

Peter Tomlinson
Manager of Air Traffic Control, London Heathrow
National Air Traffic Services Ltd.

Chairman: Thank you, Roger. Roger will be available this afternoon at the discussion session so we'll move onto our last speaker before lunch. That's Peter Tomlinson who's the manager of air traffic control at Heathrow. He's worked at Gatwick and at the LATCC, that's the London Air Traffic Control Centre and non-operationally within the industry. Peter is going to talk to us about the air traffic management contribution.

Peter Tomlinson: I'm conscious as the last speaker of the morning I'm delaying lunch so I'll try and be quite focused on this and certainly finish within the 15 minutes.

Think of a triangle to start with (slide 2). I've got some fixed points in terms of how we're going to look at this for the presentation. First of all of which is safety, obviously very, very important. Next capacity, something that as an industry we're all very keen to achieve and also, the third point, environmental impact.

Maintaining or enhancing safety is certainly key for NATS, that's right up front in what we do. As I say we're looking to maximise capacity very, very important for all of us but at the same time, as many people have said today minimising the environmental impact.

We start off as the service provider by actually drawing a line at this point (slide 3). We say safety is paramount. Any trade offs are going to come below the line between the capacity and the environmental side.

So just to sort of position where we are at the moment. NATS has two main business areas (slide 4). The first is the en route business, which is a regulated monopoly. Just quickly through these points – we can actually concentrate on the main points. Regulation is by the CAA director of Airspace policy and guidance was issued to the CAA by the government in January of last year.

The other side of NATS's business is airports. That's the division that I'm currently in and it's subtly different. The environmental measures are agreed with the airport operators and the regulation is of the airport operator rather than of NATS as the service provider. And a further subtlety, as there are with many things in aviation, there are three designated airports at those airports the direct regulation of noise is by the DFT but NATS obviously as part of that attends the monitoring advisory committee.

Just broadening out to the international scene to put it all in context. Eurocontrol plays an increasing part in aviation (slide 5). The environmental part of Eurocontrol is now actually the domain of the BATMP so the whole profile of the environment has been raised all over at the moment.

The environment has recently become a specific project to something called the Airport Operations Team and there are now actually reports back from an environmental representative four times a year to Eurocontrol. Eurocontrol are also starting to look to the future and this has been heard just recently. There are various ways forward. You may or may not have heard phrases A-man and D-man, Arrival Manager and Departure Manager. These names have been around for quite sometime but what they're looking to do is to reduce the taxi and holding point delay and airborne holding – excellent goals. At the moment Heathrow like many other busy airports actually has a pool of departures at the holding point ready. That allows us to maximise the departure sequence and get the maximum efficiency and similarly with airborne. Airborne holding allows a certain pool of aircraft so that you can maximise what you're doing.

AMAN and DMAN are looking through technology and tools to actually stream aircrafts. They arrive at the airborne holding point with minimum airborne holding and for departures similarly they arrive at the holding point just as at the point they actually need to go on the runway and takeoff. So it looks really good. The downside is it's really on conceptual at this stage. Nobody's actually managed to get hold of a genuine arrival manager and departure manager.

So back to the UK, back to sort of local issues. Some limiting factors - air space. There is no doubt that NATS, in an ideal world, would have all the air space as controlled air space (slide 6). We fly the aircraft around, we could do wonderful things but we don't live in an ideal world. There are many other air space users and when a new air space is established it's a consultation processes with many, many groups of interested people and, as you can imagine, these things often end up in a compromise situation. So as a service provider we actually don't have the sort of play area that we would ideally like. We've actually in recent years seen raising of air space so where air space used to go quite low down it's now being raised which effects our operation. For other air space users that's great. That allows them to sort of fly around underneath what we call controlled air space.

Airports. Airports realistically are where they are. The air traffic infrastructure is built up around existing airports but the departure routes can become limiting because obviously not looking to put aircraft over built up areas. So these are some of the limiting issues. Over time to balance that increased efficiency of the FMS cockpit there is no doubt that aircraft are flown more efficiently these days. A flight management system gives huge potential to do different things.

Technology and tools development is coming along. Things like AMAN and DMAN are now being developed. The operational requirements are coming out and within NATS we're looking to use technology to support continued capacity growth.

And another phrase that we've heard of quite a few times is best practice (slide 7). There are examples of best practice around and by pulling those together we can actually get the best for everybody. So what does best practice look like. Just a few examples. There is something called an Arrivals Code of Practice. This has been put together by a number of groups, by NATS as a service provider, airlines, airports and this has actually been a really positive message. So it promotes guidance and it actually tells people what we're doing for arriving aircraft. It talks about CDA, continuous decent approach, which helps people understand what they're about. We as a service provider actually facilitate continuous decent approaches by telling pilots how far they are from touchdown.

