



Environmental Audit Committee

Oral evidence: [The Airports Commission report: Carbon emissions, air quality and noise inquiry](#), HC 389

Wednesday 14 October 2015

Ordered by the House of Commons to be published on Wednesday 14 October 2015.

Written evidence from witnesses:

- [Dr Andy Jefferson](#)
- [Cait Hewitt](#)
- [Daniel Moylan](#)
- [Richard de Cani](#)
- [Lord True](#)
- [Councillor Amrit Mann](#)

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Members present: Huw Irranca-Davies (Chair); Caroline Ansell; Jo Churchill; Zac Goldsmith; Peter Heaton-Jones; Mr Peter Lilley; Caroline Lucas; Holly Lynch; John McNally

Questions [1-71]

Witnesses: **Dr Andy Jefferson**, Director, Sustainable Aviation, and **Cait Hewitt**, Deputy Director, Aviation Environment Federation, gave evidence.

Q1 Chair: Welcome to this afternoon's session. This is the first of the public hearings in the Committee's inquiry into the Airports Commission's report, specifically looking at the issues of carbon emissions and air quality and noise. You are very welcome here, and you are our first people to give evidence. We have Dr Andy Jefferson, Director of Sustainable Aviation, and we have Cait Hewitt, Deputy Director of the Aviation Environmental Federation, both of whom we have had discussions with, and you have submitted evidence as well. You are very welcome here today, and thank you for helping us with this very important inquiry. We have a lot of questions to get into, so rather than do opening statements and so on, I am sure you can kick in as we go along and explain your thoughts. We are going to go straight into it, if you are happy.

Dr Jefferson: Yes, that is fine.

Chair: Okay. What we are doing, just to let you know—it is worth saying at the outset—is not reopening the whole debate for the Government on the Davies Commission, but very much focusing on the fact that the Davies Commission has come to conclusions, has put forward sets of recommendations and is clearly putting a preferred opinion of the way forward and what measures will need to be taken. Our role as the Environmental Audit Committee is to test those assumptions and to see what you think about some of them as well. I want to turn to carbon emissions in particular at the outset. Meeting the Committee on Climate Change’s planning assumption is described by it as, “At the upper end of what is currently expected to be deliverable even in the absence of large-scale airport expansion”. How would you characterise the current picture on aviation emissions? I do not know who wants to start.

Dr Jefferson: Do you want to start? Ladies first.

Cait Hewitt: Okay, I am happy to start. Thank you very much, and I am glad that we begin by talking about the CCC’s recommendation, because we as an organisation certainly think that that is a very important framing condition that should be part of any kind of Government decision making on the Airports Commission’s recommendation. That recommendation should be tested against what impact it would have on delivery of the Climate Change Act. The problem for Governments is perhaps twofold; one thing is the fact that emissions are already anticipated to exceed the level of the carbon cap that the Airports Commission has talked about and to which you refer in the context of the CCC’s recommendations.

What comes through from the Committee on Climate Change work, from the Government’s own forecasts and even from the Airports Commission’s forecast—which is significantly lower in CO², in fact, than the Government’s—is that they anticipate, even with the baseline before you add capacity, that emissions are going to overshoot the level recommended of 37.5 million tonnes. Very briefly, the second challenge is that in adding new capacity the Airports Commission has admitted that you are going to increase the scale of that challenge, yet they have made no recommendations in terms of concrete policy proposals for how the Government should mitigate that. In fact it quite openly put the challenge back to Government in terms of tackling the climate change impact.

Q2 Chair: That is very clear and very concise. Is that a picture that you recognise, Dr Jefferson?

Dr Jefferson: From Sustainable Aviation—as you would expect, we probably come from a slightly different perspective—in 2012 we published the carbon roadmap, which reflects the learning and experience of all the sectors within the aviation industry: UK airlines and airports, manufacturers including Airbus, Boeing and Rolls-Royce, and our air traffic providers here in the UK. Using the DfT’s forecast of 2013 and the aviation forecast of 2015, the roadmap shows that, based on what we could see being achievable through improved airspace efficiencies; through improved operating techniques; significantly, through new aerospace technology developments and the integration of those new technologies in new aircraft being purchased by UK airlines; and, finally, through

sustainable fuels for aviation, you can, effectively, achieve growth in aviation without any significant increase in absolute CO² emissions.

Our conclusions in our roadmap differ slightly from the Committee on Climate Change's conclusions, primarily around an assumption of the rate of fuel efficiency improvement per annum. The Committee on Climate Change assume slightly under a 1% per annum fuel efficiency improvement. Just to put that in context, we have just collected our data, and in the last 10 years—this year marking 10 years of Sustainable Aviation's work—we have demonstrated that we have achieved an 11% fuel efficiency improvement. In the last four years alone we have achieved over a 2% per annum fuel efficiency improvement. In context, that is about a 20 million tonne saving in carbon emissions over that period. We believe, with the sustained commitment from industry and Government on the Aerospace Growth Partnership and the Aerospace Technology Institute, that there is a real opportunity to continue and accelerate the rate of progress in aerospace technology here in the UK—in context, we are the second-largest aerospace sector in the world—and substantial exports and benefits for the UK. Our view is we can achieve that growth in the UK and stay within carbon limits.

Q3 Chair: Thank you for that. Those are two quite different pictures, and one is characterised by optimism that advances beyond where the Climate Change Committee said we could be, and that we can grow beyond that. Can I just ask you a short supplementary? I asked you to characterise the picture that is currently happening, and you did that very succinctly. If we were to proceed based on the Airports Commission's recommendations, how would you characterise the picture going forward? You seem quite pessimistic that in 10 years or 20 years' time we are going to be hitting the targets we need to.

Cait Hewitt: Our view is based very much on the official forecasts of what is likely and feasible to be delivered. Of course, we would be delighted if the industry vision turns out to be accurate and the Government is not—

Q4 Chair: What is the difference in the two analyses? Are you both factoring in historical data of what we have achieved or failed to achieve? Why are you coming to different conclusions?

Dr Jefferson: I will just say from the industry's perspective that we are looking at factual data in terms of what fuel has been burned by airlines operating in the UK, what the CO² would produce and what the rate of improvement is, and then looking at the understanding and knowledge within the sectors about what is feasible and realistic on new aircraft, the phase-in rate those new aircraft and the results in CO² emissions. We do accept—I didn't this make clear in the opening statement—that carbon trading will still be required to achieve a 50% reduction in net carbon emissions from aviation by 2050.

Chair: Yes, we will come back to that, I am sure.

Q5 Caroline Lucas: The words “feasible” and “realistic” are quite subjective in a sense, and one of the differences in what I am hearing between the two presentations is that

Dr Jefferson seems to be relying on an incredibly optimistic vision of what biofuels can deliver, given that we don't yet know what the wider environmental impact would be if you were going to use so much biofuel to fuel the aviation industry as well. But my question is more about fuel efficiency. I worked on this issue when I was a member of the European Parliament, and I remember experts telling me then that fuel efficiency doesn't go on increasing in a regular cumulative fashion, that you can make a big breakthrough and then nothing happens for a very long time. Can I just ask Dr Jefferson on what grounds he is projecting such ambitious fuel efficiency improvements?

Dr Jefferson: You are right; in terms of new aircraft technology, that happens in revolutionary steps when the airlines purchase those aircraft and they come into the fleet. In addition to that, though, there are great opportunities in airspace improvements, so around a 10% reduction in carbon can be achieved just by improving how the aircraft fly in lines between A and B. At the moment we are struggling in the UK to make progress on that, despite where we would like to be from an industry perspective.

In terms of the overall fuel efficiency, it is based on the combined knowledge and all the data. The background around the assumptions is in the roadmap, so I would refer the Committee to the detail in the roadmap on that. But it is basically about taking that revolutionary step, expanding it over a period of years, and seeing what is the average change over that period of time. Our assumption is, based on our knowledge and experiences, that that 2% improvement is feasible, which leads us to that position of growth being achievable within carbon limits.

Chair: You are both experts in your field, but there is some interesting body language and expressions going on back and forth. But Zac, I think you want to go a little bit further.

Q6 Zac Goldsmith: Dr Jefferson, your 50% emissions reduction by 2050 relies mostly on operational and fleet improvements. I know you have already touched on this, but can you tell me, based on the last 10 years, if current trends of take-up were to continue, would you hit those targets or would you need to see an acceleration in take-up over the next 25 years?

Dr Jefferson: That is a very good question. In the last 10 years UK airlines have purchased 470 new aircraft, and that has cost them around \$50 billion. The work we have done in looking at the amount of fuel burned by airlines in the UK—and how that equates to carbon and how that has changed over the last 10 years—is in line with what we predicted in the carbon roadmap. That shows a slight increase in the next 15 years. We are starting to see what we call the imminent aircraft coming into play now. The Airbus A380, the double-decker, the Boeing 787 aircraft are coming in, and they are around about 20% more fuel efficient than the aircraft they replace. The next revolutionary step is from about the 2030 to 2040 timeframe, with the new aircraft coming on line. Our understanding and our knowledge within the industry is indicating that that is achievable, it is realistic and it will deliver growth within carbon limits.

Q7 Zac Goldsmith: Can I come to you, Cait? Can I call you Cait?
Cait Hewitt: Yes.

Zac Goldsmith: Do you regard those estimates and projections as being realistic in terms of the take-up of the new technology and the improvements that we will see from the 2020 to 2030 technology?

Cait Hewitt: There are a number of forecasts that have been made of future emissions from the aviation sector. I have mentioned some of those in the UK, such the Committee on Climate Change forecast, and the Government's forecasts—the Department for Transport's own forecasts. There have also been projections completed by the United Nations Environment Programme, which broadly reflect those of the Committee on Climate Change. I suppose it is no surprise that the industry produces its own forecasts that are, for various reasons, more optimistic. We have talked about biofuels. Yes, it is technically feasible to put biofuels in aircraft. That is a different question from how much biofuel will be available to the aviation sector, given commercial pressures, the costs, availability concerns and demand from other sectors. Those are the factors that need to be taken into account in the context of the forecasts.

Q8 Chair: Historically, am I right that even with the biofuel currently being utilised, it hasn't shown us the carbon emissions reductions that might have been anticipated?

Cait Hewitt: Biofuels, in particular, have been the big hope for aviation in the past in terms of achieving decarbonisation. The Department for Transport currently forecasts 2.5% of aviation fuel coming from biofuels by 2050. It is a very small quantity, and if anything the anticipation is reducing in terms of how much biofuel will be available for aviation.

