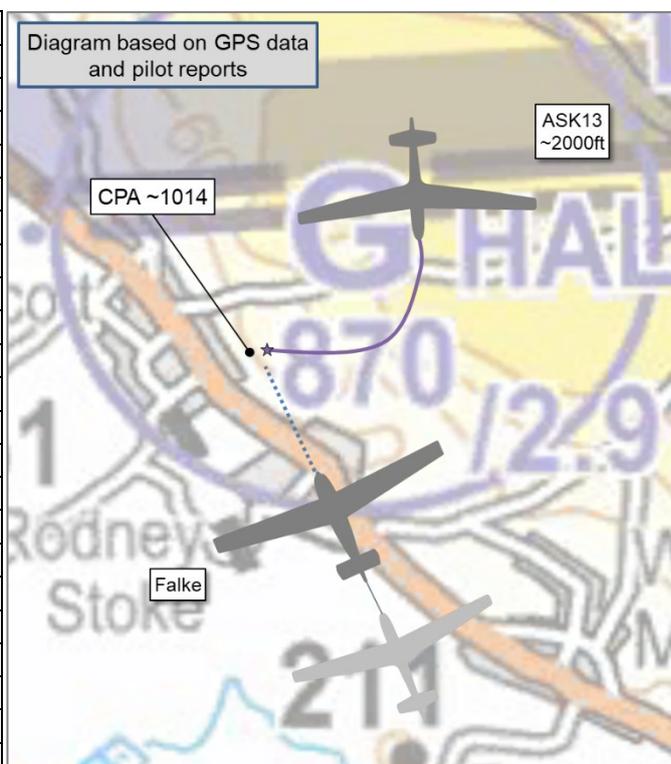


AIRPROX REPORT No 2021177

Date: 11 Sep 2021 Time: 1015Z Position: 5115N 00243W Location: IVO Halesland

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Falke	ASK13
Operator	Civ Gld	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	None
Provider		
Altitude/FL	NK	~2000ft
Transponder	A, C	Not fitted
Reported		
Colours	White, Red	White
Lighting	Strobes	None
Conditions	VMC	VMC
Visibility	>10km	NR
Altitude/FL	1200ft	2000ft
Altimeter	QFE (991hPa)	QFE (991hPa)
Heading	310°	270°
Speed	55kt	45kt
ACAS/TAS	Not fitted	PowerFLARM
Alert	N/A	None
Separation at CPA		
Reported	30ft V/0m H	20ft V/0m H
Recorded	NK	



THE FALKE PILOT reports that they were towing a glider and carried out a normal departure from Halesland. They knew there were other gliders in the vicinity and at about 1000ft QFE saw [ASK13 C/S] over the airfield (approximately a mile away) about 200ft above them on a track they considered would take it behind their aircraft. Bearing in mind the other glider was descending and they were climbing the vertical separation was going to be small so horizontal separation was key. Their attention was then distracted as the glider they were towing slipped down from the normal position and they were looking in the mirror to see if it was correcting, which it started to do. They then looked up and visually scanned and were surprised to see [ASK13 C/S] just a quarter of a mile away on a constant bearing and descending as they were climbing. They hesitated to take action as they had right of way and expected the other pilot to bear away. Very quickly they realised the other pilot probably hadn't seen them so immediately reduced power, descended and passed directly below the glider, clearing vertically by about 30ft. The glider they were towing followed them down and when they had cleared the conflict, the tow was resumed to 2000ft QFE, whereupon the glider cast off and they returned to the field and landed. In a post incident de-brief it became apparent that both pilots in the conflicting aircraft had not seen the Falke and only became aware of the Airprox as they heard it pass below.

