

Proposed Changes to Inverness Airport's Airspace – The Introduction of Controlled Airspace and Optimisation of Instrument Flight Procedures

What is an Airspace Change Proposal?

It is a formal UK Civil Aviation Authority (CAA) process that is being undertaken by HIAL in order to introduce a new airspace design to benefit airport operations. The standard published process is outlined in CAA guideline documents CAP724 and CAP725.

What do you mean by airspace?

Airspace is the vertical and lateral extent within which fixed wing aircraft, helicopters and other types of aircraft fly. Airspace is categorised by the CAA in a number of ways, which determine the rules governing its operation and the requirements placed on pilots and air traffic controllers.

What is the current airspace classification at the airport and how is it managed?

Inverness Airport is located in Class G airspace (uncontrolled airspace), where aircraft are not subject to mandatory compliance with Air Traffic Control (ATC) instruction (only a small set of compulsory flight rules) and can enter, leave and transit the airspace without ATC permission. An Air Traffic Zone (ATZ), which is also Class G, of radius 2.5 NM centred on the Inverness Airport Aerodrome Reference Point (ARP), extending from the surface to 2000 ft above the aerodrome level (aal), is the only airspace established to provide Inverness Airport with any protection. Pilots must have permission from Inverness ATC to operate within the ATZ and while within the ATZ must comply with instructions from ATC.

While Inverness Airport operates to the highest safety standards within the current airspace environment, Class G airspace is less able to efficiently support predictable and structured arrivals and departures that are required to maintain an efficient operation as the number of air transport movements (ATMs) increases at the airport.

What are the proposed changes?

Highlands and Islands Airports (HIAL), which operates Inverness Airport, is proposing changes to the airspace designation surrounding Inverness Airport and the modernisation of aircraft flight procedures at the airport. The aim of the proposed changes is to enable Inverness Airport to continue to provide safe and efficient flight services for the local community, both now and in the future.

The proposed changes include:

- The introduction of Class D Controlled Airspace (CAS) in terms of an Inverness Control Zone (CTR) within 15 nautical miles (approximately 28 km) of the airport;

- The introduction of Class E plus Transponder CAS Control Areas (CTAs), surrounding the CTR and above 5,500 feet, to provide connection to the national en-route airways structure; and
- The enhancement of Instrument Flight Procedures (IFPs) for aircraft transiting to and from Inverness Airport, to be contained within the newly established CAS.

Full details of the need for change, the changes proposed and any possible impacts, are detailed in full in the consultation document available on this website. HIAL invites anyone with an interest in this matter to read the consultation document and provide their feedback regarding the Inverness Airport Airspace Change Proposal.

Why are these changes needed?

The objective of the proposed airspace change is to create a new operating environment with elements of 'controlled' airspace, which would offer all airspace users predictability and consistency of operation. Creating a known air traffic control environment would assist the airport in catering for an increasing number of air transport movements and do so in a way which benefits efficiency and safety for many airspace users, and the environment.

Inverness Airport does not currently have any assigned CAS and the IFPs flown by aircraft are considered to be out-dated. The skies over the UK are now more crowded, airport regulatory guidance has changed and the types of modern aircraft now operating at Inverness Airport have improved flight performance capabilities and navigational accuracy. As a result of these changes, there is a need to update and enhance airspace and IFPs to allow Inverness Airport to adapt to the changing circumstances and continue to provide flight services for local businesses and the community.

What is Controlled Airspace (CAS)?

The UK Civil Aviation Authority (CAA) categorises volumes of the UK skies to determine the governing rules and requirements placed on pilots and air traffic controllers in a particular region. At the highest level, the UK skies are divided into both Controlled (CAS) and Uncontrolled Airspace. Every major UK airport has a volume of surrounding sky which it regulates to ensure the safe and efficient flight of aircraft; this is known as CAS. The sky outside of these defined volumes where neither the airport nor any other Air Traffic Service (ATS) provider has jurisdiction, is known as Uncontrolled Airspace.

CAS is specifically designed for each location. Any CAS must meet certain criteria to encompass and protect the airport's IFPs, whilst being of minimum size to ensure other airspace users' operations are accommodated to the maximum extent possible.

Why do airports need Controlled Airspace (CAS)?

CAS is regulated by Air Traffic Controllers (ATCOs) who provide services to ensure that flights are operated safely and efficiently, in a known environment. Pilots of aircraft in CAS communicate with Air Traffic Control (ATC) via radio and must fully comply with ATC instructions, whereas pilots operating outside of CAS are not necessarily required to do so.

ATCOs at airports need to have a clear picture of the airspace, current aircraft operating within this airspace and their predicted flight paths. This then enables ATCOs to manage traffic at the airport and direct aircraft on the safest and most efficient routes and an altitude, ensuring the essential separation between aircraft in the sky is always maintained, until arriving aircraft land at Inverness Airport or departing aircraft are handed over to an en-route ATC service.

What are Instrument Flight Procedures (IFPs)?

