

# MAINTAIN OUR REPUTATION

Chris Fox and Ed Downham report on another quiet year for glider-involved Airprox

**W**E'RE pleased to be able to say that again we've had a fairly quiet year for glider-involved Airprox. At 14 events, there's a small increase over last year.

**Glider Airprox in 2016/2017**

From 1 July 2016 to 1 July 2017, there were 14 Airprox involving gliders out of a total of 195 Airprox in the period, excluding drones. (See table 1, bottom of page.)

**Two themes stand out from this:**

Ten of the 14 were reported by glider pilots. We're really pleased to see that glider pilots are engaging with the Airprox system. It may feel as though nothing much happens as a result of an individual report, but it's only by building up a body of evidence that we can identify what might need to change.

Four of the 14 involved powered aircraft overflying active gliding sites. This is an ongoing problem with no single simple solution.

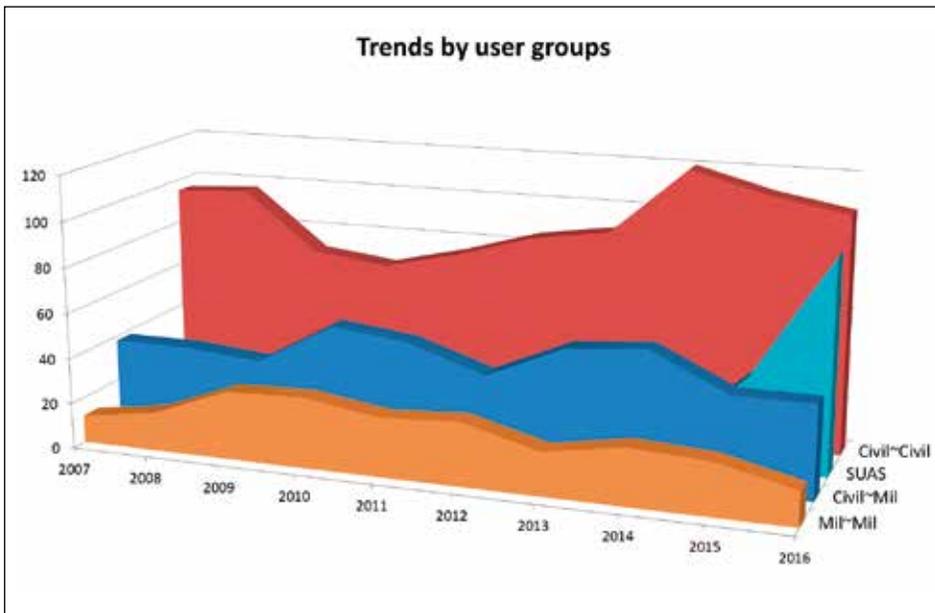
**General trends in Airprox**

It's good to see that, excluding drone-related incidents, the general trend seems to be for a decline in Airprox, both overall and for General Aviation (see figures 1 and 2 on facing page). However this is counterbalanced by a sharp increase in drone-related reports (see graphic left). The SUAS (Small Unmanned Aircraft Systems) group includes drones.

Airprox events involving drones and such have increased dramatically over the past few years (see figure 4, p31).

