HOUSE OF COMMONS

Transport Committee

Oral evidence: Airports National Policy Statement, HC 548

Monday 4 December 2017

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Watch the meeting

Members present: Lilian Greenwood (Chair); Steve Double; Paul Girvan; Huw Merriman; Luke Pollard; Iain Stewart; Graham Stringer; Martin Vickers; Daniel Zeichner.

Questions 1 - 116

Witnesses

I: Philip Graham, Chief Executive, National Infrastructure Commission; Caroline Low, Director, Aviation Capacity Delivery, Department for Transport; and Dennis Morgan, Head of Aviation Capacity Economics Team, Department for Transport.

II: Nick Dunn, Chief Financial Officer, Gatwick Airport; and Captain Jock Lowe, Director, Heathrow Hub Ltd.

Written evidence from witnesses:

- Gatwick Airport Ltd
- Heathrow Hub Ltd

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Examination of witnesses

Witnesses: Philip Graham, Caroline Low and Dennis Morgan.

Q1 **Chair:** Welcome and thank you for coming along today. Would you please introduce yourselves for the record of our proceedings?

Dennis Morgan: My name is Dennis Morgan. I am a senior analyst at the Department for Transport and I lead the Department's analysis on airport expansion.

Caroline Low: I am Caroline Low, the director of DFT responsible for airport capacity and the SRO for the programme.

Philip Graham: My name is Phil Graham. I am currently the chief executive of the National Infrastructure Commission, but for about two and a half years, from roughly September 2012 until July 2015, I was the head of the secretariat that supported Howard Davies and the Airports Commission. That was a little while ago, so forgive me if I am rusty.

Q2 **Chair:** We will take that into consideration. I will begin with a question to you, Mr Graham. The commission chose a third runway at Heathrow as its preferred option for expansion. It was a unanimous decision. Can you explain to the Committee why that was the preferred option at the time?

Philip Graham: Certainly. The first thing to stress is that the decision to select the third runway as the preferred option for expansion was very strongly not the result of a single piece of analysis that happened at the end of the process, but very much the result of a near three-year process of analysis and engagement. You cannot point to a single factor within that saying, "Here is the reason why the commission chose the third runway." There were a whole set of things taken on balance.

Talking about things being taken on balance, it is very important to stress that the commission did not simply choose the third runway as their preferred option. They said that the best option for expansion would be a third runway at Heathrow combined with an ambitious programme of social and environmental mitigations associated with expansion at that airport. The recommendation was very much for the package. They did not say, "We think a third runway is brilliant, and here are some other things you can do if you fancy it." It was very much, "You should take forward the third runway, but if you are going to take it forward you must do it in a way that recognises the concerns that local communities and others have, and do something serious about those."

What were the factors that led to that decision? I would track back, to start with, to the work we did towards the commission's interim report. First, it indicated that there was a need for additional capacity in the London airport sector. We did not solely concentrate on London. We looked at capacity from a national perspective, but while there were challenges for aviation outside London, and significant successes, availability of runway capacity was not a significant barrier in any case.

Manchester had just opened its second runway. Birmingham was operating at broadly 50%, so there was plenty of scope to expand. That was not the case in London.

The London aviation system benefited from the fact that there was a constellation of airports that served different markets, accommodated different types of travel and were located in different places, so they were easy to get to from different parts of the city. By far the greatest capacity constraint that the commission identified within that constellation was capacity for long-haul services. The airlines that ran those long-haul services would see a commercial case to take that up and to expand their business.

The commission's work, in particular its strategic analysis of the aviation industry, indicated that that constraint was likely to be most effectively addressed through expansion at the established hub airport, although it was quite clear that there was significant suppressed demand, and slots traded for a very significant fee. Whenever new slots opened up, airlines often switched from another airport to Heathrow. Vietnam Airlines did that during the commission inquiry. They had opened a service to Gatwick, but in 2014, when a slot became available that they could take, they moved to Heathrow. There was every chance, on that model, of a rapid improvement in connectivity if expansion took place there; demand was building up and was readily available. It was not impossible that we might see a similar expansion of connectivity at another location, particularly at Gatwick, but that needed a change in how the aviation system was operating at the moment.

Q3 **Chair:** In the Airports Commission's terms of reference, one of the things that they were asked to do was about maintaining the UK's hub status. The important thing for the UK economy is international connectivity. By asking it to maintain hub status, do you think it made it inevitable that the decision would be Heathrow?

Philip Graham: I don't think so. Quite a lot of our stakeholders and a lot of the people who challenged that tried to make a very strong argument that hub status was, for want of a better way of putting it, overstated and that, as time went on and we looked into the future, hub status was going to become less and less important. That is directly linked to what I was going to say about the case for expansion at Gatwick, which was that it might work but you would need a change. The importance of hub status would need to be eroded, for example. A lot of organisations claim that the development of new forms of plane, such as the A380, with very high levels of passenger usage, and the A320 and the Boeing 787 Dreamliner, which could carry smaller numbers of passengers commercially for much longer distances, would remove the need for hubs.

We looked at that, and the strong impression that we took away was that the airlines buying those planes were exactly the airlines that operated through a hub model. They were using them to reinforce the hubs and not as an alternative to hubs.

Similarly, we looked at the rise of low-cost long haul, which has been floated as a possibility for a very long time, and continues to be floated as a possibility. Norwegian has been having a pretty good stab at it, but that tends to replicate the thickest routes. The low-cost market tends to be looking to fly the thickest routes rather than opening up the kind of routes to third-world countries or newly emerging economies that you would hope to deliver through a hub model.

We looked at whether an alliance might shift, which was Gatwick Airport Ltd's original pitch when they started talking to us. But the alliances told us with one very strong voice that they had invested significantly in the facilities and slots that they held at Heathrow, and that there was little, if any, chance, certainly in the short to medium term, of them switching.

It would not be impossible, but all the analysis we did suggested that the hub model was not about to disappear. If you were looking to generate that kind of connectivity, which we thought was where there was a constraint—long-term connectivity, including to emerging markets and so on—expansion at the hub airport would be the most advantageous way to do so, if you could do it in a way that was environmentally and socially acceptable.

Chair: We will probably come back to this question a little later in our questioning.

Philip Graham: Alongside that, we thought that Heathrow offered some other strategic benefits. It is more easily accessible from the rest of the UK. It is not perfect, but it is better than Gatwick, for example, or an estuary airport on the other side of London. With the arrival of HS2, it will become significantly more accessible. It has a significant and growing workforce. We would be expanding employment in an area of relatively high levels of deprivation for the south-east of England, rather than trying to create a major new airport in a broadly prosperous area. It offered the opportunity to expand regional connectivity to the UK's major hub airport, which came up again and again in the commission's conversations with stakeholders in Scotland, Wales and Northern Ireland, and in Newcastle and in the south-west of England.

There was a bigger-picture story than simply supporting London and the south-east. All those areas valued the links that they had to Schiphol, or in some cases Charles de Gaulle, but they wanted that to be in addition to rather than as a replacement for Heathrow. There were things that Heathrow did well, particularly as a route network to north America, that those airports could not provide.

As you said, we will come back to it, but the question for the commission was, "Could you do it in a way that was acceptable?" On its own, simply saying, "Let's expand Heathrow," their view was, "No, that wouldn't be acceptable," but with a package of serious mitigation they thought it was a proposition they could take out to the local communities and say, "This is reasonable." Not everyone would agree, but they felt that they could go in with their heads high and say, "This is reasonable."

It is worth remembering that they spent significant time in the local communities around Heathrow and Gatwick. They had visited schools that were affected by noise. They had visited the heritage facilities that might be lost, and so on. They had some sense of the concerns that people faced.

Q4 **Graham Stringer:** It seems to me that your memory is pretty good, Mr Graham, given that you left the commission some time ago. Having left the commission, and now that the recommendations have had time to be analysed and looked at, do you believe that any of those recommendations should be different?

Philip Graham: They were not my recommendations. It is important to say that they were the commission's recommendations.

Q5 **Graham Stringer:** I am just asking whether you would change any of the recommendations.

Philip Graham: No. Part of the reason why I remember it well is that I have spent the weekend doing my homework a little bit. You will probably at some point in the hearing identify the bits where my homework was done less well. In the course of doing that homework, I went back over the work we did, and it feels to me that we did a pretty good job. Not everyone will agree with it. It was absolutely a balanced judgment. It was not a black and white judgment, but the judgment the commission made was a pretty good one.

Q6 **Graham Stringer:** Why did the commission not use the Department for Transport's methods of calculating economic benefits—cost-benefit analysis?

Philip Graham: We did. The figures in the economic case were calculated using the Department for Transport methodology for calculating benefits for aviation passengers. There was a nuance to that, which is that the Department's ways of calculating wider economic benefits—things like agglomeration and so on—were developed for looking at the wider economic benefits of surface transport schemes that link one place to another place within the UK; and this was a fundamentally different kind of scheme. For those wider economic benefits, we had to work to develop new ways of thinking, but in the conventional economic analysis we did and published as part of the economic case, the passenger benefits were calculated according to the methodology and using the tools that the Department for Transport had developed.

What we did in addition, because the commission was keen to try to understand how the effect of aviation expansion might be felt as a ripple through the wider economy, was something more akin to macroeconomic analysis. We were supported by PWC. That generated some of the numbers that have been quoted by Heathrow Airport Ltd and others, and which we set out in the strategic case. We did not ignore the Department for Transport's approach by any means.

Q7 **Graham Stringer:** When my notes tell me that if you use the Department's method of calculating net economic benefits Heathrow is only £1 billion more advantageous than Gatwick, can you take me through the reasons why you did not use the Department's methods, and why your methods are superior to the method that gave only £1 billion benefit?

Philip Graham: The way we calculated the benefits, as I said, is broadly in line with the Department's approach. There was the issue around wider economic benefits and agglomeration, but the way we calculated the benefits is in line with the Department for Transport's approach.

Similarly, the way we calculated the costs was in line with the Department for Transport's approach to calculating costs. The question is the stress you place on the benefit figures or the stress you place on the so-called net present value—the benefits less the costs—and how you address that. That was one of many such issues that we faced as a commission, because we were trying to use a set of tools for transport appraisal where it is generally assumed that you have a closed system, and everyone lives within the country in question or the money stays within the country in question. This was a rather more complex proposal, in which many of the users are from different countries and the investment, in this case, came from a different country.

I can quote something that Howard Davies wrote, which was not actually in the report but in a subsequent letter to Patrick McLoughlin—who was then Secretary of State for Transport. He made the important point that "this is not primarily a public investment decision, but rather a decision as to which of a number of private sector schemes, in each case likely to be funded significantly by international investors, should be facilitated through the planning system. The Commission's view is that this should be the scheme which delivers the greatest benefits for the UK." It is not the greatest net benefits, because in many ways the costs are being borne by the private sector—in which case, it is international investors.

Q8 **Graham Stringer:** I understand. Does the Department have any comments on what Mr Graham said about the different models?

Caroline Low: I absolutely agree with the way that Phil sets it out. The economic modelling for the economic case was done on a consistent basis. The most recent numbers—the ones you quote—have been updated for the most recent demand figures, so they have changed slightly from the work the commission did.

There is then the question of how you capture the wider strategic benefits that are not captured through traditional Department tried and tested methodologies. The commission took one approach, which they were clear was to be considered as part of the strategic case but not added to the economic case. We have also set out some different methodologies for valuing trade benefits, but again, because the methodologies are relatively untested, we have not included those numbers in our economic case.

Q9 **Chair:** That was in the Airports Commission's original report, but when the NPS was published those wider economic benefits were taken out. The commission's conclusion was that the economic benefits at Gatwick would be considerably smaller. That was based on the wider economic numbers, which were then taken out. That is somewhat misleading, isn't it?

Caroline Low: I am not sure what is misleading.

Q10 **Chair:** As Mr Stringer said, the actual net economic benefits of Heathrow were only ever £1 billion more than Gatwick, but the statement by the commission claimed that they were considerably smaller, because it was relying on the wider economic benefits that were subsequently dropped from the Department's NPS.

Caroline Low: The Department has been absolutely clear that it accepts the strategic case set out by the commission. While the Department was not comfortable using that form of economic modelling and presenting those numbers as part of a national policy statement, in terms of the strategic benefits, the Department accepts that those benefits exist and will be greater at Heathrow because of the trade benefits, in particular the impact of freight at Heathrow. Freight at Heathrow is something like 170 times by value the amount at Gatwick. The infrastructure is there, and we expect that the expansion will be able to build on that. In terms of the economic benefits that we can monetise confidently, based on our experience from other projects, the numbers are as Mr Stringer says.

Q11 **Chair:** You are confident about the case, but you are not confident enough to include the numbers in the NPS. Is that what you are saying?

Caroline Low: The case is the strategic case, the economic case, the commercial case and the financial case. That is how the Department looks at evidence when making these difficult decisions, which are very complex. A great deal of data have to be taken and weighed together in order to come to a decision that is right for the country. The economic case, and the quantitative benefits and costs that we can identify at this stage are not the full part of the story.

Philip Graham: From memory, I do not think it is true to say that the commission's view was that the benefits were considerably greater from Heathrow. Considerably is a weasel word; it means different things to different people. I do not think it was purely based on that macroeconomic analysis. Our view was that the economic benefits were noticeably higher from Heathrow than from Gatwick.

