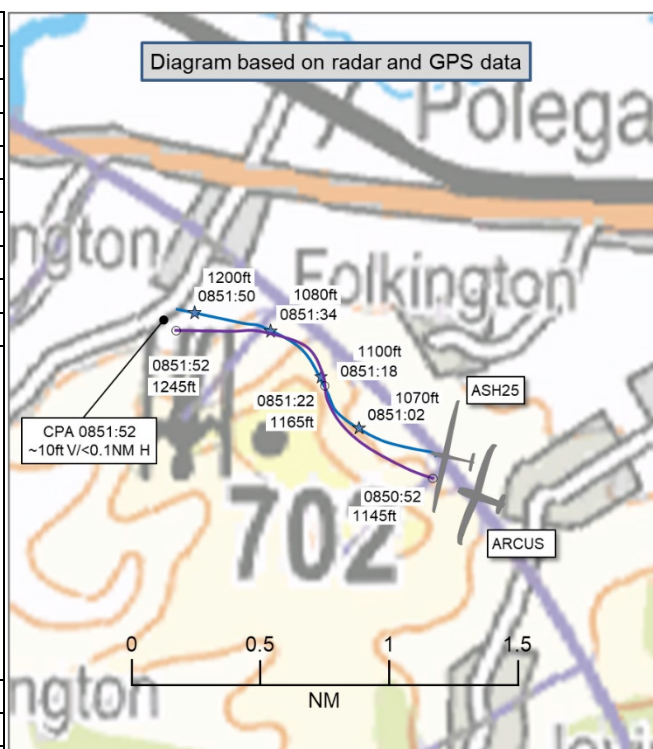


**AIRPROX REPORT No 2025074**

Date: 04 May 2025 Time: 0852Z Position: 5048N 00011E Location: IVO Polegate

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

| Recorded          | Aircraft 1       | Aircraft 2   |
|-------------------|------------------|--------------|
| Aircraft          | ASH25            | Arcus        |
| Operator          | Civ Gld          | Civ Gld      |
| Airspace          | London FIR       | London FIR   |
| Class             | G                | G            |
| Rules             | VFR              | Unknown      |
| Service           | None             | Unknown      |
| Altitude/FL       | ~1235ft          | ~1245ft      |
| Transponder       | A, C, S          | None         |
| Reported          |                  |              |
| Colours           | White            | Not reported |
| Lighting          | Nil              |              |
| Conditions        | VMC              |              |
| Visibility        | >10km            |              |
| Altitude/FL       | 1214ft           |              |
| Altimeter         | QNH (1019hPa)    |              |
| Heading           | 240°             |              |
| Speed             | 60kt             |              |
| ACAS/TAS          | FLARM            |              |
| Alert             | Information      |              |
| Separation at CPA |                  |              |
| Reported          | 30ft V/10m H     | Not reported |
| Recorded          | ~10ft V/<0.1NM H |              |



**THE ASH25 PILOT** reports that they had been on a long cross-country task, part of which was soaring the South Downs ridge. They had recently rounded the furthest turning point at Eastbourne and were retracing their steps along the ridge, taking thermal climbs when they were available as parts of the ridge were being suppressed by sinking air. They were aware of quite a few other gliders using the ridge as well, including the one they came close to, which they had shared several thermals and runs with, only with good separation. It had been a bit of a surprise when the other glider had passed very close on their left hand side as they had thought that they had been keeping a good lookout, especially before initiating the turn. The ASH25 is a large span (28m) glider with a correspondingly slower roll rate and lower manoeuvrability so, once established in a turn with thermal flap deployed and speed reduced, the options for a quick change of course are limited. They also had ADS-B in/out fitted and were squawking 7000.

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

Unfortunately, **THE ARCUS PILOT** declined to contribute to the review of this case.

