

Environmental Audit Committee

Oral evidence: The Airports Commission report: Carbon emissions, air quality and noise inquiry, HC 389

Wednesday 4 November 2015

Ordered by the House of Commons to be published on 4 November 2015.

Written evidence from witnesses:

- [Heathrow Airport Ltd](#) (plus [supplementary evidence](#))

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Members present: Huw Irranca-Davies (Chair); Peter Aldous; Caroline Ansell; Mary Creagh; Geraint Davies; Zac Goldsmith; Margaret Greenwood; Luke Hall; Carolyn Harris; Peter Heaton-Jones; Mr Peter Lilley; Caroline Lucas; John McNally.

Questions 72 – 202

Witnesses: **John Holland-Kaye**, Chief Executive Officer, Heathrow Airport Holdings Ltd, and **Matt Gorman**, Director, Sustainability and Environment, Heathrow Airport Holdings Ltd, gave evidence.

Q72 Chair: We turn to the first panel of the second public hearing in the Committee's inquiry into the Airports Commission's Report "Carbon Emissions, Air Quality and Noise". We have before us today, and you are very welcome, gentlemen, John Holland-Kaye, Chief Executive Officer, and Matt Gorman, Director of Sustainability and Environment at Heathrow Airport Holdings Limited. Thank you very much for coming before us this afternoon.

You have already submitted written evidence to us, for which we are very grateful. Do you mind if we go straight into it and make the most of our time?

John Holland-Kaye: Please do.

Q73 Chair: In the written evidence you said that the Committee can "have confidence in the Commission's indicative policies and mitigations". Does that mean that Heathrow, that you, support those mitigation actions?

John Holland-Kaye: Can I just clarify? By mitigating actions, what do you mean?

Chair: Specifically relating to carbon emissions. That is where we are going to start.

John Holland-Kaye: Yes. If I can just expand on that? We can expand Heathrow within the Government's legally binding commitments on climate change. That has been validated by both the Commission and by the Committee for Climate Change.

If we look more broadly at managing carbon, this is a global issue that we need to look at from a global aviation point of view. One thing that has happened since the Airports Commission's report is that the global aviation industry has signed up to having no growth in net carbon emissions from 2020: so growth in aviation with any growth in carbon emissions being offset by emissions trading. That is a big step forward in making sure that a vital part of the global economy—which is aviation—is able to play its part in delivering the economic benefits of aviation in a sustainable way. That is a move that we champion. We have been campaigning for that for over 10 years. It is just one of many measures where Heathrow has taken the lead globally in trying to ensure that both the way we operate and the way in which global aviation works happens in a sustainable way.

Q74 Chair: Let's stick with the issue of carbon emissions and targets. In your written evidence to the ICAO and Sustainable Aviation's reduction targets the Commission used the Committee on Climate Change's planning assumption on carbon emissions. The Government is still yet to commit to a specific target. Would it help your case if there was greater clarity on what is needed, what should be expected, from UK aviation in terms of CO₂? Do we need that clarity now?

John Holland-Kaye: I will let Matt step in on some of the detail. We absolutely need to have clear targets for what we are aiming for. A commitment to no net increase in emissions from aviation from 2020 is a very strong commitment. We want to play our part in making sure we can see sustainable growth for the global economy. We have made some big steps forward in minimising carbon emissions from aviation already. One example: the change in aviation technology so that planes now fly more efficiently; use less carbon to go about their normal business. We can see that with the new fleet that is operating.

Q75 Chair: All of that is great and there is a litany of things that you can say are pointing in the right direction. We are still missing a target. You referred to your colleague, Mr Gorman.

Matt Gorman: I am happy to step in on that. You are right that the Government has said it still has to decide on the formal status of the target but the Committee on Climate Change in its advice to Government has been very clear on this. They talk about a planning assumption that absolute emissions from UK aviation will be at 37.5 million tonnes by 2050 as you have referred to. They have concluded that with the improvements in aircraft and engine technology, operating efficiency, sustainable fuels, that it is possible to grow passenger traffic by around 60% and stay within that absolute limit. The Airports Commission has tested that. The Commission looked at two different scenarios: a carbon cap scenario, where the absolute emissions had to stay at that level; and a carbon trading scenario where through international trading there could be some growth above that.

Chair: Indeed and I will return to that in a moment because we have some questions around it.

Matt Gorman: But specifically, the fact that the Government has not yet come to a firm conclusion on a target is slightly less relevant in the sense that we already have a very clear planning assumption that the Committee on Climate Change has set out that the Airports Commission has looked at as well and concluded that growth within that limit is possible.

Q76 Chair: So a target is not necessary?

Matt Gorman: The Airports Commission has demonstrated very clearly that it is possible to grow within that planning assumption that has been put forward.

Q77 Chair: So if a target is not necessary and we can just go on the assumptions that have been made and the modelling that has been done, would you support the call from the Committee on Climate Change for the Government to bring forward a strategy on aviation emissions by next autumn? Is that necessary?

Matt Gorman: I think the Government already has a strategy in relation to aviation emissions that supports both improvements within the sector and—

Q78 Chair: I want to pull you back for a moment, Mr Gorman, because one of the things that we have that gives some credibility and some long-term thinking is the recommendations of the Committee on Climate Change. The reason I am asking you this—I know you are not the Government—but as the people who are charged potentially with being given a decision by a Government Minister to increase airport capacity, carbon emissions being one of the biggest challenges, within that scenario the Committee on Climate Change are saying two key things. One is that it would be darn good to have a target that is there and clear and binding as well as the strategies and the assumptions. The second thing is that there should be a strategy on aviation emissions by next autumn. Would Heathrow support that?

John Holland-Kaye: Yes, we would. We have always supported the industry having clear targets. The 60% increase that the Climate Change Commission has already identified is a good starting point for setting that target and we will play our part in making sure that the aviation industry has a clear strategy to make sure we can deliver against it. There is a clear strategy and I think you have had submissions from Sustainable Aviation that lays out how we can do that.

Q79 Chair: Indeed. Okay. Thank you. Let me move on. Even without any airport expansion the Committee's analysis envisages a carbon price between £200 and £334 per tonne by 2050. It is above DECC's central forecasts for future policy. Do you have an idea what impact that carbon price will have on Heathrow but also on the aviation industry generally?

John Holland-Kaye: The first point I would make in terms of carbon trading is that it is absolutely right that aviation should pay its way in emissions. We have always supported that. The long-haul flying that is supported from a hub airport like Heathrow is the most valuable form of aviation and one of the most valuable forms of transportation. The reason I say that is because there is no substitute yet for long-haul flying. If you want to get to your elderly relative in New Zealand, if you want to sign a trade deal in China, if you want to get aid to Africa, that has to be by long-haul flying. There is no alternative.

Q80 Chair: I get all of that; I get the rationale; we have seen it in the Commission's report as well.

What impact will that price of £334 per tonne by 2050 have on you and the wider aviation industry in the UK because that is a huge step?

Matt Gorman: I will step in on that. Yes, it is. The first thing to say is that we have always supported the internalisation of the external costs of aviation, in this case the carbon cost. We think the most effective way of doing that, as John said, is through an emissions trading scheme. The way I describe it is that the enemy is not air travel; the enemy is carbon. The challenge is to get carbon out of the global economy in the most efficient way and we think emissions trading does that. For all the great things the aviation industry is doing to reduce emissions—we have talked a bit about those—it will still remain more costly to reduce emissions within the aviation sector than other sectors. We will be liquid-fuel powered for the foreseeable future. But we would turn that into a positive and say—I will come back to your point the carbon price in a second—the evidence is strong the people are prepared to pay for what long-haul travel in particular gives them. The price of aviation's growth, then, will be investment in other sectors, stimulating the low-carbon economy; getting carbon out of the economy, just not necessarily in aviation.

To your point on carbon pricing, we studied this in some detail, as has the Commission, and concluded that at those carbon prices there is still demand for expansion at Heathrow. There is significant unmet demand today and even at those kinds of carbon prices there will be in future. The Commission tested carbon prices higher even than those and concluded the demand-case at Heathrow is still robust. We would just turn that into a positive. People pay more to travel; that gets invested in stimulating the low-carbon economy we need in the UK and more broadly.

Q81 Chair: You have done the risk analysis on this; on the costs for yourself and for passengers and for regional airports?

Matt Gorman: We have. You would expect us to do that because this is a significant investment that we would be making as a private company; a very long-term investment. I am sure you would expect us to test very thoroughly the impact of those prices. We have; the Commission has; and we are confident in that.

Q82 Geraint Davies: On the carbon pricing, the situation at the moment as you know is that petrol in cars is very highly taxed and fuel in aircraft is not. Clearly the carbon pricing will go some way to make a contribution but do you feel it is enough? What we are saying here, as I understand it, is we will have a massive increase of capacity in air traffic up to 2020. Then we will have a greater increase of volume and get these efficiencies from planes being more efficient. Then we will have more volume again on the back of paying our way through carbon trading. The Chair asked is this going to constrain it. Would you not agree that at the moment air travel is basically subsidised by the taxpayer in the sense that we tax cars and not planes?

John Holland-Kaye: I would not agree with that premise. There is a very significant contribution to the economy from aviation but there is also a very significant tax take that

is paid by aviation. Air passenger duty alone contributes £3 billion a year to the UK Exchequer and a lot of that is on long-haul flights.

Q83 Geraint Davies: How does that compare? If we did have the same tax on fuel for aircraft, how would that compare with air passenger duty? The air passenger duty would be a fraction of that, wouldn't it?

Matt Gorman: I don't have the figures on that but it is a significant tax take, as John said.

Just quickly on that point, because it is an important one. I think the distinction we draw is back to the point I was making earlier on emissions trading. With a tax the price you pay is certain but the environmental outcome is not certain. You don't know what level you need to tax at to have the impact on demand that you want. What we are advocating is turning that round and saying you make the environmental outcome certain through a cap on emissions, a carbon trading system that caps emissions, and it is the market that will then determine the price. This is the point I was trying to make. The market will then seek out the cheapest ways to get carbon out of the economy. Aviation is unlikely to be one of the cheapest ways to get carbon out of the economy. If it keeps emitting, it will pay, but that payment people are then making as part of the price to travel invest in low carbon in other sectors. The enemy is not air travel; the enemy is carbon. Let's get it out of the economy in the cheapest way.

Q84 Caroline Lucas: I want to challenge one of the assumptions you make about the environmental effectiveness of emissions trading when it comes to aviation. The emissions trading system only deals with CO₂ essentially, as you know. Yet when aviation is emitting its tonne of CO₂ it is also emitting contrails; it has the NO_x effect. We also don't know what the impacts of CO₂ exactly are at altitude but we know that they are significantly more than at ground level. So the whole assumption of emissions trading—a tonne of carbon is the same as a tonne of carbon irrespective of what source it has come from—that does not work for aviation because when aviation is emitting its tonne of CO₂ it is also emitting these other gases, which are very serious for climate change and that are not captured in any other way. So I want to put it to you that your fundamental starting point, suggesting that emissions trading is an effective way forward for reducing aviation emissions, is a sleight of hand. It allows a lot more global warming to happen than you account for.

Matt Gorman: No. We would take issue with that. Let me just correct, if I may, one thing that you said. CO₂ at altitude or at ground level is exactly the same. There is absolutely no difference. You are right that aviation does emit. Aircraft in the sky emit NO_x at altitude and there is some evidence of climate impacts there. It also emits condensation, which can form condensation trails and cirrus clouds, which is what you are referring to.

It is important to note there are different degrees of scientific certainty on this. I am not saying this in a slopey-shoulder way, that we are ignoring the issue on this—I will explain how we are not—but we are absolutely certain about CO₂, which is why we are going after that. There is less certainty about the NO_x and less certainty again about the cirrus. I think it is important to treat each one in the right way. We are absolutely going after the CO₂. We are supporting research and looking to governments globally to guide us on the latest science in terms of those other emissions. But we need to be absolutely clear on it.

To give you a concrete example: one way that we could address the formation of contrails, if they are an issue, is to fly a bit lower. But if you do that you definitely emit more CO₂. We have to be absolutely clear what signal we are sending.

Q85 Caroline Lucas: I don't doubt that there is a lack of certainty in terms of knowing exactly what the multiplier effect is but we do know that there is a multiplier effect and most scientists are suggesting it is at least a factor of two; at the very least. The fact that you are saying, "We can do some research about it; let's not worry about it now; we are not certain enough" that does not take on the precautionary principle and does mean that you are emitting far more than—

Matt Gorman: If I may, that is a simplification of the science. They are not saying it is a factor of two. They are saying that it could be. But they are also saying some of the other effects are regional and short-lived.

We know CO₂ is absolutely a unit of CO₂. We know the climate impact and we know it is long-lived. For these other impacts, they are saying they could be regional and short-lived and, "We do not necessarily have the right metrics to compare them" is actually what they are saying.

So we are absolutely not saying that we are not serious about tackling this. We are.

Q86 Caroline Lucas: So why not apply the precautionary principle? If I accept the fact that we are not sufficiently certain of the actual figure, why not? If we find out 20 years down the line that they were less serious than we thought, that is no harm. If we find out it is rather more serious and we have gone on assuming that they did not matter, then we are in big trouble.

John Holland-Kaye: The precautionary principle being what?

Caroline Lucas: In terms of looking at the scientific range of probability of how much extra impact comes from the non-CO₂ impacts of aviation. We know it accounts for something. We don't know exactly what. My worry is that for the moment it feels like you are parking it—go and do some research on it or whatever; we are not going to factor it in any way at all.