It comes back to the discussion I was having with Mr Stringer. If you take out the scheme costs, on the basis that those costs should be used to develop a net present value—and if that investment does not go into this scheme it might go into something else, which is the bit where it becomes uncertain, given the nature of the investment we have—then it does narrow. In terms of the net benefits, before the cost of building and so on have been taken into account, the benefits from Heathrow were around £28 billion versus around £17 billion for Gatwick. That seems to me to be a material difference.

Q12 **Graham Stringer:** According to the figures I have, the gap between the benefits of the runway at Gatwick and Heathrow either narrows or reverses if carbon emissions are capped. I want to ask you a technical question. When you consider carbon emissions, is it just those that arise from a plane taking off at one of the airports, or is it the carbon emissions of the journey?

Philip Graham: The work we did on the so-called carbon-capped forecast was not about taking carbon emissions from any individual journey into account and trying to attach a price to those carbon emissions to bring the piece down. The benefits fall in carbon-capped scenarios, because we treated the limit on carbon from aviation by 2050 proposed by the Committee on Climate Change, which I think was 35 million tonnes per annum, as being the most that could be accommodated while still meeting the Government's legislative long-term climate targets, effectively, as a constraint on aviation growth. In those carbon-capped scenarios, aviation growth was held down in order to meet the carbon limit. The amount of travel within those forecasts is lower, and that reduces the scale of the benefits. It is not simply putting a price on carbon and incorporating that.

Q13 **Graham Stringer:** I understand that; the carbon may be produced elsewhere, in Europe or wherever.

Philip Graham: Yes.

Q14 **Graham Stringer:** According to my notes, one of the main strategic benefits of the northwest runway at Heathrow was that it would be a better freight hub than at Gatwick. There is a list of benefits that came out of the report. Would you agree that the major benefit over Gatwick of the northwest runway was as a freight hub?

Philip Graham: I would agree that that was certainly one of the additional strategic benefits that the commission identified. They were quite taken by the scale of difference in terms of freight, the scale of economic activity in the areas around Heathrow and Gatwick associated with the freight industry and, as we looked into it, the degree of importance that air freight has to an economy like the UK's.

On the other hand, that was only one of a number of strategic benefits that they identified that ran alongside the economic analysis. I have already mentioned the regional connectivity piece and the locational aspect. They also felt that there was a stronger case in terms of job creation, and so on. It is true, but I would not say it was the predominant or the only issue.

Q15 **Graham Stringer:** The other five are important, if not quite as salient. Is that what you are saying?

Philip Graham: They are probably equally salient.

Q16 **Graham Stringer:** You talked with Lilian about the importance of hubs and the priorities of the airlines. Would the UK's international connectivity, particularly its intercontinental connectivity, be better with a third runway at Heathrow rather than a second runway at Gatwick, or would they be equivalent?

Philip Graham: The commission's view was that it was likely that it would be better.

Q17 **Graham Stringer:** It would be better at Heathrow.

Philip Graham: Yes.

Q18 **Graham Stringer:** Can you quantify that?

Philip Graham: We used the Department for Transport's model to come up with that. It suggested a difference in terms of long-haul destinations, and also a difference in overall long-haul seat capacity. I will just look at my numbers. It suggested that by 2050 we would be looking at 87 daily destinations with Heathrow expanded, versus 81 with Gatwick expanded, for example. Similarly, we would be looking at around 153 million long-haul seats with Heathrow expanded, versus 144 million long-haul seats.

The commission was very cognisant of the difficulties of trying to forecast anything 30 years into the future, and the dangers of placing too much weight on the individual numbers produced by models of that kind. The models pointed in the direction that connectivity would be better, but alongside that the commission drew upon their understanding of the industry, the conversations that they had had and how the industry operated, to be of the view that, as I said, there was clearly considerable suppressed demand for access at Heathrow from the airlines that delivered long-haul connectivity, including to emerging markets and the far eastern destinations we wanted to reach. Gatwick had been reasonably successful at attracting small amounts of that kind of connectivity, but that was during a period when Heathrow was severely constrained. When slots opened up—I mentioned the Vietnam Airlines experience—we often saw those things transfer to Heathrow.

It is possible that over time an expanded Gatwick would become more successful in building up that aspect of its business. If it could persuade an alliance to move, it would do so more quickly, but it seemed to the commission that there was a lot more risk associated with expansion at Gatwick, if the aim was to try to deliver long-haul connectivity, than through Heathrow, which was established in that market and was an incredibly attractive airport for airlines, and where we knew there was significant suppressed demand.

Q19 **Iain Stewart:** Mr Graham, in evaluating the three final schemes, what weight did the commission give to the environmental, community and health costs of each scheme against the economic and strategic benefits?

Philip Graham: In terms of the monetised analysis, broadly speaking we followed the Department for Transport's methodology. Numbers for noise disbenefits and for air quality disbenefits are incorporated in the analysis that took you to the figures that I quoted to Mr Stringer.

From the point of view of the commission, the numbers achieved working through these kinds of monetised economic analyses are quite small. Having spoken to the communities and visited the schools and so on, they felt that the numbers did not reflect the concerns about environmental costs, and the strength with which they needed to be taken into account. They attached significant weight to that in considering their decision. As I said in my opening remarks, in acknowledging that the economic analysis in particular favoured Heathrow—even having taken into account the monetised costs of noise impacts and so on—they were very strongly of the view that they would not be able to take that out and stand up in front of the communities and make the case for any such expansion unless there was a strong and acceptable programme of works to manage the environmental implications as well. That was why I and my team spent so long working up the package of environmental mitigations that we put forward.

Q20 **Chair:** Would you agree that many of those environmental costs are impossible or very difficult to monetise?

Philip Graham: I would probably look to Dennis as the economist. I am not an economist. The problem I have, as a policy maker, is that it appears you can monetise them because we have methodologies to monetise them. There is a set of sums that we can do; we can feed in the numbers and they pop out at the other end and tell you what the answer is.

As I was saying to Mr Stewart, the difficulty as a policy maker is that the answers that come out of that process rarely reflect their importance and the weight for those who live within a mile and a half of the airport and have a plane flying over their heads every hour of the day; even those who live 10, 20 or 30 miles away will fear them and be concerned about them. A lot of this is because the process of monetisation, even if it is evidence based and rigorous, still pulls things down to averages and treats individuals as average human beings. Actually, the ways we respond to aviation noise, the way air quality affects us and the way we care about biodiversity are hugely subjective. Understanding that subjectivity, and what the things people care about are and how you can manage that, rather than treating the environmental impacts solely in terms of monetisation is really important, although I do not think monetisation is a waste of time.

Q21 **Chair:** There will be quality of life or other issues that may be missed, or not fully costed.

Philip Graham: Yes. We had a go at trying to assess the quality of life impacts. It was very difficult. In that case, there was not a pre-existing calculation that we could do, and we never managed to get to the point of turning them into a monetary figure but, for all the reasons I have given, I am not sure how important that would have been. The quality of life impacts pull in both directions. There are significant quality of life benefits for those who get to make journeys that they otherwise would not be able to make, or are able to visit relatives more easily than they would otherwise be able to do, and can maintain family networks in an increasingly globalised world. There are clearly significant quality of life disbenefits as well. Identifying those and doing what you can to tackle them has to be part of any sensible programme of expansion, if that is what the Government choose to do.

Q22 **Iain Stewart:** In calculating the costs of the environmental impact, to what extent did you factor in future developments, for example, in aircraft engine technology, which could lower the sound impact or emissions; or in airspace modernisation? Did you look at a static picture?

Philip Graham: No, we did not look at a static picture. The former—the development of aviation engines—was taken fully into account in the development of the long-term noise forecasts. There is a set of industry standard figures for how engine technology has improved over time, drawing on past experience. We built that into our figures, which is a big part of the reason—not the only reason—why, even with passenger and flight numbers going up at most airports, the averaged-out noise impacts are expected to decline.

With regard to airspace modernisation, there was not an accepted way of taking it into account. The airspace aspects of noise calculation are one of the most difficult parts, because obviously, and very understandably, the noise calculations have to be based on an assumption about how the airspace will operate in future. We did not feel that we could bake into those assumptions on how the airspace would operate in future a very optimistic view of what airspace modernisation would achieve, when we all know that the process of airspace modernisation over the past decade in the London airspace area has been slow and incremental at best.

We were cautious about airspace modernisation, but we noted in the narrative around those conclusions that, for example, if you were to get the modernisation process in place—if the land programme was to be seen through—you could supplement the existing runway alternation at Heathrow with flight path alternation as well, which is not something that can be done very effectively at the moment. That improved modernisation would create additional areas of respite for communities.

We did another thing that differed somewhat from past practice on noise calculations. One of the most significant challenges made to us was that the standard approach to calculating noise, the so-called LAeq—I cannot remember what it stands for, but it is an average noise level across a period of the day—did not reflect the way in which many people experience noise. What they cared about was not what the average level was once you had flattened everything out, but how many times a loud plane was going to fly over their head, so we incorporated in our analysis an additional methodology that had been developed in Australia for what they call number above contours. Rather than trying to create an average noise level, those identify the communities and properties that are overflown more than a certain number of times by an aircraft hitting a particular noise threshold. Having done that work, we found that the contours were still broadly similar, so it did not change the picture significantly, but it did at least allow us to check that we were not missing something in the way we thought about noise.

Chair: We will need slightly more concise answers if we are to get through all our questions.

Q23 **Iain Stewart:** The reason I was asking was that the option of landing or taking off at a sharper angle than is currently the practice could potentially alter the relative merits of the two Heathrow options. Is that not something you should be looking at more in evaluating the three cases?

Philip Graham: Possibly. We looked in a number of ways at the airspace aspects, particularly of the extended northern runway, because it was an innovative proposal and presented more operational challenges to the air traffic control system. Between the consultation analysis and the final report, the noise impacts of the extended northern runway dropped to some degree. I have to admit that I cannot remember whether that included steeper take-offs, but, even if that were not the case, it might mitigate to some degree the noise differences but it would not alter the air quality or capacity differences between that scheme and the northwest runway.

Q24 **Iain Stewart:** Finally, I have a supplementary question for Caroline Low. Many of the submissions we have received highlighted concerns about the validity of the DFT's final cost estimates for the northwest runway. For example, the noise costs included by the Department are based on outdated noise contours. Why have you not updated them yet, based on your latest consultation?

Caroline Low: I have not seen the representations you have received, and we are of course out for consultation, so if people feel that data are missing we will look at that. I am slightly confused, because we updated our noise modelling to reflect the latest demand figures as part of the latest consultation and the monetised costs that went with that. I do not recognise what you are saying, I am afraid.

Chair: I think it is because the noise impacts in the NPS are based on the 57 decibel figure and in the new consultation—

Caroline Low: It is about which method. We are continuing to use the same noise contour as the commission used in order to provide continuity, and to give a good overview at this stage of the process of the noise impacts. It is right that in our latest guidance on how airspace change will be taken forward—the updated airspace policy—51 decibels is the right contour to look at. If the NPS designated scheme is taken forward, as the detailed flight plans are developed and consulted on, those contours will be used.

Q25 **Chair:** But wouldn't that affect the cost estimates? If you base them on the new level of decibels, would that not impact the analysis in the NPS?

Dennis Morgan: I don't think it would, because the noise analysis, as currently set out in the NPS and in the appraisal of sustainability, follows our guidance, so it estimates the numbers of people who are affected by noise at different levels. It quantifies that and puts a monetary value on it. What we are talking about here are different metrics we could present, which show the numbers of people affected in the appraisal of sustainability. It does not have a direct read-across to the monetary costs.

Q26 **Huw Merriman:** Mr Graham, the executive summary of the final report, at page 13, pretty much in its opening gambit, has the rationale for the northwest runway: "A new Northwest Runway at Heathrow delivers more substantial economic and strategic benefits than any of the other shortlisted options". What would be the substantial economic benefit?

Philip Graham: The substantial economic benefit?

Huw Merriman: The headline statement was about substantial economic benefit, but we are now talking about the fact that it might be much of a muchness with Gatwick. I just wondered if you could set out very briefly what that substantial economic benefit is.

Philip Graham: When Mr Stringer made that point, I disagreed with the idea that they were much of a muchness. Undoubtedly, Heathrow comes at a higher cost. The commission took the view that the cost would predominantly be met by international investors, but the benefits as we calculated them—

Q27 **Huw Merriman:** Reading the line about substantial economic benefits, I just wanted to know what it was referring to.

Philip Graham: We calculated that there were benefits to passengers of around £54 billion. There were benefits in terms of reduced delays of around £1 billion, and wider economic impact benefits of £11.5 billion. What the Department for Transport set against that was what they refer to as producer surplus disbenefits, which effectively is the fact that, because passengers are getting cheaper tickets, airlines are getting less revenue, which knocks a chunk off that. Those are the kind of numbers I was talking about.

Q28 **Huw Merriman:** I will tell you the bit that threw itself out at me. Bear in mind that I am working on a comparison between two competitors and it is about the substantial economic benefits of one versus the other. At page 24, there is a reference to Heathrow over a 60-year period giving a GDP boost of between £131 billion and £147 billion, whereas Gatwick is rated at £89 billion.

Philip Graham: Yes.

Huw Merriman: I put those two things together to be the driver for one offering more substantial economic benefit than the other.

