMPHRIES: What do you say about the general point  
15 there, that when one looks at areas such as Harlow,  
16 Chelmsford, Colchester and Hertford, it would be highly  
17 unlikely that one would perceive a change in the number  
18 of movements?

19 A. Yes, that's what I would say.

20 MR HUMPHRIES: The final point made there, the overall  
21 increase would occur gradually. What effect does that  
22 have on the ability to perceive a change in the number  
23 of movements?

24 A. From the discussion we have had in the last day and  
25 a half, the perception of any change in the noise index

1           would -- was alleged to be more severe if there was  
2           a sudden change, ie you can detect smaller changes if  
3           they occurred suddenly. That wouldn't be the case here.  
4 MR HUMPHRIES: Moving on now to another point now, point 6,  
5           which relates to the Terminal 5 inspector's report and  
6           the Secretary of State's decision. You were asked  
7           whether you had considered this in your main report, and  
8           you told the inquiry you had not quoted from or looked  
9           in detail at the Inspector's report. Can I ask you,  
10          however, to look at your rebuttal, to consider the  
11          approach there, where you were commenting on the  
12          evidence of others. I am going to ask you in the  
13          rebuttal, which is BAA/2/E, just to look at  
14          paragraph 3.17 on page 28. There you make the point in  
15          response to Mr Stigwood that the T5 inspector did  
16          express concerns. However, you tell us there that he  
17          took the LAeq as his starting point, four lines from the  
18          bottom. And then you say in the last sentence:

19                 "Whilst the T5 inspector therefore took other  
20                 factors into account, it needs to be understood that  
21                 these other factors are not correlated to community  
22                 annoyance, and Mr Stigwood does not suggest otherwise."

23                 It is that point I want to take up with you. Can we  
24                 just consider how the Inspector dealt with this. We  
25                 have the Inspector's report in two places, one is

1 CD 329, and the other is the appendix to one of the SSE  
2 proofs. I am going to go to CD 329, just because  
3 I think it is a little bit easier, or at least easier  
4 for me. There are two paragraphs that you might just  
5 look at. One is 21.3.37. It has been read many times,  
6 I am certainly not going to read it again. That is on  
7 page 355. That's the paragraph in which the inspector  
8 says that the LAQ system should be applied as part of  
9 the test. Do you remember that?

10 A. Yes.

11 MR HUMPHRIES: The second paragraph I am going to take you  
12 to is 21.3.53 and 4, which is on page 358. Those two  
13 paragraphs, the first of them the Inspector draws  
14 attention to the number of movements at Heathrow with  
15 Terminal 5. And in the second one he says:

16 "In any event the most significant increases are  
17 likely to be in the number of aircraft landing in the  
18 early morning. I now turn to consider the impact of  
19 these and of night flights in general."

20 Now, the first point, in relation to the number of  
21 aircraft landing in the early morning, as we saw just  
22 now, did the environmental statement specifically  
23 consider the number of aircraft landing in the early  
24 morning?

25 A. Yes, that was the figures we were looking at.

1 MR HUMPHRIES: Yes, paragraph 10.5.6 of CD 5. The next  
2 point: what then, as a result of considering the number  
3 of aircraft landing in the early morning, and night  
4 flights in general, what did the Inspector ultimately do  
5 with that data? Which is what he considered in addition  
6 to the LAQ.

7 A. I'm not aware he did anything with it.

8 MR HUMPHRIES: Right. When we get then to the Secretary of  
9 State's decision, let's see what he did. You need to go  
10 in that clip at 329 towards the end, you get the  
11 Secretary of State's decision.

12 A. I'm afraid mine is not paginated. Is it paragraph --

13 MR HUMPHRIES: Paragraph 60.

14 A. I have that.

15 MR HUMPHRIES: Just look through that. You see in  
16 paragraph 59 what he says. Just read through that.

17 Let's just see what the Secretary of State did with  
18 this. He says:

19 "In the light of the inspector's view on the  
20 adequacy of the ...(Reading to the words)... approach.  
21 As noted above he accepts the Inspector's recommendation  
22 for a condition limiting ATMs to 480,000 per year. He  
23 does this on the basis of the inspector's concerns about  
24 noise, particularly the weighting of the number of  
25 aircraft relative to noise within LAeq."

1           Now, in relation to those things, firstly, is the  
2           appellant here proposing an ATM condition?

3     A.   Yes.

4     MR HUMPHRIES:  We know from the paragraph we looked at, the  
5           Inspector was interested in the shoulder period and the  
6           night period.  Is the appellant here, again I mean in  
7           relation to G1, offering an eight hour night noise  
8           condition?

9     A.   Yes, he is.

10    MR HUMPHRIES:  Is there any other way in which the  
11           T5 inspector or the Secretary of State used anything  
12           other than the LAeq index, was the number of events used  
13           for anything else?

14    A.   Not that I'm aware of, no.

15    MR HUMPHRIES:  Now, we know from that passage that we looked  
16           at in the Air Transport White Paper in the box at  
17           paragraph 3.14, I'm not going to ask you to go back to  
18           it again, but I'll just remind you of what it said, that  
19           in the Air Transport White Paper, the consultation  
20           document looked at 54 DBA contours, and it looked at  
21           them as a sensitivity test.  Can we just consider, then,  
22           the 54 contour for the G1 proposal.  You told us  
23           yesterday that was figure 16 in the ES, that is CD 5.  
24           So look at figure 16, please.