Dr Jefferson: I would just like to make a quick comment. I completely understand concerns about biofuels, but we did do a detailed roadmap, because we fully understand the concerns about the biofuels and sustainable fuels roadmap, which we published last year. Just to be clear, when we say sustainable fuels or biofuels in aviation, we are talking about fuels that are made without indirect land use change issues and achieve at least a 60% carbon life cycle saving. Examples at the moment are waste gas emissions and solid waste products into fuel. The work we have done in that roadmap says that, yes, absolutely at the moment there is a challenge. There is partly a challenge because policy signals in the UK are not great. Globally, at the moment, there have been 2,500 flights on sustainable fuels—that is about a 50% blend with fossil fuels, so it is not pure jet fuel. There is—

Chair: Do you mind, I am going to pause you? There is a reason—we are going to come back specifically to that position in some detail.

Dr Jefferson: Yes, okay.

Q9 Zac Goldsmith: I am sorry, I would like to understand what the 50% means. Is that the 50% net average emission reduction per vehicle, or is that for the entire contribution of the aviation sector in—

Dr Jefferson: Sorry, just to clarify, are we talking about the global carbon type or the roadmap—

Zac Goldsmith: No, the roadmap, what does that 50% relate to?

Dr Jefferson: That is to the 2000 level, and—

Zac Goldsmith: But 50%, these are the emissions contributions of what?

Dr Jefferson: 50% of UK aviation carbon emissions.

Zac Goldsmith: All aircraft?

Dr Jefferson: All flights leaving the UK.

Q10 Zac Goldsmith: I know we are going to come to surface transport later, and I won't probe that now, but does that also relate to the contribution from surface transport—people getting to and from the airports?

Dr Jefferson: No, no, it doesn't, no.

Zac Goldsmith: It is only the aircraft.

Dr Jefferson: It is the aircraft emissions, yes.

Chair: You wanted to talk about trade-offs as well, Zac

Q11 Zac Goldsmith: I did, yes, and I will be very quick. You are obviously very confident in the claims that you made in relation to the emissions reductions, as are the people you represent. Are you sufficiently confident that you would support the introduction of a climate change condition for acceptance by the Government of the Airports Commission's proposals? There are conditions that have been proposed in relation to night flights, fourth runways and so on. Would you be willing to accept a condition relating specifically to emissions and climate change?

Dr Jefferson: At Sustainable Aviation we understand that to achieve growth in the industry, we need to do that within clear limits on carbon and noise. On carbon, we believe the best way to do that is through the work we are already doing on absolute reduction, and then the remaining amounts through a recognised globally acceptable carbon trading scheme. At the moment obviously the Government is talking globally through the International Civil Aviation Organisation to achieve that result. Where we have concerns is that if we take a view in the UK and say, "This is the target for the UK, anything happening in the UK has to meet this target", there is a risk that you could create market distortions and impacts for UK companies operating in the global market. We need to be careful about that. We absolutely accept that the industry needs to grow within carbon limits.

Q12 Zac Goldsmith: Okay, and the last question. What do you think of the trade-offs between improving aircraft performance in terms of efficiency and improving performance on emissions? Is it possible that by improving the emissions performance we might be making the noise contribution, for example, worse? Is there a conflict between the two? Is it an either-or?

Dr Jefferson: There is, and in our noise roadmap we try to make it clear that there is a trade-off between reducing noise and carbon. Unfortunately it is the law of physics, which we can't solve, even if we might wish to. It is to do with the way the engines are designed and how the fuel burns in the engine to make them as fuel efficient as they possibly can be, with things like a noise penalty. Certainly, rest assured, all the members of Sustainable Aviation understand that the challenge on the industry is to do our utmost to be low-noise, low-carbon and low-emissions. We are always trying to achieve that right balance but, yes, there is a—

Q13 Zac Goldsmith: But at the moment lower emissions mean more noise, is that correct?

Dr Jefferson: If you were to purely, theoretically, design an aircraft to be as carbon-efficient as it possibly could be, disrespecting any other variables, it would be slightly noisier, yes.

Chair: The proposal, if it were to go forward, has to try to deliver on all counts to the optimal amount, which is going to be quite a challenge.

Dr Jefferson: Absolutely, it is a challenge my aerospace colleagues deal with every day.

Q14 Caroline Lucas: I want to ask you how important you think an effective international agreement on aviation emissions trading is in meeting the Committee on Climate Change's planning assumptions. If you do think it is important, how likely is it that ICAO will have a robust scheme next year?

Cait Hewitt: The first thing to say is that securing an international agreement on tackling aviation emissions is something that AEF absolutely supports. We support it very actively. We are participating in the UN process as it unfolds at the moment. We are currently chairing a discussion group about what kind of offsets should be allowable under the scheme. Absolutely, we support the action at international level. The scheme that is currently on the table is not an emissions trading scheme, it is a mandatory offset scheme that would begin in 2020. We are hoping to help secure as robust a scheme as possible in environmental terms.

The second thing to say is that agreement of some kind of international measure is already assumed in all the modelling that is being done by the Airports Commission, by the Government and by the Committee on Climate Change. That is part of the baseline. We shouldn't think of this as something that is a new and additional measure to help tackle CO₂ emissions.

In my introductory remarks I talked about the CCC's planning assumption. There looks set to be an overshoot of that even before you start having new capacity, and that is the case even assuming that international action is successful. We want it to happen. It is certainly part of the picture. It is an area where environmental organisations and the industry unanimously agree that things are better done internationally insofar as that is possible, but it is very clear that that process won't deliver sufficient CO₂ mitigation to meet the CCC's recommendation under the Climate Change Act.

Q15 Caroline Lucas: That overshoot that you were referring to will get even worse if an international agreement is not found quickly.

Cait Hewitt: It depends a little bit on what happens in policy terms. At the moment, as I am sure you will be aware, if the UN process fails to deliver, the EU Emissions Trading System is due to snap back from 2017 to cover at least all emissions arriving and departing from EU states. But that is not an outcome that certainly the UK Government, or I think other European Governments, look forward to, because there are significant concerns about what that can mean.

Q16 Caroline Lucas: Before I go to Dr Jefferson, is it still the case that even if we have an emissions trading system, it is still based on carbon rather than the other emitting gases from aviation like contrails, NOx and so forth, so that you are only looking at one part of the overall emissions from aircraft?

Cait Hewitt: Yes, the evidence from the scientific community strongly suggests that aviation has an impact on global warming that goes beyond that of CO² alone. But it remains a challenge to define how properly to take that into account in the context of climate change policy. So for the moment it has simply been parked.

Dr Jefferson: I completely agree with Cait that we absolutely need that global carbon trading scheme. I would also say from Sustainable Aviation's point of view that our priority is to do the important stuff first, which is to reduce our absolute emissions. So it is about focusing on how we can accelerate things like the single European sky. How can we accelerate and work in a better way to deliver technology solutions for new aircraft? How do we get traction on developing sustainable aviation fuels? They can give us a real opportunity to reduce absolute emissions as we go forward.

In terms of the carbon trading scheme, you have the full support not just of the UK airline industry but of the global airline industry behind developing a scheme on this. They have targets on this. They want to see this happen. There are clearly global member state concerns about how this is done in a way that works for everybody around the globe, but we want very much to see this come together, so you have the full support of the industry on this.

Q17 Caroline Lucas: As I remember—because I worked on this years back—the full support is conditional on emissions trading not being just within the aviation industry. In other words, your support, or the aviation industry's support, is conditional on it being able to buy trading permits from other industries.

Dr Jefferson: That is correct, yes.

Q18 Caroline Lucas: But those other industries do not have the contrails and NOx problems that aviation does, so it is not going to be trading like for like. There is still going to be an increase in net emissions.

Dr Jefferson: Sustainable Aviation absolutely accept that we need to grow the carbon limits. We have also done a paper looking at those interdependencies. As Cait quite rightly said, there is an understanding that there is a broader impact. Exactly what that broader impact is and how we should be managing it at this stage is not clear.

Q19 Caroline Lucas: But ignoring it presumably is not a great idea.

Dr Jefferson: I would argue that Sustainable Aviation is not ignoring it. We have done a position paper on this. We stay regularly in contact with academic experts through this country to find out all the major sciences.

Q20 Caroline Lucas: Your calculations are ignoring it. It is great having position papers and roadmaps and all the rest of it, but the actual calculations you are working on do not include the extra emissions caused by aviation that currently do not have an agreement about how we are going to calculate them.

Dr Jefferson: Within the carbon roadmap we did in 2012, they did not have that in. We are looking to update that next year and we will certainly take that point on board, to look at how we can include that next year. It does relate to where the science is and what the latest thinking is.

Q21 Chair: So there is an argument that as that data comes forward and the analysis comes forward, it should be possibly part of this.

Dr Jefferson: Yes, I am more than happy for us to take that back and look at that as we update the roadmap next year.

Caroline Lucas: Last question, if that is okay, Chair.

Chair: Go on, quickly.

Q22 Caroline Lucas: It is about aviation buying carbon credits from other industries. I understand that would mean that other industries would essentially have to have targets of reducing their emissions by 85% by 2050 so that aviation can have its share. I just wonder how delighted you think other industries would be that to make space for aviation, they have to get their emissions down even more. How much discussion has there been about that, and how much does the Commission's analysis rely on these other sectors meekly coming forward with their 85% targets even when we are struggling to get them to come to 80% targets?

Dr Jefferson: From Sustainable Aviation's point of view, our focus is on what we do in absolute waste, which is carbon. Of the bit that is left that does require a trading solution, we believe that it will work.

Q23 Caroline Lucas: But you cannot just say, "We believe it will work". On what grounds do you believe it will work? What conversations have you had with the cement industry, for example, about asking them to reduce their emissions considerably more than they were planning?

Dr Jefferson: We are a UK-based organisation, so we are looking at it from a UK perspective, and our belief is that global discussions will result in a proper market-based mechanism, which is about having the discussions with all the other areas about where we get the credits from and how this will work. If we take a view that the scheme is unviable or we cannot decarbonise in other areas then we have some serious implications to think about, which are fairly draconian.

Caroline Lucas: You do. Absolutely.

