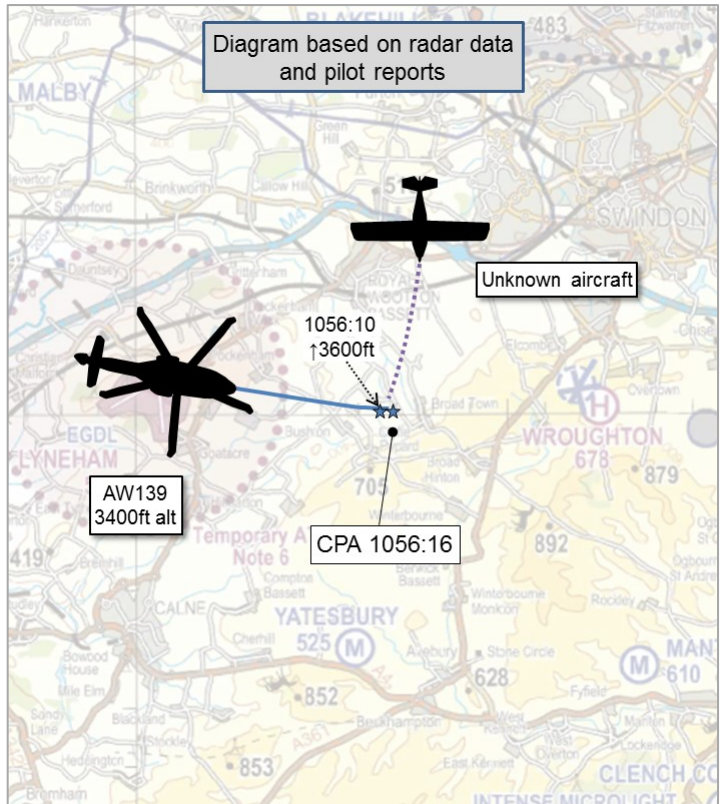


AIRPROX REPORT No 2017242

Date: 08 Oct 2017 Time: 1056Z Position: 5130N 00152W Location: 4nm east Lyneham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AW139	Light Aircraft
Operator	Civ Comm	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	
Service	Traffic	
Provider	Brize Norton	
Altitude/FL	3600ft	
Transponder	A, C, S	
Reported		
Colours	Grey	
Lighting	Anti-coll, Strobe, Nav	
Conditions	IMC	
Visibility	0.5nm	
Altitude/FL	3400ft	
Altimeter	QNH (1021hPa)	
Heading	100°	
Speed	150kt	
ACAS/TAS	TCAS I	
Alert	None	
Separation		
Reported	200ft V/0nm H	NK
Recorded		NK



THE AW139 PILOT reports that he was in the cruise, IFR, at 3400ft, under a Traffic Service from RAF Brize Norton. He was informed of pop-up traffic, ½ nm, no height. There were no TCAS indications, but, at that moment, he exited cloud to see a white fixed-wing aircraft similar to a C42 approx 100ft below and ¼ nm ahead in the climb. He initiated a rapid climb and passed over the climbing aircraft before re-entering cloud. The other aircraft appeared to be flying through a valley in the clouds and, in his opinion, did not appear to be 1500m clear horizontally nor 1000ft vertically whilst above 3000ft. The other aircraft did not appear to change course or attitude throughout.

He assessed the risk of collision as 'High'.

THE UNKNOWN AIRCRAFT PILOT could not be traced.

THE BRIZE CONTROLLER reports that he was the LARS controller at the time of the incident and was working 5 aircraft over a range of approximately 40nm. One of the other aircraft was in receipt of a Traffic Service. An AW139 called on frequency requesting a Traffic Service (TS) in transit between Junction 18 of the M4 and Battersea. He identified the aircraft in a congested piece of airspace and placed it under the service requested. Three of the other aircraft were also operating in close proximity, and he recalled that he called 2 of these to the AW139 pilot, to which the pilot called visual with both. After scanning his other aircraft, he returned his focus to the Lyneham area and, after rotating his Mode A/C labels to check for other traffic, a new, primary-only contact appeared in the AW139's 11 o'clock at a short range of 1nm, which he called to the pilot as quickly as he could. He heard someone transmit on frequency, "climb, climb" and he refrained from transmitting in case the pilot was following TCAS advice. There was no mention of any incident on frequency, and it was not until later on that day that his colleague took a telephone call from the pilot of the AW139 asking about the incident.

He perceived the severity of the incident as 'High'.

Factual Background

The weather at Brize Norton was recorded as follows:

METAR EGVN 081050Z 33006KT 9999 SCT022 15/09 Q1020 WHT BECMG SCT025 BLU

Analysis and Investigation

Military ATM

Radar replays from NATS radar feeds showed the AW139 in transit but could not identify an aircraft that matched the profile of the second aircraft involved in the Airprox.

