# Frequently Asked Questions

## Airspace Modernisation

**Updated December 2025**

GLASGOW AIRPORT

This is the **third update** of the Glasgow Airport Consultation Frequently Asked Questions, since the consultation started on 20 October 2025.

These questions have been added, following questions and feedback we have received during our drop in events, webinars, and/or consultation responses.

**What noise policies do UK airspace change proposals need to follow? Do you account for the latest guidelines from the World Health Organisation?**

When assessing noise for an Airspace Change Proposal, we are required to follow UK Government noise policy and the requirements of CAP1616.
Some communities have asked whether the noise metrics we use are calculated as part of the CAP1616 process account for the World Health Organisation's guidelines around noise.

The primary noise metrics required by UK Government policy and the Civil Aviation Authority's airspace change process look at the adverse noise impacts across the busy 92 day summer period.

The thresholds for noise as set out in these policies are based on the Civil Aviation Authority's Survey of Noise Attitudes (SoNA), which was a UK-based noise study. Information from this study has been adopted into the UK specific metrics and thresholds.

The World Health Organisation's guidance looks at the adverse noise impacts across a full year, taking into account the quieter periods. The World Health Organisation guidance is based on international studies, and within that guidance it suggests that country specific data and exposure–response curves are applied whenever possible to assess the relationship between noise and annoyance and therefore the UK policy is in line with World Health Organisation guidelines.

**What metrics are used to measure and assess noise for Airspace Change Proposals?**

The noise assessment is based around the CAP1616 primary and secondary noise metrics.

**Primary noise metrics:**
Noise metrics are generated based on a 92-day summer period from 16 June to 15 September inclusive. For the purposes of the noise modelling, a modal split of Runway 05 being used 23% of the year, and Runway 23 being used 77% of the year has been applied.

$L_{Aeq}16hr$ (daytime noise) and $L_{Aeq}8hr$ (night-time noise) noise exposure data is what is assessed to determine impacts.

$L_{Aeq}$ is way of measuring fluctuating sound levels over a specific period (see the time period shown in brackets), and representing it as a single, equivalent continuous sound level in decibels. The key thresholds set by Government policy for this are Lowest Observable Adverse

Effect Levels (LOAEL), which are the levels at which adverse effects on health and quality of life can be detected.

These levels are based on the daily average movements that take place in the 16-hour period (07:00-23:00 local time) or 8-hour period (23:00-07:00) during the 92-day period 16 June to 15 September inclusive. The levels vary depending on the time of day:

- During the day (7am-11pm) the LOAEL threshold is 51 decibels $L_{Aeq}$(16 hours)
- Overnight (11pm-7am) the LOAEL threshold is 45 decibels $L_{Aeq}$(8 hours)

This metric is the measure of noise exposure adopted by UK Government for the purposes of considering adverse effects from aircraft noise. It forms the basis of the UK Government's policies in relation to aircraft noise.

There's more information about the primary noise metrics on page 80 of the Main Consultation Document.

**Secondary noise metrics:**
N60 and N65 are what is calculated for secondary noise metrics. These metrics respectively describe the number (N) of aircraft noise events above a noise level of 60 decibels LASmax in the night-time period and 65 decibels LASmax for the daytime period. These are event-based metrics, which can be used to better understand the number of noise events that occur and their location.

LASmax is the maximum A-weighted noise level experienced during an individual aircraft overflight.

N65 and N60 contours have been generated for the baseline and for the proposed option. These contours have been used to calculate the total population within the contour and the area of the contour.

You can find more information about these from page 81 of our Main Consultation Document.

**How do you then calculate noise impact?**
When assessing noise for an Airspace Change Proposal, we are required to follow UK Government noise policy and the requirements of CAP1616. When considering primary metrics, Government policy defines the 51 decibel daytime and 45 decibel nighttime $L_{Aeq}$ contour as the threshold used to measure adverse effects from noise exposure (see above for more information about this.)

Information from the $L_{Aeq}$ contour is then input into the Department for Transport's TAG workbook which looks to monetise the benefits/impacts to changes in noise exposure. There's more information about the primary noise metrics on page 80 of the Main Consultation Document.

Secondary metrics, including 'number above contours' (N60/N65) and overflight contours are also generated for the with and without airspace change scenarios. You can find more information about these from page 81 of our Main Consultation Document.

