

AIRPROX REPORT No 2014041

Date/Time: 15 Apr 2014 1413Z

Position: 5135N 00133W
(8nm SSE Brize Norton)

Airspace: Lon FIR (Class: G)

Aircraft 1 Aircraft 2

Type: Alpha Jet Untraced Glider

Operator: MoD ATEC Unknown

Alt/FL: 3800ft NK
QNH (1030hPa)

Conditions: VMC NK

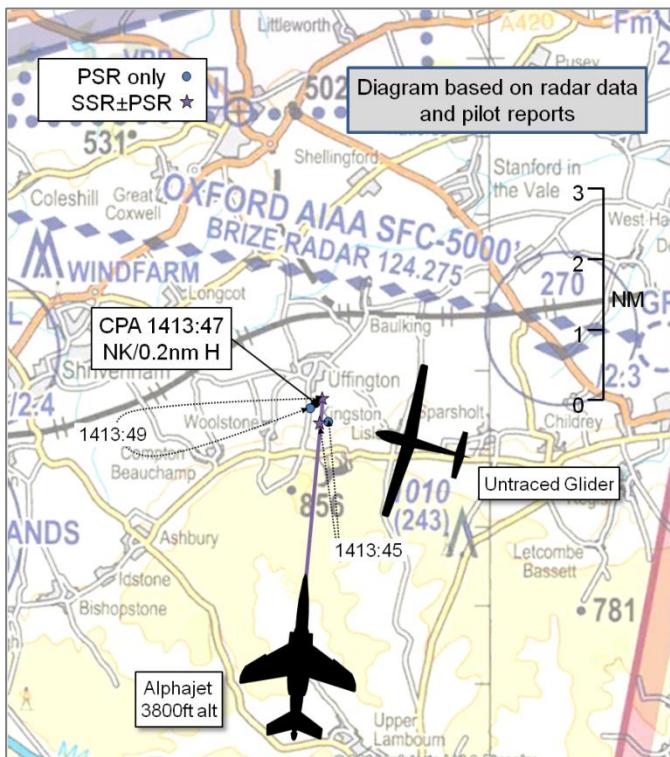
Visibility: >10K NK

Reported Separation:

0ft V/300ft H NK

Recorded Separation:

NK V/ 0.2nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE ALPHA JET PILOT reports flying a black aircraft with all lights illuminated and SSR transponder on with Modes 3A and C selected. He was undertaking a practice diversion to Brize Norton for a TACAN approach. The front-seat pilot was flying on instruments, and the rear-seat pilot was looking out when he saw a white glider in the 12 o'clock position, at the same height, which had initially been obscured by the front seat and the canopy. The glider passed within 300ft down the left of the aircraft; by the time the glider was spotted it was too late to take avoiding action. ATC gave Traffic Information on five occasions, but the glider was not believed to have been called.

He assessed the risk of collision as 'High'.

THE GLIDER PILOT: despite extensive searching the glider pilot could not be traced.

THE BRIZE DIR reports that he was providing a Traffic Service to the Alpha Jet pilot and instructed him to climb to 3800ft on the Brize QNH 1030 hPa. The Traffic Service was limited as the aircraft passed the radar overhead and, shortly afterwards, the pilot reported that he had had an Airprox with a glider. There were no observed radar returns in the area at the time.

THE BRIZE SUPERVISOR reports that the unit's workload was medium-to-low, and that the controller on Brize DIR was a very experienced and capable controller; therefore, the Supervisor was concentrating his attention on the LARS controller and assisting with liaison with Oxford. The DIR immediately brought the Airprox to his attention: on looking at the radar, the supervisor could see multiple non-transponding contacts in the vicinity of the Brize CTR, all believed to be gliders.

Factual Background

The weather at Brize Norton was recorded as:

METAR EGVN 151350Z 08011KT 9999 FEW042 13/02 Q1030 BLU NOSIG

Analysis and Investigation

Military ATM

The Brize Director had just received the Alpha Jet on frequency under a Traffic Service and workload was described as 'low'. During the handover from Boscombe Down, two sets of Traffic Information had been passed. Once on frequency, Dir provided a clearance for a TACAN procedure and the service was limited for the radar overhead. The Alpha Jet reported the Airprox on frequency and no observed radar returns were in the jet's vicinity. The Supervisor confirmed the low controller workload and added that there were multiple non-transponding contacts in the area, believed to be gliders. Primary and Secondary Radars at Brize were fully serviceable.