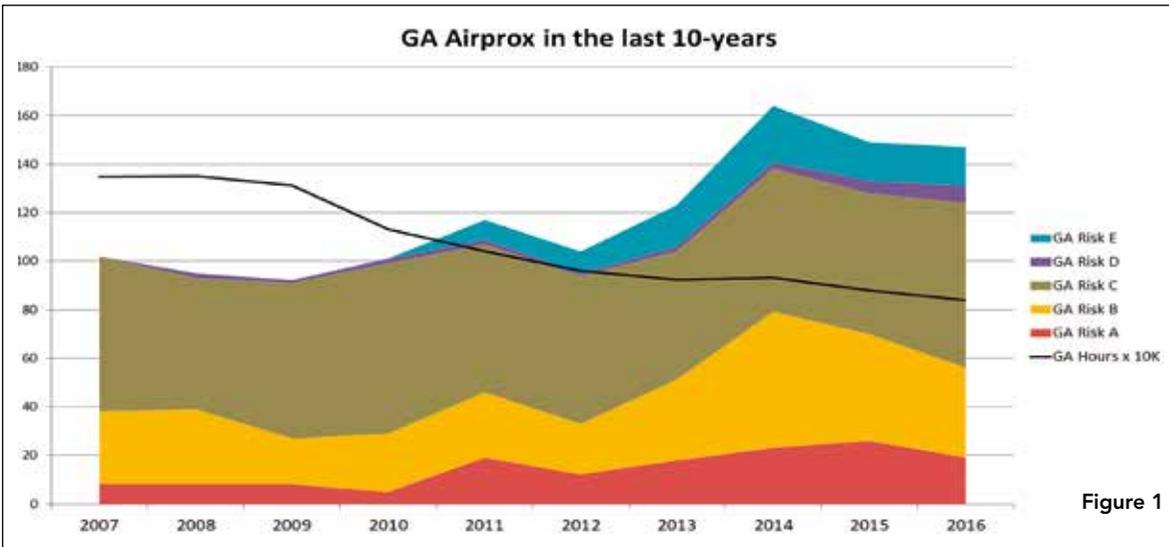
We haven't yet seen a glider/drone Airprox in the UK – but there have been reports of a glider/drone mid-air in the Netherlands. Luckily the glider landed safely with damage to one wingtip.

Within GA, by far the most common



AirproxID	Risk	Aircraft 1	Aircraft 2	Location	Comment
2016125	B	ASK21 GLIDER	CESSNA 152	Overhead Hus Bos	Overflight of active gliding site during instructional flight
2016144	C	VENTUS GLIDER	STEARMAN	West of Marham	Early sighting by Ventus; probable non-sighting by Stearman
2016149	D	DISCUS GLIDER	NAVAJO, CHIEFTAIN	NE of Cranfield	Discus operating close to the IFR hold
2016228	C	VIGILANT MOTOR GLIDER	CHEROKEE / WARRIOR / ARROW	West of Topcliffe	Light a/c seemed to 'tail chase' the Vigilant
2016169	C	LS3A GLIDER	GLIDER (UNSPECIFIED)	East of Bidford	Thermal joining protocol
2016181	D	TORNADO GR, IDS	GLIDER (UNSPECIFIED)	North of Scampton	Risk not assessed; not certain that it was a glider at 300'
2016186	C	TORNADO GR, IDS	VENTUS GLIDER	Marham MATZ	Competition task set through Marham MATZ
2017073	C	SCHLEICHER - ASK13	F-15	Near Talgarth	F15 pair spotted the glider and avoided
2017091	B	SCHLEICHER - ASW15	HORNET MICROLIGHTS	Overhead Darlton	Overflight of active gliding site
2017107	B	SCHLEICHER - ASK21	DIAMOND - DA40	Overhead Burn	Overflight of active gliding site
2017111	C	SCHLEICHER - ASK21	BOMBARDIER - CL600 2B19	Close to Halton	Biz Jet routed just over the Halton ATZ
2017131	B	ARCUS	CESSNA - 310	West of Cranfield	Late spot by both pilots - Arcus thermalling
2017050	C	GROB - G115 - E	GLASFLUGEL - H201	West of Scampton	FLARM warning in Tutor
2017108	C	CESSNA - 152	Untraced Glider	Near Bruntingthorpe	Late spot by both aircraft

Table 1 shows gliders involved in Airprox between 1 July 2016 and 30 June 2017



Left and below: the general trend seems to be for a decline in Airprox, both for General Aviation (figure 1) and overall (figure 2)

Figure 1

cause of Airprox is late or non-sighting of the other traffic (see figure 3, p31).

And on a separate but related note, it was excellent to see a recent NATS presentation report zero airspace infringements by gliders. Well done everyone.

