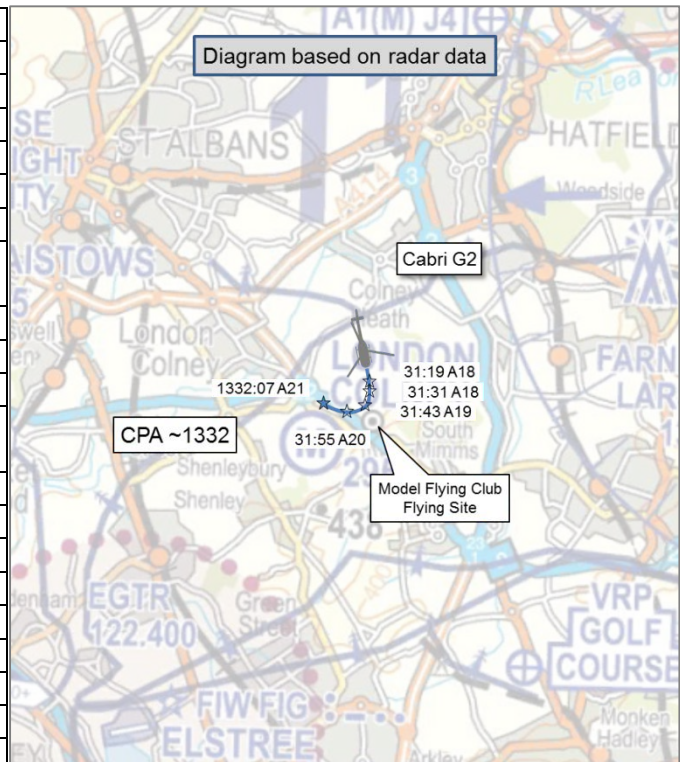


**AIRPROX REPORT No 2015191**

Date: 6 Oct 2015 Time: 1332Z Position: 5143N 00016W Location: 1.5nm ESE London Colney

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

| Recorded    | Aircraft 1         | Aircraft 2                            |
|-------------|--------------------|---------------------------------------|
| Aircraft    | Cabri G2           | Model glider                          |
| Operator    | Civ Trg            | Civ Pte                               |
| Airspace    | London FIR         | London FIR                            |
| Class       | G                  | G                                     |
| Rules       | VFR                |                                       |
| Service     | Basic              |                                       |
| Provider    | Farnborough LARS N |                                       |
| Altitude/FL | 2100ft             |                                       |
| Transponder | A/C/S              |                                       |
| Reported    |                    |                                       |
| Colours     | White              | White upper surface, blue/white under |
| Lighting    | Landing            | None                                  |
| Conditions  | VMC                | VMC                                   |
| Visibility  | >10km              | 'Unlimited'                           |
| Altitude/FL | 2150ft             | 1540ft                                |
| Altimeter   | QNH                | GPS                                   |
| Heading     | 270°               | Circling                              |
| Speed       | 75kt               | 40kt                                  |
| ACAS/TAS    | Not fitted         | Not fitted                            |
| Separation  |                    |                                       |
| Reported    | 25ft V/100m H      | 1000ft V/200m H                       |
| Recorded    | NK                 |                                       |



**THE GUIMBAL CABRI G2 HELICOPTER PILOT** reports that he spotted a white radio-controlled glider, with a wing-span of approximately 7ft he thought, less than 100m from them as he climbed through 2150ft. He turned southwest to avoid and reported the occurrence to the controller at 1328.

He assessed the risk of collision as 'High'.

**THE MODEL-GLIDER OPERATOR** reports flying above a model-flying club site practicing GPS Triangle flying on a 350m triangle. The launch height was set to 400m and airspace overhead the flying site is used by transiting aircraft he reported. The helicopter was seen approaching slightly to the west over 1nm away but because the triangle course is out to the east, and the helicopter was significantly above the height of the glider, the flight continued because no risk was perceived. The model-glider concerned is a competition model with a wingspan of 4m and a weight of 5kg. It is fitted with a sophisticated, real-time, GPS-based telemetry system that transmits position, altitude, speed, glide angle and other parameters back to the pilot. All this data is recorded and the altitude log for the flight made on the 6th October, at around the time specified for the Airprox, is displayed in Figure 1. At no time during the flight did the model get anywhere near the 655m (2150ft) reported and, at 1328 (the time shown on the report), the glider was on a descending flight path, below 400m (1312ft). At 1332, the model was climbed again to around 470m (1541ft).<sup>1</sup> [UKAB Note: the radar recordings show that the helicopter was at its closest to the operating site at 1332.] On the basis of these figures, he did not consider that an Airprox occurred. He considered it understandable that the helicopter pilot may have thought that the model glider was closer than it was; at a span of 4m it is quite a large model and much larger than any other models that were on the field that afternoon.

