A4A

Airspace for All

Airspace for All

Steve Hutt

Trial Manager

Airspace4All GA Airfield ATS ADS-B Traffic Display Trial

About Me: Steve Hutt

- Private Pilot – building a Van's RV-7
- Ex Director of the Light Aircraft Association (oversees UK Permit-to-Fly aircraft)
- 30+ year professional career in IT
- Worked for British Airways for 21 years (1978-1999)
- Member of team that implemented BA's SWORD Flight Planning system in 1980's
- Ex Programme Coordinator for FASVIG
- Involved with FASVIG/Airspace4All since 2014

Airspace4All History (FASVIG)

- CAA launched ***Future Airspace Strategy (FAS)*** in 2011 to modernise UK airspace in line with ***Single European Sky ATM Research (SESAR)*** programme
- Following the release of the FAS, Airlines, Airports and ANSPs came together as a ***FAS Industry Implementation Group (FASIIG)*** to develop the FAS Deployment Plan (FAS DP) aligned largely to the objectives of the European ATM Master Plan
- ***But, FAS only addressed Commercial Air Transport (CAT) in its first iteration.***
- So, the CAA needed a way to deliver the FAS vision ***beyond*** **CAT**.

Airspace4All History (FASVIG)

- Hence the **FAS VFR Implementation Group (FASVIG)** was formed at the end of 2013 as an integral part of FAS
- See www.fasvig.org

- In 2018 CAA launched its **Airspace Modernisation Strategy** to supersede FAS
- Thus the name FASVIG was no longer fitting
- FASVIG renamed as **Airspace4All** on 1st September 2018
- See www.airspace4all.org

Airspace4All Mission

To work in partnership with other aviation stakeholders to explore innovative solutions to create a sustainable and equitable UK air traffic environment.

Airspace4All seeks to deliver benefits across three key themes:

- **Modernising Controlled and Regulated Airspace;**
- **Improving Access to Controlled and Regulated Airspace; and**
- **Improving VFR Efficiency.**

See flyer in your pack

Airspace4All Approach

A4A Airspace for All

- ensuring changes are timely, proportionate, efficient and proven necessary, in order to minimise disruption to other stakeholders; **Appropriate**
- challenging changes to ensure that modern airspace design, technology and procedures are utilised; **Up to date**
- introducing comparators, when available, with best practice from other states; **Best practice comparators**

  See flyer in your pack
- ensuring that, despite change, access to controlled and regulated airspace is maintained equably at all times for the stakeholders; **Equitable**
- offering solutions to the regulator that achieve Airspace4All's mission **Offer solutions**
- encouraging the General Aviation Community to adopt a unified approach and position on all airspace matters. **Unify GA**

Airspace4All Projects

See flyer in your pack

- Electronic Conspicuity
- Flexible Use of (Lower) Airspace Policy
- Future ATM Concepts and Airspace Design
- Integrating All Air Traffic Types Within Regulated Airspace, Safely and Predictably
- Regularising Access to Controlled and Regulated Airspace
- Communications & Engagement