Dr Jefferson: It is not a view you would expect me to take. Our view is that this will work, and we will get it—

Chair: I am going to give you a slight assist, because it is an interesting line of questioning and I suspect one that we might return to in future evidence sessions when we have other witnesses in front of us. It is interesting.

Q24 John McNally: The Commission's work on carbon emissions was in the form of modelling assumptions rather than recommendations. So if the Government were to adopt the Commission's recommendations, what would Heathrow need to do to turn that work into a concrete set of policies?

Cait Hewitt: You are quite right; whereas the Commission came out in its headline statement with a number of specific recommendations in terms of noise mitigation, it said absolutely nothing about what an appropriate climate change condition should be.

When the Commission published their interim report, the only work that they completed in relation to CO² impact suggested that if everything was delivered by the carbon market and the Government took an entirely non-interventionist approach, you would need a carbon price exceeding £600 per tonne in order to bring the emissions from UK aviation as a whole down to the level of 37.5—this carbon cap to which we are referring—if you build a third runway at Heathrow. We said to them, “Surely this is meaningless. No one anywhere thinks that the carbon price will go from about £5, as it is today, to over £600. Surely you need to be making some more realistic proposals to Government about what they can do”.

They came back with what they called a carbon policy sensitivity test, which comprises three elements: one of them is a carbon price of £334. There is no consideration of how you get to that. The second is various operational efficiencies, some of which would be zero-cost to the industry, but with no consideration of why, if that is the case, they are not happening already. The third element was an increase in the use of biofuels, for example, through a Government mandate, which would increase costs on the industry and has so far received resistance, as I understand it, from the industry for that reason—not the specific recommendation, but the idea of a biofuel mandate.

There is no easily deliverable solution that the Airports Commission is able to propose to Government. From our perspective, we think that in order to manage the emissions from aviation, the Government should be looking to incentivise as far as possible technology progress within the industry. There might be opportunities to do that, for example, through UN discussions that are forthcoming about a technology standard for new aircraft.

Secondly, that there will be a gap in what the technology can deliver. That the Government will have to tackle by managing demand, and you can either do that by looking at making the appropriate planning decisions in relation to airport capacity or you have to do something about the price of flying, which is not something that we imagine will cause delight among Ministers.

Q25 John McNally: My understanding is getting better as we go along, but it seems to me that you are suggesting that it is probably unachievable the way things are going at the moment—or highly unachievable was the suggestion. But are there institutional and legal structures in place, then—required measures that will be implemented and enforced?

Cait Hewitt: This is something that the Committee on Climate Change has asked the Government to produce independently of the Airports Commission's process and what they are doing on runway capacity. It was one of the recent recommendations from the CCC. It is part of a whole policy response from the Government to their latest report saying that the Government should come up with a plan for limiting aviation emissions. We think that in order to manage the emissions from aviation, the Government should be looking to the level that they are recommending. What we would say is that that is, we hope, deliverable in the current situation. It depends a little bit on your forecast of what you think will happen in the future, but certainly there will be a much smaller overshoot of the target without adding capacity than with. Certainly we have seen no proposals for how you could limit aviation emissions to the level of the carbon cap if you are going to build a new runway anywhere in the south-east.

Dr Jefferson: If I could just make a few comments, Sustainable Aviation absolutely agrees about the carbon limits. There is a difference here on the rate of assumptions of improvement. We have detailed our view from the industry that we are doing better than other people think we are and that, as a result, rates of growth can be achieved. In relation to the Airports Commission work, absolutely the industry would obviously be keen to share the work and the assumptions that have gone into developing our roadmap. I am sure Heathrow Airport, when they give evidence to this Committee, would be happy to talk about the work they have done looking at this issue as well.

For us it comes down to whether you think the industry can deliver on these efficiency improvements at a better rate or whether it cannot, and if it cannot, then you would have perhaps more of a doomsday scenario.

Q26 Chair: John's question was interesting: do we have the right legal structures in place? If so, we can say to people, "You are going to have to do this".

Dr Jefferson: At the moment you already have in the UK the emissions trading scheme affecting any flight operating between the UK and any European destination. That has to sit within a carbon cap that cannot be exceeded. You have a price of fuel, which although it is low is the second largest cost an airline faces after buying the planes themselves. There is a strong market incentive for airlines to be as fuel-efficient as they possibly can be. The challenges are out there. We accept that in the industry, which is why we have done the roadmap and why we are working together to find that right solution. But we do feel that we can get it right. In terms of legislation, my advice would be to be careful that you do not create unintended consequences.

Q27 Mr Peter Lilley: You mentioned that the Commission envisaged a carbon dioxide price of £334. What impact would such a price have on the industry and on passengers?

Dr Jefferson: It is a very good question. Clearly at that price, the increase in fares that people would be paying for tickets would be substantial. That said, the challenge—

Q28 Mr Peter Lilley: Could you give any sort of feeling of how much extra it would cost compared with current prices?

Dr Jefferson: I do not have precise data with me, but there are obviously fares out there and trips that are substantially less than that—a tenth of that—at the moment, so it is going to be a dramatic change if passengers are paying the fee.

The challenge on the industry, which we are looking at, is how do we minimise that risk? We minimise that risk by minimising our absolute carbon emissions. Minimising your absolute carbon emissions means that you need to buy less credits at whatever price is agreed on the market, so that is our key focus. But yes, a strong carbon price is going to drive the right market incentive to minimise carbon emissions and do the right thing in the industry. Go too far and there are consequences.

Q29 Mr Peter Lilley: You mentioned something about how there are fares out there a tenth of that. I do not know what £334 of carbon dioxide translates into in terms of a fare from here to Edinburgh or wherever, but do you have any sort of feeling? We know that when the price of fuel goes up we sometimes get fuel supplements, so the aircraft industry must have something on that.

Dr Jefferson: I do not have that detail with me, but we can certainly provide it to the Committee if you wish.

Q30 Mr Peter Lilley: Do you envisage that at that sort of level people would just travel less?

Dr Jefferson: The challenge on the industry is, how do you work in a smarter way, which we try to do, to avoid having to impose that cost on to passenger duty or a businessman trying to do business in Europe, or whatever it might be? If that cost is directly passed on to a passenger it is going to significantly affect their decision making, I would anticipate. The challenge on the industry is how we work in a better way to minimise that.

Chair: If you do not mind going on for another five minutes—we have been very lax—we are going to try and rattle through the questions. It is very interesting the evidence that you have given.

Q31 Peter Heaton-Jones: I want to come back to the biofuels issue, which we mentioned, and which the Chair hinted we might well return to. The Commission report relies to some considerable extent on the theory that biofuels are going to be a greater proportion of aviation fuel in future. We have already heard some scepticism about that. I want to explore that a little bit more. Do you think the Commission is slightly overambitious with its thinking on how important biofuels can be, judging by not only their availability, as we have said earlier, but also the fact that their record in reducing emissions on Europe's roads is, let's say, patchy? Can I start with Cait?

Cait Hewitt: The Commission's baseline assumption on biofuels matches that of the Department for Transport, which is that they will not be more than 2.5% by 2050. The point at which that biofuel assumption ramps up is in order to try to meet the climate change challenge, if you are looking at the range of options that are available to aviation. If you are going to increase capacity and demand, what can you do? Biofuels then become

much more significant. There simply is not consideration in the Airports Commission's analysis of whether doubling the biofuel component is deliverable and feasible. We know that there have been significant challenges to its introduction. We know also that the advice to the Committee on Climate Change is about biomass, to the extent that it is scarce and is probably better used in other sectors, where it does not have to be converted into liquid form—because you lose some energy in doing that—and where you can combine it with carbon capture and storage, which obviously you cannot do in aviation.

Dr Jefferson: If I may, I started to talk about it earlier, Chairman, and you interrupted me and said we would come back to it. We did a roadmap in December 2014.

Chair: We have that impression.

Dr Jefferson: The outcome of the roadmap is that we believe by 2030 in the UK you could create a biofuel industry that would provide 4,500 jobs and generate about £260 million of gross added value to the UK. That will generate about 0.7 million tonnes of biofuel, so it is not going to be massive at all. However, we do believe that it will act as a catalyst and then stimulate the market to grow and develop those fuel sources to an increasing rate between 2030 and 2050. So by 2050 we believe 4.5 million tonnes of sustainable fuel can be developed here in the UK. That can effectively reduce carbon emissions from UK aviation by about a quarter.

There are two challenges we see in this. One is that at the moment, the policy incentives here in the UK are not strong for aviation biofuels, and after publishing the road map we took part in the Department for Transport's energy transport taskforce and made the point—we hope fairly clearly—that at the moment buying sustainable jet fuel clearly costs more than buying fossil fuel. So we need to find a way to balance that equation and have the right policy incentives in place to encourage people to buy sustainable fuels.

Q32 Peter Heaton-Jones: Can I just seek clarification on that? Is “policy incentives” a euphemism for public subsidies?

Dr Jefferson: No, we are talking about renewable fuel transport obligations, so it is not involving public subsidies at all. The other area where we have asked for support from Government on is a policy signal to the private equity market to say, “The UK is serious about looking at this stuff, and we would like you to invest here in the UK”. We believe that that can be done through a relatively modest grant scheme that would be less than £2 million, or something like that. What it will do is send a signal to the private equity markets in the world and say, “Yes, we are up for this”.

In context, the US is currently already building four of these plants, and you have four airlines around the world running on biofuels today. The schemes we are looking at, as I started to touch on earlier, are taking solid landfill waste and avoiding putting it into the ground, and turning it into jet fuel. The plants we are looking at will produce both biodiesel for road transport and aviation fuel. So we believe the schemes are viable. They offer the 60% life cycle CO₂ savings. There are other schemes looking at waste gas emissions. An airline is working with Shanghai in China at the moment to take that from steelwork emissions and things like that.

The roadmap looks at those as a starting point and then develops them into the new innovative technologies that are happening. We have a lot of great innovation and ideas here in the UK at the moment that are going overseas, because overseas they are saying, “Yes please, let’s do it over here”. In the UK at the moment we are not seeing that same level of interest in developing it.

Q33 Jo Churchill: You will have to forgive my voice. The Airports Commission says that a third runway is possible while reducing noise compared with today’s levels. I am interested, particularly in the light of health effects that have been reported from noise levels. I am particularly concerned about the fact that at 55 decibels you have an issue with I think three quarters of a million Londoners, but jacking that up to 57 decibel affects another quarter of a million. BMJ articles have shown that there is a detrimental effect from that on cardiovascular disease. I would like to know how deliverable you think it will be.

