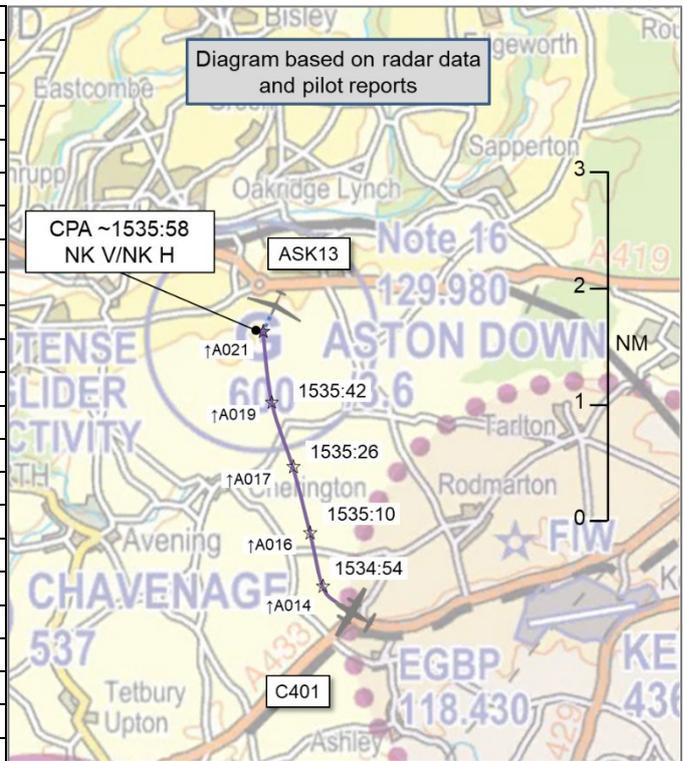


**AIRPROX REPORT No 2022173**

Date: 30 Jul 2022 Time: ~1536Z Position: 5142N 00208W Location: Aston Down

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASK13	C401
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Kemble Info.
Altitude/FL	NK	2100ft
Transponder	Not fitted	A, C, S
Reported		
Colours	Red, White	White, Blue, Red
Lighting	None	Anti-col, Nav
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2000ft	2500ft
Altimeter	QFE (NK hPa)	QNH (NK hPa)
Heading	210°	007°
Speed	50-60kt	150kt
ACAS/TAS	Not fitted	TAS
Alert	N/A	Information <sup>1</sup>
Separation at CPA		
Reported	30ft V/100m H	NR V/NR H
Recorded	NK V/NK H	



**THE ASK13 PILOT** reports that they launched with a student, by winch, from RW21 and released at approximately 1400ft above Aston Down. They then spotted the twin heading straight towards them slightly from the left. They banked the glider to the right to avoid them and they flew past to their left, [with the other aircraft] now very slightly higher. They watched [the C401] go by and they then turned back left to watch its course, and they could see it was clearly climbing in a straight line in a direction slightly west of north, straight over Aston Down, which is clearly marked on the chart [with a] 3.6, meaning that winch launching may take place to 3600ft amsl. They don't think [the C401 pilot] saw them as there was no clear avoiding action. Observers on the ground at Aston Down can confirm that the twin flew overhead the airfield well below 3600ft amsl. A phone call was made immediately to Kemble air traffic to advise them of the incursion.

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

**THE C401 PILOT** reports that they had just departed Kemble and, for noise abatement reasons, they were following the recommended track to depart Kemble and were climbing to their planned cruise altitude of approximately 4000ft, but were VFR so there was no altitude assigned. As they came close to the Aston Down gliding site during departure, they were keeping a good lookout. They were in Class G airspace. It has been some weeks since the incident but they recall seeing the glider and taking suitable avoiding action. At the time, as noted above, they were in Class G airspace and using 'see and avoid' technique for separation purposes. They had [become visual with] the glider in what they judged to be satisfactory time and took appropriate avoiding action. Given that avoiding action, they did not consider there to be a serious risk of collision and therefore did not report the incident. In retrospect it was perhaps slightly unwise to track so close to a designated gliding site and in future they would depart further to the west. However, that would run the risk of bringing an aircraft in closer contact with Nymphsfield (also an active gliding site) and there is also Restricted Area EGR105 slightly to the south