<sup>1</sup> The elevation of the flying site is 80m (262ft). The data log on the model is set to zero at the ground level of the field, before the flying session begins. At 1332 the model was at an altitude of 470m + 80m elev = 550m (1804ft).

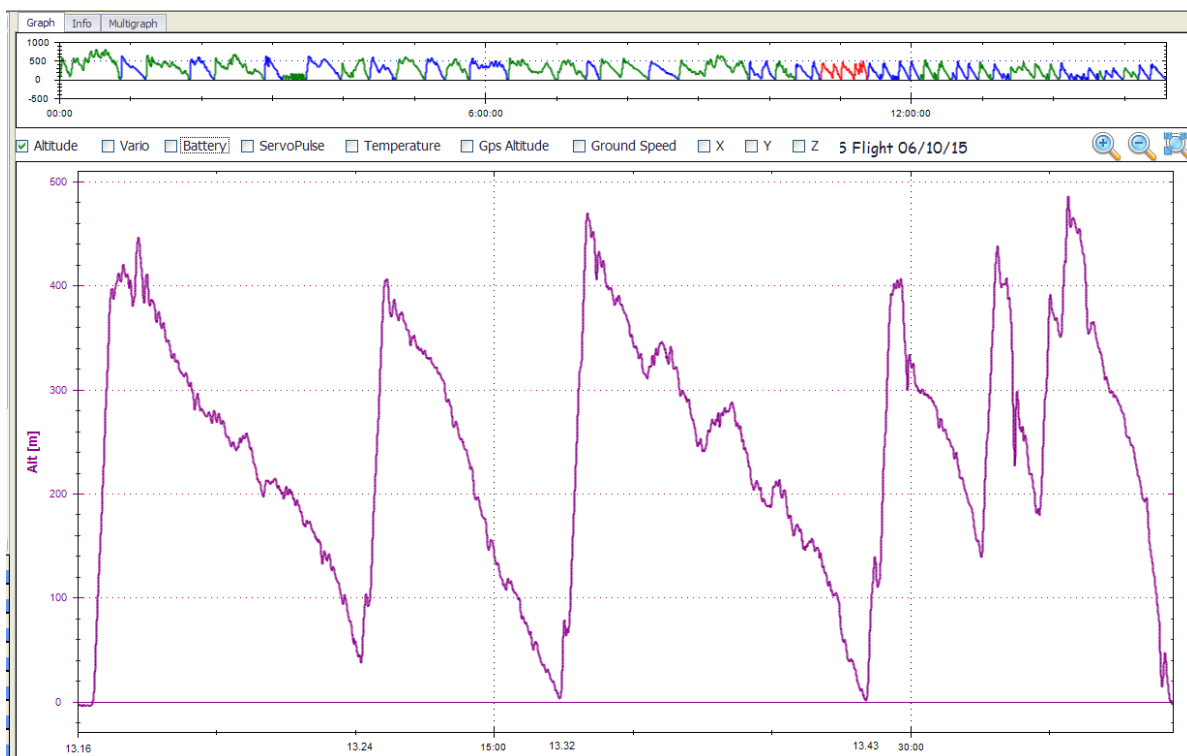


Figure 1. Model-glider altitude log.

He assessed the risk of collision as 'None'.

**THE FARNBOROUGH LARS N CONTROLLER** reports that he was providing the Cabri G2 pilot with a Basic Service. [UKAB Note: the pilot reported in receipt of a Traffic Service]. He reported that he came within 100ft of a radio-controlled glider (with a wingspan of approximately 6ft) 4nm north-northeast of Elstree at around 2000ft. No corresponding radar return was seen. The pilot said he would file a report; the police were notified.

**Factual Background**

The weather at Luton was recorded as follows:

METAR EGGW 061320Z 16009KT 130V200 9999 FEW021 SCT025 18/15 Q0995=



Figure 2. Model Aircraft Flying Club site

## Analysis and Investigation

### UKAB Secretariat

The Air Navigation Order 2009 (as amended), Article 138<sup>2</sup> states:

A person must not recklessly or negligently cause or permit an aircraft to endanger any person or property.

Article 166, paragraphs 2, 3 and 4 state:

(2) The person in charge of a small unmanned aircraft may only fly the aircraft if reasonably satisfied that the flight can safely be made.

(3) The person in charge of a small unmanned aircraft must maintain direct, unaided visual contact with the aircraft sufficient to monitor its flight path in relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions.<sup>1</sup>

(4) The person in charge of a small unmanned aircraft which has a mass of more than 7kg excluding its fuel but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight must not fly the aircraft

(a) in Class A, C, D or E airspace unless the permission of the appropriate air traffic control unit has been obtained;

(b) within an aerodrome traffic zone ...; or

(c) at a height of more than 400 feet above the surface unless it is flying in airspace described in sub-paragraph (a) or (b) and in accordance with the requirements for that airspace.

