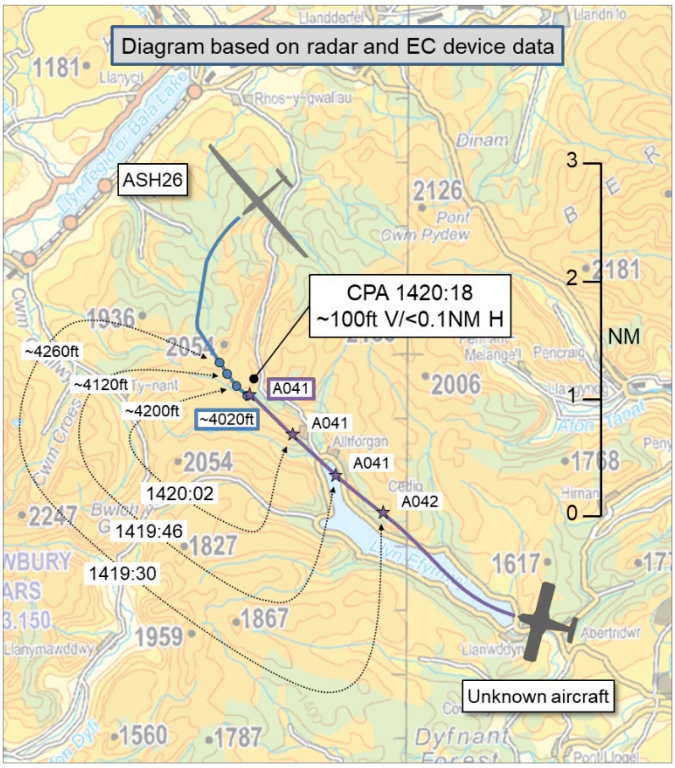
AIRPROX REPORT No 2023208

Date: 06 Sep 2023 Time: 1420Z Position: 5249N 00334W Location: 6NM S Bala

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASH26	Light aircraft
Operator	Civ Gld	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	NK
Provider	N/A	NK
Altitude/FL	~4020ft	4100ft
Transponder	Not fitted	A, C
Reported		
Colours	White	NK
Lighting		NK
Conditions	VMC	NK
Visibility	>10km	NK
Altitude/FL	4200ft	NK
Altimeter	QNH	NK
Heading	135°	NK
Speed	55kt	NK
ACAS/TAS	PowerFLARM	NK
Alert	None	NK
Separation at CPA		
Reported	200ft V/0NM H	NK
Recorded	~100ft V/<0.1NM H	



THE ASH26 PILOT reports that they had self-launched from [their departure point] and were exploring mountain wave and thermals. A weak wave was forming immediately downwind of the ridges. They had climbed to 4500ft, just east of Lake Bala, and were aiming southeast towards clouds that were marking possible lift adjacent to the Vyrnwy valley. In level cruise, they were suddenly aware of an aircraft head-on and closing quickly. They immediately pushed the stick and ducked under its path. It passed immediately over their head, no more than 200ft above (their dip was 200ft). There was no alert from their [EC device]. As far as they could tell, [the other pilot] didn't see them.

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

THE PILOT of the other aircraft involved could not be traced.

Factual Background

The weather at Shawbury was recorded as follows:

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METAR EGOS 061420Z 24002KT CAVOK 28/19 Q1019 NOSIG RMK BLU BLU
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The ASH26 was not observed on radar. Two aircraft were observed on radar to have been in the vicinity at the time of the Airprox, one of which was quickly discounted from having been involved (see Figure 1). The other aircraft could not be positively identified but is believed to have been involved. Despite best efforts, and having ascertained a probable identity, the pilot of that aircraft could not be definitively established.

The pilot of the ASH26 kindly supplied GPS track data for their flight. It was by combining the separate sources that the diagram was constructed and the separation at CPA determined. The untraced aircraft was observed on radar to have been flown at Flight Levels and an appropriate conversion factor was used to determine its altitude.

