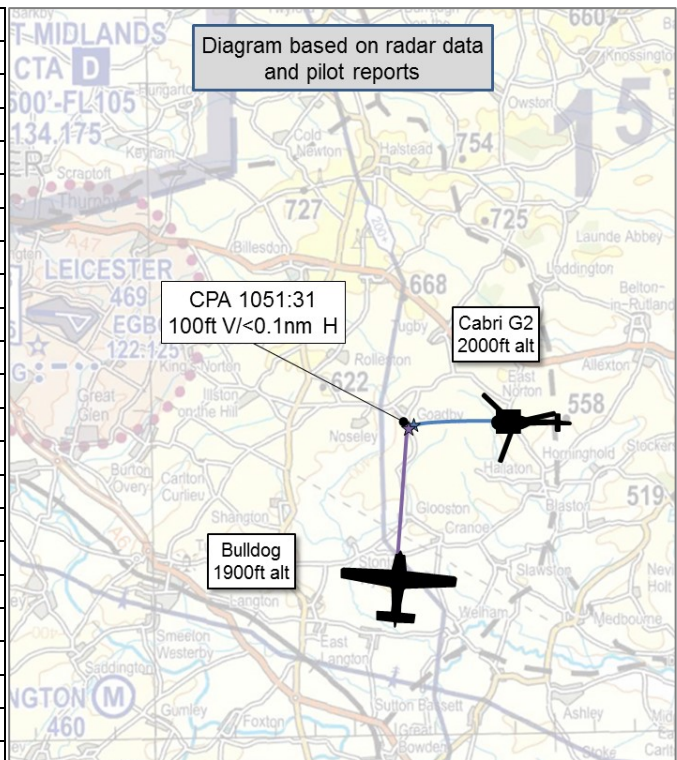


AIRPROX REPORT No 2019026

Date: 11 Feb 2019 Time: 1051Z Position: 5234N 00053W Location: 5nm ESE Leicester Airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Cabri G2	Bulldog
Operator	Civ Helo	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	Listening Out
Provider	Leicester Radio	Leicester Radio
Altitude/FL	2000ft	1900ft
Transponder	A, C	A, C
Reported		
Colours	Silver	Red
Lighting	Landing, Strobe	Strobe, Nav
Conditions	NK	VMC
Visibility	>10km	>10km
Altitude/FL	1500ft	2000ft
Altimeter	QFE (1006hPa)	QNH
Heading	288°	005°
Speed	80kt	110kt
ACAS/TAS	Unknown	Unknown
Separation		
Reported	100ft V/30m H	Not seen
Recorded	100ft V/<0.1nm H	



THE CABRI G2 PILOT reports that he was on a solo navigation, land-away exercise. He changed frequency from Wittering Zone to Leicester Radio, listening out. He called Leicester to request the QFE, circuit and landing information. He was flying straight-and-level towards the point he had planned to start descending to enter the ATZ, flying on a heading of 288°. Scanning left, he spotted a fixed-wing aircraft in his 9 or 10 o'clock at the same level flying on a heading of about 010° extremely close to his left-hand side. He immediately lowered the collective and pitched nose down dropping about 300ft to pass below. The fixed-wing was observed afterwards continuing to fly straight-and-level, with no avoiding action observed.

THE BULLDOG PILOT reports that he was just levelling off after a cruise descent from 3000ft to 2000ft to fly below a bank of cloud ahead. He believes that the Airprox took place just as he levelled off. His passenger spotted the helicopter but it was obscured from his view by the starboard wing and the passenger in the RH seat. He did not see the helicopter prior to the Airprox and did not know what its course or movements were before he saw it below and behind the starboard wing. As he leant over to look for the helicopter behind the wing, he saw it for the first time about 100m below and 100m to the right and turning hard to port, flying in the opposite direction as the helicopter pilot had turned to fly behind him. He assessed the risk at this time to be none so he continued on course. He did not hear any Airprox reports on the frequency. This was the first time he had flown to Nottingham and he was spending more time tuning to and listening out on the radio and ATIS frequencies than normal.

Factual Background

The weather at Wittering was recorded as follows:

EGXT 021050Z AUTO 33012KT 9999 FEW011/// 02/M00 Q1006

Analysis and Investigation

UKAB Secretariat

The Cabri G2 and Bulldog pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as converging then the Bulldog pilot was required to give way to the Cabri G2².

Figure 1 shows a radar screenshot of the 2 aircraft as they converged at CPA.

