FASVIG 1 Friday 17th January 2014

CAA House, Kingsway, London

Record of Discussion

1. **Attendance:**

   A record of attendees is given at Appendix 1

2. **Introductions:**

   John Brady, joint vice chairman of the FASVIG group welcomed participants to the meeting, outlined the purpose and objectives of the initiative and introduced fellow joint vice chairman, Tim Hardy, (Airside Director, Heathrow), Jim Walker, (CAA Airspace Business Co-ordinator) and Eryl Smith, (FASVIG programme co-ordinator). Individual members gave a brief personal introduction.

3. **FASVIG Context: The CAA Future Airspace Strategy:**

   JB introduced Phil Roberts, (CAA Head Airspace, ATM & Aerodromes) who provided a brief presentation summarising the timeline of activity underpinning the CAA's FAS initiative and the context for the FASVIG workstream. In his summary he stressed the importance of the FASVIG to the overall FAS initiative and the objective that this should result in more uncontrolled airspace whilst ensuring that safety, capacity and sustainability remained key. The presentation accompanies the record of the meeting.

4. **FASIIG: Background and Objectives:**

   JB introduced Tim Hardy who provided a brief summary of the work undertaken in the Future Air Space Industry Implementation Group (FASIIG) which has focussed on enabling capacity, efficiency, safety and environmental benefits to Commercial Air Transport operators and airports. He provided an update on FASIIG deployment plan and highlighted the following learning points from the FASIIG experience to date that may be pertinent to FASVIG activities:

   - Ability to articulate jointly held views

   - Maintaining perspective

   - Reconciling areas of competing interests

   - Keeping engaged

   - Working towards jointly agreed goals

   To secure this a Memorandum of Understanding had been signed by all FASIIG participants and the principle of Collaborative Decision Making adopted.

5. FASVIG TORs, Purpose & Objectives:

JB introduced the FASVIG workstrand, noting that VFR activity represented the next biggest sector of traffic after CAT. It was intended that the FASVIG working group would provide the opportunity to bring together representatives from GA and military aviation to define a vision for VFR operations in the future. A document setting out the TORs, Purpose & Objectives had been circulated prior to the meeting and copies were provided in the delegate packs. These were not prescriptive but intended to provide a framework for FASVIG members' consideration. Mirroring the approach adopted by FASIIG it was proposed that the vision of FASVIG (subsequently proposed as the "objective") should be:

'to provide a sustainable future for VFR operations within FAS'

The TORs were taken as read for the purpose of the initial meeting but attendees were invited to consider them pending formal adoption at the second meeting.

6. Creating a Vision for FASVIG

FASVIG members participated in a brainstorming workshop with the aim of identifying issues that were relevant to achieving the FASVIG vision. Post meeting these were to be shaped into indicative workstrands for presentation back to FASVIG 2 for endorsement. It was proposed that leads would be sought for the respective workstrands and FASVIG members be invited to support the individual activity strands.

The raw capture from the Vision Brainstorm is captured at Appendix 2. These were further refined post lunch in table discussion focussed on specific themes of:

- Conspicuity
- Education & Training
- Regulation; Airspace & Rules
- Flexible Airspace

The raw capture from the themed discussion is captured at Appendix 3.

7. FASVIG Timeline: Key enablers and barriers to progress

An initial group discussion was help with the aim of identifying key milestones, enablers and blockers that may influence the progress of FASVIG. Unlike FASIIG it was acknowledged that FASVIG had the opportunity to define and progress stand alone initiatives though programme co-ordination would be maintained with FASIIG and the wider FAS programme. Key elements of the timeline were identified as:

2014: scoping and exploring in detail the FASVIG workstrands; identifying enablers/blockers & quick wins

2015: evaluating and piloting initiatives to determine robust and exploitable long term developments. Continuing to implement quick wins

2016: Implementation and exploitation of substantive initiatives

2017 and beyond; realisation of increasing benefits to VFR operations

8. **Next Steps & Actions**

   JB advised that a full capture of the workshop would be created and utilised to scope, post meeting, the proposed workstrands that would form the workplan for FASVIG. These would be circulated ahead of FASVIG 2 and feedback sought to enable the workstrands and indicative workplan to be presented and endorsed at that meeting. In addition participants were asked to review the ToRs and 'Working Arrangements' documents for sign off at FASVIG 2.

