AIRPROX REPORT No 2025105

Date: 23 May 2025 Time: 1549Z Position: 5145N 00057W Location: Thame

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EC135	PA28
Operator	HEMS	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Listening Out
Provider	Brize Norton	Farnboro' Radar
Altitude/FL	1800ft	1700ft
Transponder	A, C, S+	A, C, S
Reported		
Colours	Red	White, blue, yellow
Lighting	Navigation, strobes, skid LEDs	Landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1500ft	1500ft
Altimeter	QNH	QNH (1018hPa)
Heading	027°	160°
Speed	130kt	95kt
ACAS/TAS	TAS	SkyEcho
Alert	TA	None
Separation at CPA		
Reported	100ft V/0NM H	50ft V/50m H
Recorded	100ft V/<0.1NM H	

THE EC135 PILOT reports that they had been tasked to a job in […]. During the transit, Brize Radar called two aircraft north of them by 2-3 miles at a similar operating altitude. The TCM spotted the first aircraft but the second aircraft took several minutes longer to acquire. Both aircraft had appeared on TAS. At approximately 1545 the second aircraft was spotted ahead, again by the TCM, and was seen to be paralleling their track to the left-hand side and below. The conflicting aircraft conducted a climbing left-hand turn through 270° until it was heading on a collision course from the left. The EC135 pilot climbed approximately 100ft to avoid the conflicting aircraft which did not deviate course or altitude. An Airprox was called by the pilot and a report submitted by the Brize Radar Supervisor at the time.

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

THE PA28 PILOT reports that they had been on a training sortie from […] with an early-hours student pilot. The chosen exercise area had been Aylesbury-Westcott-Thame-Chinnor. Whilst flying southwards during the lesson, the student called 'helicopter' and pointed to the right. The Instructor pilot looked and saw a helicopter approaching fast from about the 2 o'clock position, slightly high, so closed the throttle and made a descending turn to the right. They had been listening out on the Farnborough North frequency, but had not been in receipt of a service as their experience is that they tend to terminate the service as soon as you fly close to the edge of their service area, i.e. Westcott or Stokenchurch. There is no listening squawk for Farnborough North.

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

THE BRIZE NORTON LARS CONTROLLER reports that, whilst providing a Basic Service (BS) to [EC135 C/S] squawking 0016, they passed Traffic Information (TI) on conflicting traffic which was squawking conspicuity 7000 [the PA28], indicating 400ft below and had been manoeuvring; the [EC135]

pilot called visual. A short while later as the aircraft returns merged, the controller noticed the conflicting traffic had started to climb and they were about to pass further TI to [EC135 C/S] when the pilot declared an Airprox. The controller logged the details passed by the pilot on a flight strip as follows: *A light fixed wing, white and blue PA28 turned towards us and climbed, we turned and climbed 200ft to avoid*. Following this, [EC135 C/S] continued to the incident they were responding to and let down a short while later. At approximately 1615Z the controller received a call from the pilot to discuss the Airprox and they gave them their email address. The pilot informed the controller that the crew had maintained visual with the PA28 throughout and that as the aircraft turned and started to climb the pilot was informed and the avoiding action was initiated and that the PA28 had flown through their planned route and altitude. At no time did the controller speak to the crew of the PA28 and was not providing them with a service.

The controller perceived the severity of the incident as 'Medium'.

Factual Background

The weather at RAF Benson was recorded as follows:

```
METAR EGUB 231550Z AUTO 24009KT 9999 BKN054/// SCT085/// 20/06 Q1017=
METAR EGUB 231520Z 25009KT CAVOK 20/07 Q1017 NOSIG RMK BLU BLU=
```

Analysis and Investigation

Military ATM

The EC135 had been on an emergency sortie heading northeast of RAF Benson towards Milton Keynes. The PA28's Mode A was displaying conspicuity (7000) as they transited round RAF Benson's MATZ.

Sequence of Events

The EC135 [pilot] made initial contact with Brize Norton Radar at 1546:03 requesting a Basic Service. Traffic Information was provided to the EC135 multiple times by the Brize Norton Radar controller and, at 1547:54, the PA28 was called to the EC135 [pilot] "…*further traffic 12 o'clock, 3 miles, tracking west/southwest, indicating 400ft below*. At 1548:06, the EC135 pilot reported visual "*traffic sighted on both*".

At 1548:59, the EC135 [pilot] reported the Airprox "*Airprox, Airprox. PA28 aircraft has just (inaudible) towards us, same altitude. We climbed to avoid*".

CPA occurred at 1548:59, with a separation of 0.1NM laterally and 100ft vertically.

Local BM Investigation(s)

A local investigation was conducted by Brize Norton following the event to identify the ATS-related causal/aggravating factors. It was deemed that the Brize Norton Radar controller performed their duty to a satisfactory standard and provided timely Traffic Information to the EC135 [pilot] even though [they] had been under a Basic Service.

2 Gp BM Analysis

The Brize Norton Radar controller provided proactive and timely Traffic Information to the EC135 pilot to enhance the pilot's situational awareness, irrespective of the Basic Service. This had enabled the EC135 pilot to visually acquire the PA28.