These procedures are a prescribed series of aircraft manoeuvres which direct flight along predetermined routes. The pilot navigates through reference to aircraft instruments and follows the IFPs either to arrive at the runway or to continue enroute following departure. The procedures can be flown in poor weather conditions, known as Instrument Meteorological Conditions (IMC), and these procedures are typically used by aircraft both inbound and outbound of airports.

How will the existing Instrument Flight Procedures be improved as a result of the proposed changes?

Accompanying the proposed establishment of CAS, an update and standardisation of the current IFPs is also proposed to provide adequate protection to Inverness Airport's operations. The proposed designs will enhance safety and improve the efficiency of Inverness Airport's operations through:

- The introduction of optimal arrival and departure routes improving safety and efficiency whilst reducing the noise impact of arriving and departing airliners;
- The introduction of Continuous Descent Approaches (CDAs) and Continuous Climb Departures (CCDs) to reduce environmental impact through reductions in fuel emissions;
- The establishment of IFPs which incorporate the use of new technical navigational developments; and
- The design of airspace to adequately contain these IFPs and provide protection for all aircraft operating near Inverness Airport whilst improving flexibility away from the airport's immediate vicinity.

Why is Inverness Airport doing this now?

Air travel has grown significantly in the UK over the last twenty years. As a result, Inverness Airport itself has grown in recent years as it has sought to provide more flight services for local residents and businesses. As the skies are now becoming more crowded and Inverness Airport is handling more flights, ATC at Inverness need a larger volume of airspace that they can regulate. In addition, advances in technology mean that the aircraft routes which are flown to and from Inverness Airport can be updated for a more efficient and environmentally-friendly option.

What is the purpose of consultation?

CAA Airspace Change guidance document CAP725 states: *Consultation is the only way to ensure that the proposal has taken account of the interests of all airspace users and the society.*

Consultation is a way in which interested parties can raise considerations to ensure the design option is balanced between competing needs.

Consultation feedback influenced the final design. For full details download the Feedback Report [here](#).

When did the initial consultation take place?

The initial formal consultation took place from 0900 on 29 September 2014 to 2300 on 19 April 2015, a period of 29 weeks.

How does the size of the proposed CAS compare with other airports?

Inverness has designed its CAS in accordance with national policy and has proposed the minimum necessary to achieve its aims. The CTR being requested is comparable to many other regional airports with connection to the national en-route airways structure and which are protected by this type of airspace.

Will there be any change to the types of flight operations and types of aircraft operating at Inverness Airport as a result of this proposal?

No. There will be no change to the types of flight operations and types of aircraft operating at Inverness Airport.

Is the proposed CAS for the exclusive use of Inverness traffic?

No. The proposed Class D and Class E airspace would introduce an airspace structure for the protection of aircraft in the critical landing and initial departure phases of flight. This classification of airspace does not constrain access to any airspace user except those that are not radio equipped. Even non-radio equipped aircraft can be permitted to use the airspace through special procedures.

Agreements and procedures to allow flexible use of airspace are being developed in conjunction with aviation stakeholders to ensure fair and equitable access to the airspace. It is a fundamental requirement that access to this class of airspace is granted whenever possible.

Are the dimensions of airspace in the proposal unusually large in comparison to other airports?

No. We are required by the CAA airspace change process to keep the CAS to the minimum necessary to achieve the aims of the proposal.

Will the proposed changes affect the hours of operation?

No. There are currently no proposed changes to the hours of operation of the airport.

Will this proposal lead to a reduction in the number of air traffic controllers available at Inverness?

No. Inverness approach radar services will continue at the present level of service, indeed, an increase in air traffic controller resource has been approved.

Inverness Airport remains committed to maintaining the current provision of the air traffic services to all users in the vicinity Inverness.

Will the airspace change proposal alter the military operations at RAF Lossiemouth?

Slightly. The airspace change and resulting coordination improvements will allow the RAF to carry out their tasks more efficiently around Inverness Airport and the Tain range.

Will this enhance Safety?

Yes. Safety is the most important factor for any airport operator and flights operating at Inverness Airport are already very safe. The proposed changes will further enhance safety levels into the future and help to reduce the growing general effect of drone use close to airports.

Will the proposed changes result in an increase in noise for local people?

No. The aircraft noise impact immediately after implementation is not likely to be significantly different from the pre-implementation situation.

What is the impact on aircraft emissions?

Preservation of the environment is very important to us and we have conducted extensive environmental studies through a specialist organisation to assess any potential effects. The environmental studies show that there will be no impact in terms of noise at the airport or local air quality. Further details of the environmental studies are contained in the consultation document. In addition, there is the potential for an actual reduction in aircraft emissions, as aircraft to and from Inverness Airport will be flying a more direct route designed for modern aircraft.

The proposed IFPs will introduce CCDs and CDAs to the Commercial Air Traffic (CAT) aircraft operations. These environmentally friendly procedures lead to reduced aircraft emissions and noise levels within both the initial and latter stages of flight, further minimising disruption near Inverness Airport and resulting in fewer people being overflown at low altitudes.

What are the benefits of the proposed airspace change?

The overall aim of the Inverness Airport Airspace Change Proposal is to enhance safety and improve the efficiency of Inverness Airport's operations whilst minimising adverse effects to General Air Traffic (GAT) and the environment.

