

## AIRPROX REPORT No 2022130

Date: 09 Jul 2022 Time: 1300Z Position: 5142N 00252W Location: IVO Usk

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

| Recorded          | Aircraft 1                     | Aircraft 2                 |
|-------------------|--------------------------------|----------------------------|
| Aircraft          | Astir Glider                   | Bell 206                   |
| Operator          | Civ Gld                        | Civ Helo                   |
| Airspace          | London FIR                     | London FIR                 |
| Class             | G                              | G                          |
| Rules             | VFR                            | VFR                        |
| Service           | None                           | Listening Out <sup>1</sup> |
| Provider          | N/A                            | Bristol                    |
| Altitude/FL       | ~1030ft                        | FL010                      |
| Transponder       | Not fitted                     | A, C, S                    |
| Reported          |                                |                            |
| Colours           | White                          | Red/Black                  |
| Lighting          | None                           | Anti-cols, HISL            |
| Conditions        | VMC                            | VMC                        |
| Visibility        | >10km                          | >10km                      |
| Altitude/FL       | 1200ft                         | 1000ft                     |
| Altimeter         | QFE (1029hPa)                  | QNH (1031hPa)              |
| Heading           | NK                             | 190°                       |
| Speed             | 50kt                           | 100kt                      |
| ACAS/TAS          | FLARM                          | Not fitted                 |
| Alert             | None                           | N/A                        |
| Separation at CPA |                                |                            |
| Reported          | 200ft V/500m H                 | Not seen                   |
| Recorded          | ~400ft V/~0.1NM H <sup>2</sup> |                            |



**THE ASTIR PILOT** reports that they were circling in a weak thermal at 1000-1500ft when the helicopter became visible approaching from their left as they turned. At this stage they assessed that the course of the helicopter would pass clear of their turning circle and they continued the turn. With hindsight, this was a poor decision because a) they should have taken decisive action at that point to ensure separation and b) they were failing to factor in the influence of the thermal which was likely to increase their altitude. They continued to turn and monitor their position and judged that, in fact, the two aircraft were on a more convergent course than they were comfortable with. They then elected to take evasive action to increase separation. They entered a dive with full airbrake and the helicopter passed above.

The pilot assessed the risk of collision as 'Medium'.

**THE BELL 206 PILOT** reports that they were planning to transit beneath Bristol's airspace and called for a Basic Service well before the Severn Estuary. They noted that they viewed the glider site to ascertain whether there was any ground activity and had a good scan for any airborne activity, but nothing was seen. They did not see the glider at any time.

**THE BRISTOL CONTROLLER** reports that the Bell 206 pilot called Bristol to request a service as they transited southbound and west of Bristol, remaining outside CAS. A service was not provided and the pilot elected to maintain a listening watch. The Airprox was not reported at any time by either pilot.

<sup>1</sup> The pilot reported being in receipt of a Basic Service.

<sup>2</sup> Separation calculated using two different data sources and is therefore approximate

## Factual Background

The weather at Bristol was recorded as follows:

METAR EGGD 091250Z AUTO 30006KT 240V020 9999 SCT036 23/14 Q1032=

## Analysis and Investigation

### CAA ATSI

The incident did not show on the NATS radar and the Bell 206 was not receiving a service from Bristol. However CAA ATSI had the following points to make:

- Effectively no service was requested by [Bell 206 C/S] and the agreement was that they would stay on a listening watch with Bristol despite being offered the opportunity to obtain a LARS with Cardiff.
- Bristol MATS Pt2 reminds controllers that they are not a LARS unit and specifies that a UKFIS is only to be provided for pilots of aircraft matching certain criteria – none of which [Bell 206 C/S] met.
- Controllers are to advise pilots to either contact a LARS unit (Cardiff), which the controller did, London FIS, or that a listening squawk is available, again which the controller did.
- No ATS was provided by Bristol. A service was available from Cardiff, but the pilot elected to remain on a listening watch only with Bristol.

### UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The Bell 206 could be seen on the radar, indicating FL010, (radar QNH 1030hPa, 1mb = 27ft, therefore at an altitude of around 1450ft). The Astir could not be seen on the radar, however, the pilot provided a GPS data file and so the diagram at the top of this report was compiled using the two data sources, consequently the separation is approximate. The Airprox occurred at around 1300:30, see Figure 1.

