AIRPROX Insight

DIRECTOR UKAB'S MONTHLY UPDATE June 2021

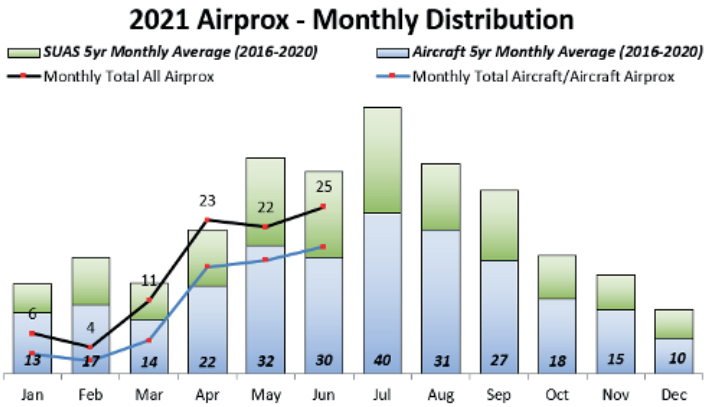
How can we improve lookout?

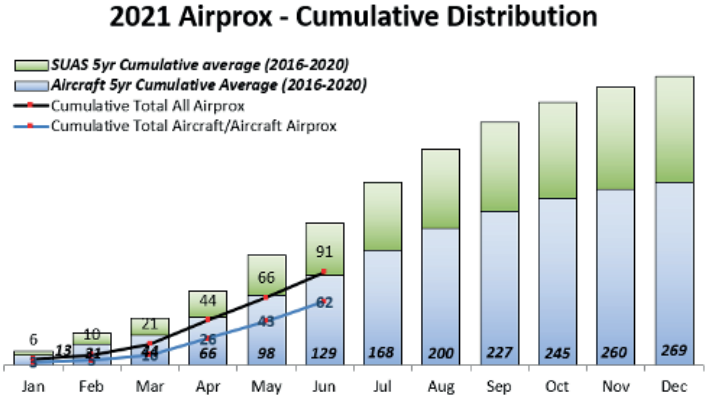
It's not just down to the eyes and a good scan any longer

Photo for illustrative purposes only: Brian Barr/SimonFinlay

With the improved weather and pilots returning to the air, there has been the expected surge of reported incidents which has now taken us above the five-year average for aircraft-to-aircraft Airprox, although the numbers still are low compared with 2019.

At its June meeting the Board considered 15 Airprox, which included four SUAS events (one of which was reported by the drone operator). Of the 11 aircraft-to-aircraft Airprox, four were classified as risk-bearing – two were category A and two category B. Of these risk bearing occurrences the weakest barriers lay with the Flight Elements of Situational Awareness, Electronic Warning systems and with the See and Avoid barriers.





SEE AND AVOID AND DISTRACTION

While all of the barriers are interconnected, some are more important than others. The final barrier in all Class G airspace events has to be See and Avoid – after all, seeing and avoiding is the overriding principle governing flying in this type of airspace where responsibility is shared by both pilots

not to so close to each other as to create a collision hazard[1].

But what can you do to make sure that your lookout is as effective as it can be? We've already spoken about the fallibility of the human eye – the default mode of the brain is to fill in the gaps by itself, creating an 'expected' picture but, if you keep active with your eyes, you allow your brain to overcome this default setting and you begin to 'see' reality.

Of course the principles of a methodical scan, clearing turns on descents and clearing airspace around you when manoeuvring remain core foundations of good airmanship and a good lookout, but what else can help? One of the most effective ways is for your lookout to be guided by indications on your electronic conspicuity equipment (if fitted).

