

VISIONARY APPROACH TO NEW FAB PLAN



From left: **Ian Hall** - Joint Chairman of the FAB Management Board and Director of Development and Investment for NATS, **Donie Mooney** - Joint Chairman of the FAB Management Board and Director of Operations for the Irish Aviation Authority, **Kevin Humphreys** - Director Safety Regulation for the IAA and **Mark Swan** - Director of Airspace Policy for the CAA.

An ambitious and visionary project to integrate North Atlantic, Domestic (Irish/UK) and European traffic flows sits at the heart of the new UK/Ireland FAB Plan due to be published next month.

Optimisation of Domestic, North Atlantic and European Traffic (ODNET) has been devised to focus on streamlining the UK-Ireland interface and comprises almost 20 different proposals, grouped geographically, to deliver safety, operational and financial benefits to customers.

Initial scoping work is currently under way involving ATC Units, Airline Customers and the Military for both UK and Ireland to look at how the FAB can be developed further over the next three years – and

to consider more than 30 proposals put forward in a Service Provision workshop last November.

A number of other proposals around technology, safety and staff engagement are also being considered for the new Plan and a final decision on which activities will actually go ahead will be taken by the FAB Management Board in April 2010.

Donie Mooney, Joint Chairman of the FAB Management Board and Director of Operations for the Irish Aviation Authority, said: "We have been determined to

Delivering on SES commitments

The UK-Ireland FAB delivers on the commitments the two countries made as part of the Single European Sky.

Its design and build ethos is bringing significant benefits in terms of efficiency, safety, and sustainability – in line with the objectives of the Single European Sky project.

The FAB is also measuring its performance in line with the developing SES performance indicators.

It is also working closely with the Commission and Eurocontrol as the SES develops.

demonstrate a clear vision of what we want our FAB to deliver. This Plan includes a great deal of careful thought around how we can maximise the operational capability of our airspace."

Ian Hall, Joint Chairman of the FAB Management Board and Director of Development and Investment for NATS, added: "This sets out a very clear and exciting vision for future operations – to which our staff can commit and our customers can be confident we will deliver. Our Regulators are also keen to see tangible results from the FAB so their support is crucial."

The 2010 plan builds on the original three-year FAB Plan published in May last year, described at the time by the FAB Supervisory Committee as "a comprehensive and detailed piece of work that has, importantly, begun to

Joint working on Technical Solutions



A new team looking at technological advancement in the UK-Ireland FAB has been set up to report straight in to the FAB Management Board (FMB).

After an initial brainstorming session identified 15 potential areas for investigation, the team of UK and Irish technology experts was asked by the FMB to look more closely at six areas where there may be potential for them to work more closely together for the benefit of both organisations.

Each of the topics is being discussed by IAA and NATS with the intention of reporting back to the FAB Management Board in July 2010.

R/T site sharing

The two companies are investigating whether there are opportunities to rationalise the R/T sites in the two countries whilst maintaining or improving the coverage they have at present.

An immediate opportunity exists to overcome a problem with a proposed windfarm on Tiree if NATS could operate some frequencies from the IAA's Malin Head site.

Surveillance data sharing and Wide Area Multilateration over the Irish sea

Both NATS and IAA have surveillance

sites located to provide coverage in their respective airspace, but the proximity of the UK to Ireland means coverage can be achieved over significant areas from both sides of the border. Sharing data could allow overlapping coverage to be achieved in both the UK and Ireland with fewer sites in the future.

The IAA has done a feasibility study on the use of WAM over the Irish Sea, the conclusion of which was that the performance of the system would be significantly enhanced if receiver sites were placed on the UK mainland as well as in Ireland. NATS is also looking at the use of WAM, and the potential for improving coverage over the Irish Sea through a joint approach is being investigated

IP Networks (PENS & Da Vinci)

The costs of access to the Pan-European Network (PENS) is relatively expensive for smaller bandwidth requirements. By combining Irish and UK traffic through the UK node a lower cost solution may be possible for both companies.

Private circuit rental between UK and Ireland is a large cost for both organisations. Extending the NATS DaVinci network into Ireland could provide considerable savings, and might also offer the opportunity for the IAA to use the network within Ireland and make further savings on land line costs.