Philip Graham: That was the macroeconomic calculation that we worked on. All of these are quite difficult to do, but that was much more innovative than the use of the standard DFT approach. Those figures aligned with our broader understanding of how the benefits of Heathrow expansion versus Gatwick expansion would run through the country. It is more accessible to the rest of the country. It provided connectivity to other regions. It was in an area with an expanding workforce that can take advantage of it. It was in an area that had an existing industry base that was used to operating with a hub airport, and would respond quickly. What we tried to do through that macroeconomic analysis was to understand, in the same way as for tax changes and so on, how that might flow out through the economy in additional investment in other areas and so on.

Q29 **Huw Merriman:** That makes a lot of sense. I would perhaps dare to suggest that that is what persuaded many people, on the basis that it might be higher risk at Heathrow but there is a much higher reward, to take the risk. What seems to be the case now, from the commission's own work, and indeed from the Department for Transport figures that are now being used, is that we are being asked to justify a runway that will lead to the demolition of 783 homes, with adverse noise, air quality and health impacts for thousands of nearby residents, for what looks like little economic gain overall, now that we are talking about all these other figures. Does that seem fair?

Philip Graham: I cannot talk about the Department for Transport's view, but I am sure Dennis and Caroline may be able to, of the macroeconomic work that I did. Actually I am going to. What the Department of Transport is concerned about is the level of certainty you can attach to the specific numbers that come out of that work. I understand that concern, because the work was difficult to do; it had not been done previously and was attempting to use a set of tools that had been developed to assess things such as tax policy for an individual infrastructure decision in an individual part of the country.

Can you say absolutely for certain that it is £149 billion versus £73 billion? I have already spoken to Mr Stringer about the difficulties of forecasting anything 30 years ahead. We thought the work was good enough to put those numbers out there and to make the case. The Department for Transport is in a slightly different position; it is not an independent body, does not speak with an independent voice in the same way and is more cautious. They will come back and disagree with me about this, but I want to say it very clearly. I do not think they disagree that any of the effects that I was talking about will not actually happen. They may not be confident in the exact numbers but I think they will be confident that all those effects will happen.

Q30 **Huw Merriman:** Let me put it another way. If you were using just the Department's figures that are being talked about right now, would you have come up with the recommendation that you came up with, in light of all the difficulties that your report talked about—that it was a high-risk project but with high reward? Would you still have come up with that recommendation if we were only dealing with the narrower differentials, rather than the big ones in your report?

Philip Graham: I think so. I cannot absolutely second-guess what view the commission would have come up with, but I think so, partly because the differential in the Department for Transport's calculations is not as big as the differential we have been discussing, but it is far from zero. Even if you did not attach those numbers to it, that strategic analysis about accessibility to the UK, about where development was taking place, about the ability of industry to respond and the way in which the airline industry would approach it, would still have been the case.

Q31 **Huw Merriman:** Ms Low, the Gatwick scheme is now estimated by your own Department to have the greatest economic benefits of the three schemes. It seems to be the case that there are far fewer environmental, health and community impacts at Gatwick versus Heathrow. Do you think the Department is wrong when it makes the assessment in the NPS that there are no true alternatives to the northwest runway, given what we have heard?

Caroline Low: I think we are rehearsing the same point, which is about the strategic case versus the monetised economic benefits. On the question that the commission was originally asked about maintaining global hub connectivity, if you look at the number of long-haul flights generated for the UK overall for Gatwick versus Heathrow, there are many more at Heathrow. It is the same for the number of destinations. The strategic case—not the monetised case—fills out lines that we also set out in our NPS around global connectivity, the types of destinations you are likely to get from Heathrow, freight, the benefits for passengers, where Heathrow physically sits in the country and therefore the connections. That is why the Department accepted the commission's recommendations.

Q32 **Huw Merriman:** I see that is the wider package, but it is quite a stark conclusion. You say the Gatwick scheme has the greatest economic benefits on the one hand, but on the other hand there is no alternative to the Heathrow third runway. Surely that is an alternative?

Caroline Low: Our assessment of the question of hub connectivity is that Heathrow is the only one that meets that objective. There is one other point I should make in relation to the economic benefits, without unpicking the numbers too much. That analysis is over 60 years, which is the way we do appraisal in the Department. What we find at Heathrow is that, because of the very significant pent-up demand, those benefits are realised much sooner. While I agree that our modelling shows that if there is no new capacity delivered, apart from a new runway, at Heathrow over the next 60 years, and you look at how the benefits build up over time, eventually in the 2070s the economic benefits at Gatwick would exceed those at Heathrow. In the short term, you get benefits at Heathrow much more quickly.

Q33 **Chair:** I want to go back to the question of noise. Mr Morgan, you said that if you changed the noise contours, it would not make a difference. The noise impacts from the northwest runway are estimated at £1 billion at an annoyance level of 57 decibels LAeq. If that is adjusted to 54 decibels, an additional 242,000 people are exposed to noise costs. How does that not impact on that £1 billion estimate?

Dennis Morgan: My understanding of the noise monetisation is that it will look at the numbers of people who are affected by the different levels of noise. The latest analysis we have done is not just restricted to 57 decibels; it also has contours going down to the 54 decibel level. The question for the monetisation is that it tries to identify the number of people who are affected; it has standard values on annoyance to noise and converts that into monetary values.

Philip Graham: As far as I remember, it is not a strict cut-off at a single level. There are people in the 60, 63 and 66 decibel contours who quite rightly have a higher monetary value attached to the annoyance they are feeling. Then you come down to the 57, the 54 and the 51, where there are lower monetary values. The question about what would change the difference is whether those annoyance values are correct, rather than where you draw the threshold on how annoyance is reported.

Q34 **Chair:** As I understand it, the significant noise annoyance and the final costs in the report are based on the 1982 aircraft noise index study. You have a more recent one; in February this year, you published your latest attitudes to noise survey, which changes the significant annoyance from 57 to 54. Why would that not increase costs? Am I wrong?

Dennis Morgan: As Phil very helpfully explained, when the monetisation is done it looks at the numbers of people who are affected at different decibel levels. That is taken into account when the monetary estimate is made.

Q35 **Chair:** But if you as a Department have agreed that now, and you think it is at a lower level of noise—that 54 rather than 57 constitutes significant noise—surely you should price that into your costs?

Dennis Morgan: It is. That is what I am trying to make clear. It is already in the analysis. The analysis has monetary values for the degree to which people are affected at different noise levels. That is calculated across a range of contours and then added up. What is also done within the appraisal of sustainability is to present metrics such as the numbers of people affected at the 57 decibel and 54 decibel levels.

Q36 **Chair:** Have the figures changed since you published your latest attitudes to noise survey, which seems to show a difference in people's perceptions and the impact on individuals?

Dennis Morgan: We have updated our analysis since then to take account of the latest demand forecasts. The Department has also updated its monetisation workbook, which is available to people who do this sort of noise analysis.

Q37 **Chair:** Have you incorporated that into the costs in your economic analysis?

Dennis Morgan: Yes, that is correct.

Q38 **Daniel Zeichner:** I have a question for Caroline Low. We talked earlier, in answer to Graham Stringer's questions, about what impact any capping of carbon emissions would have. I do not think I quite understood the answers, so perhaps you could clarify them for me. I am told that, if they were to be capped, the net economic benefits for Heathrow would be diminished. Is that right?

Caroline Low: I might ask Dennis to talk to the detail of this, because in our most recent analysis we adopted a slightly different approach from the commission in how we have tried to capture the range of possible future carbon scenarios between carbon capped and carbon traded.

Dennis Morgan: When the commission looked at carbon capped, they came up with a number of different ways in which that could be met. Some of them were through what is called demand suppression, where you just restrict demand to a certain level. Another one is what they call a carbon policy sensitivity test, where you look for specific CO_2 reduction measures that you could employ in the aviation sector. Examples of that could be higher uptake of sustainable fuels or what is called green taxiing; single-engined taxiing on the airfield. That means you could actually reduce CO_2 emissions without reducing demand across the system.

In terms of the benefits to passengers and the wider economy, in our analysis there is no difference between the carbon-traded and carbon-capped case, because there is no fundamental difference in the demand. There is a cost associated with CO_2-reducing technologies. That is included in our latest updated appraisal report, but the actual amount that you need to reduce CO_2 in 2050 is relatively small. A significant amount of the long-term reductions in CO_2 is done through expected improvement in the fuel efficiencies of aircraft. As such, even in this carbon-capped world, there are still significant benefits from expansion.

Q39 **Daniel Zeichner:** I am still not entirely clear what the effect would be on the Heathrow proposal of either of those approaches.

Dennis Morgan: Basically, as set out in the appraisal report, there is no fundamental difference between a carbon-traded and a carbon-capped world in terms of the additional number of passengers, the increase in regional connectivity or international connectivity and the total benefits of the scheme. The only difference between the two is that there is a cost associated with the technologies to reduce CO_2 that you would need to employ in the carbon-capped scenario to ensure that you reduced emissions down to the Committee on Climate Change planning assumptions for 2050.

Q40 **Daniel Zeichner:** I am still not sure that I am entirely clear, but we will move on. Caroline, I am told that the Department did not update the passenger demand forecasts prior to launching the consultation in February, because some of the new information made Gatwick look quite different. I am told that Gatwick passenger growth was forecast to reach 42 million by 2040, and in fact it reached and surpassed that figure by 2016, which would have made quite a difference. Is that correct?

Caroline Low: When we went out for consultation in February, we expected to put out new demand figures during the course of that consultation. A general election was then called and we were not able to put out new information during purdah, which is why we are now back out for consultation with our updated demand forecasts. I do not know if Dennis can comment on the 42 million number that you quote.

Dennis Morgan: The way the modelling works is that you need to come up with planning assumptions for runway capacity limits and terminal capacity limits. That is true across all the airports. It may well be the case that you can actually increase passenger numbers through bigger flights and getting more people on those planes, but there will still be restrictions on the number of flights that you can manage at a specific airport. Even then, you need to process those people through the terminal. We need to make a judgment on the limit. The assumption in the model is around 45 million passengers at Gatwick. However, that is an uncertain assumption that we need to make, and it is something that we keep under review as part of our model development programme.

Q41 **Daniel Zeichner:** Doesn't that quite different set of figures alter the balance of the economic case between the two?

Dennis Morgan: No, not fundamentally. What drives the differences between the schemes is the extent to which people choose to use the additional capacity. That is driven by a number of different factors. As Phil alluded to earlier, one of the significant advantages of Heathrow over

Gatwick is its geographic location in the UK, which makes it a much more popular airport for people to fly from. That is why we see so much pent-up demand at Heathrow.

Q42 **Chair:** But surely it is the change in the number of passengers and the forecasts for passengers that have made an impact on the bottom line of the economic case. Isn't it precisely the changes incorporating those new demand forecasts that have had a £20 billion impact on the bottom line?

Dennis Morgan: Of the assessment of Gatwick?

Chair: Yes; the relative economic benefits of Gatwick versus the northwest runway.

Dennis Morgan: It is certainly the case that incorporating the latest data, up to 2016, in the forecast means that we start from a much better place. One of the key findings of that forecast is that demand was more concentrated in London and the south-east relative to the previous forecasts, which makes Gatwick a more attractive option for those people. However, it does not affect the fundamental differences between what the schemes deliver, particularly over the short run, looking to 2030.

Q43 **Paul Girvan:** I have a very small point on the back of Daniel's comment. The increase in the number of flights and the CO_2 reduction figure have been produced. You mentioned future engine technology and improvements. How can you factor in somewhere between a 35% and 40% increase in engine efficiency? What has given you the knowledge to be able to make that assumption about the increased number of flights? I am using that as a very blunt tool for identifying that, on the understanding that there is no indication of the NOx being reduced at all.

Dennis Morgan: In our latest forecast, we have reviewed what is called the fleet model that sits underneath the aviation model and includes all sorts of different types of aircraft size and efficiency. The efficiencies of those aircraft are calibrated to European emission data, which allows us to have a good sense of how much the aircraft are burning. Looking through history, we have a sense of how long aircraft are normally in service and at what point they get retired. We have evidence from aircraft manufacturers on what the proposed next generation planes are and what efficiencies they will have.

The model is built up in a sequence of generations over time, where we see how each aircraft will improve in fuel efficiency. It is calibrated to the data we have available. That was a significant update to the model. It gives us a very good sense of what the fleet looks like now. In itself, that has helped to reduce the CO_2 emissions of the fleet.

Q44 **Luke Pollard:** Caroline, the NPS acknowledges that surface access costs are variable. How can the case for the northwest runway be adequately assessed when the Department has not yet addressed how passengers will get to the airport and how much that new infrastructure will cost?

Caroline Low: The commission did analysis on transport to the airport that the Department has reviewed. You will see from the NPS that we have not set out the exact range of options that Heathrow might look at. What we have set out are the mode share targets we think are appropriate for the airport to meet as it takes forward its planning application.

We are confident that those mode share targets can be delivered. It is really important to recognise the investments that are already in process and about to come on stream. Crossrail will be very important for moving people from the centre of town to Heathrow, which is where the largest market is. The Piccadilly line is due to be upgraded, so it will have a 60% increase in capacity; and HS2, as Phil was saying, will go down to Old Oak Common. These are existing schemes that we can factor into our modelling and will go a large way towards delivering the surface access mode share.