UKAB Secretariat

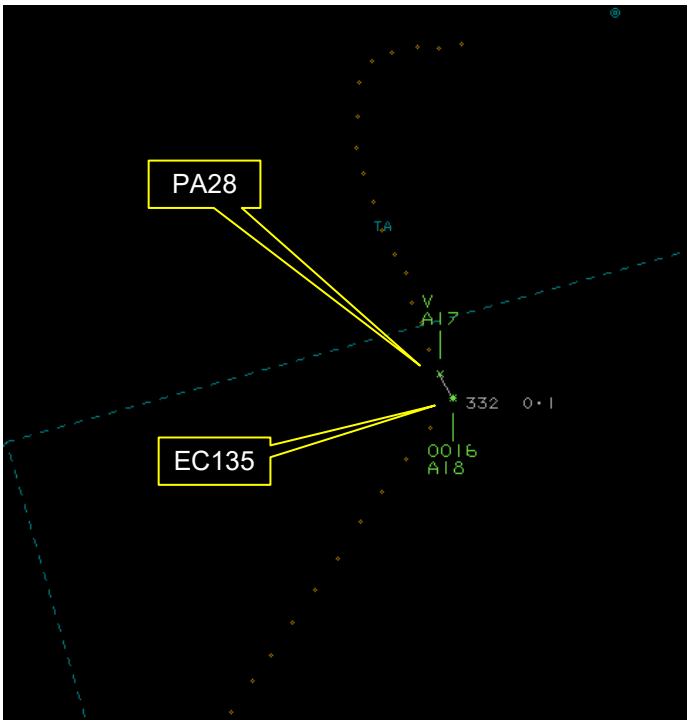


Figure 1:1548:58 (CPA minus 1 sec) 100ftV/<0.1NM H

The EC135 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.[1] If the incident geometry is considered as converging then the PA28 pilot was required to give way to the EC135.[2]

Summary

An Airprox was reported when an EC135 and a PA28 flew into proximity at Thame at 1549Z on Friday 23rd May 25. The EC135 pilot was operating under VFR in VMC in receipt of a Basic Service from Brize Norton, and the PA28 pilot was operating under VFR in VMC and had been Listening Out on the Farnborough North frequency.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the air traffic controller involved and reports from the appropriate 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 firstly considered the actions of the EC135 pilot, recognising that they had been on an active callout and wearing an 'Alpha[3]' callsign, had taken a Basic Service from Brize Radar as they had transited the area and had received Traffic Information on relevant conflictions with those called aircraft

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(2) Converging.
[3] CAP 493 MATS Pt1:
a. Category A (Alpha)
•Highest priority
•Used for flights where life is at immediate risk, such as:
Helicopter Emergency Medical Services (HEMS) on a critical mission
Search and Rescue (SAR) operations
•Air Traffic Services (ATS) must give immediate priority to these flights.

then being displayed on their TAS unit (**CF5**). The EC135 crew had monitored the PA28 as it had initiated a left-hand turn, closing toward their own track, and had taken avoiding action after having monitored the PA28 as it had closed toward their own position. Members felt that the EC135 pilot could have taken earlier, and more positive, action (**CF3, CF8**). Board members praised the EC135 crew for their lookout and for having taken an Air Traffic Service and reinforced their messaging that the highest level of service possible should be sought to improve the crew's situational awareness.

Turning to the actions of the PA28 pilot, members noted that the flight had been a training exercise with the student having seen and called the closing EC135 at a late stage (**CF7**), allowing the Instructor little time to take avoiding action with members noting that the PA28 pilot had checked their rate of climb at the point immediately prior to CPA. Members noted that the PA28 pilot had been listening out on the Farnborough Radar frequency, which members felt had denied an opportunity for greater situational awareness of other traffic in the area (**CF2**). The Board noted that the PA28 pilot had carried an EC unit which had been capable of receiving electronic emissions from the EC135 and was disappointed that this barrier had not alerted in this case (**CF6**). That, together with the lack of an active Air Traffic Service, had meant that the PA28 pilot had not had any situational awareness of the proximity of the EC135 (**CF4**).

In reviewing the contribution by Brize Norton Radar, the Board acknowledged that they had been asked for and had provided a Basic Service to the pilot of the EC135, and that that service does not require the controller to monitor the flight but that, in this case, they had done so on a number of occasions and members felt that they had done all they could have, and more, in this event. Members also acknowledged that, although Brize Radar is equipped with a conflict alerting system, the nature of the service provided to the EC135 meant that it had not been utilised in this case (**CF1**).

Board members wished to record that this Airprox highlights, for all Class G airspace operators, that HEMS aircraft operate to tight and life-saving timelines, often flying to someone whose life can depend on the seconds or minutes that can be saved in getting the medics to them. They are invariably going as fast as safely possible and by the most direct route possible. Rules-of-the-air, though, remain extant regardless of task and are applied by HEMS operators as with all other operators in UK airspace. The Board also acknowledged that, unless a pilot happens to be in communication with the same ATC unit as the HEMS pilot, there is no way of knowing if the HEMS flight is simply re-positioning, or on a time-critical mission. Therefore, the Board proffered that it may be prudent for all pilots, when sighting a HEMS aircraft, to consider that it is responding to an emergency call.

