

AIRPROX REPORT No 2014097

Date/Time: 25 Jun 2014 1358Z

Position: 5151N 00118E
(1nm NE of Oxford Kidlington)

Airspace: London FIR (Class: G)

Aircraft 1 Aircraft 2

Type: Puma HC2 NIMBUS 3dT
Glider

Operator: HQ JHC Civ Club

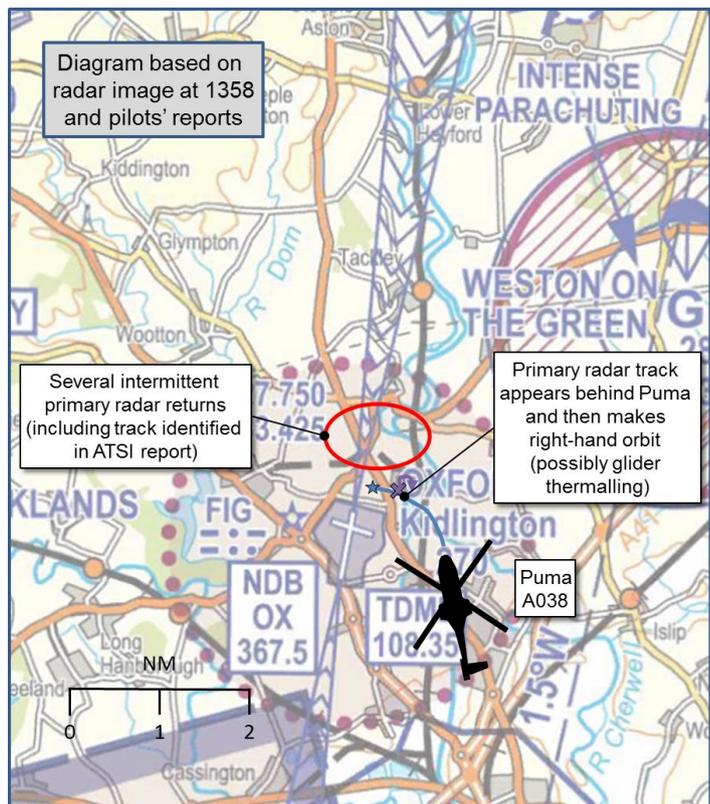
Alt/FL: 4000ft 4000ft
QNH (1018hPa) amsl

Conditions: VMC VMC

Visibility: 30km >30km

Reported Separation:
100ft V/100m H NK V/NK H

Recorded Separation:
NK V/NK H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PUMA PILOT reports flying a black helicopter, under IFR in VMC, with strobe, navigation and landing lights illuminated, and transponder Modes 3/A, C and S selected (no TCAS or FLARM was fitted). As they were entering the NDB100 hold at Oxford, under a Traffic Service from Oxford Radar, the crew were aware of 'exceptionally busy' gliding activity. They received Traffic Information from Oxford Radar on a radar contact 1nm north of them with no height information. During their hold entry turn, the Puma crew spotted a glider passing down the right side of their aircraft. The right-hand seat pilot-flying and crewman assessed the separation as less than 100m horizontally and within 100ft vertically. The Puma pilot reported that the crew's work-cycle during the whole sortie was affected by almost constant two-way with ATC due to the very high volume of glider traffic. On completion of the procedure at Oxford the sortie was continued, as planned, to land at RAF Benson.

He assessed the risk of collision as 'High'.

