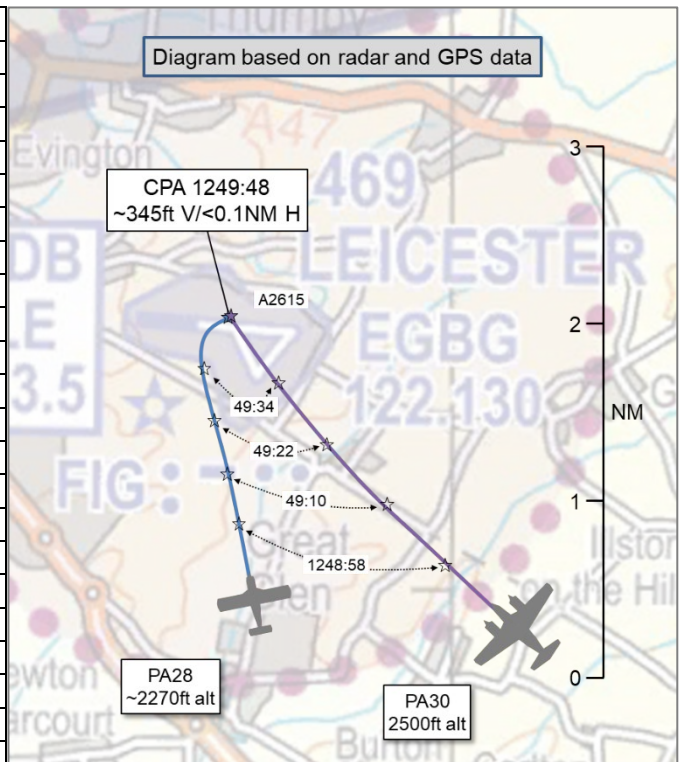


**AIRPROX REPORT No 2023069**

Date: 07 May 2023 Time: 1250Z Position: 5237N 00102W Location: Leicester Aerodrome (469ft)

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	PA30
Operator	Civ FW	Civ FW
Airspace	Leicester ATZ	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Leicester Radio	Leicester Radio
Altitude/FL	~2270ft	2615ft
Transponder	A, C, S	A, C, S+
<b>Reported</b>		
Colours	White	Yellow
Lighting	Beacon, strobes	Anti-col
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1800ft	2400ft
Altimeter	QFE (999hPa)	QNH (1016hPa)
Heading	320° turning right	315°
Speed	85kt	120kt
ACAS/TAS	PilotAware	Not fitted
Alert	None	N/A
<b>Separation at CPA</b>		
Reported	100ft V/0m H	200ft V/0m H
Recorded	~345ft V/<0.1NM H	



**THE PA28 PILOT** reports flying to Leicester with a passenger. The pilot of the other aircraft did not make a radio call in the estimated 6min that they were on frequency before the conflict or after they had made their initial call obtaining the airfield information and stating their intention to ‘report overhead’. The Airprox aircraft did not appear on the TAS but other aircraft did. The Airprox aircraft flew directly overhead as they approached the airfield overhead.

The pilot assessed the risk of collision as ‘Medium’.

**THE PA30 PILOT** reports joining the Leicester overhead from the southeast at 2400ft. During their earlier initial call at 10 miles to run, Leicester Radio had informed them that another aircraft was joining at 6 miles [they recalled] and they were looking for this traffic. The traffic was sighted at about 3 miles on a converging course and below them, which they identified as a PA28. As they approached the overhead the PA28 turned towards the airfield on an eastbound heading but still well below their own altitude. They decided the safest course of action was to maintain altitude and heading until the PA28 was sighted at the 5 o’clock position; this they did and extended the overheard join accordingly.

The pilot assessed the risk of collision as ‘Low’.

**THE LEICESTER A/G OPERATOR** reports the PA28 and PA30 pilots both called Leicester Radio for joining and airfield information at approximately 1340 local, with the PA30 pilot calling first. Both were given the airfield information, and both read it back correctly: RW28 RH, QFE 999, QNH 1016. It was a busy day with free landings for a Coronation weekend event. They did not remember whether these pilots called “deadside descending” on reaching the airfield. The PA28 touched down at 1354 local, followed by the PA30 at 1355 local.