   A detailed list of actions accompanies the record of discussion.

9. **Date of Next meeting**

   The date of the next meeting was confirmed as Friday 21st February, 1000hrs to1300hrs at CAA House, Kingsway.

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FASVIG 1 Attendance List   **Appendix 1**

1.   Sqn Ldr Dave Austen   DAATM
2.   Jamie Babbin   Leeds Bradford In International Airport
3.   Dave Best   DfT
4.   John Brady   GAA (Co-Chair)
5.   David Broughton   RIN   (apologies)
6.   Rich Fewtrell   Ascent Flight Training
7.   Tom Hardie   BHPA
8.   Tim Hardy   HAL (Co-Chair)
9.   Sqn Ldr Bob Higgins   Joint Helicopter Command
10. Tony Hooper   Euro USC
11. Brian Hope   LAA
12. Roger Hopkinson   LAA
13. Sqn Ldr Kev Hughes   22 Training Group
14. Lt Cdr Andy Hurry   NCHQ
15. Mike Jackson   LAA
16. Brendan Kelly   NATS
17. Steve Landells   BALPA
18. James Latham   SATCO Shoreham
19. Capt Rob Legg   easyJet (Flight Safety Captain) (apologies)
20. Deepak Mahajan   Damyns Hall
21. Richard Massingham   Birmingham Airport Limited
22. David McCamley   Blackpool Airport
23. Chris Mitchell   LAA Yorkshire
24. Capt Ian Moorman   BALPA
25. Timothy Nathan   PPL/IR (apologies)
26. Peter Norton   BHA (apologies)
27. Brian Peppercorn   Stapleford Flying Club
28. Will Poyner   Blackpool Airport (apologies)
29. Tony Rapson   Hd GA Unit
30. Tony Ridley   BALPA
31. Andy Roch   BGA (London Gliding Club)
32. Phil Roberts   SARG Hd AAA
33. Martin Robinson   AOPA
34. Ian Rogers   Cambridge International Airport
35. Julian Scarfe   PPL/IR
36. Eryl Smith   FASVIG PMO
37. Jonathan Smith   NATS
38. Jim Walker   SARG Airspace Business Coordinator
39.   Geoff Weighell   BMAA
40. Philip Whiteman   Pilot Magazine
41. Trevor Wilcock   LAA Bristol
42. John Williams   BGA
43. Capt Alistair Wilson   easyJet (Regulatory affairs Captain)

Visioning Breakout Capture   **Appendix 2**

Table 1:

'Clever adaption to Real Risk Increases Freedoms for all'

- Categories of airspace
  - Managed
  - Unmanaged (*free*)   *How to choose?*
  - Flexible

- Key criteria for determining = RISK
  - Current approach seen as 'lumpy' (course/inconsistent?)
  - (example of X/Runway procedures driving airspace provision even when not in use) *inertia/risk to owner of 'giving it back'*

- Adopt 'Intelligent' approach to airspace planning
  - Example; dis-incentive to give up airspace due to challenges of re-instating

Additional table comments:

- *Pipelines in the sky; visible to VFR pilots who only have to avoid. May work for the 'flexible' category of airspace or all*

- *'Real risk must decide'*

- *Regulation needs to support.......*

- *All users have live access or avoid*

- *Dynamic FUA equipped; co-operative*

- *FUA: current FUA tools are slow; not dynamic outside CAS*

- *FUA has risk; danger areas 'on/off'*

- *Need dynamic information flow for release & use*

- *Non dynamic NOTAM*

Table 2:

'Simple easy to understand structure with simple rules'

- Keep it Simple approach (KISS)
- Electronic Conspicuity seen as huge enabler and considered to be adopted by 2020
- Understanding of each other users level of Risk & acceptance levels
- Costs: believe that beneficiary should pay – Who would that be (practicalities)
- Airspace sharing through tactical time slicing

Additional table comments:
- *Pilot professionalism*

- *Lateral thinking on SERA rules for VFR*

- *Risk of rules from abroad*

- *Over reliance on technology*

- *'Squeezing' due to CAS (Laterally & vertically)*
- *Using technology for traffic analysis*
- *Who pays?/Beneficiary pays?/Defining beneficiary*
- *Geographic shifts from current????*
- *Appropriate air traffic services*
- *Airspace switching on & off*
- *Information on real time airspace usage*

Table 3:

'By 2020 GA would have greater numbers and deliver greater contribution to UK economy'

FASVIG initiative should encourage growth in the GA sector'.