When considering noise impacts, CAP1616 explains *'the CAA will weigh the outcomes from 'primary' metrics over 'secondary' metrics. Primary metrics will be those that are used to quantify significant noise impacts, such as WebTAG outputs\*.*
*Secondary metrics will be those that are not being used to determine significant impacts, but which are still able to convey noise effects, such as N65 contours and Lmax levels. While not a noise metric, overflight contours will be a secondary metric for the purposes of decision-making.'*

\*WebTAG is the Department for Transport's suite of guidance on how to assess the expected impacts of transport policy proposals and projects. The TAG noise is a tool which assesses the impact of changes in noise exposure and can be used to monetise certain aspects of the noise impact. LAeq16hr (daytime noise) and LAeq8hr (night-time noise) noise exposure data form the input into TAG.

**Do you take terrain into account when modelling noise for this Airspace Change Proposal? Is it based on sea level or ground level?**

All noise and overflight modelling carried out as part of the detailed noise assessment for this Airspace Change Proposal takes terrain into account. Ordnance Survey terrain data is incorporated directly into the model. Within the model, aircraft altitude is based on the airport's airfield elevation. This is 26ft for Glasgow Airport.

The modelling then bases the climb or descent of aircraft on Glasgow Airport's radar data, to reflect the actual operations of aircraft departing from and arriving at the airport.
To account for terrain in the model, receivers are positioned at their actual local ground level. This means that in higher-elevation areas, the model has receivers higher up and therefore closer to the aircraft overflying that area.

This approach ensures that the detailed noise modelling in the Full Options Appraisal accurately accounts for how noise is experienced in locations with varying terrain.

**When using the interactive noise tool, when I mark my location on the map does the information about aircraft altitudes take into account local terrain?**

The typical aircraft altitudes shown for a specific location within the interactive maps are based on actual climb and descent profiles from Glasgow Airport with a buffer applied to account for a margin of error.

When determining this buffer, we've considered lots of information including variation in terrain, the potential for calculated error within the noise modelling, what is considered a perceptible change in noise, and the variation of current performance of aircraft departing and arriving from Glasgow Airport.

This means that the altitude bands shown do account for the typical variation in local terrain around Glasgow Airport.

However, please note that the information presented is indicative as it is based on a typical flight for the two aircraft types. The rate that aircraft climb varies depending on lots of factors such as the wind, air temperature, weight of aircraft and aircraft type. Aircraft descending to land follow a more consistent descent profile, however there can still be some variation.

**Please can we see larger versions of the operational diagrams, like those available at the drop in consultation events?**

Yes, we have produced a single document with high quality versions of the operational diagrams in. They are available on our Citizen Space website, at the bottom of the page, alongside all our consultation material. Please view them in conjunction with our Main Consultation Document, or the Summary Document.

# Frequently Asked Questions

## Airspace Modernisation

**Updated November 2025**

Consultation runs from:
20 October 2025 to 25 January 2026

GLASGOW AIRPORT

This is the **second update** of the Glasgow Airport Consultation Frequently Asked Questions, since the consultation started on 20 October 2025.

The following questions have been added since the consultation start, following questions and feedback we have received from our drop in events, webinars and/or consultation responses.

**Your maps of the proposed arrival and departure changes don't look the same as the maps shown in the interactive noise tool. Why is that?**

The operational diagram maps which show our current and proposed departure and arrival routes were created as if Glasgow Airport were on one runway direction all day for one very busy day – for example during the summer when everyone is going on holiday. The maps include information about all areas we anticipate may be impacted by the proposals, including areas that may see less than 5 aircraft per day.

The information within the interactive noise tool is based on Civil Aviation Authority's CAP1616 requirements for noise modelling. This means we have to use average data which is based on how runway use is split (74% of the time Glasgow Airport is on Runway 23 where aircraft take off towards Johnstone area and land over Clydebank area, and 26% of the time we use Runway 05 where aircraft take off towards Clydebank area and land over Johnstone area. For the interactive noise maps, we can also only present data showing 5 flights or more for the N60/N65 and overflight metrics, so it does not cover as many areas as the operational maps which show areas which could see less than 5 aircraft per day.

If you are shown outside the maps on the interactive noise tool, this does not necessarily mean you are not overflown or will not experience noise in future; it means that you will not be overflown on average more than 5 times per day. In this case, the operational diagram maps are likely to show the current and proposed changes for your area.

