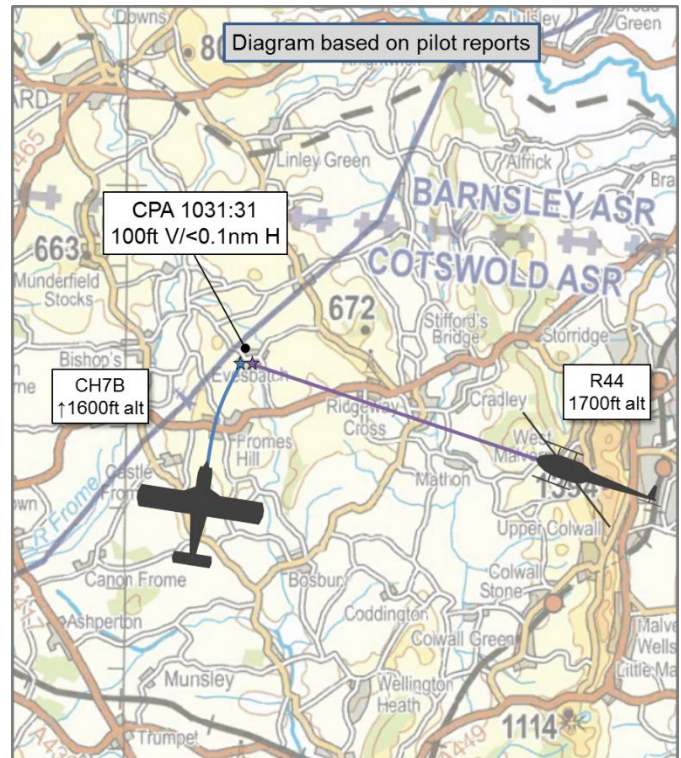


## AIRPROX REPORT No 2018036

Date: 13 Mar 2018 Time: 1031Z Position: 5207N 00226W Location: 5nm SE Bromyard

### PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Citabria CH7B	R44
Operator	Civ Pte	Civ Club
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	None
Altitude/FL	1600ft	1700ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Red, White	Blue
Lighting	Beacon	Nav, Anti-cols
Conditions	VMC	VMC
Visibility	10km	10km
Altitude/FL	1400ft	1600ft
Altimeter	QNH (1007hPa)	QNH (1008hPa)
Heading	015°	300°
Speed	80kt	91kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	<100ft V/50m H	0ft V/15-20m H
Recorded	100ft V/<0.1nm H	



**THE CH7B PILOT** reports that he had just got airborne from a private strip and was passing 1000ft in the climb. He was looking out for traffic by lowering the pitch attitude every 500ft. He saw a helicopter just to the right of his 12 o'clock at a similar altitude and took immediate avoiding action by pulling up hard and rolling right; he saw the yellow tips of the main rotor on his left as he passed above and behind. He climbed to 2700ft, circled to the left, and saw the helicopter turn left and orbit once below him. He concluded that the helicopter pilot had also not seen him until the very last moment, but it was impossible to tell whether he took any action. This was an extremely close encounter, he estimated they were only 2-3 secs from collision, and he was shaken by the incident.

He assessed the risk of collision as 'High'.

**THE R44 PILOT** reports that whilst flying straight-and-level, he saw in his peripheral vision an aircraft at the same level, 40-60ft away and about to come into 'full contact' with the helicopter. In a fraction of a second he pulled the cyclic aggressively to the right (above 30° of bank), to avoid. Once levelled-out and trimmed, he regained composure and they commenced a 180° turn in order to ascertain the registration of the other aircraft. They could see the other pilot had climbed and banked, and was moving away so they continued on route. He estimated that they were 2-4 seconds from a collision. After they had landed they were informed that the other pilot had made contact.

He assessed the risk of collision as 'High'.

### **Factual Background**

The weather at Gloucester was recorded as follows:

METAR EGBJ 131020Z 29003KT 9999 FEW010 SCT030 09/06 Q1008=

## UKAB Secretariat

Using the NATS radar recordings, the R44 can be seen transiting at 1700ft squawking 7000 and the CH7B is first be seen at 1030:38 (Figure 1) passing 800ft; at this point the two aircraft are 1.9nm apart. They converge on a constant bearing until CPA at 1031:31 (Figure 3) when they are less than 0.1nm and 100ft apart.