25           Now, over the last day and a half, there have been

1 a large number of questions based in large part, but not  
2 entirely, on the T5 inspector's report and the Secretary  
3 of State's decision, challenging the LAeq approach and  
4 in particular the 57 contour.

5 Now, can I ask you to just assume that people are  
6 more sensitive than the ANIS study indicates. Let's  
7 just assume that that was correct. Let's, as  
8 Government, in order to test this, look at the  
9 54 contour in figure 16. Does the 54 contour in  
10 figure 16 encompass any large built up areas?

11 A. No.

12 MR HUMPHRIES: I want you to keep that open, and I just want  
13 to take you to your proof of evidence, table 9, that is  
14 page 31. I'm just pausing, Mr Charles, to make sure  
15 everyone has got the documents. Table 9 sets out the  
16 reason to forecast populations near some UK airports  
17 when developed in line with the recent Government White  
18 Paper. We can see for the London area airports,  
19 Heathrow, the difference in population within the  
20 57 contour of some 27,000 people. Gatwick, we can see,  
21 that would be maximum use, is plus 12,000. Luton,  
22 again, that would be the maximum use, plus 5,300.  
23 Stansted is plus 8,000, but that of course involves  
24 a further runway, as the little asterisk shows against  
25 the figure in the middle column of numbers. But if we

1           come down to the second box, we can see the G1 proposal  
2           adds some 1,250.

3           Now, if, as both UDC and SSE and others have  
4           suggested, people are more sensitive to noise than the  
5           57 LAQ approach suggests, what does that tell one about  
6           Stansted as a place in which to encourage growth in  
7           air transport movements?

8    A.   Clearly it's better located than the other London area  
9           airports when you consider the likely population  
10          increase.

11  MR HUMPHRIES:  So insofar as UDC or SSE may be right about  
12          these criticisms of the matrix, what does that tell us  
13          about the strength of BAA's case?  That G1 and Stansted  
14          are the appropriate place for further growth?

15  A.   If we wish to develop air transport in the London area,  
16          then clearly Stansted is the appropriate location.

17  MR HUMPHRIES:  Thank you.  Now, moving on to point 7, which  
18          relates to this issue about a 3 DBA change.  You have  
19          made the point yourself, at your table 5, on page 22,  
20          that you regarded a change of 3 DB as acceptable.  Can  
21          we just go back to the passage which you took us to in  
22          the web tag document, that is your own appendices at  
23          appendix D.  It is page 4 of that appendix.

24          Now, we know in the present case the change in the  
25          LAQ value is approximately 1.1, up to, in some very

1 small areas 1.3 DB. Based on the guidance in the recent  
2 web tag document, what conclusion should the inspectors  
3 and, indeed, the Secretary of State draw on the likely  
4 change in annoyance as a result of DBA increases of that  
5 level; that is 1.1 for a slightly larger area, and  
6 1.3 in some very small areas?

7 A. By inference from this document, which we must remember  
8 does apply to road traffic, there wouldn't be  
9 a statistically significant change in the average  
10 assessment of nuisance. It is such a small difference.

11 MR HUMPHRIES: You were asked at a different point about the  
12 T5 inspector and a comment that he made. That's CD 329  
13 at paragraph 21.3.7. That's the point where he said, at  
14 the end of that paragraph:

15 "Even a difference of half a decibel would be  
16 significant, and the area enclosed by a contour would be  
17 increased by 15 to 20 per cent for every 1 DB increase  
18 in the LAQ level."

19 You were asked about this yesterday, and you told  
20 Mr Hill in relation to this that the difference of half  
21 a decibel logically therefore would be an increase in  
22 contour area, and if you take half of the 15 to  
23 20 per cent, for instance if you have eligibility for  
24 soundproofing at 63 decibels, you could end up with  
25 a few more people being affected and being eligible in

1 the scheme.

2 Now, it has been put to you repeatedly that the word  
3 "significant" is, in effect -- my shorthand -- the same  
4 as "perceptible" or "noticeable" or words to that  
5 effect. What do you understand, just on a plain reading  
6 of this, Mr Vandermeer to be getting at when he talks  
7 about a difference of half a decibel could be  
8 significant, and then referring to the size of  
9 the contour?

10 A. I presume he is not dealing with the matter that he  
11 addresses at the start of this paragraph, where he is  
12 dealing with detectability of 3 DB or changes of two.  
13 He is dealing with the change in the contour area. That  
14 is why it is all in one sentence.

15 MR HUMPHRIES: Right. And perhaps you gave us the answer  
16 yesterday, but why might that be significant?

17 A. Well, it means that some people who wouldn't have been  
18 offered soundproofing will be offered, which would make  
19 quite a quantum change to their indoor environment.

