

# GENERAL AVIATION ALLIANCE

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Partnership in Aviation

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## HOUSE OF COMMONS TRANSPORT COMMITTEE INQUIRY INTO AIRSPACE MANAGEMENT AND MODERNISATION - A SUBMISSION BY THE GENERAL AVIATION ALLIANCE (GAA)

### The General Aviation Alliance

1. The General Aviation Alliance (GA Alliance) is a group of organisations representing the interests of many in the UK General Aviation (GA) industry. It was formed in 2004 to address the need for co-ordinated response to UK regulatory issues.
2. Members of The Alliance include; British Balloon and Airship Club (BBAC); British Gliding Association (BGA); British Hang Gliding and Paragliding Association (BHPA); British Microlight Aircraft Association (BMAA); British Parachute Association (BPA); Helicopter Club of Great Britain (HCGB); Light Aircraft Association (LAA); PPL/IR Europe – European Association of Instrument Rated Private Pilots; Royal Aero Club of the United Kingdom (RAeC). The Alliance coordinates about 72,000 subscription paying members of these bodies.

### Submission - Executive summary

3. The GA Alliance supports the government view that the UK relies greatly on the speed and global reach of air transport to keep us connected and provide the international access that we need for trade, business and tourism. We agree that the modernisation of UK airspace is necessary and must be informed by the needs of all airspace users. The GAA welcomes the opportunity to comment to this Select Committee. In summary, we note;
  - The UK Government's GA Strategy recognises the importance and diversity of GA and its significant contribution to the UK economy

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*British Gliding Association  
British Hang Gliding and Para gliding Association  
British Microlight Aircraft Association  
British Parachute Association*

*Royal Aero Club of the United Kingdom  
Helicopter Club of Great Britain  
Light Aircraft Association  
PPL IR Europe*

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- GA needs access to significantly large areas of joined up airspace unencumbered by unnecessary air traffic control intervention and disproportionate regulation
- The ongoing commitment to safe operations by all airspace users and the airspace regulator ensures that UK airspace remains acceptably safe
- Numbers of flights in the UK have not increased as much as commercial operators suggest
- Controlled airspace (purportedly in support of commercial aviation) has expanded significantly and continues to do so to the detriment of GA
- Parts of controlled airspace are barely used but are not given up as airport operators view controlled airspace as a commercial asset
- Sponsors of controlled airspace applications tend to ignore the impact on other airspace users. Increased CAS forms hazardous choke points and forces GA aircraft lower
- GA wants to integrate safely without disproportionate restrictions
- Flexible Use Airspace (FUA), which is used elsewhere in Europe, would facilitate efficient sharing of airspace
- NATS is powerful, significantly relied on for expertise by the Government and the CAA, and is largely owned by shareholder airlines and airports

#### **General Aviation – a key component of UK aviation and communities**

4. The GA Alliance agrees that airspace is an important national asset and that commercial air transport is a key component of the aviation sector. The UK has a thriving General Aviation (GA) sector. GA is the term used for all aircraft and flying machines other than those operated by airlines or the military. GA ranges from privately owned business jets to balloons, light aircraft, gliders and paragliders. GA aircraft are used for business, training, recreation, sport and pleasure and as a means of transport. Hundreds of GA air sport airfields are focal points of their local communities that contribute to quality of life and sport participation objectives as described in governments *Sporting Future* strategy. The GA sector comprises about 33,000 of the civilian aircraft in the UK, around 1000 belong to airlines. GA aircraft use all types of airspace. Business and some private aircraft mainly use controlled airspace, but the majority of GA aircraft mostly operate in uncontrolled airspace.

#### **UK GA Strategy**

5. The Government's *GA Strategy* espouses that the UK should be the best place in the world for GA operating as a flourishing, wealth generating and job producing sector of the economy. The total economic impact of GA on the UK economy is around £3 billion of Gross Value Added and supports in excess of 38,000 jobs. The wider aviation sector adds around £20bn a year to the economy, supports 220,000 UK jobs. The UK GA Strategy includes the following elements described here in precis;
  - Proportionate, transparent, risk, and evidence based regulation and only when necessary
  - Progress of the Future Airspace Strategy VFR Implementation Group (FAS VIG) deployment plan to deliver tangible benefits to VFR (GA) users.....so as to establish a sustainable future for (GA) operations.

