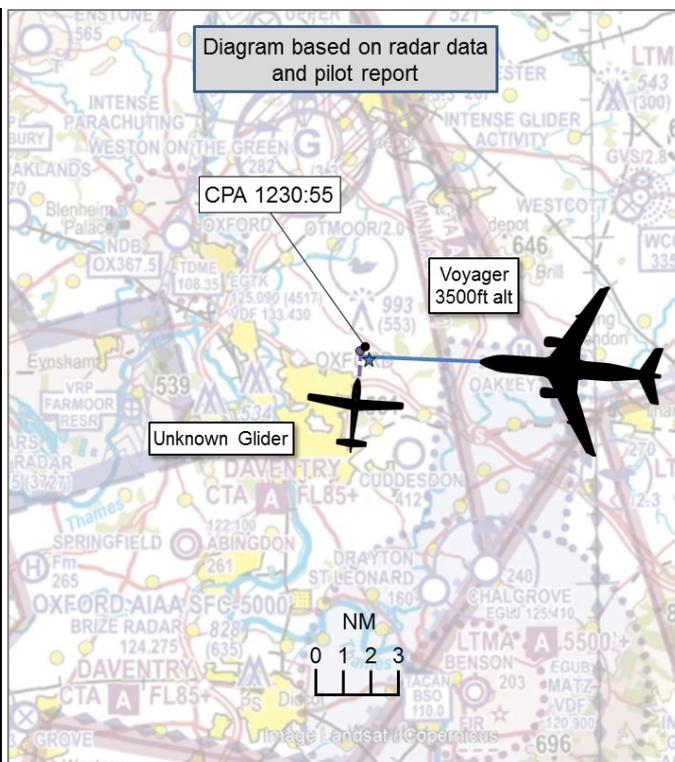


AIRPROX REPORT No 2020040

Date: 20 May 2020 Time: 1230Z Position: 5145N 00110W Location: 1.5NM NE Oxford

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Voyager	Unknown Glider
Operator	HQ Air (Ops)	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Traffic	Unknown
Provider	Brize Director	
Altitude/FL	3500ft	
Transponder	A, C, S	None
Reported		
Colours	Grey	White
Lighting	Strobe, Nav, Landing, Beacon	None
Conditions	VMC	
Visibility	>10km	
Altitude/FL	3500ft	
Altimeter	QNH (1021hPa)	
Heading	275°	
Speed	220kt	
ACAS/TAS	TCAS II	
Alert	None	
Separation		
Reported	200-300ft V/0.5NM H	N/K
Recorded	NK	



THE VOYAGER PILOT reports that they were cleared direct to 10NM final for RW25 at Brize by Swanwick (Mil), descending to FL80. After handover to Brize Director, they were placed under a Traffic Service and cleared to descend to 2800ft on the QNH (1021Hpa). TCAS was showing multiple squawking aircraft in the lower levels ahead of the aircraft on either side but none within 5NM of their track. One of the contacts was of concern to them at that time. ATC reported traffic 1 o'clock, 7.5NM, advising that the reported aircraft was with Brize LARS and that the aircraft's pilot was visual with them. This was the aircraft that they were initially concerned about and keeping an active lookout for after the TI. The Co-pilot then pointed out that in front and slightly to the left of them was a glider, moving left to right. The PF gained visual with the glider as they closed rapidly, and the PF assessed that avoiding action was required. The PF disconnected the autopilot and levelled the aircraft at about 3500ft and rolled to the left to go around the back of the glider, maintaining visual contact with the aircraft at all times. By this time the previously called traffic working LARS had passed down their right side and was well clear. The PF estimates that the glider was 200-300ft below them once they were level and at its closest point was about 0.5NM. Once they were clear of the glider the co-pilot reported the Airprox to ATC who said they had nothing showing on radar in the vicinity at that time. The autopilot was reengaged, and the rest of the approach flown without incident. The PF telephoned ATC post flight to discuss the Airprox further.

