

AIRPROX REPORT No 2014063

Date/Time: 14 May 2014 1420Z

Position: 5139N 00116W
(Oxford AIAA)

Airspace: London FIR (Class: G)

Aircraft 1 Aircraft 2

Type: Tutor Glider

Operator: HQ Air (Trg) Unknown

Alt/FL: 3500ft NK
QFE (1025hPa)

Conditions: VMC VMC

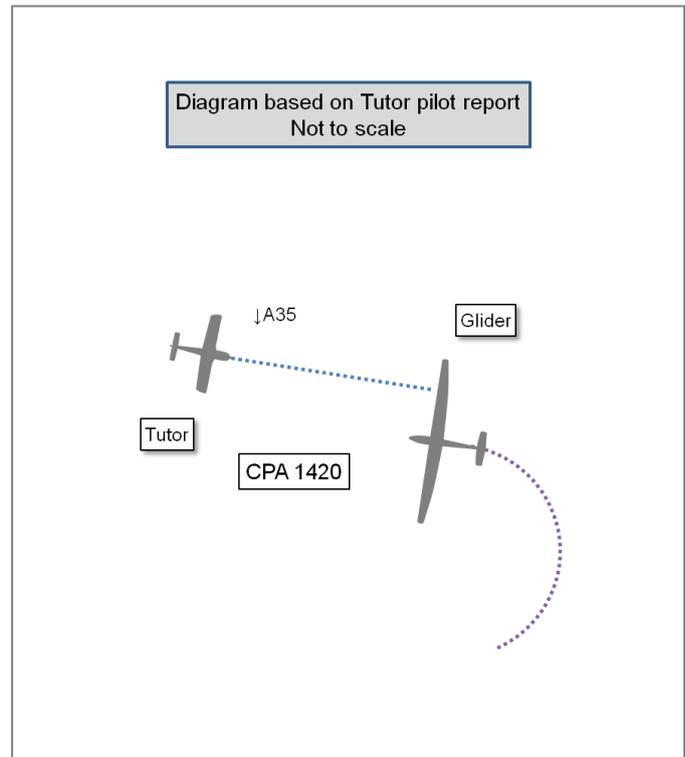
Visibility: 40km NK

Reported Separation:

300ft V/400ft H NK

Recorded Separation:

NK



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE TUTOR PILOT reports conducting an Air Experience flight with a cadet. The predominantly white aircraft had strobe, navigation and landing lights selected on, as was the SSR transponder with Modes A, C and S. The aircraft was fitted with a TAS. The pilot was operating under VFR, below cloud in VMC, and in receipt of a Traffic Service from Benson ZONE whilst on recovery to RAF Benson. A descent to initial altitude was initiated 2nm north of Didcot Power Station and multiple non-squawking contacts in his vicinity were called by 'Benson Approach' - one contact was given as 12 o'clock at a range of 1 mile but with no altitude information. Moments later, heading 100° at 100kt and passing height 3500ft in a wings-level descent, he saw the contact, a white 'high-performance' glider, and bunted below it to ensure separation was maintained. Even so, he felt the other aircraft was uncomfortably close at a range of 600-700ft. He did not immediately feel the need to report this incident to ATC but did so on the ground having discussed the incident with his supervisor.

He assessed the risk of collision as 'High'.

THE GLIDER PILOT: Despite extensive tracing action and the pro-active involvement of BGA members, it has not been possible to establish the identity of the glider pilot and hence it has not been possible to obtain a report.

THE BENSON APR CONTROLLER reports that he was unable to recollect any significant details regarding the incident in question. He did remember noting that the U/T controller performed to the best of his ability, calling relevant traffic with reduced Traffic Information due to high traffic density.

THE BENSON SUPERVISOR reports the date of occurrence was a fine weather day with minimal wind. He was aware that there was a gliding competition from Bicester and understood the route to be from Bicester to Norfolk, then Lasham, and back to Bicester so believed that the local airspace would be busy with gliders towards mid to late afternoon. ATC at RAF Benson was operating SSR only due to planned annual primary radar servicing, so had deployed controllers to RAF Brize Norton (BZN) in order to provide a full service to Benson aircraft using the BZN primary radar. One radar screen at RAF Benson was left with primary radar displayed as there were periods when a legible picture could be seen; there appeared to be a lot of primary radar contacts in the area which he believed to be gliders. Through liaison with the Benson controllers at BZN, he could tell that they were working hard, providing a Traffic Service throughout the day to a number of Tutor pilots in an

area of high traffic density. The controllers at Benson were likewise busy, particularly on the Zone console. Due to the traffic density he decided during the mid-morning that RAF Benson would not accept any further practice approaches (PDs) above the 3 already booked. A blanket refusal of PDs is a decision that he does not make very often but he believed that a careful control over traffic was required due to the busy local airspace and to ensure adequate workload management and rest for the controllers. Concerns at the high traffic density had been raised by the supervisor during the lunch hour, and a photo of the radar screen with primary radar [contacts] had been sent to the Air Experience Flight to raise their awareness of the large number of primary contacts in the area.