Secondly—I am going to get it out now because my voice may just go completely—if noise targets and mitigations were more ambitious than those the Commission proposed, how deliverable is that likely to be? Sorry, huge question, but it basically covers health.

Dr Jefferson: Do you want me to start? An important question, and noise and health issues are a great concern to the industry, as I am sure they are to everybody. Certainly we recognise that growing aviation has to stay within strict noise limits. At the moment we work around the basis that 57 Leq decibel noise level is, under UK law, recognised as a significant onset of a noise. When we did our roadmap we clearly accepted that that may not well be the case for lots of people living around airports. However, it is important to understand that every airport, as you go round the UK, is a unique situation, with its own geographical situation, and those things need to be taken into account very carefully.

The roadmap looks in a lot of detail at what we can achieve through aerospace technology improvement. So there is a pan-European project, which the aerospace sector in the UK is heavily involved with, looking at how we reduce further noise by 15 decibels between now and 2050, and that is through the ACARE project.

Q34 Jo Churchill: May I interject? Why do you report on average decibel levels and not more specific decibel levels, then? It is obviously fairly critical where the decibel level is as for the medical or health effects that you might get. I am sorry; I am perhaps just being very thick.

Dr Jefferson: We held a very interesting workshop within Sustainable Aviation with a series of experts from the World Health Organisation and others, to inform us about the emerging work on noise and health. It is interesting that they are saying the health impacts are associated with annoyance, and the stress that comes from annoyance. It is about understanding what are the trigger points that create that annoyance; what is the precise reason? We looked at that in the roadmap—is it the volume, the amount of noise that aircraft makes? Is it the tone of noise? Is it the time of day? Is it the frequency of overflights? It became quite clear that it is a mixture of all these things, and that everybody is slightly sensitive to slightly different aspects of that.

From data that airports across the UK have provided, they have evidence to say, “The person living on that side of the street is highly annoyed by the aircraft. The person living on the other side of the street is fine with it”. The challenge with all these things is how

you come together with a proper metric that feels acceptable to people who have been affected by noise and also acts as a sensible mechanism to help make policy decisions about what noise limits should be. Certainly Sustainable Aviation is very keen to work with Government and explore those issues going forward.

Chair: I am sure we could keep you for hours, but you would not want that.

Zac Goldsmith: I have a mega-quick question.

Chair: Go on, mega-quick.

Q35 Zac Goldsmith: I know that Heathrow is telling us that the average noise levels will come down even in an expanded Heathrow. But is it not the case that a combination of population growth and a wider noise footprint means that many more people will be subjected to noise above the World Health Organisation recommended levels? That is not a question; we know that is the case. My question is: how many people in an expanded Heathrow do you think would be subjected regularly to noise beyond World Health Organisation levels?

Dr Jefferson: Our roadmap shows that we believe we can grow aviation without increasing noise, so that would mean they would not be additionally affected. In terms of the detail of Heathrow, it is best for Heathrow to provide the evidence to you on that one.

Q36 Zac Goldsmith: That is the average noise experienced by individuals, not the number of people affected.

Dr Jefferson: We have looked at UK aviation noise output, yes.

Q37 Zac Goldsmith: But you have not looked at the number of people affected.

Dr Jefferson: It is not an absolute number. It is correlated to contours, so we are basically saying that we do not anticipate that the noise contours would increase, because you are getting quieter aircraft into the mix and things will improve over time. What we are also accepting is that annoyance is different from what is captured in the noise contours.

Chair: We may return to that in a subsequent session as well.

Q38 Caroline Ansell: I have a question around the Air Quality Directive. The Airports Commission's interpretation of that directive suggests that expansion at Heathrow is dependent on its air quality remaining less bad than central London. What are the implications of that interpretation for Government policy on air pollution?

Cait Hewitt: Let me start. The latest Government estimate is that poor air quality results in the equivalent of over 52,000 deaths in the UK annually, so there are two important questions to be put in the context of the Airports Commission's interpretation of EU law. One is whether it is legally defensible. The other is whether it is the right thing to do for the UK public. Certainly we have significant doubts about both of those.

Dr Jefferson: From Sustainable Aviation's point of view, we clearly recognise that any growth that we do has to meet strict air quality limits. My understanding at the moment is that the air quality monitoring around boundaries of UK airports shows no breach of those

limits, but there are clearly breaches on roads coming in and out of the airports, and there are issues with congestion and service access.

Within the industry we do take this very seriously. There is a lot of work going on around how we can reduce emissions and improve air quality. New aircraft engines and a 90% reduction in NO_x by 2050 are what is on the table for the aerospace sector to work towards. In terms of what we are doing on airports, there are surface access schemes, staff travel schemes, work with low-carbon vehicle schemes to introduce lower emitting vehicles for airport use, and work around the airport. On operation in the short term, airlines are looking at how we do reduced engine taxiing to and from the runway, so we are reducing emissions through that.

So there are a range of things going on. Clearly it is a big issue, and in Sustainable Aviation we are going to be looking at this in more detail next year in the roadmap, but we will certainly be doing a very detailed paper looking at what we see as the opportunities and how we can work with Government on them going forward. But it is clearly an important issue. In relation to the specifics of the Heathrow situation again, I would refer you to Heathrow when they give you the evidence.

Chair: You are desperate to come back in.

Cait Hewitt: The way that the Airports Commission has suggested defining an appropriate air quality limit in the context of expansion is entirely new and very much less stringent than the limit that was put in place the last time the Government was looking at this issue, and the last time the Government of that day felt confident it could be met. It is a significant step backwards in the environmental stringency that the Commission is proposing.

Chair: Hold that thought. Holly, over to you.

Q39 Holly Lynch: On noise pollution, I have been copied into a number of emails that have gone to Heathrow from local residents that paint quite a desperate picture of sleepless nights and of young children who are having nightmares or cannot sleep at night because of the noise. They think the planes are going to land in their bedrooms because the noise is so loud. I know the Commission has proposed a compensation scheme, community engagement and noise monitoring proposals, which will hopefully increase the chance of reaching noise outcomes that are agreeable to everybody. I know there has been a little bit of reluctance from Sustainable Aviation to embrace those proposals. Do you think that that is fair?

Dr Jefferson: Growing aviation within strict noise limits is important, absolutely. The industry does not want to be in a situation where we are creating this distress and upset people. We have delivered much quieter aircraft over the last 40 or 50 years—dramatically quieter than when we started in this industry. However, what we have seen—I started to explain this a bit earlier—is that reaction to that noise is quite understandably changing as well as time moves on.

In terms of the specific recommendations that the Airports Commission makes, our view is that clearly local communities and the local specific airport communities are the best people to decide what those best solutions are. If we try to decide what it is nationally and

impose it on a community, they may be sitting there saying, “I am not sure that is right for me, and maybe I would have thought about a slightly different solution”. It is certainly the right mitigation being in place. We will do our utmost within the industry to make those aircraft as quiet as possible to work with communities. I know things like community forums are emerging, and people are trying to work with communities to look at what we can do in terms of aircraft routings and different operational procedures. I would strongly encourage that going forward, and clearly the right solution has to be found.

Q40 Holly Lynch: If that was left at the discretion of the airports, do you think that they would embrace local communities as fully as those communities might like them to?

Dr Jefferson: From the industry perspective at a UK level, we absolutely recognise that we will not get growth unless we meet the noise limits. That has to happen. The work we did in the roadmap recognises that we have not been as good as we could have been around engaging the communities and understanding the precise nature of their concerns and upsets and how we can work with them. My personal experience, having worked for a number of years in an airport, is that by going out and having the conversations in village halls, you can better understand what the concerns are and find a better solution. That is what is so important in this area, not perhaps to just sit in Westminster and say, “That is the solution for them”.

Chair: Thank you very much. Time has overrun, but thank you for being generous with your time and staying with us. Can I suggest that if there is anything related to what we have been asking that you think you want to supplement your answers with, send it to us? Similarly, we might pursue some avenues with you as well. But thank you both very much for the generosity and the time on your answers. Relax. Thank you.

Examination of Witnesses

Witnesses: **Lord True CBE**, Leader, Richmond Council, 2M Boroughs, **Daniel Moylan**, TfL Board Member/Mayor’s Adviser on Aviation and Crossrail 2, Transport for London, **Richard de Cani**, Managing Director, Planning, Transport for London, and **Councillor Amrit Mann**, Deputy Leader of the Council and Cabinet Portfolio Holder for Environment, London Borough of Hounslow, gave evidence.

Q41 Chair: Good afternoon, and thank you for your patience in waiting for us. It has been a very interesting first session. Thank you for your time, in advance, in coming to give evidence to this inquiry. Because time is always against us, if you will put up with it, we will go straight into the inquiry and the questions.

If I could kick off with a question: Heathrow and the Commission argue that with the exception of NO² levels at Bath Road the air quality impact of expansion will not impact any local receptors with implications for human health, nor will it endanger UK compliance with national air quality targets. Do you accept that, and if not why not?

Richard de Cani: If I could kick off, the Commission has adopted a particular interpretation of EU guidance, which basically allows air quality to get worse provided it is no worse than the worst link in the zone, and that is the assessment they have adopted.

The proposals do not improve air quality anywhere. They make it worse. As a basic approach we would disagree with their interpretation of the guidance that they have adopted.

Q42 Chair: Why is it the wrong approach?

Richard de Cani: Because the spirit of the guidance and the Commission's own appraisal criteria is to improve air quality, not just to seek the minimum compliance by not being the worst zone in London, so we would have expected them to look at improvements across the board in air quality. On the points about receptors, the Davies Commission does identify a number of receptors that experience a worsening in air quality, including a number of primary schools. To what extent that impacts on public health has, as far as we can see, not been assessed as part of their assessment, but there is a worsening of air quality at those receptor sites.

Q43 Chair: Does anybody want to add to that?

Councillor Amrit Mann: If I may. Certainly in Hounslow we have a particular problem, because five of the receptors often exceed the permitted levels of 40 micrograms per metre cubed, and these are always in excess of 50 micrograms per metre cubed at five of the seven sites. So there is that. There is also the health impact that we have. We have heard from the previous speakers with regard to cardiovascular and also respiratory problems. The Davies Commission identifies that there is a cost of about £10.8 million. The question that we would like to pose is: who is going to bear that cost? Is it going to be a local authority, or is it going to be national health, or is it going to be central Government?