Q45 **Luke Pollard:** What are the implications? In the NPS, you say that there will be around £5 billion in capital costs for surface access. What happens if the figure is actually closer to TfL's forecast of between £15 billion and £20 billion? How much impact will it have on the overall assessment of the viability of Heathrow if the figures are three or four times as much as you estimate?

Caroline Low: We do not accept the figure that TfL has put forward. Our understanding is that it includes a lot of schemes that will potentially be necessary to deal with background growth in London. We are confident that the £5 billion captures everything that we think will be needed.

Q46 **Luke Pollard:** For folks coming up from the south-west, as I do, who are looking at western rail access to Heathrow, does that £5 billion include the western rail access?

Caroline Low: The £5 billion that the commission set out does not include western rail access because the commission assumed that that was a scheme the Department was already taking forward, which is indeed the case, subject to final business case and a contribution from the airport. Those rail schemes, while very important for access to the airport, are not necessarily essential to deliver the mode share targets. They will be taken forward through the normal departmental planning and budgeting purposes.

Q47 **Luke Pollard:** Effectively, western rail access is not in that £5 billion. The £5 billion is £5 billion plus some other stuff. If you were to put the £5 billion plus the other stuff, such as western rail access, which you have just told me is not included in that £5 billion, does it change your assessment of Heathrow's surface access figures? It seems to me that it is much bigger than the £5 billion the NPS has already set out.

Philip Graham: It is important to remember that western rail access was never predicated on the airport expanding. Western rail access was a scheme that was planned well before the Airports Commission ever came along.

Q48 **Luke Pollard:** But it is a key part of moving passengers to the airport.

Philip Graham: And it will be, whether the airport continues at two runways or at three runways. It is not a central part of the case for expansion. It is something that will enable the expanded airport to serve a larger part of the country more effectively, but it was planned and expected to be put in place whether or not the airport remained at its current size or whether it grew.

Q49 **Luke Pollard:** TfL says the figure will be three or four times the figure you have just given. You have just told me that western rail access, as an example, is not included in that £5 billion. If you were to include all the things that are not included in the £5 billion, because it sounds as if there is quite a lot missing from that—where there are currently services to the airport—does that change your assessment on the Heathrow scheme?

Caroline Low: Can I just come back to "quite a lot missing" because I do not accept that? It is important to understand what is in the £5 billion. It is a mixture of things. There are some numbers in that £5 billion about changes to the infrastructure around the airport that Heathrow will have to make in order to deliver the new runway, such as putting the M25 in a tunnel, changes to local roads and re-routeing the A4 and the A3044. Those are costs that Heathrow is committed to bearing as part of the scheme design, effectively, because they are integral to the scheme.

The Airports Commission also included around £2.5 billion for possible upgrades to the M4 as an example of work the Department might do to deal with additional traffic on the M4 as a result of Heathrow. But the commission was clear that that was only one way the Department might go about tackling future congestion on the M4. In the Department's view, widening the M4 is probably not the way we would approach it. That is why we have taken that £5 billion and included a range of costs in our analysis.

There are schemes that are already funded, such as Crossrail, the Piccadilly line and HS2, which I talked about. There are other schemes on TfL's long list to get to £20 billion, including the first stage of Crossrail, which is already funded. We do not accept that Crossrail 2 is a scheme that is needed to deal with additional passengers.

Q50 **Luke Pollard:** I have a slightly separate follow-on question. There has been speculation that the northwest runway scheme will be altered significantly from what was presented in the national policy statement. Do you accept that the changes could be significantly different? If they are, will that change the way you assess it? Is it not best to assess the scheme as it actually will be built, rather than as it might be proposed, which could significantly change?

Caroline Low: We are out for consultation on the scheme that is in the NPS. We will look at the responses with an open mind, but once the NPS is designated—if it is designated—that is the scheme that will be taken forward.

Q51 **Luke Pollard:** If the proposals are significantly different, and that pops out as a result of consultation, and might not be a scheme you consulted on, are you adequately reassured that the general public and stakeholders have enough chance to comment on what the final scheme will be?

Caroline Low: If we significantly changed the scheme at this stage, there would have to be further consultation. It is possible that you are referring to proposals by Surinder Arora, which he has put in the public domain. Those proposals move the runway to the east, taking out additional villages and changing all our environmental analysis. If, as a result of the consultation, Ministers wanted to make that their preferred scheme, there would need to be a period of further consultation.

Q52 **Chair:** I have a follow-up question on surface access. Hypothetically, say it was Gatwick that was going to expand rather than Heathrow. Would western rail access still happen?

Caroline Low: This goes to Phil's point. Western rail access is a scheme that the Department has been looking at in a two-runway world. It is a scheme that we are actively taking forward, building a business case and considering it in accordance with our normal rail policy.

Q53 **Chair:** They are not related.

Caroline Low: The business case will change in the event that the NPS is designated and there is a third runway, but the original proposal for western rail was for a two-runway world.

Q54 **Chair:** The case for western rail access would be affected—

Philip Graham: It isn't.

Q55 **Chair:** It is and it isn't. It would be affected.

Caroline Low: It would be affected, but it is not predicated on—

Philip Graham: It is not dependent on that.

Chair: Thank you.

Q56 **Paul Girvan:** This question is for Caroline. The latest forecasts show that we will need an additional runway, wherever that might be, by 2026. Which scheme do you think has the greatest prospect of actually delivering that runway?

Caroline Low: We are satisfied about the deliverability of the Heathrow scheme. We looked at the deliverability of all three schemes at the point when Government took a preference decision. We are confident that

Heathrow can be delivered. What we have said in the NPS—we have not changed this in the updated NPS—is that we think a new runway needs to be in place by 2030.

Q57 **Paul Girvan:** The NPS acknowledges that the northwest runway is not without its difficulties and risks. What are the risks associated with the scheme?

Caroline Low: As you have pointed out, it is a large and complex scheme. There are numerous dependencies. There is no single thing we can point to and say, "That is the biggest risk." It is about bringing together all the stakeholders and managing those dependencies and, as Phil said, ensuring that the package of mitigations and compensation for communities is delivered alongside that infrastructure. Bringing all of that together is probably the overarching risk for the project.

Q58 **Paul Girvan:** There are many things we think are going to have some impact upon it, but stopping time is not one of them. I ask you very pointedly, will this be delivered by 2026? Are you on target to deliver by 2026? Will it be delivered by that date?

Caroline Low: The Government's target is to deliver by 2030. The Government's role in this is to put in place a national policy statement. It is then for Heathrow to take forward the detailed planning and to deliver the scheme. It is probably a question for Heathrow around their detailed timeline, but we are confident that 2030 can be met.

Q59 **Chair:** I have a question for Dennis. The NPS states that a northwest runway will provide the "biggest boost to the UK's international connectivity", but the data have always shown that at UK level, rather than individual airport level, the connectivity benefits are broadly the same with all three schemes. At 2050, we would expect, with the northwest runway, 137 short-haul, 92 long-haul and 28 domestic daily scheduled services, compared with Gatwick at 143, 88 and 28 respectively. If the connectivity benefits are broadly the same, but the economic case is now in Gatwick's favour, where does the northwest runway's advantage lie?

Dennis Morgan: I would start with the connectivity story. What the forecasts show is that there is a very clear difference between the two schemes. To give two examples, in 2030, expansion at Heathrow with the third runway would deliver 35,000 additional long-haul flights, versus only 1,000 at Gatwick. The Heathrow third runway would deliver 16 additional long-haul destinations served daily, versus only two at Gatwick. We see a very clear difference in the international connectivity earlier on.

Q60 **Chair:** Is that around where the flights are, as opposed to the whole UK's connectivity?

Dennis Morgan: That is UK level. The UK will have 35,000 more long-haul flights if we expand Heathrow with a third runway, versus only 1,000 more at UK level if we expand at Gatwick. It is that difference in international connectivity that feeds through into the strategic benefits and the strategic case. As Phil was saying earlier, it is very difficult for us to put a precise monetary number on those GDP impacts, but we think the GDP impacts are real and that they are fundamentally driven by the differences in connectivity, which is why we can have some confidence in saying that we think Heathrow will be better placed to deliver those strategic benefits.

It is also the case, if you look at the narrow economic benefits we estimate, that, whereas the total between the schemes is very small, across the whole 60 years there is a very clear difference in the dynamic profile between the two schemes. By 2030, a third runway at Heathrow, for example, would deliver three times the number of benefits that a second runway at Gatwick would deliver.

Q61 **Chair:** In terms of the international connectivity piece, you are saying that because of the pent-up demand, Heathrow delivers connectivity faster. Over the longer period, are they broadly the same or not?

Dennis Morgan: Those differences continue right into the 2040s. It is only at that later point that Gatwick starts to catch up. It is probably also worth mentioning that that is very dependent on a two-runway Gatwick operating at full capacity, so it would be operating at a much higher intensity than is currently allowed with a two-runway Heathrow.

Q62 **Chair:** You have also forecast that Gatwick's daily long-haul route offering will decline from 11 last year to seven in 2030, and that is with an additional runway. It seems to defy common sense that they would have fewer long-haul routes with a second runway, particularly given recent long-haul growth. How did you come up with that forecast?

Dennis Morgan: Could you repeat that figure for me, please?

Chair: Gatwick's daily long-haul route offering is to decline from 11 last year to seven in 2030.

Dennis Morgan: At the airport level.

Chair: Yes, with an additional runway.

Dennis Morgan: What the model is trying to do is to reflect the nature of the demands predicted at that particular airport. The model is suggesting that, even with that additional capacity, the preference of flyers is not going to be to those locations but to, for example, more short-haul locations.

Q63 **Chair:** Given that they have increased their long-haul destinations in the last couple of years, it seems to defy common sense to suggest that the number of long-haul destinations will actually fall when they have an extra runway. How confident are you in that forecast?

Dennis Morgan: We are confident in the general messages that the forecasts tell us. There is a strong evidence base, for example, around the suppressed demand at Heathrow. There is a strong evidence base around how, if you release that capacity, it will be used up very quickly and will have a big boost to international connectivity. The evidence base we have on the way Gatwick is utilised means, as Phil was saying, that there is more demand uncertainty. That is fair, and it has been reflected in our publications. It appears to be the case that that capacity will be used much more slowly. Passengers will seek alternatives, particularly travelling through competitor international hubs. In that world, we see the UK's share of the international transfer market, for example, declining quite significantly.

Q64 **Chair:** Is it generally an issue that the Department for Transport's forecasting of passenger demand is difficult? I notice that Stansted airport's passenger demand has grown by 6% a year since 2011, but it is forecast by your Department to fall by 8% between now and 2030. Can you explain why that is the case? It just seems strange.

Dennis Morgan: Stansted is an example of a number of airports that, even in the long term, which is one of the fundamental purposes of the model, are expected to grow faster than the national average. However, there are situations where the airport has had more variability in its past passenger numbers. Where it is in a catchment area that overlaps with a lot of other airports, the specific allocation for that airport is much more uncertain, and it is harder to forecast.

What we are forecasting for the London system is much higher growth than in the previous forecasts. What the model cannot do in the very short term, and is not designed to do, is to pick up some of the drivers of short-term allocation at airports. A good example relates to the commercial strategies that airports such as Stansted could put in place to enable it to capture a bigger slice of the growing London market.

Q65 **Chair:** Let me explore this a bit further. Your forecasts assume that passengers are insensitive to price when they make their choice of airport, which seems to defeat what you were just saying, even for low-cost carrier passengers. How do you justify that assumption?

Dennis Morgan: The choice of airport is fundamentally driven by something that is quite standard in transport appraisal—the generalised cost. That takes into account a number of costs that a potential passenger would have to incur to access an airport. It includes journey time and the cost of that journey. It includes, to a degree, the convenience of the flights, the frequency and so on. That is a significant driver in airport choice.

Q66 **Chair:** Do you think the price of the actual ticket is a relatively small part of passengers' decision making?

Dennis Morgan: The model does not have a specific variable for fares as such. The model works on a different basis. It constructs its generalised costs, and part of that is a particular cost associated with using different airports. It gets into some very technical realms—

Q67 **Chair:** It just seems quite surprising for those of us who, when we are buying an airline ticket, would look at price as our first option, maybe.

Dennis Morgan: It is certainly part of the package that one would consider. It may cost you a few pounds to fly from Glasgow, but if you live in Kent the distance might be a consideration.

Q68 **Chair:** On the assumption that Heathrow will open by 1 January 2026, the Department has forecast that additional airport capacity will fill up within two years. I appreciate the point about there being pent-up demand, but how did you reach that conclusion, given Heathrow's own plans to phase in the capacity by 2040?

Dennis Morgan: That is a scenario that assumes that that capacity can be used up in that period of time. It assumes that there is no phasing and it assumes that all the airlines can get all the planes in the right places.

Q69 **Chair:** Even though Heathrow themselves have assumed phasing.

Dennis Morgan: Again, the purpose of the analysis was to present a consistent basis to compare the schemes, and for that we used the scheme designs as set out by the Airports Commission. In our analysis, we actually included a sensitivity where capacity was phased in at Heathrow.

Q70 **Chair:** Turning to regional connectivity, the forecast showed that, with the northwest runway, Heathrow would deliver, without other interventions, fewer domestic routes than Gatwick, and that regional airports would experience more direct connectivity growth under an expanded Gatwick than under a northwest runway. Doesn't that suggest that Gatwick is better for other regions of the UK?

