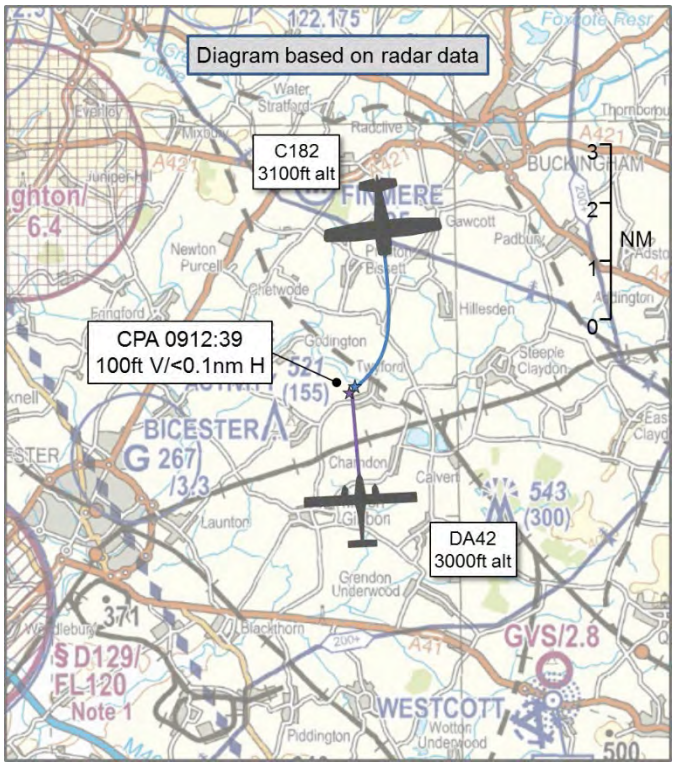
AIRPROX REPORT No 2018124

Date: 03 Jun 2018 Time: 0912Z Position: 5155N 00102W Location: 3nm S Buckingham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C182	DA42
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Listening Out
Provider	Oxford	Wycombe
Altitude/FL	3100ft	3000ft
Transponder	A,C,S	A, C, S
Reported		
Colours	White, Red	White, Blue, Grey
Lighting	Beacon	Anti-Cols, Strobes, Landing
Conditions	VMC	VMC
Visibility	10km	
Altitude/FL	3000ft	2800ft
Altimeter	NK	QNH
Heading	171°	NR
Speed	125kt	110kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	0ft V/0.25nm H	0.25nm H
Recorded	100ft V/<0.1nm H	



THE C182 PILOT reports that they were operating at 3000ft in VFR conditions; the cloud was few at 2500ft, but they were manoeuvring in an area of about 10nm which was clear of cloud. They saw a DA42 climbing through 2900ft on a reciprocal track. It had been hard to identify due to its 'slick' appearance and white colour against the cloud. They first saw it at 0.25nm and took avoiding action by climbing and lazy-banking to the left, once passed it appeared that the DA42 had also taken evasive action.

He assessed the risk of collision as 'High'.

THE DA42 PILOT reports that he was flying a training flight in good weather conditions. They did some clearing turns prior to stalling and, during the turns, he noticed an aircraft approaching from the left, a little higher. He turned to the right, the other aircraft continued on its way, and they continued with their exercise. He believed it was a late sighting by both pilots.

He assessed the risk of collision as 'Medium'.

Factual Background

The weather at Luton was recorded as follows:

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METAR EGGW 030850Z AUTO VRB03KT 9999 NCD 21/15 Q1019=
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Analysis and Investigation

CAA ATSI

The C182 pilot reported flying 3nm south of Buckingham at 3000ft, and was displaying a 4520 SSR code. This code is assigned to aircraft in receipt of a Basic Service from Oxford Approach and is only to be selected with ATC direction, therefore it is likely that he was receiving a service from Oxford.

At 0909:50 (Figure 1) the C182 was tracking south at 3000ft and the DA42 was manoeuvring at 3000ft. CPA occurred at 0912:38 (Figure 2) when the aircraft were separated by less than 0.1nm and 100ft vertically.