20 MR HUMPHRIES: Point number 8, and again, this perhaps  
21 follows from some earlier answers, but you were again  
22 asked questions at one point about the numbers of people  
23 in the 57 contours and the difference between the  
24 numbers of people in the 57 contour in the 25 MPPA case  
25 and the 57 contour in the 35 MPPA case. Would it be

1 correct for the Inspectors to assume that all of those  
2 people within the contour, or the difference between the  
3 two contours, are highly annoyed?

4 A. No. No.

5 MR HUMPHRIES: Point number 9. You were again asked at one  
6 point about numbers of complaints and rises in numbers  
7 of complaints. And you made reference to the study on  
8 the future of airports, SERAS, and we have already  
9 discussed earlier various air space changes. Are there  
10 factors and issues other than the number or increasing  
11 number of aircraft at Stansted which may be relevant to  
12 any consideration of the number of complaints or any  
13 increase in the number of complaints?

14 A. In the extent of the application?

15 MR HUMPHRIES: Just -- I think the point was being put to  
16 you about recently numbers of complaints rising, and the  
17 Inspector asked Mr Hill if he was leading evidence on  
18 that, but leave that aside for one point. Just as  
19 a generality, are there other factors at play than  
20 simply increases in numbers of aircraft?

21 A. In terms of the likelihood of complaints?

22 MR HUMPHRIES: Yes.

23 A. Complaints definitely can be affected by many matters,  
24 as well as simply the noise produced by the aircraft or  
25 the number of the aircraft.

1 MR HUMPHRIES: What sort of factors?

2 A. A long debate over a second runway might be one thing  
3 that might increase interest in Stansted and the noise  
4 that aircraft produce.

5 MR HUMPHRIES: Point number 10. Again you were asked  
6 questions about the numbers of people within the 48 DBA  
7 night contour. And again, if we look at Mr Turner's  
8 evidence, if you would be so kind, his table 13, you can  
9 see there the numbers of people highly sleep disturbed  
10 within the various LAQ eight hour night noise bands.  
11 Again, is it appropriate simply to look at the number of  
12 people in the eight hour night noise band in the  
13 25 million case and in the 35 million case, and draw the  
14 conclusion that that is the additional number of people  
15 highly sleep disturbed?

16 A. The answer is no, and we have to be careful here. This  
17 isn't the percentage of people highly sleep disturbed,  
18 as it says in the title of the table. This relates  
19 to the -- a play on the words, this is a self-reported  
20 sleep disturbance survey, so it is not quite the same as  
21 having the detailed studies which the Government has  
22 done on sleep disturbance, where they have actually seen  
23 whether the sleep has actually been disturbed, and  
24 whether it is due to the aircraft noise. This is just  
25 self-reported sleep disturbance.

1 MR HUMPHRIES: And?

2 A. And again it will vary from person to person, so you  
3 can't deduce which person would necessarily express this  
4 particular view.

5 MR HUMPHRIES: Point number 11, Hatfield Forest. Again, the  
6 point was put to you that there would be more aircraft  
7 and therefore more noise. Obviously you are aware of  
8 the numbers of aircraft and we have seen your own  
9 assessments. Is the change in the noise climate  
10 a significant one, such as would give rise to  
11 significant additional community annoyance?

12 A. No.

13 MR HUMPHRIES: We move on, then, to things arising from  
14 earlier today. You were asked questions again about  
15 numbers of flights, and it was put to you that there  
16 were an additional 170 flights per day, and you said,  
17 "Yes, those are shared between landings and arrivals".  
18 Just explain for the Inspectors the significance of that  
19 answer. Why is that material to a judgment of annoyance  
20 with the effect of number?

21 A. Well, basically, local residents, except for those who  
22 live parallel to the runway, live at one end or the  
23 other, and therefore they would only get half the number  
24 of those flights additional per day. Because half of  
25 them will be arrivals, and half of them departures.

1 MR HUMPHRIES: Thank you. Point 13, I think we have already  
2 picked up. Point 14. Again, there was a long series of  
3 questions in which you were asked to vary, in  
4 a hypothetical exercise, the numbers of movements and  
5 also the noise level from any particular noise event.  
6 This ended up with you considering four times the number  
7 of movements, but each with a 3 DB fall in noise level.  
8 You went through that exercise. Mr Charles, we know  
9 obviously an ATM cap is being proposed in this case.  
10 What is your view on the actual numbers which are  
11 approximately a 30 per cent increase over what would be  
12 a six to seven year period from this year, next year,  
13 through to 2014? How perceptible would that change be,  
14 in normal circumstances, not laboratory circumstances,  
15 but normal circumstances?  
16 A. We believe this will lead to a change over six years,  
17 which, to make the mathematics easy, we can assume will  
18 be around 1.2 DB. So that is 0.2 of a DB per year if  
19 there is a smooth increase, which is completely  
20 immaterial, and would not be detectable.  
21 MR HUMPHRIES: Point 15. Again, you were challenged on the  
22 point that the LAQ approach was an average, and you were  
23 asked a number of questions at different times about it  
24 being important to be astute, not to overlook local  
25 variation. I just want to understand the approach to

1 understanding significant community annoyance. When one  
2 is looking at significant community annoyance, what is  
3 the sort of period over which, you know, one asks people  
4 whether they are annoyed by aircraft noise?

