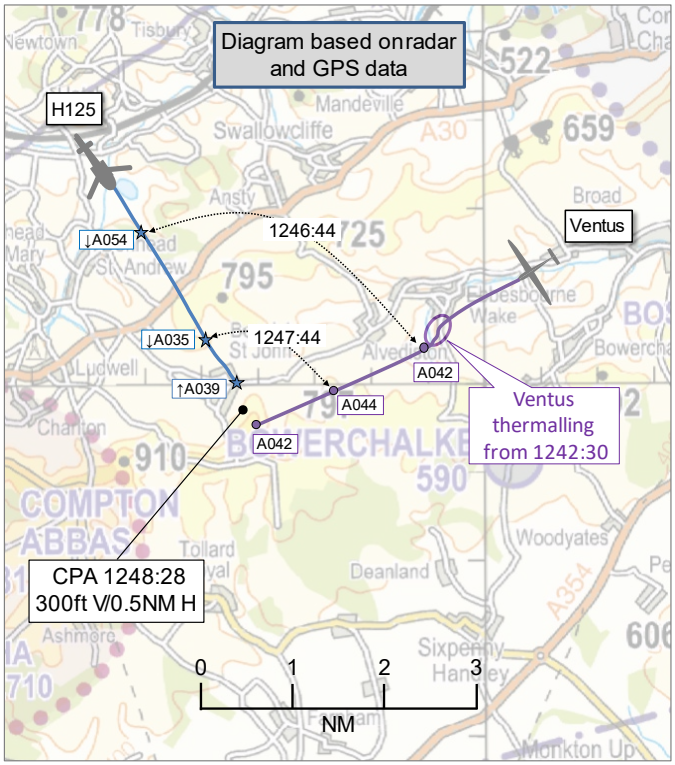
AIRPROX REPORT No 2024125

Date: 17 Jun 2024 Time: 1248Z Position: 5100N 00204W Location: 4NM ENE Compton Abbas

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	H125	Ventus
Operator	Civ Comm	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	None
Provider	Boscombe Radar	Gliding Channel
Altitude/FL	3900ft	4200ft
Transponder	A, C, S	Not fitted
Reported		
Colours	White, Red, Blue	White
Lighting	HISL, nav & landing light	None
Conditions	VMC	VMC
Visibility	NR	>10km
Altitude/FL	4000ft	4300ft
Altimeter	RPS (1007hPa)	QNH
Heading	135°	243°
Speed	65kt	70kt
ACAS/TAS	TAS	FLARM
Alert	None	None
Separation at CPA		
Reported	0ft V/0.5NM H	Not seen
Recorded	300ft V/0.5NM H	



THE H125 PILOT reports that they were heading southeast at 4000ft AMSL when a traffic report was received from Boscombe ATC of a contact with no reported altitude at 1NM range. Whilst the crew was actively looking for the contact, a glider was sighted at approximately 0.5NM at 11 o'clock relative position, co-altitude, on a converging track. Avoiding action was taken to gain adequate separation. The crew were actively monitoring the aircraft on TAS, with ADS-B contacts shown via [an electronic conspicuity device] on their iPad but [glider EC] contacts not shown. The crew was receiving a Traffic Service from Boscombe Down ATC. They described their avoiding action as a left turn to pass left side [they thought] of the traffic.

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

THE VENTUS PILOT reports that they were on a cross country flight. They circled in a thermal to approximately 4000ft altitude, and resumed level flight at 1245. They then maintained straight and level flight under a cloud street until 1249 when they turned 30° to the right to aim for an active cumulus cloud. Therefore, at the time of the [reported] Airprox, they were flying straight and level. The information for this was mostly [taken] from their GPS trace as they had not seen the other aircraft. They had been maintaining a lookout at all times and using a standard [glider electronic conspicuity] device without integrated ADS-B or transponder Mode C/S receivers.

The pilot assessed the risk of collision as 'None'.