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

THE UNKNOWN GLIDER PILOT could not be traced.

THE BRIZE CONTROLLER reports that they were training in TC(RA) bandboxed with TC(Dir) and TC(Zone). The Voyager was handed over to them pointing directly to the localiser for RW25. The Brize controller issued a decent to 2800ft, shortly after passing Bekley Mast. The Voyager pilot said that they had seen a glider that passed close on their intended glidepath. The Brize controller informed the pilot

that there was nothing seen on radar. Later the Brize controller was informed by the Brize Supervisor that the Voyager pilot was treating the incident as an Airprox.

Factual Background

The weather at Brize Norton was recorded as follows:

METAR EGVN 201220Z 20007KT CAVOK 24/10 Q1020 NOSIG RMK BLU BLU

Analysis and Investigation

Military ATM

The Voyager was returning to Brize from an overseas flight and being positioned for the ILS approach to RW25 at Brize. Whilst in the descent to altitude 2800ft, the Voyager pilot reported passing a glider by an estimated $\frac{1}{4}$ of a mile, slightly below, on their flight path.

The Brize Approach position was occupied by a trainee and a mentor controller. Due to reduced traffic levels (as a result of COVID-19) they were also bandboxing Approach with the Director and Zone frequencies although traffic loading was light with only one other aircraft under their control. Following the reported Airprox, the Brize Approach Controller confirmed that the glider was not displaying on radar.

The Radar Analysis Cell were unable to positively identify the glider on radar. Analysis of the Brize R/T transcript shows that in the run up to this incident, Traffic Information was passed to the Voyager pilot on another aircraft and, shortly after being cleared for the ILS approach, the Airprox was declared.

It is unfortunate that, in this instance, the glider was not visible on the Brize Approach Controller's radar screen which meant they were unable to provide Traffic Information to the Voyager pilot about the glider.

UKAB Secretariat

The Voyager and unknown Glider 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 Voyager pilot was required to give way to the Glider.²

Prior to CPA an unknown track can be seen on the area radar replay, it is not known if this is the unknown glider or not but is coincident with the time the Voyager pilot turns to avoid the glider. Separation between the Voyager and the unknown radar contact is 0.2NM horizontally.

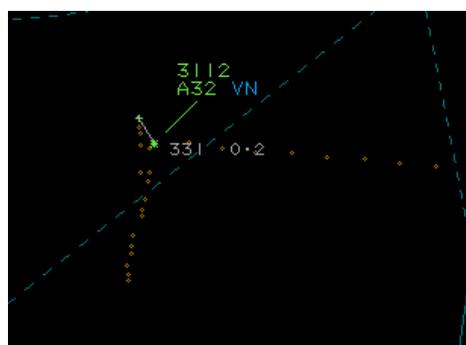


Figure 1: 1230:55 Voyager squawk 3112

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

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

Comments

HQ Air Command

This Airprox was subject to a Local Investigation (LI), which resulted in no recommendations. However, it highlights the importance of continued lookout when operating in Class G airspace and is commendable that the crews were able to spot the glider and manoeuvre to avoid conflict. Other RAF stations, where gliders are prevalent, have implemented barriers in ATC to aid SA for the possible locations of gliders using the internet based FLARM repeater. It has many caveats, but if the controllers believe the provision of FLARM derived altitude/height information would assist the pilot, this information will be passed, which has had tangible benefits for the units that use it. Unfortunately, this system is not in use at RAF Brize Norton, as with some other RAF units, due to the data source being unassured. The actions taken by the Voyager crew meant that the risk of collision was low.

BGA

This is very congested airspace, and the Voyager crew are to be commended for their vigilance. It is unfortunate that the glider could not be traced; this is another example where compatible EC systems, and/or FLARM data being available to the Brize controller might well have improved everybody's situational awareness.

