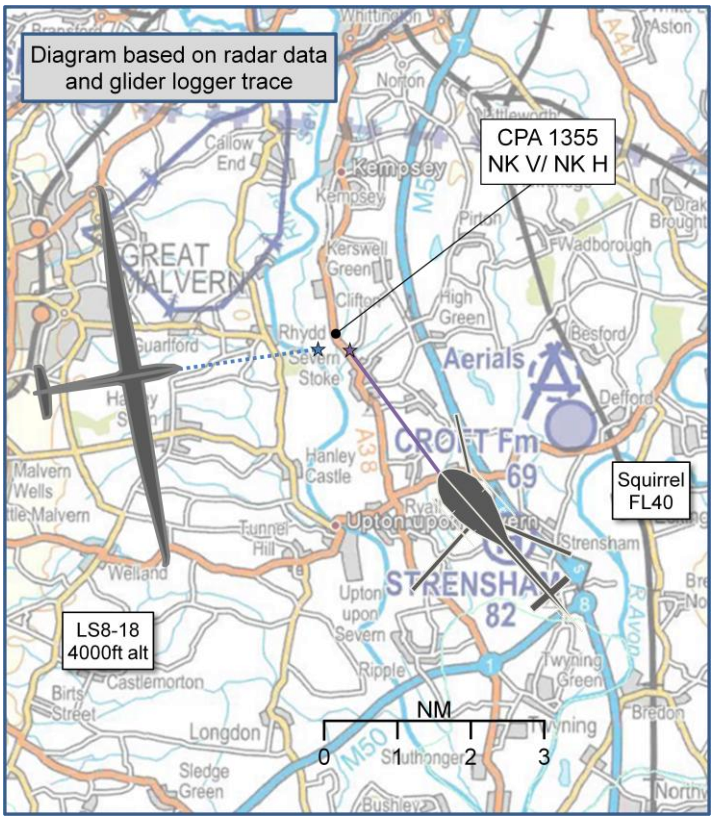
## AIRPROX REPORT No 2015078

Date: 3 Jun 2015 Time: 1400Z Position: 5206N 00214W Location: Great Malvern

## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
|---|---|---|
| Aircraft | LS8 | Squirrel |
| Operator | Civ Club | HQ Air (Trg) |
| Airspace | FIR | FIR |
| Class | G | G |
| Rules | VFR | VFR |
| Service | None | Traffic |
| Provider | NA | Brize Radar |
| Altitude/FL | NK | FL40 |
| Transponder | Not fitted | On, A, C, S |
| **Reported** | | |
| Colours | White | NK |
| Lighting | None | NK |
| Conditions | VMC | VMC |
| Visibility | 30K | 40K |
| Altitude/FL | 4000ft | FL40 |
| Altimeter | NK | NK |
| Heading | 090° | 360° |
| Speed | 80kt | 110kt |
| ACAS/TAS | FLARM | Other TAS |
| Alert | Unknown | Nil |
| **Separation** | | |
| Reported | 20ft V/100M H | 0ft V/50M H |
| Recorded | NK V/NK H | |




**THE LS8 PILOT** reports heading East at 4000ft. He spotted a helicopter converging from the right at the same level. He put his glider into a dive to avoid the other aircraft.

He assessed the risk of collision as 'High'.

**THE SQUIRREL PILOT** reports heading north under a Traffic Service from Brize at FL40. He was initially informed of several contacts by the controller, then, after a quiet period, he noticed a glider ahead with a large rate of descent and large bank angle crossing ahead of his aircraft. He took late avoiding action.

He perceived the severity of the incident as 'High'.

**THE BRIZE CONTROLLER** reports providing the Squirrel with a Traffic Service. He called several primary contacts to the helicopter although he cannot recall if the subject glider was one of them. He was fairly sure that no contacts were displaying on his radar in the vicinity at the time of the incident.

He perceived the severity of the incident as 'Low'.

### Factual Background

The Gloucestershire weather at the time of the incident was:

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METAR EGBJ 031150Z 28006KT 9999 SCT042 16/05 Q1023
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## Analysis and Investigation

### Military ATM

The incident occurred on 3 Jun 2015 at 1400 between a Glider and a Twin Squirrel. The Squirrel was under a Traffic Service with Brize Radar. The Radar Analysis Cell could not capture the glider on radar replay.

At 1337:19 the Squirrel left controlled airspace and was placed under a Traffic Service. The Squirrel requested vectors for Gloucester and Shawbury and was given a heading of 295° at 1337:31. At 1339:59, the Squirrel requested a Deconfliction Service and at 1340:15, the controller replied with: "[Squirrel c/s] *Deconfliction Service avoiding action turn right immediately heading three six zero degrees traffic twelve o'clock seven miles crossing left right no height information*." The controller issued the warning at 1340:29, "[Squirrel callsign] *reduced traffic information from all around due to high traffic density multiple contacts between yourself and Gloucester all manoeuvring no height information believed to be gliders*."

