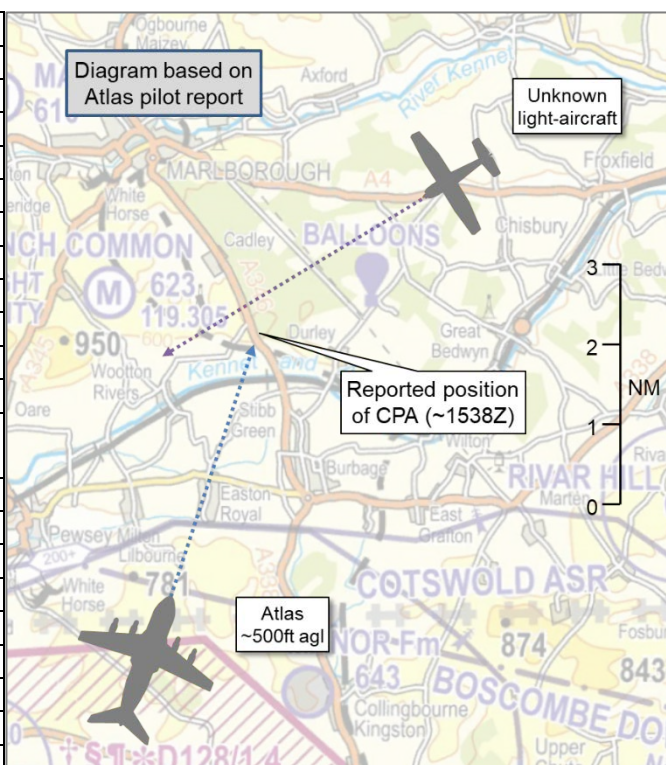


AIRPROX REPORT No 2020088

Date: 03 Aug 2020 Time: ~1538Z Position: 5122N 00141W Location: 3NM SE of Marlborough

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Atlas	Unk light-aircraft
Operator	MoD ATEC	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	NK
Service	None	Unknown
Provider	Salisbury Ops	NK
Altitude/FL	NK	NK
Transponder	A, C, S	NK
Reported		
Colours	Grey/black	NK
Lighting	Strobes, beacon, nav, landing lights	NK
Conditions	VMC	NK
Visibility	10Km	NK
Altitude/FL	500ft agl	NK
Altimeter	QNH (1016hPa)	NK
Heading	010°	NK
Speed	240kt	NK
ACAS/TAS	TCAS II	Unknown
Alert	None	Unknown
Separation		
Reported	100ft V/200m H	NK
Recorded	NK	



THE ATLAS PILOT reports that the event occurred on recovery to RAF Brize Norton from Everleigh Drop Zone (DZ). The weather was good, with unlimited visibility and no cloud. The Pilot Flying (PF) was in the right hand seat (RHS) and the aircraft was at 1000ft on QNH 1016 (equating to approximately 500ft agl), at 240kts, progressing north towards Brize Norton. The crew was in contact with Salisbury Ops. The PF spotted a light-aircraft in the 11 o'clock at close range (<0.5NM) and at a similar level (within 100ft). The traffic was called by the PF and an avoiding manoeuvre was flown, banking to the right and climbing. The Pilot Monitoring (PM) was in the left hand seat (LHS) and spotted the traffic as it was called by the PF. The light-aircraft was flying right-to-left across the nose of the aircraft. Both pilots checked their navigation displays and saw that the light-aircraft did not appear to be squawking. Other TCAS traffic was displayed on the navigation display, but not this aircraft. The light aircraft was white and appeared to be a Cessna 152 or similar.

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

THE LIGHT-AIRCRAFT PILOT could not be traced.

THE SALISBURY PLAIN SENIOR AIR OPERATIONS OFFICER reports that the Airprox occurred outside the confines of SPTA¹ and subsequently they do not have anything to add to the investigation. Their radios are no longer recorded nor would they provide any information to aircraft outside of known aircraft within the Range boundary.

¹ Salisbury Plain Training Area.

Factual Background

The weather at Boscombe Down was recorded as follows:

METAR EGDM 031550Z 30012KT CAVOK 19/07 Q1016 NOSIG RMK BLU BLU=

Analysis and Investigation

UKAB Secretariat

Analysis of the NATS radar replay revealed that neither aircraft was visible on radar. Therefore, no accurate plot of the aircraft's respective tracks was possible and neither was a measurement of the CPA.

The Atlas and unknown light-aircraft pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.² If the incident geometry is considered as converging then the Atlas pilot was required to give way to the unknown light-aircraft.³

Comments

HQ Air Command

At the time of the Airprox, the Atlas Pilot had recently departed SPTA, was working Salisbury Ops and was just about to transfer across to Brize Approach. As a result, at the time of the Airprox, they weren't in receipt of a Traffic Service and chose not to report an Airprox to Salisbury Ops as their aircraft was just outside Salisbury Ops' area of operation.