Airspace4All GA Airfield ATS ADS-B Traffic Display Trial

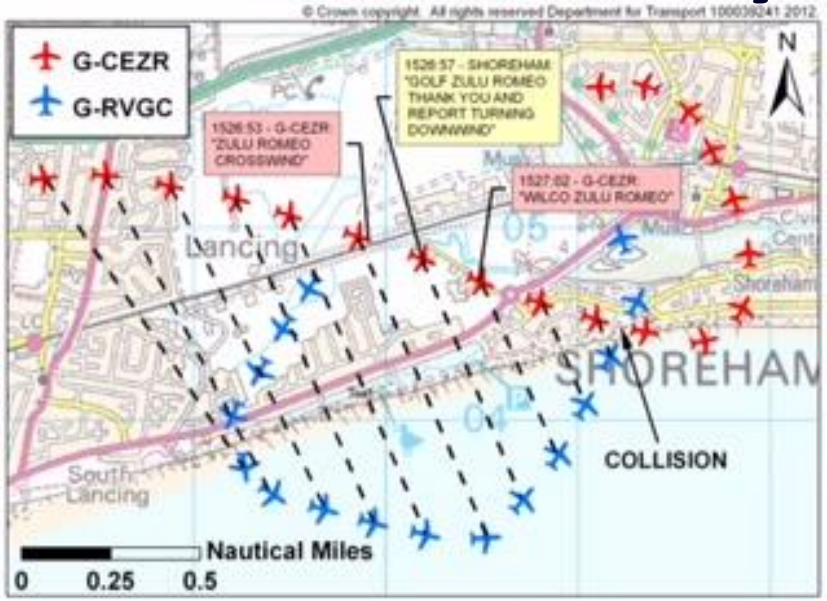
Airspace4All

Shoreham MAC 15:27 4th July 2011

Airspace for All

Bright Sunshine
Clear blue sky
Visibility est. 30+nm

ATCO never sighted G-CEZR



2x Flying Instructors
P1 3450hr

20,600hr ex-747 Captain
averaging 60hr/yr GA

Why do the trial

- 85% of powered GA aircraft Mid-Air Collisions are with another powered GA aircraft
- Of these, **57%** are in the **airfield circuit or adjacent airspace**

The airfield circuit and adjacent airspace is the greatest risk area for GA powered aircraft mid-air collisions

Source: Airspace4All Mid-Air Collisions: An Evidenced Based Analysis of Risk 1975 to 2018

Why do the trial

- ADS-B Electronic Conspicuity can provide traffic awareness
  - to GA pilots in the air
  - and GA ATS/AGCS on the ground
- ATS ADS-B Traffic Display technology is now low cost (circa £2k)
- **However....**
  Current CAA regulations do not allow use of a Traffic Display by GA AFIS, AGCS or non-radar ATC

The trial

So.....

Airspace4All ran a CAA approved ADS-B Traffic Display trial for 6 months in the live operational environment at 3 GA airfields

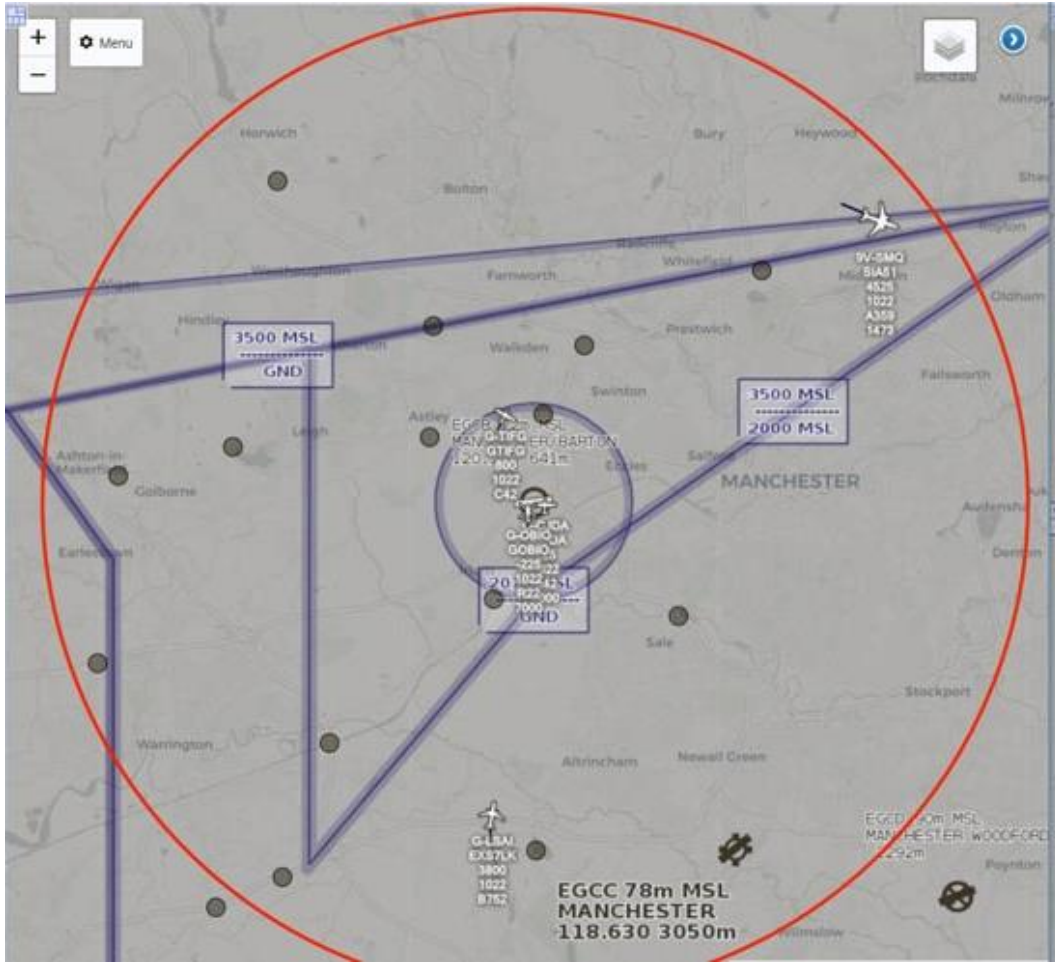
"To gather evidence to enable CAA to assess the capability and give consideration to policy change authorising use of ADS-B real-time traffic displays by GA ATS units"