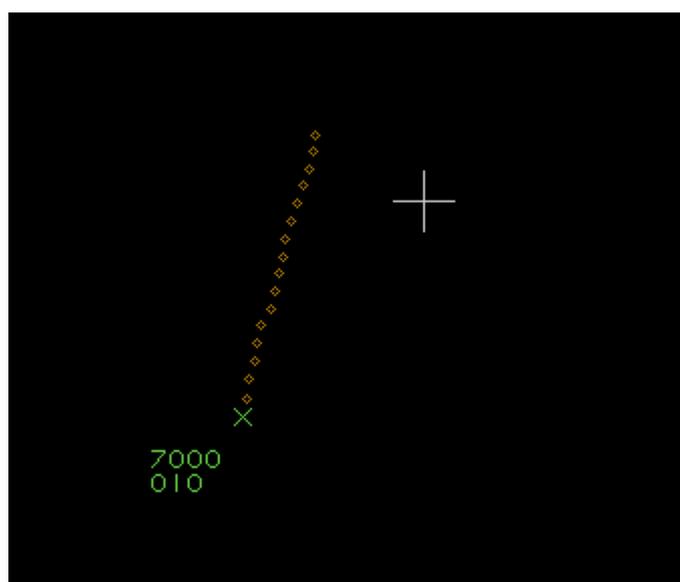


Figure 1 – 1300:30  
Usk marked with the white cross

The Astir and Bell 206 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>3</sup> If the incident geometry is considered as converging then the Bell 206 pilot was required to give way to the glider.<sup>4</sup>

## Comments

### BGA

UK glider launch sites are listed in UK AIP ENR 5.5 and labelled on the CAA 1:500,000 and 1:250,000 charts with a "G" symbol, as shown in the chart segment in Part A. A greater density of gliders may be expected nearby at any time during daylight hours, and at any altitude up to cloud-base.

With no interoperable Electronic Conspicuity between the glider and helicopter, and neither aircraft in receipt of an ATS, see-and-avoid was the only operating MAC safety barrier in this incident. The Astir pilot is to be commended for maintaining a good lookout, and manoeuvring to remain clear of the Bell 206.

## Summary

An Airprox was reported when an Astir glider and a Bell 206 flew into proximity in the vicinity of Usk at 1300Z on Saturday 9<sup>th</sup> July 2022. Both pilots were operating under VFR in VMC, neither were in receipt of an ATS.

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

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS data and a report from the air traffic controller involved. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first considered the actions of the Astir pilot. The EC equipment on the glider could not detect the transponder on the Bell 206 (**CF2**) and there had been no other means of situational awareness available to the glider pilot. Therefore, there had been no situational awareness of the Bell 206 to the Astir pilot prior to them becoming visual (**CF1**). The BGA member described how, as Usk was often used for training glider pilots, it was likely that the pilot was an early hours solo pilot. Certainly, members thought that this might have explained why, having seen the Bell 206 at range, the pilot had not taken early action to break the conflict, but had continued until a point where more severe avoiding action had been required. Furthermore, they questioned the avoiding action, in that the glider pilot had continued to fly towards the helicopter whilst descending, rather than turning away, and again thought that this pointed to a lack of experience. That being said, members agreed that the glider pilot had acted correctly in taking the avoiding action, and had increased the separation between the two aircraft, thus the See and Avoid barrier had been fully effective.

Turning to the Bell 206 pilot, members wondered whether the pilot had adequately planned for this routing. The pilot had seemed unsure of the base of the Bristol CAS, and had questioned the controller a number of times on the RT, and although Bristol ATC had suggested the pilot call Cardiff for a LARS, the pilot elected to listen-out on the Bristol frequency. Although members agreed that the routing just to the west of Usk had not been contributory to this particular Airprox (because the glider was thermalling to the southwest of the glider site) they thought that by routing so close to the site, the Bell 206 pilot had increased their chance of encountering gliders. Whilst the pilot had reported that they had looked for, and not seen, any gliders at Usk, given that gliders were notoriously difficult to spot, and that the pilot had not seen the Astir anyway, members felt that it may have been wiser for the Bell 206 pilot to

<sup>3</sup> (UK) SERA.3205 Proximity.