ATS Message Handling System (AMHS)

NERL has significant spare capacity on its AMHS switch which is currently serving in the order of 300 terminals. It may be feasible to examine what contingency / redundancy options may be available to the IAA. Currently, NERL has dual redundant AMHS switches installed at the Swanwick centre.

Dublin Arrival Manager Data

Dublin has an Arrivals Manager system, data from which could be fed to Prestwick to help traffic co-ordination over the UK/Irish boundary. This would improve the accuracy and efficiency of the Dublin AMAN data from NATS supplied to the Dublin Centre.

Voice Comms switches

The IAA is procuring a Voice Comms System for Training purposes and will extend this to a full replacement programme to upgrade existing operational equipment. The IAA voice switch should take in to account interfacing with the NERL system to ensure voice interoperability across the FAB. NERL will support the IAA on the interface definitions and lessons learnt.



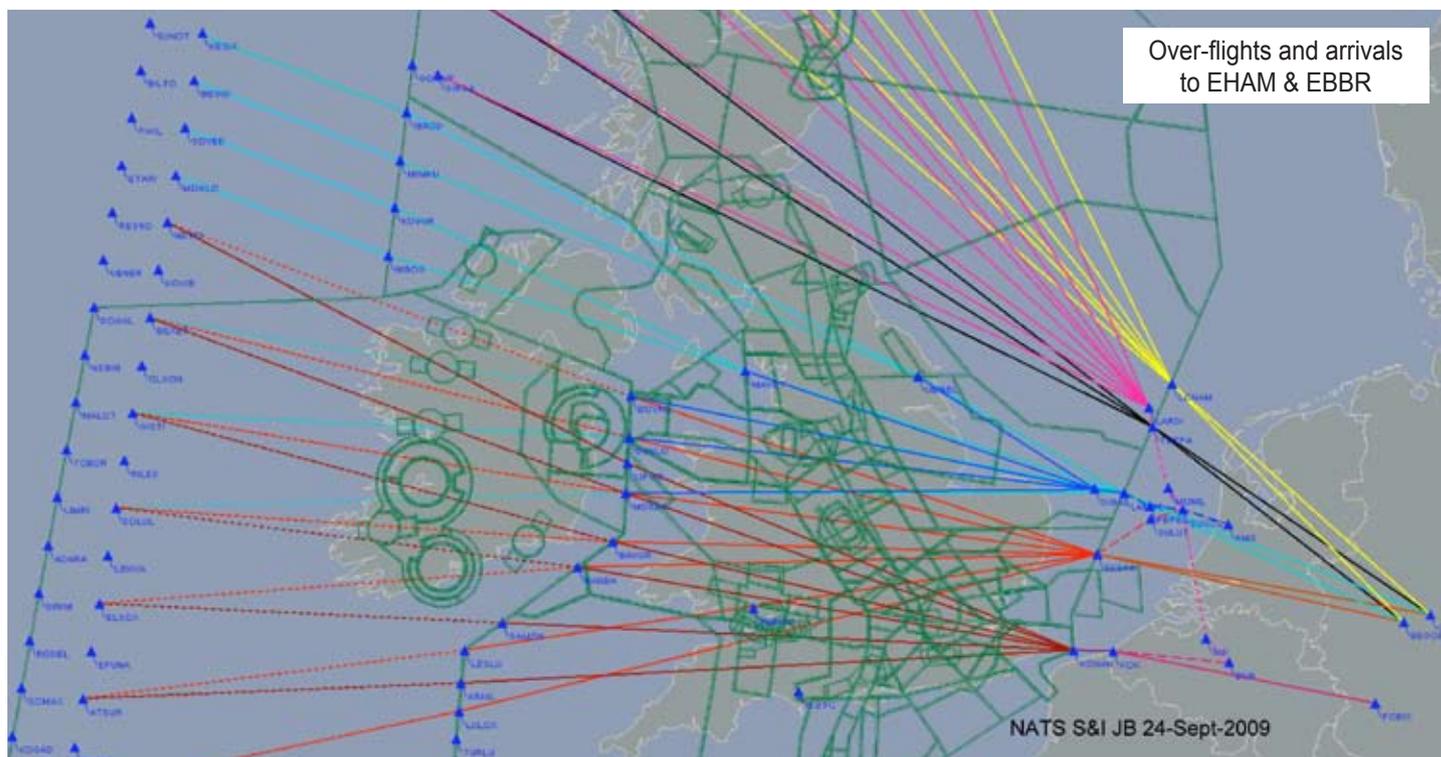
Integrated Vision

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put meaningful detail on the Design and Build concept of the UK/Ireland Functional Airspace Block".