Q44 Chair: Do you have a clear answer to that at the moment?

Councillor Amrit Mann: It is not going to be us.

Lord True: That is something a Labour councillor can say and everyone can agree on. Our view is that the Commission was very complacent on this point, and there is a legal framework here and I am sure the Committee has had drawn to its attention the latest legal opinion on the point affecting the sheer legality of going ahead where we are already in breach. Just on the precautionary issue of safety, setting aside the politics of going off to negotiate with the European Union when you are saying, "I am going to build an airport that is in breach of your standards"—that may or may not be a good negotiating tactic, I do not know—our view is that DEFRA's own current limit values compliance map shows breaches, as my colleague has said. We think it is not good enough to say that somewhere else in London the situation is worse. We simply have no meeting point with Davies's basis for assessment of the risk here.

Q45 Chair: Thank you for that. Can I ask something slightly different as well? It is in relation to the global awareness of what has been going on in the background, in a different context. There is a gap between this and what is happening with vehicle emissions, which do impact on this, and between what is recorded and what is real life. Do you anticipate that that has any relevance for air quality given what we are now learning? It is not simply the VW issue, it is the gap generally between recorded and real-life emissions in this area.

Lord True: It does have an impact, yes. There is no doubt that although it is essentially wider than the VW issue, certainly the VW issue does have a substantial impact because even if we take the Heathrow view that, “It is not down to us, boys, it is all those cars around”, there has to be certainty in the mix if you are basing a sensible environmental policy.

But I would make a wider point, if I may, Chair, which is that there is a huge issue of trust here in delivering great infrastructure projects, which this would be, whether it goes ahead here or anywhere else. It does depend to a great deal on the public, who are the people who are most affected both in the benefits and the disbenefits, believing it is being sold to them on a true and accurate basis. At the moment, what has happened, as you say, obviously diminishes public trust.

Councillor Amrit Mann: If I can just add to that, it depends on whether the Davies Commission used the vehicle manufacturers’ numbers as the baseline or whether they were obtained somewhere else from some of the receptors, in which case the data is valid. But if it is vehicle manufacturers’ data then, yes, there is a particular problem with that and we would require a reassessment of the air quality assessment.

Chair: Zac, you wanted to come in on that.

Q46 Zac Goldsmith: Just very quickly, I could go to anyone with this question. The estimate is that a third runway would lead to 25 million extra road passenger journeys every year to and from Heathrow. In their calculations, both Heathrow and the Airports Commission had to make an assessment of the contribution of those journeys in terms of air quality, but we now know that the data on which those calculations was made is flawed—it is wrong, categorically wrong. So does that not mean that the pronouncements made by the Airports Commission in relation to air quality are more or less worth nothing at this stage? You would have to go back to the drawing board. Likewise, with the DEFRA air consultation that is currently live, it is hard to understand how any of those calculations could be regarded as valid in any sense at all, given that everything they are based on has just been fundamentally discredited. Is that not the case, and does that not pose real legal problems for the Government and Heathrow?

Daniel Moylan: There are a number of things that have changed—including since we submitted our written evidence to the Committee—but it is just starting by remembering that the Government is under no obligation to approve an expansion of Heathrow, but it is under a very firm obligation to meet certain air quality targets. The Davies Commission’s own approach to the assessment of air quality was rather strange. They were well aware of this as an issue from the outset. In fact, their consultation on it was split into two parts. The first was at a very high generic level, and the second appeared right towards the end of the process with only a few weeks—I think three weeks—for people to respond, and it was issued in a form that was impenetrable to anybody but a small number of experts. On that basis they made an assessment that is effectively to the effect that it will not be worse on the Bath Road than it is in Marylebone Road, which we dispute, because they have not taken into account the effects of the ultra-low emission zone that is now a committed scheme that the Mayor is bringing in. We also dispute, as has been said, that that is the right test that should be applied either under law or in terms of how social benefits of improvements should be distributed. Why should they all accrue to the airline industry and

not to the people of London? That is a political judgment, but it is one that one can form a view on.

They managed to take that approach and then said, “But if we are wrong you can build the runway but you cannot use it,” which is even more bizarre because it becomes unfinancial, I would have thought, in the private sector if you cannot use it either for lengthy periods or simply because the wind is blowing the wrong way from Holland on a particular day and you have to stop using it. How does that work? Nobody has an answer on any of that.

Then we have a revised air quality framework but, as Mr Goldsmith has said, it was published before the news of the Volkswagen scandal came out. That is evidence of deceit. I have no reason for thinking that deceit or deception is practised by other manufacturers, but it is certainly the case that the relationship between what comes out and what happens on the road must now be in question. Experts have always understood this, and it is fair to say the DfT allow for it by a certain factor when they do their assessments, but whether that factor is correct and whether it can be tested more robustly is another question.

Q47 Chair: You are obviously querying some of the assumptions and some of the baseline modelling, but in light of the fact that the baseline data has now been revised—we have different baseline data—and in light of other queries over what the real difference might be in terms of road emissions, your feeling is that the Government should look at this, or that the Commission or somebody else should use the new data to feed into the model.

Daniel Moylan: Yes, but first you have to have a robust and accepted air quality action plan that shows that you can meet your European Union legal obligations. The draft published by DEFRA does not include any assumption about Heathrow expansion, but it is of course only a draft for consultation. We need to see a final version, and that also ultimately requires Commission approval, and maybe to be tested in the courts for all I know—the UK courts or elsewhere.

We need to have some certainty of that. Then you can see what margin you think you have, but there is still the technical question: is the margin robust? There is also the political question: should that margin accrue to people—to Londoners—or to the airline industry?

Just one final point: even if you meet the limits, it is still the case that you have poor air quality, it is just not as poor as it was before. There are health impacts from poor air quality even at levels below the limit, so it is a genuine question how that margin should be distributed as a social benefit.

Chair: I want to bring Caroline in, but Richard de Cani, do you want to add to that?

Richard de Cani: I just have a broader point about how the air quality assessment has been undertaken and the forecast it is derived from. The Davies Commission has tested a particular scenario in terms of Heathrow demand in 2030, based on certain assumptions around passenger movement, employees and mode splits. We would normally, for something so significant, look beyond the year of opening to a full utilisation and test that in a number of different scenarios so we can see the best and the worst case from it. Our interpretation of the Davies Commission’s assessment is that it is a very optimistic view of what the number of people travelling to and from the airport will be, and if you looked at it through a different set of assumptions around a busier airport, a faster utilisation, different

employee numbers and not such an optimistic mode share, you would get a different number of road traffic vehicles, which would then feed into your air quality assessment. So there is a more fundamental issue about the range of scenarios that have been tested and the range that you would expect to be tested for a development of this size.

Q48 Caroline Lucas: There is disagreement between the Airports Commission and some of the witnesses to our inquiry about the Commission's interpretation of the Air Quality Directive, and I want to know what would be the implications for the Commission's recommendation if the "does not delay" compliance test was ruled insufficient. If it was ruled insufficient, what additional mitigation would be required?

Lord True: If their interpretation is wrong, it casts doubt over the viability of the whole project. The mitigation possibilities have flowed from some of the things we have been discussing on the previous question. I do not know if TfL want to come in on that.

Daniel Moylan: One approach you could take is to say, "You cannot build a runway", and Davies could try, but it is not going to work on air quality grounds. The other is to take the Davies fall-back approach of building it but not using it, but then there is no reassessment made of the economic benefit—the whole Davies case in the end comes down to economic benefit. It never started out that way, but that is how it ended up in the final report, "This is what we go for, and it has the greatest economic benefit". If you cannot use the wretched thing you have to reassess what the economic benefits are. So the whole case comes into question.

Lord True: One can never of course prove an assertion; it could be a very unworthy thing to assert. But it has already been said that the air quality effort that was made by Davies, however you assess it, was done in two different stages. Suddenly there is this rushed late assessment. One of my more loquacious colleagues said that the work they had done on air quality so far opened them to legal challenge—possibly the law of coincidence, but I think the law of actuality that they thought they would try to block that hole. I do not think the hole is blocked at all.

Richard de Cani: A different way to look at this would be to seek to achieve no overall deterioration from the proposal, so you end up where you start off. That requires a transformational change in the proposition in terms of the overall approach to surface access, travel demand management and the operation of the airport, and introduces a whole range of issues around public transport charging and those sorts of things. That would be a different way to look at it. That is not what we are presenting—

Daniel Moylan: But that is the test that the DfT applies to new roads, so it is the test that is being applied to the Mayor's proposal for a new river crossing, for example—that it demonstrates no deterioration in air quality. That seems quite a sensible thing, and you can get that through tolling and charging and so forth. It has to be shown that you can, but that is our view. That should be the test, should it not, at a minimum?

Chair: This has been quite useful in laying out some quite big areas of your concern. You are fundamentally saying that this could be the project that you approve in principle, but you could go ahead and find that it is undeliverable, because you are going to hit up against either legal challenges or issues of air pollution that cannot be reconciled and so on. But let us test the model a little bit further.

Q49 Zac Goldsmith: Just a tail question on that one. If this investment happens, if the expansion goes ahead, and if the legal obligations in relation to air quality mean that the infrastructure is going to lie idle and not be used, being a cynic I would imagine that the legal levels would be the first thing to shift. You would see pressure on Government to change the legal definition of an acceptable level of air pollution. Is there anything preventing the Government from doing that?

Daniel Moylan: I do not think we can do that within the confines of European law, but Mr Goldsmith's instinct is correct, because on noise parameters the 57 LDA—I mumble a bit over the suffixes, but the 57 limit—was recommended for tightening to 55 some 12 or 13 years ago as a measure to comply with World Health Organisation limits, and the Government refused to implement it because of the limiting effect it would have had on Heathrow's operation. The instinct is well-evidenced.

Q50 Zac Goldsmith: I am going to move on. I think I know what the answer is going to be. The evidence that we have had suggests that by far the biggest contributor to air pollution would be surface transport linked to Heathrow expansion, so the question is, to what extent is the responsibility for mitigating that impact with Government, local government, TfL or Heathrow itself? Where do you think the principal responsibility lies in term of dealing with the additional air pollution?