<sup>4</sup> (UK) SERA.3210 Right-of-way (c)(2) Converging.

have routed further away. Without an ATS and without a CWS, the Bell 206 pilot had had no situational awareness that the Astir was in the vicinity (**CF1**) and they had not seen the glider at all (**CF3**).

Members briefly discussed the role of ATC; Bristol ATC is not a LARS provider and, as such, was not required to provide an ATS. The controller had given the Bell 206 pilot the information they required to transit beneath Bristol CAS and had advised the pilot that if they required an ATS, they should have called Cardiff. Although the Bell 206 pilot had not indicated that they expected that they were receiving any type of service, members wished to highlight to pilots that adopting a frequency monitoring code was not akin to receiving an ATS, and that pilots should not expect to receive any form of Traffic Information whilst listening-out.

When determining the risk, members considered the reports of both pilots and the radar and GPS data. They noted that the glider pilot had seen the helicopter at range and, whilst by their own admission could have taken earlier action, once they had taken avoiding action they had achieved a separation of around 400ft. The Board therefore agreed that whilst safety had been degraded, there had been no risk of collision; Risk Category C.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

|   | 2022130       |  |  |   |
|---|---------------|--|--|---|
| CF  | Factor        | Description                                | ECCAIRS Amplification  | UKAB Amplification  |
| <b>Flight Elements</b>  |               |  |  |   |
| <b>• Situational Awareness of the Conflicting Aircraft and Action</b> |               |  |  |   |
| 1   | Contextual    | • Situational Awareness and Sensory Events | Events involving a flight crew's awareness and perception of situations  | Pilot had no, late, inaccurate or only generic, Situational Awareness |
| <b>• Electronic Warning System Operation and Compliance</b>           |               |  |  |   |
| 2   | Technical     | • ACAS/TCAS System Failure                 | An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations | Incompatible CWS equipment  |
| <b>• See and Avoid</b>  |               |  |  |   |
| 3   | Human Factors | • Monitoring of Other Aircraft             | Events involving flight crew not fully monitoring another aircraft   | Non-sighting or effectively a non-sighting by one or both pilots      |

Degree of Risk: C.

### Safety Barrier Assessment<sup>5</sup>

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

#### **Flight Elements:**

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because neither pilot had any prior situational awareness that the other was in the vicinity.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the EC equipment on the glider could not detect the Bell 206.

<sup>5</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

| <b>Airprox Barrier Assessment: 2022130</b> |  | Outside Controlled Airspace |                    |   |                                   |                 |     |     |
|--|--|-----------------------------|--------------------|---|-----------------------------------|-----------------|-----|-----|
| <b>Barrier</b>                             |  | <b>Provision</b>            | <b>Application</b> | <b>Effectiveness</b><br>Barrier Weighting |                                   |                 |     |     |
|  |  |                             |                    | 0%  | 5%                                | 10%             | 15% | 20% |
| Ground Element                             | Regulations, Processes, Procedures and Compliance          | ○                           | ○                  |   |                                   |                 |     |     |
|  | Manning & Equipment  | ○                           | ○                  |   |                                   |                 |     |     |
|  | Situational Awareness of the Conflicition & Action         | ○                           | ○                  |   |                                   |                 |     |     |
|  | Electronic Warning System Operation and Compliance         | ○                           | ○                  |   |                                   |                 |     |     |
| Flight Element                             | Regulations, Processes, Procedures and Compliance          | ✔                           | ✔                  |   |                                   |                 |     |     |
|  | Tactical Planning and Execution                            | ✔                           | ✔                  |   |                                   |                 |     |     |
|  | Situational Awareness of the Conflicting Aircraft & Action | ✘                           | ✔                  |   |                                   |                 |     |     |
|  | Electronic Warning System Operation and Compliance         | ✘                           | ✔                  |   |                                   |                 |     |     |
|  | See & Avoid  | ✔                           | ✔                  |   |                                   |                 |     |     |
| <b>Key:</b>                                |  | <u>Full</u>                 | <u>Partial</u>     | <u>None</u>                               | <u>Not Present/Not Assessable</u> | <u>Not Used</u> |     |     |
| Provision                                  | ✔  | ⚠                           | ✘                  | ○   |                                   |                 |     |     |
| Application                                | ✔  | ⚠                           | ✘                  | ○   | ○                                 |                 |     |     |
| Effectiveness                              | ■  | ■                           | ■                  | ■   | □                                 |                 |     |     |