**How has Glasgow Airport developed this proposal?**

We have followed a data led approach to inform this proposal we are consulting on. We started by removing all the routes around Glasgow Airport and then flooding the airspace with 1000s of potential flight paths. These were then all assessed against our Design Principles, agreed with our stakeholders in Stage 1, and 30 options were selected. We worked with our stakeholders again in Stage 2 to refine the list further and re-assess those options against a number of criteria and our current flightpaths. This provided us with a shortlist to assess against operational and environmental categories required by the CAA's Airspace Change Process (CAP1616), which in turn provided us with the option we are currently consulting on.

It is important to note that at every stage, we have followed what the data recommended in terms of meeting our own objectives and those of the Airspace Modernisation Strategy, CAP1616 and Government policies. We're now seeking feedback on that to help us refine our proposal further.

This consultation aims to reach all stakeholders who may be impacted by the proposed changes. This includes Aviation Industry stakeholders, such as airlines and General Aviation, and communities who are either currently overflown by aircraft arriving or departing Glasgow Airport or who could be in the future.

**Do you take terrain such as hills into account when modelling how noise is experienced? Is noise modelling based on ground level or sea level?**

Terrain is taken into account when modelling. The noise and overflight modelling for Glasgow Airport's Airspace Change Proposal includes adjustments for local terrain, as required by the Civil Aviation Authority (CAA). This ensures aircraft height in the modelling is calculated relative to actual ground level rather than sea level. Geometrical corrections for aircraft-to-receiver distances and elevation angles are applied so the modelling accurately reflects how noise and overflights are experienced in areas with varying elevations.

**Is this proposal to allow the airport to grow?**

This Airspace Change Proposal is not linked to growth and instead is driven by the UK Government's requirement for 18 UK airports to modernise their airspace. Whilst Glasgow Airport has been transparent in its ambition to grow (targeting growth of around 5% per year), this growth is not dependent on our Airspace Change Proposal.

**Does this mean in 2027 you'll suddenly have loads more flights?**

In short, no. Resilience and our obligations as part of the UK Government Airspace Modernisation Strategy is not linked to the airport's own growth ambitions.

**Why do you think this Airspace Change Proposal will go ahead this time? I remember the proposals from 2018 which were scrapped / did you take on my responses?**

The reason we had to start again from a blank slate after the 2018 consultation was because the UK Government had a fundamental change in policy which led to the Civil Aviation Authority creating a completely new Airspace Change Process which would have changed how the 2018 proposals would be taken forward. We began this process again in 2019 and restarted after Covid once more.

Despite the time lapse, responses from the 2018 consultation helped to shape our approach to the Define Stage of the current CAP1616 process by providing insights into those stakeholder groups with a greater interest in airspace change and the major issues that should be considered when developing airspace design principles. Moving into stage 2, we took a completely blank sheet approach, allowing the data to drive our options development but we remained aware of previous feedback and this was built in to our thinking during that process, cognisant that more up to date views were sought at that time.

The CAA is currently consulting on some changes to the Airspace Change Process as opposed to a completely new process. We're also aware that the Government are expected to consult on

changes to Air Navigation Guidance. However, we have engaged extensively with the CAA and Government and have permission to proceed to this stage in the knowledge that the expected changes to Airspace Change Process and Air Navigation Guidance are not material enough to undermine the work done by Glasgow Airport so far.

**How many flights does the airport currently see on average day?**

About 200 flights (a flight is an arrival *or* a departure) a day was our average in 2024. There are some days, in the summer, when it could be more than this, and some days when it could be fewer. It's important to note that this is our current average from last year.

**Will you review your Noise Insulation Scheme as a result of these changes?**

The Noise Insulation Scheme focuses on those closest to the airport who are unlikely to see much change, if any, as part of the proposed changes under this ACP.  The contours are reviewed every year anyway so any change which triggered a review of the NIS would be picked up.