Daniel Moylan: It all comes back to the Government. The Government is under the legal obligation. The UK Government is the party to the legal obligation to meet certain air quality limits. The UK Government is the entity that can or cannot—Parliament can or cannot—approve a national planning policy statement that would allow Heathrow expansion or otherwise. TfL of course has obligations that are derived from that and has the money to do it, and works for the Government to approve air quality in a whole host of areas, and will want to do so for its own sake because it is a good thing for Londoners. But even that has to be done in collaboration with Government, and sometimes on the basis of Government funding, which incidentally we do not think is adequate for the purpose, but that is another point.

Lord True: I strongly agree with that, and I am going to also agree with what Amrit has said. Local authorities are not going to be in a position to pick up these kinds of tabs. It must be a cascading line of responsibility, as Daniel has said. The key is that Government must comply with its legal obligations. You cannot just come along and build a coal mine in Richmond Park and then say to the local council, "Look, boys, you sort out the pollution". Some people are taking the decision to create the entity with whom the responsibility lays.

Councillor Amrit Mann: In terms of noise and certainly in terms of air pollution, both these factors do not see any boundaries, so we are limited in our scope as to what we can do as a local authority. Hence we would shift the onus on to Heathrow Airports Ltd, but also the Government. The way I see it—and I see it from a legal standpoint—is the good neighbour principle. In English court law we talk about *Donoghue v. Stevenson*, which is the duty of care. The duty of care lies not with the local authority but certainly with Heathrow Airport, and also with central Government, who, if they are minded to support Davies, are going to endorse the third runway.

We would not want to pick up the pieces. The residents in Hounslow, our community, are looking to fund the costs of all the pollution, the air noise and what goes with it, and then on top of that we are lumbered with trying to clean all the mess up. So we would shift the onus back on to central Government and Heathrow Airports Ltd.

Q51 Zac Goldsmith: Can I ask a question of TfL? I know that Heathrow and the Airports Commission have both estimated that the cost of adapting our service transport infrastructure to accommodate the extra traffic backwards and forwards from Heathrow is somewhere between £3 billion and £4 billion. I know that TfL have done their own assessment of those figures. The cost, incidentally, is being borne not by Heathrow but by the taxpayer. I know you questioned those figures. Can you explain what figure you reached and why?

Richard de Cani: It is important to just remind ourselves of the geography of Heathrow, because it is to the west of London, surrounded by built-up areas. When we look at the transport needs of London as a whole we take into account the population employment growth for the future. Since the Davies Commission finalised their report we have had a revised population employment forecast for London. The employment forecasts are an extra 650,000 people working in London from what they were then. All those people will be travelling on our rail, bus and road networks, getting to and from work and other journeys.

We look at it in terms of the totality, and we look at the overlay of the Heathrow demand on top of the background demand we will get from population employment growth. We do not believe the assessment undertaken by the Davies Commission is the right assessment. It does not look at the right year. It does not take into account the right background growth. When we look at it through our own forecasts for the future, we see a much greater need for more capacity across London as a whole. Some of those are schemes that Davies has identified, and the schemes will be funded by 2030. They are not currently in anyone's funding plans. So we have identified quite a considerable gap between what Davies identifies as the minimum necessary and what we think is necessary for London, as a whole, including an expanded Heathrow, in terms of public transport improvements in particular.

Q52 Zac Goldsmith: Can you give us a figure?

Richard de Cani: There are a number of schemes that we think are essential to support growth in that part of London, including Heathrow. Some of those are identified by Davies: southern rail access, Crossrail improvements, and Crossrail 2 is needed to support general growth in London by 2030. Davies assumes that is funded. It is not funded at the moment. There are other improvements to the national rail network and the road network that Davies assumes are funded, which are not currently in anyone's plans.

So if you take into account all of the schemes that are identified as being necessary but do not have clear funding plans, then the cost, the gap, is in the order of around £20 billion. Not all of those are absolutely essential just for Heathrow, but they are needed for growth in its totality, including Heathrow.

Q53 Zac Goldsmith: Are you able to give us an indication of how much of that £20 billion gap would not be necessary if the Heathrow expansion did not happen?

Richard de Cani: It is difficult to desegregate it in that way, because many of the people travelling to and from Heathrow are also people travelling to and from work elsewhere in London. So if you look at the Piccadilly line, that has people who live in Hounslow travelling to work and people travelling to Heathrow. It is difficult to separate out, but the scale of demand that you get with Heathrow expansion is clear, and if you want to push it in the right direction towards increased public transport that is a big generator activity on top of what is already a large increase in demand by 2030.

Chair: I just want to bring in Peter here, because he has a question very relevant to this modal shift of quite a scale.

Q54 Peter Heaton-Jones: Thank you, Chair, absolutely. The Commission and Heathrow in their evidence to the Commission envisaged this fairly significant shift away from private road transport to get to the airport and on to public transport. It envisages that more than half of all the surface journeys to the airport—53% I think is the figure—will be via public transport; a big shift. I just want to ask simply: do you think that is credible?

Richard de Cani: Without expansion it is the right objective to seek to achieve, but it can only be delivered with the right plans in place. At the moment the public transport mode share for passengers at Heathrow by public transport is around 41%. So we are talking about a big increase in the quantum of people travelling to and from Heathrow. That is just passengers. Employees at Heathrow use 28% public transport, so there is a bigger increase to achieve for employees. That requires an integrated approach looking at new capacity, looking at demand management, looking at the approach to parking, looking at how staff travel is dealt with, looking at incentives. What Davies has put forward at the moment does not address all those issues. So the scale that Heathrow would have to move to get to that is quite considerable. It is absolutely the right ambition to seek a higher public transport mode share, but it needs more investment in rail, in particular, to get to those figures.

Daniel Moylan: Can I just draw attention to the staff figures there? They must not be thought of as trivial? There are approximately 70,000 people employed on the Heathrow site, and we have figures of 28% travelling only by public transport and the balance largely by car and taxi. Moreover, it is fair to say—I think one of the earlier witnesses referred to this—that Heathrow does already have quite good staff travel plans for an employer, they are not negligent in this regard, yet they are still only achieving this very low public transport mode share, despite the efforts they have put in.

Q55 Peter Heaton-Jones: Just a follow-up, then: is there an example anywhere else in the country where there has been such a significant modal shift from private to public transport? Has that been achieved anywhere else?

Richard de Cani: When you look at London as a whole over the last 15 years and how people travel in London, we have seen a shift away from the car towards public transport through a massive investment in rail capacity, the introduction of the congestion charging scheme and investment in our bus network. We have seen a shift on that scale. At Heathrow, you need to look in detail at where the markets are for people travelling to and

from the airport and how you can target improvements on those particular corridors. At the moment, Heathrow has quite good public transport mode share on particular corridors to and from the airport, and much worse on others. What is needed is more a targeted, focused approach on how you can drive that mode share, but it requires a huge amount of investment beyond what is currently identified in the Davies Commission report.

Q56 Chair: Can I just ask a supplementary? Is it all a carrot? Is it to do with improving the infrastructure, giving people the choice to switch to other modes of public transport, or would you argue that in order to fuel that big transition in the way that we move people about through land—you called it a transformation—you would have to have more aggressive measures and more expansion of charging, to try to push people away from cars as well as to encourage them on to public transport?

Daniel Moylan: You might, but it does not get you away from the fact that you still need the public transport investment in order to carry them. If you told all the staff that they would be charged £10 a day if they brought their car to work—I am not suggesting that—then if they gave up using their car you would have to have a night tube on the Piccadilly line, because there are many different shifts and so on, a total upgrade of the Piccadilly line, which we need anyway, and additional Crossrail trains. Of course, many of the staff do not come from central London. I think we had the figure of 1,000 staff at Heathrow—slightly out of date, maybe—who live in Brighton, and you come across people who work at Heathrow who live in Oxford. I think even the chief executive may come from Oxford on a daily basis.

Lord True: We would all endorse all the things that have been said and the aspirations, but I think when you are looking at making policy, you also have to, sadly, consider human nature. The reality of people who go on particularly long flights is that they tend to like the sort of kiss and tell arrangement—not kiss and tell, kiss and go.

Daniel Moylan: Kiss and wave.

Lord True: Kiss and wave.

Chair: Sorry, yes. This is a public session, be careful.

Lord True: I think it is perhaps the recent excitement we have had in the House of Lords with the Lord Chairman of Committees. I do apologise.

The fact is, getting people who want to drop off a loved one with three or four heavy cases to make the rational choice is probably slightly more difficult than it ought to be, and it may need both carrot and stick. I do not think that is going to be possible.

Q57 Chair: Just before we bring John in, you are saying we would have to do a huge transformation with a number of things, including massive investment in infrastructure beyond what has already been assumed within the model, as well as affecting consumer behaviour. Are you saying it is unachievable, or are you saying it is achievable, but that the scale of things we would need to do would be transformational not only in terms of the infrastructure, but in terms of the way people move and the choices we would be limited to?

Councillor Amrit Mann: I personally think that it is possible, but I will go back to a word that you used, which is “aggressive”. I think there has to be an aggressive approach to this. Certainly in the communities that I represent, we would like to see the Piccadilly line beefed up more, because currently it is quite dire. We would like to see an increase in the frequency of the trains that run and the modernisation of that entire Piccadilly line, because it is very, very key to taking people to and fro into Heathrow. We want to also look at the introduction of travel free zones and the charging fare structure with the Oyster card. It is possible, but it needs to have an aggressive approach.

Chair: This is wider than Heathrow, this is clearly beyond—

Daniel Moylan: The whole thing has to be embedded in the transport solution.

Chair: Whereas I suspect Heathrow would say to us, “This is just a Heathrow issue that we can deal with here”.

Daniel Moylan: But Heathrow adds significantly to it, and there are costs associated that are sometimes difficult to disaggregate. You have to ask yourself why you are doing it, because the objective is to mitigate a harm that is caused from this. Perhaps the answer is not to create a harm in the first place. We could tie ourselves up in knots working out how you mitigate an unnecessary harm and how you disaggregate the costs of doing so. We could happily spend days talking about that—Richard can, of course, because that is his job, in practice.

Chair: But we are not going to let him do that now.

Daniel Moylan: I would like to go back to the root of it: it is an avoidable harm that one is seeking to mitigate. It is very expensive and difficult, and one needs to be quite aggressive with people, as has been said, in order to achieve that mitigation. Of course, everything is possible in the end if you are sufficiently aggressive. Some of these things are desirable in their own right and necessary in their own right.

Chair: John, I would like to bring you in at that point.