**Factual Background**

The weather at Shoreham airport was recorded as follows:

METAR EGKA 040850Z 36012KT 9999 SCT032 12/06 Q1017=

**Analysis and Investigation****UKAB Secretariat**

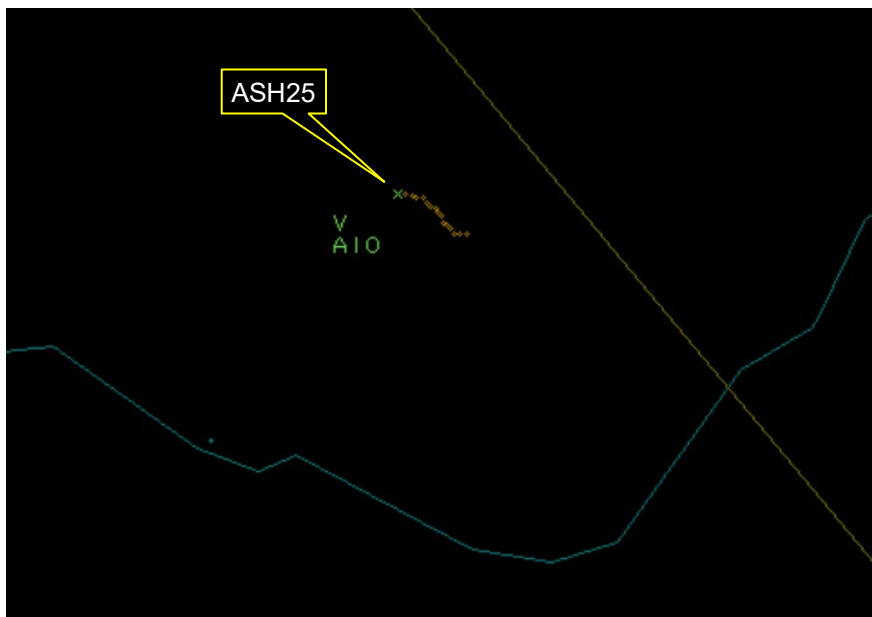


Figure 1: At CPA – 0851:52. The Arcus did not show on radar.

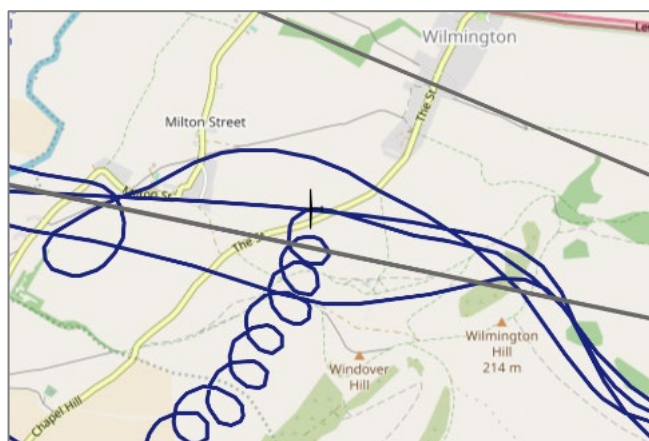


Figure 2: ASH25 at CPA from the pilot-provided IGC file.

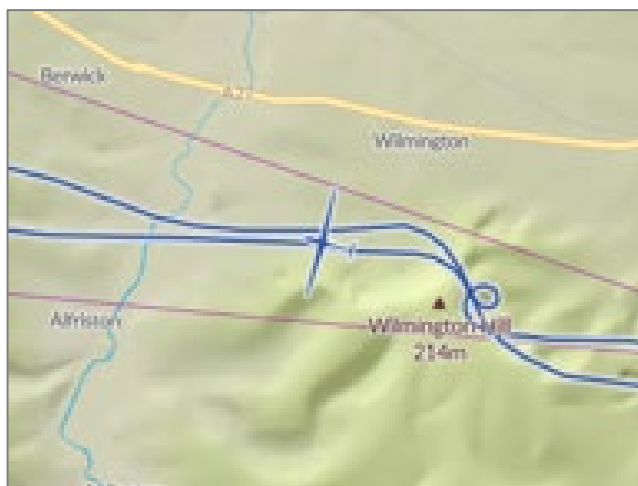


Figure 3: The Arcus at CPA. Image taken from an open source

The ASH25 was tracked by radar and identified through Mode S data and detail confirmed against the pilot-provided IGC file. The Arcus did not show on radar or any of the ADS-B and MLAT tracking systems available to the Board, but a track file was retrieved from an open-source website. The diagram at page 1 was constructed utilising a combination of radar and GPS data with available altitudes corrected to a common reference to allow comparison.