- Ensuring VFR operations are understood and recognised in policy & decision making
- That controlled and regulated airspace is rebalanced to reflect the needs of all including GA
- Flexible management of airspace is widely implemented based on greater engagement with GA operators
- Capacity of airspace structures to accommodate GA operations is measured and maximised
- GA aircraft not excluded from any airspace that is not being utilised for its intended purpose
- Progress development of electronic conspicuity via low cost, low power, lightweight devices that potentially benefit all parties

### **Future Airspace Strategy**

6. A range of organisations from across the aviation industry are working together on a Future Airspace Strategy (FAS) deployment plan which is supported by airports, aircraft operators, air traffic control organisations, the Military and the Civil Aviation Authority. The primary influencers within the FAS are those representing airports, airlines and NATS, a global corporation and a public private partnership between the Airline Group, which holds 42%, NATS staff who hold 5%, UK airport operator LHR Airports Limited with 4%, and the government which holds 49%. Commercial air transport interests are currently front and centre of FAS developments, with a single-minded focus on their industry and no interest in the impact on other, eg GA airspace user interests.
7. Following intervention by GA and the CAA, a Future Airspace Strategy VFR Implementation Group (FAS VIG) has been established to ensure that GA needs are at least considered; VFR refers to 'visual flight rules' to demarcate the primarily VFR GA operations from the primarily IFR (instrument flight rules) commercial air transport operations. Unfortunately, the FASVIG is far from being an equal representative within FAS. And the FASVIG funding, which is dependent on the goodwill of the FAS membership, is currently uncertain.
8. GA cannot possibly flourish without access to large areas of contiguous freely accessible airspace. To facilitate the delivery of tangible benefits from FAS to GA and other VFR users, it is clear that the FASVIG effort must be sustained through the development and delivery of FAS.

### **Commercial air transport operating techniques**

9. The introduction of Continuous Descent Approaches (CDA) brings airliners down a 3 degree, or steeper, flightpath all the way from their cruising altitude to touchdown. Their engines remain at very low power settings throughout, reducing noise and emissions and providing substantial fuel and cost savings. This has advantages for the general population and GA because airliners are higher (and quieter) and do not need so much low level controlled airspace. At the same time, the technology available to ATC controllers has enabled them to achieve more efficient routing and

to increase the landing and take-off rate so better utilizing our existing runways. Although this should have resulted in the release of controlled airspace, in practice NATS and other ATC providers want to retain this resource because there is no business advantage in giving it up. It is clear that NATS and other ATC providers see airspace as an asset to be acquired and owned rather than as a finite national asset to be shared and freely available to all.

### **Inaccurate reflection of need by commercial air transport**

10. GA cannot possibly flourish without access to large areas of joined up unreserved airspace. UK airspace is highly segregated. As the main airports have approached capacity and driven by airlines' search for cheaper landings, regional airports have seen an upsurge in the last 10 years. Controlled airspace at lower levels is 'owned' by airports and the systems that support that airspace are established to meet the needs of the airport. Access to airspace is prioritised on commercial need and is increasingly supported by a minimum level of controller resource. As a consequence, the UK's lower airspace is rapidly becoming a growing patchwork of areas of controlled airspace, very few of which are operated or utilised efficiently and which result in GA being squeezed into smaller areas of uncontrolled airspace. Unrealistic traffic separation requirements frequently result in enormous swathes of unused airspace being reserved for some unjustified future need based on an airports fictitious and exaggerated growth projections.

### **Air traffic data**

11. Although airports like to use passenger numbers to highlight business growth, aircraft are getting larger and airspace demand is dependent on aircraft not passengers. Passenger numbers continue to grow albeit slowly but at a much greater rate than movements. For the past 10 years the growth and capacity projection data for all but the major UK airports have been inaccurate and are not a valid basis for airspace planning. As part of any modernisation of UK airspace, there is a requirement for an independent, robust and sustainable method of establishing airspace capacity needs.

CAA air traffic data – commercial passengers and movements by year 2005-2015

NB – one movement is a take-off or a landing ie 2.1m movements = 1.05m flights

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Passengers	230m	237m	242m	238m	220m	213m	222m	223m	231m	241m	254m
Movements	2.37m	2.42m	2.46	2.41m	2.20m	2.07m	2.12m	2.09m	2.1m	2.12m	2.16m

