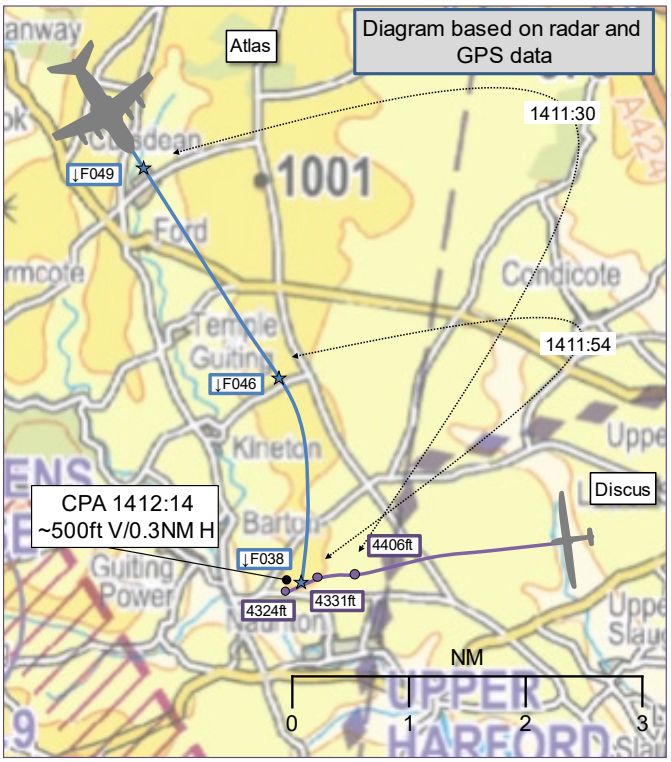
AIRPROX REPORT No 2025092

Date: 20 May 2025 Time: 1412Z Position: 5155N 00150W Location: IVO Upper Harford

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Atlas	Discus
Operator	HQ Air (Ops)	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	None
Provider	Brize Radar	N/A
Altitude/FL	FL038	4324ft
Transponder	A, C, S+	Not fitted
Reported		
Colours	Grey	White
Lighting	Strobes, Landing, Beacon, Nav	None
Conditions	VMC	VMC
Visibility	5-10km	>10km
Altitude/FL	4500ft	4300ft
Altimeter	QNH (1021hPa)	SPS
Heading	170°	'Circling'
Speed	250kt	56kt
ACAS/TAS	TCAS II	FLARM, ADS-B out
Alert	None	None
Separation at CPA		
Reported	300ft V/0m H	500ft V/0m H
Recorded	~500ft/0.3NM H	



THE ATLAS PILOT reports that they were returning to Brize, at the end of a 4 hour training serial, with Brize Director, on handover from Swanwick West. The crew was cleared to descend to 3000ft on Brize QNH and was made aware of a number of traffic contacts in the vicinity. This included a contact with no height information available to them [ATC]. Descending through 5000ft, the pilot handling spotted the glider approximately 2NM ahead and, in response, deselected the autopilot to increase the rate of descent. This glider did not have TCAS/FLARM etc (they believed) and they could not confirm this was the contact advised to them by ATC due to the number of aircraft present. They passed approximately 300ft beneath the glider and the pilot monitoring reported the Airprox to ATC (Brize Director). Very shortly after, a further TCAS TA was triggered as the aircraft continued descending to 1800ft. The sortie continued as normal afterward. Upon landing, the Captain consulted with the Brize ATC Supervisor who was very helpful in discussing the level of GA traffic (in particular without TCAS etc) and potential shortfalls of the Brize radar to detect slow moving traffic, such as gliders, following the upgrade.

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

THE DISCUS PILOT reports that they were circling and were looking out for a nearby paraglider which was the focus of their attention, when they saw the military aircraft pass below. They were unsure of vertical separation as they knew these are very large aircraft and had nothing to scale from. They did not hear it until it passed beneath them.

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

THE BRIZE DIRECTOR CONTROLLER reports this report was submitted after an Airprox had been raised by the crew of the Atlas. They remember the pilot mentioning it on frequency and that they had called traffic however, if this was a glider, it was probably not painting on the radar. They could not add any more details.

The controller perceived the severity of the incident as 'Low'.

THE BRIZE SUPERVISOR reports that they overheard [the pilot of] an aircraft reporting a sighting but there was no further action to be taken.

Factual Background

The weather at RAF Brize Norton was recorded as follows:

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METAR EGVN 201350Z 15004KT CAVOK 20/04 Q1021 NOSIG RMK BLU BLU=
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Analysis and Investigation

Military ATM

Background

The Atlas was on recovery to Brize Norton following a 4-hour training sortie and was being vectored for an instrument approach. The glider was circling [they reported] due to [its pilot] sighting a paraglider and wanting to maintain good visual with it.