# Frequently Asked Questions
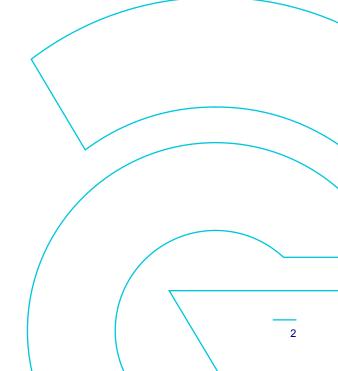
## Airspace Modernisation

## Version 1 - October 2025

GLASGOW AIRPORT

# Table of contents

# 1 Airspace change process

## 1.1 What is airspace?

Airspace is the 'invisible infrastructure' in the sky which helps aircraft operate safely. It includes the flight paths that aircraft take when arriving and departing from an airport, which are usually the responsibility of an airport up to 7,000ft above ground level. The routes on the airspace network above 7,000ft are the responsibility of NATS (the UK's licensed Air Navigation Service Provider for en-route operations).

Airspace can be controlled and uncontrolled; this means that in some areas there are restrictions on which aircraft and/or pilots can fly in the airspace to protect other airspace users such as commercial airliners. To enter most controlled airspace, pilots must get permission from Air Traffic Control. There are different classifications of controlled airspace that have varying requirements.

## 1.2 What is airspace change?

Airspace change is the process through which flight paths, routes, controlled airspace boundaries and controlled airspace classification can be changed. The Department for Transport (DfT) is responsible for all aviation policy in the UK, including airspace. The Civil Aviation Authority (CAA) is responsible for its regulation and for the Airspace Change Process which all airports must follow where changes to airspace are proposed. Glasgow Airport is responsible for the design of any changes to flight paths into and out of the airport up to approximately 7,000ft, and NATS is responsible for changes to airspace above 7,000ft.

## 1.3 What is CAP1616?

The aviation industry is regulated by the Civil Aviation Authority (CAA) in the UK, and they ensure that the environmental impact of aviation on local communities is managed through efficient use of airspace. When changes to airspace are proposed, an airport is required to follow the CAA's Airspace Change Proposal (ACP) process – this is known as **CAP1616**.

CAP1616 is a 7-stage process which places great importance on engaging and consulting on airspace proposals throughout the process with a wide range of stakeholders, including potentially affected communities.

Glasgow Airport successfully passed Stage 2 of the CAP1616 process in September 2022. More information on Stage 1 and Stage 2 can be found on the **CAA's Airspace Change Portal**.

Glasgow Airport's consultation is based on Version 5 of the CAP1616 guidance, which can be viewed **here**.

## 1.4 How does airspace change work?

Airspace change is conducted in line with a process set out by the Civil Aviation Authority (CAA), called CAP1616. Initially, in Stage 1, a 'Sponsor' (the party trying to change the airspace) needs to produce a Statement of Need explaining why the change is needed. Design Principles are then worked up in collaboration with key stakeholders.

Stage 2 'Develop and Assess' sees multiple options worked up and then assessed against the Design Principles established in Stage 1. Following this assessment, a shortlist of options is taken to the first of three phases of appraisal called the 'Initial Options Appraisal'. After the Initial Options Appraisal, the options may be shortlisted before moving onto the Stage 3 'Full Options Appraisal'. The Full Options Appraisal identifies the options for public consultation and this consultation forms one of the main parts of Stage 3. This is where we are now.

## 1.5 What is the Airspace Modernisation Strategy?

The Airspace Modernisation Strategy (AMS), also known as **CAP1711**, is a document published by the Department for Transport (DfT) and Civil Aviation Authority (CAA) in December 2018. The document describes how the airspace within the UK is reaching capacity and, due to the age of the design, includes features that restrict the aviation industry's ability to improve its operational and environmental performance.

The AMS sets out a new shared objective between the CAA and the DfT for modernising airspace which is to deliver quicker, quieter, and cleaner journeys and create more capacity for the benefit of those who use and are affected by UK airspace.

# 2  Our proposals

## 2.1    What is Glasgow Airport proposing and why?

Glasgow Airport is proposing to make changes to the arrival and departure routes to introduce Performance Based Navigation (PBN) technology. We are also proposing to make changes to the Controlled Airspace (CAS) within the vicinity of Glasgow Airport.

Glasgow Airport is required to modernise its airspace by the UK Government's Airspace Modernisation Strategy, which is driving a nationwide upgrade to UK airspace. Across the country, eighteen airports including Glasgow Airport are developing Airspace Change Proposals to meet the objectives outlined by the Strategy.

