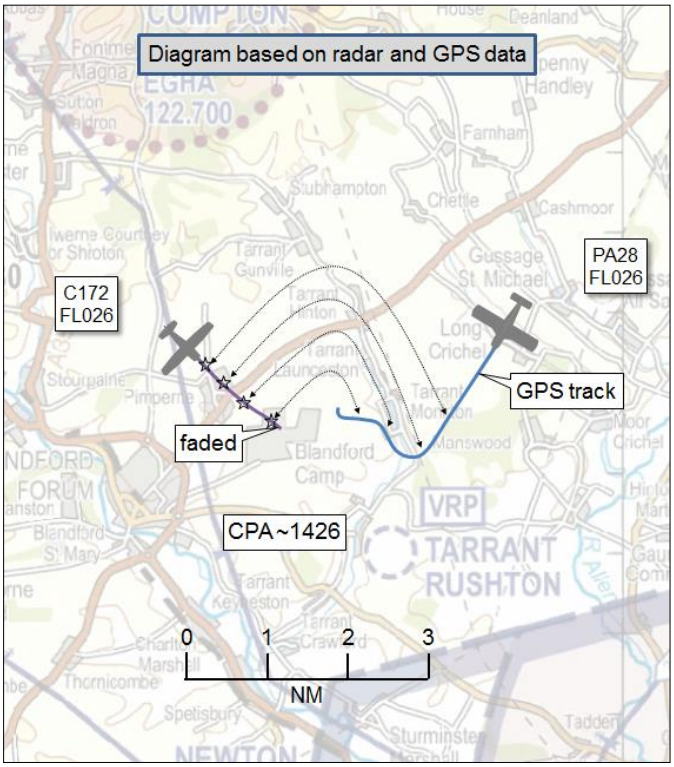
AIRPROX REPORT No 2017194

Date: 15 Aug 2017 Time: 1426Z Position: 5054N 00227W Location: 3.5nm SSE Compton Abbas

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	C172
Operator	Civ Trg	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	None
Provider	Compton Abbas	N/A
Altitude/FL	~FL026	~FL026
Transponder	A, C	A, C, S
Reported		
Colours	White/red	White/blue
Lighting	Strobes, beacon	NK
Conditions	VMC	VMC
Visibility	>40km	50km
Altitude/FL	2000ft	2500ft
Altimeter	QFE (989hPa)	NK
Heading	335°	NK
Speed	85kt	NK
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	10ft V/100m H	NK
Recorded	NK[1]	



THE PA28 PILOT reports instructing a navigation exercise when, shortly after turning north at Blandford Forum the student (PF) observed a high-wing aircraft converging from the left at the same altitude. The student initiated an avoiding turn to the right and alerted the instructor.

He assessed the risk of collision as 'Medium'.

THE C172 PILOT reports routeing south and east of Compton Abbas prior to a planned landing there. He was clear of controlled airspace and not yet in contact with the airfield when a red and white aircraft appeared slightly above and on the right. The C172 pilot turned away and behind. When he was sure he was clear of conflict he continued the flight before landing at Compton Abbas. The C172 pilot commented that his passenger was in the right-hand seat and also did not see the other aircraft until quite late and that in his opinion the late sighting was probably a combination of his blind-spot, above and right of the wing, and that he was below and under the other aircraft's left wing. He was not able to complete details of heading, height, altimeter settings etc due to the length of time elapsed before being notified of the Airprox.

He assessed the risk of collision as 'Medium'.

Factual Background

The weather at Bournemouth was recorded as follows:

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METAR EGHH 151450Z 29010KT 240V310 9999 FEW041 SCT048 20/1 Q1016=
METAR EGHH 151420Z 27008KT 240V330 9999 SCT040 21/13 Q1016=
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[1] The C172 track faded from radar before CPA so it was not possible to determine separation at CPA.

Analysis and Investigation

UKAB Secretariat

The PA28 and C172 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[2]. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right[3]. If the incident geometry is considered as converging then the C172 pilot was required to give way to the PA28[4]. The C172 radar returns fade shortly before CPA so the geometry of the incident could not be ascertained with certainly.

Summary

An Airprox was reported when a PA28 and a C172 flew into proximity at 1426 on Tuesday 15th August 2017. Both pilots were operating under VFR in VMC, the PA28 pilot in receipt of an A/G Service from Compton Abbas and the C172 pilot not in receipt of a Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots radar photographs/video recordings and a GPS track log.