THE BOSCOMBE DOWN RADAR APPROACH CONTROLLER reports that they were working 2 helicopters to between 10 and 15NM southwest of Boscombe Down between the surface and 6000ft on the Portland regional pressure setting of 1007hPa. During this time there were multiple gliders operating autonomously within their area of responsibility, some with a conspicuity squawk but the majority without. There was also a gliding competition which was NOTAM'd, however this was to the

west of Compton Abbas airfield and north of the Salisbury Plain Training Area. They had passed Traffic Information on multiple tracks which had conflicted with the 2 helicopters and updated the pilots when required. At approximately 1300 the pilot of [the H125] informed them on frequency that at 1247:30 they had got close to a glider that they had previously passed Traffic Information on and would be submitting an Airprox DASOR once they were on the ground. They immediately alerted the Supervisor and wrote down the details. Once off console a short time later, the H125 pilot called to clarify the situation and again they stated that Traffic Information had been passed and updated, and while they were searching for the conflicting aircraft, they saw it pass very close to their helicopter.

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

THE BOSCOMBE DOWN ATC SUPERVISOR reports that they did not directly witness the incident as they were involved in organising a Practice Emergency State 1 (PES1) for an aerodrome control endorsement. They saw the 2 primary contacts in the climb-out lane prior to organising the PES1 and prompted a 'call for release' against a fixed-wing aircraft departure they had. The contacts moved away sufficiently and additional information on the primary contacts had been obtained from other sources (ADS-B etc) to allow the release of the fixed-wing. The contacts were called to the departing aircraft and it passed north of their position with no issues. At this point they left the [trainee] to organise the PES1. On returning to the [trainee], they were informed that a helicopter operating in the area of the 2 previously mentioned primary contacts had stated that they were going to submit a DASOR for an Airprox they had just incurred. There had been a lot of gliding activity in the area throughout the day and they were aware of a gliding competition to the north and west of Boscombe Down that had been NOTAM'd.

THE BOSCOMBE DOWN ATC FSO reports that the controller did all they could with the information at hand. [They stated that] they will continue to struggle deconflicting their traffic against gliders, especially during competitions, when they can be almost everywhere. Future concerns will be when they transition onto [alternative] equipment, as to whether they will be able to see them at all due to filters removing non-squawking, slow-moving aircraft.

Factual Background

The weather at Boscombe Down was recorded as follows:

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METAR EGDM 171250Z 22005KT 9999 SCT048 19/07 Q1011 NOSIG RMK BLU
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Analysis and Investigation

Boscombe Down Investigation

This report was compiled from ATC and pilot reports and interviews.

A non-cooperating glider was sighted at approximately 0.5NM, at 11 o'clock relative position, co-altitude, on a converging track. During this time there were multiple gliders operating autonomously within [the ATC] area of responsibility. The controller had been passing Traffic Information on multiple contacts to the helicopter [pilot] the best they could.

A causal factor was identified, in that some of the gliders were transmitting a conspicuity squawk but the majority were not. The H125 pilot briefed this event as the 'Flight Safety moment' at a morning brief on Tues 8th June. They explained how the crew had been given a 'heads up' on the traffic from ATC and that they had stopped what they were doing to focus on looking out and finding the called traffic, which luckily, they did this time.

[As a result of the Airprox investigation] the Flight Operations Manager is investigating getting [common glider EC] software licences on their EFBs, which will give them another line of defence.

Local BM Investigation

A local investigation was conducted by Boscombe Down and identified the event outcome as a loss of safe separation between two non-cooperating aircraft. As a result of the Ventus not being displayed to the controller on radar until 1NM from the H125, and Traffic Information being passed at this point, Boscombe Down did not identify any further BM-related contributory or aggravating factors.

2 Gp BM Analysis

The actions of the Boscombe Down Approach controller fulfilled the requirements of the Traffic Service through providing timely and accurate Traffic Information at the earliest opportunity. The Radar Analysis Cell was only able to see the Ventus for 3 sweeps on one of the radar heads available to them; because of this, the RAC was unable to determine the true CPA before the radar contact was lost again. The actions taken by the Boscombe Down RA controller are deemed suitable and in accordance with UK Flight Information Service provision rules. No additional BM factors were identified.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and the H125 was identified using Mode S data. The Ventus did not display on the radar, although at 1247:44 a primary radar return was seen, appearing to be heading west, but disappeared on the next radar sweep (Figure 1). The glider was identified by contacting the local gliding clubs and using ADS-B information.