5 A. You try to assess it so that you've got a long term  
6 assessment of their response to the conditions that they  
7 live in.

8 MR HUMPHRIES: Why is that important?

9 A. Because that's the decision you are making. You are not  
10 making a decision concerned with what happens on one  
11 day. If this airport is allowed to develop, this will  
12 happen over 365 days. So you need to have some  
13 assessment of the long term effect.

14 MR HUMPHRIES: How helpful, therefore, is it as a tool to  
15 decision-making simply to focus on a particular day or  
16 a particular hour, or a particular two or three hours?  
17 What assistance does that give you with understanding  
18 the community response?

19 A. It doesn't really help you at all.

20 MR HUMPHRIES: Again, you were asked at another point in  
21 relation to noise, and I think in relation to night  
22 noise, about whether you had any psycho-acoustic  
23 evidence to support the use of the LAQ approach. You  
24 said you didn't. What has been the approach of the  
25 UK Government, and indeed the EU, who, as you told us,

1 use this matrix? Have they examined these figures?

2 A. Basically, in the UK, since September 1994, we have  
3 planned parts of Britain and especially residential  
4 developments based on night noise contours. With regard  
5 to studies on night noise, there are many studies that  
6 have been made to understand night noise and sleep  
7 effects, in Europe, the UK, and America. Australia.  
8 There's lots of studies.

9 MR HUMPHRIES: Have they taken into account, I'm not quite  
10 sure what is meant by psycho-acoustic evidence, but have  
11 they taken into account community response to noise?

12 A. Yes, that is what they have been trying to determine, in  
13 a way.

14 MR HUMPHRIES: Moving on, I will pass over point 17, I think  
15 I have dealt with that.

16 Point 18, again, you were then asked about the WHO  
17 guidelines, and you made it clear that this is a report  
18 of the authors. Can we just see, however, what  
19 UK Government has said about the guidelines? You need  
20 to look at that first consultation with the night noise  
21 restrictions, that is CD 114. Mr Charles, this is dealt  
22 with in the document on pages 10 and 11, at paragraphs  
23 3.8 to 3.13. But can I just draw your attention to  
24 paragraph 3.12, just get you to look through that. I'm  
25 not going to read it out. What do you understand

1 UK Government's policy to be towards the WHO guidelines?

2 A. My understanding is they are committed to take them into  
3 account.

4 MR HUMPHRIES: And as far as meeting targets, over what time  
5 horizon is UK Government thinking?

6 A. They are thinking over a long term -- over the 30-year  
7 time horizon in the White Paper.

8 MR HUMPHRIES: Would it be possible to introduce those now?  
9 Is that what WHO intend?

10 A. The WHO document gives guidance on how Member States  
11 should seek to set standards and, effectively, targets.  
12 And, in the same document, provides these guidelines  
13 which they say should be taken into account when setting  
14 the Member States' individual targets. So they will  
15 take them into account. Clearly one reason for the  
16 difficulty is the fact which is referred to in  
17 3.11 above, which is that 30 per cent of the population  
18 of the European Union already exceed the levels.  
19 Therefore, unless we close down Europe, we are not going  
20 to meet those levels for some time.

21 MR HUMPHRIES: Are the WHO guidelines used as a threshold  
22 for decision-making in UK airport planning inquiries?

23 A. No.

24 MR HUMPHRIES: I move on to point 19, which relates to  
25 schools. Again, you were asked about the WHO

1 guidelines. Can we just look at the approach in your  
2 evidence on this. You deal with the impact on local  
3 schools from page 33 onwards, and at page 35, you refer  
4 us to the RIVM report. That is in your appendix E. And  
5 you refer in paragraph 7 to 49. Now, the point that was  
6 being put to you was that you had only looked at the  
7 four schools within the 57 contour, and that you hadn't  
8 looked at schools beyond that contour. Mr Charles,  
9 having regard to your conclusions and indeed the  
10 conclusions of Mr Turner on schools within the  
11 57 contour, what would you expect of any examination of  
12 schools beyond that contour, for example it was put to  
13 you schools in Bishop's Stortford?

14 A. Basically I would expect a similar conclusion on the  
15 available evidence. There is no effect on the cognitive  
16 development of primary school children.

17 MR HUMPHRIES: And you have at table 12 an Essex school  
18 survey finding which looks at a range of different  
19 schools at different Leq levels, and the views of  
20 the teachers. Have the educational authorities  
21 responsible for these schools drawn to your attention  
22 any problem in schools beyond the four that you looked  
23 at?

24 A. No.

25 MR HUMPHRIES: Point 20. You were then asked again about

1 night noise. And you said that the approach had been to  
2 look at the DFT's night noise restrictions, because you  
3 said the Government had resolved night noise to 2012.

4 Then at a later point you were asked about LAm<sub>ax</sub>  
5 figures. Again, can we just understand what Government  
6 did in promulgating the night noise restrictions?  
7 Again, could you have the stage 1 consultation document.  
8 That is CD 114.