<sup>1</sup> The ASK13 had not been carrying a transponder and so the 'information' likely related to a different aircraft in the vicinity.

of the climb-out. There is also Chavenage Airfield in close proximity. It would seem that the desired noise abatement route for aircraft departing to the west and north does run the risk of putting an aircraft at risk of coming close to gliders given the relative locations of Kemble, EGR105, Aston Down and Nympsfield. However, they were keeping an active lookout as shown by the fact that the glider was spotted and suitable avoiding action taken.

**THE C401 PASSENGER** reports that they noticed, after take-off and turn, a glider appear in front of them. The Pilot in Command was using SkyDemon and the aircraft is fitted with TAS. The glider was not really close but action was necessary to turn out of its path before it got closer. They said to [the pilot that] there's a glider on the nose below and [the pilot] turned right out the way and climbed. They noticed when they looked at the SkyDemon [that the pilot] had gone through the gliding zone, even though they were climbing above it and [the pilot] mentioned that they didn't realise they were that close to the gliding site.

The passenger assessed the risk of collision as 'Low'.

**THE KEMBLE AFISO** reports that on leaving the ATZ the [C401 pilot] was offered a Basic Service with a 1013hPa regional pressure setting. Kemble AFISO operating procedures require that an AFISO will mention to an aircraft that Aston Down is active when a right-hand turn out is requested, on this occasion however, a right-hand turn was not asked for.