At 1344:01, the Squirrel crew requested a Traffic Service and were subsequently provided vectors for Shawbury of 320°. Three sets of Traffic Information were passed, including at 1347:24: "[Squirrel c/s] *clear of last reported traffic further traffic twelve o clock four miles crossing right left ahead no height information possible glider*."

The CPA was estimated at 1350:50 (Figure 1) although no primary return appeared on radar.

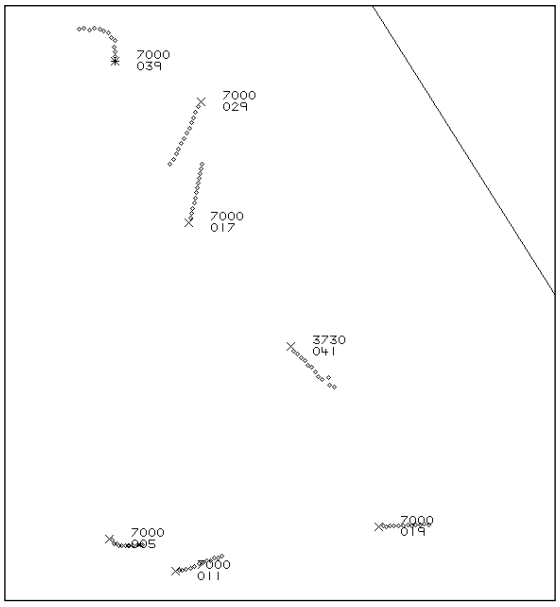


Figure 1: CPA estimated at 1350:50 (Squirrel squawk 3730).

Further sets of Traffic Information were passed at 1351:39 and 1354:37. At 1355:37 the Squirrel crew commented: "*we've just had a glider pop out of the cloud he was a reasonable distance in front of us but there was no warning of* (unintelligible) *that*..." ATC replied at 1355:51 with: "*Roger nothing showing on radar apart from the er traffic I previously called to you which has now passed behind*."

The controller had demonstrated duty of care by providing avoiding action and then Traffic Information to the crew throughout the transit. The service had been reduced due to high traffic density and this had allowed the crew to concentrate on lookout. The glider did not appear on radar replay but the controller had warned of the high glider activity and the crew had focussed on their lookout. TAS did not provide information on the glider as it appears not to have been transponding. The limitations of 'see-and-avoid' are well known, especially with the limited target characteristics of a white glider appearing suddenly against a white cloud background.

**UKAB Secretariat**

Both pilots had equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision.[1] When converging, power-driven heavier-than-air aircraft shall give way to sailplanes.[2]

**Comments**

**HQ Air Command**

In Class G airspace with gliders often not painting on ATC radar screens, the remaining barriers are CWS (Collision Warning Systems) and lookout. In this case the CWS on each aircraft were incompatible (the Squirrel's TAS is IFF based and FLARM is only visible on other FLARM equipment) so look out was the remaining barrier. The Squirrel had 3 POB and had made efforts to improve his situational awareness knowing of the intense glider activity (he had requested to descend below cloud so that he could take a traffic service and the handling pilot had stopped using his visor to simulate IF). Even after these efforts, neither ATC nor the Squirrel pilot were aware of this specific glider's presence until the late sighting and avoidance action was taken.

**BGA**

It seems likely that both aircraft were operating close to the reported cloudbase of 4200ft which can make any aircraft difficult to see. Both pilots are to be commended for their prompt avoiding action.

**Summary**

An Airprox was reported when a LS8 glider and a Squirrel flew into proximity on 3rd June 2015. The glider was operating under VFR in VMC with no ATC service. The Squirrel was operating under VFR in VMC under a Traffic Service from Brize Radar.

**PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from the pilots of both aircraft, 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 commended the Brize Radar Controller for providing timely traffic information to the Squirrel crew on multiple targets, believed to be gliders, and commented that this had undoubtedly raised the level of situational awareness of the Squirrel crew as they prioritised their lookout accordingly. Unfortunately, the glider in question was not seen on radar, and so no warning could be given. Notwithstanding, the fact that all three crew members were made aware of the presence of returns in the vicinity of their flight path was considered instrumental in concentrating their lookout.

The Board then turned again to the issue of electronic conspicuity. They noted that the glider was fitted with FLARM, whilst the Squirrel's TAS was only compatible with aircraft fitted with and employing SSR equipment. Noting that glider power issues meant that they could not be relied on to squawk SSR even if fitted, some members wondered whether the MOD were considering fitment of P-FLARM to their helicopter fleet given that there was likely conflict with gliders given that they both regularly operated in the same height bands. The JHC Board member commented that, although the MOD was looking at various options, the cost benefit of fitting P-FLARM to the Squirrel fleet was perceived as small because, historically, there had been few conflicts with gliders.

[1] SERA 3205 (Proximity)
[2] SERA 3210 (Right of way)

The Board agreed that the cause of the Airprox was a late sighting by both pilots, Although they commended both pilots for their prompt avoiding action on sighting the other aircraft, they were sufficiently concerned by the reported separation at CPA to agree that, although late avoiding action had been taken by both aircraft, safety margins had been much reduced below normal, thus assessing the risk as Category B.

## PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by both pilots.

Degree of Risk: B.