9 Can I just get you to turn to pages 55 and 56. At  
10 the top of page 55, you can see the title to this  
11 section of the appendix is the 90 DBA SEL footprint, and  
12 over the page, on page 56, you can see the footprint of  
13 the 90 DBA SEL for Stansted for the runway in easterly  
14 and westerly operations, and looking at the various  
15 departure routes.

16 Can you just explain to the Inspectors the  
17 relationship between SEL first of all and LAm<sub>ax</sub>?

18 A. The study found -- let me go slowly.

19 The Government's major study into sleep disturbance  
20 and night noise reported its results mainly in terms of  
21 the 90 DBA SEL values. In approximate terms, the  
22 equivalent for an aircraft which produces 90 SEL is  
23 approximately around 80 DB LAm<sub>ax</sub>, and in fact in the  
24 actual study papers, a formula is given to relate it to,  
25 which strictly gives you 82 LAm<sub>ax</sub> or 90 SEL.

1           This ties across, if you look to PPG 24, with the  
2           footnote to Annex 1, where they use 82 based on the  
3           90 SEL study of night noise. So that's how the two  
4           relate.

5           Approximately, because dependent on I think the  
6           location, there may be slight differences depending on  
7           how fast the aircraft is going and its juxtaposition to  
8           the observer. But that is very much a rule of thumb.

9   MR HUMPHRIES: Bearing in mind that Government, for the  
10           reasons that you have explained, used SEL rather than  
11           LAmax, did Government in formulating its night noise  
12           restrictions that we have in CD 118.1 have regard to the  
13           noise energy and peak noise energy from individual noise  
14           events during the night period?

15   A. Yes, it did.

16   MR HUMPHRIES: In that context, and in the text that  
17           Government is responsible for night noise during the  
18           night quota period, is there any great benefit in BAA  
19           duplicating that work in its own assessment?

20   A. No, BAA have no responsibility other than in doing  
21           whatever DFT tells them to do, but it is DFT who sets  
22           the regime in place, having decided it on their own.

23   MR HUMPHRIES: The next point, which I think is 21, you were  
24           asked about the stage 2 consultation, that's CD 115, and  
25           in particular the data at page 40, which is I think

1 attached as paragraph 7.4.8. The relationship between  
2 the figures given there for movement limits at Stansted  
3 and the figures given in CD 19, table 29.

4 Just to understand what we have here on page 40, it  
5 talks about the movement limits if we were to extend the  
6 night quota period to 2300 to 0700. First of all, did  
7 they in fact extend the night quota period to 2300 to  
8 0700?

9 A. No, they didn't.

10 MR HUMPHRIES: Is this in any event a consultation document?

11 A. Yes, this is.

12 MR HUMPHRIES: Are those figures there, the 7,100 and the  
13 14,020, the figures which in fact apply at Stansted?

14 A. I don't know without looking at the ...

15 MR HUMPHRIES: You need to look at 118.8.

16 A. Is it 118?

17 MR HUMPHRIES: 118.1, sorry. Page 17.

18 A. So in that document it gives --

19 MR HUMPHRIES: These are the actual movement limits  
20 imposed --

21 A. At Stansted.

22 MR HUMPHRIES: Yes.

23 A. Which are 12,000 in total for the six and a half hour  
24 night period.

25 MR HUMPHRIES: Yes. And will the G1 proposal cause there to

1 be any breach of those restrictions?

2 A. No.

3 MR HUMPHRIES: Sir, I think the last point has probably been  
4 superseded, so those are all my questions. I wasn't so  
5 very far out.

6 MR PHILLIMORE: Thank you very much, Mr Humphries.

7 Questions by THE PANEL

8 MR BOYLAND: I have quite a long list of questions for  
9 Mr Charles, some of which I thought were quite good, but  
10 unfortunately Mr Hill has beaten me to those, so I just  
11 have a couple of trivial ones remaining.

12 You mentioned the strategic noise map, the fact that  
13 the maps are supposed to be prepared by 30th June, and  
14 the limit values and criteria by 18th July. Do we know  
15 where things stand on that? Are we on track?

16 A. I believe it is 31st July when the Secretary of State is  
17 supposed to tell us what are the criteria. My rumour is  
18 it's going slow, because it is not an easy task.

19 MR BOYLAND: That doesn't surprise me. Do you think we are  
20 likely to get the maps by 30th June?

21 A. I think the maps should be available, yes. Well -- now,  
22 I had better go slowly. The maps will be produced by  
23 then and submitted to the relevant department. I'm not  
24 clear what the Department are going to do with them; are  
25 they going to publish them and release them or not.

1 MR BOYLAND: I see.

2 A. We have done maps for about six airports and they have  
3 said to us: what are we supposed to do with them? So  
4 I said, give them to DFT and they will come back to you  
5 sometime.

6 MR BOYLAND: Isn't the requirement in the regulations to  
7 publish them by those dates?

8 A. They have to do a consolidated version of the noise maps  
9 at some stage. We do have a national expert on it  
10 sitting there smiling who is actually the man  
11 responsible for it. Not that he wants to give further  
12 evidence.