Sequence of Events

At 1408:58 the Atlas pilot contacted the Brize Norton Director and requested a Traffic Service and an instrument approach.

At 1409:31, the Brize Norton Director instructed the Atlas pilot "*descend to altitude 4000 feet Brize QNH 1021*".

At 1410:51, the Atlas pilot was provided Traffic Information "*traffic 12 o'clock 4 miles crossing left right indicating 2400 feet*".

At 1411:29, the Atlas pilot responded "*visual, that traffic 2500 below*".

At 1411:46, the Atlas pilot was given further Traffic Information "*traffic right er 1 o'clock 6 miles crossing right to left no height information*".

At 1412:09, the Atlas pilot reported visual with a glider "*visual traffic just passed us on the nose by about 200 feet it's a glider*".

[Using the NATS radar replay] CPA occurred at 1412:11, with a radar separation of 0.6NM laterally and an unrecorded, but reported, 200ft vertically.

Local BM Investigation(s)

A local investigation was conducted by Brize Norton following the event to identify the ATS-related causal/aggravating factors. It was deemed the ATS provision was suitable as the glider did not appear on the radar.

2 Gp BM Analysis

The Brize Norton controller carried out their duties to a satisfactory standard iaw with ATM standards as the glider did not appear on radar. The controller gave a step descent to safely descend the Atlas around any transponding aircraft on its track.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken, the Atlas could be seen and identified using Mode S data (Figure 1). The Discus could not be identified, however, a primary-only contact could be seen. The Discus pilot provided a GPS data file which matched the profile of the primary-only track on the NATS radar (Figure 2). The diagram at the top of the report was compiled by amalgamating the GPS data file and the radar data to provide an approximate separation. The Discus has been shown in the diagram with altitudes based on standard pressure. The primary-only track faded from radar at 1412:10, just before CPA. Note, the Brize Radar controller would not have been using the NATS radar and therefore probably had a different radar picture.

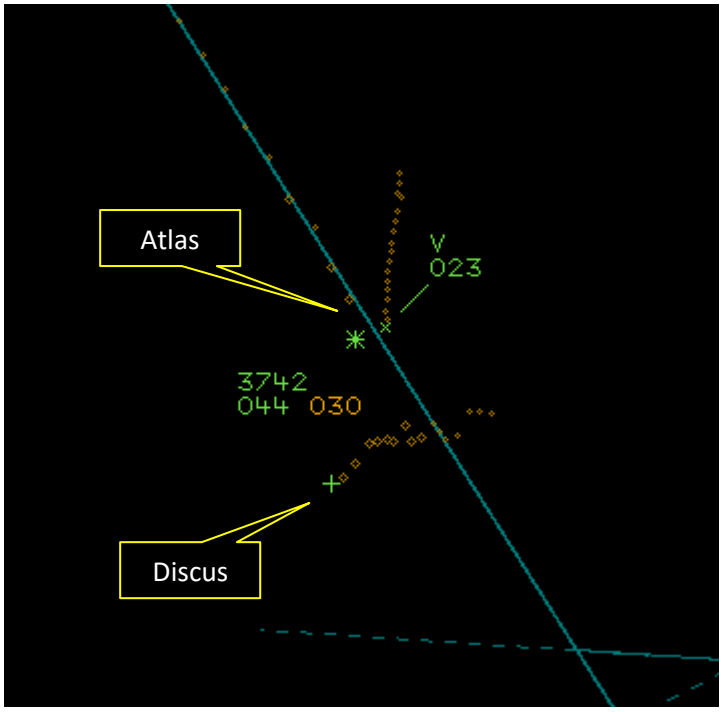

Figure 1 - NATS radar 1412:02

The Atlas and Discus 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 converging then the Atlas pilot was required to give way to the glider.[2]

RAF Brize Norton Occurrence Investigation

It was acknowledged that the crew was receiving a high turnover of Traffic Information from ATC, [and a large] amount were without height information via surveillance equipment. The ATC Supervisor was correct in highlighting the limitations of the radar "speed gate" that does make it difficult for slow moving aircraft to be seen by radar and ATCOs. Since this incident, a FLARM detection system is now permanently installed within the Approach Control Room (ACR). It should be noted that, legally, ATCOs may not provide official Traffic Information using this system, however, it does provide more situational awareness of intense gliding areas that can then be passed to crews in receipt of an ATS from Brize Norton.

