In Focus

A briefing from the Civil Aviation Authority

November 2012

Updating the UK's airspace - The Future Airspace Strategy (FAS)

Aviation relies on the scarce resource that is airspace to ensure that passengers, businesses, the military and leisure flyers enjoy the many benefits aviation brings.

The basic structure of the UK's airspace was developed over forty years ago. Since then there have been huge changes, including a hundred fold increase in demand for aviation.

Throughout Europe there is a move to simplify and harmonise the way airspace and air traffic control is used through the Single European Sky project. In the UK and Ireland we're meeting those and other issues through the Future Airspace Strategy (FAS) which sets out a plan to modernise airspace by 2020.

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What will FAS deliver?

Achieving sustainable growth in aviation is dependent on improving the way air traffic is managed and moves around the airspace. Advancements in 'Air Traffic Management' (ATM) can generate significant commercial, environmental and safety benefits. The organisations that operate in, and regulate the aviation sector must progress common lines of action in order to successfully realise these benefits.

The benefits of implementing FAS include:

- Fuel savings from more direct routeing and greater flight efficiency are expected to generate direct financial benefits to operators.

- Time savings from more direct routeing and the provision of additional capacity when and where required are expected to generate direct financial benefits to operators.

- CO2 savings from more direct routeing and greater flight efficiency are expected to generate societal benefits.

- Noise reductions from less aircraft holding at low levels are expected to generate societal benefits.

- Passenger time savings from more direct routeing and the provision of additional capacity when and where required are expected to generated societal benefits.

How will it affect an average flight?

With the FAS system airlines, airports and air traffic control share data making it easier for everyone to know what's happening.

Accurate information about when aircraft are departing is valuable to get the maximum use of scarce runway capacity. Air Traffic Control uses it to plan how the airspace will be used over the next few hours and airport teams use it to manage their workload and make sure they are not the reason for a delay. So overall the 'system' will cause less delay.

Once the aircraft has taken off under FAS proposals it would make maximum use of its climb performance, getting higher quicker. This reduces the noise footprint to those near the airport and means the aircraft reaches its efficient high cruise altitude much more quickly.

Once into the airspace system aircraft currently use a complicated set of routes that can mean them flying many extra miles. Under the simplified structure of FAS aircraft can integrate into the air traffic control system with fewer changes and more direct routes– this saves on fuel and therefore cost to the airlines and the environment in CO_2.

These direct routeings and better liaison throughout the air traffic control system mean that more flights will arrive on time and generally arrival times are more predictable

Throughout the journey air traffic controllers are managing the progress of flights to be able to remove extensive holding and delay at the end of the journey. As well as benefiting those on board, this also reduces the noise and CO_2 impact for everyone else.

In the future as aircraft approach to land they will use satellite guidance, known as Performance Based Navigation (PBN), instead of ground based radio navigation aids, meaning the aircraft flies a much more accurate path. PBN allows the UK's complicated, busy airspace to be fundamentally re-designed, increasing capacity and efficiency.

Next steps

Passengers, the wider public, national and European government demand these improvements. To achieve its potential FAS needs action from the whole aviation industry; that needs to start now and stay joined up as changes are made.

Without this action and collaboration the benefits of FAS may be jeopardised.

The entire system needs to take action:

- Many aircraft are already fitted with PBN compatible systems but some will need to be upgraded. In addition airports will have to introduce new routes.

- Air traffic control providers will need to introduce new airspace structures

- Airlines and airports will need to share flight information into the 'system'