The FAB Plan was always intended to be a rolling plan, updated annually. The FAB has been operational since July 2008 and, as the first working FAB to be established in Europe, is providing a model for others currently in development.

The "two countries, no boundaries" agreement was the culmination of four years' work by the IAA, NATS, their respective airline and military customers and the two governments to develop their adjoining airspace into one seamless operation.



Trans-Atlantic aircraft crossing UK and Irish airspace have been able to take advantage of direct routes saving fuel and reducing emissions.

Under the auspices of the UK-Ireland FAB, NATS and the Irish Aviation Authority (IAA) introduced changes to airspace in December in order to facilitate the new routes through two specific projects.

The Ensure Project removed all upper air routes in Shannon airspace, while Night Time Fuel Saving Routes allowed for flight plannable routes across both Shannon and UK airspace for overflying traffic between 12.01am and 6am.

Projects Ensure FAB delivers SES promise

Airlines will use less fuel, passengers will spend fewer hours in the air and the environment will benefit from reduced CO2 emissions following the introduction of the ENSURE project at the end of 2009.

Developed by the Irish Aviation Authority and NATS under the auspices of the FAB, the ENSURE project has streamlined ATM, removing outdated air routes and allowing airlines to plan their flights to route directly through European airspace.

ENSURE - En-Route Shannon Upper Airspace Re-Design – is expected to make significant savings in 2010 including: 2.2 million kilometres flown; 14,800 tonnes of fuel; 46,800 tonnes of CO2; and 195,500 minutes of flight time. This initiative clearly demonstrates the UK and Irish Air Traffic industry's commitment to streamlining its services to improve the productivity and profitability of airlines.

Eamonn Brennan, Chief Executive, Irish Aviation Authority said that the Authority relied solely on the airline industry for its funding. So it was vital that the organisation provided value for money.

"This innovative system will reduce costs, maintain the high safety standards and contribute positively to the environment. I commend all staff involved in this project from conception through to implementation," he said.

Ian Hall, Joint Chairman of the FAB Management Board and Director of Development and Investment for NATS, said: "In simple terms, ENSURE cuts out the old 'zig-zag' flight paths and offers airlines a straight forward point-to-point route when they fly over European airspace.

"The changes brought about by ENSURE were the biggest in the European air route structure last year and improved the service for both eastbound and westbound flights."

The Night Time Fuel Saving Routes initiative is being delivered in two phases – it went live at Swanwick Centre in December and is scheduled to go live for Prestwick Centre in Scotland in March.

Until now aircraft overflying UK and Irish airspace at night had to flight plan using existing upper air routes, although they were often tactically routed directly by controllers.

Now airlines are able to flight plan

for direct routes and benefit from the corresponding saving in time and fuel that that creates.

On average this will lead to a reduction of 271kg of CO2 emissions per UK night time over-flight. For Amsterdam and Brussels arrivals, the average reduction of CO2 per flight would be 525kg.

This translates to an annual saving of approximately 5,700 tonnes of fuel and 18,100 tonnes of CO2. With aircraft likely to carry less fuel from take off as a result

of the reduced track mileage the fuel and CO2 savings could be even greater.

NATS Project Manager Coral Boyne said: "There has been a tremendous amount of work done with a lot of partners and stakeholders and we were delighted to see all of that come to fruition.

"The work has had a direct positive improvement for many of our customers and I know that they appreciate what we have done."

New Airline comes on Board



FlyBe has agreed to Co-Chair the Service Provision Working Group following Aidan Fox's departure from Aer Lingus to join the IAA as General Manager Shannon ACC.

Nick Rhodes (left) will join Grant Worsley of bmi, who is continuing as Co-Chair until a replacement is found for him.

Grant and Aidan have co-chaired the SPWG since it was set up 18 months ago and have been instrumental in driving its work forward and ensuring that customer requirements are represented.