Dennis Morgan: The short answer is probably not. What happens with expansion at Heathrow is that it improves the UK's international connectivity. Forecasts suggest that more people from the regions will use an expanded Heathrow than would use an expanded Gatwick. Expanding capacity gives us an opportunity to increase both international connectivity and domestic connectivity. It is the case that without expansion we expect significant increases in growth in all sorts of regional airports. With expansion, that sort of growth declines a bit, and that effect is more pronounced with Heathrow than Gatwick. What that actually tells you is that expansion at Heathrow gives an option that more people in the regions would prefer to take advantage of than if you expand at Gatwick.

Q71 **Chair:** Under either model, there is more international connectivity but it is sucked into Heathrow. Is that broadly speaking what happens?

Dennis Morgan: International connectivity will continue to increase at all the regional airports, even with expansion at Heathrow or Gatwick.

Philip Graham: This was an issue we discussed quite a lot with the commission. I do not know the exact nature of the forecasts at the moment but there are two things I would say. The members of the commission were certainly not of the view—this was driven by the discussions they had in Newcastle, Glasgow and down in the south-west, for example—that access to any London airport is the same as access to any other London airport. The message they were given by the regional contacts that they made, which were not just the Governments—we did some sessions for industry and business in Scotland and the north—was that access to Heathrow was particularly important. Even if there is that differential, as you put it, Heathrow access was prized regionally, in addition to the access they already had to hubs in Europe like Schiphol, and in some cases to Dubai via the Emirates connections.

The other thing the commission felt was particularly important was that the point about all other things being equal is not a point, if you were to expand Heathrow, that should be taken as read. Actually all other things should not be equal. There are opportunities, as Heathrow expands, to find ways to make it more attractive to the airport and to the airlines to use more of the slots that are created to expand regional connectivity. It is not just about numbers of destinations; it is about frequency of service, and about competition on those routes, which might bring prices down. The commission's view was that there were real regional benefits from expansion at Heathrow, particularly if you put the right measures in place to drive it.

Q72 **Chair:** But it does rely on those measures, and if either the Government or Heathrow were unwilling or unable to subsidise those extra domestic routes, would it happen?

Philip Graham: I do not think it relies on them. I think they are increased, but they are real even if you do not go down that route. I am not sure that subsidy would be the way to make it happen. It would be more around some conditions associated with slot usage. Even if Heathrow Airport Ltd was unprepared to look at the way it handled the slots, and I seem to remember that shortly after the Airports Commission report was published Heathrow airport moved proactively in that direction, the benefits would still be real. Access to Gatwick was considered to be valuable and useful. Access to Gatwick from regional destinations would be maintained whether it expanded or not, in contrast to Heathrow where it would be squeezed if the airport was not expanded. It was not considered to be a replacement for access to that particularly valuable route network.

On top of that, all communities valued the expansion of long haul from their own areas in so far as they could, but that is far more driven by the ability of Manchester airport, Glasgow airport and Belfast International to create a viable offering for the airlines that might serve those routes than it is by a decision about what happens at Heathrow.

Caroline Low: The national policy statement is very clear about the expectations Government have for maintaining and increasing domestic routes through steps that Heathrow is expected to take, but as a backstop through Government using PSOs or slot allocation techniques.

Q73 **Steve Double:** Heathrow's capacity and capability for handling freight is well known and established. Has any consideration been given to whether, if Gatwick were to expand, it would be able to increase its capacity for freight as well? Have any forecasts been produced or considered for all the expansion options on freight? That is mainly for Dennis, but anyone can come in.

Philip Graham: I don't think we produced a forecast specifically. As you would expect, Gatwick made the case, "Well, if we were to expand, we would catch up with Heathrow." The bottom line from the commission's point of view was that Gatwick may well start to expand its freight business. You would expect it to if it were able to expand, and if it were able to attract more long-haul flights and more full service airlines—a terrible phrase—as opposed to low-cost airlines. Low-cost airlines, not 100% but generally, try to keep freight out of their planes, because it messes with their business model. Part of the problem for Gatwick, Stansted and co. is that they do not have that.

It is about where you start from. Gatwick is starting from one place and Heathrow from another. It is not just about the amount of freight that happens to travel through the airport. It is also about the entire ecosystem that sits around that—the motorway access and the freight logistics firms. There is a piece of new evidence that I remember because it was one of the things that really had a reaction from the commission when we presented it to them. There is a map in our report—on page 257, I am sure you will be delighted to know—that shows the location of freight logistics firms in the south-east of England. There is a very clearly defined cluster around Heathrow, which also reflects the fact that Heathrow is where the M4 and the M25 meet. It is a good place to be a freight logistics firm. There are, literally, two by Gatwick, and that was a point that really struck home with the commission as to the advantages that Heathrow has in that area.

Caroline Low: I echo everything that Phil says. It is about where you are starting from. Looking at the level of freight logistics around Heathrow, at the current volumes and value carried through Heathrow and allowing for the types of airlines that operate, we have put some numbers on the trade benefits, using some of the most recent techniques set out in the literature. For all the reasons we have discussed before, we have not included those in our economic case, but they give some indication of what we think Gatwick could achieve in terms of trade benefits versus Heathrow.

Q74 **Steve Double:** Do you have anything to add, Dennis?

Dennis Morgan: No. The only thing I would say about those figures is that again they are presented over 60 years. There is a difference if you look at the dynamic profile. The story is the same, and it is very much the case that expansion at Heathrow will deliver those benefits a lot sooner.

Q75 **Daniel Zeichner:** This question is for Caroline. Going back to sustainability issues, looking at the NPS as a whole there really is not very much, in the sense that there is only one paragraph that does a side-by-side comparison of the relative environmental impact of the proposed schemes. Do you think that is sufficient?

Caroline Low: We have also published an appraisal of sustainability where there are some 2,000 pages of analysis. We are satisfied that we have set out sufficient detail on the environmental and sustainability impacts of the three schemes that the commission shortlisted.

Q76 **Daniel Zeichner:** Parliament is quite likely to look at the NPS itself. Do you not think more could have been put in it to make it easier for us to make a judgment on the environmental issues?

Caroline Low: In the end, the NPS becomes a planning document against which the promoter needs to make a planning application. It is not really the place to set out an extensive discussion. There is a summary document of the appraisal of sustainability that we can make sure you have a copy of. It is provided with all the documents and draws out the key points from the longer appraisal.

Q77 **Daniel Zeichner:** To some extent, I am going back almost to where we started. In the end, we are looking at the demolition of 783 homes, hundreds of thousands of people exposed to worse noise and air quality, and, according to the report, that is balanced against a maximum net benefit of £3.3 billion over 60 years. Is that the right judgment to be making in the end? Listening to a lot of the evidence, it seems to me that in the end the strategic issues override whatever the economics say. Is that unfair?

Caroline Low: You said a few things that I want to come back on, so check that I have answered your question at the end. In relation to air quality, the NPS is absolutely clear that Heathrow can proceed only if it can be delivered while we meet our legal obligations on air quality. I do not think I quite agree with you that air quality will be worse.

In relation to noise, we have set out what we consider the likely future noise impacts to be. Overall, the noise will get better because of the improvements in technology and the package of measures that the commission recommended, which are taken forward through the NPS. There will be the night-flight ban, respite and fixed noise envelope.

I think your point was how we balance those things overall and have we got it right. We are out to consultation at the moment, so of course we are open-minded to the responses that come back. We are confident that, taking into account the strategic case, the economic case and the environmental impacts, Heathrow is the right answer for the whole of the UK.

Q78 **Daniel Zeichner:** Listening to the whole discussion, the strong sense I get is that, whatever the economic and environmental case is, in the end the strategic case is the overriding one. Is that a fair point?

Caroline Low: I am not sure that I would say overriding. You have to look at all of those things in the round. You have to look at all the evidence together, and overall the conclusion is that the northwest runway is the right answer.

Philip Graham: That was certainly not the case for the Airports Commission; it was very much judgment and balance, looking across all the elements of the work. If it had been just the strategic case, we would not have spent so much time and effort preparing the package of mitigation measures that we put together to accompany the proposal for expansion.

Chair: Thank you. That concludes our questions to the first panel of witnesses today.

Examination of witnesses

Witnesses: Nick Dunn and Captain Lowe.

Q79 **Chair:** Welcome and thank you for coming along today. For the record of our proceedings, would you introduce yourselves?

Nick Dunn: I am Nick Dunn. I am the chief financial officer for Gatwick airport.

Captain Lowe: I am Jock Lowe. I am a director of Heathrow Hub, which is the sensible option for expanding Heathrow. Previously I was director of flight operations at BA.

Q80 **Chair:** This is a question for both of you in turn. The headline conclusion of the NPS is that there are no true alternatives to the northwest runway. I suspect I know the answer, but do you think that is a fair assessment of the relative merits of your schemes?

Nick Dunn: There are probably three points in answer to that. The first one is to welcome the draft NPS and the revisions to it, because it now goes some way to recognising the growth we have seen at Gatwick and across airports in the UK and emphasises the need for capacity as soon as we can do it. Obviously, the fact that it recognises that Gatwick delivers the best economic value for the UK is welcome recognition.

With that in mind, you cannot then move on and suggest that Gatwick is not a true alternative. When we think about the hub question and whether the UK has connectivity, the connectivity outcomes for the UK are the same whether you expand Heathrow or Gatwick. I will illustrate that with an example: long-haul flights and long-haul origination and destination passengers from the UK. There will be 51.8 million in 2030 if you expand Heathrow; and 51.8 million if you expand Gatwick. It is the same people from the UK on leisure or business going to the same places around the world. That is really important. The big difference is that that connectivity is spread more broadly across the UK in a Gatwick expansion.

The other thing that struck me, both from the NPS and from the session I have just sat through, is the sense that it is more urgent than ever that we deliver capacity, particularly as we move into a Britain post Brexit. It feels to me that we have little to gain from the to and fro about whether Gatwick or Heathrow is a better outcome. We have made it very clear in our submission to you and to the Government that as a business we are comfortable with developing our runway capacity at Gatwick, whatever decision is made about Heathrow.

As a Committee scrutinising the NPS, you have a real opportunity to make this a national policy statement that is somewhat more ambitious and genuinely national in its outlook, rather than single site.

Captain Lowe: I detected a lack of common sense in the first session, so the common-sense answer is that of course there are options. There is our scheme for expanding Heathrow, which can be done in stages. It is deliverable and cheaper, for the same capacity. There is always the option of doing partial expansion at both airports. If limits are not met on noise or emissions at the first stages, you do not carry on. While we may pretend that we know what the emissions and noise will be, we do not actually know. The Heathrow all-or-nothing option of the northwest runway has a high risk in terms of not meeting targets or not being financially viable.

Q81 **Luke Pollard:** The economic case for Gatwick has shifted significantly in your favour in recent months. Do you think your case has been fairly represented by the NPS?

Nick Dunn: Things have moved on considerably. The recognition in the NPS that Gatwick delivers the best economic outcome starts to come through, just about. It has always been the case that Gatwick delivered the best economic outcome, even in the Airports Commission's own data.

There are a couple of things that need to be addressed in the calculation of economic outcome. The NPS needs to reflect them and the Airports Commission should have reflected them. The first one is about international transfer traffic. Many people use our UK airports to transfer, for example, from Germany to do business in New York via London. They are our competitors, and they choose to step off in the UK on their way to another place to do business. Government guidance is exquisitely clear about the need to exclude the costs and benefits associated with those passengers from the calculation of UK benefits. It makes sense. Why count to the benefit of the UK the benefits that flow to a German or an

American who is doing business at our expense? That is one thing that needs to be adjusted, and it is very clear in the Government's own guidance. I am happy to give you the reference.

The second thing is that the traffic forecasts touched on in the last session produced some very questionable results. I am sure there is a very fine model generating these outputs—in fact, we know there is—but they really underplay the track record of growth at Gatwick, and the potential of Gatwick. Maybe I could illustrate that with a couple of points, because the traffic forecasts are fundamental to driving the economics. The first one is the build-up of traffic. When Gatwick expands and opens, the model suggests that there will be around 5 million extra passengers within two years; but at Heathrow it will be 38 million. Thirty-eight million is the size of BA, so overnight BA needs to arrive with a fleet to take up all the capacity that is being delivered. I question whether that is a plausible outcome.

For Gatwick, it is 5 million passengers in two years; we just saw the auction of some slots by Monarch. That was worth around 2 million passengers per year. It was six times oversubscribed. That means that, if we delivered it today, we could probably find 10 million passengers. These are really important things.

Chair, during the earlier discussion, you touched on the fact that today Gatwick handles around 12 daily services to long-haul destinations, and 64 destinations in total. In 2050, the model suggests 58 long haul, of which only 13 are daily. These are going backwards. These are very important things that need to be picked up in the modelling to make sure that the economic benefits, which already favour Gatwick, really bring home the advantage.

Q82 **Luke Pollard:** The NPS states that Heathrow's benefits "will be experienced more rapidly" than Gatwick's. Is that right?

Nick Dunn: Once again, I go back to my first point, which was about the exclusion of benefits that flow to our competitor nations. The quote suggesting that benefits arrive earlier to the UK under a Heathrow expansion included all the benefits that flow to international passengers. Those should be excluded. Of course, most of the traffic build-up in the early years at Heathrow is transfer traffic. There is a very large influx of transfer passengers, and therefore economic data. Unfortunately, the DFT has not given enough detail in its current consultation. We would welcome it if they could give it to us. We need more detail so that we can unpick those economic benefits.