John Holland-Kaye: That is not our intention at all. We take the carbon impacts of aviation and other emissions very seriously. That is why we have been campaigning on this for over 10 years. We were one of the first to make a call for carbon trading at a time when it wasn't fashionable to do so. I think it is a really good step forward that we have got to this.

Part of what I think you are describing is what the right level of charging for carbon emissions is and that is something that needs to be set on a global basis because this is a global issue. I don't want to lose sight of that: this is a global issue. Restraining growth at Heathrow does not solve the global carbon issue. Forcing somebody who needs to get to China to sign that trade deal, or get to New Zealand, to fly from Luton to Paris to do so, does not do anything.

Q87 Caroline Lucas: Do you think our negotiating capacity about reducing aviation emissions in international fora will be greater or less if we are expanding Heathrow?

John Holland-Kaye: I think it will be unchanged by expanding Heathrow. We are such a small part of the global economy—

Caroline Lucas: So let's not bother.

John Holland-Kaye: —look how much impact we have been able to make in changing global aviation policy through ICAO, a very lengthy process, by taking a lead in this area; doing the right thing to argue for changing global emissions.

Matt Gorman: If I may just pick up on this, Chair?

Chair: Very, very quickly because I want to move on.

Matt Gorman: You said, “Let's not bother”, Caroline. To reiterate what John said, we have been absolutely at the forefront, not only as a UK industry but as a company. We were the first company in the aviation sector to call for aviation to be an EU emissions trader—

Q88 Caroline Lucas: Of course you were because you can offset all your responsibility. Of course you are going to be in favour of ETS.

Matt Gorman: No. We don't want to offset our responsibility. We want to invest in other sectors to reduce emissions—

Caroline Lucas: So you don't have to.

Matt Gorman: —getting carbon out the economy.

Caroline Lucas: You don't have to.

Q89 Chair: Right. Can I put a hold to that for the moment because we may return to aspects of that?

Can I just return very specifically to your clear commitments on accepting what the Commission has said in the per tonne price of carbon? I want to ask you a very direct question. We know that when the going gets tough on things like carbon reduction, sometimes Government and other players get cold feet. You see it with things like the petrol duty escalator and so on.

This price: you are saying now you have built the assumptions in; you have built the risk analysis in. Five years down the line, 10 years down the line: you are going hold by that? This is going to be saleable to the people who use your airport as a hub; to your customers; you think this is going to be politically deliverable as well? As well as being a commercial operator you operate in a political domain with these decisions. You think you can hold to this and deliver both on the carbon trading but also the price per tonne of carbon?

John Holland-Kaye: Yes, we do and bear in mind this is not a Heathrow-specific price per tonne. This is a global trading system. Flights into Heathrow are the most valuable in the world. I have 30 airlines that want to fly into Heathrow or expand their operation at Heathrow. No other airport in the world has that kind of demand. Slots at Heathrow trade

for \$20 to \$30 million a pair. That is how much pent-up demand there is. So, yes, there is more value at Heathrow for flying because of the long-haul connectivity, because of the value of trade in the UK, than at any other airport in the world.

Q90 Chair: All right. I just have a couple of other questions before I broaden this out beyond carbon.

One of them is this: part of your analysis is based on the elimination of stacking of aircraft and reducing the need to hold aircraft on the ground after landing. Can you guarantee that those practices will not be reintroduced some way down the line?

John Holland-Kaye: Yes, we can guarantee the end of routine stacking coming into Heathrow. That is very much a function of the constraint that we have at the moment and only being able to operate on a single runway.

Q91 Chair: So under a long-term forward plan we will see no return of stacking or parking up of aircraft on the ground?

John Holland-Kaye: Not on a routine basis.

Q92 Chair: Can you explain what you mean by that? Not on a routine basis?

John Holland-Kaye: Today stacking is just part of the way we manage business. Every hour of the day, pretty much, planes are stacking coming into Heathrow. A lot of that is because we have very little flexibility with the two runways that we have at the moment. Having a third runway gives us that flexibility because we can operate on two at any one time and that allows us to get rid of that daily, hourly, stacking that we have at the moment.

You are right. There is a big benefit to avoiding the wasted carbon, the wasted cost, the delay, that comes with that.

Q93 Caroline Ansell: I do want to come on the point about stacking. You set out when you spoke that you be able to expand Heathrow within the Government's policy around climate change. Would you be able to expand Heathrow around the Commission's finding and recommendation? You talk about pent-up demand and latent demand and you say that currently you do not have that flexibility to navigate that. But around that specific proposal to ban scheduled night flights, has Heathrow accepted that as a recommendation? Would that not have a bearing on stacking, for example?

John Holland-Kaye: We have not made a public comment yet on night flights. We will do so in due course.

Q94 Caroline Ansell: I think that was a number one or number two recommendation, so very high on the Davies Commission's recommendations.

John Holland-Kaye: I don't think there was a particular order to the recommendations. It is something that we are looking at. We will make a comment on it in due course. There are huge benefits to local communities for getting rid of the early morning scheduled arrivals between 4.30 and 6.00 am. Equally there is a big cost to that for the UK economy

because those are very valuable trading routes to the Far East, Singapore, and Hong Kong. It is not easy to resolve that. We are working on it. I am confident that we will be able to find a way through that. With expansion there is a real opportunity to significantly reduce night flying at Heathrow.

Q95 Caroline Ansell: Will you have found that way forward before the decision is made imminently?

John Holland-Kaye: I don't know when a decision is going to be made.

Q96 Caroline Ansell: My understanding is before the New Year.

John Holland-Kaye: Let's hope so.

Q97 Zac Goldsmith: Very quickly on that point: there were three key—I am going to call them conditions—in relation to the Government's decision as far as the Airports Commission was concerned. One of them we have just mentioned: the ban on night flights before 6.00 am. Another was a legislative ban on a fourth runway. A third one was mitigation measures on environmental effects, including that the new runway would not be able to be used unless air quality limits around Heathrow had been met.

Can you respond to those three conditions and tell us—we know now that you do not accept the first one—but in relation to the second two conditions: are those conditions that you are also unwilling to sign up for?

John Holland-Kaye: Let me clarify on the first one. I have not said that I do not accept the first one. All I have said is that we have not accepted it yet. It is something that we need to keep working on. It is not in our gift. We need to discuss it with airlines and with Government. I think there is a way through that and we will make our statement on that in due course.

Q98 Zac Goldsmith: Can you clarify when is due course?

John Holland-Kaye: When we have concluded our agreement. We are not in a position where we can do that yet. We are discussing it with other stakeholders.

Matt Gorman: Before John goes on to the next two, if I can just step in on the night flights point, just to reiterate what John said. We are confident that we can agree a package that will significantly reduce night flying. Put that another way: significantly increase the period without night flights at Heathrow. This is a significant change. This has been one of the main issues, clearly for constituents, residents, in your constituency and other areas around Heathrow. This is really reiterating what Howard Davies said. Heathrow can get better. Because it gets bigger we can reduce night flying at Heathrow. This is a significant change. We are not saying exactly what yet. It is a clear commitment.

Q99 Zac Goldsmith: Let me ask you a question, from a political point of view. The Government is committed to making a decision this side of Christmas. Is it your expectation that they should make that decision without knowing whether or not you can meet that top commitment; that top condition, which we are talking about now?

John Holland-Kaye: I think you have to ask the Government.

Q100 Zac Goldsmith: The question is for you. Do you expect the Government to make that decision in the absence of clarity from you on that very, very core condition that was set by Howard Davies? Is that something that you expect the Government to be able to do?

John Holland-Kaye: Again, that is a question for Government. I do see that there are no show-stoppers in the conditions that were set by the Airports Commission. As Matt has said, I think there is an opportunity to significantly reduce the night flights at Heathrow.

Q101 Zac Goldsmith: Can I get answers to the second two conditions, on the fourth runway and the mitigation measures?

John Holland-Kaye: The fourth runway is a matter for Government because it is a legislative matter. We have never campaigned for a fourth runway—

Chair: I will just pause you for a moment. I realise this is an area of great controversy and great interest. However, running commentaries from the public gallery will not be accepted so please bear with us; listen to the evidence. If we can keep some order here, please. My apologies. Zac, can you continue?

Q102 Zac Goldsmith: You can leave the jeering to us. I am interested in your views on the fourth runway. Your view is that is also a Government measure but I just would put on the record that at an all-party group, a session of this sort that we conducted last year with you, you were very clear to us that a successful third runway would pave the way for a campaign for a fourth runway. Is that still your position?

John Holland-Kaye: I don't think that was what I said. What we have said is that Heathrow is capable of expanding to four runways if that were ever necessary. That is not what we are arguing for today. That is entirely a question for the future.

The specific question and the recommendation of the Airports Commission was one for Government; a legislative ban on the fourth runway.

Q103 Zac Goldsmith: Before we come to the third point I will submit my own evidence to the Committee in due course because we took minutes, which were approved afterwards and in which I think your position was much clearer than the position that you have presented just now in the relation to the fourth runway.

On the point about air quality: is that something that you would be willing to accept as a clear condition before the Government makes that decision?

John Holland-Kaye: Yes. I have said that publicly. Heathrow today complies with EU air quality limits. It is an issue we take very seriously. We have a very good and robust plan in place to make sure that even with expansion we will continue to do that. We have some mitigating factors we can take. The third lock, the triple lock, to ensure that we do so is that we will not release new capacity from the new runway unless it is clear that we can do so without Heathrow being the cause of breaching any—

Q104 Zac Goldsmith: Just as a business, how do you anticipate raising nearly £18 billion of finance to build a runway that you may theoretically not be able to use? How do you square that? That does not include the £20 billion or so that would be required for surface access. So the £18 billion, excluding surface access improvements: how are you going to do that? How will you make the case to investors that we want this vast sum of money to build something that the law may prevent us from using?

John Holland-Kaye: Let's pick up on the plan first. We have got a good record of increasing the use of surface access to get to the airport and encouraging people to shift out of their cars on to public transport.

Zac Goldsmith: I know. We are coming to surface transport. On the first point.

John Holland-Kaye: So I am very confident in the plan that we will deliver because we have a good record of doing exactly that.

I must challenge you on the £20 billion. I think that you have had evidence from TfL at this Committee where it was accepted that the £20 billion is a long list of anything that might be needed across London.

Matt Gorman: Including the whole of Crossrail 2.

John Holland-Kaye: Including the whole of Crossrail 2.

I don't think anyone would expect that a single private organisation would be funding all of London's infrastructure needs.

Zac Goldsmith: We will come back to surface transport.

Q105 Caroline Ansell: In your written evidence you argue that Heathrow will not delay compliance with the EU Air Quality Directive because air quality will be no worse than central London. When does Heathrow's modelling suggest that the area around Heathrow will meet EU NO2 limits in absolute terms?

John Holland-Kaye: The area around Heathrow meets EU limits today. There are two monitoring stations on the M4 to the north of Heathrow that are higher than the 40 measure. The reason for that is through traffic on the M4. The real issue for air quality is vehicle traffic, not the airport. In terms of those two monitoring stations, DEFRA forecast that they will both be compliant by 2020. So the situation is getting better and it is getting better for a number of reasons but particularly round the airport it has been getting better because of actions that we have taken. Over five years emissions from the airport have reduced by 16% because of actions that we and the aviation community have taken to make sure we can improve air quality around the airport.

Q106 Caroline Ansell: Will traffic not also increase, though, with an expanded Heathrow?

John Holland-Kaye: No, it won't. We will have no more cars on the road as a result of Heathrow expansion.

Now that sounds like a surprising statement but if you look back at history the number of passengers using Heathrow has doubled with no more cars on the road. The reason for that is the point that we were just talking about, which is improvements in alternative surface access. Give people an opportunity to get there by public transport and they take it. When we invested in Heathrow Express, which is just one of the rail routes we have into London at the moment, we increased modeshare—the proportion of people coming to the airport by rail—by 11%. It took us from just over 30% to 41% today. That is just one increase in surface access and that is just into the centre of London. We have no rail links today to the north, to the west or to the south, but with expansion and for the most part with committed projects such as HS2 and Western Rail and Crossrail, we will have significantly more capacity coming into the airport. Give people a choice to get out of their cars and they take it.

On top of that we are making a number of changes that will encourage people to do so whether they are working at the airport or coming to the airport to travel. This is part of what we have designed into the new layout for the airport. Today if you are working in one of the hotels or the offices to the north of the airport, around the Bath Road, you have very little choice other than to get into your car, particularly if you are coming from the west or the north. With expansion we will be relocating all of those offices and hotels next to the public transport interchange, next to the railway station and the coach and bus station at Terminal 5. That means that if you are living out in Reading or Slough and working at BA head office, you will be able to get there by public transport. There is a big change and we have seen that if you give people the choice of going by public transport they take it.

Q107 Caroline Ansell: Is that then why you are describing all the very good work that you are doing around modal shift and encouraging the uptake of public transport? Is that why you are not committing to fund the, I think, projected £6 billion of surface access work that will be required and would otherwise fall to Government?

John Holland-Kaye: We will comply with the policy that has always been the case where we will make a contribution to surface access that is proportionate to the airport's contribution to the need for that surface access. That is what we have always done in the past.

Q108 Caroline Ansell: What might that be, in terms of a proportion? What is the model?

John Holland-Kaye: There is more work to be done on that. We have planned for a contribution of over £1 billion in terms of surface access. We have a good record of doing this. We contributed to the Piccadilly Line extension. We have contributed to Crossrail. We built the Heathrow Express line. So we have made a very significant contribution in the past to surface access into Heathrow in proportion to its use. That is in line with Government policy.

Q109 Caroline Ansell: I think you have done some justice already to my next question but there is one last nuance in it so I will put it to you.