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

THE GLIDER PILOT (being towed by the Falke) reports they were climbing up through 1000ft heading west along the ridge. They were monitoring the position of [ASK13 C/S] and were comfortable with its position as it tracked towards the ridge, it then changed course which put it eventually on a converging course. As the ASK13 got closer they realised that the pilot probably hadn't seen their glider and Falke as they were in the blind spot under the port wing of the ASK13. They continued to climb; the glider pilot then started to lower their tow position anticipating the tug to descend. The tug then dived to give clearance, the [ASK13 C/S] passed clear of their glider by approximately 100ft, above the tug and above the rope. [Note: the towed glider would be below longitudinal axis of Falke]. The pilot noted their options

for releasing were that they would have released away from the glider and not maintained visual contact with it. Points that could have made the Airprox less likely:

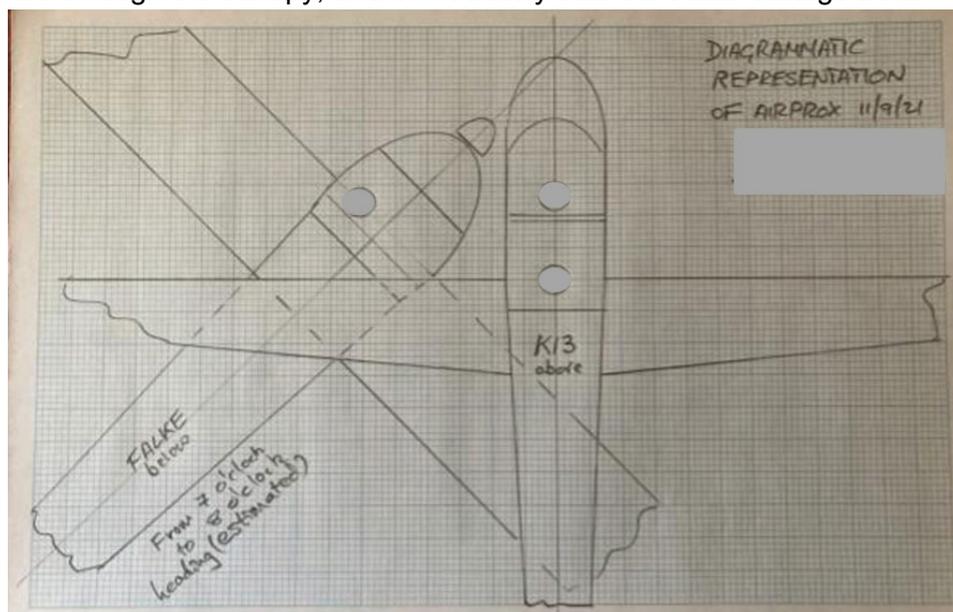
- the TAS in their glider was not recorded as u/s in the DI book.
- Although they had put a radio in the aircraft, it was removed for ground ops, so they were unable to advise the tug and [ASK13 C/S] of the impending Airprox.

They noted that at all times they were always aware of the situation and evaluating the options that were open to them, but were comfortable that the situation would not escalate. They opted to stay on tow to reduce the possibility of suddenly appearing around [ASK13 C/S], causing them alarm, and to maintain visual with them and situational awareness with the tug. They opined that sometimes it is best to do nothing and continue, than to antagonise a situation by taking evasive action that may compromise separation and situational awareness.

THE ASK13 PIC reports that they were flying with a licenced pilot who had not flown for a couple of years as they wished to get back up to speed and start gliding again. They had been soaring and drifted with the wind to the east of Halesland airfield, the lift ran out and they decided to push back upwind of the airfield, however instead of going straight across the airfield which would have put them at risk with potential winch cables, they headed to the south side of the airfield and then turned back up the ridge flying alongside the airfield now on the south side of it. After approximately 20 to 30sec they heard an engine noise that was so loud it made them really look around as at this point they knew something was very close, when they looked over their left shoulder they saw [the Falke] flying directly under them from the seven o'clock at approximately 20ft below. Knowing the aircraft (it was also flying from Halesland) they knew it would possibly have a glider on the back being aero-towed so they were also watching out for that, but as it happened so quickly, and it was so close, they literally had no time to react. After the Falke cleared from beneath the aircraft, they made the decision to return to the airfield immediately.

