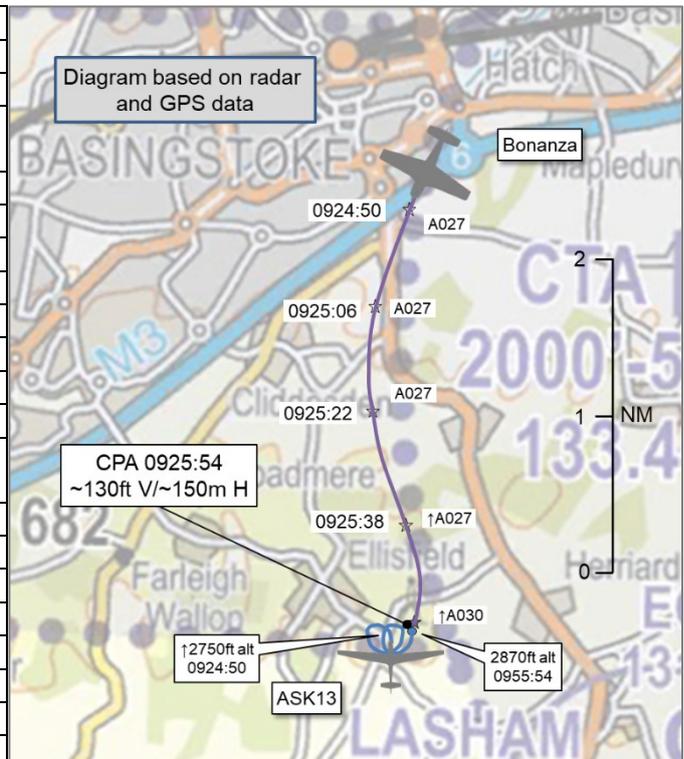


AIRPROX REPORT No 2022081

Date: 12 May 2022 Time: 0926Z Position: 5112N 00104W Location: 2NM NW Lasham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASK13	Beech Bonanza
Operator	Civ Gld	Civ FW
Airspace	RAF Odiham MATZ	RAF Odiham MATZ
Class	G	G
Rules	VFR	VFR
Service	Listening Out	None ¹
Provider	Lasham Gliders	N/A
Altitude/FL	2870ft	3000ft
Transponder	Not fitted	A, C, S
Reported		
Colours	Red	White
Lighting	Nil	Strobe, Nav, Anti-Col
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2500ft	3000ft
Altimeter	QFE (999hPa)	QNH (NK hPa)
Heading	Turning	180°
Speed	50kt	140kt
ACAS/TAS	PowerFLARM	SkyEcho
Alert	None	Information ²
Separation at CPA		
Reported	20ft V/0m H	200ft V/200ft H
Recorded	~130ft V/~150m H	



THE ASK13 PILOT reports that they were conducting their first flight of the day with an inexperienced pre-solo student. They inspected the glider for flight and all equipment was serviceable. They launched by aerotow around 10-15min before the Airprox and, after releasing at 2500ft QFE, they and their student focused on some soaring training in the local area. Whilst soaring and conducting a continual lookout they were turning to the left and they caught sight of a low wing, single engine aircraft, not moving in their field of view, coming towards them slightly above. They considered that it might pass rather close so they took control from the student and descended the glider to increase vertical separation. The aircraft passed directly over the top nearly close enough to read the registration but, given it appeared to have some speed, they weren't able to read it. They informed Lasham by radio of the Airprox who began the Airprox reporting procedure. They continued the lesson normally for a safe landing back at Lasham.

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

THE BEECH BONANZA PILOT reports that [they recall that] they had requested, and been given, a Basic Service from Farnborough. Transiting through the Odiham MATZ, Farnborough alerted them to glider activity near Lasham, and they asked their passengers to add to their visual scan. Their front seat passenger has been a professional racing driver, has good eyesight and has flown with them many times, and also has a good appreciation of distance and speed. [Their passenger] observed the oncoming glider initially just prior to themselves. They climbed and turned about 10° to the west, recognising there was a second glider higher in their 2 o'clock on an approximate NW heading. The

¹ The pilot was in the process of changing to the Farnborough LARS West frequency but had not yet made contact.

² The pilot reported receiving 'Information' from their EC device, however, they also report not receiving commonly used glider EC and so it is assessed to be likely that the 'Information' was generated by the EC equipment of a different aircraft.

oncoming glider went past under their right wing. They continued on, maintaining a visual scan. While they can't specifically recall this, they believe just prior to the Airprox they were preparing an onward frequency together with the visual scan, thus their passenger was first to spot the traffic. [They opine that] the prime background reason for this event along with, they suspect many other glider/aircraft conflicts, is the larger deeply-flawed Farnborough Class D airspace, which funnels traffic between [Farnborough] and Solent. Also there has to be consistency in on-board traffic alert systems. They don't receive [alerts from commonly used glider EC equipment] and they doubt that glider pilots see ADS-B aircraft transmissions. Finally, adding some radio workload and setting an aircraft up for the cruise in this congested area adds to the Airprox risk.

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

THE FARNBOROUGH LARS WEST CONTROLLER reports that they had been informed that an Airprox occurred between a glider and Beech at 0925, 1NM northwest of Lasham. After the Airprox [the Beech Bonanza pilot] called them on LARS West for a service. They have no recollection of the incident.

