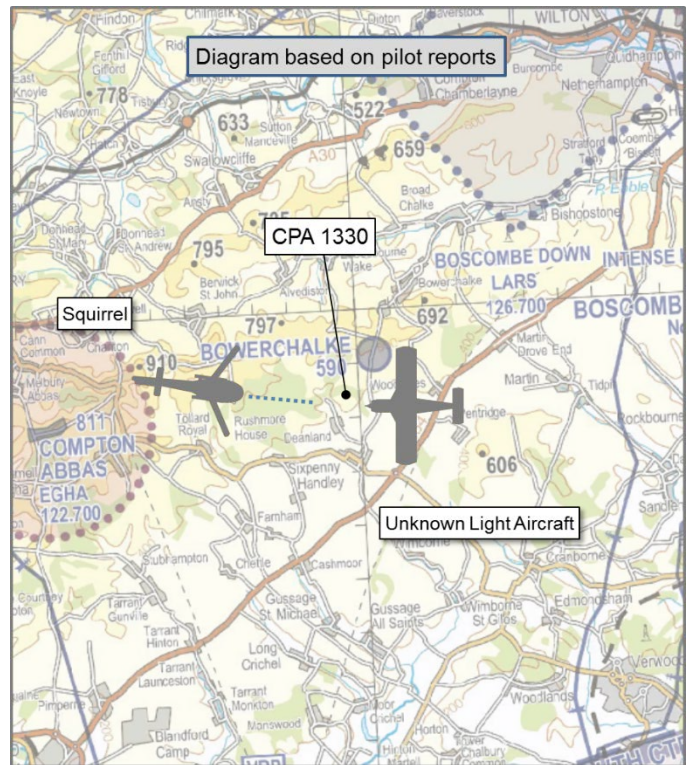


**AIRPROX REPORT No 2017250**

Date: 21 Sep 2017 Time: 1330Z Position: 5058N 00201W Location: 10nm SW Salisbury

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

| Recorded          | Aircraft 1                        | Aircraft 2              |
|-------------------|-----------------------------------|-------------------------|
| Aircraft          | Squirrel                          | Untraced Light Aircraft |
| Operator          | HQ JHC                            | Unknown                 |
| Airspace          | London FIR                        | London FIR              |
| Class             | G                                 | G                       |
| Rules             | VFR                               |                         |
| Service           | None                              |                         |
| Provider          |                                   |                         |
| Altitude/FL       |                                   |                         |
| Transponder       | A, C, S                           |                         |
| <b>Reported</b>   |                                   | <b>Not Reported</b>     |
| Colours           | Black, Yellow                     |                         |
| Lighting          | Strobes, Position Lights, Landing |                         |
| Conditions        | VMC                               |                         |
| Visibility        | >10km                             |                         |
| Altitude/FL       | 100ft                             |                         |
| Altimeter         | RPS (1009hPa)                     |                         |
| Heading           | 015°                              |                         |
| Speed             | NK                                |                         |
| ACAS/TAS          | TAS                               |                         |
| Alert             | Information                       |                         |
| <b>Separation</b> |                                   |                         |
| Reported          | 100ft V/0m H                      |                         |
| Recorded          |                                   | NK                      |



**THE SQUIRREL PILOT** reports that he was flying a high workload sortie due to poor met conditions. They were listening out and making blind calls on the LL-common frequency, 278.0Mhz, which is monitored by Middle Wallop. They had a TAS contact at 2km and on the initial sighting of the light fixed-wing aircraft, it seemed to be no conflict because it was crossing left-to-right and they would pass behind. They continued to descend into a valley feature, and the fixed-wing aircraft began an orbit at low-level bringing it directly into a head-on conflict at the same level, which was at cloud base. There was high ground both left and right, which restricted the action that could be taken, and the cloud-base was almost at tree-tops on the high ground. The QHI took control and initiated avoiding action by descending into fields whilst reducing speed commensurate with a height down to 30ft. The fixed wing aircraft continued to turn before overflying the helicopter at the cloud base, approx. 100-200ft above.

He assessed the risk of collision as 'Medium'.

**THE LIGHT AIRCRAFT PILOT** could not be traced.

**Factual Background**

The weather at Boscombe Down was recorded as follows:

METAR EGDM 211250Z 21010KT 8000 -RA FEW005 SCT007 BKN022 15/14 Q1013 GRN BECMG SCT015 WHT=

METAR EGDM 211350Z 28007KT 9999 FEW008 BKN035 OVC090 15/13 Q1014 BLU=

## Analysis and Investigation

### UKAB Secretariat

The Squirrel and light aircraft pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>1</sup>. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right<sup>2</sup>.

### Comments

#### JHC

The flight profiles of both aircraft appear to have been affected by the prevailing weather conditions that were worse in the locality to that forecast prior to launch. Whilst the rotary crew expected to be in low-level environment (albeit, the weather causing a high cockpit workload) it is highly likely that this was an unusual environment for the fixed-wing crew which could have affected their internal cockpit work-cycle, their capacity to adopt low-level flying procedures such as landing lights and appropriate RT frequencies, and most importantly, their look-out. As a result of these factors both aircraft came into proximity in Class G airspace and had to rely on the see-and-avoid barrier to prevent a more serious episode from occurring. In this instance, with the heightened situational awareness provided by TAS, the see-and-avoid barrier was successful. It is also worthy of note that while it is unlikely that an ATC service would have been able to differentiate either aircraft from the ground clutter at the heights and ranges involved, a VHF low-level common frequency could have provided greater mitigation to MAC than a military-only UHF frequency. After successfully trialling a VHF low-level common frequency north of N56°, the RAF Safety Centre is engaged with the CAA to introduce this UK-wide to further aid GA awareness of military low flying.