Summary

An Airprox was reported when a Voyager and an unknown Glider flew into proximity 1.5NM NE of Oxford at 1230Z on Wednesday 20th May 2020. The Voyager pilot was operating under IFR in VMC and in receipt of a Traffic Service from Brize Norton. The unknown Glider pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the Voyager crew, radar photographs/video recordings and reports from the air traffic controller involved. 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 began by looking at the actions of the Voyager crew. They had been cleared to descend by the Brize controller to 2800ft for a straight-in ILS approach. Some members asked why they had started to descend straight away rather than carry out a Continuous Descent Approach (CDA). It was ascertained that whilst the Voyager Operating Manual highlights the benefits of a CDA, it does not specifically direct its use. Nevertheless, it was agreed that descending early into an area of known high traffic density was not best practice and the Voyager crew could have considered remaining higher to minimise the chance of encountering GA traffic who tend to be operating at lower altitudes. The Brize controller passed Traffic Information to the Voyager crew on a known aircraft that was working Brize, it was whilst the crew were looking for this identified traffic that one crew member saw the glider. On visually acquiring the glider the PF turned the Voyager to pass behind it (**CF3**). Members agreed that the Voyager crew should be commended for their lookout, especially with the high cockpit workload that they would have been managing at the time. Some members thought that a large aircraft in Class G airspace, especially operating in a high traffic area, would have been better served operating under a Deconfliction Service. The military members said that it was normal practice to request a Traffic Service in VMC because the crew were in Class G airspace with good weather and with all available aids. However, it was agreed that the type of service being used was not germane to this particular Airprox as the glider was not visible on the Brize controller's radar. Additionally, the Voyager crew believed that their intended flight path was sufficiently clear of traffic. The Board were heartened to learn that Brize are looking at the use of a Deconfliction Service in this area, rather than a Traffic Service, because of the high density of aircraft operating there. The Voyager's TCAS II did not detect the glider because they had incompatible equipment (**CF4**).

Unfortunately, the glider pilot could not be traced.

Members asked why Brize ATC did not use FLARM equipment to increase the controller's situational awareness when some other military Air Traffic units do use it. The Military ATC advisor said that individual units are able to use their discretion regarding the installation and use of FLARM because the data is not assured. On further discussion, it was stated by the ATC advisor that it is the FLARM height information that cannot be assured because legislature states that ATC cannot use geometric height information, it must be derived from the barometric pressure. The ATC advisor went on to say that the CAA is looking at cooperative EWS, ADS-B out, to be mandated for all aircraft from 2024 onwards. Board members said they were concerned about the slow progression of the EWS integration. The BGA member offered that some gliders do use barometric pressure with FLARM. Members opined that it could be helpful if the MAA had a universal approach to the use of FLARM in military ATC.

Turning to the actions of the Brize controller, the Board noted that the glider was not visible on the controller's radar and therefore the conflict could not be detected (**CF1 & 2**). Members wondered why the Voyager crew were not recovering via a Standard Arrival Route which would have minimised the Voyager crews' time around the Oxford area. Upon further investigation it was ascertained that there is no standard route because of the (normally) high traffic levels in surrounding airspace. This is especially applicable to aircraft approaching from the east as fixed routes can result in funnelling around the Oxford Area of Intense Aerial Activity (AIAA) consequently, crews are reliant upon their own navigation.

Turning to the risk, the Board agreed that although safety had been degraded the Voyager crew saw the glider early enough to take avoiding action and there was no risk of collision, a risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTOR(S) AND RISK

Contributory Factor(s):

2020040			
CF	Factor	Description	Amplification
Ground Elements			
• Situational Awareness and Action			
1	Contextual	• Situational Awareness and Sensory Events	The controller had only generic, late or no Situational Awareness
2	Human Factors	• Conflict Detection - Not Detected	
Flight Elements			
• Situational Awareness of the Conflicting Aircraft and Action			
3	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
• Electronic Warning System Operation and Compliance			
4	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment

Degree of Risk: C.

Safety Barrier Assessment³

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 glider was not visible on the Brize controllers radar screen.

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 any information on the other aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the Voyager's TCAS could not detect the glider.