13 MR BOYLAND: Indeed, I'm sure he doesn't. Okay, thank you.

14 A. Perhaps he can tell me if I have got it wrong.

15 MR BOYLAND: Maybe outside the inquiry, but I am sure  
16 someone will advise us.

17 The other point, if you can just help me with my  
18 understanding of quota counts. They go up in -- they  
19 double, don't they? As far as I know, the first one  
20 is --

21 A. Yes, that is the one they have just brought in, and they  
22 are equivalent to 3 DB change.

23 MR BOYLAND: Yes, that's right. But what is the base level?  
24 Where do they start?

25 A. Hang on. Luckily I have the right document.

1 MR BOYLAND: I'm sure it is buried somewhere amongst the  
2 documents we have, but I am afraid I have not been able  
3 to find it.

4 A. It is. Here we are. In CD 0115, in annex D, you've  
5 actually got the QC values quoted for departing aircraft  
6 on page 67, and that gives you both the QC value and the  
7 noise level just above, in EPNDB. So for instance if  
8 you take QC.25, it goes from 84 to 86.9 EPNDB.

9 MR BOYLAND: Sorry, say that again, 84 to 87?

10 A. Effectively, yes, but they are being careful, they call  
11 it 86.9, and then the QC.5 is 87 to 89.9. Then the  
12 exempt class is less than 84 EPNDB.

13 MR BOYLAND: Okay. That is very helpful. Thank you very  
14 much.

15 MR PHILLIMORE: All my questions have been covered as well,  
16 Mr Charles, so thank you very much for your evidence.  
17 Thank you.

18 (The witness withdrew)

19 MR PHILLIMORE: We will take a slightly longer adjournment  
20 to give us time to put the documents away. When we come  
21 back, is Mr Maiden here and ready to give his  
22 evidence-in-chief?

23 MR HUMPHRIES: Yes, sir, he is, although I understand that  
24 Mr Holgate is not here any more. I don't know whether  
25 he wanted to hear Mr Maiden or not. I mean, I am very

1 much in everybody else's hands on this.

2 MR PHILLIMORE: Our assumption was that we would be going  
3 ahead. There will be the transcript no doubt for their  
4 purposes, but on that basis, I think if we go ahead and  
5 come back and hear Mr Maiden in-chief after the  
6 adjournment.

7 It is just after 3.30 pm, so if we resume just after  
8 3.50 pm, please. Thank you very much.

9 (3.32 pm)

10 (A short break)

11 (3.50 pm)

12 MR PHILLIMORE: Can we resume, please. Mr Humphries, when  
13 you are ready to introduce Mr Maiden.

14 MR STANLEY MAIDEN (called)

15 Examination-in-chief by MR HUMPHRIES

16 MR HUMPHRIES: Mr Maiden, is your name Stanley?

17 A. It is.

18 MR HUMPHRIES: Good. I move on to my second question.

19 Mr Maiden, you are the Group Research Director for  
20 BAA Limited, and that is a post you have held I think  
21 for some 20 years, is that right?

22 A. That's correct.

23 MR HUMPHRIES: In your full proof of evidence in section 1,  
24 the introduction, you set out your experience. It might  
25 just be worth looking at section 1.2 to look at your

1 role.

2 You tell us there that as Research Director your  
3 role and that of your team is to provide the following  
4 services for the BAA Group: (a) air traffic analyses;  
5 (b) forecast of air traffic and related activities such  
6 as airport employment and car parking; (c) market  
7 research among air passengers and other airport users;  
8 and (d), operational research support. Is that right?

9 A. That's correct.

10 MR HUMPHRIES: And you go on to tell us of your experience  
11 in the various groups that you sit on and indeed chair  
12 both nationally and internationally.

13 Mr Maiden, I am going to invite you to read in  
14 a moment from your summary proof of evidence, which is  
15 BAA/6B. If you look at that, could you just start  
16 reading perhaps from paragraph 1.2 in the summary.

17 A. "The core of my evidence explains the basis of  
18 the forecast advice upon which BAA has framed its case  
19 for lifting the annual limit of 25 million passengers  
20 (condition MPPA 1) and 241,000 air transport movements  
21 (condition ATM 1) at Stansted. It concludes with  
22 a reference to the most recent review of forecast for  
23 Stansted and the implications for the most likely date  
24 that 35 million passengers might be reached.

25 "In its forecasting evidence BAA has examined two

1 main cases. First, the 25 million case, and the  
2 35 million case. But it has also conducted sensitivity  
3 tests which considered the separate impacts of a fleet  
4 mix containing a higher proportion of larger aircraft,  
5 the annual passenger total reaching 40 million  
6 passengers, and different assumptions concerning the  
7 ground origins of air passengers.

8 "Statement of common ground. While no statement of  
9 common ground between BAA and Uttlesford DC existed at  
10 the time this proof of evidence was prepared, it is  
11 BAA's belief that certain public comments made by both  
12 UDC's advisers on air traffic forecasts and its own  
13 planning officers indicate a broad measure of agreement.  
14 In essence BAA considers that UDC have accepted its  
15 forecast as providing a reasonably sound basis on which  
16 to assess the various environmental impacts of  
17 the 35 million passenger case. Even where its advisers  
18 pointed to specific differences of view over the  
19 proportion of long haul passengers and the ground  
20 origins of passengers, they also described the  
21 differences as being insubstantial. BAA has  
22 nevertheless prepared sensitivity tests which take both  
23 these different viewpoints into account.