### Summary

An Airprox was reported when a Squirrel and a light aircraft flew into proximity at 1330hrs on Thursday 21<sup>st</sup> September 2017. The Squirrel pilot was operating under VFR in VMC, without an ATS. The light-aircraft pilot could not be traced.

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

Information available consisted of reports from the Squirrel pilot, radar photographs/video recordings, reports from the appropriate operating authority.

The Board first looked at the actions of the Squirrel pilot. He was aware of the prevailing weather conditions but was still able to fulfil his tasking VMC low-level. Operating at low-level meant that he could not receive an ATS, nevertheless he was listening out on the UHF low-level frequency. Noting that it was highly unlikely that the light-aircraft pilot would be listening out on this frequency, the Board wholeheartedly agreed with the JHC comments that a VHF low-level common frequency would be welcome. Although the light-aircraft did not appear on the NATS radars, presumably because of its height, it probably was transponder equipped, because the Squirrel pilot had a TAS contact at 2km showing that the aircraft was diverging and no conflict. Having seen the light-aircraft at range, the Squirrel pilot was at first content with the separation, judging that they would pass behind; however, its subsequent orbit put it into direct conflict with the Squirrel, at which point the QHI took control to take avoiding action in the only manner available by descending and slowing down.

Unfortunately, without the light-aircraft pilot's report, it was impossible for the Board to know whether the pilot had seen the Squirrel or not but, judging by his actions, they thought that he probably had not. They thought that it was likely that the pilot had been caught out by the deteriorating weather

<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3210 Right-of-way (c)(1) Approaching head-on.

conditions and that his orbit was in an effort to try and remain VMC whilst avoiding the high ground. Although they could not offer comment on the conditions pertinent to this particular incident, members agreed that this was a timely reminder to all pilots about the dangers inherent in pressing on in poor weather conditions.

In determining the cause of the Airprox, the Board quickly agreed that the Squirrel pilot had seen the light aircraft as soon as was practical and so the incident was best described as a conflict in Class G resolved by the Squirrel pilot. The Board also agreed that a contributory factor had been the low cloud base and high ground that had funnelled both aircraft into the same area. However, assessing the risk was a cause for much discussion. Some members opined that although safety was degraded, the actions by the Squirrel pilot had been timely and effective, Category C. However, others thought the situation was more serious than that, and they saw the avoiding action as emergency action take at the last moment with safety much reduced below the norm, Category B. The debate ebbed and flowed, and, in the end, the latter view prevailed.

**PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: A conflict in Class G resolved by the Squirrel pilot.

Contributory Factor: The low cloud base and high terrain caused the aircraft to be funnelled together into the same valley feature.

Degree of Risk: B.

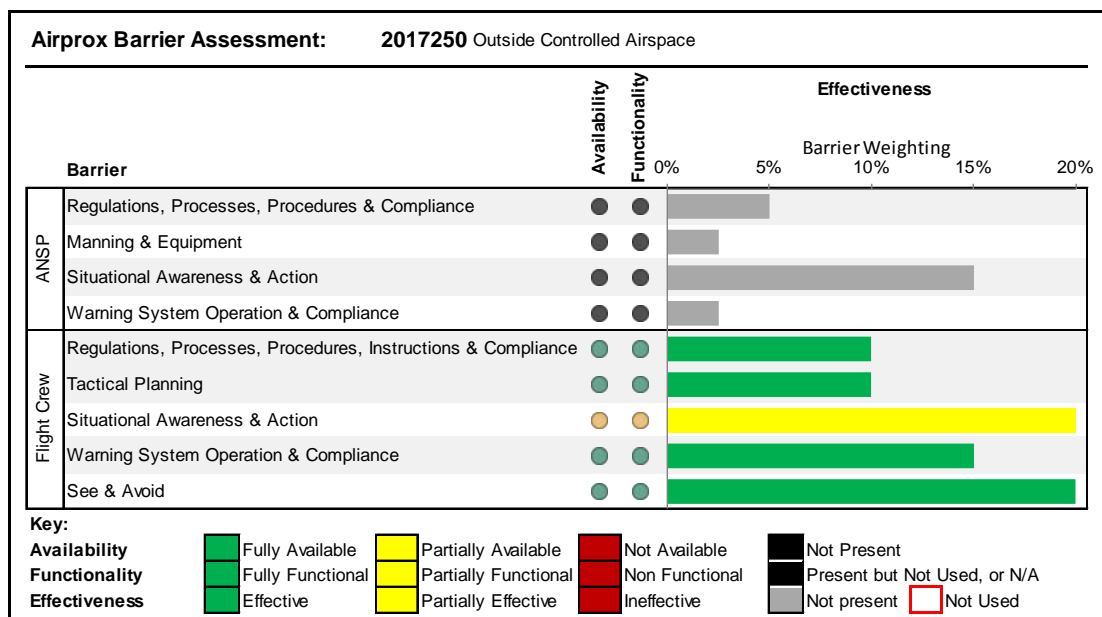
Safety Barrier Assessment<sup>3</sup>

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

**Flight Crew:**

**Situational Awareness and Action** were assessed as **partially effective** because there appeared to have been no situational awareness available to the light-aircraft pilot regarding the Squirrel.

**See and Avoid** were assessed as **effective**, having seen the light-aircraft in good time, the Squirrel pilot was able to take avoiding action when it turned towards him.



<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).