## Factual Background

The weather at East Midlands Airport was recorded as follows:

METAR EGNX 071250Z 25010KT 9999 SCT027 17/10 Q1017=

## Analysis and Investigation

### UKAB Secretariat

The PA28 and PA30 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 overtaking then the PA28 pilot had right of way and the PA30 pilot was required to keep out of the way of the other aircraft by altering course to the right.<sup>2</sup> An aircraft that is obliged [...] to keep out of the way of another shall avoid passing over, under or in front of the other, unless it passes well clear and takes into account the effect of aircraft wake turbulence.<sup>3</sup> An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.<sup>4</sup>

## Summary

An Airprox was reported when a PA28 and a PA30 flew into proximity at Leicester aerodrome at 1250Z on Sunday 7<sup>th</sup> May 2023. Both pilots were operating under VFR in VMC, both in receipt of an AGCS from Leicester Radio.

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

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the A/G Operator 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.

Members first discussed the chronology of R/T calls and established that the PA28 pilot had changed to the Leicester AGCS frequency after the PA30 pilot had called. Consequently, although both pilots had received airfield information and the PA30 pilot had heard the A/G Operator exchange with the PA28 pilot, the PA28 pilot had not been aware of the joining PA30 (**CF2**). Members discussed the role of the A/G Operator at length and agreed that although it would have been useful to have informed the PA28 pilot of the PA30, also joining from the south/southeast, there was no requirement to do so. The PA30 pilot had seen the PA28 at range, which Board members felt had presented them with an opportunity to sequence their arrival at the airfield overhead but, in the event, the PA30 had arrived at the overhead at the same time as the PA28 perhaps, the Board felt, because the PA30 pilot thought they would overtake the PA28 (**CF1**). The PA28 pilot had started to turn right to position to the deadside for the overhead join, which the Board felt the PA30 pilot could reasonably have expected, and had seen the PA30 as it had passed overhead, at about CPA. Members agreed that this effectively constituted a non-sighting (**CF5**). The Board noted that the PA30 pilot had been content with the amount of vertical separation but they had passed close enough to the PA28 (**CF4**) to cause its pilot concern (**CF6**). Unfortunately, the PA28 TAS had not alerted on the PA30 (**CF3**), no doubt adding to the PA28 pilot's surprise when the PA30 was sighted. Turning to risk, members agreed that the PA30 pilot had had sufficient vertical separation that risk of collision had been averted, Risk C, however, they also felt that the PA30 pilot could have afforded the PA28 pilot a greater degree of vertical separation or arranged their flight path to avoid passing directly overhead. Finally, members noted that the PA30 had not been equipped with a TAS, observed that the closing date for the Department for Transport rebate

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

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

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

<sup>4</sup> (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

scheme for EC devices<sup>5</sup> had been extended to 31<sup>st</sup> March 2024, and that adoption of EC equipment by all airspace users could only help further mitigate the risk of mid-air collision.

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

### Contributory Factors:

	2023069			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Flight Elements</b>				
<b>• Tactical Planning and Execution</b>				
1	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
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
2	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
<b>• Electronic Warning System Operation and Compliance</b>				
3	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
<b>• See and Avoid</b>				
4	Human Factors	• Incorrect Action Selection	Events involving flight crew performing or choosing the wrong course of action	Pilot flew close enough to cause concern
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
6	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: C.

### Safety Barrier Assessment<sup>6</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 A/G Operator was not required to monitor the traffic positions.

#### **Flight Elements:**

**Tactical Planning and Execution** was assessed as **partially effective** because the PA30 pilot heard and saw the PA28 ahead but continued to the airfield overhead and arrived at the same time as the PA28.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the PA28 pilot changed to the Leicester frequency after the PA30 pilot had made their joining call and was unaware of the joining PA30 and the Leicester A/G Operator did not pass information to the PA28 pilot regarding the PA30, also joining from a similar direction.

<sup>5</sup> <https://www.caa.co.uk/general-aviation/aircraft-ownership-and-maintenance/electronic-conspicuity-devices/>

<sup>6</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the PA28 TAS did not alert on the PA30 and the PA30 was not carrying any equipment that could have detected the PA28.

<b>Airprox Barrier Assessment: 2023069</b>		Outside Controlled Airspace					
<b>Barrier</b>	<b>Provision</b>	<b>Application</b>	<b>Effectiveness</b>				
			<b>Barrier Weighting</b>				
			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	✓	✓				
<b>Key:</b>			Full	Partial	None	Not Present/Not Assessable	Not Used
Provision	✓	!	✗	●			
Application	✓	!	✗	●		○	
Effectiveness							