I also go back to the point on long-haul passengers. If long-haul passengers travelling to and from the UK—the important economic generators—are the same whether Heathrow or Gatwick expands, why would you expect a vastly different profile or outcome in terms of the economic benefits? You should not. It will be interesting to see the detail of the analysis.

Q83 **Chair:** The answers given by the previous panel were that benefits from expansion of long-haul connectivity from an expanded Heathrow using a northwest runway would accrue much faster. Mr Morgan gave a reference for what the difference would be in 2030. Is that not the difference? The extra connectivity is delivered much faster with the northwest runway than it would be with an expanded Gatwick.

Captain Lowe: Let me give an overall picture. Over 50% of the people who come into Heathrow live overseas. With Gatwick, it is only 20%. Yes, the general attitude of overseas airlines, which are the ones we want to come into Heathrow or into London so that we can expand the routes there, is to prefer Heathrow. It is a worldwide brand and that is where they will go.

However, there is a change, and this is where the models are always at least five years behind. There is no such thing as low-cost long haul, but low-fare long haul is going to expand. BA has picked up many of the Monarch slots at Gatwick to bring it level. It is low fare and they pack the seats in. That will change the model quite significantly. These things are not taken into account. Taking the overall picture, yes, Heathrow will probably expand more quickly than Gatwick, but they will both do well. That is why I come back to the point, why not do both?

Nick Dunn: You referenced some numbers that were raised in the previous session, Chair. The expansion differs in the extent to which transfer passengers flow through the system. Outside that, the expansion does not deliver a broadly different outcome for the UK. It is the same number of people. These are long-haul passengers travelling to and from the UK. Under a Gatwick expansion, by 2030 we will have 51.8 million. Under a Heathrow expansion, the figure is 51.8 million, so they are the same. What is different is the number of transfer passengers. That will mean that there are more flights. Of course, there are going to be more flights if you are bringing in lots more transfer passengers over the heart of London, and with that comes noise, carbon usage, and so on. What is the output that we are trying to garner from all those transfer passengers? Surely it is making sure that more people from the UK travel overseas than they otherwise would have done on business, and more people from overseas travel to the UK as tourists to spend their money here. The answer is that they do not.

What is different—I emphasise this point—is the impact on regional airports or the international gateways around the UK. Under a Heathrow expansion, if the DFT model is to be believed, by 2030, compared with no expansion, there will be 10 million fewer international passengers at airports outside London. Of those, 4.6 million will be replaced by the great opportunity of flying from their local airport to London and then on somewhere. Instead of flying from Manchester, they get to fly to London and then they get to fly somewhere. Instead of flying direct from Edinburgh, they go to London. Instead of flying from Belfast, they do the same. These are important points about the way the system develops.

I would not disagree with Jock's suggestion, because it comes back to the point I made at the beginning. There is quite a lot of to and fro about whether one is better than the other, but we are left with a slightly artificial construct. Why one? Why not both? That delivers capacity to the system. It supports resilience in the system. It supports competition in the system and it supports a sharing of the load across the system.

Q84 **Huw Merriman:** The NPS has now been updated. It sounds as if you are not convinced that the economic case has been correctly stated. Which key parts do you believe are still lacking in the economic case?

Captain Lowe: While Nick is getting the figures, I will do ours. I simply cannot understand why the DFT continues with the assumption that we have lower capacity with the extended north runway than with the new northwest runway. They are the same. In fact, there is a possibility that ours has greater capacity, so why does that perpetuation of the financial benefit from the northwest runway carry on? It was put in by the commission at the last minute.

Ours could easily be built much more quickly. It is the cheapest of the options. It could be done in phases and we would have the same capacity. How anybody could make that out to be a lower economic value, I do not know. That is not reflected in the NPS. The other parts of the NPS that are wrong are about noise, which perhaps we can come on to later.

Nick Dunn: There are probably three points. I will be brief as I mentioned them earlier. The first one is about international transfer passengers. As I said, the aviation appraisal guidance document is exquisitely clear that those benefits should be excluded. That is £3.2 billion to the evaluation. The passenger benefit, even on DFT's calculation, is £1.8 billion in favour of Gatwick. It would move to £5 billion if you excluded those particular passengers.

The second area where there is explicit guidance is on environmental disbenefits. The DFT has set aside guidance from DEFRA that suggests that the range of noise impacts should be shown fully on the evaluation. The environmental disbenefits shown in the NPS are a point estimate, and, at the top end of the range, the impacts for Heathrow are probably about £5 billion to £6 billion worse than they currently are.

The final point is on traffic forecasts. I do not think we are alone among airports in being somewhat surprised by the latest iteration of the results the DFT traffic model is producing. It does not take into account the price, yet price is so important for a passenger's choice of airport and the overall volumes. It separates full-service carriers, low-cost carriers and charter carriers into separate buckets. This becomes hugely important when you look at frequency of services. In essence, it treats Stansted as one large low-cost airport that long haul or full service can never go near. In the case of Gatwick, it treats us as three small airports, and never the demand will go, between those three elements of low cost, charter and full service. That is not what we see day in, day out in the way the industry has moved.

Those are the things that need to be updated. Where Gatwick is already recognised as having the advantage from an economic perspective, that advantage will widen ever further.

Q85 **Huw Merriman:** I should not assume anything, but it could be the case that you could seek legal redress if that is not corrected. Have you had that conversation with the Department to ask for a further amendment?

Nick Dunn: The Department is out consulting, as you heard from Caroline Low. They have an open mind, so they will no doubt be looking again at the representations we are making on these particular points. One would hope that they will reflect the points that have been made, and made quite strongly. With the oversight that this Committee brings, you have an ability to make sure that what is produced is a much improved version. Therefore, it would be far too early to talk about whether the final product will be satisfactory or not.

Q86 **Steve Double:** Jock, in your written evidence you claim that your scheme can be delivered £6 billion cheaper than the current figures suggest. What do you believe accounts for the difference?

Captain Lowe: We said £6 billion cheaper than the Heathrow option and much cheaper than the Airports Commission worked out, not least because they included optimism bias, whereas we put in contingencies for each of the separate factors. I can come back to you with the exact breakdown of the £6 billion and the differences and costs between the two schemes. Principally, it is about the amount of concrete you have to put down and the number of houses and the infrastructure you have to destroy for the northwest runway scheme.

The other thing that has not been taken into account at all is phasing, which is a point I mentioned earlier. The first phase of our scheme could be just to build a runway and some concrete stands to put the aircraft on. That is much less than £4 billion and would be stand-alone. In other words, the growth that it would produce would pay for it. Why there continues to be non-acceptance of this cost difference by some, when it is pretty obvious, not least for the Heathrow northwest runway, that they do not yet know how to cross the M25, I do not know.

Q87 **Steve Double:** Has there been any attempt by the DFT to try to resolve those discrepancies?

Captain Lowe: No. It would seem that the data we got were taken in but not discussed. There was no iterative process, so we do not know what their thinking is. We certainly gave the Secretary of State a cost breakdown of the differences as we know them. Of course, we only know our own scheme in detail, but we could make some pretty good assumptions from the data in the Airports Commission.

I stress that it is like for like. If you downgrade the quality of the terminal and build a shed, it is much cheaper than building terminal 5. Like for like, we will always be £5 billion or £6 billion cheaper than the Heathrow scheme and £2 billion or £3 billion cheaper than Arora's plan. Again, if I could for the last time use common sense, half the runway is already there. We are using it. Despite the fact that it is still significant, it is 240 houses as opposed to 750, and they are not in the most salubrious place.

Q88 **Steve Double:** This is a question to both of you. The total cost of the northwest runway at Heathrow is estimated to be £16 billion. Do you see any risks in that figure? Where do you think costs could possibly rise?

Captain Lowe: There are large risks, because they do not know in particular how to get across the motorway; nor, as far as I can tell, have they done a safety review or safety analysis of taxiing between the runways. It may well be that the runways have to be shortened or lengthened. There are risks in terms of the actual cost. Already, there are assumptions that you could take some things out, such as the people transfer system, where it could be a bus instead of a train. That cuts costs. Yes, there are things that you could do to reduce it, but at the same time you are reducing quality and I do not see anything that will reduce the difference between the two.

Nick Dunn: If I might, I will answer the question in the context of a comparison with Gatwick, because everything we have looked at always has a comparable. What is the land that we are going to build a second runway on at Gatwick? It is largely agricultural land to the south of the existing runway that has been safeguarded for that use for many years, as compared with a runway that must be built—if it is the northwest runway option—over the Bath road, with the demolition of various commercial properties there, and across land that has historically been used for landfill and therefore has to be treated. At Gatwick, there are no waste-to-energy plants in the way of the flight path, nor are there any other major buildings for which removal must be separately consented. Neither the runway nor any of the terminal infrastructure goes anywhere near the rail lines, let alone over the major motorway that serves the airport.

Around all those reasons, we recognise that we have a low-cost, low-risk solution, which even we choose to phase, because that gives us options should traffic come at us quicker or slower than anticipated. It is sensible risk management. Those options are not available at the northwest runway scheme.

Q89 **Steve Double:** Do you see any risks in your schemes of cost inflation?

Captain Lowe: With our scheme, none that we have not fully taken into account, because it is a fairly simple process. We build a bypass for the M25 overnight. We move the crash barriers and we go again, mainly through land used for gravel pits, or unused land, between the runway and the M25. The only risk that I would identify is the cost of moving the waterways; the rivers and so on. That may be higher or it may be lower, but we have made a pretty conservative high estimate of what the cost of that would be. Until you do the detailed planning you do not know, but just putting a runway down, a taxiway and moving a road is pretty predictable.

Nick Dunn: From a Gatwick perspective, clearly the scheme is a lot simpler and more straightforward. Therefore it is inherently lower risk. Let's be clear, we are not complacent about it. When we put together our bid and our proposal, we scrutinised it ourselves. We brought in external parties to help us with that work. Bechtel was one of the organisations that looked at phasing and the investment in the scheme. There are quite large amounts of risk allowance in there: optimism bias, risk, whatever you want to call it.

Perhaps to underscore the confidence we have in our scheme, both the demand for it and the costs are reflected in the fact that we put forward a proposal to the Airports Commission. We have reiterated to Government that we are willing to cap the airport charges that can be charged at Gatwick because we are confident of our scheme and our ability to manage it. This is in stark contrast to other schemes that talk loosely about keeping prices at the sort of level they are today. That does not sound quite as convincing as, "We're capping our prices. We've set a price."

Q90 **Chair:** We have spoken quite a lot this afternoon about long-haul connectivity, which is obviously particularly important in the current context. It has been touted by the NPS as one of the key comparative advantages of Heathrow northwest runway. How do both of your schemes compare in terms of offering new long-haul routes?

Nick Dunn: I go back to the question for the UK overall. When we talk about connectivity, we must mean the ability of travellers to move out of the UK overseas or to move into the UK directly or otherwise. The output and traffic forecasts that the DFT has produced indicate that there is no difference in terms of either the levels of traffic—51.8 million passenger journeys—nor the places they go to around the world. It has provided the detail behind that. You can interrogate it. There is the same volume of people going to the far east on business or on leisure, and the same number of people going to north America. At that level, the connectivity is the same.

Where there is a difference is as you move down through the DFT model, and there are more and more assumptions made, not about what is happening at the UK level but about how to allocate traffic across the airports. What that means is that by the time we get to the allocation model between airports, which I think the DFT touched on before and said that of the other areas that was the more uncertain area, there are differences in the number of long-haul services that the model would suggest are served directly from the UK.

Q91 **Chair:** Are you saying that, between your scheme and the Heathrow northwest runway scheme, you have the same number of long-haul destinations and the same frequency, but from the UK as a whole and not from a particular airport?

Nick Dunn: No. At the UK level there are the same number of passengers, so passengers still travel to the places where they want to go. That is quite important, because what is the purpose of either a destination calculation or a frequency calculation? It is then just a question of convenience. What the model tells us is that everybody still travels, gets to the places where they want to go and comes back. What the model suggests, to your point, is that in 2050 there will be 124 long-haul destinations served from the UK if Heathrow expands, and 121 if Gatwick expands.

The model suggests a small differential over a period of time in the number of destinations directly served, but that is not manifesting itself in fewer passengers. Taking those passengers and the economic value, it is not manifesting itself as a better economic outcome. The same people travel to the same places. The economics are better, but you might be able to choose to fly to New York between nine, 10 and 11 o'clock instead of nine, 11 and one o'clock. The DFT model produces those numbers. The model is highly sensitive by the time it gets to that area, but they do not manifest themselves in any different economic or travel outcome.

Q92 **Chair:** And for the extended northern runway.

Captain Lowe: Because we can do it more quickly and the impact on the passengers is less—we have all tended to miss that out—our scheme would cost less and would not put any extra money on fares, similar to Gatwick. The actual introduction of flights into Heathrow would be quicker in our scheme than probably any other.

Where I would partly disagree with Nick is that there are clearly more long-haul flights into Heathrow. The short-haul schedules are geared to connect and maximise the amount of transfer traffic. That is not possible at Gatwick for quite some time. The build-up of long-haul services, if we opened up Heathrow, would in my view be quicker and more beneficial, simply because that is what the market says now.