The ASH25 and Arcus 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 overtaking, a sailplane overtaking another sailplane may alter its course to the right or to the left.<sup>2</sup>

## Comments

### BGA

This incident occurred at the eastern end of the South Downs ridge between Butser Hill (10NM north of Portsmouth) and the outskirts of Eastbourne, 48NM to the east. Given northerly winds of sufficient strength, hill-soaring gliders fly significant distances along this ridge using the narrow band of rising air immediately upwind of it to maintain height.

Although regulations would normally prohibit en route flight closer than 500ft to any person, vessel, vehicle or structure, a specific exemption<sup>3</sup> permits “a glider conducting day VFR flight elsewhere than over the congested areas of cities, towns or settlements or over an open-air assembly of persons, to be flown below 500ft above the ground or water, below 500ft above the highest obstacle within a radius of 150m from the aircraft or closer than 500ft to any person, vessel, vehicle or structure if it is hill-soaring.”

In order to safely share the restricted volume of airspace that contains the strongest ridge lift, pilots at BGA gliding clubs follow a nine-point hill soaring protocol:<sup>4</sup>

1. Where reasonably possible, remain 500ft clear of people and property.
2. Do not fly lower than necessary to utilise the soaring conditions.
3. Never fly close to, towards or directly over any person on the ground.
4. Lookout is always paramount.
5. Remain clear of other aircraft. The glider with the ridge on the right has priority.
6. Overtake with caution, bearing in mind the other glider could suddenly change direction.
7. Make all turns away from the ridge.
8. Be aware that when flying with a significant drift angle, FLARM direction indications can be misleading.
9. Always have an available safe landing option.

For approximately an hour prior to this incident, both gliders had been flying east along the South Downs ridge at similar speeds and heights, with the Arcus usually about 1NM behind the ASH25. Just before reaching Eastbourne, both gliders turned back to fly west along the same ridge, with the Arcus now closing up behind the ASH25.

Five seconds before CPA, at 0851:47, the ASH25 was flying at a ground speed of 72kt on a track of 285°, 570ft above the top of the adjacent ridge, when it encountered a strong thermal. With a 1.5NM gap in the ridge immediately ahead, whose crossing could incur significant height loss, the ASH25 pilot had apparently decided to use that thermal to gain extra height, and had begun rolling the glider left, towards the ridge, to begin a continuous thermalling turn. At that moment the Arcus was 100m astern of the ASH25 at the same level and in the latter's 7 o'clock position, flying at a similar speed on a gently diverging track of 270°. As the ASH25 turned across the Arcus' path, the latter's pilot had had little time to react. GNSS data indicate a minimum horizontal separation of 30m between the two gliders at CPA.

In the light of Point 7 in the BGA soaring protocol (“Make all turns away from the ridge”), the ASH25 pilot's decision to turn towards the ridge may have surprised the Arcus pilot, who may in fact have positioned themselves to the left of the ASH on the assumption that any turns it made would be to the right. The BGA offers no guidance on the minimum height above a ridge top at which it is safe and appropriate for a glider to turn towards it. However, some experienced ridge-soaring pilots

<sup>1</sup> (UK) SERA.3205 Proximity.

<sup>2</sup> (UK) SERA.3210 Right-of-way (c)(3)(i) Overtaking.

<sup>3</sup> (ORS4 No 1496 paragraph 9, [ORS4 No.1496](#)).