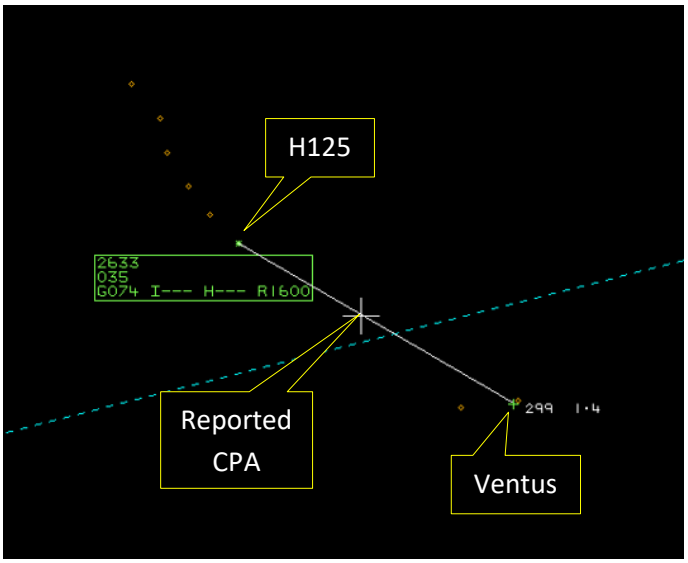


Figure 1 – Time 1247:44 separation 1.4NM

The Ventus pilot supplied their flight profile information which provided altitudes AMSL and further position reports. The position for 1247:47 on the glider's log coincided with the primary target and direction seen at 1247:44 on the NATS radar replay (Figure 1).

The point of CPA was assessed to have been at 1248:28 based on the combination of ADS-B and radar data. After the recorded point of CPA, the H125 was seen to initiate a left turn, as described by the pilot.

The H125 and Ventus 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 H125 pilot was required to give way to the Ventus.[2]

Comments

BGA

ATSUs near this and other busy gliding areas may wish to install Flight Information Displays that provide instantaneous situational awareness on aircraft carrying the EC system fitted to almost all gliders (including this Ventus).

Summary

An Airprox was reported when an H125 and a Ventus flew into proximity 4NM east-northeast of Compton Abbas at 1248Z on Monday 17th June 2024. Both pilots were operating under VFR in VMC, the H125 pilot in receipt of a Traffic Service from Boscombe Radar and the Ventus 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, ADS-B data, reports from the air traffic controllers involved and a report from the appropriate operating authority. 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 H125 pilot and noted that the pilot had been informed of glider traffic which they had actively looked for and spotted at 0.5NM. Members also noted that the H125 had been equipped with TAS that had not detected the presence of gliders and had not, therefore, detected this Airprox event as their TAS had been incompatible with the glider's EC equipment. Members therefore surmised that, as the H125 pilot had been informed of traffic in the vicinity, they had had generic situational awareness of the glider's presence. The Board acknowledged that the H125 pilot had been concerned by the proximity of the glider and, once sighting it at 0.5NM, had made a left turn as an avoidance manoeuvre.

Turning their attention to the Ventus pilot, the Board discussed whether the pilot could have made use of the radio to help improve their situational awareness, and decided that although they held a Flight Radio Telephony Operator's Licence (FRTOL), in this case they had been operating sufficiently distant from Boscombe's zone for a FIS from Boscombe to have been of little benefit to them. Members remarked that the Ventus pilot's EC equipment had not been able to detect the H125 as the equipment had been incompatible and that without effective guidance from R/T or EC that they had had no situational awareness of the H125. Furthermore, members noted that the Ventus pilot had remained unsighted on the H125.

The Board then regarded the actions of the Boscombe Down Radar Approach controller, and agreed that they had passed sufficient information to the H125 pilot to enable them to have had awareness of the Ventus.

Concluding their discussion, it was agreed that the H125 pilot had been adequately informed of the Ventus traffic, and that their concern of its proximity had led to them gaining good visual contact with it. Members agreed that the H125 pilot had made a timely avoidance manoeuvre to the left and had maintained adequate horizontal separation between the aircraft and agreed that no risk of collision had existed. As such, the Board assigned Risk Category E to this event and agreed on the following contributory factors:

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

CF1. The H125 pilot had generic situational awareness of the Ventus, and the Ventus pilot had no situational awareness of the presence of the H125.

