

# REPORT FROM PARLIAMENTARY OFFICE OF SCIENCE & TECHNOLOGY

Professor David Cope  
*Director, Parliamentary Office of Science & Technology*

Good morning ladies and gentlemen, and I have to say straight away that following the previous speaker I feel rather naked on two counts. One, as has been implied, we haven't actually published our report, I'll say a bit more about that in a minute. And secondly, I don't actually have any overheads, so I'm afraid you're just going to have to listen to me.

Our report, which also the minister referred to is actually at a critical stage in its production. We've been working on it for the past nine months and it's now at the review stage. Every publication that we produce, be it a two page briefing for Members of Parliament, or as in this case, a document running to some ninety pages, is subjected to a formal process of peer review, and we're at that stage at the moment. And I know that there are a number of people here in the audience who are helping us on that, and I'd like to record my thanks to them. That's a process that can't be rushed, and it means that our report is likely now to be published for Parliament, and is also available to you, and I'll say a bit more about that in a minute, during the first couple of weeks of May.

Now, I perhaps ought to say a little bit about who we are and what we do. As you heard from Roland, the Royal Commission is a body of somewhat venerable age now, actually I'd describe it perhaps as into early middle age, I think it's thirty-one, thirty-two years old. We are by comparison, merely a teenager, having been created fourteen years ago by the Houses of Parliament. And our work essentially is to provide a service which, as the Chairman suggested, contributes to the work of both Houses of Parliament to ensure that all the operations of Parliament – committees, debates, question time, and so forth – are able to draw upon what members, I hope, are assured as being informed, objective, and timely analysis, provided by ourselves.

I ought perhaps, and this is a good point to do this, to issue a little disclaimer here. What I'm going to say today in no way is any official statement from the Houses of Parliament, or any of its committees, or any other form, it's purely my own opinions. I would say that when I, as the Chairman has indicated, took over as Director of the office in 1998, and I engaged in a horizon scanning activity with my staff and others, it was very clear to me, so I'm glad that I think my view has been corroborated subsequently, that sooner or later, probably sooner, there'll be a dramatic increase in Parliamentary attention given to matters related to aviation, and that we would need to address that in one way or another.

Let me take you through just quickly, the ways in which Parliament interfaces, if I can use that term, with aviation. Now, you don't need me to tell you that clearly a matter such as aviation is a cross-cutting issue, and so when we look at the activities, the growing activities of select committees in Parliament, again it won't surprise you that a number of committees turn their attention to aspects of aviation. So in the House of Commons, for example, the Trade and Industry Committee has a keen interest in the aerospace industry as an economic activity, and I guess I'd say in particular, although not

exclusively, with its export potential and by extension therefore, how it relates in terms of potential overseas competition.

The Transport Committee, well obviously it is concerned with all aspects and all modes of transport, and many of you will know that it is now going to go on to look at aviation in the context of the debate that we're talking about. And then, clearly, and a growing air of concern, the Commons Environment Committee will have an interest in here, and also the new committee, which is called the Environmental Audit Committee, that essentially has a role looking at Government's environmental performance across departments, in trans-departmental areas, and that is shortly to begin to examine the Treasury document, which you've already heard reference to today on aviation and fiscal instruments.

Aviation clearly is an international activity and there are profound European, EU dimensions. As many of you will know, the House of Lords has a specific responsibility for looking at how EU legislation impacts on the UK, and so the Lords EU Committee will, it has in the past and will continue in the future, pay attention, particularly to those international dimensions. And then other committees, as issues arise, will pick up on topics that relate to aviation. Perhaps the most interesting one, although it's somewhat off the agenda for today, was the work done by the House of Lords Science and Technology Committee, a couple of years back on the aircraft cabin environment, concerned with matters such as internal air quality, and deep vein thrombosis, and issues like that. Quite an influential report, and in more ways than you might imagine, because we actually assisted that committee and a lot of its work particularly examining the forecasts of growth in passenger numbers, flight sectors, and so on and so forth, and I think it was that, as much as the concern generated by health aspects that first sent ripples of awareness through Parliament about what those growth forecasts might mean, particularly in terms of the growth of the low-cost airlines.