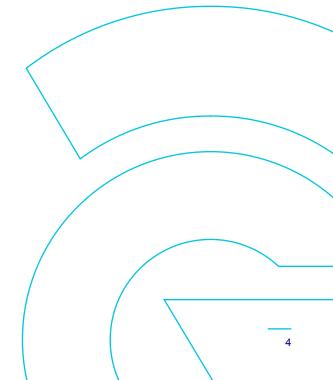## 2.2    What is Performance Based Navigation (PBN)?

Performance Based Navigation (PBN) forms of a key part of the **Government's Airspace Modernisation Strategy** (AMS). PBN improves the accuracy of where aircraft fly by using modern satellite navigation, rather than outdated ground–based navigation aids (conventional navigation).

## 2.3    What is vectoring?

Vectoring is when Air Traffic Control (ATC) provide an instruction to pilots in the form of a direction (heading based on a compass bearing). ATC may also instruct pilots to climb or descend. ATC do this to ensure aircraft are safely separated and where possible are given the most efficient routes.
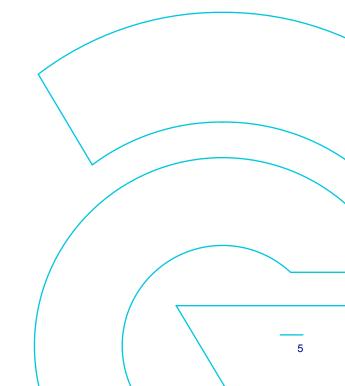
## 2.4    Where are we now?

We are now in Stage 3, where we have carried out our second appraisal on the remaining options, called the Full Options Appraisal (FOA), and have planned and prepared for this consultation by producing a Consultation Strategy and our consultation material. The material is available to view **here**.

## 2.5    How has the proposal been developed?

| Airspace change stage | Link to documents (also available on the ACP portal) |
|---|---|
| At Stage 1A, Glasgow Airport participated in an assessment with the Civil Aviation Authority (CAA) to discuss the Statement of Need and to enable the CAA to consider whether the proposal falls within the scope of the formal airspace change process. | **Statement of Need**<br><br>**Assessment meeting minutes** |
| At Stage 1B, Glasgow Airport developed a set of Design Principles through engagement with identified stakeholder representatives. The Design Principles provide high-level criteria that the proposed airspace design options should meet. They also provide a means of analysing the impact of different design options and a framework for choosing between or prioritising options. | **Stage 1B Design Principles Submission Report** |
| Stage 2A requires Sponsors to develop and assess options for the airspace change.<br><br>In Stage 2A, the Sponsor develops a Comprehensive List of Options that address the Statement of Need and that align with the Design Principles from Stage 1.<br><br>Those options are then shared with stakeholder representatives (the same ones engaged on the Design Principles). Feedback from the engagement was then used to generate further options where feasible.<br><br>Finally, all options were qualitatively assessed against the Design Principles and a Design Principle Evaluation (DPE) was produced. Glasgow Airport's Comprehensive List of Options was then shortlisted before progressing to Stage 2B. | **Stage 2A Main Document** |
| Stage 2B requires the Sponsor to carry out an Initial Options Appraisal (IOA) of the airspace change options which proceed from Stage 2A. The appraisal described the options, explaining the methodology used to assess each option and the IOA outcome. Following this the document explained, based on the IOA, which options have been taken forward to Stage 3 and the preferred option(s). | **Initial Options Appraisal** |

# 3 Coordinated consultation

### 3.1 Who is part of the Scottish Airspace Modernisation coordinated consultation?

Glasgow Airport, Edinburgh Airport and NATS, coordinated by ACOG, have worked closely together to develop the Scottish Airspace Modernisation proposal. These parties, in unison, are also referred to as the Scottish Terminal Control Area (ScTMA) cluster. More information on the coordinated consultation can be found on the Scottish Airspace Modernisation website.

### 3.2 What are the responsibilities of each Scottish Airspace Modernisation Sponsor?
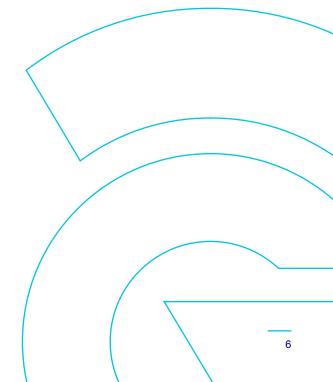
Glasgow Airport's Airspace Change Proposal (ACP) forms part of a wider Scottish Airspace Modernisation proposal. Glasgow Airport and Edinburgh Airport are responsible for the modernisation of their departure and arrival routes below 7,000ft and the airports' Controlled Airspace. NATS, the UK's licensed air navigation service provider for en-route operations, is responsible for connecting these routes into the network airspace, and the wider route network above 7,000ft.