Ian Hall, Joint Chair of the FAB Management Board, said: "Grant and Aidan have made a huge contribution in making the FAB successful and keeping the ANSPs on our toes. We welcome Nick to the team and look forward to working with him, and we're delighted that Grant has agreed to stay on."

We have made a difference already

Aidan Fox

Formerly Manager Flight Despatch at Aer Lingus and now General Manager, Shannon

Aidan Fox was co-chair of the SPWG for 18 months, breaking new ground as the FAB started work. He shares his thoughts.

In May 2009 I said that: "The FAB initiative is positive in its approach in crossing national boundaries in an inclusive manner with the involvement of ANSP providers and Airlines, and should lead to a more efficient service and benefits to the consumer, the travelling public."

I am pleased to say that progress has been made in achieving both the purpose and vision of the FAB. A series of focused meetings have taken place between the ANSPs and the Airlines, discussing Airspace Design, Service Provision and Safety initiatives.

Some projects have been delivered already, for example, the Ensure Project, leading to a reduction in track miles flown, lower costs and also a reduction in CO2 emissions for traffic transiting the North Atlantic through the FAB Area.

A further phase of the project - the Night Time Fuel Saving Routes - will be fully delivered in March.

The feedback from the Airlines is very positive and they wish to see similar progress made on further projects in the shortest timescales possible.

The key for future success is to treat



the airspace as one continuum and work in partnership across all areas leading to operational efficiencies. All parties must be innovative, and be prepared to take inclusive decisions to maintain the ability to deal with the future growth in traffic when it returns in the near future.

Planning for traffic flows in one's own area of operation with little recognition of the impact on the adjacent areas or other users of the airspace should be a thing of the past.

We need to plan for the future now, remove as many barriers as soon as possible and deliver real savings to the Airlines, and the ANSPs, leading to a more efficient service for the consumer.

The "FAB" has the ability to deliver huge benefits but requires full commitment from all involved.



Tangible benefits of co-operation

Grant Worsley

ATS Manager, bmi

It has been my pleasure to be involved in the UK/Irish FAB from the beginning.

The FAB has drawn the main stakeholders together, and the relationships, and understanding of requirements, have matured in a very positive way.

It is extremely heartening to see what can be achieved by close co-operation, for example, the benefits of ENSURE.

However, major challenges still lie ahead in delivering further benefits to the community, not only in the UK and Ireland, but interlinked with other FABs, and there is scope to develop the FAB concept even further by removing boundaries, and progressing even closer ties.

NEWS in Brief

Joint Planning for better efficiency

Joint working between NATS and the Irish Aviation Authority has led to a much better aligned and developed tactical planning process. The two organisations plan a single route availability document as part of the process.

The change has meant less duplication of effort and has also helped harmonise inconsistencies between the two countries.

Eventually there will be a single point of contact for Network Operations between the FAB and the Central Flow Management Unit in Brussels.

In April a daily teleconference between NATS Pre Tact, Shannon and Dublin will take place which will result in a daily FAB Pre-tactical Network Brief for release to Air Operators.

This also helps airlines identify the most efficient routes, plan for more direct routes across the airspace and therefore save on fuel burned.

Reducing fuel burn and emissions

The FAB has reduced fuel consumption and CO2 emissions after optimising flight profiles through the Shannon Oceanic Transition Area to enable more direct routing to and from the UK.

The change has also increased the available route options for aircraft operators between Ireland, France and Spain.

Analysis of fuel burn has indicated that the change to an optimised profile – 37,000ft instead of 27,000ft – is likely to save 3,327 tonne of fuel for operators during 2010, which equates to a saving of 10,481 tonnes of CO2.

Airspace change reduces complexity

One of the earliest successes for the FAB was the change to the airspace structure linking southwest Scotland, Dublin and Northern Ireland.

The P600 airspace change, which came into effect in May 2009, aimed to reduce flight delays by easing the complexity of the route structure as well as bringing environmental benefits.

The new airspace arrangements have delivered greater airspace efficiency by reducing complexity and delay through improving the flow of air traffic in the region.