## Factual Background

The weather at Gloucestershire was recorded as follows:

```
METAR EGBJ 301520Z 22009KT 190V250 9999 -SHRA FEW034 BKN044 22/16 Q1017
METAR EGBJ 301550Z 23007KT 200V260 9999 FEW034 BKN044 20/17 Q1017
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## Analysis and Investigation

### UKAB Secretariat

An analysis of the NATS radar replay was undertaken and only the C401 was detected and could be seen departing Kemble and climbing in a north-northwesterly direction. The ASK13 was not detected by the radar and unfortunately no GPS data was available detailing their departure from Aston Down.

The Kemble UK AIP<sup>2</sup> entry states that for noise abatement pilots should:

- a) *Pilots should avoid overflying the villages and hamlets of Kemble, Kemble Wick, Rodmarton, Culkerton, Ashley and Chelworth, wherever possible.*
- b) *Contact Kemble Operations for detailed noise abatement procedures.*

The UKAB Secretariat contacted Kemble operations for further details regarding their noise abatement procedures, as advised in the Kemble AIP entry. The relevant sections of the information received have been reproduced below:

*Runway 26 - Left Hand. Departures:  
GA aircraft are requested not to climb out straight ahead after departure.*

*General:  
Avoid all local villages as much as possible, especially on final approach.*

*Keep a good look out for:  
Aston Down: Gliders up to 3000ft 3NM to the north west of Kemble.*

<sup>2</sup> UK IAIP. Part3 – Aerodromes. AD2. EGBP Kemble AD 2.21 Noise abatement procedures.

Kemble also kindly provided recordings of both their RT and of the telephone call from Aston Down.

From the RT recording, the C401 pilot agreed a Basic Service with the Kemble AFISO on leaving the ATZ at 1534:34 and left the frequency at approximately 1537. There was no report of an Airprox made on the frequency.

The telephone call from a representative from Aston Down was received at approximately 1537 and the conversation is summarised below:

Aston Down asked whether a twin had just departed.

Kemble confirmed that they had.

Aston Down requested that the pilot of the twin be advised that they had flown through the overhead just below the height of a glider.

Kemble advised that they would pass that on.

Aston Down advised that they were just about to launch a glider.

Kemble asked if the cable was in use at the time.

Aston Down advised that it was.

Kemble asked if it was vertical or on the ground.

Aston Down advised that it was on the ground being prepared for hook up.

Kemble acknowledged.

Aston Down commented that had the twin been 5min later they could have contacted the cable, they added the twin passed 200-300m away from a glider at about the same height or slightly below.

The ASK13 and C401 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 C401 pilot was required to give way to the ASK13.<sup>4</sup>

## Comments

### AOPA

Flying in Class G airspace uses see and avoid for aircraft separation and it is therefore incumbent for pilots to see and avoid. GASCo provides useful information about avoiding aviation-related sites and it is important to have a TEM briefing before take-off and include threats for the departure and how they are going to be mitigated; in this case noise, abatement and several gliding sites affected the departure. An altitude wouldn't have been assigned as an AFISO cannot issue altitude restrictions, and avoidance of a launching gliding site is a major mitigation of contact with a cable and a MAC. It must also be remembered that gliders don't stay within the 'blue circle' shown on charts so effective lookout is an essential mitigation. If the intention is to fly close to a gliding site a suitable radio call would improve everyone's situational awareness.

### 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 below. Where winch launching is used, the maximum winch launch altitude is listed in the AIP and marked on the chart; this is 3600ft AMSL at Aston Down, as indicated by the black arrow, Figure 1.

A glider being winch-launched has an initial climb rate in excess of 4000ft/min, and (under the right conditions) takes about a minute to climb to 2500ft AGL. Aircraft overflying a winch site below its maximum winch altitude will have little warning of a launching glider that suddenly appears at or above their level, possibly after climbing towards them unsighted, from below.

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

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

Winch-launch ground crew will not initiate a launch if they see a powered aircraft about to overfly the active runway. However, an aircraft flying towards the site at 150kt, and which will arrive overhead at the same time as the winch launch finishes, could still be over 2 NM away at the moment the launch starts, and hence out of sight of the ground crew.