<sup>4</sup> [BGA Soaring Protocol](#).

consider 500ft above a ridge's top to be the minimum height at which it's acceptable for a hill-soaring glider to turn towards it; such a climbing turn should ensure enough separation from any person, vessel, vehicle or structure to avoid violating [the 500ft rule], even if ORS4 No 1496 paragraph 9 is not considered to apply (because arguably a thermalling glider might not be considered to be hill-soaring).

Be that as it may, self-preservation dictates that a pilot should never fly behind another aircraft in a position where its unexpected turn, in either direction, would imperil both aircraft.

## Summary

An Airprox was reported when an ASH25 and an Arcus flew into proximity at Polegate at 0852Z on Sunday 4<sup>th</sup> May 2025. The ASH25 pilot was operating under VFR in VMC and had not been in receipt of a Flight Information Service. The Arcus pilot declined to provide a report.

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

Information available consisted of a report from the ASH25 pilot, radar photographs/video recordings and GPS data. 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 ASH25 pilot. Both gliders had been on similar cross-country flights covering significant distance and time. As they approached the same eastern-most turning point, the Arcus had been approximately 1km behind the ASH25 and, as is the nature of glider ridge flying, both had been following terrain and occasionally using thermal lift to continue their flights. At that turning point, the Arcus had turned slightly shorter than the ASH25, bringing them closer together as they then proceeded west. As the two aircraft had approached the point of the reported Airprox, the Arcus had been in the ASH25 pilot's 5-to-7 o'clock position and obscured from their view (**CF7**). Although the ASH25 pilot had carried EC equipment commonly used in gliders, they had received only information signals (**CF4**) which, the Board agreed, had allowed only generic situational awareness of the positioning of the Arcus (**CF3**).

In reviewing the role played by the Arcus pilot, Members expressed some frustration that they had declined to contribute to the process, noting that this does not enable a comprehensive review of the event. The Board wished to remind all who may find themselves involved in an Airprox that the purpose of this process is not to apportion blame, but instead to allow learning for all by examining the circumstances of the event, noting the effect of the known barriers to an Airprox, and identifying what contributing factors had existed.

As the Arcus had progressed west in the period immediately before CPA, it had been slightly behind the ASH25 and at a similar altitude, following the same line of rising air generated by the effect of wind on the terrain. Members suggested that the Arcus pilot had probably assumed that if the ASH25 were to change heading significantly, it would have done so by initially turning right, away from the rising ground on its left, as recommended by the BGA's 'Soaring Protocol'. Although the ASH25 pilot had not had visual contact with the Arcus, nor awareness of its exact position, members further suggested that the ASH25 pilot could reasonably have suspected that the Arcus might have been close behind, and that its pilot would indeed assume that any turns by the ASH25 would have been to the right. However, the BGA Soaring Protocol does not specify the range of terrain clearances for which pilots should follow this recommendation, and the ASH25 pilot may have considered that their terrain clearance had been sufficient for this clause of the Soaring Protocol not to apply. Differing interpretations of the Protocol may therefore have contributed to both the ASH25 pilot's decision to turn left and the Arcus pilot's decision to position themselves slightly on the ASH25's left and behind. Members agreed that under other circumstances these would have been fair and rational justifications for both pilots' decisions, but nevertheless felt that the overtake manoeuvre performed by the Arcus pilot had been very close to the ASH25 (**CF1**, **CF2**). This had allowed little scope for the left turn that the ASH25 pilot had subsequently made which, as the pilot of the ASH25 had effectively not sighted the Arcus (**CF6**), had brought the Arcus into conflict (**CF5**).

The discussion concluded and members considered the risk of collision. They felt that the safety of the aircraft had not been assured, that safety margins had been reduced much below the norm and that the separation between the aircraft had been reduced to the bare minimum. Members acknowledged the BGA Soaring Protocol guidance regarding turns toward and away from a ridge line, but noted the potential for differing interpretations as to the range of terrain separations over which it applies. That aspect, together with a tight overtake by the Arcus pilot, had magnified the risk in this case. Members agreed that there had been a serious risk of collision (**CF8**) and assigned Risk Category A to this event.