At 1412:22 the handover was being conducted from Boscombe to Brize: the Boscombe controller called, "*traffic 12 o'clock, 5 miles, manoeuvring, height unknown.*" The Brize Dir accepted the handover and passed the frequency. Figure 1 details the geometry at handover.

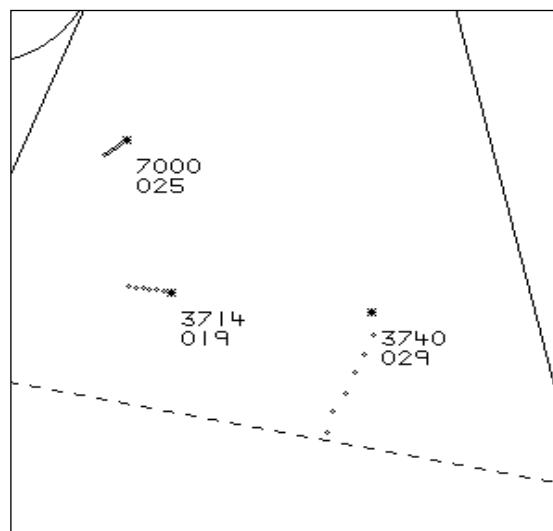


Figure 1: Aircraft geometry at 1412:22 handover (Alpha Jet squawk 3740).

At 1413:03, the Alpha Jet called Brize Director and was provided with a Traffic Service. The Dir passed clearance for routing at altitude 3800ft Brize QNH 1030 hPa. Figure 2 shows a slow moving, non squawker, 3nm to the north east of the Alpha Jet.

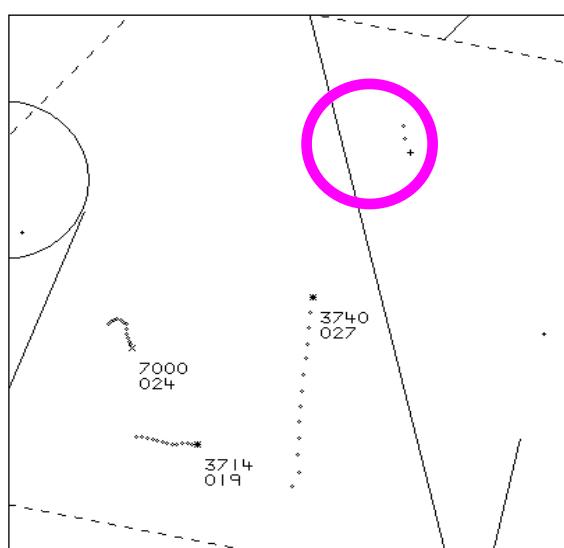


Figure 2: 1413:03 with a primary contact to the north east by 3nm.

The Closest Point of Approach (CPA) happened on the radar replay between 1413:50 to 1413:58 as the Alpha Jet was reading back the clearance altitude. As per Figure 3, at CPA, no conflicting return is displaying on the radar replay.

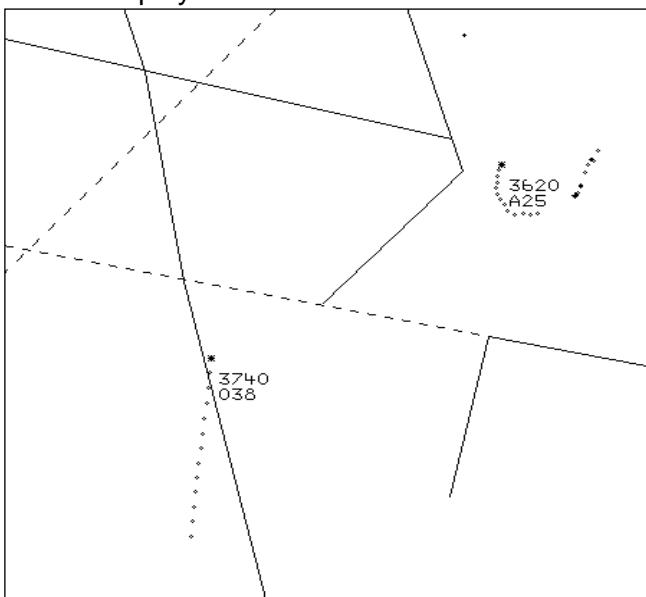


Figure 3: 1413:58 at CPA.