- Endorsed Table 2 comments
- Improved process of design; de-designation where appropriate (but who/how/cost issues?)
- Flexible use of airspace
- Corridors of/for access into/through controlled airspace for mutual users benefit

Additional Table Comments:

- *Review of airspace (reverse engineer)*
- *Flexible use of airspace (timeshare)*
- *Design criteria for CAS should be performance based*
- *Mechanism for reviewing regional CAS & operator to justify (formalise process)*
- *Does Class G need to change*
- *Carriage of equipment (transformers &/or radios)*
- *Class G safari park*
- *Encourage airports to assist with GAT transits (LBA corridor)*
- *General interface between airports & GAT*
- *Airspace justification body (NAPMAC)*
- *Reverse ACP (at reduced cost)*
- *Funding for LARS*
- *Electronic conspicuity*
- *Projection of GAT flying (PPLs/Flying Hours/registrations)*
- *GAT is good for the economy*

Table 4

'Overarching policy should be to maximise amount of Class G airspace

- Release of airspace and greater flexibility of use – simple and easy to use
- Easy access into controlled airspace

- o Issues for equipment & equipage
- Education: better education for Class G operators
- Conspicuity is not and option to many (at current levels of affordability and compatibility with aircraft

Additional table comments:

- *Airspace design exploits current & future technology*
- *Pilot schemes for increasing flexible use of Class G airspace by end of 2014?*
- *Information management, distribution & assurance*
- *Aerial Right to Roam: retain max Class G; Blockers: cost/resistance from CAT/ Enablers: compare other countries VFR*
- *Flexible Airspace requires greater data/info management*
- *PBN should result in less airspace required*
- *Older aircraft/older pilots should reduce by 2020/newly trained pilots/new tech a/c by 2020*
- *Lots of 'non-licensed pilots in Class G: educate & inform them & prepare them for 2020*
- *Increasing availability of information in the cockpit through technology (tablets/mobile phone)*
- *Cost of allocating/relinquishing airspace*
- *Start with a 'blank slate' for Class D&G airspace*
- *Volume of CAT is known/Volume of GA or VFR in Class G airspace is not known; need for data collection to predict demand for 2020*

Table 5:

'Enhanced See & Avoid'

- Issues
    - o Remotely piloted systems
    - o General identification: transponders/two way radio
    - o Are current VFR rules fit for purpose?
    - o VFR access to other airspace – precedence?
    - o Relevant levels of training, education and experience to operate in controlled/uncontrolled airspace. (example of powered parachutists) consider the full activity spectrum

Table 6:

'Maintaining an Aerial Right to Roam'

- As much access to controlled airspace as possible, aided by enhanced conspicuity and the wider use of safety systems (encouragement to adopt but not mandated)

- Greater ATC understanding of S&R capability

- Review of airspace criteria (do all ATZs have to be 2mi circles?)

- Controlled airspace should reflect current and future technology & performance capability (exceptions not the rule), *not historic requirements*

Theme Discussions **Appendix 3**

The following theme topics were discussed by participants in greater detail and their comments recorded below:

Conspicuity

- Electronic
    - Transponder/radar/visual – opportunity to improve & secure quick wins
    - If mandated how would you address those for whom its difficult/impossible to adopt
    - *Should be seen as an enabler: user needs/cost/availability/desirability key factors*
- Proportionality of Rules
    - Acknowledgement of Conspicuity W/G; output from W/G of significance to FASVIG; need to complement work not duplicate
    - Issues of costs, man & machine interface
    - 2 boxes emit & emit/receive
- Different User requirements
- FAS must take account of IFR & VFR users
- Issues around UAV integration
- Risks to be addressed (to be determined)
- Concern at over reliance on technology
- Class G – conspicuity considered 'nice to have'
    - Enabler to securing access into other airspace
    - Imperative is 'stopping collisions'
    - May result in some managed airspace being released
    - Use of TMZ/RMZ as part of mix

Stick-it commentary:

- *Emit only boxes*
- *Emit & receive boxes*
- *Over reliance on technology*
- *Output from ECWG*
- *The rules proportionate*
- *Beneficiary pays*
- *Costs*
- *What risks to be addressed*
- *Training*
- *Standardised MMI*
- *Interoperability*

- *Who are the players & what are their requirements*

- *UAV integration*

- *Within same users, different requirements*

- *Size, weight, battery life*

- *What can be done by what aircraft; avoidance*

Education & Training

'If you think the cost of education is high what's the price of ignorance?'

