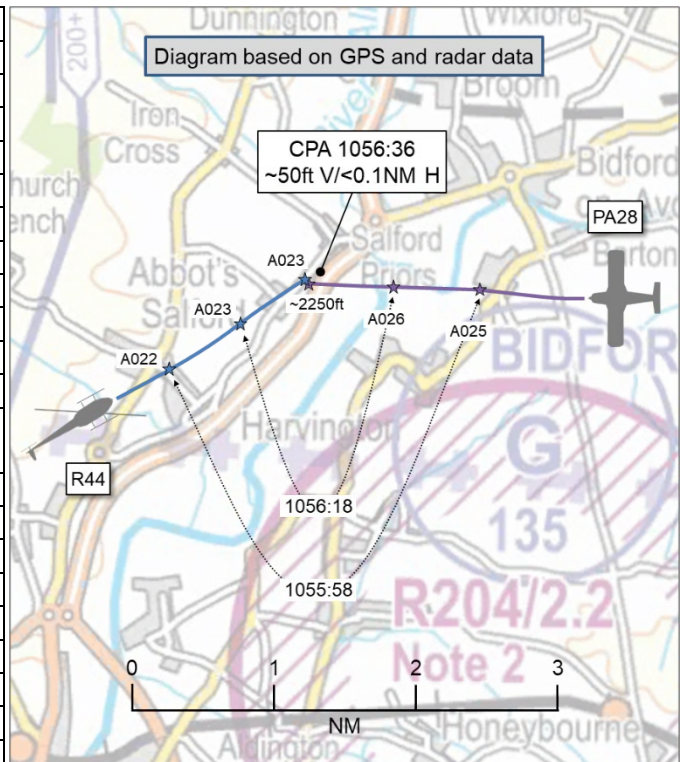


**AIRPROX REPORT No 2024097**

Date: 24 May 2024 Time: 1057Z Position: 5209N 00154W Location: 2NM NW Bidford

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	R44	PA28
Operator	Civ Helo	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Birmingham Radar	Wellesbourne Info
Altitude/FL	2300ft	~2250ft
Transponder	A, C, S	A, C, S+
<b>Reported</b>		
Colours	Blue	Blue, white
Lighting	Landing, nav, anti-col	Tail beacon, wing strobe
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	2000ft	2300ft
Altimeter	QNH (1018hPa)	QNH
Heading	060°	270°
Speed	100kt	110kt
ACAS/TAS	Not fitted	Not fitted
<b>Separation at CPA</b>		
Reported	50ft V/50m H	500ft V/1NM H
Recorded	~50ft V/<0.1NM H	



**THE R44 PILOT** reports that they were in the cruise tracking approximately 060° at 2000ft, 2NM north-east [they recall] of Bidford gliding site. The student pilot was flying with the instructor monitoring. Birmingham Radar (123.980MHz) was set on the radio with their transponder set to the Frequency Monitoring Code 0010. Wellesbourne Information (124.030MHz) [was set to] 'standby' to monitor for traffic. Initially, no contact had been attempted with either station, they were listening only. Position lights and the anti-collision strobe were on, the landing lights were off. Visibility was over 10km, however, clouds were broken to overcast around 2200ft which made the area generally dark and grey. The Instructor was looking right (south) for any activity at Bidford gliding site (none observed) when the student pilot exclaimed "*traffic ahead*" and sounded in great distress. The Instructor immediately looked ahead and observed a single-engine low-wing aeroplane slightly to the right of the nose heading directly towards their helicopter. The Instructor took control, "*I have control*", and entered autorotation in an attempt to descend fast enough to avoid a collision. With the proximate aircraft slightly to the right of the nose, the Instructor had decided that a right turn would be less likely to avoid a collision than an autorotation. The [pilot in the PA28] appeared to take no avoiding action and passed less than 50ft above, slightly in front of the helicopter, moving right-to-left. Upon recovery from autorotation, a note was made of the time and position for later reporting and contact was made with Wellesbourne Information for a Basic Service, and continued the cruise.

The pilot assessed the risk of collision as 'High'.