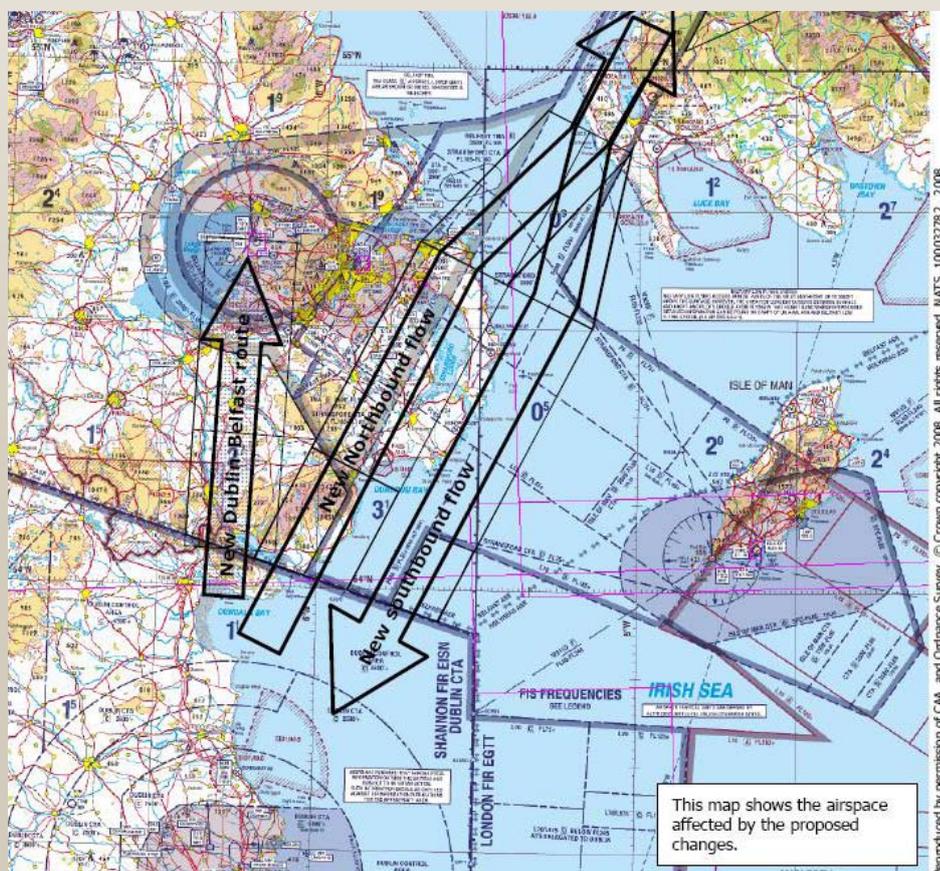
They were developed to meet the needs of airline customers and to improve

the environmental performance of the airspace.

The changes included the introduction of separate uni-directional routes to facilitate the Dublin - southwest Scotland axis, in accordance with the new Dublin formal route structure, and enabling controllers to manage the flow of traffic more easily. Also the introduction of a direct route from Dublin to Belfast with the protection of controlled airspace.

The new airspace arrangements enable the majority of flights to achieve continuous climbs and descents, thus reducing fuel burn and CO2 emissions.

A post-implementation review of the change this spring was expected to show the benefits created by the change.



Flexible use sought for Aberporth military danger area

A major project to improve the flexible use of the airspace between the UK and Ireland will involve the military in both countries to a significant degree.

Both the UK and Irish military play a key role in the development of the FAB with seats at the management board.

And they are at the heart of plans to make more flexible use of the Aberporth area of airspace and the North Wales Military Training Area as part of the ODNET project.

Currently aircraft travelling between the

UK and Ireland either travel to the north of this area through the Isle of Man sector, or to the south through Strumble sector.

But investigations are now underway to establish whether there could be more flexibility to give airlines a more direct route towards London and onwards to Europe.

Colonel Paul Fry from the Irish Air Corps and Air Commodore Malcolm Crayford from the RAF are members of the FAB Management Board.

Unions playing their part in the FAB

Staff groups have an important part to play in discussions on projects as part of the FAB. The unions on both sides of the Irish Sea – Prospect in the UK and Impact in Ireland – are represented on each of the FAB's three working groups.

They take a full part in discussions on all the major projects that are debated during the working group meetings and are a key stakeholder in all management board decisions.