Flying below a winch-launching glider also risks encountering high tensile strength steel cable (as pictured) connecting the glider to the winch on the ground.

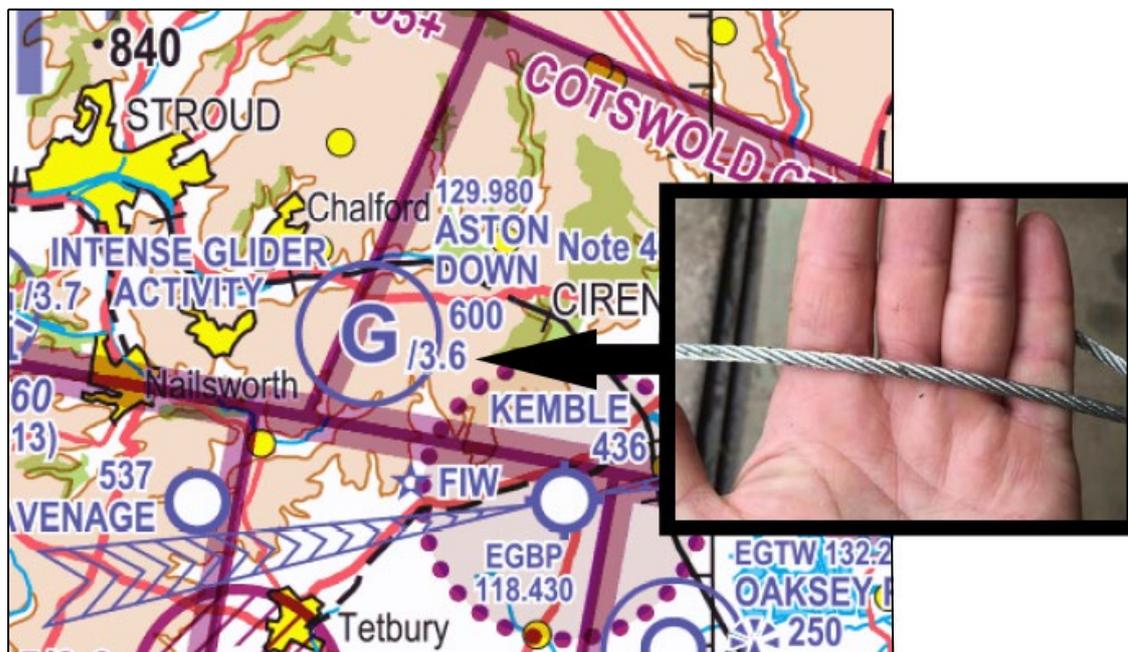


Figure 1.

## Summary

An Airprox was reported when an ASK13 and a C401 flew into proximity at Aston Down at approximately 1536Z on Saturday 30<sup>th</sup> July 2022. Both pilots were operating under VFR in VMC, the C401 pilot in receipt of a Basic Service from Kemble Information and the ASK13 pilot not 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 and a report from the AFISO 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 ASK13 pilot and members agreed that, although the pilot had released from the winch wire following launch, they had still been in the critical take-off phase of flight, and a gliding pilot member stated that the aircraft could still be carrying the momentum from the launch and climbing quickly. The Board appreciated that workload can be high for glider pilots immediately after launching and that the ASK13 pilot would have had little opportunity to build their mental model regarding other aircraft in the area, with members agreeing that the pilot had not had any prior awareness of the presence of the C401 (**CF6**). The Board noted that the ASK13 pilot had not been carrying any EC equipment and members agreed that, although it is for individual airspace users to decide what their requirements are regarding EC equipment, the Board would encourage pilots to utilise every opportunity to enhance their situational awareness. The Board wished to highlight to pilots that additional funding has been made available for Electronic Conspicuity devices through the CAA's Electronic Conspicuity Rebate Scheme, which has been extended until 31st March 2023.<sup>5</sup> Members

<sup>5</sup> [Electronic conspicuity devices | Civil Aviation Authority \(caa.co.uk\)](https://www.caa.co.uk/News/News-Details/2023/03/01/2023-03-01-01)

went on to agree that although the ASK13 pilot had become visual with the C401, this had been at a later than optimum stage (**CF8**).

Next, members discussed the actions of the C401 pilot, agreeing that they would have had a generic awareness of the likely presence of gliders (**CF6**) from their pre-flight planning, as Aston Down is marked on aeronautical charts. The Board agreed that, although regulation does allow for flight through notified gliding sites, planning to do so is not recommended (**CF3, CF4**), and this had resulted in the C401 pilot flying in such proximity to the ASK13 so as to cause its pilot concern (**CF5**). Members discussed what opportunities there had been for the C401 pilot to have acquired more information regarding the activity at Aston Down. Cotswold Airport procedures require the Kemble AFISO to mention notified activity at Aston Down to pilots who request a right turn-out from RW26, however, the C401 pilot had not communicated that it had been their intention to turn right after departure (**CF2**), and so no mention of Aston Down had been made. Members agreed that, with the two airfields in such proximity, every effort should be made to provide pilots operating at Kemble with information of activity at Aston Down, therefore the Board resolved to recommend that: *Aston Down and Cotswold Airport work together to establish a mechanism to facilitate the notification of Aston Down's activity to pilots operating to, or from, Cotswold Airport*. Members next discussed the EC equipment available to the C401 pilot and had been encouraged that a system had been in use, however, as the ASK13 had not been equipped with a transponder, the C401's equipment had not been able to detect it and had therefore been incompatible (**CF7**). The Board went on to discuss at which point the C401 pilot had become visual with the ASK13, noting that the C401 pilot had felt that they had visually acquired the ASK13 in sufficient time, however, given that the glider pilot had still been in the latter stages of their launch, members agreed that safety would have been enhanced by an earlier visual acquisition by the C401 pilot (**CF8**).

Before moving on, the Board held a discussion regarding the possible consequences of an aircraft encountering a winch cable. Members agreed that unannounced overflight of an airfield that is actively involved in winch-launching aircraft carries a high chance of encountering a winch cable, and that the consequences of such an encounter would be severe and would affect not only the aircraft involved but could also impact persons and property on the ground in the locality.