**THE PA28 PILOT** reports that their flight was without issue, and was a club check-out in a PA28. They were PIC as a Class Rating Instructor, the Pu/t was a very experienced GA pilot. They departed to an area in which they normally train. Cloudbase was around 2700ft, visibility was probably just under 10km in places, and they actively kept clear of cloud. They remember seeing a helicopter on their port-side, around 2NM off, a couple of minutes after levelling-off. It was below their height and [tracking] eastwards (possibly north-eastwards) and appeared to have been no threat so they continued on their current

track. They remember that, as they had a trainee in the back seat with them, they discussed that it was not a threat, and asked for them to also look for it. [The pilot of the PA28 opined that] for them, it was an unremarkable event. There were no remarks made on the Wellesbourne frequency.

The pilot assessed the risk of collision as 'None'.

**THE WELLESBOURNE AFISO** reports that [the pilot of the PA28] had been in receipt of a Basic Service. The helicopter [R44 callsign] was not known to them, and no report of an Airprox was received from either party.

## Factual Background

The weather at Gloucestershire Airport was recorded as follows:

METAR EGBJ 241050Z 18002KT 9999 FEW020 SCT042 14/09 Q1019

## Analysis and Investigation

### UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified from Mode S data. The moment of CPA was determined to have occurred between the radar sweeps at 1056:34 and 1056:38 (Figures 1 and 2). The aircraft were depicted on the radar replay to have been at Flight Levels. A suitable correction was applied to determine their respective altitudes. The altitude of the PA28 was observed to have changed between the radar sweeps before and after CPA. Consequently, the altitude of the PA28 has been shown as an approximation in the diagram.

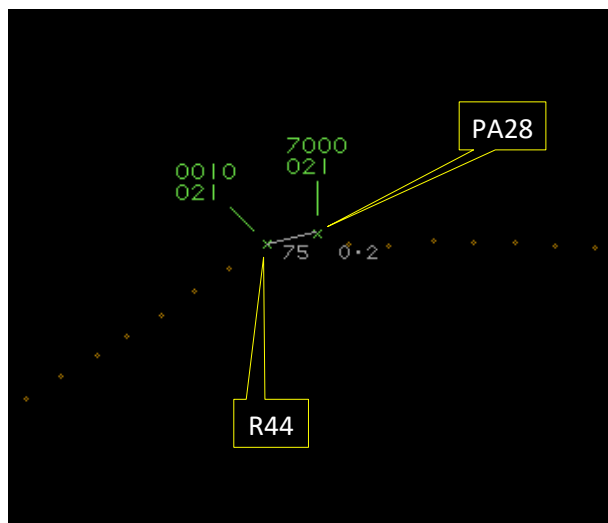


Figure 1 - 1056:34

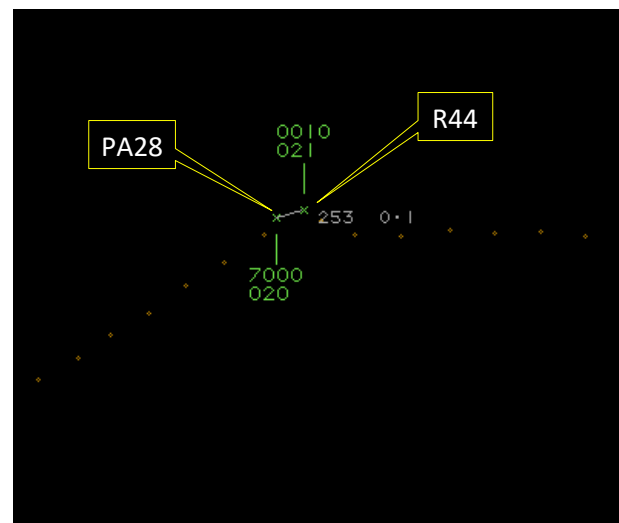


Figure 2 – 1056:38

Both pilots also supplied GPS track data for their respective flights (Figure 3). It was by combining the data sources that the diagram was constructed and the separation at CPA determined.