The Board discussed whether more could have been done by either pilot to increase the SA of the other with some members commenting that an earlier call by the C172 pilot to Compton Abbas as he routed past before turning north may have alerted the PA28 pilot to his position, and he to any other aircraft operating in the Compton Abbas area or ATZ. Similarly, it was suggested that had both pilots been in receipt of a service from Bournemouth LARS the situation may have been improved. However, it was recognised that both these options would be circumstantial to the other pilot being on the same frequency and therefore not wholly reliable. In their discussion about maximising the available safety barriers, some members also commented on the benefits of some of the increasingly affordable collision warning systems that are now available for less than £200 in some examples. Noting that both aircraft were squawking, they opined that even if only one of the aircraft had had a collision warning system then situational awareness would have been immeasurably enhanced. Other members felt that whilst all of these options may have helped, the most important barrier to mid-air collision in Class G currently remained see-and-avoid. In that regard the barrier worked, albeit at far less separation than was desirable, and it was agreed that the cause had been that each pilot saw the other aircraft at a late stage, probably not aided by the low- and high-wing configurations of their respective aircraft: a timely reminder to all pilots to conduct a robust lookout prior to entry and after rolling out of a turn.

Turning to the risk, some members were of the opinion that both pilots had been able to take effective avoiding action given that both pilots described a converging geometry as they routed north and had themselves both judged the collision risk as medium. Other members were less sanguine about the geometry given that the PA28 student had felt the need to conduct an avoiding turn before he had had time to alert the instructor. Acknowledging the absence of a definitive radar picture at CPA, the Board were ultimately convinced by the PA28 pilot's narrative and agreed that safety had been much reduced.

PART C: ASSESSMENT OF CAUSE, RISK AND SAFETY BARRIERS

Cause: A late sighting by both pilots.

Degree of Risk: B.

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

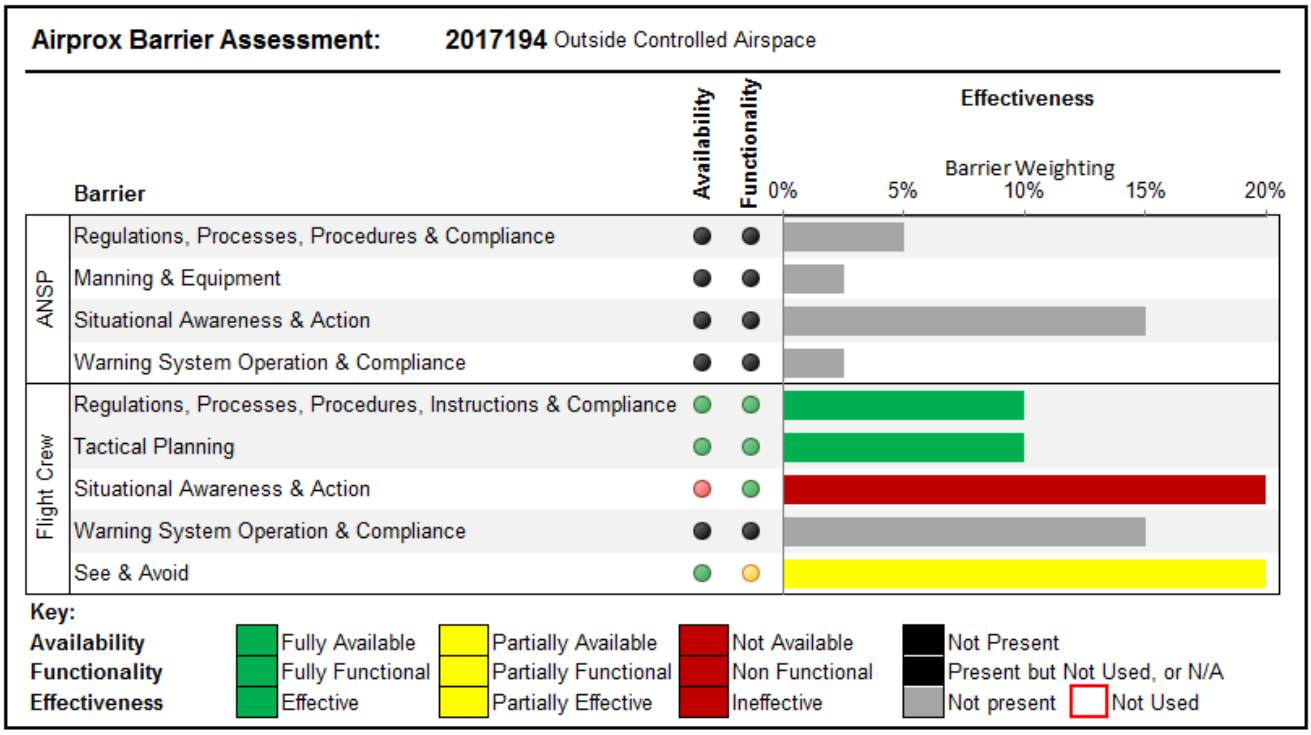
Safety Barrier Assessment[5]

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 position of the other aircraft until shortly before CPA.

See and Avoid were assessed as **partially effective** because the pilots' reports indicated that visual acquisition and avoiding action occurred at a late stage.



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