THE GLIDER PILOT could not be positively traced but more than one glider pilot, who had been in the area, came forward and provided reports in the interests of furthering flight safety. The pilots included one who had seen and overflowed a military helicopter and it is possible, but by no means certain, that he was flying the glider that the Puma crew saw; however much of the detail in this glider pilot's report provides useful context for assessing the occurrence. All of the glider pilots reported flying in VMC and some reported cumulus clouds, which often indicate good thermalling conditions. The glider pilot who saw the Puma noted that it was a busy gliding day, in a 'busy bottleneck' for light-aircraft and gliders, and that they had encountered several other gliders in that area; consequently, the glider pilot could not be certain if his was the reported glider. The glider was crewed by two pilots in a level cruise, at around 4000ft amsl, at 65kt, in the vicinity of Kidlington, when they turned on to 180° to pick up their return leg and became aware of a military helicopter around 5nm away, travelling west and converging on their position from the east. They maintained visual contact with the helicopter and it was clear that it was 'substantially in a steady, level, cruise around 500ft lower than the glider. Both pilots agreed that the helicopter was 'of minimal concern' as it was 'passing substantially below' their glider, but they continued to monitor its progress, after their tracks crossed, as it turned north and entered a 'race-track hold' in the 'uncontrolled airspace' between the 'Brize Norton CTZ and the Weston-on-the-Green danger area'. The helicopter remained below them and

they kept the glider on a southerly track until they had passed above the helicopter; they noted that they could not notice the noise of the helicopter even in the quiet glider cockpit and they assessed that no avoiding action was required because, despite the converging tracks, the helicopter remained 'substantially below' them. Whilst the helicopter did not produce any indications on the glider's FLARM system, the glider's pilot thought it likely that military aircraft would be able to receive the FLARM signals that they were emitting. The tracks and distances in this pilot's report do not correspond with the Puma pilot's report, and it is possible that either or both pilots have perceived or recalled them incorrectly, or that the Puma had an Airprox with another glider, of which there were several in the area.

THE OXFORD APPROACH CONTROLLER reports providing a Traffic Service to the Puma crew whilst they were carrying out a procedural NDB100 hold at Oxford; the pilot was cleared to OX at 4000ft (QNH 1018hPa) to enter the hold. The controller had pre-briefed on NOTAMed gliding competitions from Bicester and Shennington, and had seen multiple primary radar contacts around Oxford for several hours prior to controlling the Puma. The controller warned the Puma crew about the gliding activity and added that he would pass Traffic Information on any contacts seen on the radar display. A primary radar contact was observed north of the Oxford ATZ, tracking south, and Traffic Information was passed to the Puma crew, and was subsequently updated several times. The pilot reported visual contact with a glider and said he would like to file an Airprox; the controller noted that the radar contacts merged on the display and that the Puma pilot reported the glider had passed around 200m below the helicopter.

Factual Background

The weather at Benson at 1350 was recorded as:

METAR EGUB 251350Z 04006KT 9999 SCT046 BKN250 19/08 Q1018 BLU NOSIG

The Brize Norton weather at 1350 was recorded as:

EGVN 251350Z 12006KT 9999 SCT047 20/06 Q1018 BLU NOSIG=

Analysis and Investigation

CAA ATSI

ATSI had access to reports from the Puma pilot and the Oxford Radar controller, area radar recordings and RTF and transcripts of the Oxford Radar frequency.

[UKAB Note: Some of the glider pilots' reports were received after ATSI had completed their report]

The Puma was tracking towards the OX to hold and had been instructed on entering the hold to descend to 3500ft and report ready for the NDB 100 procedure.

At 1357:10 the Oxford radar controller advised the Puma of a primary contact due north of the field which appeared to be entering the ATZ, 2nm north of Oxford, southbound, height unknown. This was acknowledged by the Puma pilot. The Oxford Radar controller clarified that the traffic was north of the Puma by 1.5nm, south-southeast bound (Figure 1 shows the positions of the Puma and the primary return at the end of the Traffic Information passed by Oxford).



Figure 1.

The tracks of the Puma and the primary contract continued to converge (Figures 2 and 3) with the CPA occurring at 1357:55 when the lateral distance between the aircraft, as displayed by the area radar recordings, was 0.4nm.