24 "Although the pattern of growth has been uneven,  
25 with periods of rapid increases interspersed with events

1       such as major oil price inflation, regional conflicts  
2       and terrorism, air traffic in the South East has grown  
3       in 32 out of the 36 years since 1970. Within the  
4       compound average growth of 5.2 per cent per annum,  
5       Stansted has significantly increased its share of  
6       the total using the currently three largest airports  
7       from 1.8 per cent in 1990 to 19 per cent by 2006. The  
8       implication of Stansted being limited to 25 million  
9       passengers by condition MPPA 1 is that its share will  
10      gradually recede to about 17 per cent by 2014/15.

11             "The forecast approach. In its medium and long term  
12      forecasting work, that is when looking at periods more  
13      than five years ahead, BAA relies heavily on methodology  
14      which uses econometric modelling techniques to predict  
15      air passenger demand and contrasts this with any  
16      foreseen constraints on airport capacity to obtain a  
17      predicted level of throughput. Where it is considering  
18      one or more airports which may be competing for  
19      passengers within a given system or region, then it also  
20      has to consider the process of passenger choice between  
21      airports. In both the use of econometric models and  
22      a top down system approach, BAA's forecasting  
23      methodology is similar to that used over many years by  
24      bodies such as the DFT and CAA.

25             "Forecasts of unconstrained demand. Using BAA's

1 knowledge of the various market segments which make up  
2 the observed base level of passengers. It applies to  
3 each of the segments a series of economic drivers and  
4 other factors which influence demand. These include  
5 growth in UK and world GDP, the prospects for  
6 international trade, future trends in air fares, the  
7 degree of market maturity, the effects of rail  
8 competition and development of air services in the  
9 regions. Informed by historic relationships and  
10 expectations about future trends, BAA takes a view on  
11 the sensitivity of each passenger segment to changes in  
12 the main drivers influencing demand for air travel over  
13 the forecast period.

14 "Airport capacity. The key components of airport  
15 capacity are runway capacity, apron capacity and  
16 terminal capacity, with any single airport's capacity  
17 governed by the most limiting of these components.  
18 Surface access and air space capacities are also to be  
19 considered, but seldom are found to be critical to the  
20 overall determination of capacity.

21 "In the case of Stansted in 2014 and 15, BAA judges  
22 that its single runway would be the most limiting  
23 physical element of capacity. Calculating this capacity  
24 is done in two stages. The first establishes the  
25 maximum reasonable number of aircraft movements carrying

1 passengers which might be achieved annually, having  
2 regard to the number that can be safely handled at peak  
3 hours, and the extent to which the theoretical annual  
4 capacity can realistically be utilised.

5 "The second stage examines the likely mix of  
6 aircraft types to serve the airport, and hence the  
7 number of seats offered for each of the key markets.  
8 Applying load factor assumptions to each of the seat  
9 capacities generated in this way produces a forecast of  
10 the implied passenger capacity equivalent to the  
11 previously projected aircraft movement total.

12 "Distribution of demand. The next step in BAA's  
13 approach combines the system demand forecast with the  
14 capacity assessments outlined above. Forecast demand is  
15 distributed between airports according to their relative  
16 attractiveness to passengers, taking account of  
17 the capacity constraints of each airport, and thus of  
18 the potential for destination coverage and flight  
19 frequency.

20 "To enable demand to be split between airports, BAA  
21 establishes the catchment area for Heathrow, Gatwick and  
22 Stansted using information provided by the CAA's origin  
23 and destination surveys. The demand within each  
24 catchment is distributed by specifying the relative  
25 attractiveness of each airport. The process is carried

1 out separately for UK business, UK leisure, foreign  
2 business and foreign leisure passengers. Comparing the  
3 level of demand for each airport with the assessed  
4 capacity reveals whether the demand can be accommodated.  
5 Any that cannot be accommodated at its first choice  
6 airport is then reallocated to an alternative airport or  
7 lost from the system altogether.

8 "Developing the 25 million passenger case. The  
9 25 million passenger case assumes a continuation of  
10 condition MPPA 1, which currently restricts the airport  
11 to a passenger throughput of 25 million passengers. The  
12 analysis therefore concentrated on the expected  
13 evolution of traffic characteristics over the six to  
14 seven year period that traffic throughput, in terms of  
15 passengers, is forced to stagnate. This implies a set  
16 of circumstances so far not experienced at airports  
17 elsewhere. As a result, BAA's approach examined the  
18 drivers influencing likely airport responses to the  
19 situation and the impact that this would have on the  
20 passage make up as well as the number and mix of  
21 aircraft to be deployed. It also considered how it  
22 would respond as a business to the maintenance of  
23 a 25 million passenger limit.

24 "The outcome is a series of projections which  
25 entailed a less than pro rata reduction in aircraft

1 movements as compared with the 35 million passenger  
2 case, an increase in the proportion of business traffic,  
3 and a slower growth in long haul passengers."