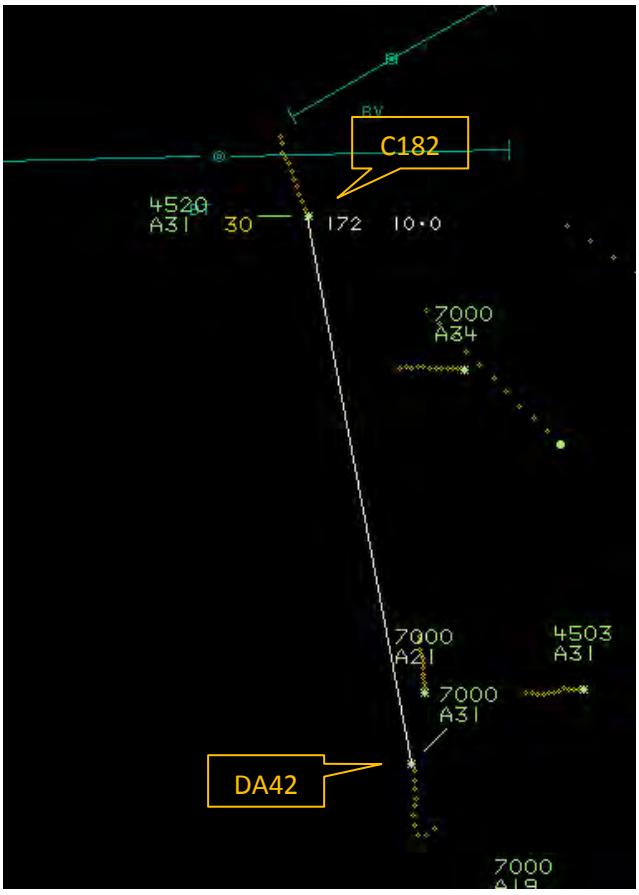


Figure 1 – 0909:50

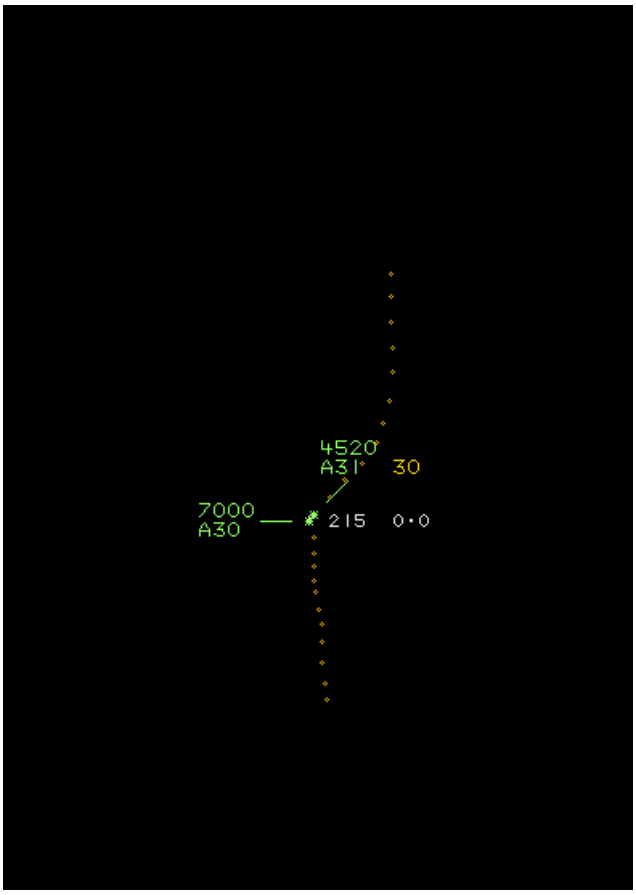


Figure 2 – CPA - 0912:38

ATSI were unable to review Oxford R/T following a failure with the impound request process, and so could not verify the type of service or whether Traffic Information had been passed or not.

UKAB Secretariat

The C182 and DA42 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1]. If the incident geometry is considered as head-on or nearly so, then both pilots were required to turn to the right[2]. If the incident geometry is considered as converging, then the DA42 pilot was required to give way to the C182.

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(1) Approaching head-on.

Comments

The C182's Operating Authority

This was a conflict in Class G airspace where it appears that at least one crew (and probably both) spotted the other aircraft. The manoeuvring that followed reduced the risk of collision and the resulting separation was assessed as 0.25nm. The Instructor who filed the Airprox lacked familiarity with UK Airprox procedures, therefore it is intended that this incident is publicised internally to draw attention to UK AIP ENR 1.14 requirements to report such occurrences immediately on the RT.

The DA42's Operating Authority

Following an investigation, we will be requesting all instructors on general handling exercises to obtain at least a Basic Service from a radar unit, or monitor the frequency of a radar station with a listening squawk. As an organisation we are already looking at the various electronic conspicuity devices available and trying to ascertain which will be best for the fleet.

Summary

An Airprox was reported when a C182 and a DA42 flew into proximity at 0912hrs on Sunday 3rd June 2018 in the vicinity of Buckingham. Both pilots were operating under VFR in VMC, the C182 pilot in receipt of a Basic Service from Oxford and the DA42 pilot in was not receipt of a ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings and reports from the appropriate ATC and operating authorities.

The Board first looked at the actions of the C182 pilot. He was operating in Class G airspace and receiving a Basic Service from Oxford, which does not require the controller to provide Traffic Information unless they notice and consider there to be a risk of collision. The Board were frustrated that there was no controller's report from Oxford due to a failure in the RTF recording impounding process because, without it, it was not possible to know whether the controller had seen the incident or not. However, given that the pilot didn't recall receiving any Traffic Information, it was likely that the controller hadn't seen the event. Without such information and with no CWS, see-and-avoid was the only mitigation against mid-air collision, and this had only worked to a limited extent. In that respect, and noting that controllers are not required to monitor traffic under a Basic Service, members opined that the C182 pilot may have been better served by requesting a Traffic Service from Oxford which, if Oxford had had the capacity to provide, would have meant he should have received Traffic Information on the DA42. Members noted that the C182 pilot reported first seeing the DA42 at 0.25nm away and then taking avoiding action by climbing and lazy-banking to the left which, although later than desirable, had probably materially increased the separation.