Just in essence, for anyone who's not familiar, basically if you have an aircraft at say 7,000 ft, 3^o flight path means that you should leave 7,000 ft at about 20/22 miles from touchdown so it minimises the noise impact on the ground. So we say to pilots 20 miles to go and they start the decent to 3,000 ft.

In terms of arrivals we're becoming much better at collaborating with customers. A good example of this is a new arrival route that was put in for Stanstead – I'm not sure if we say London Stanstead from what we said this morning! NATS had a route that was quite an inefficient route. It was relatively low level, it came up through Detling in Kent for Stanstead and with a whole load of other changes we actually needed to move that route. We moved it to in effect overhead Heathrow much higher. But rather than just saying to the pilot community that's it, we actually went to the pilot community and said okay, to be honest, what do you think of this route? How flyable is it, what sort of profiles can you work with? They took that away, ran it through some simulators, came back and between us we actually ended up with a really good route, much higher – it's about 10,000/12,000 ft higher at the same point so it minimises noise impact on the ground but we knew when we introduced it that the airlines could actually fly it. So very much collaboration.

FMS again. What sort of arrival routes. Optimising the lateral and vertical flight profiles. Is a known profile is the optimum one and the aircraft can actually fly it rather than the air traffic controllers having to manage it each time. Without a doubt that improves the environmental situation and we mentioned Heathrow quite a few times today, I guess obviously as the main UK airport. Heathrow arrivals will be part of a trial for SMS arrival routes probably towards the back end of this year so it's all moving forward on that front.

Just looking at the CDAs just briefly. Aircraft decent profile down to this 7,000 ft that I mentioned earlier. In days of old pilots at 7,000 ft continued down to about 3,000 ft and then had a period of level flight for about 20 miles. That's really environmentally not a good thing to do (slide 8). Lower down is more fuel burn, more noise, etc. So CDA basically put any level flight in higher up, which minimises the impact, and then give the decent appropriate to the point the aircraft's at. So here you've had a number of profiles starting much later. They're all ending up at this point for the start of the landing approach.

CDAs are something that's been a great success. It's often mentioned when I go to European meetings, well CDAs are very difficult and we can't do them say various other people. I have to say that if within the London TMA, where you've got Heathrow, Gatwick, and Stanstead all very, very close together, if we at NATS can do CDAs in that environment then I would strongly suggest that many other people should also be able to achieve them.

Departures. This is pretty much known to you so I'll go through these relatively quickly (slide 9). Standard instrument departments have been around now for 30/40 years. Added to that –

Maximising capacity. Things such as increased movements; an additional runway perhaps at Heathrow or mixed mode that has been talked about would all increase capacity and the value of an increased movement at Heathrow has been estimated by a number of people (slide 11). The actual estimate varies but there is no doubt each extra movement at Heathrow is worth a phenomenal amount to the UK as a whole.

On the other side of that trade off is the environmental impact to the local community, which we've said quite a lot about. I won't go into the details but we have something at Heathrow called the Cranford Agreement, which actually precludes departures on one of the runways. If we were to go into mix mode or an additional runway that would almost certainly have to go. We have something called Westerly Preference. Up to five tail wind aircraft will use the westerly runways at Heathrow. We also alternate the westerly runway between 27 left and 27 right to spread the noise around during the day. Again, very good, we're right by the community and the community are very aware of these things but if we were to go for extra capacity that wouldn't be available.

Terminal 4 is an interesting example. A lot of the planning restrictions around Terminal 4 were for environmental reasons. Aircraft at certain times of the day have to be towed onto stands they can't taxi on. That actually gives us, as the air traffic controllers at Heathrow, quite a big issue because it adds a lot of complexity to ground movement and does actually have a limiting factor.

So the question arises, how do you actually measure those? In terms of what I've been saying like movement versus the environment there is no real true method to measure these trade offs (slide 12). You would probably suggest that a tool needs to be developed and validated so you can actually put all the various parts in. So what would this look like if we were to go down and have some of these trade offs? How can we assess the cost environmentally on UK PLC of a movement at Heathrow? What would that be like? Probably nothing that we at NATS could do but we suggest that maybe something that Eurocontrol could actually take on.

So in conclusion (slide 13). We would suggest that there is a definite linkage between capacity and environment. The ATC system can be adapted to lessen the environmental impact but in doing so there may be capacity penalties.

Hopefully that's kept within the 15 minutes. Thank you.

Chairman: Thank you, Peter. You will be around this afternoon. Yes, good