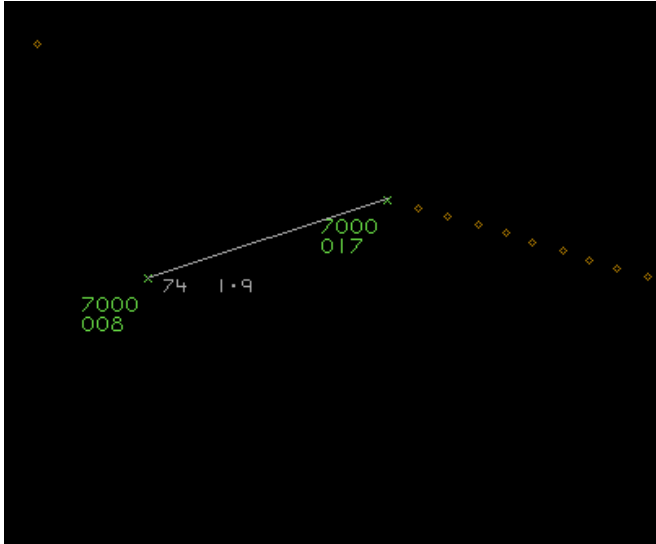


Figure 1: 1030:38



Figure 2 1031:19

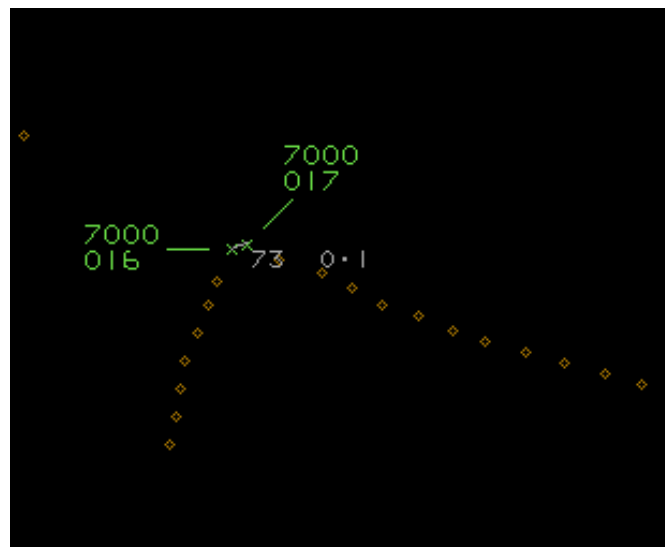


Figure 3 1031:31

The CH7B and R44 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>1</sup>. If the incident geometry is considered as converging then the CH7B pilot was required to give way to the R44<sup>2</sup>.

## Summary

An Airprox was reported when a CH7B and an R44 flew into proximity at 1030hrs on Tuesday 13<sup>th</sup> March 2018. Both pilots were operating under VFR in VMC, neither were in receipt of an ATIS.

<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3210 Right-of-way (c)(2) Converging.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from the pilots of both aircraft and radar photographs/video recordings.

The Board first looked at the actions of the CH7B pilot and commended him for displaying good airmanship by dipping the nose during his climb to check the airspace ahead. However, it was unfortunate that he still didn't see the R44 in time to take anything other than emergency avoiding action, probably because the R44 would have been a small target stationary in his windscreen as they converged. Members discussed whether there was any ATC in the vicinity that either pilot could have called to ask for a Traffic Service to assist, but noted that there was a gap in the availability of provision of service in the area, and the CH7B would likely not have painted on radar much before CPA anyway. Some members opined that one of the perils of operating from small private strips was that without the knowledge of its position, other pilots cannot keep clear, which makes aircraft vulnerable on climb-out, as in this case.

Turning to the R44 pilot, members commented that he was in a similar position in that there was no ATC availability and, although he was looking out, the CH7B would have appeared suddenly from what was likely a dark background below. Members noted that as soon as saw the CH7B he also took emergency avoiding action but that the encounter had been very close and with little opportunity for him to materially increase separation.

Members noted that neither aircraft was fitted with any form of electronic conspicuity equipment which would likely have alerted them to the presence of each other; given the increasingly affordable systems such as PilotAware that were now available, they urged all pilots to review whether now was the time to consider investing in such relatively low-cost safety systems. The Board went on to discuss ADS-B systems, noting that the CAA advocated them as the likely future preferred choice from their perspective. The CAA member advised the Board that they and EASA were currently undertaking work regarding electronic conspicuity for GA and, once that had been reported on, it was likely that the CAA would be able to draw conclusions about what the best options were likely to be.

Looking at the cause and risk of the incident, the Board determined the cause of the Airprox to be a (very) late sighting by both pilots. In assessing the risk, it was clear to all members that this had been a very close call indeed where providence had played a large part. Although both pilots had managed to take emergency avoiding action, members assessed that separation had still been down to the bare minimum and they therefore assessed the risk as Category A; a serious risk of collision had existed.

## **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: A late sighting by both pilots.

Degree of Risk: A.

### Safety Barrier Assessment<sup>3</sup>

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 had any information on the other aircraft.

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<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

**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 only saw each other very late and managed to take only emergency avoiding action that probably did not materially increase separation by much.