4 MR HUMPHRIES: Mr Maiden, may I just stop you for a moment  
5 there. It might just be worth explaining a little bit  
6 more about the 25 MPPA case. There have been a number  
7 of questions about what happens and what happens to the  
8 proportion of business passengers, and why, when one  
9 moves from the 25 MPPA case to the 35 MPPA case, the  
10 additional number of business passenger movements is  
11 300,000, rather than some larger figure. Can you just  
12 explain briefly to the Inspectors what is happening here  
13 and what happens when you constrain demand to 25 MPPA?

14 A. I think the best way to look at this is, rather than to  
15 move from a 25 million scenario to a 35 million case, is  
16 to look at it from the other end of the microscope and  
17 say: 35 million in BAA's terms by 2015 or thereabouts  
18 represents, if you like, business as usual. 25 million  
19 in 2015, having been frozen from 2008, implies  
20 a restraint on the natural demand for travel at the  
21 airport. In a condition of constraint like that, it  
22 would be logical for it to drive up the price that  
23 airlines can charge for access to services at Stansted.  
24 In any situation in which the price is driven up, one  
25 would expect the business travel market to be more

1 resilient in the face of higher prices, and therefore  
2 the proportion of business travel retained, let's say,  
3 in the 25 million case would be somewhat higher.

4 So in other words, the lost traffic as between  
5 25 and 30 will consist of a disproportionate amount of  
6 leisure travel, and the obvious consequence of that is  
7 a disproportionate, if you like, retention of business  
8 travel.

9 MR HUMPHRIES: Thank you for that. Perhaps move on to  
10 section 9, aircraft movement forecasts.

11 A. "Forecast of passenger air transport movements, which  
12 comprise more than 80 per cent of all aircraft movements  
13 at Stansted, are derived following the forecast of  
14 passenger throughput by market segment. The process  
15 entails making judgments about the future mix of  
16 aircraft types in each segment, taking into account any  
17 available intelligence on operator and aircraft  
18 manufacturer intentions, and the anticipated load  
19 factors in each market segment.

20 "The key differences between the 25 million  
21 passenger and the 35 million passenger cases in terms of  
22 passenger ATMs are that the 35 million passenger  
23 scenario would provide greater opportunity and incentive  
24 for airlines to develop long haul services, while the  
25 25 million passenger case would enable airlines to

1 extract a higher unit price from selling the more  
2 limited number of seats. It would also offer them less  
3 incentive to increase the number of passengers per  
4 movement, either through the use of larger aircraft, or  
5 through the attainment of higher load factors.

6 "Air cargo forecast. The overall demand for cargo  
7 at Stansted is expected to be the same regardless of  
8 the annual passenger limit, and to be substantially  
9 influenced by the diminishing opportunity for growth in  
10 air freight at Heathrow and Gatwick. However, the  
11 distribution of cargo between whole plane cargo  
12 movements and belly hold capacity is expected to vary,  
13 with greater use of the latter in the 35 million  
14 passenger case, because of the expected introduction of  
15 more long haul passenger services.

16 "Latest forecasts. In the normal course of events  
17 BAA regularly updates its forecast to reflect changing  
18 circumstances. Its most recent review undertaken in  
19 early 2007 has produced a reduction in a predicted rate  
20 of demand growth. This has been largely caused by  
21 greater pessimism about the future trend of oil prices,  
22 and the adoption of assumptions concerning the level of  
23 environmental taxes, which are more restrictive of  
24 traffic growth than those previously used. As a result,  
25 BAA now expects that, assuming the planning conditions

1 are lifted, Stansted will reach the figure of 35 million  
2 passengers some 12 to 18 months later than projected at  
3 the time the environmental statement was produced.

4 "Conclusion. Although BAA has recently reviewed and  
5 slightly revised down its forecast for Stansted, it  
6 remains confident that the forecast presented in  
7 volume 16 of the environmental statement remain its best  
8 view of the traffic characteristics associated with  
9 a 35 million or 25 million passenger scenario at around  
10 2015."

11 MR HUMPHRIES: Mr Maiden, thank you very much.

12 MR PHILLIMORE: That took rather less time than it had been  
13 indicated to us it would take. Mr Hill, I will not put  
14 you on the spot in terms of changing the order, that has  
15 already been agreed.

16 MR HILL: Thank you sir. I do understand there is a bit of  
17 a hiatus. Had we appreciated that this was how today  
18 might unfold then I would, of course, have been in  
19 a position to start now, but I am not, I am afraid.

20 MR PHILLIMORE: I understand that. In that case I think we  
21 will now adjourn until tomorrow. It is earlier than  
22 anticipated, but we now adjourn until 10 o'clock  
23 tomorrow morning. Thank you very much.

24 (4.10 pm)

25 (The Inquiry adjourned until 10.00 am on Thursday,

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21st June 2007)

Mr Charles (continued) .....	1
Cross-examination by MR STINCHCOMBE .....	1
(continued)	
Re-examination by MR HUMPHRIES .....	105
Questions by THE PANEL .....	144
MR STANLEY MAIDEN (called) .....	147
Examination-in-chief by MR HUMPHRIES .....	147