The UK's current breaches are in part due to the failure of vehicle emission standards and a resulting failure to accurately model NO2 emissions. To what extent do you consider this is within the airport's power to control and to what extent does it depend on Government policy?

John Holland-Kaye: We will do our part, as we have been doing. The kinds of things we have been doing—I have touched on some of them, around surface access. We have also been encouraging airlines to bring their cleanest, quietest planes to Heathrow. That has had a significant benefit. We are converting all our vehicles around the airport to electric. We are putting in electric-charging stations. We have the first public hydrogen fuelling station in the UK at the airport. We are changing the operating procedures the airlines use so they do not run their engines when they are going round the airport or sitting at stand; that they can use electricity instead. So there is a whole series of measures that we are taking.

But you are absolutely right; the issue here is about vehicles using the main motorways and that is where we need to work with local councils, with bus companies, with the Mayor of London, to make sure we are tackling that. There is a big opportunity here. The two monitoring stations I referred to earlier sit outside London's low-emissions zone. Why? I have no idea. You would think that a City Hall would want to do everything it could to make sure that it cleans up that part of the motorway by extending the low-emissions zone out to those two junctions, and then in time extending the ultra-low-emissions zone out to the M25. That is one of the measures that can be taken, working together, to make sure that we tackle the real issue around air quality on the motorway and we will work with City Hall and local councils to make that happen,

Q110 Zac Goldsmith: Very briefly, following a question Caroline asked. As far as I know the Department for Transport has stated now that the Government will not be paying for any surface access improvements at all. The Commission has put the figure at £6 billion. You put the figure at £1 billion. TfL—I know you dispute the figure—

John Holland-Kaye: I think they dispute the figure.

Zac Goldsmith: Well they don't dispute the figure. TfL put the figure at £20 billion. What they say is that £20 billion-worth of investments would not be necessary were it not for the fact that Heathrow—

Matt Gorman: They did not say that.

Zac Goldsmith: This is what they told us at the last Committee.

Matt Gorman: If you read the transcript carefully, they said that was the entire package of improvements in London surface access that they were looking for and it was impossible to segregate out the Heathrow contribution. That is an almost verbatim transcript of it.

Q111 Zac Goldsmith: I do not have the transcript in front of me, but a hell of a lot more than £20 billion of surface access improvements for London. The £20 billion they referred to in a report they submitted for us, and they gave evidence as well, relates to the additional traffic in and around Heathrow. So it is not only going to be used by Heathrow

passengers but these are investments that would be necessary to accommodate a third runway. I would suggest your—

Matt Gorman: We were being careful with the figures.

John Holland-Kaye: We completely dispute that. The thought that Crossrail 2 is necessary for Heathrow expansion is just not the case.

Q112 Zac Goldsmith: Even taking the Airports Commission's figure of £6 billion and accepting that the Government has said that it will not pay for any of those improvements, that it still £6 billion, by the calculations of the Airports Commission that you would have to pick up. Do you accept that?

John Holland-Kaye: No, I don't accept the £6 billion figure. We are consistent with the Government's position, which is to the extent that airport use contributes to surface access then airport users should pay. Well, we have always done that. We have based our plans around that. But the airport users are not the only users of some of these surface access routes. I go back to the big rail opportunities, Western Rail access, Crossrail: these are committed projects. They are funded. They have a good business case in their own right. They do not need to be funded solely by the others.

Q113 Zac Goldsmith: Last question. If the decision goes ahead and you end up having to pick up that bill because the Government refuses to do so, what does that do to the viability of Heathrow expansion as a project?

John Holland-Kaye: The biggest element that was identified there is the M4. I think there is over £4 billion of that £6 billion you refer to that is around the M4. We do not believe that the M4 needs to be widened and that goes against all Government policy, that you would increase motorway capacity in order to meet an increase in need. But there is absolutely no need for that anyway within the plans that we have because we can expand Heathrow with no more cars on the road. We have demonstrated that we can do that. We have a good track record of doing so and we have the committed rail projects to allow that to happen.

Q114 Geraint Davies: In terms of your assumptions you mentioned low-emission zones. We know now that low-emission zones have very high emissions, partly because of VW fitting defeat devices; 50,000 people a year dying and 10,000 just in London, from diesel pollutants. The issue of NO2 emissions you are modelling, I put to you that this modelling is outside your control both because of that and also just marginal increases in congestion on both the M25 and M4 through just more people coming to London, be it to fly or otherwise, can massively increase these emissions. Obviously I personally welcome the rail link from Reading, which will help South Wales, which I represent, but I put it to you that the modelling you are putting forward is very high-risk. We are already seeing enormous increases in problems with emissions. How can you sit there and guarantee that something outside your control will not push your plans outside EU regulations on emissions?

John Holland-Kaye: I will let Matt comment on the detail but I think you are referring to the VW issue. There is a clear breach of trust there by VW. I think the benefit that will come out of that is it will drive real focus from car companies, from the public, from Government, to really drive down the genuine emissions from vehicles, and that is a

positive thing. That helps us, because it is tackling the real issue, which is emissions, rather than just modelling and numbers.

We have seen improvements in air quality around Heathrow because of actions that we have taken. We can see already that there are plans in place that will help to reduce emissions from vehicles on the roads and that is the big prize that we should be pursuing.

The modelling that has been done that shows that the Heathrow expansion is compatible with meeting EU targets on NOx emissions does not rely on the VW input data. It relies on data that has been modelled forward, so I think we can take a lot of confidence in that.

Q115 Geraint Davies: But that data is much higher than the model data and that is the problem.

Matt Gorman: No, this is what John is saying, so the modelling we have done and indeed what the Government has done is based on real world emissions from those vehicles. We accept, and it has been long accepted, that there is a gap between a test cycle and real world. What the VW issue has exposed is that even the test cycle was wrong for VW, but we have used real world emissions from vehicles in our measurement of emissions today around the airport, and in our modelling for the future, which is why we are confident.

By the way, it is worth saying that our forecasts for the future at Heathrow show not that we are just scraping under these air quality limits but that we are significantly below them at the sites around the airport. We believe there is headroom to provide a bit of sensitivity testing around that anyway, because we are significantly below it.

Chair: We may return to that in a moment as well. Sorry, you wanted to come in on that, Mary?

Mary Creagh: Yes, we are on question 6?

Chair: Yes.

Q116 Mary Creagh: *Okay, gentlemen. Perhaps I can bring you back to the issue of surface access. You say you paid your fair share in Crossrail but of course perhaps I can remind you that you were originally supposed to pay £230 million and that reduced to £70 million because of the decision of the Civil Aviation Authority saying that Heathrow would not benefit from Crossrail because it was effectively full.*

As a taxpayer, as somebody who is keen to scrutinise Government, what guarantees can you give the taxpayer that you will pay your fair share of either any future rail upgrades, M4 upgrades, M25 upgrades that are coming down the track? I see in the evidence you have written to us you are talking about a contribution of about £1.2 billion to those surface access improvements. Where do you see that money going?

John Holland-Kaye: If I can just deal with the first part of that, we paid our fair share on Crossrail and it was the CAA who was ultimately agreed as the arbiter of what that fair share should be, £75 million.

Q117 Mary Creagh: It left the taxpayer with a £160 million gap to pay.

John Holland-Kaye: £75 million is a very significant investment in Crossrail, but if you look at our history we invested in the Piccadilly Line, we invested in Heathrow Express. We have a good record of investing in these big projects, so we pay what is our fair share.

In the case of Heathrow Express we funded the entire project, so we have invested over £1 billion in rail infrastructure to the airport over the last few years.

We have allowed just over £1 billion for further surface access investment. Some of that is going into motorways, the M25, and some of it is going into improving local roads. Some of it is going into local rail.

Q118 Mary Creagh: Can I just bring you back to Heathrow Express? Any time I have been on it, it always seems half empty. Perhaps I am an off-peak traveller. Have you done a demand elasticity calculation to see how you would fill up Heathrow Express? Per mile it is the most expensive passenger rail franchise in the country, isn't it?

John Holland-Kaye: I am glad you asked that question, because that is exactly what we are doing. We are looking at how we can use Heathrow Express more effectively to bring more passengers into the airport. So rather than just seeing it as being a commercial vehicle that has to pay for the rail infrastructure, let us use it as a way of increasing use of surface access to get to the airport, even on that London route, which is already well served. So we have been doing kids travel free offers, we have been testing advance booking on the Heathrow Express where you only pay £10 to travel on the Heathrow Express—15 minutes from central London to Heathrow for £10 is a very good offer. That has been working—we have been getting more passengers choosing to use Heathrow Express because of it.

You are absolutely right, there is more we can do in this space. We want to get as many people as possible coming to the airport by public transport. If I can just mention, we are also doing similar things with buses. We have been extending our bus network. We have I think the biggest free bus service in the UK around the airport, so if you show your Heathrow pass you just get on a local bus and come to the airport for free. We are extending that and we are also extending the hours that they operate, so we now have buses to Slough that operate 24/7, so that shift workers can come to Heathrow by public transport. That has been very popular, so there is a real untapped demand and we are extending that out to other routes as well. We are investing in getting people out of their cars and into public transport.

Q119 Mary Creagh: Finally, in the evidence that you submitted to us you said that you want to get the travelling public modal shift to more than 50% and employees to more than 50% but you do not give any sense of timescale on that. What are your timescale, milestones and deadlines to achieve that level of modal shift?

John Holland-Kaye: The big increases are when Crossrail comes in, in 2018-2019, and when we get the Western Rail Access coming in, in the early 2020s, so by the time the expanded Heathrow opens we will be at that level. It is a very achievable target. If you look at the increase in train seats coming into the airport they will almost treble from where they are today, with the increase in capacity that is already planned. That will give us significantly more than we need just to service the needs of the airport, so we will have around 13,500 seats per hour coming into the airport. Even if everybody who was flying

from the airport went on a train there would only be about 7,500 per hour, so it just shows there is significant capacity there that we can tap into.

It has been shown very clearly at the airport provide it with public transport and they will come. People will use it. They want to get out of their cars.

Q120 Carolyn Harris: We have talked a lot about public transport and surface area access but there is still an argument that where you want to be is not quite where you are at the moment. Are there any key strategies that you feel the Government need to introduce to help you achieve your goals?

John Holland-Kaye: That is a very good question. I think the things that are committed, Crossrail, Western Rail Access, HS2, those all help. They make a very significant contribution. That is the backbone of our plan. There are other things that we are doing. I have talked about relocating offices and hotels to be closer to rail stations, expanding our free travel area.

One thing that we are doing, and this is more working with local authorities and local bus companies than working with Government, is around making sure that the 40,000 new people who are going to be working at the expanded airport, local people working in the airport, can get to the airport by public transport, so we will be working with local councils to make sure that we are extending bus networks so that young people coming to work at the airport can get there by public transport. There is a huge opportunity.

Q121 John Mc Nally: Thanks, Chair, and thanks for coming along today. I would like to bring you back to follow on from what Carolyn is talking about, the here and now and Heathrow's performance on air quality to date. You are telling us there is a lot of good public transport in place already and it is going to be better if you go ahead and build this third runway, so my question is basically about the Bureau Veritas audit of what Heathrow's air quality performance was in 2012. They found that progress towards reducing the number of air quality monitoring sites that you mentioned earlier on were not compliant within the EU limit. The EU limit value was behind and "at risk", they said. Could you tell the Committee why that was the case, and what progress has been made?

John Holland-Kaye: These are the two sites that I mentioned on the M4, where the issue is the background traffic on the M4, not the airport. That has been validated. Even if you close the airport one of those monitoring sites would still exceed the EU limits. This comes back to the DEFRA forecasting with changes that are in place and planned. DEFRA's forecasting at both of those monitoring stations will be compliant with the EU limit in 2020.

Q122 Zac Goldsmith: I was disturbed by our last exchange about the TfL figures and I am looking at what they told us here. They told the Committee in relation to the £15 billion to £20 billion figure, "Unless there is any confusion about its composition this is an estimate of the likely cost of the surface access infrastructure required by an expansion of Heathrow Airport. That is not to say there won't be other benefits accruing to non-airport passengers" so it is very clearly related to airport expansion at Heathrow. It does not include planned improvements like Crossrail, the Piccadilly Line and so on. These are additional requirements according to the submission that TfL provided.

John Holland-Kaye: That is very different, with respect.

Q123 Zac Goldsmith: You can take issue with TfL but they are probably better placed than any other organisation on earth to know what the surface transport implications of an expanded Heathrow are.

John Holland-Kaye: I will challenge that, and I will also bring you back to Government policy on this, which is that airports should pay their way and make the proportionate contribution relative to their use of those things. So expecting any private investor to fund all of Crossrail 2—

Q124 Zac Goldsmith: But that is not included in that figure, as I just said.

Matt Gorman: I am looking at a bit of the transcript that does include that. This may not be the most fruitful use of your time, Chair, to swap transcripts but there is a very clear piece here that is talking about general growth in London, “Not all of those schemes are absolutely essential, just for Heathrow needed for growth in its totality” and that is in the section on the £20 billion. So I would suggest it is not entirely clear how TfL arrived at that £20 billion. Certainly we are not entirely clear.

Chair: We will certainly interrogate that as a Committee when we are looking at both the written and the evidence that we have heard as well. Peter, you wanted to come in.