During the initial identification and the agreement of a Traffic Service, the Brize LARS Controller passed Traffic Information (TI) to the AW139 pilot on two conflicting aircraft, to which the pilot responded that he had both contacts on TCAS. During the next minute, there was no break in transmissions as the controller dealt with other aircraft. The controller then returned his attention to the AW139 and passed TI to the pilot on 'pop-up traffic' in its left, 11 o'clock, 1nm, crossing left to right, no height information. The pilot responded that he was looking, at the same time as "...climb, climb, climb..." was heard on frequency, and then stated "got him", which could be interpreted as being visual. With no mention of the Airprox on frequency, and no conflict visual on radar replay, it is difficult to determine if this was the incident.

With a busy LARS frequency giving perceived medium-high workload, the controller was required to divide his attention between multiple aircraft under his control. Although the primary-only traffic was only 1nm away from the AW139 when TI was passed, it had not been visible on radar the last time the controller had checked, and he did pass TI at the first opportunity once the conflict was seen, which is reasonable in the circumstances.

UKAB Secretariat

The AW139 and unknown aircraft pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as converging then the unknown aircraft pilot was required to give way to the AW139².

Summary

An Airprox was reported when an AW139 and an unknown aircraft flew into proximity at 1056 on Sunday 8th October 2017. The AW139 pilot was operating under IFR in IMC and in receipt of a Traffic Service from Brize Norton. The unknown aircraft pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the pilot of the AW139, transcripts of the relevant RT frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board began by looking at the actions of the Brize controller. They acknowledged that he was busy with other speaking units, that the unknown light-aircraft was not transponding in a busy piece of airspace and, due to the radar coverage in the area of the Airprox, probably appeared on the controller's

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(2) Converging.

radar screen late as it climbed into Brize's radar cover. However, this had not deterred the controller from passing Traffic Information (TI) to the AW139 pilot as soon as he saw the primary return, and the Board commended him on his diligence.

The Board then looked at the actions of the unknown light-aircraft pilot. Although they could not substantiate the actual meteorological conditions at the time, members opined that flying in such busy airspace in the reported conditions without a transponder or an ATS did not seem to be a sensible course of action. That being said, members also opined that the AW139 pilot's impression that the unknown light aircraft was not flying sufficiently clear of cloud could also not be substantiated, and they noted that it can often be difficult to judge another pilot's flying conditions in what was clearly a stressful situation for the AW139 pilot. The Board acknowledged that the unknown light aircraft may not have been fitted with a transponder, and that this incident had occurred before SERA 13001 was in operation in UK.³ However, members wished to emphasise the changed SERA requirement for transponder use, which was an important step in increasing the conspicuity of aircraft for both ATC radar controllers and aircraft Electronic Warning Systems.

The Board then turned to the actions of the AW139 pilot. Some members thought he would have been better placed by requesting a Deconfliction Service when flying in cloud rather than a Traffic Service, although they acknowledged that it would have been unlikely to have influenced this incident because the unknown light-aircraft had only appeared late on the Brize controller's radar. In the event, the AW139 pilot had had little time to react to the unknown light-aircraft as he broke cloud, although the Board noted that he had had enough time to initiate an emergency climb to avoid the other aircraft.

The Board then looked at the cause and risk of the Airprox. The Board agreed that the weather conditions, coupled with the unknown light-aircraft not transponding, had severely limited two of the AW139 pilot's safety barriers, 'lookout' and 'TCAS'. However, the TI from the Brize Controller and the fortunate timing as the AW139 exited cloud meant that he had seen the other aircraft as soon as reasonably practical. The Board therefore agreed that the cause was best described as being a conflict in Class G resolved by the AW139 pilot. The Board then turned to the risk. Noting that the AW139 pilot had seen the unknown aircraft at a late stage and had only been able to conduct an emergency climb, the Board agreed that safety had been much reduced below the norm, and it was the AW139 pilot's emergency avoiding action that had averted a collision. Accordingly, the degree of risk was assessed as Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict in Class G resolved by the AW139 pilot.

Degree of Risk: B.

Safety Barrier Assessment⁴

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

ANSP:

Situational Awareness and Action were assessed as **partially effective** because, although the controller did well to call the pop-up unknown aircraft, the non-transponding conflicting traffic only appeared on the screen late and this had limited the controller's ability to pass Traffic Information to the AW139 pilot.

³ SERA 13001 requires: *The pilot of an aircraft equipped with a serviceable SSR transponder to operate the transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where SSR is used for ATS purposes.*

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

Flight Crew:

Situational Awareness and Action were assessed as **partially available** because of the late Traffic Information caused by the unknown aircraft appearing on the controller’s screen only shortly before CPA.

Warning System Operation and Compliance were assessed as **ineffective** because the AW139’s TCAS I could not interact with the non-transponding unknown aircraft and therefore the AW139 pilot was not able to use this barrier.

See and Avoid were assessed as **partially effective** because the AW139 was initially in cloud and only saw the unknown aircraft as he exited the cloud shortly before CPA.