### 3.3 How are the consultations coordinated?

Glasgow Airport, Edinburgh Airport and NATS have worked together to identify which stakeholders are shared across all three proposals. For these stakeholders, such as airlines and General Aviation organisations, there will be coordinated consultation events where all three Sponsors will present the overall proposal. For more information about whether you are a coordinated consultee, please see our Consultation Strategy.

### 3.4 I live in Glasgow; will Edinburgh Airport's Airspace Change Proposal impact me?

For more information about how the different proposals might interact and to find out which proposal(s) are relevant to you, you can view our map and/or use the information on our coordinated website: www. scottishairspacemoderisation.co.uk

# (4) Consultation and feedback

## 4.1 What engagement has already been done, and when?

A list of the stakeholder representatives we have previously engaged as part of earlier stages of the process is available to view in our Consultation Strategy.

The previously engaged stakeholders included relevant parliamentarians, local authorities, National Air Traffic Management Committee (NATMAC), Glasgow Airport Flight Operations Performance and Safety Committee (FLOPSC), aviation industry, Community Councils and interest groups.

## 4.2 How have you determined which stakeholders are relevant at Stage 3?

Glasgow Airport has kept all previously contacted stakeholders on its notification list for Stage 3, to ensure all those who may be interested are given an opportunity to engage. However, new consultees have been established based on those communities who could experience some change as a result of the proposals, those who represent these communities, and those who represent seldom-heard communities. There is more information about our consultation audience in our Consultation Strategy.

## 4.3 What happens to the feedback received?

All the feedback received is published on the Citizen Space consultation website. Once the consultation closes, Glasgow Airport will then collate, review and categorise the consultation responses. Responses will be categorised into those which may lead to a change in the design and those which would not. We will then produce a Consultation Response document which summarises the consultation and our response to issues raised. This will also be published on the Civil Aviation Authority's (CAA) Airspace Change Portal.

## 4.4 Where can I find out more information?

You can find out more about this airspace change on our Glasgow Airport consultation website. As part of the consultation, we will be holding multiple drop in events and online webinars where there will be an opportunity to ask questions. For further details of how to join these, please see our Glasgow Airport consultation website.

## 4.5 How do we know you'll listen to us?

Following CAP1616 guidance, we will produce a Consultation Response Document that will summarise the consultation, the responses we received, and how these have influenced the final proposal. This document will be assessed by the Civil Aviation Authority (CAA) to ensure we have accounted for stakeholder feedback.

## 4.6 Didn't you already consult on these proposals?

In 2018, Glasgow Airport conducted a 13-week consultation on proposals to modernise the flight paths to and from the airport, following the regulatory process for airspace change that the CAA required at the time (known as CAP725).

During the consultation, Glasgow Airport was informed by the Civil Aviation Authority of a change in policy which would alter how our proposals would be taken forward. This change in policy meant we had to restart our airspace change process, and therefore we are holding a new consultation based on these current proposals and based on the up to date guidance.

# 5  Next steps

## 5.1  What happens after this consultation?

After this consultation, we will collate, review and categorise the consultation responses and prepare a Consultation Response Document. The Civil Aviation Authority will assess this document, examining how we have refined our proposals in response to feedback. We can then proceed to prepare for implementation.

## 5.2  When is the proposal likely to be implemented?

If approved by the Civil Aviation Authority (CAA), the Scottish Airspace Modernisation Sponsors are working towards a target implementation date to deliver the airspace changes as a single integrated deployment no earlier than 2027.*

## 5.3  Will there be a Post Implementation Review?

Subject to decision of the Civil Aviation Authority (CAA), the Airspace Change Proposal (ACP) would then move onto Stage 6: implementation. A year after implementation, a Stage 7 Post Implementation Review is undertaken to ensure the ACP is meeting the objectives.

*The expected implementation year may change. This depends on the UK Government's airspace modernisation priorities and the aviation industry's ability to manage major changes safely and efficiently.