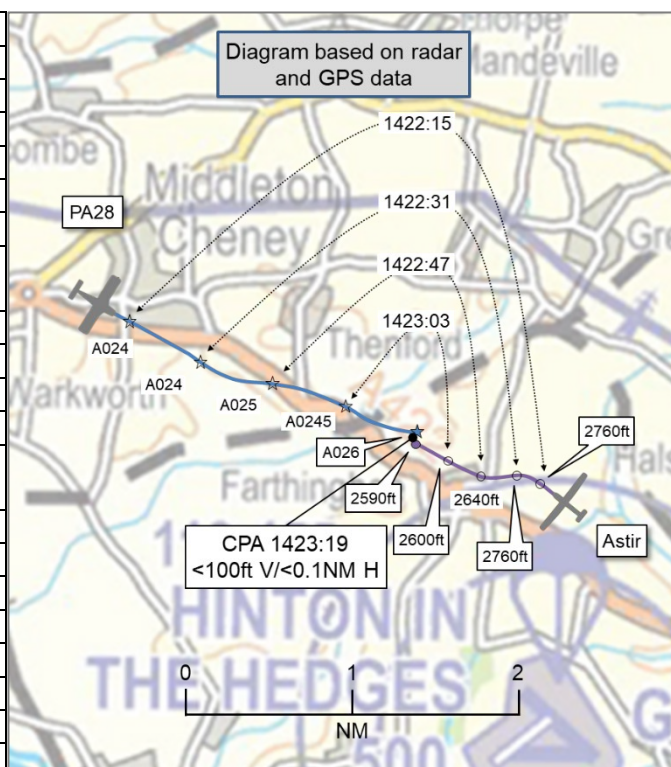


AIRPROX REPORT No 2022214

Date: 18 Sep 2022 Time: 1423Z Position: 5203N 00114W Location: 4NM E Banbury

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Astir	PA28
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Hinton in the Hedges	Oxford Radar
Altitude/FL	2590ft	2600ft
Transponder	Not fitted	A, C
Reported		
Colours	White	White, Blue
Lighting	None	Nav, 'Wing' Beacon
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2700ft	NK
Altimeter	QNH (NK hPa)	QNH (NK hPa)
Heading	240°	NK
Speed	50kt	90kt
ACAS/TAS	FLARM	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	50ft V/60m H	0ft V/NK H
Recorded	<100ft V/~0.1NM H	



THE ASTIR PILOT reports that they were on a local flight to maintain currency on type and they had climbed a couple of hundred feet in weak lift. They were tracking west and, at the time of the incident and turning 20° to the south, the plane approached from the west and slightly below heading east, they recall. They think it was climbing slightly and [they opine that the other pilot] saw them at the last minute and turned away to their left, so they were both turning left. They didn't see the other aircraft until the last minute and, as they were turning away, they didn't need to take any further action.

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

THE PA28 PILOT reports that [due to the late notification of the incident and the time that has elapsed] their recollection is not clear but they can remember a glider suddenly appearing and then it disappeared down the starboard side of the aircraft.

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

A HINTON IN THE HEDGES AIRFIELD REPRESENTATIVE reports that Hinton is an unlicensed airfield with no control tower. They have a traffic-only radio to enable people to communicate with each other.

OXFORD RADAR reports that their records show that, during the period that the PA28 pilot was on the frequency, a hand over of watch had taken place. Neither controller has any recollection of an incident being reported or taking place.

Factual Background

The weather at Oxford was recorded as follows:

METAR EGTK 181420Z 34013KT 9999 SCT041 BKN045 16/07 Q1021

Analysis and Investigation

Oxford ATSU

Oxford ATSU were contacted regarding this event however due to the initial mis-identification of Aircraft 2, an extended period of time had elapsed. The response from Oxford ATSU is summarised below:

The event took place too long ago to allow for any meaningful independent investigation as there are no recordings or recollection and it is beyond the required retention period, however, at unit level, Oxford ASTU have checked the relevant radar Watch Log and their Safety Management System and there is no record of an incident on this date and time recorded.

CAA ATSI

ATSI reviewed this event however, due to Oxford ATSU being notified outside the required retention period for relevant data, insufficient information is available for ATSI to make comment.

UKAB Secretariat

The Astir pilot, in their initial Airprox report, provided the UKAB Secretariat with the best available time and location information regarding the event, which was used, along with radar data available via the NATS radar replay system, to trace what was believed to have been Aircraft 2 and, in accordance with normal practice, the pilot was contacted soon after the event. However, shortly before the Airprox was due to be read by the Board, additional information became available to the UKAB Secretariat which, when cross-referenced with the original information collected, showed that the Aircraft 2 which had originally been traced had in fact been the incorrect aircraft. The process of tracing Aircraft 2 was then restarted. The pilot was contacted and then the ground elements involved were identified and contacted. Although the restarted tracing process was successful in identifying the correct aircraft, pilot and ANSP, due to the time that had elapsed in the interim period, memories had faded and ATC records had been overwritten. The UKAB Secretariat would like to thank the individuals and organisations involved in this event for their understanding and patience, including that of the incorrectly identified pilot. Fortuitously, the circumstances surrounding this Airprox were such that, although elements of detail have been lost, sufficient information is available to enable the production of this report and its presentation to the Board.