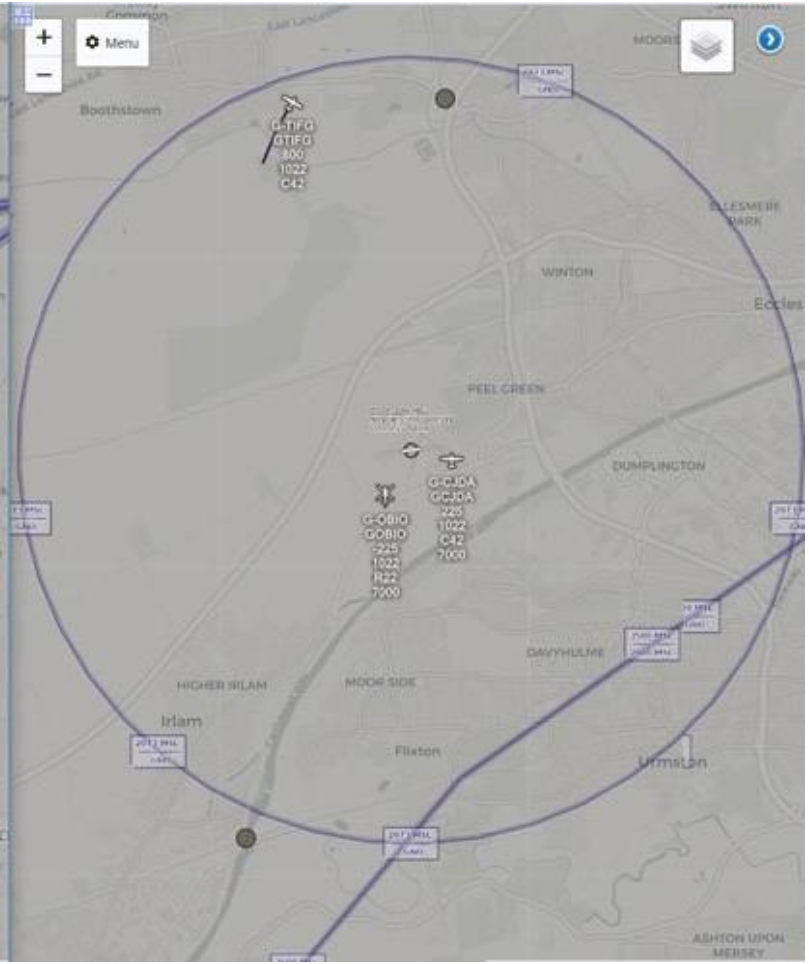
The trial

- Single All-weather ADS-B ground receiver
- Direct air-to-ground ADS-B realtime data
  - (not via internet – unknown latency)

- Used as a supplementary tool for enhanced situational awareness to provide traffic information (under CAA agreed safety case)
- ATS provided daily & monthly online feedback throughout trial