**Electronic conspicuity**

After the ‘mandatory Mode S’ debacle of a few years ago, this area is coming to the fore again.

We see many incidents at UKAB where see and avoid didn’t prevent aircraft getting close to each other. Unfortunately, we have a variety of systems in use which don’t always talk to each other.

The CAA has now said that ADS-B is the technical way forward. Most glider pilots will be users of, or have come across, FLARM ☺

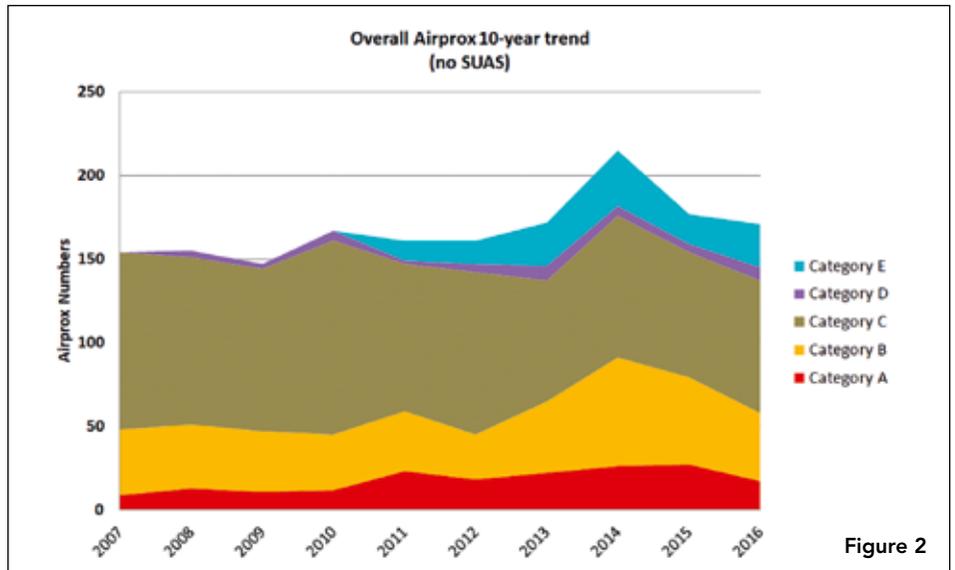


Figure 2

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### UK AIRPROX BOARD

The Board's sole purpose is to promote and increase air safety. It investigates all Airprox that occur in UK airspace and it's made up 14 people involved in aviation from almost every discipline: ground and air-based, civil and military, professional and amateur, users and regulators. It's chaired by the Director of the UKAB - currently Steve Forward, an ex-Harrier and occasional glider pilot.

An Airprox is any event where, in the opinion of a pilot or air traffic controller, the aircraft involved got close enough to cause concern. That's it. No minimum distances - but note it must be a pilot or ATC who files the report, not a ground observer.

A report is made on form CA1094 - a slightly daunting bit of paperwork available on the website at [www.airproxboard.org.uk](http://www.airproxboard.org.uk), but actually not too onerous to complete.

Once accepted by the UKAB team based at Northolt, an investigator is assigned and they will collect all the relevant data, including tracing all the involved aircraft, capturing radio transcripts and radar recordings, etc. A report of the facts is prepared and submitted to the Board for appraisal.

The Board meets once a month to consider 20-25 Airprox, supported by advisors from the military, NATS, CAA and so forth. We decide what caused the Airprox (but definitely without assigning blame) and allocate a Risk Category from A - it was pure luck that a collision didn't occur, to E - a Sighting Report where there was never any actual risk of collision. The full details of every report are published on the Board's website at <http://bit.ly/1kX1gkC>, updated monthly. There's also an annual magazine, available online at <http://bit.ly/1lJP27w>

The real value of the Board's work comes in the form of recommendations made to other bodies, eg CAA or NATS, for systemic changes that can reduce the risk of future Airprox. This comes down to looking at overall trends and looking for common themes.