Q58 John McNally: Thank you, and thank the good Lord for refocusing our attention quite quickly there. You have argued that the definition of the vicinity of the airport is crucial to assessing the Commission’s proposals on air quality. Where did the Commission draw the line; where should it be drawn; what are the implications for the Commission’s findings?

Councillor Amrit Mann: I would like to see it drawn to include my community, because at the moment, under Davies, it would be drawn around the borders of Heathrow Airport Ltd. I think because the issues regarding noise and pollution are much wider, it needs to be much wider in terms of context and in terms looking at it where the environmental insults are being produced. It should not just be within Heathrow Airport Ltd’s perimeter, because they could achieve some of the issues if they carried electric cars and charged for entry into the perimeter, but then all that does is displace the issues and problems to a much wider problem down to Hounslow and Richmond and others. We would like to see a much wider context of the vicinity being defined.

Lord True: I obviously endorse that. Yes, Heathrow has a giant impact. It is the biggest significant impact on a wide area of west London, and that social environmental impact has to be taken into account by Government, if not by Heathrow.

Q59 Caroline Ansell: This is a question for TfL—a risky question, given the previous comment that you could talk for days on mitigation; I fear we have just the dying gasps of this session. You say in your submission that before there is any sort of green light for development, there should be a fully worked mitigation plan that goes into detail. How realistic is it to expect that at this point, as we are just in principle at this stage and there are many, many rafts of approval and planning processes to go through?

Daniel Moylan: It is expected of every other major transport scheme that is put forward, not least road schemes, and of course any mitigation plan will contain certain assumptions that may not turn out to be wholly accurate, but it does not mean to say that you cannot start the job. Before you make a decision that is in principle capable of meeting your international legal obligations, you should have a plan as to how you are going to mitigate that effect. I am sorry, that is sort of the answer, is it not?

Richard de Cani: It is, sort of. Just to add to the answer, it is about the scale of what is proposed here as well, which is very significant from a surface access perspective in terms of the number of people moving to and from the airport. These are not minor matters of detail that can be dealt with downstream, they are quite significant points of principle that have to be seen to be workable in the context of what is happening in the rest of the city.

Councillor Amrit Mann: Davies talks about a £1 billion mitigation package, but if we look at that, £250 million is set aside for compulsory purchase of properties; £750 million of that is for the rest of London, and I have to fight it out with my good friend Nick here as to what sizeable chunk of the £750 million we get.

We commissioned a report in Hounslow by Bureau Veritas and they came up with a figure of £250 million just for mitigating the noise factor in Hounslow. That is current, never mind the expansion. I think we need to look at the levels of mitigation monies that are being provided. I do not think that the £1 billion goes sufficiently far. I also think that in terms of deliverability, a lot of the mitigating factors need to be instigated now, before any expansion takes place. As we have heard, with terminal 5 there has been foot-dragging and dishonoured promises, and in that time we have had to go back to our residents and say, “Look, this is what we can and cannot do, given our circumstances”.

Q60 Chair: But Caroline’s point is surely that if the Minister was sitting here, the Minister would say to you, let alone to Heathrow, “Look, this is such a massive project that we cannot fill in all the gaps yet. It is not practical to do that, but we know what the gaps are likely to be, we know the known unknowns—we will do this. We will fill it in”. Your answer is, “Every other project does that”. They will say, “This is a big complex one, but we know it has to be done”. Why would the Minister not be reasonable in saying that?

Councillor Amrit Mann: If the Minister was minded to take that position, we would like to see legal and binding conditions in place before expansion comes about. We are quite happy to have enforceable and legal and binding conditions set upon it. This is what has

been failing with the terminal 5 conditions, because we have not received any of the mitigating circumstances that should have been delivered back then.

Q61 Chair: So you are worried that with things like this being open-ended, you or somebody else is left carrying the can. Okay.

Daniel Moylan: Any alternative solution is further delayed if you head off down a cul-de-sac. It might be a very long cul-de-sac, it might take you a long time to discover you are in a cul-de-sac, but if you have people telling you you are in a cul-de-sac, and even Davies saying it could be a cul-de-sac—in which case you can get all the way down it and then not use it—then maybe you should prove it is not a cul-de-sac before you head off by showing what the exit strategy is. I do not have this right at all now—the metaphors are wrong, but the sentiment is sound.

Lord True: The real problem is that what is there already is breaching the air quality limits, as we have discussed before in this session. It is providing noise pollution that equates to that provided by a whole sackful of other airports in London. I deeply resent when my residents and Amrit's are called NIMBYs. We make an enormous contribution in tolerance already in putting up with what is going on in Heathrow. We are not calling for it to be closed down, but I think in those circumstances it does behove Government or any public authority—given, as has been said, the background of repeated past broken promises—to make crystal clear not only, “It will be all right on the night, boys,” but that there will testable, clear mitigation programmes. Frankly, if those are not there, my own local authority will certainly be interested in testing some of these things in the courts.

Q62 Chair: Which would delay the project, and would delay compliance and so on.

Lord True: Yes.

Chair: Interesting.

Q63 Holly Lynch: I want to pick up on some of those issues. I am particularly interested in the Airports Commission's proposal of a noise envelope and how deliverable and achievable that is. Given that it would also rely on the creation of a community engagement board and an independent aviation noise authority, which we have already heard the airports are a little bit reluctant to commit to, how achievable is that noise envelope, would you say?

Daniel Moylan: What is it? Mr Chairman, I do not know if Ms Lynch would like to tell us what she thinks it is. I don't think we have any idea, do we? You may.

Richard de Cani: No.

Holly Lynch: I think there is still some discussion on that.

Lord True: We are slightly baffled by this concept. I think Daniel said it very briefly. Theoretically, of course you might be able to negotiate your way to something that is called a noise envelope, whatever it means, but there are so many complicating factors. It has to be based on real measurement. You can measure the number of flights, but once

you get into the issues of noise it gets much more difficult, particularly in the case of the proposition that is on the table. There are going to be very large numbers of people who are going to be affected who have not been affected by aircraft noise before.

When I gave evidence to the Davies Commission, I spoke afterwards to Mr Holland-Kaye and he said to me, “Oh, it was a terrible mistake that we had those experiments on the trial flights, because suddenly people were mobilised about what might happen in Heathrow”. Indeed, in my own council area I have a very active and effective campaign group in Teddington, where there was no visible concern about Heathrow until they heard what was going on over them. With this new model, it may well be that the kind of assessments of what is acceptable or unacceptable noise, for example, which are based on very long ago survey, back 30 years ago—there has been no recent social attitude survey of this kind. I think that finding a proper mechanism for that part of how you might create a noise envelope would be extremely difficult. We may be able to get there, but certainly not overnight.

Q64 Chair: The Commission has suggested some approach to a noise envelope. You are very well aware: the physical area, particular noise contours, the number of people within particular corridors, some sort of points-based system. The Commission would say that you could develop a noise envelope model.

Daniel Moylan: As I say, I don’t know. Is a noise envelope like a bucket of noise that you carry around and have a bit here and bit there, and then when you have doled it all out for that particular day, you cannot have any more noise? I do not know what a noise envelope is. Or is it a contour you draw on a map? Well, the contours are drawn by aeroplanes and what their flight paths are, so they are not drawn by decisions on how you allocate an envelope, it is about where they fly. Reference has been made to using modern technology that allows much more precision in terms of landing and taking off and where the planes fly.

It is very interesting, Heathrow’s approach to that, because in the Government’s aviation strategy, the suggestion or the recommendation is that that is used to concentrate flight paths. The assumption here is that this is for airports that are surrounded by fields, more or less, or where you have a field between two villages, so if you concentrate the planes going over that part, you have less effect on the villages. It makes a lot of sense. What Heathrow is proposing to use this technology for is not to concentrate flights but to disperse them, so that you are going to have an awful lot more people affected by noise, but potentially at levels just below the standard to which it is measured. That of course would be a very nice noise envelope then, because you could have a lot more noise, a lot more people affected and Heathrow would be able to say, “Nobody can hear a thing, it is inaudible because it is below the limit”. It is very interesting how this noise envelope concept can be flexed.

Q65 Jo Churchill: So we go from a little envelope to a big envelope then, would you say?

Daniel Moylan: Yes. Essentially they are aiming to go to a big envelope, but one where the measurement will tend to fall below the limit and then you will be able to say,

“Nobody can hear it”. If it is 54 as opposed to 55, it falls below and you have achieved it, job done.

Lord True: But my point of course is that the 55 might not be acceptable to all the new victims, and then you have potential health impacts, following on from what we heard in the earlier session, because the rest of us might be inured to 55 or 57, but there will be hundreds and thousands of people who have not experienced that before.

Daniel Moylan: There will be much less respite than before—I think that is a point worth making.

Chair: Councillor Mann wanted to come in as well.

Councillor Amrit Mann: Just two points: first, I welcome the concept of noise envelopes. There needs to be a bit more work on defining the area and the number of flights going through. Also in terms of noise, I think my colleagues have picked up some of the issues, because noise affects people differently, as we found in the Wright study of 2005. Young kids are cognitively affected by noise.

The other issue for me is that you mentioned community engagement boards. We do not know their governance, we do not know the make-up, and we do not know how they are going to be funded. We would not want to have them funded by the aviation industry. I would rather have them centrally funded. What are the terms of reference? All those have not been defined as yet, and we would like to see a lot more work around that, and also for them to be up and running before any expansion takes place. There is no point having expansion and then having these bodies materialise, because they are ineffective at that point.

Daniel Moylan: We have multiple community engagement arrangements with Heathrow already. They fall down essentially on the question of trust. In the model pointed to by Sir Howard in the Netherlands—which seems to work better, he believes, and I think it does—I think he ignores the years of effort and work that went into creating and re-establishing an element of trust on the part of Schiphol with local communities to allow that to become something that people locally bought into. It is not just a question of setting up another community engagement forum, of which there are numerous ones, and expecting it to work in the same way.

Lord True: Schiphol is also publicly owned. I do not think they will be discussing in the Chinese Politburo how they can engage with their residents. They are the owners of Heathrow.

Chair: Holly, did you want to follow through on that?

Q66 Holly Lynch: Yes, just to expand slightly, I know that as part of that negotiation between Heathrow and those local communities, there is this offer in the region of £1 billion compensation. I think it is £700 million that would go towards insulation of properties. Transport for London have been quite critical that that would not go far enough to insulate the numbers of homes that would be affected by the noise pollution. Is that true?