In the long run, yes, it would probably balance out, but again it comes back to, why go for all or nothing? There are clearly changes happening in the travel model. Despite what the DFT said, price is becoming more of an issue for the established carriers on short haul and economy long haul, and low-fare long haul is moving in. There have been some significant changes, but we must use where we are now. There are far more long-haul flights into Heathrow, and it is far more likely that airlines would move from Gatwick to Heathrow than from Heathrow to Gatwick. It is far more likely that other airlines—China Southern or LATAM from Brazil—will come into Heathrow because it is an easier market to sell.

Q93 **Chair:** Nick, can I press you a bit further on forecasting? The latest forecasts indicate that the number of daily long-haul services offered by Gatwick will fall to seven by 2030, and that is with an extra runway. Does that sound right to you?

Nick Dunn: Does it sound right to you?

Chair: I'm asking the questions.

Nick Dunn: Well, I'll answer then. No.

Q94 **Chair:** Why do you think the DFT has come up with that outcome, and what does that suggest about its modelling?

Nick Dunn: The DFT model, in a sense, has constructed a number of levels. It starts at a UK level and looks at GDP across different nations, internationally. Then it works its way down to airport level and says, "How should I decide to allocate them between different airports?" What is quite fundamental is the sensitivity of that particular allocation. We can already see it today. I think you cited some forecasts earlier for Stansted. To cite the ones for Gatwick, every year we have beaten the DFT's assessment of what our forecasts are. The latest assessment in the DFT's forecasts was for 2017, the calendar year we are currently in. The DFT was forecasting, because it is the first year of its forecast, that Gatwick would handle about 43.5 million passengers. Its forecast, published one month ago, says we are going to handle 43.4 million passengers. We have handled 45.4 million in the year to date, so they are 5% out already.

Moving to the question of the allocation of flights in between, you can understand that it does not take much to move, particularly around the daily services. Again, it is somewhat in the mists of time, but the DFT will point to the analysis and econometric modelling that has been done in the past. One of the observations that one of the independent reviewers made some years ago when he looked at the model was, "Well, one of the problems of this model, although it doesn't seem to be manifesting itself at the moment, is that it is clearly modelling itself on today's preferences and today's market." Today's market is dominated, particularly in long haul, by one particular airport. That has changed quite profoundly over the last three years, but the model is still using today's travelling patterns and preferences to try to project forward into the future. What the model cannot cope with is what I would call the discontinuity of a new airport arriving in the shape of a two-runway Gatwick that has not been in the system before.

Q95 **Chair:** If it is not seven, how many is it? About 20 or 30?

Nick Dunn: Our own figures do not differ much from the DFT's figures; if there are to be services for the UK overall, there should be very little difference between Gatwick and Heathrow in terms of either the destinations served or in the frequency of those services.

I also make that statement at a UK level. At a UK level, this continues to be very important. There are opportunities for airports outside London to serve international routes. Major routes are served already out of Manchester, Edinburgh and other airports around the UK. The DFT's model says that does not persist if Heathrow expands, for the reasons that Jock outlined, which are that it would suck all of the lifeblood out of the regional airports and deposit it in Heathrow.

Captain Lowe: To go back to what I think is one of the major issues, only one of the three schemes cannot be phased. If any of these forecasts are wrong, on passenger numbers and the preferences for where they go, if the emission targets are not met, and particularly if the noise targets are not met—because you will make them legal limits—you have spent all the money. It is all up front with the northwest runway scheme. All the forecasts are debatable, although clearly the passenger one is the clearest at the moment. But why have that risk? That has defeated me in the debate so far. You do not need to take the risks to still get the same benefits, but in a controlled fashion and not in a one-off fashion.

Q96 **Chair:** Coming back to the impact on regions, what does your scheme deliver for regional connectivity?

Nick Dunn: For journeys to and from, say, London and the regions, or around the regions, the traffic outcome that the DFT is projecting—we would not differ on this—is that UK domestic travel will be pretty much the same: 38 million passengers. That is for the purpose of travelling from one place to another in the UK. It is not for the purpose of travelling via an airport to hop on to a service somewhere else. In terms of domestic connectivity, people will want to do business in Edinburgh, flying from London or from Manchester. It is the same under both schemes.

Captain Lowe: I don't think it is quite that simple. At the moment, KLM is flying a lot of regional flights from around the UK to Amsterdam, or Lufthansa is flying to Frankfurt. What will happen for the benefit of the UK for outbound passengers is that there will be more flights to and from big airfields in particular. If the Government choose, they could expand some of the smaller ones, in Newquay, Dundee or wherever.

However, what you also want are direct flights to expand from a place, which would be Heathrow, so that if the inbound passengers—say from China—have to get to Amsterdam and travel on to England, to the UK, they will not. They will just stay in Amsterdam, or a lot of them will. We want them to come direct to the UK, which is where you have a major hub. No matter how we look at it, there are far more long-haul flights and connections to make from Heathrow. That is likely to carry on for quite some time.

Q97 **Chair:** Do you think Gatwick is wrong to say that there is a change in the model?

Captain Lowe: Not at all; I am not saying that. There are some changes in the model. Gatwick's case is significantly enhanced over what was there when these projections were put forward five or six years ago. On balance, if you are only going to do one runway, yes, it should be Heathrow. Of course, it should be the cheapest and quickest option, but there is still a case for saying that the figures are so far out that the case for both airports, with some phased and limited expansion in the first instance, is the right thing to do. We disagree on that.

Nick Dunn: I think we made that point at the beginning. We are very comfortable as a business to contemplate that. We as a business were separated from the BAA monopoly, which is left as just Heathrow, some seven years ago. At the very core of our business is competition. Extra capacity in the system will not only drive resilience and a sharing of a load, but will also allow competition. To the extent that the forecasts are wrong, and to the extent that maybe Jock and I have a different view of the future, we are quite happy to allow competition to thrive, and for whoever to demonstrate which is the best case.

Q98 **Luke Pollard:** I have a quick question on air freight, which is regarded as one of the key selling points of the northwest runway scheme. Jock, do you think your scheme could match the same benefits on air freight as the northwest runway scheme?

Captain Lowe: Of course. It is the same number of movements more quickly, so if anything we should do a little better than they have done. This overlaps with the issue of emissions around the airport. The big trucks have to be dealt with, so that might be a constraint. The freight goes in the belly holds of aeroplanes. There are not freighters. I think there is one freighter flight at the moment at Heathrow at 11 o'clock at night, and that's it. There will not be freighters; it will be belly-hold passengers. Wherever big passenger aeroplanes go, there will be freight opportunities.

Q99 **Luke Pollard:** Nick, Gatwick is in a different position with air freight, as we heard earlier from our other panel. Do you think there is a scenario where you could get to the same level as Heathrow in relation to air freight, or do you think that is a different market that you do not want to play in?

Nick Dunn: If you step back and look at what airport expansion and runway expansion allows, it allows international passengers to fly to and from the UK. Trade generally is reasonably well connected with that. That is not to say that one causes the other or vice versa, but there is some linkage between them. Indeed, that was something that was observed by PWC when they did some wider economic analysis for the Airports Commission. In fact, they concluded that the best relationship was with trade and passenger flows rather than trade and seats and seat capacity. Given the similar levels of long-haul passengers and, let's put it crudely, that is business people getting out, doing business and winning services for goods and trade between the UK and overseas, the separate question is, will we get the same trade outcomes? Yes, why not?

The question now comes to freight. Freight is not a driver of an economic outcome. It is just an output. It is a by-product of what we do. To the extent that some trade in goods is supported in the future, there is no special source for any particular airport. The volume or capacity is delivered by passenger aircraft. When long-haul passenger aircraft come to Gatwick they come with belly-hold cargo. Whether they are low-cost operators or not, in the long-haul market, freight is important so the capacity will flow with the traffic that comes. We have seen a burgeoning amount of cargo coming through Gatwick over the last two years because of that.

I think the freight piece is overplayed in a sense. It is the same with trade and goods. The question is, what is the capacity of cargo that is needed for the UK in the future? Philip Graham from the Airports Commission could not quite recollect whether they had produced any specific forecasts. I can correct his recollection. They produced no forecasts of the UK's cargo needs, and within that what role air freight would play. The DFT have produced no forecasts of what the UK needs of cargo are in the future and what role road, sea or air freight might play. It is a pretty lazy assumption just to assume that, because Heathrow is bigger today, it must be the right place to expand in the future.

Q100 **Chair:** What evidence do you have that Gatwick would be able to accommodate the increases in freight that would inevitably flow from those extra long-haul flights? It seems to me that your physical location is less well connected than Heathrow and less well served by a variety of surface transport options.

Nick Dunn: First, if you look at our local footprint, provision is made in our expansion plans for the expansion of our cargo facility. We already have cargo facilities at the airport. Those will be expanded with a second runway. The traffic, as it comes, can be served, and that is at our location.

It is also important to remember that this is not about Gatwick expanding and then shutting every other airport down. Heathrow continues to be a vibrant airport, but so do Birmingham, Manchester and other airports around the UK, and they already handle freight as well. Passenger aircraft that come into Manchester from China today will carry freight and utilise those freight facilities.

Some of our freight is handled at the airport and is then taken by road to other facilities that are networked right around the M25. It might head west towards facilities that are in the Thames valley; it might head north up to Northampton; it might go east out towards the Thames estuary. All those freight hubs are available to Gatwick once it produces the cargo off the aircraft.

Captain Lowe: But it is still safe to say that the infrastructure for handling large amounts of high-value freight exists already at Heathrow. It does not exist anywhere else, which gives it a head start, clearly, if you have new business coming in.

Q101 **Iain Stewart:** Mr Dunn, if you are correct in the correlation between increased passenger growth and freight growth, and you are successful in getting your extra capacity at Gatwick—I am not talking about building extra freight-handling capacity at the airport or immediate surface access—for many freight distributors you are the wrong side of London. If your freight volumes go like that, how do you address the broader point of getting stuff round the M25? The railway lines are highly congested into London and elsewhere. How would you address that?

Nick Dunn: We already handle sizeable freight volumes, and in the future that will expand with a second runway. As I say, there will be other locations around the UK, because the Gatwick model does not see the removal of long-haul flights from other regional airports. A lot of that traffic will still be dealt with there. Freight will still come into Heathrow and be dealt with there. Freight will come into Gatwick; we are on the M23 and linked to the M25. We have choices about whether we go into freight facilities in the Thames estuary and beyond, or into the M25 and down the M4 and the M3. We are reasonably well connected.

Q102 **Iain Stewart:** I won't press the point, but there are still big capacity issues.

Nick Dunn: Our analysis would suggest that the road network is entirely capable of handling the extra volumes that are expected to come here, because, as Jock rightly points out, generally this is high value, low volume. It might be pharmaceuticals, machine products or electronic products. They are high value, low volume. This is not the port of Dover bringing vast haulage lorries into the south of England that then need to navigate around the M25.

Q103 **Chair:** Nick, the NPS states that your scheme has higher demand risk than the other schemes. Is that a correct assertion?

Nick Dunn: I suppose, in short, no. There is one thing that I will draw out again, and about which I made a comment before. We saw only two or three weeks ago a very clear expression of the demand that we are faced with at Gatwick. That was the sale of the Monarch slots, which handled around 2 million passengers a year. That request for slots was almost six times oversubscribed. It is a good representation, albeit at one point in time, of the demand for services at Gatwick. As we have discussions with carriers around the world, even last week talking to many carriers in China, our challenge is offering the ability to serve daily services all year round. We do not have the slot capacity. We are already full; we are turning away business. The only way we can expand at the moment is by larger aircraft coming in or the quieter parts, such as the shoulders of the summer, being used by existing carriers.

We are very confident in the demand that has presented itself to us. Remember, we have grown from 31 million passengers back in 2009 to over 45 million this year. We will be touching 46 million passengers this year and are confident we can go beyond that.

I have no problem with the level of confidence and demand, but if you are putting together a proposal—to tie this to the question that was asked earlier about the risks of construction—we obviously take those seriously and we have phased our project. One reason we have phased the project is that, if demand does not present itself in the way we expect, we can manage some of the key risks and maintain our financing. That might mean that if traffic is less strong than we anticipate, because there might be an economic downturn at the point in time it started, it might not change our long-term view but in the short term we can flex our scheme. Equivalently, if demand presents itself far more rapidly, we can accelerate those schemes and meet it. My answer to whether there are issues around demand is no.

Q104 **Luke Pollard:** You talked earlier about landing charges. The modelling currently assumes in the NPS that high landing charges will be absorbed by the airlines. Do you think that is possible?

Nick Dunn: Maybe I should bring out one point, which was touched on in the previous session, which is the question of the costs of the scheme. The costs of the scheme, wherever it is built, must be recouped from somebody. Just because it might be funded by somebody in the US, the UK or somewhere else in the world does not mean they are not expecting a return on that investment. Those construction costs are a very real cost that must be recouped, and they are recouped through airport charges from passengers via the airlines.

That is a really important point when you are considering the comments made by the representative from the Airports Commission, who felt that we could simply ignore the costs of construction because it is going to be privately funded. Who is going to pay? I make that point because I think it is important. The NPS, at the moment, suggests that the passenger benefits at Heathrow, albeit in the long term lower, in the first instance are slightly higher and accrue sooner; but, already, they have to be paid for. There is no account made of airport charges that have to be paid for by passengers through their airlines from the outset.