Improved safety and airspace efficiency

Inverness Airport is located within uncontrolled Class G airspace, where aircraft are not subject to mandatory compliance with ATC instruction (only a small set of compulsory flight rules) and can enter, leave and transit the airspace without ATC permission. This exposes current flights to a range of hazards.

Although Inverness ATC handles the current operational issues safely on a tactical basis, any future increase in traffic may result in overload situations as controllers try to accommodate more aircraft in a limited volume of airspace to the west of the airport.

The proposed CAS will provide additional protection for CAT during arrival and departure (both vulnerable phases of flight for airliners) on current and proposed new IFPs, to optimise the airspace with efficiency and environmental benefit for all airport users and the local community in general.

Environment

With improvements in efficiency and safety, a new airspace environment could achieve reductions in noise around the airport as well as reduced fuel usage and emissions over time (including CO₂), compared with doing nothing.

However, in developing design options, there is a balance to be struck between competing benefits. For example, low-level altitude routings may prioritise the avoidance of areas of population to reduce the impact of noise but could lead to an increase in track miles, thereby potentially negating the fuel-saving benefits. The consultation sought to explain this balance and asked for feedback.

Additional to the absence of CAS, the uncertainty and lack of standardisation of arrival and departure aircraft flight routing, which arises from the current absence of IFPs in terms of standard routes, contributes to this environmental impact.

CAT pilots in particular are prevented from efficient flight under the current conditions, they are unable to minimise both emissions and noise near the airport. It is anticipated that the update of existing and establishment of new IFPs would lead to environmental benefits; allowing CAT to operate to optimum performance.

What has happened so far?

The initial airspace design phase began in 2014. This has involved continued engagement with key aviation stakeholders to help develop preliminary design options. HIAL took this proposed design to the initial formal consultation, where both aviation stakeholders and members of the public along with other interested parties were encouraged to formally submit feedback.

Public representatives (including MPs, district and borough councils), statutory bodies, the military and environmental groups have also been consulted. All feedback from both aviation and non-aviation stakeholders is considered and used to refine the proposed design.

A consultation document outlining the proposed airspace changes was released at the start of the initial consultation on 29 September 2014 and initial consultation closed on 19 April 2015. All the consultation material is available on the Inverness Airspace Change Consultation website.

All feedback gathered during the initial public consultation was analysed. The Feedback Report, also on the website, provides a summary analysis of the numbers, types of responses received and indicates how the main points raised have been taken into account in the design refinement process.

How will the proposal affect me?

The introduction of CAS at Inverness Airport will have minimal or no impact for many local residents. The outbound and inbound routes, have been designed so as to minimise the environmental and noise impacts to the local community, whilst enhancing flight safety and efficiency.

The addendum, and previous consultation documents available on this website contain information from which aviation consultees, organisations, statutory bodies and individuals, including General Aviation pilots and local residents, can gain an understanding of the proposal, how it will affect them and how they are able to provide an informed feedback. HIAL wish to make the public aware of the changes and invites you to read the addendum consultation document in detail.

How can I make my opinion heard?

It is essential that all aviation stakeholders and local residents are consulted and have the opportunity to state their opinion; your views on this proposal are important to us. Members of the public are invited to contribute to the consultation as individuals if they so wish and should follow the guidance on consultation responses in section 2 of the consultation document. We have created an email address on this website, which will allow you to submit your feedback. Alternatively you can write to us using the contact information detailed below. The deadline for consultation is dd mm 2016 and to ensure everyone's opinion can be heard, HIAL kindly ask you to respond in advance of this date.

Email Address: invernessairspace@hial.co.uk

Who will prepare the ACP and who decides if the proposal is accepted?

The Airspace Change Proposal will be prepared by Osprey Consulting Services Limited (Osprey CSL) on behalf of HIAL, the 'Sponsor' of the proposed change, as defined by the CAA.

This consultation is being conducted in accordance to UK Government aviation policy. HIAL is responsible for conducting the consultation for the Inverness Airport Airspace Change Proposal and any associated costs. However, the organisation that determines which airports can have an area of CAS is the UK CAA. The CAA requires each airport seeking CAS or the enhancement of IFPs to submit a Proposal which justifies their application, and demonstrates that all interested parties have had an opportunity to make their views known. The CAA is then required to decide on the merits of the application for the Airspace Change Proposal for Inverness Airport.

HIAL launched the formal consultation, for the introduction of CAS and optimisation of IFPs at Inverness Airport, on dd mm 2016. This consultation will run until dd mm 2016.

Where can I find additional information?

Details of the Inverness Airport Airspace Change Proposal will be published on this website throughout the proposal process.

In due course, an executive summary of the formal Airspace Change Proposal will be available on the UK CAA website (www.caa.co.uk).

Additional background information regarding UK airspace and regulatory requirements for an airspace change can also be found on this website and in documents provided on the CAA website. These documents include:

CAA Civil Air Publication (CAP) 724: *The Airspace Charter* (www.caa.co.uk/cap724)

CAA CAP 725: *CAA Guidance on the Application of the Airspace Change Process* (www.caa.co.uk/cap725)