Figure 3 – Aircraft positions at CPA (GPS data)

The R44 and PA28 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 head-on or nearly so then both pilots were required to turn to the right.<sup>2</sup> If the incident geometry is considered as converging then the R44 pilot was required to give way to the PA28.<sup>3</sup>

## Summary

An Airprox was reported when an R44 and a PA28 flew into proximity 2NM north-west of Bidford at 1057Z on Friday 24<sup>th</sup> May 2024. Both pilots were operating under VFR in VMC, the R44 pilot listening-out on the Birmingham Radar frequency and the PA28 pilot in receipt of a Basic Service from Wellesbourne Information.

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

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data and a report from the AFISO involved. 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 first considered the actions of the pilot of the R44, and members noted that they had not been in receipt of an ATS but had been listening-out on the Birmingham Radar frequency. Members agreed that it may have been more prudent to have requested the highest level of ATS available and suggested that they may have been better served under a Traffic Service from Birmingham Radar (whilst acknowledging that Birmingham Radar does not formally participate in LARS provision) (**CF2**). Members agreed that, although the pilot of the R44 had tuned their radio to the Wellesbourne Information frequency, it had been set to 'standby' and they had not gleaned any situational awareness of the presence of the PA28 in the area (**CF3**). Additionally, members noted that the R44 had not been fitted with an additional EC device.

Members agreed that the PA28 had been sighted late by the pilot of the R44 (**CF4**) and noted that the Instructor had reacted quickly to take control and initiate emergency avoiding action. Members commended the 'good spot' and the swift reaction by the R44 pilot and the Instructor respectively. Members strongly encouraged the fitment of additional EC equipment and pointed out that it would have been especially prudent in the case of an aircraft operated by a training organisation. Further, members suggested that an additional EC device may have alerted to the presence of the PA28 and have afforded the pilot of the R44 plenty of time to have avoided the conflict with the PA28.

<sup>1</sup> (UK) SERA.3205 Proximity.

<sup>2</sup> (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

<sup>3</sup> (UK) SERA.3210 Right-of-way (c)(2) Converging.

Turning their attention to the actions of the pilot of the PA28, members noted that they had tuned their radio to the Wellesbourne Information frequency and had been in receipt of a Basic Service from the Wellesbourne AFISO. Reiterating their thoughts from their earlier discussion, members were in agreement that it may have been more prudent to have sought a higher level of ATS. Furthermore, members emphasised their thoughts on the fitment of additional EC equipment.

Members noted that the pilot of the PA28 reported that they had sighted the R44 when it had been approximately 2NM to their port-side. From the radar replay, members noted that both aircraft had been tracking in broadly straight lines and that the separation between the aircraft had been 2NM approximately 30sec before CPA. Therefore, whilst the pilot of the PA28 reported that they had visually acquired the R44, members surmised that they had subsequently lost visual contact. Consequently, and given that the separation between the aircraft had been approximately 100m (from GPS data) at CPA, members were in agreement that it had been a non-sighting (**CF5**).

In consideration of the actions of the Wellesbourne AFISO, members agreed that they had not been required to have monitored the flight of the PA28 under the terms of a Basic Service (**CF1**). Further, members appreciated that the R44 had not been 'known traffic' to the Wellesbourne AFISO, and noted that they had not had the use of surveillance equipment. Therefore, it was agreed that there had been little that they could have done to have assisted matters.

Concluding their discussion, members noted that the pilot of the R44 had not had situational awareness of the presence of the PA28, and there had not been a common frequency in use between the pilots. It was noted that the pilot of the PA28 had gained, but had subsequently lost, visual contact with the R44, and that neither aircraft had been fitted with additional EC equipment. Members were in agreement that safety margins had been much reduced and there had been a risk of collision (**CF6**). However, it was agreed that the emergency action taken by the Instructor in the R44 had increased separation at the last-minute and had possibly averted a collision. The Board assigned Risk Category B to this event.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

2024097				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
• Situational Awareness and Action				
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
<b>Flight Elements</b>				
• Tactical Planning and Execution				
2	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
• Situational Awareness of the Conflicting Aircraft and Action				
3	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
• See and Avoid				
4	Human Factors	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
5	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
• Outcome Events				
6	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: B.