Factual Background

The weather at RAF Benson was recorded as follows:

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METAR EGUB 141350Z 32006KT 9999 SCT048 16/06 Q1032 BLU NOSIG
METAR EGUB 141550Z 33007KT CAVOK 17/07 Q1032 BLU NOSIG
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Analysis and Investigation

Military ATM

The specific incident was not captured on area radar replay due to no radar response from the glider. Figure 1 is the photo of the radar screen that the Supervisor sent to the Tutor operators.

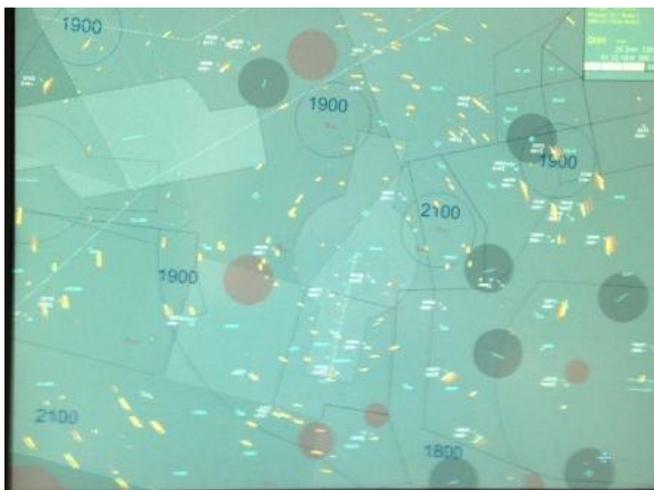


Figure 1: RAF Benson ATM primary radar display on the morning of 14 May 14

The tape transcript from Benson showed that Benson Radar provided a Traffic Service to the Tutor pilot. Traffic Information, which was steady throughout the sortie, began at 1414:34 with, “[Tutor C/S] *multiple contacts from left to right 2 o’clock. Range of 2 to 5 miles all manoeuvring height unknown. Believed to be gliders.*” More specific information was passed at 1415:00 as, “*Traffic left 11 o’clock 1 mile crossing left right slow moving height unknown, believed to be a glider.*”

The Tutor pilot asked for information on glider activity including routings, but Radar could not detect a specific route and gave information of multiple contacts 20-30 miles from the south west to the north of Benson. Multiple sets of Traffic Information were passed to the other pilots under a service and the specific Tutor pilot was passed further information at 1421:04, “*traffic South West. 5 contacts range of 3 miles to 4 miles all manoeuvring believed to be gliders.*” At 1422:09, the pilot was updated with, “*Traffic South East 3 miles tracking North West indicating 700 feet below.*”

The Benson trainee controller called Traffic Information on a number of occasions, assisting the Tutor pilot in becoming visual with the untraced glider. Benson ATM should be commended for persistent and accurate calling of traffic and pro-active supervision. The barriers to an Airprox

were prevalent, as radar-derived Traffic Information and pilot lookout helped maintain separation. The procedures for general deconfliction of airspace with mass glider moves were discussed in a unit investigation and there are various recommendations that require action in order to reinforce this barrier. The TAS on a Tutor has limitations, especially in detecting gliders.

A Benson safety investigation produced 15 recommendations. The Tutor recommendations looked at reducing sortie ops when there was a high traffic density, and many recommendations focussed upon maintaining a situational awareness throughout the day to plan for clearer pieces of airspace; Benson ATC could assist Tutor operations with flight planning and updates from the radar display. Since the Airprox, Tutor instructional sorties have been provided with a discrete frequency. An airspace review was conducted, as well as a review of Tutor operating heights to limit exposure to gliders. Fitting FLARM to the Tutor fleet would also provide better awareness of gliders and this is currently under trial. The incident report also stated that the Tutor operators found it difficult to get information on planned glider activity, despite using the BGA website and attempting to call glider operations at Bicester and Lasham. The issue of promulgating gliding routes could be addressed at the Local Airspace Working Group, and on a national level through the RAF Safety Centre and BGA. The main tenets of the investigation were a review of current airspace procedures and an attempt to get a better flow of information to aid in sortie planning.

UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision¹. Subject to Rules 10 (Approaching head-on) and 11 (Overtaking), the Tutor pilot was required to give way to the glider².

Comments

HQ Air Command

That the post-event investigation run by RAF Benson focussed on airspace management and liaison with other users is entirely appropriate; it is hard to imagine how the Tutor captain might have modified his recovery given the position of the gliders and the difficulty one encounters when trying to visually acquire an aircraft with a narrow head-on cross-section such as a glider. The investigation highlighted the need for closer harmony between the BGA and RAF Benson, amongst the other factors already described by the Military ATM investigator.

Summary

An Airprox was reported when a Grob Tutor and an untraced glider were flown into proximity at about 1420 on Wednesday 14th May 2014. Both pilots were operating under VFR in VMC, the Tutor pilot in receipt of a Traffic Service from Benson APR, the glider pilot most likely not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the Tutor pilot, radar photographs/video recordings, reports from the air traffic controllers involved and a report from the appropriate ATC and operating authorities.

The Board first commended the BGA authorities and wider gliding community for their response to the request to trace the glider pilot and willingness to engage in the Airprox process. A number of pilots forwarded GPS logger files, which confirmed that they were not flying the subject glider; unfortunately, even with this support the pilot involved could not be traced. The Board discussed whether the absence of an Airprox report denoted a lack of concern over the incident on the part of the glider pilot, but decided that this inference could not be made with any certainty. Turning to the

¹ Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions) and as reflected in Military Flying Regulations.

² *ibid.*, Rule 9 (Converging)

Tutor pilot, he was passed relevant Traffic Information on a number of occasions, became visual with the glider, albeit at a late stage, and took avoiding action. Members agreed that the ATC team at RAF Benson had taken every reasonable step on the day to improve locally-based Tutor pilots' situational awareness, including sending the Tutor squadron a screen-shot of the radar picture to emphasise the local traffic density. The Board commended RAF Benson ATC for their proactive approach, and particularly the Supervisor on the day. The Benson controller was faced with a daunting situation, providing a Traffic Service in an unknown traffic environment involving multiple primary and intermittent primary-only contacts. His persistent and accurate Traffic Information was no doubt an important factor in resolving the conflict and the Board also commended him for his performance. The Board noted that many RAF stations had reported positive outcomes from activity involving coordination with airspace users local to them, and therefore resolved to recommend that 'RAF Benson conducts coordination with local airspace users' in order to reinforce their linkages and the passage of information.

Gliding members noted that the discreet phone number given on gliding NOTAMs was the best contact point for enquiring about competition task routeing, but members reiterated that gliders could range hundreds of kilometres from the point of departure and that it was not practical for an airfield to ring every gliding NOTAM to establish the effect on their local area. It was also noted that glider pilots with radios would be served well by contacting ATC at an airfield they were nearby, especially busy military airfields. Some members pointed out in return that controllers also required education in that a call from a glider pilot was usually for information only, was not an invitation to conduct a prolonged identification process, and did not imply that the pilot wanted a service unless requested.

Some members were aware of ground based FLARM technology that enabled the position display of FLARM equipped aircraft in a computer web browser window³. Given that modern gliders are often not readily observable on primary radar but are increasingly equipped with FLARM (as are some light-aircraft with PowerFLARM), members felt that there may be merit in reviewing the applicability of this technology to improving ATC situational awareness, which in turn could be used to improve pilot situational awareness, especially in areas of non-secondary radar high-traffic density. ATC members drew the Board's attention to several important factors regarding the wisdom of introducing 'non-certified' technology into an air traffic environment, factors which the Board accepted as highly important in recognition of the fact that such information could not be used for formal controlling purposes. Nevertheless, the Board resolved to recommend that the MoD and CAA investigate the use of FLARM ground displays to aid situational awareness in ATC.

The Board agreed that in this case conflict resolution had ultimately depended on the barrier of see-and-avoid (cued by good Traffic Information); they determined that the cause was the late sighting of the glider by the Tutor pilot. Because he was able to take avoiding action as soon as he sighted the glider, the Board considered that this constituted effective and timely action that merited a risk category of 'C'. The Board emphasised that all parties had performed with credit, and that the interaction of physiological and environmental factors in Class G airspace could result in a 'near-miss' despite everyone's best efforts.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	A late sighting by the Tutor pilot.
<u>Degree of Risk:</u>	C.
<u>ERC Score⁴:</u>	4.
<u>Recommendation(s):</u>	1. MoD and CAA investigate use of FLARM displays to aid SA in ATC. 2. RAF Benson conducts coordination with local airspace users.

³ For example 'glidernet.org'.

⁴ 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.