At 1414:19 the DIR transmitted, “[Alpha Jet callsign] reduced traffic information for the next 10 miles due to the limits of surveillance cover, there will be one Islander departing below you and one Dauphin helicopter joining the hold above you.” At 1415:00 the Alpha Jet reported an Airprox with a glider at the same height.

During the handover, the Brize DIR accepted the Traffic Information (12 o'clock, 5nm), which does not appear on radar replay at Figure 1, and noticed that further traffic (10 o'clock, 4nm) was not a factor. Brize DIR scanned for conflicting traffic on handover and limited radar services as the Alpha Jet routed closer to the radar overhead; at no point does an immediate conflictor become apparent on the radar replay, although an intermittent contact does appear approximately 50 seconds prior to CPA.

The Alpha Jet crew had chosen an appropriate type of service for the conditions and had made provision for the rear seat crew to maintain the lookout.

Certain barriers were not present during this Airprox: the Alpha Jet did not have an Airborne Collision Avoidance System onboard, and Traffic Information was limited by radar performance and conflicting aircraft displaying on radar. It is not known what type of service or equipment the glider had. The final barrier in such an incident is the pilot lookout, this partially worked for the Alpha Jet, but did show certain limitations in looking for traffic from the rear seat.

UKAB Secretariat

Both pilots had an equal responsibility to avoid a collision¹, in addition, the Alpha Jet was required to give way to the glider.²

¹ Rules of the Air 2007 (as amended), Rule 8 (Avoiding Aerial Collisions)

² Rules of the Air 2007 (as amended) Rule 9 (Converging)

Comments

HQ Air Command

This incident highlights the limitations of radar detection of gliders, particularly in the vicinity of the radar overhead. On this occasion the most likely means of detecting the glider was crew lookout and the crew had apportioned responsibilities accordingly; unfortunately, rear seat lookout was impeded by the canopy arch and front seat which led to a late acquisition of the glider.

Summary

An Airprox was reported on 15th April 2014 at 1413z between an Alpha Jet and an untraced glider. The Alpha Jet was on a practice diversion to Brize Norton and receiving a Traffic Service; the glider did not show on radar and so the controller could not give Traffic Information. Unfortunately, it has not been possible to trace the glider.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilot, 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 first discussed the actions of the Alpha Jet crew and judged that they had mitigated the risk of the IF approach by using the rear seat pilot as lookout but were unfortunate that the front cockpit ejection seat and canopy arch had blocked the glider from view from that position. The Board discussed whether the crew could have taken any other measures but, having requested a Traffic Service, and in the absence of any electronic ACAS equipment (such as P-FLARM), it was felt that they had done all they could realistically do.

The Board then turned to the actions of the Brize Controller and decided that, because he couldn't see the glider on his radar, there was little assistance he could give in this instance. In discussing the issue of glider radar conspicuity, the Board resolved to recommend that, in light of advances in technology in recent years, the BGA be asked to investigate the fitment of radar reflectors in gliders.

It was unfortunate that the glider pilot could not be traced, but the Board opined that good airmanship would dictate that, had he seen the Alpha Jet in such close proximity, he would probably have filed a report; therefore, it was assumed that he didn't see the Alpha Jet.

In discussing the cause and risk, the Board agreed that the cause was a late sighting by the Alpha Jet pilot and an assumed non-sighting by the glider pilot. The reported separation, together with the fact that the Alpha Jet pilot considered that it was too late to take avoiding action, led the Board to decide that the risk was a Category A, chance had played a major part in events.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by the Alpha Jet pilot and an assumed non-sighting by the glider pilot.

Degree of Risk: A

ERC Score³: 100

Recommendation: The BGA considers reviewing the feasibility of fitting radar reflectors in gliders.

³ Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.