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

### **Contributory Factors:**

|    | 2025074                                                               |                                            |                                                                                                                       |                                                                       |
|----|-----------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| CF | Factor                                                                | Description                                | ECCAIRS Amplification                                                                                                 | UKAB Amplification                                                    |
|    | <b>Flight Elements</b>                                                |                                            |                                                                                                                       |                                                                       |
|    | <b>• Regulations, Processes, Procedures and Compliance</b>            |                                            |                                                                                                                       |                                                                       |
| 1  | Human Factors                                                         | • Use of policy/Procedures                 | Events involving the use of the relevant policy or procedures by flight crew                                          | Regulations and/or procedures not complied with                       |
|    | <b>• Tactical Planning and Execution</b>                              |                                            |                                                                                                                       |                                                                       |
| 2  | Human Factors                                                         | • Action Performed Incorrectly             | Events involving flight crew performing the selected action incorrectly                                               | Incorrect or ineffective execution                                    |
|    | <b>• Situational Awareness of the Conflicting Aircraft and Action</b> |                                            |                                                                                                                       |                                                                       |
| 3  | 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>           |                                            |                                                                                                                       |                                                                       |
| 4  | Contextual                                                            | • Other warning system operation           | An event involving a genuine warning from an airborne system other than TCAS.                                         |                                                                       |
|    | <b>• See and Avoid</b>                                                |                                            |                                                                                                                       |                                                                       |
| 5  | Contextual                                                            | • Loss of Separation                       | An event involving a loss of separation between aircraft                                                              | Pilot flew into conflict                                              |
| 6  | 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      |
| 7  | Contextual                                                            | • Visual Impairment                        | Events involving impairment due to an inability to see properly                                                       | One or both aircraft were obscured from the other                     |
|    | <b>• Outcome Events</b>                                               |                                            |                                                                                                                       |                                                                       |
| 8  | Contextual                                                            | • Near Airborne Collision with Aircraft    | An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles |                                                                       |

**Degree of Risk:** A.

### **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:**

**Regulations, Processes, Procedures and Compliance** were assessed as **partially effective** because the Arcus pilot had made their overtake manoeuvre too close to the ASH25, bringing themselves into close proximity with the ASH25 as it had turned.

<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](#).

**Tactical Planning and Execution** was assessed as **ineffective** because the ASH25 pilot had turned left into the ridge where the Arcus pilot could reasonably have expected that turn to have been to the right, and the Arcus pilot had made their overtaking manoeuvre too close to the ASH25.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **partially effective** because the ASH25 pilot had only generic situational awareness of the positioning of the Arcus.

**See and Avoid** were assessed as **ineffective** because the Arcus had been obscured from the view of the ASH25 pilot which had led to an effective non-sighting of the Arcus at CPA, and the Arcus pilot, having made their overtaking approach too close to the ASH25, had flown into conflict with the ASH25.

| Airprox Barrier Assessment: 2025074 |                                                            | Outside Controlled Airspace |             |               |                            |     |          |     |
|-------------------------------------|------------------------------------------------------------|-----------------------------|-------------|---------------|----------------------------|-----|----------|-----|
|                                     |                                                            | Provision                   | Application | Effectiveness |                            |     |          |     |
| Barrier                             |                                                            |                             |             | 0%            | 5%                         | 10% | 15%      | 20% |
| Ground Element                      | Regulations, Processes, Procedures and Compliance          | ●                           | ●           |               |                            |     |          |     |
|                                     | Manning & Equipment                                        | ●                           | ●           |               |                            |     |          |     |
|                                     | Situational Awareness of the Conflicting Aircraft & 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>                         |                                                            | Full                        | Partial     | None          | Not Present/Not Assessable |     | Not Used |     |
| Provision                           |                                                            | ✓                           | !           | ✗             | ●                          |     |          |     |
| Application                         |                                                            | ✓                           | !           | ✗             | ●                          |     | ○        |     |
| Effectiveness                       |                                                            | ■                           | ■           | ■             | ■                          |     | □        |     |