It would appear that the light aircraft encountered was neither squawking nor talking to an ATS agency. As such, lookout was the only available barrier to the prevention of a mid-air collision and it is fortunate that the Atlas crew spotted the light aircraft in time to effect a manoeuvre sufficient to increase separation. Despite this, the Atlas pilot has opined that a collision with the light aircraft did not appear likely, but a very close pass behind the aircraft was imminent before the avoiding manoeuvre was initiated. This Airprox serves as a reminder that GA can be encountered anywhere in Class G airspace with no warning, and that a robust lookout remains key to the avoidance of mid-air collision.

Summary

An Airprox was reported when an Atlas and an unknown light-aircraft flew into proximity 3NM SE of Marlborough at ~1538Z on Monday 3rd August 2020. The Atlas pilot was operating under VFR in VMC and was not in receipt of an Air Traffic Service. The light-aircraft pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted only of a report from the Atlas pilot. 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first heard from a military member with experience of operating on Salisbury Plain who informed members that, on occasion, aircraft passing to the north of the Plain call on the Salisbury Ops

² SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

³ SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

frequency to gain information on military traffic transiting in or out of the Danger Area to the north. Thus, it was entirely justified for the Atlas pilot to have maintained the Salisbury Ops frequency as they departed the Pain to the north. Furthermore, the Atlas pilot's decision to transit at 500ft agl had been taken, in all likelihood, to not only achieve low-flying training objectives but also to avoid the height band in which it would have been more likely to encounter GA traffic. It had also been unsurprising that the Atlas pilot had yet to make contact with Brize Norton, given that they had been at low-level and would have been below the base of the Brize Norton radar coverage.

The Board then heard from a GA member that a light-aircraft that resembled a 'Cessna 152 or similar' would most likely have been equipped with a transponder and, therefore, the Board could not draw any conclusions as to why the light-aircraft had either not been transponding or had had a serviceable transponder that had not been detected by the TCAS II equipment fitted to the Atlas (the event occurred below the base of NATS radar coverage and so neither aircraft was displayed on the NATS radar replay). In any case, the Board agreed that the non-detection of the light-aircraft by the TCAS on-board the Atlas had been contributory to the Airprox (**CF2**) and that this had been the only realistic opportunity for the Atlas pilot to have gained situational awareness of the presence of the light aircraft (**CF1**).

The Board considered it unfortunate that the UKAB Secretariat had been unable to trace the light-aircraft pilot, as this had denied them the opportunity to fully assess the performance of the Flight Elements' Situational Awareness, Electronic Warning Systems and See and Avoid barriers, the latter of which generated some discussion as to whether the light-aircraft pilot had seen the Atlas and considered that the existing separation had been adequate. Whilst members felt that, in all likelihood, an aircraft the size of an Atlas would have been seen by the light-aircraft pilot, without a report for the light-aircraft pilot it could not be stated with any degree of certainty and so the Board agreed that the See and Avoid barrier had not been assessable.

Turning to the risk involved in this event, members acknowledged that they only had the Atlas pilot's report with which to make an assessment which could not be corroborated with radar or GPS data. That said, the Board felt that the Atlas pilot's assessment of both the collision risk and separation were coherent, and noted that they had had time to take action to increase separation and assessed the risk of collision as 'low'. Accordingly, the Board agreed that, although safety had been degraded, there had been no risk of collision and so members assigned a Risk Category C to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2020088			
CF	Factor	Description	Amplification
Flight Elements			
• Situational Awareness of the Conflicting Aircraft and Action			
1	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
• Electronic Warning System Operation and Compliance			
2	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment

Degree of Risk: C

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:

⁴ 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 Atlas pilot did not have any knowledge of the possible presence of the light-aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TCAS II equipment fitted to the Atlas did not detect the presence of the light-aircraft.

Airprox Barrier Assessment: 2020088		Outside Controlled Airspace		Effectiveness				
Barrier		Provision	Application	0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	●	●	[Grey bar to 5%]				
	Manning & Equipment	●	●	[Grey bar to 2.5%]				
	Situational Awareness of the Conflicting Aircraft & Action	●	●	[Grey bar to 15%]				
	Electronic Warning System Operation and Compliance	●	●	[Grey bar to 2.5%]				
Flight Element	Regulations, Processes, Procedures and Compliance	●	●	[Green bar to 10%]				
	Tactical Planning and Execution	●	●	[Green bar to 10%]				
	Situational Awareness of the Conflicting Aircraft & Action	✗	●	[Red bar to 20%]				
	Electronic Warning System Operation and Compliance	✗	●	[Red bar to 15%]				
	See & Avoid	●	●	[Grey bar to 20%]				
Key:		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	●	●	✗	●				
Application	●	●	✗	●	□			
Effectiveness	■	■	■	■	□			