But, behind all this, and this again will be of no surprise to you, there is of course the overall driver of the concern that individual Members of Parliament express, driven by the messages they are getting from their constituents. And that reflects in the questions they ask and the pressures they're putting on the Government in different ways. And in that respect, and critically influential to our report - I have to be very careful people don't misunderstand me here - but individual members are not perhaps so interested in the issues that Roland has been talking about, about carbon dioxide emissions and global warming. I'm not saying there's no interest in that at all, that would be a complete fallacy. But the issues that are driving individual members and therefore which reflect themselves together in the activities of Parliament are very much related to constituency concerns. So they are very much related to local impacts. This has been accentuated recently by experiences, and again people will be well aware, in the expansion of regional airports, and those issues are both positive and negative. The Minister referred to the employment and other economic stimuli effects, but there are of course also the perceived negative effects, and above all, of course, the question of noise, which I would hazard a guess, individual constituency members get more in their mailbag than any other issue related to aviation. So, that's why essentially because it is 100% focussed on the concerns of individual members, our report takes a different perspective and is attempting to do a comprehensive examination across the board of all aspects of the aviation *system*. I emphasise that very strongly, with more focus on what we might call local impacts than the global warming dimension. And also partly because we knew of course that the Royal Commission had actually conducted that study. And of course it's

done in the context of the broader Government Parliamentary examinations that we've heard about already – the White Paper, the review of airport capacity, and the Treasury Paper that has already been mentioned. So as I say, we're looking systemically at all impacts of the aviation system including very definitely second order effects, and again there's already been reference to that. The land traffic generation, for example, because nobody goes from one airport to another without travelling on, in one way or another, from the point of landing or take-off. And we're also attempting to look at that critical issue again from a constituency point of view, the land take implication of airport expansion, and, as I've already said, that issue which generates more concern than anything else, noise.

Now, lying behind all that, and I've already alluded to it are the concerns that have been generated by the growing awareness of those growth forecasts that we've heard about. Now, some people might say it's a strange time to be talking about aircraft growth forecasts. Haven't we heard that in recent past how there's been dramatic declines in passenger numbers, and of course we all know the causes of that, the uncertainty generated by the situation in the Middle East, and more recently the uncertainty in the Far East generated by SARS. But those, I don't think, of a longer term are going to be very significant, and anyway they are essentially affecting long haul business by and large, and as we've heard, perhaps the most important area, is the growth in shorter haul activity, and particularly the budget airlines. I think there will be Parliamentary discussion influenced by those factors and I expect once Parliament turns its attention back to, how can I put it, more conventional issues, some people will start saying that those forecasts are over estimates, drawing upon the evidence of situations.

And I think there's an additional reason, I fall back upon some points almost of a psychological level here because psychology and politics of course interact very strongly as in a sense we've seen from some of the comments by the Secretary of State for Transport. I mean it's quite clear that in our society, mobility is extremely highly valued. We can all postulate our own reasons for this. It's a simple, almost literally a physical symbol of freedom. We know that societies which are not politically free, one of the first things they do is constrain internal travel, travel of all forms. For that reason, I find it difficult to think that it is true that we will reach in the near future any sort of level of satiation of that desire for mobility, both in terms of land transport, but also particularly in terms of aviation. In fact, if you look at technologies, or technological systems that have experienced a sort of plateauing or down-turn, again making a broad philosophical point, and examples are perhaps nuclear power, and maybe genetically modified food and crops technologies. They've only reached that or experienced that decline when consumers have reacted against them because essentially of fears about direct or indirect impact on human health, not on their environmental impacts by and large, and I'm not really aware of any serious concern that suggests that there are direct human health, indirect maybe, direct human health impacts on the consumers of aviation. And so I find it difficult to believe that there will be significant constraints that will pull back those forecasts. The only one I think that has any validity is if there were a very very serious economic down turn, and then it's possible those forecasts might lose some of their validity. But that apart, I'd find it difficult, so we're facing a situation where I think we have to accept those forecasts and to attempt to accommodate or to manage the consequences.