✎ - this works very well for us, but doesn't interface with transponder-based alerting and warning systems as used in CAT and powered GA. Keith Vinning's article in the Dec 17/Jan 18 issue (*Helping hand with lookout*, pp16-17) gave an excellent summary of how FLARM can now provide warnings to PilotAware-equipped aircraft. This is an increasingly-popular low-cost traffic alerting system in the wider GA group.

It remains to be seen whether, when and what cost products will appear using the ADS-B protocols, but with the 'glider-aware' collision prediction algorithms that have made FLARM so popular. Tim Freearde's article elsewhere in this issue (see pp18-21) gives an excellent summary of the benefits and drawbacks of the CAA's proposed approach.

By the way, did you know that if you have a working transponder, you're now required to have it switched on at all times (SERA.13001, which came into effect last October)? There is an exemption for 'aircraft without sufficient electrical power supply', but really, it's time to get those batteries sorted out!

### Choke points

The complexity of the UK airspace structure means we regularly see Airprox (not necessarily involving gliders) occurring in

choke points - places where GA traffic is funnelled into relative narrow corridors of Class G airspace by surrounding CAS.

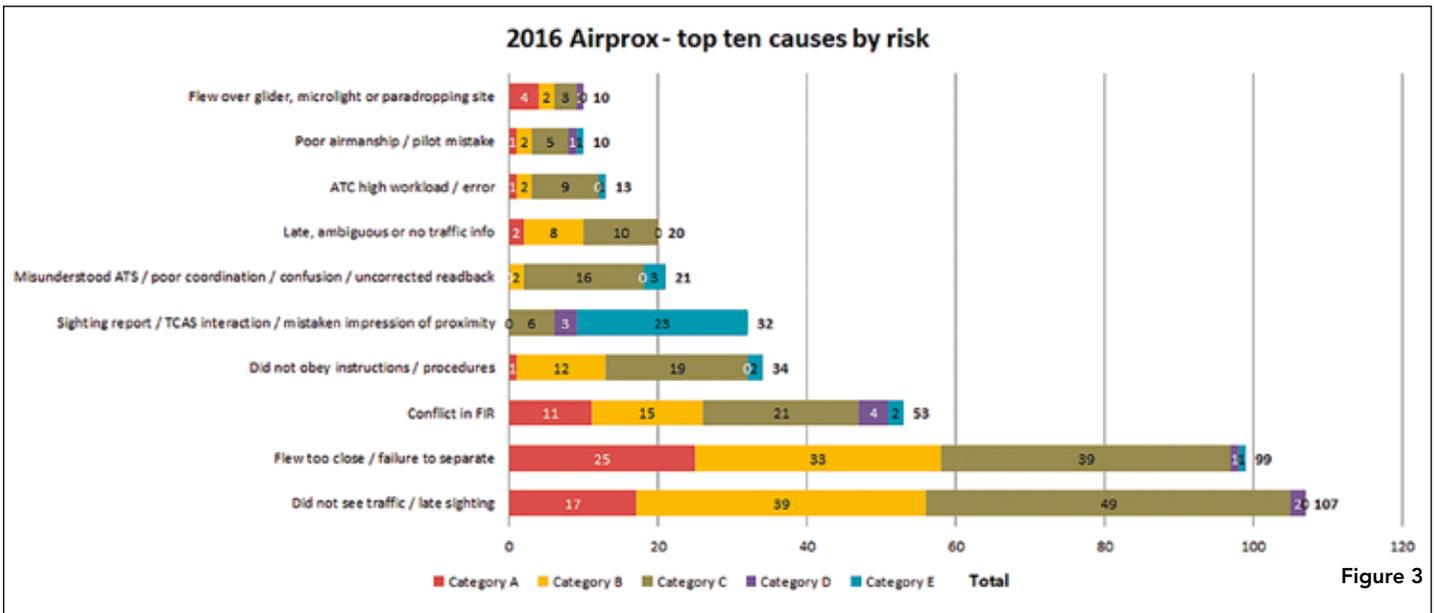
Obviously, the probability of a close encounter of the unwelcome kind is greater in these areas, so how do we avoid becoming a statistic?