Q125 Peter Heaton-Jones: I want to go back, if I can, to a statement that you, Mr Holland-Kaye, made a short time ago that I noted down because my ears pricked up as you said it. You said, and I quote, “We can expand Heathrow with no more cars on the road”. There might be a general question mark over that, but I want to put a very specific question to you about my constituency, because this is what it comes down to. It comes down to how will people get to Heathrow if Heathrow is expanded? You want more people to use Heathrow, that is the whole point of expansion. If someone in my constituency lives in Ilfracombe I can tell you how they are going to get to Heathrow if they are attracted to do so by expansion. They are going to get in their car, because there is no public transport in or out of Ilfracombe to talk about apart from a bus to Barnstaple. How can you possibly say that you can expand Heathrow and attract more passengers from places like North Devon and yet they are not going to get in their car?

John Holland-Kaye: I can demonstrate the success we have had over the last 25 years of expanding Heathrow without having more people getting in their cars. Public transport makes a huge difference. Connecting the west of England, South Wales, with a direct rail line into Heathrow will be transformational. Heathrow for the first time will be at the heart of a national integrated transport network. That has never happened before. Rail links to the north, south, east and west, we will have five railway lines coming into Heathrow. We will have the biggest bus and coach station in the UK. That is transformational for getting people by public access, by surface access, public transport, into the airport. It may well be a coach that people choose to take to get to the airport.

One of the great advantages of rail and one of the reasons why people choose it and why things like Heathrow Express are so popular is it is reliable. You are not going to get stuck in a traffic jam going around Bristol. You are going to be able to get there reliably, and that is why many people will choose to do that. Of course it will not just be people on the

main lines, other people will choose to use branch lines to come on to the Western Main Line and connect in.

We have to look ahead to a very different airport, right at the heart of an integrated transport network. This is a huge opportunity.

Q126 Peter Heaton-Jones: I take that point. I just fear that an integrated transport network is fine if you are on it. Ilfracombe is not, just as an example.

John Holland-Kaye: It may well be on the coach network.

Q127 Peter Heaton-Jones: I will move on to the question I was planning to ask, if I may. It is going back to air quality, not particularly around the perimeter of the airport, but in the surrounding boroughs. We took some evidence from Hounslow, for instance, and whether or not they accept the particular points you are making about what the air quality will be around the airport perimeter itself, they are worried about beyond that. They are saying that the difficulty is that some of the transport modelling that has been done in effect pushes the problem out. So you find your targets fine, you hit your targets, but in the surrounding boroughs they get the problem exported to them. Is that a difficulty?

Matt Gorman: Not from the modelling that we have done. So just to be absolutely clear, the commitment that we are making is no more airport-related vehicles on the road. In future those vehicles coming to Heathrow will be cleaner, because the whole vehicle fleet in the UK will be shifting away from petrol and diesel over time to hybrid electric and hydrogen. We are saying we will, if you like, solve the airport contribution to the air quality issue.

What we have also been absolutely clear on is our action needs to go hand in hand with action from city hall and from central government to both improve public transport, back to our earlier debate with Mr Goldsmith, but also to improve vehicle standards across not just London but the whole of the UK. The two we see going hand in hand.

John Holland-Kaye: Can I just build on that? One of the great opportunities with Heathrow expansion is we take something that has developed in a fairly piecemeal manner, the master plan around Heathrow, over the last 60 years with buildings popping up all over the place wherever is available and we turn it into something that is master plan, where things are in the right place. My example of moving hotels and offices is one of those.

We can also redesign the routes around the airport. We can build a new tunnel to the south of the airport that makes it easier to balance flows of traffic and get them off local roads. There is an opportunity here to sort out some of the concerns about local road connectivity that exists today with this massive privately-funded infrastructure investment.

Q128 Chair: That master plan issue is quite a pertinent one though because one of the big questions that is being thrown at the Heathrow proposal is how much of that master plan should be bolted down there before you progress and how much can we leave to some future assumptions? We will return to that.

I want to bring Luke in and a couple of others in a few minutes. We are going to overrun slightly because I think there are still some important questions we want to ask. On that issue of air pollution can I just ask you, you have probably seen as I have, in the last couple of days the report that has come out from the Open Data Institute and it turns to the issue of levels of toxic gas, NOx and of the particulates and so on, in gardens close to the airport, regularly 125% higher than maximum thresholds set out by the EU. This is interesting, because it is open source data. It is involving communities in gathering the data. I wonder what your response to that is. That is just so far above the EU standards. Does that impact on what you have been telling us today?

John Holland-Kaye: I welcome that people are engaged on the issue of air quality, something that is important to us. We want to see air quality improved right across London. Some of the measurements that we have seen are completely inconsistent with the independent measurements that take place around the airport. They are very sophisticated, they are independently audited. They are managed by local councils, not by us. We need to make sure that we are comparing like-for-like and in particular that we are clear about what the source of the NOx emissions is. NOx disperses very quickly as you move away from the source of it, and some of the monitoring stations being talked about were four and five miles away from the airport. It is unlikely that the airport is a direct contributor to that at those kinds of levels.

Q129 Chair: If you have something that you would like to send us on your response to that, because the interesting aspect of that once again is we can look at Heathrow on its own. We can look at Heathrow as part of a wider issue within a glomeration where there are significant problems with noise, with air pollution and so on. So for all of the assumptions that have been made on the model and so on we would really be interested in your response to that. Even though it might be apples and pears, I do not know, they seem to be fairly robust in their defence of the way in which these have been carried out in people's back gardens.

Matt Gorman: We do need to look at that more, and we are very happy to work with that group. We have already met them to understand what they are doing. Our sense is there is a bit of apples and pears, and we will send you a note on this. The other important point to log with the Committee is the European limit that we in the whole of the UK need to meet is based on an annual average of emissions and that is just a snapshot of data from a much shorter period, so there is another issue there.

Q130 Chair: Very often in the report from the Commission they deal with aggregates of emissions. This is in somebody's garden. Which one is most appropriate? Let us hold that thought.

John Holland-Kaye: If I can just pick up a point, this is an incredibly complicated thing to measure, which is why there are such sophisticated measuring systems around Heathrow. If for example you put a monitoring station next to your boiler you will get a very high reading of NOx. Nothing to do with the airport, but it happens to be next to your boiler. We have to be clear what the sources are that are driving emissions.

Chair: Come back to us on these.

Q131 Luke Hall: I want to bring the conversation around to noise, briefly. I have just read in the final report and I want to quote, “A clear noise envelope should be agreed and Heathrow must be legally bound to stay within these limits. This could stipulate the total number of people affected by noise under expansion should be no higher than it is today”. There seems to be some uncertainty around what that noise envelope means in practice. Can you explain what it might mean for Heathrow in terms of daily, monthly, yearly operations? Also do you agree with that stipulation that the total number of people affected should be no higher than it is today?

John Holland-Kaye: We go further than that. We will see with expansion fewer people impacted by aircraft noise than today. We have designed our plans to be able to deliver that.

Q132 Luke Hall: Just to be clear, you agree with a legal stipulation as well that that should be the case?

John Holland-Kaye: It is exactly what we agreed when we built Terminal 5, and we are well within the limits that were set with that noise envelope. We are very comfortable with that kind of thing, so yes, we would agree with having something like that. We again have a good record of reducing noise from the airport, and that is partly because of changing aircraft technology. Planes are getting significantly quieter, and that has been a significant investment by the industry as a whole in doing that. It is also about changing the way in which we manage the airport, getting planes flying higher, changing the angle of descent so that they come in more steeply and moving the point at which they land on the runway so they are again flying higher before they come in. There are a whole series of measures that we have built in.

On top of that we have built in a set of measures to insulate homes from noise, so homes in the higher levels of aircraft noise we will completely insulate. We have been testing this and it has been very effective. That would see in the order of 160,000 homes being insulated from noise in the flight path. That is a very significant investment, but that programme is world-class. It is based on what has happened with other EU airports when they have expanded.

Q133 Luke Hall: Thank you for all of that. Forgive me if I am wrong but I have not seen a clear and detailed noise envelope proposal, so I welcome the information that you are saying there. Have you so far published one and do you think you should have one, if you have not, before expecting Government to agree to expansion?

John Holland-Kaye: By noise envelope do you mean a particular line that might be drawn?

Luke Hall: Yes. There is some interesting information out there but I have not seen any clear proposals from you. Are there any out there that I have not seen?

Chair: At the evidence session last week one of the responses we had was, “Can you tell us as a Committee what a noise envelope is?” So what is a noise envelope?

John Holland-Kaye: Do you want to describe what is happening at Terminal 5?

Matt Gorman: Yes, so I can describe the history today and the ideas for the future, and then there is an important point about community engagement on this. So the Terminal 5 condition was to limit the area, and therefore the number of people, within a noise contour around Heathrow, the traditional way of measuring noise. As John said, we are well within that. So that is one form a noise envelope can take.

We have looked with interest at experience from other parts of the world. Sydney airport, similar urban environment to Heathrow, has set a similar kind of limit but it has also looked at the number of flights over different areas. This is the concept of providing predictable respite to communities around the airport, something we know people want, predictable breaks from the noise.

We think a noise envelope could take a number of different forms. We think it is really critical that we do not just, as a Government, as an airport, as an industry, come up with something but we engage people on what the kind of envelope that they would like to see is. The one clear commitment that we have made that we have already touched on is from all of the projections that we have done we are confident that you can add a third runway at Heathrow and reduce the total number, which is why we talked about our comfort at that kind of broad level of commitment. I think an envelope could be a bit more sophisticated than that, but we would look forward to engaging with local communities to say, “What other elements would make a robust noise envelope?” We absolutely support the principle.

Chair: We are going to have to draw this particular session to a close, because we are running slightly over, but I just want to bring Margaret in on an issue of community engagement.

Q134 Margaret Greenwood: You have just mentioned community engagement. I understand you support in principle the creation of an independent aviation noise authority and are keen to work with the community, but you would like the Government to consult on the detail. Would you be happy for a noise authority to advise the Government on a noise envelope, and also for any changes to flight paths?

John Holland-Kaye: We see the noise authorities acting in a similar way to the way the Noise Ombudsman works in Australia, which is a well-established approach. I have met the Noise Ombudsman, and their role is to make sure that the aviation industry is applying Government policy correctly. Government policy on air space, on flight paths, needs to be set at a Government level rather than through some other body. There needs to be very clear laws around that, so we want to work with Government to make sure that happens.

Q135 Margaret Greenwood: Would you be happy for a noise authority to mediate disputes between yourselves and local people?

John Holland-Kaye: Yes, very much and that is the way the ombudsman works in Australia. I think it helps to have an independent voice that can do that, that can hold the industry to account. We are very comfortable with that, to make sure that there is a much clearer level of trust there, in both the data and in the actions that follow.

Q136 Margaret Greenwood: So you would be happy for a community engagement board to have real influence over your activities?

John Holland-Kaye: I am very comfortable with having a community engagement board. We have a lot of consultation groups formally now. We have HACC, the Heathrow Airport Consultative Committee, which I attend every quarter, and that is an independent body. I would hope that rather than adding a new body this would be an extension of what they do.

We also do huge amounts of community engagement and this is something I want to get over. We are part of the local community. We provide jobs for almost one-quarter of all the local people. The kids in local schools are the kids of the people I work with and will come and work for us one day. It is absolutely in our interest to give them a good quality of life, a good quality of education. We spend a lot of time working with the local community. We listen to the concerns people have. I met with local MPs including Mr Goldsmith, and that has been very powerful.

We were talking about reducing noise earlier. One of the challenges that Mr Goldsmith gave me at the APPG was, “Why don’t you do something about A320s? They make a whistling noise on approach” so I did. I wrote to 40 airline chief executives, found out which ones were responsible and 85% of A320s are now being modified to remove the whistling noise. That reduces the noise on approach by nine decibels. It is action we have taken as a result of engagement with local community. We are now working on the remaining 15%.

Equally, the other measures that we discuss with that group, making sure that airlines are consistent about where they drop their landing gear. We have seen improvements on that as a result of action we have taken. There is a whole series of measures that we are actively working on as a result of engagement with MPs such as yourself.

Chair: That is brilliant. You are on a roll, so I am going to stop you there. Thank you very much for the evidence. I think what we might do as well is in discussion with my colleagues on the Committee we may put a letter to you asking some questions that we still want answered. So, Mr Holland-Kaye and Mr Gorman, thank you very much. We will close this session now and invite in our next two witnesses. Thank you very much.

Examination of Witnesses

Witnesses: **Sir Howard Davies**, former Chairman, **Philip Graham**, former Secretary, **Professor Dame Julia King**, former Commissioner, and **Eirik Pitkethly**, former Deputy Head of Secretariat, Airports Commission, gave evidence.

Q137 Chair: Good afternoon and welcome to the second public hearing of the Committee’s inquiry into the Airports Commission’s Report “Carbon Emissions, Air Quality and Noise”. This is our second session of the afternoon and thank you to our new set of witnesses, who are taking their seats, for bearing with us. We have had a very interesting session and I am sure this one will be as well.

We have with us Sir Howard Davies, the former Chair of the Airports Commission, Philip Graham, the former Secretary to the Commission, Professor Dame Julia King and Eirik Pitkethly. I hope I have the pronunciation right. Welcome all of you.

Peter, did you want to ask a question just to get us underway?

Q138 Peter Heaton-Jones: I will. Thank you very much indeed for coming. I am sorry we kept you waiting, but we like to talk a lot.

Sir Howard, my opening question is to you, and it is a fairly straightforward one, I hope. In terms of the issues that this Committee is concerned about: air quality, noise, environmental impact, do you stand by everything that is written in your report?

Sir Howard Davies: I do not think that I have seen anything since we published the report that causes me to rethink the recommendations in it. Certain policy areas have moved on. At the time the report was published we did not yet have the DEFRA consultation on how they were going to deal with the Supreme Court judgment on air quality, so that is new. I do not think anything else has changed very materially since this report.