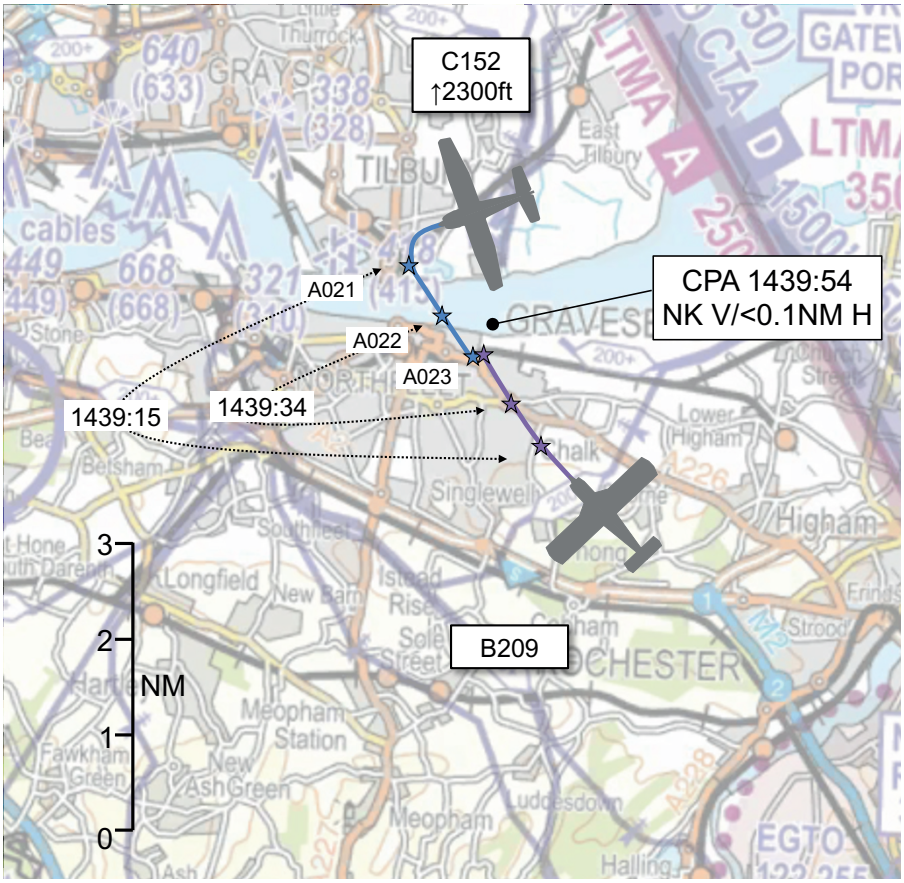
But electronic conspicuity shouldn't be treated as a panacea, one of the other ways is to actively engage a surveillance-based Air Traffic Service. The point of this is not to have an Air Traffic Controller drive you around the skies, but to gain awareness of the environment that you are in and give others the opportunity to do the same.

These two inputs into your brain allow you to build as accurate a mental model as possible. You know your position and your route from your planning, so you can use radio traffic information, ATC advice and your electronic conspicuity equipment to guide you where to look.

Finally beware of distraction. It's so easy to be drawn into the cockpit when you should be looking out – so break up any 'in-cockpit' task into small pockets of activity. This achieves two things: if it's a complex task, you're more likely to complete it effectively because you're not rushing to get it done so that you can return to looking out, and secondly, it automatically helps your eye and your brain as you are continually changing your focal point from near to far.

Distraction comes in all shapes and sizes ranging from difficulty with passengers, to locating hats and sunglasses, to radio problems, to simply capacity overload when conducting a complex procedure or manoeuvre.

Here's a list of all the distraction-related, risk-bearing Airprox from 2019, 2020 and 2021 – dive in and take a look, but note that it's but one of the things that can contribute to an Airprox, not necessarily the only thing…



2019	2020	2021
2019071	2020008	2021028
2019109	2020035	2021029
2019162	2020064	
2019175	2020066	
2019199	2020069	
2019201	2020082	
2019206	2020103	
2019216	2020104	
2019295	2020133	
	2020152	

Finally, let's take a look at the latest Airprox involving an element of distraction – the full report can be found at the link in the table above, but a short summary follows here:

Airprox 2021029 was reported when a Cessna 152 and an Bölkow B 209 Monsun flew into proximity near Gravesend. Both pilots were operating under VFR in VMC, the C152 pilot was in receipt of a Basic Service from Southend DIR while the B209 pilot wasn't in receipt of any service. For the Ground Elements the **Situational Awareness of the Confliction and Action** barrier was assessed as ineffective because the controller was busy with inbound traffic and didn't see the conflict occur.

In the Flight Elements, three out of five of the barriers were ineffective — the **Situational Awareness** of the conflicting aircraft and Action barrier was assessed as **ineffective** because neither pilot had any situational awareness that the other was in the vicinity.

The **Electronic Warning System Operation and Compliance** barrier was assessed as **ineffective** because the TAS on the C152 did not detect the B209, and finally the **See and Avoid** barrier was deemed ineffective because neither pilot saw the other in time to take avoiding action.

There was an element of distraction in this Airprox when the B209 pilot was changing fuel tanks and the Board emphasised the importance of breaking up any activity which requires the pilot to look inside the aircraft and to punctuate it with a robust look-out.

[1] SERA.3205 Proximity