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

THE ASK13 PF reports that they were the handling pilot (P2) in [K13 C/S]. They were flying straight and level with normal lookout, heading in roughly a west-south-westerly direction at perhaps 1100ft (from memory). Suddenly they heard the sound of a powered aircraft very near to them. They reacted by looking to the left and downward through the canopy, and immediately saw the Falke emerge from under their left wing and pass very close beneath them; they estimated that it came from their 7 o'clock to 8 o'clock direction. They clearly saw the Falke's fuselage, left wing, and its pilot. The Falke's right wing was obscured underneath them. They estimated it was perhaps 30 or 40ft below their K13. They were quite shocked but immediately concentrated on continuing to fly the glider, until the PIC took control to enable their prompt return to the airfield.



Factual Background

The weather at Bristol was recorded as follows:

METAR EGGD 110950Z AUTO 25009KT 9999 BKN015 BKN019 BKN025 17/14 Q1018=
 METAR EGGD 111020Z AUTO 24010KT 9999 BKN017 BKN023 OVC042 17/13 Q1018=

Analysis and Investigation

UKAB Secretariat

Unfortunately the incident did not show on the NATS area radars, the Falke did not appear on radar until it was north-west of Halesland, after the Airprox had occurred, and the ASK13 did not display on the radar at all. Although the GPS data from the ASK13 was recovered, the GPS on the glider being towed by the Falke was not transmitting.

The Falke and ASK13 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.¹ If the incident geometry is considered as converging then the Falke pilot was required to give way to the ASK13.² SERA 3210 states:

(2) Converging. When two aircraft are converging at approximately the same level, the aircraft that has the other on its right shall give way, except as follows:

(i) power-driven heavier-than-air aircraft shall give way to airships, sailplanes and balloons;

(ii) airships shall give way to sailplanes and balloons;

(iii) sailplanes shall give way to balloons;

(iv) power-driven aircraft shall give way to aircraft which are seen to be towing other aircraft or objects.

Comments

BGA

It is very disappointing to read of a further Airprox involving this tug and a glider. When you sight aircraft that may be a possible threat, it's wise to assume they haven't seen you and plan your flight path accordingly. Appropriate EC in the tug, [compatible with glider EC], would be of great utility when operating out of a gliding site.

Summary

An Airprox was reported when a Falke and an ASK13 flew into proximity in the vicinity of Halesland at around 1014Z on Saturday 11th September 2021. Both pilots were operating under VFR in VMC, neither 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 reports from the appropriate operating authorities. 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.

¹ (UK) SERA.3205 Proximity.

² (UK) SERA.3210 Right-of-way (c)(2) Converging.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first looked at the actions of the Falke pilot. They were towing a glider and were familiar with glider operations at Halesland. Discussing the pilot's comments about expecting the glider pilot to give way to them, BGA members told the Board that in line with (UK)SERA regulation the guidance and procedures issued by the BGA were clear that powered aircraft towing gliders were required to give way to other gliders, members further noted that the CAA Skyway Code also pictorially represented the order of giving way clearly³ (**CF1**). Some non-gliding members wondered how manoeuvrable the tug with a glider attached was, but were assured that it was quite capable of making a 30° AOB if necessary. Having first seen the ASK13 routing along the ridge and believing it would pass behind their aircraft, the Falke pilot themselves noted in their report that lateral separation was key because there was very little vertical separation. Members thought that at this stage the pilot would have been wise to have made a turn away to ensure the separation (**CF2**). Whether they did not because they believed the other pilot would give way to them, or because they thought there would be enough separation, without knowing for sure that the other pilot was visual with them there was always the risk of the other pilot behaving unexpectedly. Members opined that in this case flying defensively and ensuring a good margin of separation at the early stages could have averted this Airprox completely and that an earlier input of just a small turn would have averted the possibility of needing to take robust avoiding action later. As it was, the Falke pilot then became distracted by the glider on the tow (**CF5**) and whilst looking in the mirror at them, did not assimilate that the ASK13 was continuing towards them until they looked back and realised, at a very late stage, that action was necessary (**CF6**). In continuing on heading without taking early action members thought that the Falke pilot had flown into conflict with the ASK13 (**CF7**).