I should say, however, that the Commission finished and wound up on 1 July and since then I have been doing something else.

Q139 Peter Heaton-Jones: I absolutely understand that, but just to clarify, the report that you wrote is now sitting, as far as we know, on the Prime Minister's desk. Do you want to add anything to it or take anything away from it before he makes a decision based on it?

Sir Howard Davies: No, I do not think I want to add or take anything away from it. We emphasised in the report, and I am sure we will come on to this, that there were certain things about which the Government would need to satisfy itself before it made a decision, and that remains the case. No, I do not think that I have seen anything that would alter the judgment of the Commission, and not just my judgment, it was a unanimous judgment of the Commission.

Most of the criticisms that have been made are picking up things that were in the report and giving them a different emphasis from the emphasis that we gave them. No, I think not.

Q140 Chair: Thank you, Peter. If we can turn to some of the specific recommendations, Sir Howard. It is interesting that in your approach to carbon emissions specifically the Commission recommended binding conditions on air quality and on noise, and yet not on carbon emissions. Why not?

Sir Howard Davies: Because we regard the framework for carbon emissions as being something that is set by the Committee on Climate Change. We took our cue from the committee, of which Professor King is also a member and was a member of my Commission, so we had a strong link with the Commission and we met them frequently both at the level of the Commissioner's angle and also of the staff. It seemed to us to be appropriate that we should take the policy framework, so the policy framework set by the Climate Change Commission was extremely influential in our report, most particularly in leading us to the conclusion that we could at this point safely recommend one net additional runway in the south-east of England, because we thought that the implications of a further expansion beyond that would be such as to impose what looked to us to be implausible carbon reduction objectives for the rest of the economy. That was therefore the framework within which we operated, but that was a framework that was something borrowed, something blue. It was borrowed from the Committee on Climate Change because we wanted to ensure that our recommendations fitted into the way they thought about it. Julia, you might want to add something particularly on that point.

Q141 Chair: Perhaps you could turn to the issue that worries us, which is without having that binding target, abdicating that responsibility to the Committee on Climate Change, and I can understand your logic on that, it leaves a real accountability gap. The Government could say, “Let us go ahead with this, because it is now up to the Committee on Climate Change to tell us what to do. Your Commission bolted it down, we must have binding issues around air quality, we must do it on noise, but they have left it up to the others. Yes, we can achieve that”.

Professor Dame Julia King: It does not take any different approach from the approach the UK takes in the Climate Change Act, which is that we have a target for 2050 that is economy-wide. The Committee on Climate Change was asked back in 2008 to look at whether it would be feasible to get CO2 emissions from international aviation back to 2005 levels by 2050. That is what we have worked to on the Committee on Climate Change and that is the assumption that is in all of our carbon budgets that have been set so far, and outside other advice from the Government we think that is a reasonable target and we will continue setting our carbon budgets. Indeed the new carbon budget we are currently setting, the fifth carbon budget we are currently recommending the level of will be done on the same basis.

Q142 Caroline Lucas: Can I just ask you to remind me what the assumption is in terms of enabling you to do that, to give you the head room to do that for aviation? What extra amount of cuts will other parts of the economy have to take in terms of their emission reduction in order to allow aviation to grow to that amount?

Professor Dame Julia King: The ones that are in the carbon budgets that we have up to 2027 in current legislation, that is up to the fourth carbon budget, and we are currently working on the fifth carbon budget, so it means that by 2050 the rest of the economy will be looking at reductions above 80%, approaching 90%.

Q143 Caroline Lucas: How realistic is that? What modelling has been done to know that that is possible? We already know that in a sense it is going to be quite hard to do.

Professor Dame Julia King: We have scenarios and DECC have worked on scenarios as well that demonstrate how that can be achieved. What the Committee on Climate Change does is we look at a whole range of scenarios, taking into account a number of factors, with the predominant one being the cost-effective path to achieving the requirements of the Climate Change Act as passed in 2008. The path that we have that takes the assumption that the Airports Commission use has that assumption embedded in it. All of our calculations of cost are below those that Lord Stern suggested in the “Stern Review” of something like 2% of GDP.

Q144 Chair: It is absolutely clear then in saying that the Government should look to the modelling that has been done by the Committee on Climate Change and the recommendations that flow from that, a decision on this would have to be bound by what the Committee on Climate Change says has to be done. If they have specific recommendations, because it is not within your report, the Government is going to have to say that we go with the Committee on Climate Change on this.

Professor Dame Julia King: The Airports Commission has taken the assumptions used by the Committee on Climate Change in all our work into its work. It has not made any different assumptions.

Q145 Chair: Indeed, but the very logic of that means that the Government would now have to bind itself to whatever recommendations flow from the fourth budget, the fifth carbon budget, specifically for aviation. So if that Committee on Climate Change says, “Here is what we say has to be done now to reach these targets” the Government is going to be bound by them.

Professor Dame Julia King: That is not quite how our budget-setting works, because we are looking out to 2050. We do not know what technology developments there will be in which sectors by 2050, but inevitably although we produce a number of scenarios they have to have flexible edges. If somebody produces a development in automotive or in HGVs that can significantly reduce emissions more cheaply than some of the other assumptions we have made that clearly would be the sensible thing to do.

Q146 Chair: You will do iterations with the Committee on Climate Change and—

Professor Dame Julia King: We will do iterations, yes, and we will continue to do those and we will continue on the Committee on Climate Change to be monitoring the developments in aviation. If something cheap and good comes up there we can relieve pressure on the rest of the economy.

Q147 Chair: Am I right in my understanding that it is not simply that the Government should have regard to what you are putting forward in terms of this critical issue of airport capacity expansion, but because the responsibility in effect has been given to the Committee on Climate Change whatever iterations you come up with the Government would be pretty darn stupid, and flying in the face of the evidence and the experts to say, “Well, we are not going to go with it”?

Professor Dame Julia King: With my Committee on Climate Change hat on, I would love that to be the situation.

Q148 Chair: It has to be, does it not? It has to be.

Professor Dame Julia King: The Airports Commission has followed exactly what the Committee on Climate Change has recommended in making its recommendations and we iterated very extensively and sometimes in quite challenging ways, because the models we have been using were not designed for this purpose.

Q149 Chair: You touched on the issue of the different scenarios, the five different scenarios. Did you ascribe a probability to the likelihood of achieving each of those scenarios, and what was that?

Sir Howard Davies: By the scenarios you mean the assessment of the costs?

Chair: Sorry, the demands, yes.

Sir Howard Davies: No. The scenarios, “Low cost is king” and so on, were used as sensitivity tests that were really designed to understand the likely dynamics of different expansion options. In other words recognising that we are trying to look at what aviation demand and the pattern of aviation demand would be over the period from now until 2050. That is inherently an uncertain activity. There is a central statement that is an assessment of need that drops out of the Department for Transport’s forecast, although we have adjusted it somewhat, but we did not want to make a recommendation that would be completely invalidated if other things happened. We looked at various other things that could happen—very rapid growth in emerging markets, or a very rapid growth in low-cost airlines as opposed to legacy airlines—just in order to see whether we were misleading ourselves by taking one central forecast. They were not to do with the climate change.

On the carbon front we had two scenarios, a carbon-traded and a carbon-capped, so those are two ways of meeting the carbon constraint, one of them being that there would be an international agreement on carbon trading, which would get you there, or the alternative, if there were no such international agreement, would be an absolute cap on emissions from aviation. We thought we had better look at both of them, since we cannot know which of them is going to eventuate. Then against that we also set these five scenarios about how the industry would evolve but that was more to look at the robustness of a conclusion that we eventually reached on which airport had the strongest case.

Q150 Chair: If I can explore that just a little bit further. The headline carbon price that was quoted in the Commission’s report was £334 per tonne of CO₂ by 2050. This figure assumed, if I am correct, no airport expansion and followed the most likely demand scenario. Should it be a concern for the Government that this has led to a carbon price at the very top end of the models used for policy forecasts?

Sir Howard Davies: The carbon prices that appear in the report drop out of the model. They were not assumptions that we made about carbon prices, but we tried to model the sensitivities of aviation demand in relation to carbon prices.

The headline conclusion we reached is that in fact it is remarkably insensitive, and this is particularly true at Heathrow, in the sense that the people’s perceived economic or indeed other value of flying is such that they will continue to pay at quite high levels of carbon prices, which has an implication on cost, but we were not making a central assumption about what the carbon price was, Julia, were we? That was just something that came out of the model.

Professor Dame Julia King: No. In the carbon-traded we used £200, which is the same value we had used in a lot of our modelling for 2050 for the Committee on Climate Change, but the other ones are just something that comes out of the model. They are a parameter in the model. They are such high carbon prices that we would have to say we do not understand what behaviour would do at those levels of carbon prices, so I do not think it is entirely sensible to regard them as in any way real carbon prices.

Q151 Chair: Okay, because one of the things that has been intriguing us is what the impacts of that high carbon price would be on the wider economy. You seem to be suggesting to me do not put all the weight on that particular figure, yet if it is that figure the costs on the wider economy and on regional airports and on flights could be significant.

Sir Howard Davies: We tried to model what we think the impact on the regional flights would be in these scenarios and in all scenarios in fact regional airport movements continued to grow. There are about 83 million passengers at the moment and I think on the smallest increase of our various scenarios they go up to about 140 million during the period, with some others being higher. They would be higher of course if you had no further expansion in the south-east. But we think that regional airports can continue to grow in this circumstance, albeit it is fair to say that they would grow less if you have Heathrow. But that is inherent in the modelling that we did earlier about what would happen if you did not do any expansion under the south-east, what would the consequences be? You would get more growth at regional airports, but you would also get a much less efficient distribution of flights, you would have more smaller half-full planes going from place to place and overall it would be environmentally disadvantageous because you would be sort of using airports that were not the ideal airport for that particular traffic. That was something we did for our interim report, in fact.

Q152 Chair: When we had Civil Aviation in front of us, we asked them the question, “If you were to assume that was the figure, what would it do to the cost of an aeroplane ticket?” They just could not answer it. Have you turned your attention to that at all, that if that were the figure, what would it do to a ticket price? You are saying there is a real customer demand here that would drive the elasticity on this.

Philip Graham: There was a figure in the interim report with not an identical but a similarly high carbon price. In my head, I think it was around £50 on a long-haul ticket.

Chair: £50 on a ticket?

Philip Graham: On a long-haul ticket. Of course the impact on the ticket depends upon the amount of carbon that is generated by a journey, so the impact would be greater on a long-haul ticket than a short-haul ticket.

Sir Howard Davies: I seem to remember now. I think we had better check these numbers. I am sure the clerk will do so, but on a long-haul flight that was, say, a £400 flight, it would be about a £50 supplement on it, yes.

Q153 Chair: Your assumption is that is workable?

Sir Howard Davies: Yes. The evidence seems to suggest that there would still be demand for the type of capacity that Heathrow would be offering even if prices went up in that way.

Professor Dame Julia King: Can I just add, we were not suggesting those as figures of a carbon price. It was absolutely critical for us to find a way to model in a carbon cap scenario to check that there was still value in having the additional runways. We were forcing the model to do something that was absolutely at an extreme, because we needed to know as a kind of backstop position that if we said this was a good idea, even in that extreme scenario this still made sense. The conclusion was it did. It was not that we are suggesting that would be the carbon price. There might indeed be a number of measures with a lower carbon price, but other constraints that would achieve the end.

Q154 Geraint Davies: If we assume the £50 on £400, which is a 12.5% increase in price, that is still a lot lower than the taxation of petrol or diesel as well, in fact, in cars, isn't it? We are still in a situation where there is a massive relative subsidy to aircraft, even after the carbon pricing. Do you think there is room for much higher carbon pricing in the interests of the environment?

Sir Howard Davies: This took us into territory that was not absolutely central to the choice that we were asked to make and the decision that we were asked to make, but I have to say there are some bits of gratuitous observations in the report that no one has told us off for making yet, although I think the Chancellor might at some point. But, for example, we came to the view that APD was quite a good tax and that it was serving to constrain to some extent the demand, and particularly the very price-sensitive demand. Within the kind of environmental constraints and climate change constraints, it would seem odd that you want to remove a tax like that, which may have a deterrent effect on the marginal flight, which has little or no economic value, if you like, maybe in a sort of Budapest stag party market, is influenced to some extent by that, I think. We believe that it is perfectly reasonable to do that, but I would emphasise that this was really rather the five of us, after two and a half years embedded in this, that is how we came out and we were a little bit off-piste at that point.

Q155 Chair: One final question here on carbon emissions, and it is to do with the indicative policies, the range of indicative policies that you refer to. There has been a lot of debate around the evidence we have taken about whether those indicative policies would be achievable in practice. Can I just ask, to give us some confidence in it, how much consultation did you do on those indicative policies that might get us to this place and how much modelling do you do? How confident can we be in them that these will be achieved in practice?

Sir Howard Davies: Sorry, I think the only modelling we did was related to the demand for aviation, and looking back at the past experience and the impact of price—and of course there have been significant changes in price, because the oil price goes up and down and so on—that caused us to think that even if you had to operate a very high carbon price in order to achieve the 37.5 target, that you would still have demand that would render the additional airport expansion in the south-east economically justifiable and indeed advantageous. We do not ourselves, but I do not know if the Committee on Climate Change does modelling of impacts on the rest of the economy of the plausibility of different types of decarbonisation. I think it is not much beyond—

Q156 Chair: It is the things like the operational efficiencies at zero cost to the industry, the increased use of biofuel, all of which—and there are others I could refer to—have big question marks over them. That is what we are trying to get at, these indicative policies, how optimistic are they or how realistically they can be achieved.