## Comments

### Model Flying Club

The Model Flying Club commented that only a small proportion of their pilots fly models that are large enough to be flown at altitudes where they can mix with other traffic. These pilots are amongst the most highly skilled, and quite a few of their members have been, or still are, pilots of full-size aircraft. They take every opportunity to remind pilots of their responsibilities under the ANO, and they also encourage (and expect) spectator pilots to call out if they see traffic approaching at altitudes that may demand a change of position or altitude of any of the models. The majority of the pilots fly their models below 300ft, and it is only very low-flying traffic that they need to look out for; they will take this report as a timely reminder. The Committee Review for the Club's AGM in 5 weeks time was currently being prepared and will include a reminder to all pilots to pay particular attention to transiting traffic, whatever height they may operate at. This will be published in their Newsletter in advance of the AGM, it will form part of the discussion at the AGM, and of course will then be included in the AGM minutes which will be circulated as part of the next Newsletter. They will also add a prominent notice on the matter to the club hut Notice Board.

## Summary

An Airprox was reported when a Cabri C2 helicopter and a model-glider flew into proximity at 1332 on 6<sup>th</sup> October 2015. The Cabri pilot was operating under VFR in VMC, in receipt of a Basic Service from Farnborough LARS (N). The Cabri C2 pilot reported sighting the model 100m away, 25ft below. The model glider pilot saw the helicopter approaching his operating site when it was over 1nm away. He judged that there was no conflict between the two flights. His GPS log showed the glider at a height of 470m (1541ft), which equated to an altitude of 550m (1804ft); the site elevation is 80m amsl (262ft). The helicopter pilot reported climbing through an altitude of 2150ft at the time of the Airprox.

<sup>2</sup> Article 253 of the ANO details which Articles apply to small unmanned aircraft. Article 255 defines 'small unmanned aircraft'. The ANO is available to view at <http://www.legislation.gov.uk>.

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

Information available consisted of a report from the pilot of the Cabri G2, the model-glider operator and the Farnborough LARS controller.

The Board first considered the actions of the Cabri G2 pilot. He reported that he had only seen the model-glider when it had been less than 100m away. He had obviously been concerned about the proximity of the model-glider and had turned away as avoiding action. The Board noted that the pilot had reported its wing-span as approximately 7ft although the glider pilot had reported that its wing-span was almost double this at 4m (approximately 13ft). In view of the disparity between these figures the Board wondered whether the Cabri G2 pilot had misjudged the separation between the two aircraft, believing that it was closer than in reality it was.

The Board then considered the actions of the model-glider operator. The Board agreed that he was operating in accordance with the ANO and noted that he had reported seeing the helicopter at just over 1nm away. The model-glider operator reported that the helicopter was significantly above his operating level but several members commented that, in their experience, it is difficult to accurately judge the height separation of aircraft from the ground. Judging from both the reports and comparing the Cabri's radar track, it appeared that the vertical separation was about 350ft at the time of the Airprox. The Board opined that the model-glider operator should have taken more action to have remained clear of the helicopter's flight-path in any case when he first sighted it. Inaction when detecting a conflict is one of the top 3 causes of Airprox, and it is important for all those who fly aircraft or models not to assume that the other party will have seen your aircraft; if they were to manoeuvre unexpectedly when not in sight then what might be considered a comfortable separation could very easily be eroded. Finally, the Board noted that the model launching site is situated below the London TMA where the base is 2500ft. They commented that if model-gliders are operating at these higher altitudes in the vicinity of this site then it is highly likely that they will encounter aircraft that must fly below the TMA; some members wondered whether it was a sensible location to conduct these higher altitude model aircraft flights without a NOTAM being published first.

The Board then considered the cause of the Airprox and agreed that, in not realising the actual size of the glider, the Cabri G2 pilot had probably misjudged the separation between his helicopter and the model aircraft. Consequently, rather than being the risk-bearing Airprox that he thought, it was decided that the cause of the Airprox was simply that the model aircraft had been flown close enough to cause the Cabri pilot concern. It was estimated, based on the reports from both pilots, that the minimum vertical separation at the time of the Airprox was approximately 350ft. As a result, the Board decided that safety had not been compromised, and they agreed that the Airprox should be categorised as risk Category E, normal safety parameters had pertained.

It has become apparent since the Airprox was reported that Elstree were not aware of the operation of the Model Flying Club at London Colney. At the Elstree AFISO's suggestion, the club will be sending details of their operation to Elstree Tower and this information will be placed on the notice board at the base of the Tower building so that pilots may acquaint themselves before flight.

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

Cause: The model aircraft was flown close enough to cause the Cabri pilot concern.

Degree of Risk: E.