The NATS radar replay showed that the PA28 pilot had been tracking in a southeasterly direction and slowly climbing in the lead-up to the Airprox, commencing a slight turn to the left 8sec, (2 radar sweeps), before CPA. The Astir pilot reported that, at the time of the Airprox, they were turning by 20° to the south, the GPS data relating to the Astir flight recorded this turn as commencing at, or very shortly after, CPA.

The diagram has been produced by combining different data sources, radar and GPS, and as a result the separation at CPA has been recorded as an approximation.

The Astir 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 head-on or nearly so then both pilots were required to turn to the right.²

¹ (UK) SERA.3205 Proximity.

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

Comments

BGA

UK gliding sites are listed in UK AIP ENR 5.5 and labelled on the CAA 1:500,000 and 1:250,000 charts with a "G" symbol, as shown in the chart segment in Part A. A greater density of gliders may be expected nearby at any time during daylight hours, and at any altitude up to cloudbase.

The Hinton-in-the-Hedges aerodrome VHF frequency (119.455MHz) is also shown on the CAA charts and in ENR 5.5. If transiting nearby below 3000ft AMSL, a brief broadcast call on the Hinton channel using "Unattended Aerodrome" phraseology (CAP 413 paras 4.162-4.170) could help avoid conflicts and increase everyone's situational awareness.

Summary

An Airprox was reported when an Astir and a PA28 flew into proximity 4NM east of Banbury at 1423Z on Sunday 18th September 2022. Both pilots were operating under VFR in VMC, the PA28 pilot in receipt of a Basic Service from Oxford Radar and the Astir pilot not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS flight data, 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 first discussed the actions of the Astir pilot and had been encouraged that the pilot had been utilising EC equipment; however, this had been unable to detect, and had therefore been incompatible with, the transmissions from the transponder fitted to the PA28 (**CF3**). The Board went on to agree that without interoperable EC, and as the pilot had not been in receipt of an air traffic service, there had been no opportunity for the pilot to have gained any prior awareness of the presence of the PA28 (**CF2**). Members noted that the Astir had been at a slightly higher altitude than the PA28 in the moments immediately prior to the Airprox, and that the aircraft had been approaching one another relatively head-on, two factors which would have made the PA28 more difficult to visually acquire. The Board agreed that, although the Astir pilot had seen the PA28, it had been at or after CPA (**CF4**) and it had been fortuitous that they had been in a slight turn, as it had been too late for them to have been able to have taken any further avoiding action.

Next, members considered the actions of the PA28 pilot, and noted that they had been in receipt of a Basic Service provided by Oxford Radar. A discussion followed regarding whether a different service or service provider may have better aided the PA28 pilot. The Board wondered whether a Traffic Service may have been available from Brize Radar, however, a military controller advisor stated that it would have been unlikely that the Brize radar would have detected the Astir. After examination of this, and a number of other ATS options, including whether a call to Hinton in the Hedges would have been reasonable, members agreed that a service from Oxford had been appropriate. The Board next considered that, having been under a Basic Service, and without having any EC equipment, the PA28 pilot would not have had any mechanism to gain awareness of the presence of the other aircraft and had therefore had none (**CF2**). A glider pilot member added that when head-on or nearly so, gliders can be particularly difficult to visually acquire, and the Board agreed that this had contributed to the PA28 pilot only visually acquiring the Astir at CPA (**CF4**). A GA pilot member stated that were a pilot to weave, they may increase the visual conspicuity of their own aircraft, however, the Board accepted that it is not always possible to employ this method, especially during instruction.

The Board then turned its attention to the ground element involvement and quickly agreed that, as the Oxford controller had been delivering a Basic Service to the PA28, they had not been required to monitor the flight (**CF1**), with a civil controller adding that, even if the controller had been monitoring the PA28, it was unlikely that the radar would have detected and displayed the Astir to the controller.

Finally, in assessing the risk of collision, the Board noted that the EC equipment carried by the Astir pilot had been unable to detect the PA28. Members agreed that that neither pilot had had any prior situational awareness regarding the presence of the other aircraft and, although both pilots had become visual with the other aircraft, it had been at a time too late for any avoiding action to materially increase separation. Therefore, the Board concluded that providence had played a major part in events, that the separation that had existed had been fortuitous and the bare minimum, and that there had been a serious risk of collision (**CF5**). As such, the Board assigned a Risk Category A to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022214			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• 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
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
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
• Electronic Warning System Operation and Compliance				
3	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
• See and Avoid				
4	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				
5	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: A

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:

Ground Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **not used** because the Oxford Radar controller was not required to monitor the flight of the PA28 under a Basic Service.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had had any awareness of the presence of the other aircraft prior to sighting it.

³ 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 EC equipment carried by the Astir pilot had been unable to detect, and had therefore been incompatible with, the transponder fitted to the PA28.

See and Avoid were assessed as **ineffective** because, although both pilots had become visual with the other aircraft, this had been at or after CPA, too late for them to have been able to take any effective avoiding action.

Airprox Barrier Assessment: 2022214		Outside Controlled Airspace		Effectiveness				
Barrier		Provision	Application	Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Manning & Equipment	✓	✓					
	Situational Awareness of the Conflication & 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	■	■	■	■	□			