Captain Lowe: The weakness of the commission and the NPS is that the commission almost ignored finance as an issue, whereas it is the passengers who pay. If the capacity cannot be delivered or the demand or capacity is not there because of emission constraints or whatever, the residual passengers have to pay, because it is unlikely that the CAA would allow the charging to force Heathrow airport into bankruptcy. The passengers will pay it. That will have an effect on demand, because the fewer the passengers, the more the cost will be. A significant issue is the apparent inflexibility that the NPS puts on fares. Of course it will affect them. If you put the cost up and the volume down, the fares will go up even more. It is one of the elements of risk that does not need to be taken.

Q105 **Luke Pollard:** I do not think any airline likes the idea of increased airline charges increasing passenger costs. Finally, my colleague Paul mentioned schemes being delivered by 2026. Can both of your schemes—this is a question to both of you—be delivered by 2026?

Captain Lowe: Ours certainly can. It is the simplest of all the schemes. Assuming the parliamentary process finishes by 2021—

Luke Pollard: We are very good at timekeeping today, as you can tell.

Captain Lowe: Yes, I can see. We said originally 2023, but that was based on a 2019 go-ahead, which seems less likely.

Nick Dunn: The phasing of our scheme means that we can deliver elements of it very early, and now we remain confident of delivering. The key issue is going to be support for that—and soon—because, while we are prepared to build a second runway whatever happens with Heathrow, that needs Government support and becomes very important as we think about how the NPS might be improved. If we are to take those sorts of steps and really make this a national policy statement rather than a west of London policy statement, taking account of the possibility of both being developed is very important.

Q106 **Luke Pollard:** On the question about 2026, if Heathrow got the go-ahead to build a northwest runway as per the recommendations of the Airports Commission, at what stage do you think you would be putting your application in for your runway, if you want to have both at the same time?

Nick Dunn: I think we are effectively saying that, as a business, we are willing to do that. We have been very clear, and we find ourselves at a point where, rather than later down the track, that could be delivered through the NPS.

Q107 **Luke Pollard:** The 2026 date is valid from your point of view for both Heathrow and Gatwick.

Nick Dunn: I will speak for Gatwick. I will let Jock speak for Heathrow Hub. But to the same extent that I had experts look at our delivery plan, the certainty of delivering in 2026 was high, and we knew that the Heathrow northwest runway would not be delivered by 2026, according to that analysis. I will have to leave others to make that judgment.

Captain Lowe: I agree with that. The chance of doing the northwest runway, with all the risks and problems involved, by 2026 is pretty remote. I can expand on that if you want me to.

Q108 **Huw Merriman:** Very briefly, I turn to airspace complexities. NATS believes that all three options would be fine as far as airspace is concerned. Do you agree?

Captain Lowe: I think this is one of the most important issues and it is a thing that has not been aired at all about the northwest runway scheme, or, indeed, about any three parallel runway schemes. It has not been done anywhere in the way they are proposing. You have to cross the aeroplanes over. There are aeroplanes coming from that direction that have to land on this runway and aeroplanes from that direction that have to land here. They have to cross over in the sky, probably here. It makes a lot more noise, increases the track miles that they fly, and the airspace is very complex. Personally, I think the chance of being able to deliver that capacity at Heathrow with the crossovers that I have talked about, and still get the same capacity growth at Gatwick, Stansted and Luton, is pretty remote. You are taking out a great big chunk of airspace just to cross the aeroplanes over. Noise has not been included in the NPS at all. It doesn't matter what you do—you are going to need that space.

Following on from that, the more complex you make the system, the less flexibility there is, as a fairly general rule. The more you make it complex in terms of airspace, the more you potentially limit other people, and the more you limit the use of modern aircraft equipment to do their own flying, the more they have to stay on railroads, effectively, in the air; they cannot move. It is a complex system with enough variables if you do the northwest runway scheme. I am just amazed that that has not been aired and included in the NPS, because it is a big, big chunk.

I think NATS is right; yes, you could do it. But the next question is, what do you have to do to achieve it? What is the knock-on effect? What are the mitigations you have and so on? What will that do to noise on the ground? It will not be 51 decibels; it will probably be 49 decibels, but it is still annoying. HACAN will probably tell you that the further out it is, the more the cones expand and so the more constant the noise, and so it goes on.

Nick Dunn: I have two slightly separate observations. One is, can airspace be designed to deliver the increment of traffic at Heathrow northwest runway as suggested in the NPS? Jock's advice and our own independent advice that we have looked at is no. Getting more than 700,000 movements will not be possible and it could be much lower still. That is in terms of the design of that particular airspace.

But we are touching on a broader point; in the clamour to push ahead with an NPS for one airport, airspace changes could have a profound effect on other airports around that need to make the best use of their existing capacity in all cases. Whether that is Gatwick, London City, Luton or Stansted, they will all be affected, so it is very important that the NPS picks up those airspace planning issues and makes sure that they are not left to some future strategy, some future day, because decisions that you make in this NPS will have an effect and will have major implications down the track. If you are looking for areas to reflect on and look for improvement, that could be one.

Q109 **Huw Merriman:** What I think you are both saying is that, while the airspace complexities can be overcome, the NPS does not properly reflect the mitigation measures that will have to be taken, which will then worsen some of the other ticks that they have. That is one issue. Secondly, again, it can be overcome, but it does not take into account the knock-on effect it is going to have on other airports. Is that right?

Captain Lowe: It will still be complex. I am not saying it cannot be—

Nick Dunn: I would say I wish I had said it that succinctly.

Captain Lowe: It will still be complex, but it is the impact that the changes to make it safe—to keep the separation vertical and horizontal—will have on all sorts of other factors, not least noise and other airports.

Q110 **Paul Girvan:** Nick, this is really for you. Gatwick clearly offers advantages in relation to the number of people who would probably be affected by noise with an extension to the network. Do you think that has been taken into account in the NATS report?

Nick Dunn: Whether it is in the NATS report or the draft NPS, to which I can speak, in a sense what I have seen from the draft NPS continues to quite fundamentally underplay the advantage of Gatwick on environmental issues, of which noise is just one. But if we pick noise, whatever metric you choose, it is ultimately a product of the fact that Gatwick is an expansion over a largely rural area, with flights to and from the airport. It is not unpopulated, but it is largely rural compared with the expansion at Heathrow, which would see flights going over one of the main population density centres in the world.

Strategically, once you have made the choice to do one or the other, you have either embraced that issue or you have addressed it. Heathrow, with expansion, impacts three quarters of a million people. That is 30 times the number that a Gatwick expansion would affect. Those are profoundly different numbers. In my mind, I do not think the NPS draws that out enough and really draws it together with what has been a very long-standing Government policy for many Governments of the day, which is to limit and, where possible, reduce the number of people in the UK significantly affected by noise. That decision in the NPS as drafted would drive a coach and horses through that particular issue.

Q111 **Paul Girvan:** So you do not believe that the NPS has evaluated that or taken it into account.

Nick Dunn: I do not think it has given it enough weight, particularly now that there is recognition that Gatwick delivers the best economic outcome in an area where it is fundamentally better in its environmental impact. We still have an impact and we are obviously sensitive to that, but it is a fundamentally lower order of magnitude compared with Heathrow. We do not feel that has quite been brought out enough. Again, as the NPS is being looked to be improved so that people can make the right judgments at the right time, that is another area that needs to be given a bit more emphasis.

Captain Lowe: I do not disagree with that, but here again, for me, we have to differentiate the two schemes, in that the northwest runway scheme has to cause more annoyance. Forget your decibel footprints. More people will be affected. Our thesis has always been that, with a simple system, as ours is, which increases volume from what there is now, you can have more aeroplanes but not make any more noise than at the moment. You do not have to bring new people in just because you have more aeroplanes. Clearly, if you did not have the increase, there would be a reduction in noise, but there need not necessarily be any increase at all. There could still be some reduction, but, clearly, you cannot have another 100,000 or 200,000 movements without making more noise than you would make without them. At Gatwick, they would have to bring new people into the noise envelope. With our scheme at Heathrow, you would not. With the northwest runway scheme you would.

Q112 **Chair:** Surely one advantage of the northwest runway scheme is the ability to offer respite to affected communities. How would your scheme affect that?

Captain Lowe: I do not know how to explain this to the DFT again, but I will try now. It has assumed that aircraft have to carry on in a straight line to the runway with 20-mile finals over London. Nowhere else does that. We have said that for each runway you could just have two slightly different approaches, and we could do that now. NATS does not include noise at all other than as an overview. There is nothing that requires it to look at noise at all. The chaps on the screen have no idea what is underneath them. Simply by having two approaches, as other airports do, we would offer twice as much respite, whereas with the Heathrow northwest runway scheme the paths are fixed and they offer only four or five hours' respite. They cannot do what we would do because of the complexity that has gone beforehand. It is quite simple. You have an angled approach and a straight-in approach.

Q113 **Chair:** In terms of the claims that the northwest runway scheme makes about the respite offered to communities, are you saying that their claims are unachievable?

Captain Lowe: Yes. People use the terms "local people" and "respite" without defining what they mean by local people. Is it those within three miles, five miles or 10 miles, or is it where all the complaints come from, which is further out? With the complexity that I explained, those people have no respite. It is only for the local people. We will still affect some people if there is an angled approach, but the number of houses affected is less than the number you would knock down with the Heathrow scheme. I think it is a reasonable trade-off. I have tried to get the DFT to accept this argument, but it seems to perpetuate the view that the runways are just straight in and therefore you have no respite. That is not true.

Q114 **Chair:** In terms of Gatwick, what is the impact on local communities affected and the ability to offer respite to those who are impacted?

Nick Dunn: In terms of the number of people who are affected by the second runway scheme in the 2050s on the 55 decibel Lden measure, we would impact around 24,000 homes. Those newly affected within that would be 18,000. That is 24,000 as compared with 726,000 at Heathrow. Newly affected on the northwest runway would be 158,000 at Heathrow and 18,000 at Gatwick. We have a profoundly lower impact. To the extent that we do, clearly one of the benefits of having a second runway means that we are able to operate it in a different way. There are opportunities to offer respite.

To turn back to the question of whether we can stop this to and fro about whether it is Gatwick or Heathrow, expanding both delivers capacity, which improves the ability of all airports to improve the respite that they can offer, because today, as a one-runway airport, we cannot offer respite.

Q115 **Daniel Zeichner:** A final question, you will be pleased to hear, this time on air quality, I am afraid, which is a very pressing issue. From what we see, the evidence seems to be mounting that the northwest runway would struggle to meet legal air quality requirements if it expands as currently planned. But the analysis—this is aimed at Jock—is that there is a high risk of your scheme also not complying with air quality limits. What is your response to that?

Captain Lowe: There is a big risk for all of us in how many diesel vehicles will come out and so on. That is ignoring the carbon-capped limits. There is more chance of the emissions targets being met with our scheme simply because there is less area, but I come back to the point that we can do it in a phased way. For phase 1, you release a third of the slots. If you do not make the targets, you do not spend the money to release phase 2. It is challenging. I know that Heathrow has done a lot of work on restricting and changing the vehicles, and so on. It is going to be one of the more difficult things for all of us to do. It really comes back to transport.

Q116 **Daniel Zeichner:** There is an additional risk, is there not, because it is likely to be challenged by people through judicial review, which could end up slowing any process still further?

Captain Lowe: There are two things. One is that the emissions for our construction phrase will be less affected, because it is a smaller area, but if we do not make it we stop. It is viable even at a third of the capacity growth. Every bit is part of the transport remit overall, to try to get that air quality. The airport itself does not make a huge difference. Heathrow is doing a lot on congestion charges and limiting vehicles, and so on. Into that comes surface transport, the link and so on. It all has to be delivered.

Daniel Zeichner: Nick is keen to make one final point.

Nick Dunn: To pick up on the point about air quality, we are classed as low risk in the NPS. It still feels as if these issues have not been brought to the fore, but we are classed as low risk. A threat to the opening day because of that is very low. Heathrow northwest runway is seen as a high risk, which means that there is not just a possibility but a likelihood that it will be delayed.

Maybe I can join that together rather than labour the point with the question of phasing. I have heard from a couple of people, and I have even heard today in this session, that, potentially, the northwest runway might be phased. That is not the scheme in the NPS. It is not the scheme that was put forward by the Airports Commission. While it might be a means of addressing their air quality issues if they choose to phase it, again that is not the scheme that is in front of us. If we find ourselves in a world in which the scheme is going to be phased, it is really important that all aspects of the NPS get looked at again, because many of the discussions that we have had today about economic benefits would be eroded further if Heathrow northwest runway were phased; all those connectivity benefits, which do not appear to lift the number of origination and destination passengers in the UK but increase the number of transfer passengers, and pollution with it, would all be undermined by a phased scheme. It is going to be very important to make sure that whatever comes to the NPS ultimately to be laid before Parliament properly reflects the scheme that is going to be developed. It is really important that this particular issue is run to ground.

Captain Lowe: To make it clear, the northwest runway's construction cannot be easily phased. They might phase the release of capacity. If they did that, it is fair to say that it would put up the fares quite a lot.

Chair: Do colleagues have any further questions? Thank you very much for giving evidence today. That concludes our session.