Concluding the discussion, members thoughts turned to the consideration of the risk of collision. Whilst it was acknowledged that the pilot of the EC135 had achieved visual contact with the PA28, members were in agreement that they had flown close enough to have caused its pilot concern. Members agreed that safety margins had been reduced but were satisfied that there had not been a risk of collision. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025105			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Electronic Warning System Operation and Compliance			
1	Technical	• Conflict Alert System Failure	Conflict Alert System did not function as expected	The Conflict Alert system did not function or was not utilised in this situation
	Flight Elements			
	• 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

3	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
	• Situational Awareness of the Conflicting Aircraft and Action			
4	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
	• Electronic Warning System Operation and Compliance			
5	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
6	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
	• See and Avoid			
7	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
8	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern

Degree of Risk: C.

Safety Barrier Assessment[4]

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

Ground Elements:

Electronic Warning System Operation and Compliance were assessed as **not used** because the conflict alert system was not utilised in this situation.

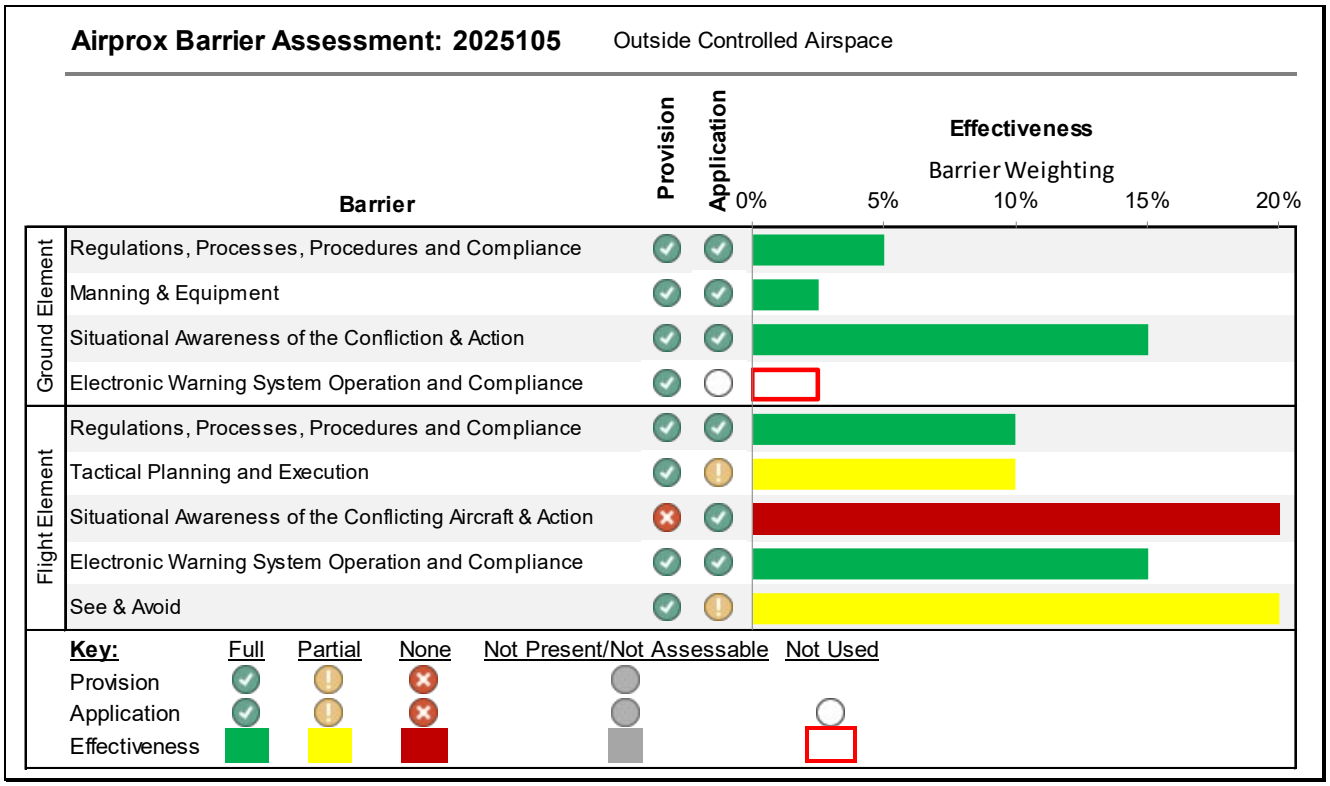
Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the PA28 pilot could have elected to utilise an active Air Traffic Service.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the PA28 pilot had no situational awareness of the proximity of the EC135.

See and Avoid were assessed as **partially effective** because the PA28 pilot had achieved only a late sighting of the EC135 and the EC135 pilot, having visually acquired the PA28, had delayed taking action to maintain or increase separation.

[4] 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: 2025105
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 Assessable
Not Used
Provision
Application
Effectiveness