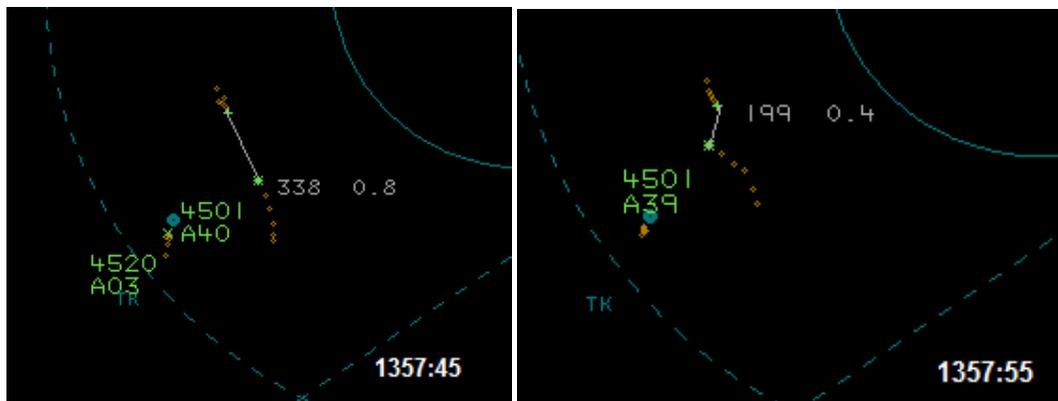


Figure 2

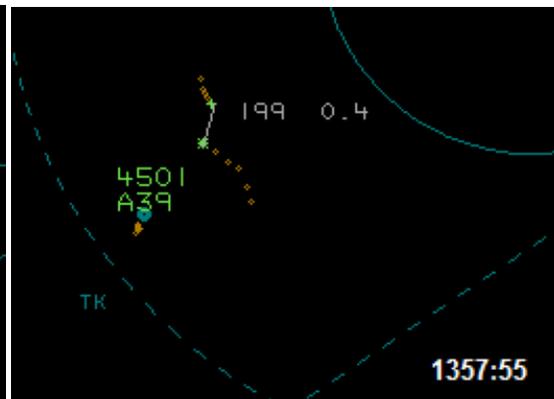


Figure 3

The Puma reported to Oxford that they were descending in the hold to 3500ft and the Oxford Radar controller asked if they had passed above or below the previously called traffic. The Puma pilot replied that they had passed marginally below and the Oxford controller asked the Puma pilot to confirm that the traffic was a glider, which the pilot confirmed and reported that he would be filing an Airprox.

The Puma pilot reported that the glider was spotted during the hold entry turn passing down the right hand side of the aircraft. The distance was estimated as being less than 100m horizontally and within 100ft vertically.

The report from the Oxford Radar controller stated that multiple primary contacts had been observed for several hours around Oxford prior to the Airprox. The Puma crew was advised of the primary contact, and the controller stated that the contacts merged on the display.

The Oxford Radar controller passed Traffic Information to the Puma on a primary return unknown to Oxford, which was likely to have been the glider. With no SSR information the Oxford Radar controller could only provide lateral information. As the Airprox occurred in Class G airspace, the pilots of the Puma and the glider were ultimately responsible for collision avoidance.

UKAB Secretariat

Both pilots had equal responsibility to avoid a collision¹ and, if the aspect was perceived to be head-on, or nearly so, both pilots were required to alter course to the right.² If the aircraft were

¹ Rules of the Air 2007, Rule 8, Avoiding Aerial Collisions

seen to be converging then the pilot of the powered aircraft (the Puma) was required to give way to the glider³.

Comments

JHC

This was a close call in congested airspace, with good air traffic control providing important situational awareness to the crew. Unless all radar rooms receive a FLARM picture and gliders carry transponders, it is a significant risk that remains. It also emphasises the importance of maintaining a good lookout even when under a Traffic Service.

Summary

An Airprox was reported in Class G airspace between a Puma helicopter and a glider. Traffic Information was passed to the Puma on a primary contact, which was believed to be the glider. The glider could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, 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.

Board members agreed that, with so many gliders sighted in the area, and discrepancies between the Puma pilot's and the glider pilots' reports, there was some doubt about which glider the Puma crew had seen. Notwithstanding, members were extremely grateful that one of the glider pilots had offered an extensive report, which added greater context to their discussion. It was clear that Oxford ATC were well aware of the intensive gliding activity and, having passed both generic and specific Traffic Information to the Puma crew, the Board agreed that the Oxford controller could not have done more to improve matters.