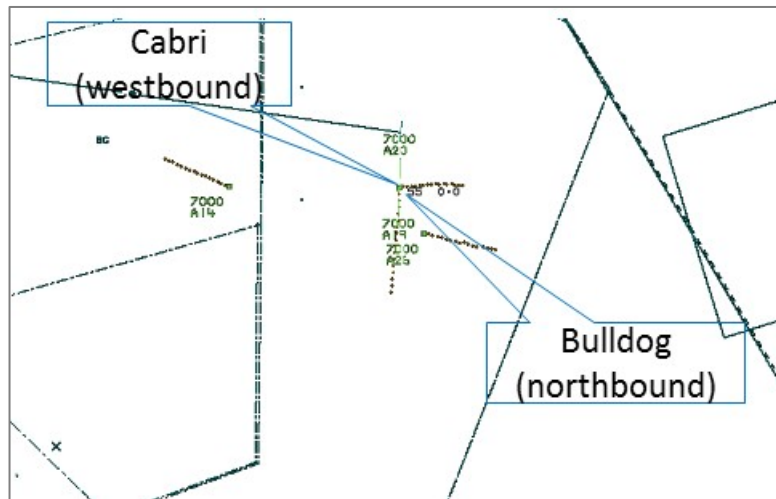


Figure 1

Summary

An Airprox was reported when a Cabri G2 and a Bulldog flew into proximity near Leicester airfield at 1051hrs on Monday the 11th of February 2019. Both pilots were operating under VFR in VMC, the Cabri G2 pilot in receipt of an AGCS from Leicester and the Bulldog pilot Listening out on Leicester Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, transcripts of the relevant R/T frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board began by looking at the actions of the Bulldog pilot. Members noted that he had not seen the Cabri as they converged and surmised that this was due to it likely being stationary in his field of view; potentially obscured by cockpit and canopy architecture; and his likely task-focus on navigation and radio tuning to the detriment of lookout. Members agreed that this once more highlighted the importance of a maintaining a robust scan at all times to mitigate these well-known deficiencies in the lookout barrier (**CF1, 2 & 3**). Although the Board did not know why the Bulldog pilot had not heard the Cabri pilot call on the Leicester frequency, GA members commented that simply listening-out on a frequency doesn't always deliver sufficient situational awareness; if it is possible, even a short information call can provide valuable situational awareness to others regarding your own position and intentions (**CF1**).

Turning to the actions of the Cabri pilot, members agreed that the same comments about lookout applied equally to him. More specifically, in his case, the Cabri pilot may have been concentrating on

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(2) Converging.

his routing and obtaining information from Leicester prior to positioning himself to join the visual circuit (**CF2 & 4**). In both pilots' cases, the well-worn mantra of Aviate-Navigate-Communicate applied, with lookout being a part of the Aviate task that was best served by apportioning 80% of time to looking out and only 20% to in-cockpit activities. Notwithstanding, although later than desirable, ultimately the Cabri pilot did see the Bulldog and, perceiving it to be at the same level as himself, descended to increase separation and pass below.

Expanding on the theme of the deficiencies of lookout, the Board noted that neither aircraft appeared to be equipped with collision warning systems that might have cued the pilots to each other in this scenario. It was not for the Board to recommend specific equipment, but increasingly affordable systems were now available and the Board commended all pilots to consider their purchase.

The Board then looked at the risk and agreed that the Cabri pilot saw the Bulldog late and carried out emergency avoiding action; they also noted that the Bulldog pilot did not see the Cabri until after CPA. The Board therefore agreed that safety had been much reduced below the norm and that it had been the Cabri pilot's late emergency avoiding action that had prevented a collision. Accordingly, they assessed the risk as Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Contributory Factors:

CF	Factor	Description	Amplification
	Flight Elements		
	• Situational Awareness of the Conflicting Aircraft and Action		
1	Contextual	• Situational Awareness and Sensory Events	Pilot had no, or only generic, Situational Awareness
2	Human Factors	• Distraction - Job Related	Pilot was distracted by other tasks
	• See and Avoid		
3	Human Factors	• Monitoring of Other Aircraft	Non-sighting by one or both pilots
4	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: B.

Safety Barrier Assessment³

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

Flight Element(s):

Situational Awareness and Action were assessed as **ineffective** because neither pilot had any situational awareness about the other aircraft, and both pilots were likely distracted by other tasks; the Bulldog pilot by tuning and listening-out on his radio and the Cabri pilot by focussing on his routing and join at Leicester.

See and Avoid were assessed as **partially effective** because the Bulldog pilot did not see the Cabri until after CPA and the Cabri pilot only saw the Bulldog late and had to take emergency avoiding action.

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

Airprox Barrier Assessment: 2019026		Outside Controlled Airspace						
Barrier	Provision	Application	Effectiveness					
			Barrier Weighting					
			0%	5%	10%	15%	20%	
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Manning & Equipment	✓	✓					
	Situational Awareness of the Confliction & Action	✗	○					
	Electronic Warning System Operation and Compliance	●	●					
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Tactical Planning and Execution	✓	✓					
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓					
	Electronic Warning System Operation and Compliance	●	●					
	See & Avoid	⚠	⚠					
Key:			Full	Partial	None	Not Present	Not Used	
Provision	✓	⚠	✗	●				
Application	✓	⚠	✗	●		○		
Effectiveness								