## Flexible Use of Airspace

12. Flexible use of airspace is airspace that is turned off or on at specific times to meet traffic needs. Currently this occurs in upper airspace, for example allowing access for military traffic to certain areas. Flexible use of airspace is also needed in lower airspace. A simple example is in giving access to an area that is not needed when a particular runway is being used. A number of countries with equally successful aviation sectors as that of the UK, and with similar challenges, utilise different airspace constructs than those deployed in the UK. In particular, efficiently designed airspace, deployed on the basis of proven need and including carefully employed flexible use of airspace at all levels, can reduce the need for segregation and rebalance the needs of VFR and IFR operations
13. With airports focusing on business and many excluding GA, small airfields, airstrips and gliding sites are a valuable resource to their communities that are under threat. The spread of controlled airspace restricts the use of many small airfields and strips and it is virtually impossible to relocate as communities always fear that a small and quiet operation will develop into noisy jet traffic. We would like to see a better balance achieved by giving appropriate regard to small airfields and including access arrangements and risk analysis at the time airspace is designed. It is not at all clear that the forthcoming revised approach to airspace change designed to be transparent will achieve this important objective. The current system invariably generates poor airspace decisions from a wasteful, time consuming and confrontational process. The UK could achieve better airspace decisions at much lower cost if CAA would ensure that all aviation stakeholders' needs are genuinely considered *before* new airspace designs are commissioned.

## Technology and Electronic Conspicuity

14. Technology is a significant potential enabler of modernised airspace. While technology solutions are being considered within FAS, it is likely that inadequate investment in funding and technical expertise are limiting the potential opportunities technology can offer all users within modernisation of UK airspace. The CAA has previously aspired to impose radar-based Mode S transponder devices on every aircraft flying anywhere in UK airspace. These make the aircraft identifiable to radar systems and to anti-collision systems installed in airliners, and are mandatory for public transport aircraft flying in controlled airspace. For visual flight outside controlled airspace, imposition was strongly resisted primarily because there is no justification for such a mandate, the equipment is expensive in relation to the hull value of many small aircraft, a significant number have no electrical system to support it, and for some there still isn't any equipment that they could fit. Whilst the use of Mode S radar transponders in commercial air transport aircraft flying in controlled airspace is important to their safety (it is one side of the anti-collision system of last resort) it does not benefit small aircraft which do not have the complex anti-collision systems needed to see other transponders and resolve conflicts.

15. Mid-air collisions make up less than 10% of the total operational risks for GA and are thankfully very rare. Statistics demonstrate that the greatest risk of collision to a glider is by another glider. The same applies to powered aeroplanes, where the greatest collision risk is from another powered aeroplane. Over the last 15 years, the gliding community has voluntarily equipped with FLARM, an internationally utilised low cost traffic information and electronic conspicuity device that provides tangible safety benefits to users that are similarly equipped. Meanwhile, Project EVA, a NATS research and development project co-funded by the SESAR Joint Undertaking, has been developing other traffic information technologies and assessing them in flight trials in the UK and across Europe. The devices enable GA aircraft that are not equipped with a transponder to transmit their position and receive information from other suitably equipped airspace users around them using ADS-B technology. This electronic conspicuity provides real-time traffic information and proximity warnings of conflict risks, thereby increasing the ability to see and avoid conflicts in a timely manner. Project EVA ran from August 2014 to October 2016 and included assisting with the development of certification and regulations in the UK and elsewhere in Europe to speed up the availability of the technology. The CAA and GA jointly previously agreed an industry standard which will facilitate development and production of devices that will be beneficial to users and as a consequence should result in widespread voluntary equipage. However, within the CAA's conspicuity working group, a number of fundamental issues have been identified that stem from optimistic analysis of supplied data. Unless addressed, these issues significantly limit the opportunities presented by the technology, including the opportunity to minimise the need for segregation and minimise air traffic controller input.

## **Recommendations**

16. The government should direct that airspace modernisation should be progressed and that modernisation must deliver tangible benefits to GA and other VFR airspace users to ensure a sustainable future for their diverse range of operations.
17. To facilitate the delivery of tangible benefits to GA and other VFR users;
  - a. GA and other VFR sectors needs must be appropriately and equally represented; and
  - b. FAS VIG must be financially supported by the commercial air transport sector as it is the overall beneficiary of controlled airspace
18. The development and implementation of modernised airspace must include tools that support proportionate levels of reserved airspace which are;
  - a) scalable in time and size dependent on actual need; and
  - b) include flexible use of airspace at all levels that delivers real benefits for GA and other VFR airspace users such as the Military.
  - c) based upon idealised models for the various possibilities of controlled and regulated airspace. These models to be produced by the CAA and designed to minimise the airspace used, thereby limiting the environmental impact as a consequential benefit.

19. Electronic conspicuity must be developed as a tool that;
  - a) reduces the need for both airspace segregation and traditional air traffic control 'man in the loop' solutions
  - b) must provide direct benefits to the user
  
20. It should be established through independent challenge that no conflict of interest exists from NATS inputs to government and the airspace regulator

**Further information**

21. The GA Alliance is able and willing to provide verbal evidence if so required.

Thank you for your interest.



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