Richard de Cini: Our starting point was that people who were experiencing a noise impact from Heathrow should benefit from the compensation, and the size of the pot

should be set accordingly. Based on our calculations, looking at a more pessimistic view of the number of people who would be affected by noise, that figure was not enough. I think it is more the basic principle we would seek to protect—that people who have an impact are offered the right compensation to mitigate that impact. It is not clear that that is what is being offered at the moment.

Councillor Amrit Mann: I just want to put it on record that with the new team at Heathrow Airport Limited under John Holland-Kaye, they have been a lot more engaging with certainly our community in Hounslow in terms of providing mitigation. It is years too late, but it is a great gesture and we would like to see a lot more of it.

In terms of the airport, I know my colleague, Nick, said that he did not want it shut down. We too do not want it shut down, hence our mantra, “We want it better, not bigger”. If they can somehow put the mitigation package together that delivers respite to our residents— and this is for existing issues, not the expanded Heathrow—that would go a long way in building up trust, which is what has been lacking.

Lord True: You are very generous. We have not felt the same warmth from Mr Holland-Kaye as you perhaps have, and maybe that is in a fault in me. But I do repeat a point that I made: this is on top of already intolerable limits, so the fundamental thing here is that if this project goes ahead, it is picking the site where it is most expensive to provide any form of mitigation and also doing it against the background of people being at the limits of their tolerance, health risk and other things.

Q67 Jo Churchill: Just playing a bit of devil’s advocate, given that the expansion will not be completed for around a decade, and given the improvements in technology and so on, how sure can we be that the new flight paths, new technologies and operational improvements will not mitigate the problems, notwithstanding that we cannot crystal ball-gaze, as you said?

Daniel Moylan: Just a few things. You have already heard that there is a limit to improvements in carbon emissions on aero engines that does not impact on noise. If you put it the other way around, you have a converse limit in relation to noise, so that you cannot make the engines very much quieter without increasing the carbon emissions, if you see what I am trying to say.

Jo Churchill: Yes, I do.

Daniel Moylan: Or perhaps I can put it the other way, on failing to reduce carbon emissions. Our view is that much of the noise improvement has already been achieved, and the aero engine manufacturers confirm that they do not expect to see very much more. It takes time for that to arrive on the airfield, because of course planes have a life of about 30 or 40 years, so you will expect to see some improvement continuing as existing modern technology is rolled out into the fleet, but there is a limit to it.

As far precision landing and take-off is concerned, I look with a degree of suspicion at what in fact it is trying to achieve, given that it has been used for the opposite purpose that was envisaged by the Government. The steeper angles of descent and take-off are quite small angles, but nonetheless have an effect on noise. We are still to be persuaded that they can be applied to the very largest planes—it can be achieved on the smaller planes,

but we are not persuaded they it can applied on the largest planes, which tend to be the more noisy ones. I would simply say to Ms Churchill that it is inherently implausible that you can have 50% more flights, a third runway and an improved noise situation. As the Mayor once said, there would be more pigs flying over Heathrow than aeroplanes if you believed that. I think one can start with the view that it is inherently implausible.

There is the issue of respite. At the moment it is 50:50, so that the alternation between two runways allows respite for half the affected population, or all of the affected population for half of the day and so on. But when you have three runways, you cannot do that. One of the runways has to operate in mixed mode, and Davies admits that the respite period will, on average, fall to a third of the flying day rather than half at the moment. But our analysis shows that while that figure of a third, as an average, is about right, for over half of the communities it will fall to only 25% of the day and for the others it will be 50%, so that the 30% is an average and includes 50% of the affected population. A larger population will have only 25% of the flying day as respite. That is something people are not aware of that is coming down the road at them.

Chair: Mr de Cani, you want to come in on that?

Richard de Cani: Just with a small point about process. Where you are faced with a situation where the future is uncertain and you are relying on assumptions, what one would normally do with something of this scale is to apply a range of sensitivity tests to look at the best case and the worst case, and not always plan for the best case, but plan for the worst case as well and look at what mitigation would be necessary to deal with that. Some of the scenarios that have been tested through the Davies Commission process have been quite optimistic in their use of assumptions. Because we do not know, and there are no guarantees about whether these things will be borne out, it would be prudent to look at the best case and the worst case and perhaps plan mitigation around the worst case, so that if that does materialise, the impacts will not happen. That has not been part of the proposals to date.

Q68 Jo Churchill: May I just confirm that that is all within what the Commission has stated, that the noise envelope should be agreed and Heathrow must stay within the limit, no higher than today, so you have to keep those limits where they are while jacking up?

Daniel Moylan: I have this difficulty with the whole concept of that, because noise is not a thing that you have, noise is an experience.

Jo Churchill: However, one can measure it.

Daniel Moylan: One can, but then if I have half the noise and I share the other half with Nick, is that an improvement or not? Given how you measure noise in logarithmic scales, it might be a significant improvement. That might solve the problem, but I have huge difficulties with the whole notion of a noise envelope that people have to stick to—contour is another matter—because it is not a quantum of something.

Q69 Chair: I am going to draw this to a conclusion, but before I do, can I just ask you something? I am going to come you last, Mr Moylan, for what might appear a very good reason. With all the reservations, both fundamental but also detailed, that this can be achieved

without delays through legal challenge, or because the costs will have to be negotiated as to where they fall or on customers and so on and so forth, you are in a strange situation as a group of organisations and elected representatives. You have those reservations, but also the Government and Heathrow are saying, “We need to work with you in case this is given the go-ahead”.

Very simply, with all those concerns and reservations, if the Minister said, “We are going to proceed with it,” given the hurdles you have been describing, can it be done? I do not mean commercially and so on, because it might hit all the hurdles, but can it be done and protect your constituents and the people around the area from air pollution, noise pollution and emissions? Perhaps I will start with you, Councillor Mann.

Councillor Amrit Mann: Given the scenario that the Government recommends the third runway, we would work with Heathrow Airport Limited, because we are in a unique position, being the worst affected borough. Also, we recognise that there are 370,000 jobs directly and indirectly linked to Heathrow, so we have a duty of care to those residents who work, or whose relatives work, at the airport. It is a big employer and a big chunk of the local economy. If we were minded to have legally binding conditions placed upon Heathrow Airport Limited and the expansion—up to this moment, we are still looking at the deliverability of mitigating circumstances for the previous expansion, terminal 5—and we had rock-solid deliverability, so that the trust that has been missing kicked in, then yes, we would be willing to work with Heathrow.

Q70 Chair: That was not quite my question. The question was, do you have a degree of confidence that in the focus of this Committee on air quality, noise and emissions, you may be able to help deliver it? Can that be delivered for the people who are going to be affected by this?

Councillor Amrit Mann: That is a very difficult question.

Chair: Okay, thank you. Lord True.

Lord True: I do not think it can, because there are so many imponderables. Everything we have heard in this session, including the very interesting point, “When all these wonderful silent planes come in, the world will be wonderful”, is all asking people to take things on the best possible assumption, which runs so much through Davies. I do not think I would survive, frankly, as a local politician, as there is so much distrust. When we had a referendum run by the Electoral Reform Society—not an opinion poll—in Hillingdon and Richmond, 100,000 people voted. These were real people in a real vote, in real ballot boxes, saying that in no circumstances could they accept this. I think it would be extremely difficult in terms of democratic leadership to gain consent from the population. I am doubtful about the technical feasibility, particularly in terms of surface transport and air quality.

I would also, if I may, say one other thing, which I do not think has been mentioned enough. I know a lot of people do not agree with me, but as a person who carries public responsibility, given the current international security position, I think the biggest environmental disaster of all—yes, the oil industry creates problems, but it is the Exxon Valdez and the Torrey Canyon—the last thing we would ever want would be to have a massive environmental disaster of a plane being brought down over the main centre of our

population, one of the biggest international terrorist targets imaginable. We know airport security is easily penetrated in various parts of the world, and it is an environmental question, and also a question of social responsibility, not to double up the risk with 250,000 more flights a year and more in this particular area over our population. I think that is also an environmental question. I would find it very hard to give consent.

Chair: Extremely doubtful.

Lord True: I do not think our population will.

Q71 Chair: Extremely doubtful, okay. Can we deliver the environmental imperatives?

Richard de Cini: I would say from a technical perspective that the right assessments have not been done to demonstrate whether that is the case or not. First, the baseline has changed, not through the fault of the Davies Commission, just because of the pace of change that we have in London and the south-east through population and employment. The baseline has changed from the DEFRA report, but we have not done the right assessments to look at the full range of possible impacts to convince ourselves whether this is workable in terms of air quality, noise and other environment impacts, so further work is needed.

Chair: Okay, thank you.

Daniel Moylan: I know quite what the good reason was, but I have to look at it a little bit from the point of view of the Mayor. It is worth remembering that the Mayor has views on this question, but he has responsibilities on which he is elected that relate to spatial geography, economic development, planning, housing and all sorts of aspects of London. An airport, and indeed a new runway at an airport and the number of flights involved, represent a very violent and powerful intervention in all those responsibilities.

Even if it could be shown that it would be compliant with EU air quality limits—I do not myself believe that it is ever likely to be, so I think that is going to be hugely challenging—you would still be left with the question, “But why would I want to do that? Why would I, as Mayor, with all these responsibilities, in a city with a population of already 8.6 million, and forecast very reliably to be 10 million by this time this runway opens, want to do that and impose that on all of these people when we need a better solution?” He of course will not be Mayor for very much longer, and his views on the matter will be not those of the Mayor; there will be somebody else in position. You can ask them yourselves, but I find it difficult to see any of the contenders who have been nominated or declared for the post sitting down and saying, “Yes, you have solved it. Let’s just get on with it”. I do not see it happening.

Chair: I cannot believe you are drawing him into the area of political speculation.

Daniel Moylan: Not at all. I think it is fair to say that on Saturday at the mass rally that took place in Parliament Square—which it was my privilege to attend, and I think you (Lord True) were there as well—every declared candidate for the mayoralty was already up there, quite irrespective of party. I was not making a party political comment at all.

Chair: Okay. Can I, on behalf of my Committee members, thank you very much for attending and the evidence you submitted before, but also for being here today and the generosity with your time? If you do have any further thoughts, feel free to put them through to us, but thank you very much indeed. It has been a very interesting session, and thanks as well to all who have attended to listen to this. Thank you very much.