CF2. The H125 pilot's TAS was incompatible with the Ventus' EC equipment and was unable to detect it. Likewise, the Ventus' EC equipment was unable to detect the H125.

CF3. The Ventus pilot had not seen the H125.

CF4. The H125 pilot had been concerned by the proximity of the Ventus.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024125			
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	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			
3	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
4	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: E.

Safety Barrier Assessment[3]

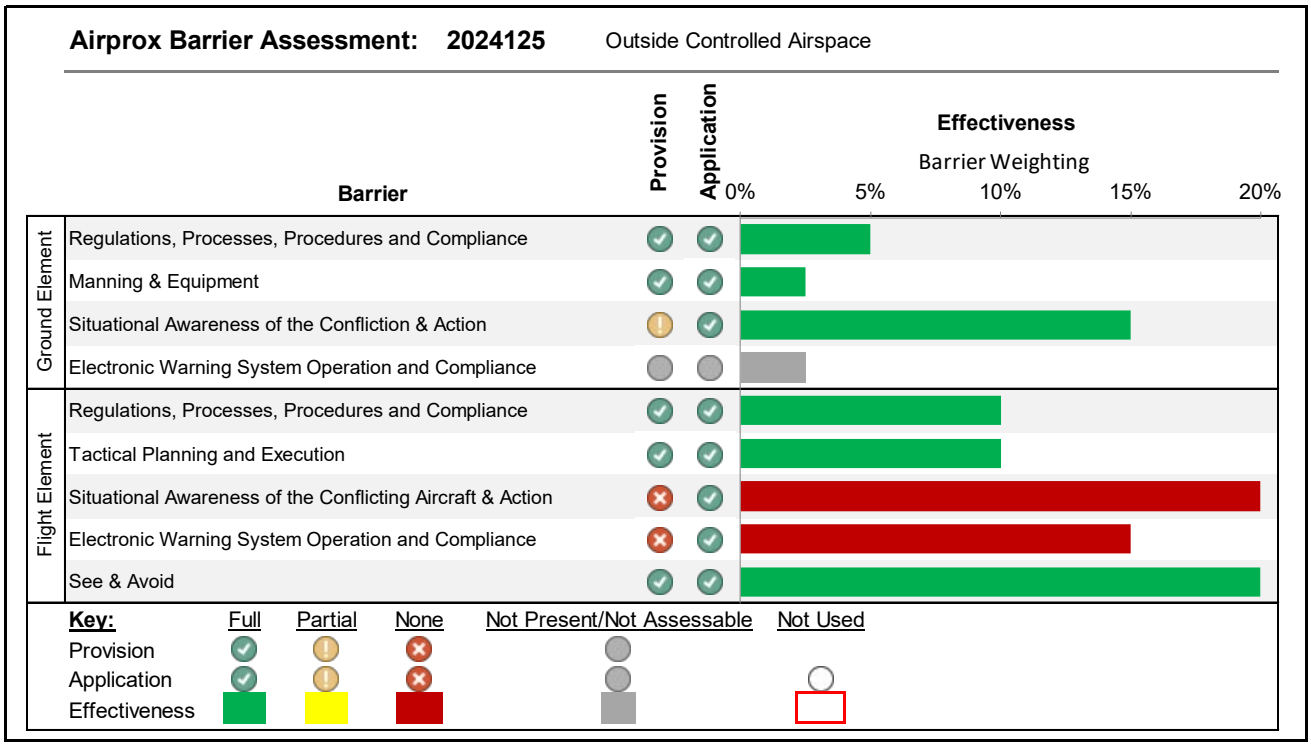
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the H125 pilot had only acquired generic situational awareness of the presence of the Ventus, and the Ventus pilot had had no situational awareness of the H125.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because neither the H125 nor the Ventus EC systems could detect the other aircraft.

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


Airprox Barrier Assessment: 2024125
Outside Controlled Airspace
Barrier
Provision
Application
Effectiveness
Barrier Weighting
0%
5%
10%
15%
20%
Ground Element
Regulations, Processes, Procedures and Compliance
Manning & Equipment
Situational Awareness of the Confliction & 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