Professor Dame Julia King: In our review about meeting the UK aviation target from the Committee on Climate Change, we go into some detailed discussion of that. The team for the Airports Commission have valued pretty much in line with our central scenario in our report published in December 2009 for biofuels, taking into account that you do not get the full benefit of biofuels, they are only looking at about half of the CO₂ savings from the percentage of biofuels. Sustainable Aviation have some much more extreme scenarios with very high levels of biofuel and things in them, which might be possible, but we have

not gone for incorporating any of those. Those are not policies, those are ways of achieving the reduction. There is then an issue of what policy would achieve that, and because we are talking about predominantly international aviation they have to be at least Europe-wide, if not global.

Q157 Chair: Do you think that there is more modelling and more discussion to be done on this, and if so, who should be doing it? It is the Committee on Climate Change, with your other hat on?

Professor Dame Julia King: It is part of the Committee on Climate Change's role, but also it needs to be done at EU and international level and that is something we should be arguing for very strongly, because the amount of biofuel in aviation kerosene is not an issue for the UK.

Q158 Peter Aldous: Your report used a level of CO2 emissions that was 15% below the last published Government figures forecast, which I think were in 2013. That was due to the role of larger, more efficient aircraft. I just wonder what level of take-up of those aircraft did you assume and by when?

Sir Howard Davies: Yes, we did. Our figures do differ slightly—15%, as you say—from the 2013 figures. That is largely to do with the evolution of the fleet with planes getting larger, on average. In each category of plane, the next generation plane tends to get a bit larger, so it is not just shifting up to 380s, it is in each category they are a bit bigger, so we get some more efficiencies there. The assumptions that we made about the future fleet are, I think, quite conservative assumptions, because we only assume that the planes that are currently in operation will take up a larger proportion of the fleet. You can model this reasonably reliably for at least a decade or so because there are order books of these planes and they are in service, you know how efficient they are in terms of fuel and you know pretty much when airlines are going to bring them in, particularly at an airport like Heathrow, where they have fairly tight constraints on the kinds of planes you can use and where the market is such that people tend to use their best new planes at Heathrow because of the sort of business mix and that is the market they use them on. We took only the assumptions about what was pretty much clearly going to happen and we did not make any assumptions about new planes currently to be invented that might be more efficient, which may well happen. The history of the past would suggest that that will happen, but we have not made that an assumption, I don't think.

Philip Graham: We used the information that was out there about the ways in which these planes have historically been taken up and exactly as Howard says, the rate of take-up that you see from order books and so on. I think we used that to identify a sort of trend rate of improvement in terms of load factors, because it is not simply the size of the plane, it is how efficiently the plane is used and how many people you get on to it and how much or little spare capacity there is on the plane. There was a sort of trend rate built into the forecast, but that was relatively conservative, we think, because it was based very much on patterns that we had seen and order books that are in place.

Q159 Peter Aldous: You might say I should not be asking this question to you, but the Government's figures were only published in 2013, why didn't they take these quite sensible assumptions?

Philip Graham: We did a specific piece of work in 2013, after the Government's forecast had been published, to review these assumptions.

Q160 Peter Aldous: So the Government got it wrong?

Philip Graham: No, the Government did it on the basis of the best information available at the time. We went and did a further piece of research and had some improved information.

Q161 Peter Aldous: Just moving on, what were the features of the carbon trading arrangements that the Commission assumed for the carbon tracked scenario?

Sir Howard Davies: The carbon trading tax, the CT.

Peter Aldous: Carbon trading scenario, sorry, yes.

Sir Howard Davies: I am afraid all reports have bit of jargon in them now. It has a CC or a CT. Eirik, I think you can answer the detail of that.

Eirik Pitkethly: Yes. We assumed the same assumptions that DECC make in their policymaking documents that up until 2030 it would be through the European Emissions Trading Scheme, and the carbon price that applies through that is the one we used. Then beyond 2030, there would be a global agreement that led to a fully liberal global carbon market. The carbon prices that are generated through that assumption are the ones that are linked to a global abatement potential and how you would meet a global 2 degree target.

Q162 Peter Aldous: Did you assume that aviation would be able to buy in credits from other sectors?

Eirik Pitkethly: Absolutely.

Q163 Peter Aldous: You did. What assumptions did you make about the availability of these credits?

Eirik Pitkethly: That they would be fully available, that it was a fully liberal global carbon market.

Q164 Peter Aldous: To what extent do the proposals currently being discussed by the International Civil Aviation Organisation meet the assumptions that you adopted?

Sir Howard Davies: I guess they do not get there completely, because this would be a first stage, but what Eirik was talking about is what we assumed beyond 2030.

Eirik Pitkethly: The key difference is what we assumed was that the entire world is engaged in a global carbon market, that all the economic sectors are participating in that market and that all the abatement potential from all of those sectors is there to be accessed by all participants in the market. It is a stylised assumption in that sense.

Philip Graham: It is important to note that both the carbon traded and the carbon capped approaches to managing this are, to some degree, the extremes of a range. Carbon traded, as Eirik said, assumes a complete liberalised global market. Carbon capped assumes no one has done anything and the only way to achieve this is for the UK to impose a sector-specific cap all on its own. As we say in the report, I think that the more likely outcome is somewhere between those two.

Q165 Mr Peter Lilley: I confess I am totally bemused by all this. I can see that you can make a choice between airports on the grounds of the number of people affected by the noise at one airport versus the other or the cost of all the infrastructure required to go to one airport or another, but the idea that you make a choice on the grounds of having specific carbon targets for airports is Gosplan economics. I am sure, Sir Howard, when you were at the Treasury you would have laughed it out of court. Hang on, I can hear in my memory the sort of laughter you would have done, because I was there too. But there is established economic logic that having multiple targets is less efficient than having a single target. If you have a single target in the whole economy of how much carbon you emit, we have to get it down, so we have committed ourselves to 50% by 2050. Just reduce the amount year by year, let the price set and it will be up to the airport operators to work out how many people are going to travel in those circumstances or not. Only Gosplan did this sort of thing. Why are we going back to this?

Sir Howard Davies: The main use of our carbon analysis was to answer the question could we afford to have expansion of aviation capacity, because undoubtedly if you expand at constrained airports, you will allow more flights in the high-demand areas to occur than otherwise would occur. What we did not want to do was to say we agree that Heathrow should expand or Gatwick should expand, but then to find that in fact you would have to constrain that expansion to the point where it would be uneconomic to use it because you were bumping up against your climate change constraints, which are expressed in legislation. It is fair to say that on our travels, when we went to visit other airports, everybody else looked at us slightly blankly on this and that nobody else considers this at all, because they do not have legislated climate change targets like we have.

The key thing we were trying to do is to say is it reasonable to say that we could allow these airports to expand and that they would not find themselves then subsequently told, “You have a lovely new runway, but you cannot land anybody on it because you are going to be constrained in some way that is implausible and will suppress the demand”. It was not used to determine the eventual choice that we made of location, except in a very marginal sense, that because the suppressed demand at Heathrow is so high, we believe that Heathrow would fill up more quickly than Gatwick, so it was relevant in that narrow point. But primarily it was not, so it was not used in the Gosplan way to decide where a runway was going to be, it was to decide whether you could have a runway within the legal framework within which we have to operate in this country.

Q166 Mr Peter Lilley: What percentage of the total national carbon budget were you assuming this airport would consume?

Sir Howard Davies: What emerges from the model, if you have a new runway at Heathrow, then the amount of carbon on an unconstrained basis that aviation would consume would go up from something like 39 point something to 43 point something, so it

is not quite at 10%, but it is somewhere around there as an increase if it were unconstrained, if you like. That is roughly the size of it, but in terms of the total carbon—I was coming on to that—at the moment, from memory, aviation represents about 6% of total carbon emissions in the economy, but because of the easier decarbonisation of the rest of the economy, particularly of combustion engines, it is easier to convert diesel trucks to biofuels than it is to convert aero engines. Lord Stern said to me once that the last barrel of oil will be burnt in a jet because it is the high-octane nature of it, and Julia knows this better than I do, but it means that that is the most difficult bit to convert. Over time, the proportion of carbon emissions represented by aviation goes up, so by 2040, on our estimation, it is somewhere like 24%, it is about four times as big. Aviation is a very material part of the total emissions of the economy, it is about a quarter, whereas if you just looked at it today, you would say, “What are you worrying about, a 10% increase on 6%?” You would not regard that. But looking that far ahead, it is significant.

Chair: We will move on now to the issues of air quality, and I think, Caroline, you wanted to lead us off on this.

Q167 Caroline Ansell: The Commission’s appraisal framework contained an objective to improve air quality in the vicinity of the airport, yet the proposed scheme was considered adverse against this objective, even with mitigations in place. Why then did the Commission not propose a greater level of mitigation to allow the scheme to at least meet the objective?

If I can also ask too that arguably one of the most sensitive parts around plans to expand airport capacity would be during the construction phase, yet there have been no assessments made around air quality impacts in that regard or mitigation, so I wonder if you might comment on that also.

Sir Howard Davies: We did make some assessment of the air quality implications of construction, we did not go into detail about mitigations, although we do refer to things that were done around Terminal 5. We probably just felt that was a bit far for us to go.

Philip Graham: It was qualitative rather quantitative and the advice we had from the expert adviser we had on air quality was that there are established methods in place for containing and managing the pollution implications of construction sites.

Q168 Caroline Ansell: But this would be a significant project, would it not, over a very extended period of time?

Philip Graham: It would be a significant construction project, but the advice we had was that even for large-scale construction projects there are methods in place to manage the air quality implications. It is much more difficult to manage the air quality implications over a longer timeframe of an airport when it is in operation, so that was the period that we focused on.

Q169 Caroline Ansell: So more mitigation then around the scheme itself?

Sir Howard Davies: Yes. Around the scheme itself, what we focused on was how you could ensure that the scheme could be delivered without delaying compliance with the Government’s obligations under the European directives, because we identified that the

Heathrow north-west runway scheme, which we eventually recommended, would have reduced air quality and increased the NO_x in one particular place above the highest level that is currently in London, which is on Marylebone Road. What we focused our attention on was whether you could produce mitigation measures in the airport itself or around the airport that would be sufficient to make that a permitted development, if you like, without causing difficulties for our European obligations. We concluded that there were mitigants that could be identified: the use of electric power on stands so that engines are not switched on until the plane leaves. At the moment, there is quite a lot of engine running on the stand in order to produce air-conditioning and so on; it could be done via electricity. There could be changing taxi routes and electrical vehicles to taxi planes around, such electric vehicles on the airport itself.

We identified a number of mitigations that we thought would be adequate to achieve that objective. We also said that there could be other mitigations that we did not feel we had the ability to absolutely recommend, but which were possible, which would reduce the NO_x around the airport even more. The most dramatic one would be a kind of congestion charge around the airport, so we looked at the implications of, say, a £20 charge to go to the airport, whether it would apply to just the kiss and fly market or whether it would apply to taxis as well. That would also have quite a significant impact on air quality around the airport. But we did not think that we could make it a condition of the scheme, if you like, but it is certainly something that a Government could do.

Q170 Caroline Ansell: I understand that. You say that those possible further mitigants did not make it to recommendation sort of status, and yet we heard earlier that your top recommendation, which was around scheduled night flights, that Heathrow has not in fact at this point come to a position on that. I think there is a real cause for concern around the standing of recommendations, not least then other potential strategies.

Your final report states that none of the air quality receptors around Heathrow, which would have implications for human health, are forecast to exceed air quality limits in 2030, yet Hounslow Council were able to point to modelling suggesting that up to £10.8 million costs for additional medical appointments could be incurred. How can these statements be reconciled?

Sir Howard Davies: What we were taking was an absolute level at an individual receptor and there is a level that is deemed to be directly damaging to human health around that area. We looked at the number of properties that would be brought into that. In fact, there was rather more at Gatwick than at Heathrow on that standard, only 14 properties were deemed to be damaging from that point of view. But that is not quite the same point as saying that the broader issue of air quality in the whole area is one that is having health consequences, which I do not think was something that we could analyse.

Q171 Caroline Ansell: Yet air quality is absolutely central to the argument around health and wellbeing.

Sir Howard Davies: Yes, but the airports, in fact, on air quality in the whole area of Hounslow is by no means the most significant thing. The fact is that there is the M40 and the M25 and the NO_x from those things are very dramatic. We were trying to focus on how much worse or better the airport would make it.

Q172 Caroline Ansell: Dramatic and would be potentially increased with an expanded Heathrow?

Sir Howard Davies: We argued that the increases would be modest and could be mitigated, but obviously we could not recommend moving the M4.

Q173 Caroline Ansell: I understand that and I understand the idea around “modest”, although today Heathrow did not rule out a fourth runway. They said it was not a question for today, which I think will cause some consternation among the local population.

Sir Howard Davies: We have recommended that a fourth runway should not be built at Heathrow for a variety of reasons. We think that it could not be managed in air traffic control terms. The National Air Traffic Control Service said to us that more than 800,000 traffic movements in one location in London in the south-east would be extremely difficult, if not impossible, to manage. You would get up to 760 with one runway, so the marginal impact of a fourth runway would not be economic. Also, I have to say, looking hard at the locations of different runways around that site, we rejected the south-west runway on the basis that it would have damaging consequences for the reservoirs and so on around there. It is the case that we have not built a new runway in the south-east since the late 1940s, but we also have not built a new reservoir since the 1940s. We simply do not see how you could replace that capacity. From our point of view, we cannot see where you would put a fourth runway on anything like an acceptable basis, nor do we think you could manage it in air traffic control terms.