*Lookout is the primary tool*; so maybe leave distracting tasks such as fishing out the sandwiches and taking pictures until you are in a less congested area? Working out from the map where traffic concentrations are likely to be highest is a good plan; these areas are often coincident with arrival/departure routes to busy airfields. Try not to linger on the extended centrelines of runways, especially at a height and distance that would be normal for a straight-in approach. For powered aircraft, that is around 300ft per NM of distance.

*Electronic conspicuity* (yes, again) is another barrier. FLARM helps spot similarly-equipped aircraft and if you have a transponder, ATC and other aircraft can spot you. On that score, how about a little break from the entertainment frequencies of 130.1, etc, and talking to ATS for a bit instead? You don't have to take a Service, just "I'm here and going in this direction at this sort of altitude" could result in this information



A typical choke point, formed by Brize, Abingdon, Oxford and Weston on one side and Chalgrove, Benson, Chiltern Park and Harwell on the other



being passed to the right person in time to avoid an unscheduled meeting. Another possibility is to actually get a clearance through controlled airspace and operate for a while in an area where most of the traffic is known; this also has the effect of taking you away from choke points as the majority of GA traffic tends to hug the boundaries of CAS, even though they are quite entitled to use it.

If you can, try and avoid tasking through obvious choke points – although we appreciate that is becoming increasingly difficult. Self-briefing on the threats and developing strategies to reduce exposure to them is just good airmanship (see graphic on facing page).

For our part, we continue to point out the risks of existing and potential new choke points to the CAA and NATS in our discussions on Airspace.

#### Minimising the risk

The messages here don't change:

- Let other airspace users know where you are and what you're doing. This can be via the radio, or increasingly using electronic conspicuity devices, such as FLARM and transponders.
- When you're in the vicinity of busy airfields, especially those with Instrument

Approaches, let them know you're there. Just a short call could avoid an Airprox, or worse.

Last year we talked about the risks from Instrument Holds; these haven't gone away, although we're pleased to say we haven't seen any incidents of this type this time around.

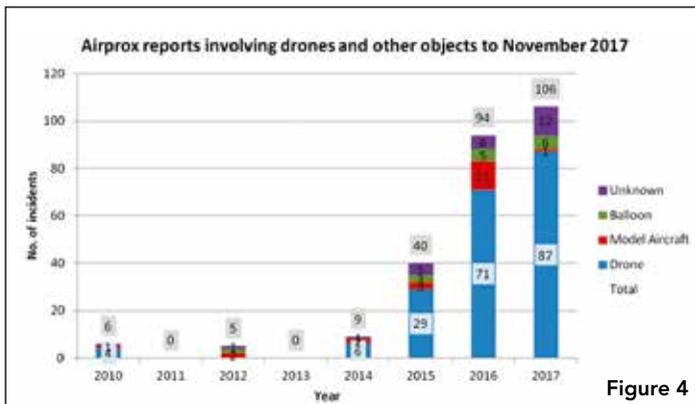
- Be aware that our 'risk appetite' – in particular, how comfortable we are with flying close to other gliders – is usually different to that of other airspace users.

Last year, the Comps Committee tightened up the guidance to organisers regarding MATZs. We know that, legally, we can enter these without talking to anyone, but it's really not a good idea to mix it with fast jets who may not know you're there. We'd strongly urge you to call up when you're in or close to a MATZ.

Our participation in UKAB is good for the visibility and credibility of UK gliding, and we're lucky that several other Board Members representing other aspects of aviation are also active glider pilots. Our reputation is generally good – let's keep it that way.



Chris Fox is a Full Cat instructor who flies a Duo Turbo, mostly in Wales and the north west. He also flies fixed wing and rotary aircraft



Ed Downham flies an EB28 in the UK and other parts of Europe. When it's not soarable, he takes a 777 round the rest of the world