For his part, the DA42 pilot was also operating without an CWS and was receiving a Basic Service from Wycombe, who do not have a radar. Some members commented that in that location he would have been far better served in calling Oxford for a service, in which case he may have heard the C182 pilot on frequency. Similar to the advice for the C182 pilot, they thought that a Traffic Service would have been a better option, especially given that he was conducting low-speed stalling manoeuvres with associated reduced manoeuvrability. The DA42 pilot also reported seeing the C182 late, and took action by turning right. The Board were heartened to hear that the DA42's operating authority was investigating the options for fitting a CWS to its aircraft; given that both aircraft were squawking in this case, if either had been fitted with a CWS it is likely that it would have provided a timely warning.

The Board quickly agreed that the cause of the Airprox was a late sighting by both pilots. In assessing the risk, the Board thought that the late sightings by both pilots and the associated lack of time available for them to take avoiding action (3-4 secs at their closing speed of 235kts at 0.25nm) made this a Category B incident where safety had been much reduced below the norm.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by both pilots.

Degree of Risk: B.

Safety Barrier Assessment[3]

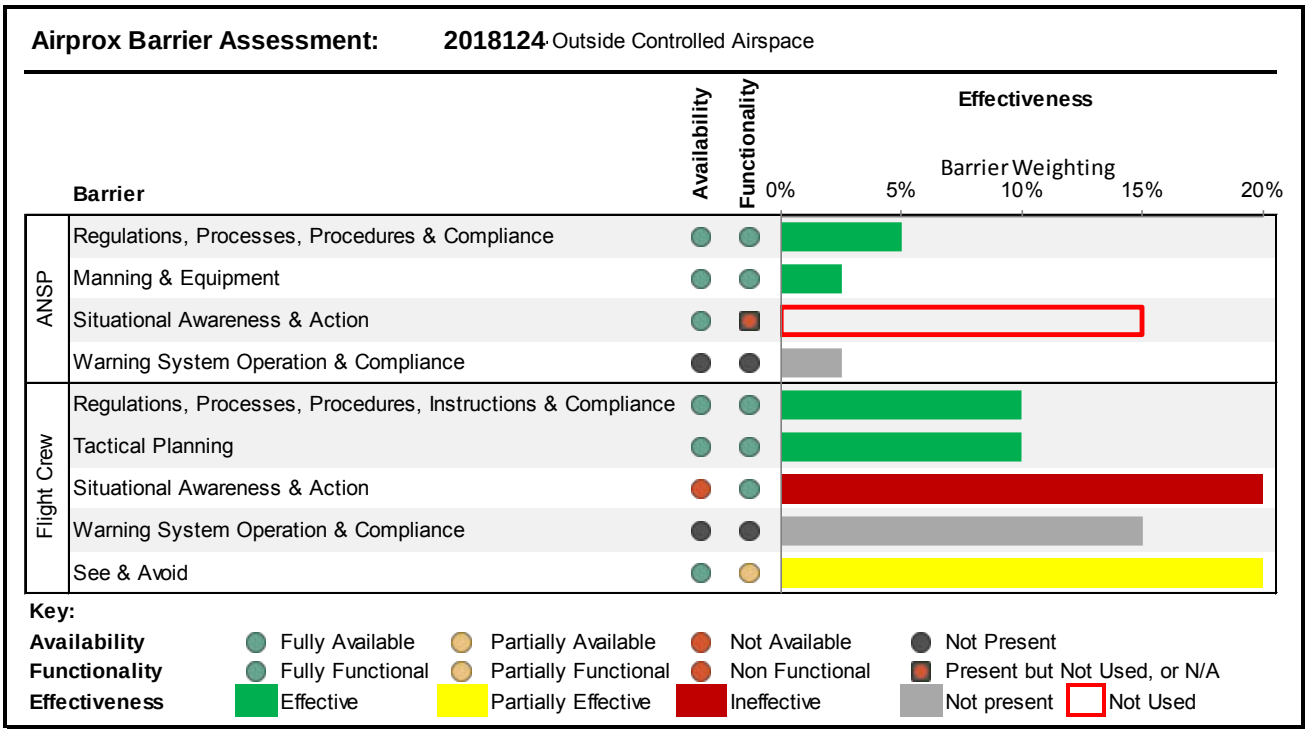
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew:

Situational Awareness and Action were assessed as **ineffective** because neither pilot was aware of the other aircraft until just before CPA.

Warning System Operation and Compliance were assessed as **not present** because neither aircraft was fitted with a CWS.

See and Avoid were assessed as **partially effective** because both pilots saw the other aircraft late and took avoiding action later than ideal.



[3] The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the UKAB Website.