Furthermore, we also reached the view that the appropriate combination of airport capacity around London was one that emphasised competition. You have to balance competition and concentration in this market, because concentration does give you some advantages in terms of connectivity and hubbing, but competition clearly also brings you other advantages. The customer experience, the passenger experience is undoubtedly improved by competing airports and of course there are different catchment areas for those airports and so on. We think that looking further forward you would want to, if you could develop further airport capacity consistent with all your climate change obligations and so on, do it somewhere else, because you would not want to concentrate all of that capacity in one place. So for reasons of operations, of practical location, but also reasons of competition and serving different markets appropriately, we do not think Heathrow gets anywhere near being a candidate for a fourth runway. That is why we argued that you should rule it out.

Q174 Caroline Ansell: I think Heathrow might see it differently, particularly when the local population are remembering, at the time of lobbying around Terminal 5, that idea, “We will never seek a third runway”. So you can understand perhaps some of the concerns.

Sir Howard Davies: That is why we suggested legislation for them to do it.

Q175 Caroline Ansell: One very last quick question around a very key date. The Commission uses 2030 as the key date against which air quality is to be considered. The Government’s latest consultation uses 2020 as the target date for compliance. What impact would this have had on the Commission’s findings had it been known at the time, and

remembering your answer to my colleague's initial question around your report going forward?

Sir Howard Davies: We have not had the capacity to look in detail at DEFRA's consultation paper, although I have looked at it quickly. We did not assume new measures in our report. We focused on what we could see today and what would happen and what we could recommend related specifically to the airport expansion, to get down to that. We did note that since the Government were under an obligation to produce a plan following the Supreme Court judgment—they had that obligation anyway, arguably—that that could also help. I would say that this could only be helpful in terms of the case for airport expansion, but we do not have the capacity, since we no longer exist, in spite of appearances today, to analyse that further. The Government, I think, will need to do that.

Caroline Ansell: The Government should do that. Thank you.

Q176 Zac Goldsmith: I want to come in on the air quality. Just before I do, you seem to be implying that NATS advised you a fourth runway would be dangerous. Is that so?

Sir Howard Davies: Not exactly.

Zac Goldsmith: Can you just clarify? I had not heard that point and I would be interested in just a brief elaboration.

Philip Graham: I do not think “dangerous” would be the NATS phrase, because NATS would not operate—

Zac Goldsmith: By implication.

Philip Graham: The point is NATS would not operate the airspace in a way that was dangerous. So taking into account the fact that they will not operate in a way that is dangerous, they will only operate it in ways that meet the relevant safety criteria and the operational criteria, their view was given how congested the airspace is in the south-east of England, the number of significant airports in that part of the world, that trying to get more than 800,000 movements into a single site would be very, very difficult. The only way you could do it, to maintain safety, would be to start stripping things out of other sites. If you look at other airports, the busiest airport in the world at the moment is Atlanta, which I think is just over 900,000 movements, so not hugely more than that, but they do not have another airport for 200 miles, so it is a very different kind of challenge.

Sir Howard Davies: Sorry, just the specific reference is in 14.116—I am sure that will be etched in your mind—and what we say specifically is, “NATS advises that a maximum of 800,000 air traffic movements per annum could be supported by an airport that operated four independent parallel runways within the congested airspace of London and the south-east”.

Q177 Zac Goldsmith: So colleagues of ours in this House who believe that this is one step towards a mega hub at Heathrow will be disappointed if that is the position of NATS? That was your very clear message, was it?

Sir Howard Davies: Yes.

Zac Goldsmith: No matter how much demand there is politically, three runways is as far as it goes?

Sir Howard Davies: That is what we think, for the reasons I have set out: for the NATS reason, for the location and the sort of topography, we do not think it possible, but also just as a general view. We think a competing airport system is right for London.

Q178 Zac Goldsmith: I saw the decision during the course of the Airports Commission, you moved from talking about the mega hub effectively towards emphasising competition, but is it not the case that in the report itself, the data in your report suggests that significant additional activity at an expanded Heathrow would happen at the expense of neighbouring airports, so in other words, a third runway alone—let alone a fourth runway—would have some impact in terms of inhibiting competition at competing airports like Stansted and Gatwick? Would you agree with that?

Sir Howard Davies: Heathrow is attractive to certain types of travel, but it will be relatively even more expensive to land and take off there than it is today. Today it is, by the distance, the most expensive airport for landing charges, and it would become even more expensive with the third runway. It would become much more expensive, and therefore although, as I say, the demand suggests that at the moment Heathrow would fill up quite quickly, it would still leave a lot of space for other places. Yes, I would certainly not deny that growth at some other runways, probably not so much Gatwick, because Gatwick does not have a lot of opportunity for growth, only if it had another runway, of course, but if it does not have another runway, it does not have that much opportunity for growth. But Stansted would grow more slowly. I think that is likely, yes.

Q179 Zac Goldsmith: Just my last one on air quality. You touched on this partially. You said in your view a third runway should be conditional upon expansion of Heathrow meeting our legal obligations on air quality and you have said in the report that you think, based on everything you know, that is possible. But surely the VW scandal changes that profoundly, surely it is the case that some of the key assumptions on which you base your confidence that Heathrow can meet those air quality targets have now been proven to be fraudulent. One can only estimate the likely air quality impacts of expansion by taking a view on the likely contribution of cars in the future, but if the cars in the future are dramatically more polluting than the cars we thought we would have in the future because of the fraudulent behaviour by VW, does that not reduce and chip away at the confidence you have in your air quality statements in the report and should the Government not look again therefore at that air quality section in the report and perhaps redo some of the maths?

Sir Howard Davies: I do not think it does, because what we were looking at was actual measurements and actual modelling, so we were not assuming that all the VWs going along Bath Road were going along in test mode with their whatever it is, bit of software tweak, working. They were emitting what they were emitting. I think that that does not really apply.

Also, in terms of future emissions, we were not assuming anything beyond—what is it, EP6?

Professor Dame Julia King: 6B or it might have been 6C, yes.

Sir Howard Davies: So we were not assuming—

Zac Goldsmith: I understand that.

Sir Howard Davies: —further improvements and nor were we doing any—

Q180 Zac Goldsmith: May I interrupt you, sorry? Just on the point on Euro 6, so you had to therefore calculate the contribution of Euro 6 vehicles going into the future, but we now know that many vehicles that are Euro 6 are 50, 60, 70 times more polluting than we were led to believe Euro 6 vehicles would be. I am assuming when you made your calculations, you were not taking a view that the Euro 6 vehicles were 50 times more polluting than the manufacturers tell us they are, in which case—I am not pointing my finger at you on this, clearly it is a VW scandal, it is a fraud, it is a crime—the data you have is based on that scandal and that fraud and that crime and therefore the data needs to be revisited, surely.

Professor Dame Julia King: Can I make a point there, which is that the measurements in the UK—and there is quite a lot of research on this—have suggested that the NOx values generally in the UK have been typically in the range of four to eight times the values on tests. Now, we can all rail about the flexibilities that Europe has allowed manufacturers to use on tests that are inappropriate, but they are not at the 50 and 80 level they have seen in the US. We have been seeing an improvement in NOx and, in a way, the perverse benefit of the VW scandal is that it has flagged this up and it is driving some much stronger statements from the automotive industry about moving to both hybrid and indeed electric vehicles. I think we will also see a move back to higher efficiency petrol engines as well.

Q181 Zac Goldsmith: Just for the record, because you may want to take this away, the information and the evidence that we had from Transport Minister last week—I think it was last week—was that they were looking at multiples of, I am sure he said, 40 or 50. Chair, you can correct me.

Chair: We will have to check the transcripts.

Zac Goldsmith: I am absolutely certain that is what we were told.

Professor Dame Julia King: That was certainly what they have said in the statement.

Zac Goldsmith: In which case, these things that you presented—

Professor Dame Julia King: I did not know that we had seen that in the UK.

Zac Goldsmith: No, I understand, but if it is correct—

Professor Dame Julia King: There is a lot of academic research comparing the test emissions and on-road emissions.

Q182 Zac Goldsmith: Understood. I am just trying to establish one point: if the figure that I have just given you is broadly correct—and we can check the minutes and check with the Minister—does that not support my thesis that the air quality estimations in your report will need to be revisited? If there are many, many multiples of difference between the

tests in the laboratory and the reality on the road and Euro 6 vehicles that are in the pipeline at the moment are going to massively miss the goal in terms of air quality targets, does that not put a question mark over your own mathematics in relation to air quality? Surely it must do.

Professor Dame Julia King: I would have to ask the team exactly what went into the calculations for that.

Q183 Geraint Davies: It was my understanding, having checked with the Department for Transport officials, we are talking about a scale of 20 times as opposed to four or five or 50. 50% of new cars are diesel and we know that something like 10,000 people are dying in London from diesel emissions and that these cars are continuing to belch stuff out on the road. In your evidence, you said the tests you would use were simply to ensure that Bath Road would be no worse than Marylebone Road. The issue here is that Marylebone Road is much worse than we thought it was and people are unnecessarily dying through fraud. I realise the industry may adapt and respond in its selfish way, but how can we have any confidence in going ahead with this third runway when there is so many people living in London when there is an option in Gatwick, given all that?

Sir Howard Davies: I am getting a bit puzzled now, because I do not think that it is that Marylebone Road is worse than we thought it was, because it is what it is, because there are receptors there that measure what the NO_x levels are at Marylebone Road and Bath Road. I understood Mr Goldsmith's point to be a slightly different one, which was, "What were you forecasting about the future in the light of this?" Eirik, perhaps you could help us on that second point.

Eirik Pitkethly: Yes. On the second point, we did some sensitivity testing around this and our projections were based on not the test cycle, but the test cycle adapted to real world conditions, which used real life data measurements to calibrate. So whether or not that picks up on the differences that the VW changes have made, I do not know, I do not have that information in front of me, but certainly across the fleet of vehicles currently driving in the UK, their real world performance was used to calibrate what we assumed would be possible with Euro 6A and B. We also did not assume any benefits from Euro 6C vehicles coming in, because we felt that there was enough controversy about that, about how well they were performing—these are vehicles that are due to start coming into the fleet in the next couple of years—that our core assessment was based only on Euro 6A and B. We did sensitivity testing on what would happen if you assumed that Euro 6C made things worse and we did sensitivity testing if they made it better as well.

Q184 Geraint Davies: Can I pursue this, because my understanding is that we have evidence to show that 10,000 people dying of these particulates and that children's lungs have a 10% lower capacity in low emission zones in particular in London because of the failure of the real world to comply with the tests. You seem to be saying, if I understand you correctly, if Bath Road meets these very bad standards, which presumably are below EU standards, we can go ahead.

Sir Howard Davies: We were saying that the tests we were planning were, "Would this development delay compliance with the directive?" and our conclusion was that there were mitigations that could be put in place that would mean that it would not delay compliance. I think the broader point about NO_x in London as a whole and in areas of

high concentration, particularly Marylebone Road but also Bath Road, is one that is a broader issue for the Government, which we think it now has to address.

Q185 Geraint Davies: But if there is much more risk in terms of the emerging evidence, does that make one want to rethink about the Gatwick versus Heathrow decision on this?

Sir Howard Davies: This is one factor in our appraisal framework, and there many others. One would need to look at the balance again, but I would not have the capacity to do that, but I do think the Government will need to satisfy itself on this particular point. Clearly some things have moved on, as Mr Goldsmith and others have pointed out. The Government will need to satisfy itself that this can be safely done.

Q186 Geraint Davies: Finally, if the demand for vehicular traffic because of the expansion of Heathrow and other factors increases on the M25 and the M4 and that increases congestion—and the average car is more congested and emitting more particulates and we did not anticipate how many particulates of factor 20 those cars were emitting—did you model all that, the worst-case scenario of the worst congestion with the worst diesel outputs?

Sir Howard Davies: We modelled the impact of the airport on congestion around the airport, yes.

Philip Graham: Yes, exactly. We modelled not simply the level of traffic there might be in a general sense, but the way in which that traffic would move around the particular roads around the airport, the M25 and the M4. So to the extent that it is likely that that would drive additional congestion that was caught in the modelling, and so that will have been picked up in the end results.

Q187 Geraint Davies: Can I finally ask something on noise? Obviously, there is an issue about the number of people affected by the noise of more planes coming into Heathrow, in simple terms, is much, much less than the same planes going into Gatwick, isn't it? So how did you weigh that out?

Sir Howard Davies: Yes. The absolute numbers of people affected around Gatwick are clearly lower, though there are other issues to be taken into account, because Gatwick is otherwise quieter, so the impact on people is greater for the noise there. But noise was something that we took a lot of time on, and that is why the particular construction of the package that we recommend in relation to Heathrow has an awful lot of noise related dimensions to it.

First of all, we thought there should be a noise authority. We think there should be a noise envelope around the airport, which has been agreed in some other places, Manchester and also Amsterdam. We thought there should be a very, very significant set of mitigations and compensation packages. The airport itself has proposed a package that is quite large, but we argued that on a continuing basis a noise levy should be introduced that could fund the kinds of compensation and mitigation schemes that are difficult to fund otherwise.

We also recommended, as you know, the removal of flights from the core night period of 11.30 pm to 6.00 am, and the nature of the third runway we recommend is such that early morning planes can land there and will be much higher, appreciably higher, as they go

over central London because they are landing further to the west and also a bit further to the north.

The combination of all of those things means that the airport would be, with a three runway operation, less noisy than it currently is today. Indeed, on some of the metrics, it would be less noisy than even if you had a two runway operation in 2030, because of the different configuration of runways. So we did take this into account, and proposed a whole set of measures, some of which perhaps the airport is not so enthusiastic about.