K1605
26L
999
997
17:04:46
RUNWAY BLOCKED

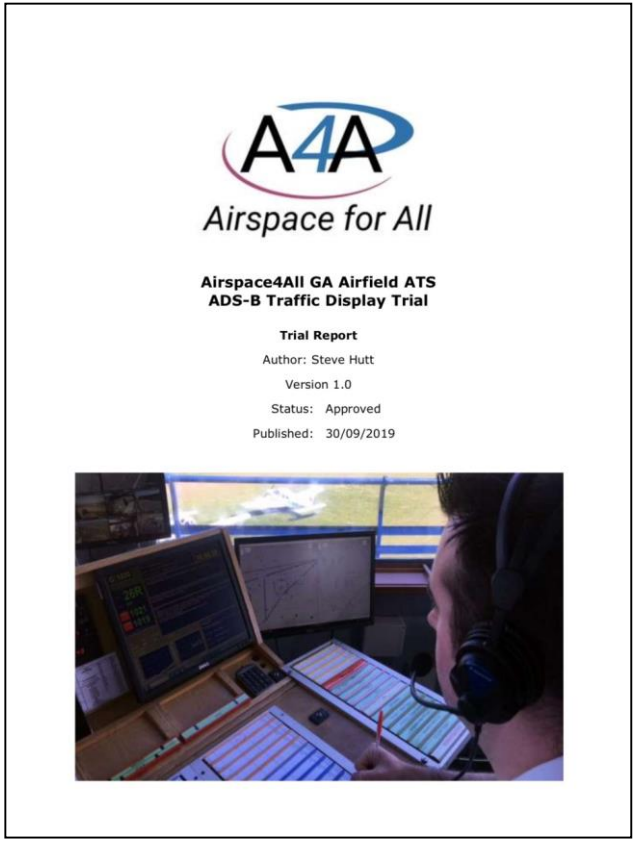




Zoomed-out 10NM radius view on left. Zoomed-in ATZ/circuit view on right.

Airspace4All

Trial Report



Airspace for All

Airspace4All GA Airfield ATS ADS-B Traffic Display Trial

Trial Report

Author: Steve Hutt

Version 1.0

Status: Approved

Published: 30/09/2019

The Trial Report is now available on the Airspace4All website.

www.airspace4all.org

See ‘Reports’ on the Main Menu.

Report is primarily based on feedback provided by the ATS units

See Exec Summary in your pack

Conclusions

- Safe to Use (not a distraction hazard)
- Range sufficient to cover ATZ and beyond
- Viable solution for GA airfields
- Enhanced ATS Situational Awareness
- Enabled provision of better traffic info
- Helps reduce probability of Mid-Air Collision
- Helps reduce airspace infringements
- Helps confirm compliance with local traffic regs

Conclusions

- Improves ATS service
- Improves health & wellbeing of ATS staff
- Highly accurate (more so than most pilot position reports)
  - Should be allowed to treat ADS-B position data same as pilot position report
- Requires Airfield & ATS Unit commitment
- Has raised GA awareness of ADS-B
- **Has incentivised aircraft operators to equip with ADS-B**
  - ADS-B is not mandatory for UK light aircraft (<5700Kg, 250kt)

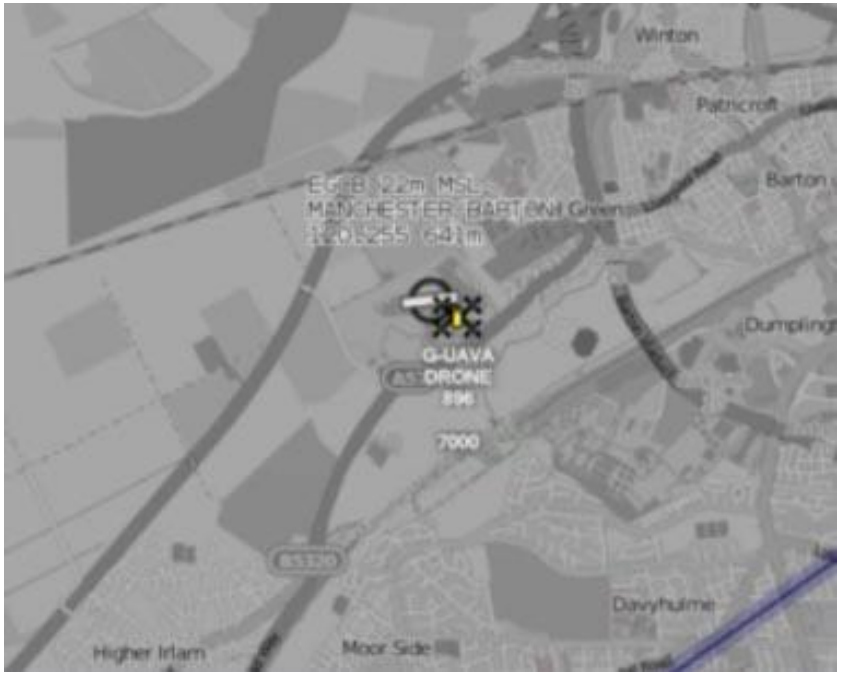
A User Quote

Airspace for All

"Having been a FISO for some 20 years it has been nothing but a positive. It enables me to provide a much better service as a FISO giving me a tool to enhance my own situational awareness. Rather than relying solely on (often inaccurate and woolly) position reports, I can now confidently know where aircraft are and identify relevant traffic information and assist pilots in avoiding conflict"

Drone Infringement Safeguarding

- And finally……
- We have flown an ADS-B equipped drone at a GA airfield alongside ADS-B equipped GA aircraft to research Electronic Conspicuity for drones.
- Report is to be published by end of October
- Come see video on our stand.



See you during the break