For their part the crew in the ASK13 did not have any situational awareness that the Falke was in the vicinity (**CF3**). Although there was a TAS in their aircraft because there was no compatible equipment in either the other glider or the tug, they did not receive a warning (**CF4**). Consequently, they were unaware of the Falke until they heard, and then saw it, crossing beneath their aircraft, by which time it was too late to take any avoiding action (**CF8**).

Members then discussed the procedures in general at Halesland. They recalled that there had previously been another Airprox at the airfield⁴ which had been assessed as Risk Category A, and that during the discussion of this previous Airprox members had been assured that the club was making efforts to fit radios and compatible EC equipment into all their aircraft. They were disappointed that this had not yet been achieved. Noting that the glider being towed did not have a radio and therefore the pilot could not alert the Falke pilot, they thought that this had been a missed opportunity to avert the Airprox. Some members also opined that whilst it did not directly affect the Airprox itself, they were surprised that the pilot being towed did not release from the back of the Falke but followed it into close proximity with the other ASK13.

UKAB Secretariat Note: The Halesland CFI has since informed the BGA that suitable glider EC equipment and panel mounted radios have been purchased for all club gliders and the syndicate Falke. Fitting and commissioning has proved frustrating, but once complete training in use will be a major aim for this season.

When assessing the risk, members did not have the benefit of radar or complete GPS data and therefore had to rely on the reports from the pilots. That being said, all 4 pilot reports were remarkably similar and so the Board felt they had enough information to make an assessment. Whilst it was quickly agreed that there had been a risk of collision (**CF9**), some members thought that because the Falke pilot had taken avoiding action, albeit late, they had materially affected the separation. However, others countered that the estimated separation was so small that there had still been a serious risk of collision. The Board agreed with this view and therefore assigned a Risk Category A.

³ CAA Skyway Code, Airspace, Essential Rules of the Air, page 58, [available here](#)

⁴ Airprox 2021032 available on the UKAB website [here](#)

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**Contributory Factors:**

CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
2021177				
Flight Elements				
• Regulations, Processes, Procedures and Compliance				
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
• Tactical Planning and Execution				
2	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
• Situational Awareness of the Conflicting Aircraft and Action				
3	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late or only generic, Situational Awareness
• Electronic Warning System Operation and Compliance				
4	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
• See and Avoid				
5	Human Factors	• Distraction - Job Related	Events where flight crew are distracted for job related reasons	
6	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
7	Contextual	• Loss of Separation	An event involving a loss of separation between aircraft	Pilot flew into conflict
8	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
• Outcome Events				
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: A.

Safety Barrier Assessment⁵

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 **ineffective** because the Falke pilot should have given way to the ASK13.

Tactical Planning and Execution was assessed as **ineffective** because the Falke pilot did not adapt their plan when they first saw the ASK13.

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

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the ASK13 pilot had no situational awareness about the Falke.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TAS in the ASK13 could not detect the Falke.

See and Avoid were assessed as **ineffective** because the ASK13 pilot did not see the Falke and the Falke pilot became distracted and took late avoiding action.

Airprox Barrier Assessment: 2021177		Outside Controlled Airspace						
Barrier	Provision	Application	Effectiveness					
			Barrier Weighting					
			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	✗	✗					
Key:								
	<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>			
Provision	✓	⚠	✗	○				
Application	✓	⚠	✗	○	○			
Effectiveness	■	■	■	■	□			