- Is there a case for a 'professional qualification to operate an air vehicle?' (*Air vehicle considered to be anything that takes up a person or is flown by a person on the ground)*
    - How to operate (in airspace terms)
    - Interaction with other airspace classes
    - Avoidance of risk to/with other airspace users

- Is there a need to review what's provided, who receives training/who provides it/ what's covered etc; *(understand the needs of other airspace operators and how to operate safely)*

- Set out what the minimum training requirements should be 'play nice with other airspace users' (*training appropriate to the level of available technology available; training to be delivered against an agreed list of subject)*

- *Period review of training requirements to allow for changes in regulation, technology and performance)*

- *Guidance for instructors to ensure that people they 'flight check' are updated on changes*

- Mutual education – simpler it is to train for

- Improvement in levels of communication (capability)

- What is the position with regard training for unmanned vehicles – basic qualification provided for aerial work involves ground school and exam (Ref Euro USC)

- How to legislate for ignorance/incompetence or poor approach/attitude? Who takes responsibility for addressing this?

Regulation: Airspace & Rules

- Base on current capability (not historic); Need to review

- Basis for separation should be appropriate separation requirements for VFR/IFR

- Rules should be based on pilot competence and equipment fit

- ICAO classification (Managed/Unmanaged)
    - Managed = equipment & training

- What about creating simpler airspace categories (A/B/C)?

- Review charging for ACP based on volume of space sought – implication that this would reduce demand

- Need to recognise extant International obligations

- Design of airspace for modern use: enabler – Transition altitude/ current a/c performance

Flexible Airspace

- Managed Airspace
  - Dynamic
  - How to expand this into Class G?
- Methodology
  - Broadcast activation (cf Skydemon)
- Non-Dynamic
  - The X/runway example (NOTAM inactive leads to change in airspace configuration/ reactivate when required) cf Aberporth ranges
  - Class D activation: apply differing rules appropriate to what you want to do with it
- Flexible Design
  - Reflect actual ops
  - Variable dimensions
  - Maintain buffer & contact
- FAS: exploit current/future technology
  - Info management
  - Distribution & assurance
  - Increasing access to controlled airspace with capability
- Time notification: eg parachutists blanket NOTAMs but not advised 'when parachuting stops' (early)
  - Enabler of data link to cockpit & pre-flight information (link to NOTAM WG)
  - Consideration of AIS

Additional Theme Comments

Airspace Structure:

- Design CAS based on the performance of modern aircraft

- Flexible use of CAS (Timeshare)

- As commercial traffic starts to use the 'straight up/straight down' methodology, increase base of CAS either side of CAS and release to Class G

- Move Danger Ares from places that are critical to GA/CAT operations (ie D132/133/138

- Robust Mechanism for reviewing CAS (continual process of justification)

- Consider Re-sizing airspace to suit actual use rather than historic standard

Equipment & Equipage

- Cheap & affordable conspicuity

- 'Greener' aircraft for GA with electronic conspicuity built into airframe

Safe Operations

- Encourage airports to assist with GAT transits (improve LARS)

- Planned integration IFR/VFR to avoid operational conflict

- Improve general interface between airports & GAT

- Better understanding of VFR operations by all others

- Improved knowledge of rules and practices by VFR pilots – 'better training'

Information Management

- One notification for flight

- Integrated system to share flight plan/flight information with all along route (include ATC/ADS/Events/Activities/Customs/Police) – 'Single Flight Notification'

Other

- Promote the benefit of GAT for the economy

- Does Class G airspace need to change?

- TMZ/RMZ Service levels? Staff available?

- 2020 educate/inform old & new pilots to cope with & process changing operations

- PPL Training: ATC approach to PPLs Pliots ability to operate with skill & confidence

- Study into projection of future GAT traffic

- Consideration of other EU nation VFR (or any) flight to UK – not a UK centric issue