Comments

HQ Air Command

The Atlas pilot was given information on various contacts during a descent to 3000ft, including a contact with no height information which may have been the Discus Glider. In this instance, the Atlas pilot became visual with the glider and elected to deselect the autopilot and increase the rate of descent, which resulted in approximately 500ft of separation. It is assessed that it was too late for

[1] (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.
[2] (UK) SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

the Atlas pilot to initiate a manoeuvre to create lateral separation. This Airprox highlights the need for gliders to have suitable and compatible electronic conspicuity installed.

BGA

A glider circling in a thermal climb will typically complete one 360° turn every 20sec, during which time an aircraft approaching at 250kt would cover 1.4 NM. The pilot of a thermalling glider must look for aircraft approaching from every direction; although continuously turning facilitates 360° lookout, it also leaves the pilot unsighted in any specific direction for about half the time. In addition, the difficulties of sighting another aircraft approaching head-on with no relative motion are well-known.

It is very encouraging to learn that Brize ACR now has a permanently-installed Flight Information Display (FID) showing the locations of gliders carrying the EC system installed in almost all gliders. This will augment their situational awareness of non-transponding glider traffic.

Summary

An Airprox was reported when an Atlas and a Discus flew into proximity in the vicinity of Upper Harford at 1412Z on Tuesday 20th May 2025. The Atlas pilot was operating under VFR in VMC in receipt of a Traffic Service from Brize Radar, and the Discus pilot was operating under VFR in VMC 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 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 looked at the actions of the Atlas pilot. They had been recovering to base following a long sortie and had been receiving a Traffic Service from Brize. They had received Traffic Information from the controller on a number of contacts and on one 6NM away without any height information. This traffic had been called as crossing right-to-left, when the glider in question had been crossing left-to-right, so the Board agreed that this had not been the glider involved in the Airprox. Therefore, because the TCAS on the Atlas could not have detected the non-transponding glider either, the Board agreed that the Atlas pilot had not had any prior situational awareness on the Discus (**CF2**, **CF3**). However, the Traffic Information call from the controller had prompted the crew to look out and, in doing so, the pilot had become visual with the glider at a range of around 2NM. The Board heard that this range was approximately 30sec flying time, and not enough time to manoeuvre the large, heavy aircraft laterally, but that the pilot had been able to increase their rate of descent to increase the vertical separation, although the separation at CPA had been of concern to the Atlas pilot (**CF5**).

Turning to the Discus pilot, they had reported seeing an Atlas cross beneath them whilst they had been circling. The GPS track provided by the pilot had put them in the vicinity of the Atlas whilst flying on a straight track and the Board agreed that the glider pilot had probably recalled a different incident. The Discus pilot had not received any information from their EC equipment, which could not detect the Atlas (**CF3**), and so members agreed that the Discus pilot would not have received any situational awareness about the Atlas (**CF2**). Members discussed that the transponder on the Atlas had been transmitting ADS-B out, and that the glider had also been transmitting ADS-B out, but that neither aircraft had had the facility to receive or display that information to its respective pilot, which members agreed had been a missed opportunity. They then considered whether on this occasion the Discus pilot had not seen the Atlas, which would have crossed behind the glider, or had seen it but had not been concerned enough to remember the incident specifically. After some consideration, they agreed that, given the geometry and the separation, the Discus pilot had probably not seen the Atlas on this occasion (**CF4**).

The Board then looked at the role of ATC. They heard that, along with most RAF surveillance equipment, the sensors at Brize could only detect gliders when certain conditions were met and, similarly, could only detect ADS-B on occasion. For this Airprox, the Brize controller had seen an

aircraft, believed to be a glider with ADS-B, to the south of the Discus, and had provided Traffic Information to the Atlas pilot. However, the Board was told that, for reasons unknown, the Discus involved in the Airprox had not been visible to the controller (**CF1**). Fortuitously, the Traffic Information provided had primed the Atlas pilot to search for the traffic and had enabled them to become visual with the Discus. The Board was heartened to hear about the Flight Information Displays that had been installed at Brize, noting that, despite the caveats for use, they were almost certain to assist the controllers in detecting gliders and become an aid to planning.

When determining the risk, the Board considered the radar replay and the GPS data, together with the pilots' and controllers' reports. Members noted that even if the glider pilot had not seen the Atlas, the Atlas pilot had seen the Discus and taken action to increase the separation. It was therefore agreed that there had not been a risk of collision, but members agreed that the lack of prior situational awareness for both pilots had meant that safety had been reduced; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025092			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
	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
5	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[3]

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 **ineffective** because the Brize controller could not see the glider on the radar.

[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 neither pilot had received any prior situational awareness that the other aircraft had been in the vicinity.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EWS on the Atlas could not detect the non-transponding glider, and that, although the glider had been equipped with two forms of EC, one had been incompatible with the Atlas's and one had been purely ADS-B Out and so had no means of displaying other ADS-B contacts to the pilot.