Q188 Chair: Could I just return for a moment to this issue of the way in which you are judging that there will be compliance? The key issue that Geraint put to you, which is that as long as Bath Road is no worse than Marylebone Road, that is the basis on which we will be judging whether there is compliance. I guess our question, it is a fundamental question, is, is this a sustainable way to manage pollution, to allow breaches in one area so long as there is another area that is worse?

Philip Graham: It is important to note, the test of compliance is not whether the Bath Road is more or less polluting than the Marylebone Road. It will be in future, when the airport is built and operational, whether we are complying or not. That is the test of compliance.

The question that the Commission was asking at this point is, how can we make an assessment of the realism that this airport will be compliant at that point 20 years in the future? It needs to do that without knowledge of the totality of the Government and industry and local authority's strategies for achieving compliance in the future, not least because the Supreme Court has made its judgment that the Government needed to publish a strategy, but that strategy had not yet been published.

So the basis on which we tried to reach, essentially, a probabilistic judgment of is there a good chance of achieving compliance, is looking at the Marylebone Road, which is the worst area; thinking, well, the Government, to meet the requirement that has been placed upon it by the Supreme Court, is going to need to get the Marylebone Road to compliance. So are we, through this project, likely to be getting you to a point where there is a bigger problem than that that needs to be solved? The answer is no, but is this compliant or not? That is a question for the future, when this is open.

Q189 John Mc Nally: Air quality, as we have heard today and we are all aware of, is a huge concern to everyone. Public health is obviously of paramount importance to local communities, and particularly those that are directly affected. I think that probably some of them are sitting here. To protect these communities from further air pollution, if this expansion is to go ahead, I think the question that the communities would want an answer to is, first, how do you anticipate the recommendation on air quality in your report being enforced and, secondly, who should ultimately be responsible for determining whether capacity should be released?

Sir Howard Davies: I think that it is the Government's responsibility to ensure compliance with European directives and it will, no doubt as a result of the current consultation, produce a set of policies on low emission zones and so on, which we believe it will need to do anyway, and which will improve air quality around the airport.

Q190 John Mc Nally: Okay. Excuse me, but in the notes that I have I think you have said that it should be a planning condition. Is that a Government planning condition, or is that a local authority planning condition?

Sir Howard Davies: As we say in the last chapter of the report, we talk about how this would be implemented. Because of the high economic significance, we assumed that this would be subject to either a hybrid bill in Parliament or a national planning statement, because it is the sort of application that if it were made locally would immediately be called in by the Secretary of State. So, under the last Parliament—

John Mc Nally: I understand that.

Sir Howard Davies: —a procedure was agreed. So this would be the national planning—

John Mc Nally: So that is the process that would happen?

Sir Howard Davies: Yes.

Q191 John Mc Nally: Yes. Okay, that is clear. What about the first part of the question?

Sir Howard Davies: I am sorry, I thought you said, who was responsible?

Q192 John Mc Nally: No. How do you anticipate the recommendation of air quality in your report being enforced? Who is going to enforce it?

Sir Howard Davies: This may be going beyond my understanding, but my understanding here is that this is a DEFRA policy, but there are local air quality management, LAQM—

Philip Graham: There is a local air quality system that the local authorities are responsible for, but compliance—

Q193 John Mc Nally: Can I just interrupt you? That is one of the concerns I think you have, because there are so many Government cutbacks coming now, the positions and officers and people in jobs that police these things are getting thinner and thinner on the ground, and that raises huge concerns. I can only tell you that because in my own situation back home in Falkirk, where the SEPA people are under severe pressure monitoring the water equipment. I am making that transition in my mind from there to here. That is what causes concern. I am sure that causes concern to you as well?

Sir Howard Davies: I can understand that concern, but all I can say is I think it is the Government through the LAQM process.

Q194 Luke Hall: We touched earlier on noise envelopes and were talking about some of the conditions around them. I just wondered, first of all, can you just clarify the exact definition of that envelope? Also, I see that there are a few examples of ways in which the envelope could be set that have been laid out in your report. I just wonder whether there is any specific recommendation from you as to which of those should be implemented or which would be the most effective?

Sir Howard Davies: No, there is not, and the reason that there is not is because we think that this should be done by a new community engagement group, which is, again, something we found in operation at Frankfurt but also particularly at Amsterdam, where the local community and the airport are sort of bound together in a group that makes these decisions.

There are some irreducible dimensions of noise with airports, but then there is also a robbing Peter and paying Paul dimension, because you can move noise around through different flight paths and different operating procedures. There is also a respite dimension to it because you can move arrivals around the time of day. One of the things that appealed to us about the third runway option that we eventually went for was that this gave you an opportunity for a very reliable respite, because you could move your landings around, and so on.

What we think is that this noise envelope should be set with the local community, because what we have encountered in the course of the work, although this more a Civil Aviation Authority responsibility than ours, is that unpredictable changes in noise patterns are very, very annoying to people because they suddenly find that they have overflying. But if you can give people certainty, I am not saying they will run up a flag and say everything is terrific, but that they appreciate that to a large extent.

There are also all kinds of subtleties about the timing of respite and how the respite moves around, and what the predictability is. There are issues in relation to schools and so on. So we think that this very much should be a locally owned envelope and, indeed, it might vary from time to time. I think it does in Amsterdam. So we just tried to give an illustration of what we meant, but we certainly would not feel that we had the ability to second guess the needs of the individual local communities around the airport.

Q195 Luke Hall: Thanks very much for that. One more question. Forgive me if it was already explained. So it should be set by the community. We understand the point. I just wonder if you think that should be set or a consultation process with the community should happen before a decision is made? Or whether that is something that should be ongoing after the decision, if it was approved, for instance?

Sir Howard Davies: I do not think you could realistically set it. We argued that an independent noise authority should be set up about 18 months ago. So part of the building blocks of this better noise regime is an independent aviation noise authority, which does the measurements and advises people on what noise actually is. Because if you get embedded in this area you discover there are all kinds of disputes about what the noise measurements should be, what they are and so on.

So we felt an authoritative independent agency should be put in place first, and that would give you a basis for discussion. I am not sure that you could sensibly put in place a noise envelope before you even made a decision, although I think you could say that that will happen and you could legislate to ensure that it would happen, because it would depend on patterns of utilisation of the airport and it would vary over time.

You would not want to set one in 2016 that would come into effect in 2026, because you would need to look at the types of planes that were landing and where they were landing, and so on. I do not think you could set it completely, but I think you should certainly, as

part of the Government's approval process, say that that will happen, and put in place the statutory things you need to do to create a context for it.

Q196 Chair: Can you just confirm that part of your recommendation was that the noise envelope, when it is constructed, should include not just aggregate, average noise levels, but individual noise levels as well?

Sir Howard Davies: You mean individual events?

Chair: Yes.

Sir Howard Davies: We found the best approach to looking at noise was to look at a balanced scorecard, if you like, of the noise impacts. There are some people who say you should look at average noise during the day, others argue that it is the night noise that is particularly important and should be given a higher weight. Then there are the incidents of noise that go above a particular level, and that annoys people too, when the noise is unusually high. So a noise envelope would need to take all of those things into account.

Q197 Margaret Greenwood: Following on with that, we have heard calls for any envelope to measure the noise using WHO levels. The Commission did this at 54 decibels. From your consultation work, would you feel that this is a more accurate reflection of serious noise than the Government's current measure of 57?

Sir Howard Davies: We used a number of different measures. We used 54, we used 57 and we used "incidents over".

Philip Graham: We used all the way from 54 up to, I think, 63. We did it in increments because we wanted to understand how the picture changed, and particularly whether the picture changed at different levels of noise. We did not try to define a single measure that was the threshold of annoyance or—

Q198 Margaret Greenwood: Okay. Thank you. The last survey of social attitudes to noise took place 30 years ago. Do you think an updated survey would have given your recommendations on noise further credibility?

Sir Howard Davies: We seemed to be seeing things more recent than 30 years ago, I have to say.

Philip Graham: There was a more recent exercise that took place that was not subsequently adopted into policy. You would have to talk to the Department of Transport about the reasons why that was not the case, but there was a more recent exercise that took place.

Sir Howard Davies: But it is something that the noise authority could do and, indeed, I think I speak for all the members of the Commission, we were rather disappointed that that was not taken up after our interim report. Because I think if the Government had begun to set up such an authority—which is something borrowed from France, where they have a noise levy that they administer—you could start to get some clarity on a lot of the debates about which particular noise level, who it should be measured by, and what social attitudes

would be. So we were rather disappointed that nothing has happened on that. We recommended it in fact at the end of 2013.

Chair: You have been very generous with your time, but we have one final question, if we could. Geraint?

Q199 Geraint Davies: In the final report on noise, you emphasise that the noise from an expanded airport would not exceed 2030. But in earlier documents you said that the noise from 2030 and 2040 would be noisier than the two runway airport in those years. I was just wondering whether you could explain that seeming change.

Sir Howard Davies: It may not have been about the north-west runway that we eventually adopted, but also it certainly would not have taken into account our decision to recommend no night flights before 6.00 am, so that would affect the noise figures as well.

Philip Graham: Could you repeat the question?

Q200 Geraint Davies: The long version of the question is, why did the Commission choose in its final report to emphasise that it would be possible to ensure only that noise from an expanded airport in 2030 did not exceed current levels, when in earlier documents it said this comparison was not required and an expanded Heathrow in 2030 and 2040 would be noisier than a two runway airport in those years? You seem to have changed your position.

Philip Graham: I do not think we have changed our position. We have always, as the basis for our assessments, in terms of the monetised assessment of noise, the comparison between options, looked at the relative performance of an expanded airport, whether that is an expanded Gatwick or an expanded Heathrow, versus a future Heathrow or Gatwick without expansion. All of that data is in the final report, and more detailed versions of it are in the detailed technical reports, but that is the approach that we used in the final report to judge the different options against each other.

What the Commission has noted is that, having moved towards a view that Heathrow should be the recommended option, with that option taken forward, the noise impacts, even by 2050, would be, against a large number of metrics, lower than those today and, as Howard has noted, against some metrics lower even than those of an unexpanded airport in future, because of the different ways in which you can configure takeoffs and landings with the runway further to the west. But the basis for comparison was very much done on the basis of what the difference is between a non-expanded and an expanded airport in future, because that is the best way to judge against a level playing field.

Q201 Geraint Davies: But just so we have this clear, if we did not expand Heathrow and expanded Gatwick, obviously over time the current noise levels at Heathrow would go down because of other mitigating circumstances and changing technology of the aircraft and sizes, and whether they are braking, and stacking and all the rest of it. So they would go down. So the counterfactual would be either a reduced noise from an existing Heathrow or a new Heathrow with an extra runway that, if you like, started off at least with lower noise levels than currently from the two runways and ended up with significantly higher than if we had not had a third runway?

Sir Howard Davies: Not necessarily. Not necessarily. If you look, we set out in the report the comparisons between the existing runway, under existing configuration now, and a new one with three runways, but also what the “do minimum”, as we call it, scenario would look like.

On some noise measures, a new three runway airport would in fact be less irritating than an existing two runway airport, partly because of the different configuration of the flights. You could put them further to the north and overfly fewer people. You have the flights coming in at higher level, so some of the flights that are coming in low over central London in the morning would not be coming in low over central London in the morning, they would be coming in over less populated areas a bit further to the north and they would be higher.

So on some of the measures a three runway airport is less noisy than a two runway airport at that time. Furthermore, you would not in fact get any of the very significant compensation and mitigation measures that Heathrow are prepared to envisage now that they have volunteered because of the additional profitability of having a third runway.

So you would have an existing two runway airport, which is about as noisy as a three runway airport in future, but without any of the noise compensations and still with night flights, because you couldn't possibly not have night flights if you did not have an expanded airport. So, overall, I would argue, and we believe strongly, that a two runway airport in 2030 is not as good as a three runway airport in 2030 for noise on almost all the considerations.

Q202 Chair: So if the Government were to say soon, “We are going to go ahead with this. We are going to work through the details. We are going to go ahead”, do you think the Government should ensure that the three model runway should be better than the projections if we had a two runway airport?

Sir Howard Davies: On most of the projections it could reasonable say that. I would have to look carefully at precisely all of them.

Philip Graham: I think it could say that in relation to most metrics at night. During the day, the picture is very much more mixed. But in terms of what Howard is saying, the bigger part of the picture is the overall relationship and impact in terms of noise, taking into account compensation, taking into account night flights, taking into account the mitigatory measures that would be put in place. That would be a big part of what would need to be specified by the Government.

Sir Howard Davies: If I could just bring this to a sort of down home reality, if you like, we were very impressed when we went to visit some primary schools right around the airport. They were going to be very noisy whether it is two runways or three runways. They are very inspiring people and they say, “Look, we could make this school a lot better, but what we need is not just the double glazing that people have been prepared to put in, but it needs a significantly different air conditioning system because the double glazing cannot be shut in the summer because you do not get the ventilation. We need outdoor play areas that have insulated roofs but open sides”, and so on.

These are people who have very, very clear ideas about how you could make those schools much better. A three runway operation would provide you the funding for that kind of thing. If that does not happen they are not going to close, because they are totally embedded in local communities around the airport and they are going to remain very noisy. So there are some genuinely positive things that could be done with this pot of money that can arise as a result of the enhanced profitability of a new airport, which would make big differences in some crucial facilities around the airport.

Chair: Thank you very much. Thank you for the generosity of your time and with your answers as well. Mr Pitkethly, Mr Graham, Professor Dame Julia King, and Sir Howard Davies, the former chairman of the Airports Commission. Thank you all very much.