### Safety Barrier Assessment<sup>4</sup>

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

#### Ground Elements:

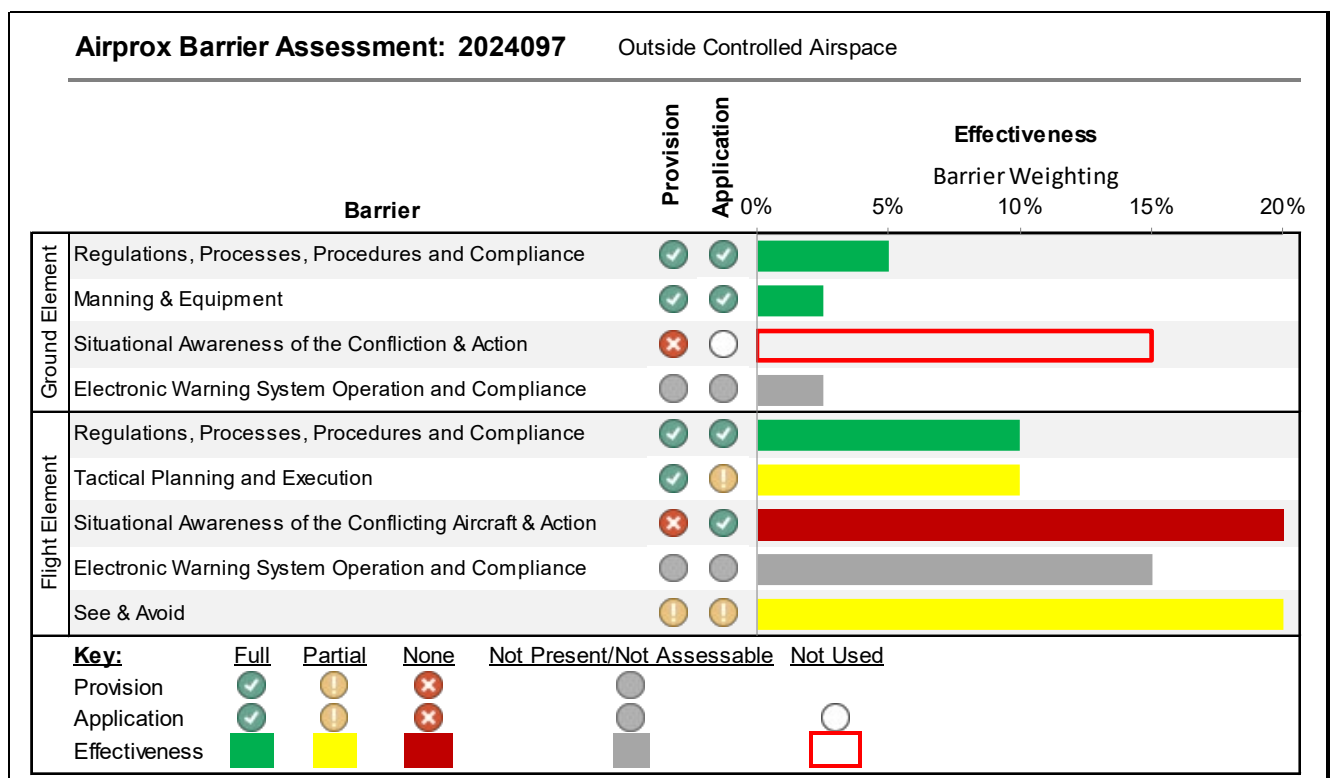
**Situational Awareness of the Confliction and Action** were assessed as **not used** because the Wellesbourne AFISO had not been required to have monitored the flight under the terms of a Basic Service.

#### Flight Elements:

**Tactical Planning and Execution** was assessed as **partially effective** because it would have been prudent for each pilot to have been in receipt of the highest level of ATS available.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because neither pilot had situational awareness of the presence of the other aircraft until visually acquired.

**See and Avoid** were assessed as **partially effective** because the pilot of the R44 sighted the PA28 late.



<sup>4</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).