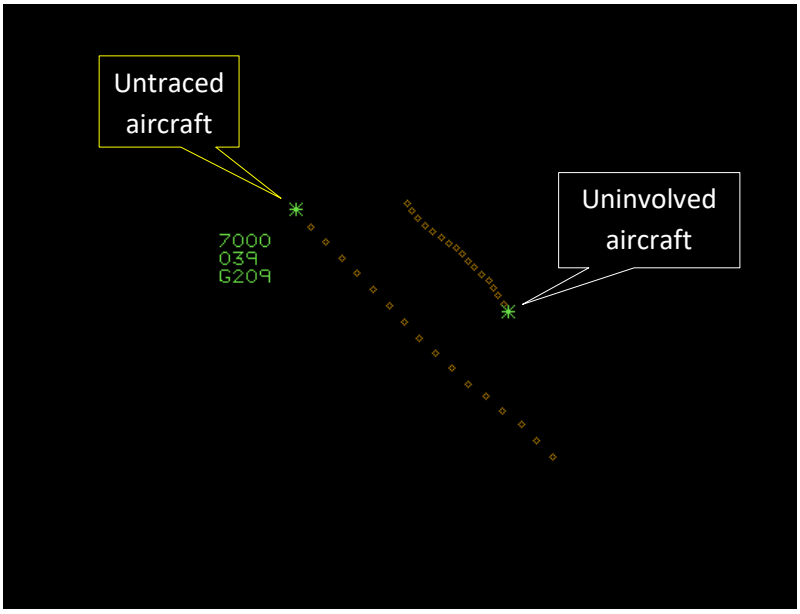

Figure 1 – CPA at 1420:18

The ASH26 pilot and the pilot of the untraced aircraft 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]

Comments

AOPA

Unfortunately, even in today's world of technology with integrated resources, not all aircraft can be identified, which makes the investigation process more difficult. The use of the Low Level Common frequency, or SafetyCom, can assist in everyone's situational awareness.

BGA

This incident once again highlights the difficulty of seeing an aircraft approaching head-on on a reciprocal course.

Summary

An Airprox was reported when an ASH26 and an untraced aircraft flew into proximity 6NM south of Bala at 1420Z on Wednesday 6th September 2023. The pilot of the ASH26 had been operating under VFR in VMC. It could not be determined if the pilot of the untraced aircraft had been in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the ASH26 pilot, GPS track data and radar photographs/video recordings. Relevant contributory factors mentioned during the Board's discussions

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board appreciated the effort that had been made to identify the pilot of the untraced aircraft but was disappointed that, ultimately, it had not been possible. Notwithstanding, members began their discussion by considering the actions of the pilot of the ASH26. A member with particular knowledge of gliding operations explained that it would have been very difficult for the pilot of the ASH26 to have sighted an aircraft that had been heading directly towards them due to the small frontal aspect that it had presented and lack of relative motion. The matter of electronic conspicuity was pondered and, although it was not known whether the untraced aircraft had carried any EC equipment other than a transponder transmitting Mode A and C data, members agreed that the EC device fitted to the ASH26 would have been expected to have detected its presence. Given the proximity of the aircraft, members were surprised that the pilot of the ASH26 reported that they had not received an alert (**CF2**). Consequently, it was agreed that the pilot of the ASH26 had not had situational awareness of the presence of the untraced aircraft (**CF1**). Nevertheless, members agreed that upon visual acquisition, albeit late (**CF3**), the pilot of the ASH26 had reacted quickly to take avoiding action.

Concluding their discussion, members agreed that the pilot of the ASH26 had taken decisive avoiding action but safety during the encounter had not been assured. Members were in agreement that there had been a risk of collision (**CF4**) and that it had been the emergency action taken by the pilot of the ASH26 that had increased separation between the aircraft at the last minute. As such, the Board assigned Risk Category B to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023208			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Situational Awareness of the Conflicting Aircraft and Action			
1	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			
2	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			
3	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
	• Outcome Events			
4	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[3]

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

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the ASH26 had not had situational awareness of the presence of the untraced aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC device fitted to the ASH26 would have been expected to have detected the presence of the untraced aircraft, but no alert was reported.

See and Avoid were assessed as **partially effective** because the pilot of the ASH26 had visually acquired the untraced aircraft late.