20 key facts about the UK-Ireland FAB

- 1** Discussions around establishing a potential UK-Ireland FAB started in 2004 with the launch of the SES legislative package.
- 2** Throughout the process of establishing the FAB there was liaison with staff groups, airlines and the military – all of which played a key part in ensuring the IAA and NATS were able to complete the historic agreement.
- 3** The UK-Ireland FAB was formally established in July 2008 through the signatory of three simultaneous agreements between the Irish and UK Governments, the Irish and UK NSAs and the Irish Aviation Authority and NATS.
- 4** The UK-Ireland FAB does not include any change to sovereign airspace arrangements, nor does it alter any of the existing Safety, Regulatory or Executive accountabilities in either country.
- 5** Approximately 90% of North Atlantic traffic passes through Irish or UK airspace and the joint approach will enable enhanced safety and improved efficiency of the management of the airspace to the benefit of the airline industry and passengers.
- 6** In consideration of its unique geographical location, a key goal of the UK-Ireland FAB is to successfully optimise the integration of traffic flows between the North Atlantic, domestic (Irish and UK) and core Europe.
- 7** The UK-Ireland FAB develops a rolling three-year FAB Plan. The next iteration of the Plan for the period 2010-13 is due for publication in April 2010.
- 8** The UK-Ireland FAB is an operational FAB based on the principle of 'design and build' in partnership with airspace users, both civil and military.
- 9** The FAB Management Board (under the control of the respective ANSPs) is responsible for implementing the operational FAB. Its members include representatives from the IAA, NATS, Irish and UK military and the airline sector. The FAB Management Board is co-chaired by Donie Mooney, Director of Operations from the IAA and Ian Hall, Director Development and Investment from NATS.
- 10** Since establishment, three working groups are responsible for implementing FAB activities in the areas of Airspace Design, Service Provision and Safety. The co-chairs of each working group are members of the FAB Management Board. Working Groups meet formally approximately four times per year ahead of FAB Management Board meetings.
- 11** A central objective for the UK Ireland FAB is to deliver customer benefits by implementing joint projects which drive operational efficiency improvements and enhance safety. Airline customer engagement is critical and therefore the Service Provision Working Group is co-chaired by airline representatives.
- 12** ANSP staff engagement is secured through trade union representation on the working groups.
- 13** Cross-border regulatory coordination is crucially important. The Irish and UK NSAs supervise the FAB on behalf of their respective States through the joint FAB Supervisory Committee.
- 14** The UK-Ireland FAB actively participates in European FAB fora such as the European Commission FAB Focal Points Group. The Irish and UK participants are in continuous contact with European stakeholders to assist and help in the development of SES Implementing Rules.
- 15** In early 2010, the first meeting of a new joint ANSP/NSA Performance Advisory Group (PAG) took place to ensure that the performance of the UK-Ireland FAB conforms to SES requirements and leads the way to a performance regime that meets the aspirations of all stakeholders. The PAG reports to both the FAB Management Board and the FAB Supervisory Committee.
- 16** The UK-Ireland FAB is strongly supportive of inter-FAB connectivity and coordination. The IAA is a member of North European Alliance Providers (NEAP) with NATS' joining them after signing a memorandum of co-operation in March 2010. NATS attends a number of groups in FABEC in our 'collaborative partner' status covering Operational, Technical and project oversight activities Representatives from both NEAP and FABEC attended the last FAB Management Board meeting in December 2009.
- 17** Although the ANSPs operate two different Flight Data Processing systems, both the IAA and NATS are committed to aligning their systems to be SESAR compliant. Furthermore, a Technology Coordination Group is engaged in the assessment of areas for potential technology collaboration.
- 18** To ensure all ANSP projects are de-conflicted, a new Project Alignment Review Team is tasked with coordinating the timescales for all major IAA, NATS and FAB operational projects.
- 19** Rationalisation of centres within Irish and UK airspace has been delivered through the recent opening of the new Prestwick Centre, which assumed Manchester ACC service provision responsibilities.
- 20** The UK-Ireland FAB is required to develop an Annual Report for the NSAs and States. The Report for 2009 will be completed and issued by the end of March 2010.



For more information on the UK-Ireland FAB contact the joint secretariat
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