Members then examined the involvement of the Kemble AFISO, again noting that their procedures require that if a pilot notifies them of a right turn-out after departure from RW26 they are required to mention activity at Aston Down. As the C401 pilot had not communicated their intention to turn right, the Board agreed that the Kemble AFISO had followed their procedures, however, members felt that there had been an opportunity for the C401 pilot to have been informed of the Aston Down activity. Upon leaving the ATZ the AFISO had agreed the provision of a Basic Service to the C401 pilot, under which they had not been required to monitor the flight (**CF1**).

Finally, in assessing the risk of collision, the Board agreed that although the C401 pilot had had generic awareness of the likelihood of glider activity at Aston Down, they had continued their routing over the field, and that the EC equipment they had been carrying had been incompatible with that of the ASK13. Members commented that because of this, lookout had been the remaining barrier for collision avoidance and, whilst the pilots of both aircraft had become visual with the other, which had reduced the risk of collision, it had not removed it entirely as it had been at a later than optimum time. Members agreed that, in this case, safety had not been assured and that there had been a risk of collision (**CF9**). Accordingly, the Board assigned a Risk Category B to this Airprox.

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

### Contributory Factors:

2022173				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	<b>Ground Elements</b>			
	• Situational Awareness and Action			

1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
<b>Flight Elements</b>				
<b>• Tactical Planning and Execution</b>				
2	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
3	Human Factors	• Aircraft Navigation	An event involving navigation of the aircraft.	Flew through promulgated and active airspace, e.g. Glider Site
4	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
5	Human Factors	• Lack of Action	Events involving flight crew not taking any action at all when they should have done so	Pilot flew close enough to cause concern despite Situational Awareness
6	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>				
7	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>				
8	Human Factors	• Identification/Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
<b>• Outcome Events</b>				
9	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: B

Recommendation: Aston Down and Cotswold Airport work together to establish a mechanism to facilitate the notification of Aston Down's activity to pilots operating to, or from, Cotswold Airport.

### Safety Barrier Assessment<sup>6</sup>

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

#### **Ground Elements:**

**Situational Awareness of the Confliction and Action** were assessed as **not used** because, when delivering a Basic Service, the AFISO had no ability to monitor the flight, nor are they required to.

#### **Flight Elements:**

**Tactical Planning and Execution** was assessed as **partially effective** because the C401 pilot had not communicated that they had intended to turn to the right after departure and they had then flown through a notified gliding site.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the C401 pilot had only had a generic awareness regarding the possibility of gliders

<sup>6</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

operating in the area, and the ASK13 pilot had not had any awareness of the C401 prior to sighting it.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because although the C401 had been equipped with a TAS, it had been unable to detect the ASK13 as it had not been equipped with any compatible EC equipment.

**See and Avoid** were assessed as **partially effective** because, although the pilots of both aircraft had become visual with the other, this had been at a later than optimum stage.

Airprox Barrier Assessment: 2022173		Outside Controlled Airspace		Effectiveness				
Barrier		Provision	Application	Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar: 0% to 5%]				
	Manning & Equipment	✓	✓	[Green bar: 0% to 2.5%]				
	Situational Awareness of the Conflication & Action	✗	○	[Red bar: 0% to 15%]				
	Electronic Warning System Operation and Compliance	●	●	[Grey bar: 0% to 2.5%]				
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar: 0% to 10%]				
	Tactical Planning and Execution	✓	!	[Yellow bar: 0% to 10%]				
	Situational Awareness of the Conflicting Aircraft & Action	!	✗	[Red bar: 0% to 20%]				
	Electronic Warning System Operation and Compliance	✗	✓	[Red bar: 0% to 15%]				
	See & Avoid	!	!	[Yellow bar: 0% to 20%]				
<b>Key:</b>		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	!	✗	●	○			
Application	✓	!	✗	●	○			
Effectiveness	■	■	■	■	□			