The Board was informed that there was at least one large gliding competition in the area, and that the BGA⁴ had ensured that relevant NOTAMs had been issued; the Board also noted that the Oxford controller recalled having pre-briefed these NOTAMs. There was then some discussion on the issue of NOTAMs and competition task routes, and the Board recalled that it had recommended in other Airprox reports that the BGA look at the issue of their timely notification (specifically Airprox 2013079 in November 2013 which had elicited a response from the BGA that they supported such an approach but would not lead on its development). A glider member informed the Board that the BGA was alive to the value of publicising competition routes to other airspace users and had looked into several new ways to achieve this more effectively, such as publishing routes in a format that can be used in flight planning systems such as CADS, Skydemon and others. However, it seemed that resources could not be found to take any of these solutions forward.

The Board noted that at least one glider pilot that had reported had thought that military aircraft were routinely equipped to detect FLARM; however that is not the case. The Board was informed that the RAF VGS⁵ fleet will be FLARM equipped when it restarts flying soon, but other military aircraft are not at present FLARM equipped. Other members observed that it was risky for glider pilots to operate near the hold or overhead of a busy aerodrome, and that they would be well served to contact ATC by radio if the glider was suitably equipped. However, it was also noted that it is difficult for glider pilots planning their sorties, or navigating en-route, to know where individual aerodrome instrument patterns and holds are located because they are not shown on the VFR charts. Members agreed that

² *Rules of the Air 2007, Rule 10, Approaching Head-on*

³ *Rules of the Air 2007, Rule 9, Converging*

⁴ *British Gliding Association*

⁵ *Volunteer Gliding Squadrons*

this was a problem that had also been a contributory factor in assessing Airprox 2014126⁶ that month, and made the same recommendation that the CAA should consider producing a chart depicting UK aerodrome holding pattern positions.

The Board then discussed the cause and agreed that, although the glider pilot could not be positively traced, there was sufficient information to show that the aircraft were converging and so the Puma pilot was required to give way to the glider. However, the Puma crew did not see the glider until it was too late to take action, so members agreed that this was effectively a non-sighting by the Puma pilot. Whilst the Puma crew had seen the glider too late to take action, the circumstances of the glider pilot were not known; if the glider pilot had also suffered a late or non-sighting, the degree of risk would be A, but if, like one of the reporting glider pilots, he had seen the Puma early and felt that sufficient separation had existed then the degree of risk would likely be B or C. The Board agreed that unfortunately there was insufficient information to definitively assess the degree of risk and so it was agreed as a Category D.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	Effectively a non- sighting by the Puma pilot.
<u>Degree of Risk:</u>	D.
<u>ERC Score⁷:</u>	Not scorable.
<u>Recommendation(s):</u>	The CAA considers producing a chart of UK airfield IFR holding pattern positions.

⁶ The relevant text of Airprox 2014126 was as follows:

“Glider-pilot Board members noted that the glider pilots concerned should have been aware of the instrument approach at Cranfield, as depicted by the ‘fan’ on the ½ million scale CAA VFR chart, and presumably of their proximity to it. However, they also opined that it was difficult for glider pilots to access information of where the IFR holds were in UK airspace other than to review all the approach charts of all the airfields they would be flying near – for long-endurance sorties, which might deviate significantly from planned routing and thereby go near numerous airfields, this was not feasible. Members noted that it was no more inappropriate for gliders to be flown in the vicinity of IFR approaches than it was to conduct an IFR hold and/or approach in Class G. Nevertheless, the Board felt that it should be possible to present additional information on IFR hold positions and resolved to recommend that the CAA considers producing a master chart of UK airfield IFR holding pattern positions and IFR tracks that could either be carried as a paper copy or used as an overlay on proprietary GPS/digital mapping software. They agreed that it was probably not appropriate to annotate this information on the ½ million scale CAA VFR chart for reasons of clarity; however, a stand-alone chart would be useful as a means of highlighting these locations and tracks”.

⁷ 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.