And that comes then, it seems to me by logical extension, to a dilemma that again, Roland has already indicated, and it's caught up in the very title of this conference. The

title of this conference is Greener by Design. If I take the word design to mean technological or technical innovation, technical sophistication. The question is: can we actually achieve an overall more environmentally benign system purely through technological or design needs? And we've seen, the question is: as the improvements and all sorts of environmental indicators per, let's say passenger kilometre, go down in turn, but the number of passenger kilometres go up, where do we reach that cross-over point that no matter what the greener by design, no matter what the technological improvements, the sheer impact of numbers means that environmental impacts increase? And that, it seems to me, is the critical debate that will go on in Parliament and elsewhere. What are dimensions of that cross-over point, and does that mean that at some point we have to interfere in the system and start constraining demand? And I'm very pleased to see that that will be picked up in various ways in the discussions later on today and tomorrow.

Well, I'd like to finish because there are many other points that I could take up, on two particular dimensions which I think will be particularly articulated in the Parliamentary debate and will also resonate more generally as we move forward. The first one, and this is obviously because the primary role, why we've got that place down on the River Thames down there at Westminster is to regulate the process of raising revenue by taxation. There will be obviously a debate on this question, on taxation and the environment. And I think it's important in examining that discussion that we recognise certain principles which are not always articulated or recognised as wide as they should be, and that is certainly true within Parliament. And this is essentially encapsulated in what I call the fags fallacy, fags as in cigarettes I hasten to add. And that is the belief of many people, based upon how they see the Exchequer dealing with smoking, that the aim of taxation is to stop people doing something which is undesirable in some way or other. Now, I assure you that it would be a disaster for the Treasury if suddenly people stopped smoking overnight. The reason why they tax cigarettes of course is nothing to do with attempting to improve the nation's health. It's essentially because they are addictive, and they know that people will continue to smoke cigarettes, and tobacco and cigars, whatever, even though taxation levels are at this abnormally high level, say over 80%. An analogy occurs in the debate over taxing all forms of transport and the environment. Some people believe that the aim of environmental taxes is to reduce the activity that is incurring the tax. Now the aim in environmental economics is not that. The aim is to ensure that the activity bears its full environmental costs, on the assumption that some of these costs are not reflected in the actual price. And it may well be, there's a massive debate obviously about what that cost is, I accept that, but it may well be that demand, and I think it is in the case of aviation, that the demand for that particular commodity, like cigarettes, in a sense is so inelastic, so inflexible that people, despite the increase, will still go on with some marginal decrease resorting to that activity. And then the argument goes, well we've got to put the taxes up further and further until people actually do stop doing it. And, I'm saying to the industry, I think it's very important that you get across that message, that that is not the aim of environmental taxation, but simply that the activity should bear its full environmental costs. And even your industry I can say this because I saw a notice outside amongst other things that "There's no clear evidence," and I quote "that taxes will reduce emissions." There may not be, but that is not necessarily the point. The point is not necessarily by fiscal means to reduce the emissions, but merely that the activity bears its full environmental costs.

The second point I'd like to leave with the industry and Greener by Design in particular, and I think this is picked up by the overall theme, the overall subject area to this conference, it was pointed out to me, something I missed, that I think we don't perhaps have such a strong representation of airport operators as we might, but, the need, coming back to my point, to approach this entire issue on a very consistently, systemic basis. By which I mean, to bring together an examination of the industry on a full life chain essentially, everything from the aircraft manufacturers, the aircraft operators, the airport operators and all second order things I've talked about, fuel suppliers, I was glad to hear that we have some of those represented here, and to move I think towards identifying for the debate, what are the minimum irreducible impacts that aviation may make, allowing for the technological, design improvements that I talked about. I've got what I call a theory of latest, the advantage of being the latest mover. In many ways, aviation is a young industry, well is it? I don't know, we're celebrating the centenary I suppose this year, which is another factor that will increase the amount of parliamentary attention incidentally on aviation, but what we're seeing now is very much a young industry, and I think that for all sorts of reasons, I mean look at it in broad perspective, the younger industries tended to be the more environmentally aware, whereas the older industries, particularly like the extractive industries, coal, so on and so forth, which have been the least environmentally aware. I think there's good potential in the aviation industry. I'm quite impressed as an outside observer at some of the activities it's taken on to date. I think you bring that all together as I say into that broad systemic life chain, as I call it, some people call it a life cycle, it's not a cycle, life chain analysis of the industry. You will then be in a position I think to inject some really valuable information into the debate that's going to occur in Parliament and elsewhere over the forthcoming few years.