Factual Background

The weather at Odiham was recorded as follows:

METAR EGVO 120920Z 26012KT 9999 FEW029 14/07 Q1019 NOSIG RMK BLU BLU

Analysis and Investigation

Farnborough Occurrence Investigation

A unit investigation was carried out by Farnborough which found that the pilot of the Beech Bonanza called Farnborough LARS at 0926:22 and therefore concluded that neither aircraft pilot was on a Farnborough frequency at the time of the Airprox.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and the Beech aircraft was detected and identified using Mode S data. There was an intermittent primary-only return observed in the locality of the Airprox, however, it could not be verified that this was the ASK13. Fortunately, the ASK13 pilot was able to supply the UKAB Secretariat with a GPS data file and this has been used, along with the radar data, to create the diagram on page one of this report and to measure CPA which, due to the necessity to combine differing data sources, has been recorded as an approximation.

The ASK13 and Beech Bonanza pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.³ If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.⁴ If the incident geometry is considered as converging then the Beech Bonanza pilot was required to give way to the ASK13.⁵ If the incident geometry is considered as overtaking then the ASK13 pilot had right of way and the Beech Bonanza pilot was required to keep out of the way of the other aircraft by altering course to the right.⁶

Comments

AOPA

This is another case of incompatible EC, however, as part of the TEM for the flight, the management aspect could have considered what action to take in the event of an encounter with a glider, or

³ (UK) SERA.3205 Proximity.

⁴ (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

⁵ (UK) SERA.3210 Right-of-way (c)(2) Converging.

⁶ (UK) SERA.3210 Right-of-way (c)(3) Overtaking.

communicate with the site. This is a known hot spot area for Airproxes with a number having occurred in the last 3 years.

BGA

This Airprox took place in the choke-point formed in February 2020 by the creation of low-level Class D airspace just to the east of Lasham airfield, home to one of the largest gliding clubs in the world.

The difficulties of sighting another aircraft approaching head-on with no relative motion are well-known. Many pilots now opt to permanently switch on forward-pointing high-intensity landing lights, even in full daylight, to aid visual conspicuity in this direction.

The EC equipment fitted to the Bonanza can be configured to receive the EC transmissions from the vast majority of gliders and display that traffic via participating EFB applications. Pilots who routinely fly through areas labelled on CAA charts as having "INTENSE GLIDER ACTIVITY" may see safety benefits from configuring their EC and EFB equipment in this way.

Summary

An Airprox was reported when an ASK13 and a Beech Bonanza flew into proximity 2NM northwest of Lasham at 0926Z on Thursday 12th May 2022. Both pilots were operating under VFR in VMC, the ASK13 pilot listening out on the Lasham Glider frequency and the Beech Bonanza 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, GPS data files, reports from the air traffic controllers involved 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.

The Board first considered the actions of the ASK13 pilot and a GA member stated that this is an extremely busy area of airspace where a variety of different types of operation happen simultaneously. Members agreed that there could be a channelling or funnelling effect in this area due to the local airspace structure and pilots often fly through the area because an alternative routing through controlled airspace may not be always possible. The Board had been encouraged that the glider pilot had been carrying EC equipment which should have been capable of detecting the transponder carried on the Beech Bonanza; however, the ASK13 pilot reported receiving no alert (**CF2**). Members went on to agree that this had contributed to them having no prior awareness of the Beech Bonanza (**CF1**). A glider pilot member commented that the ASK13 pilot would have been extremely busy managing their flight path and maintaining a good lookout during their thermalling climb. It was noted that the ASK13 pilot had been completing a full 360° turn in less than 30sec which, whilst allowing for a 360° lookout, only allowed any given portion of the sky to be visible for a short period of time: members agreed that this had contributed to the pilot only becoming visual with the Beech Bonanza at a late stage (**CF3**).

Next, members considered the actions of the Beech Bonanza pilot and discussed the EC equipment that they had been using. The Board agreed that, although their equipment had generated an alert, which had meant that they had had generic awareness of other aircraft in the vicinity (**CF1**), members noted that the pilot stated that they do not receive alerts from EC equipment commonly used by glider pilots. The Board discussed the interaction between different EC products that are available to pilots and agreed that it is for each individual pilot to determine their own requirements for additional equipment according to their needs. However, the Board wished to highlight that many products have additional add-ons or subscriptions available to enable compatibility with other products/systems. The Board was encouraged that the pilot had been keeping a good lookout and that they had instructed their passenger to do the same, however, members agreed that gliders can be difficult to visually acquire and the Board determined that the Beech Bonanza pilot had become visual with the glider at a later than optimum point (**CF3**).

Finally, in assessing the risk of collision, the Board discussed that, although the ASK13 had EC equipment on board, it had not alerted the pilot to the presence of the Beech Bonanza. The EC equipment on the Beech Bonanza had given the pilot an alert, although members considered it unlikely that this had been generated by the glider although this had given them some Situational Awareness of other aircraft in the vicinity. Members determined that lookout had been the primary barrier against collision and that, although both pilots had become visual with the other aircraft, this had been at a late stage. The Board agreed that there had been a risk of collision (**CF4**) however, as the pilots had been visual, the risk had been reduced but not entirely removed, and that safety had not been assured. Accordingly, the Board assigned a Risk Category B to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2022081				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
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
• Electronic Warning System Operation and Compliance				
2	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
• See and Avoid				
3	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
• Outcome Events				
4	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

Safety Barrier Assessment⁷

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 the ASK13 pilot had not had any prior awareness of the presence of the Beech Bonanza and, although the EC equipment carried by the Beech Bonanza pilot had not detected the ASK13, the 'Information' alert it had generated would have given the pilot generic Situational Awareness about the presence of other aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC equipment carried by the ASK13 pilot should have been capable of detecting the Beech Bonanza but no alert was reported.

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

⁷ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Airprox Barrier Assessment: 2022081		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 Confliction & 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:			Full	Partial	None	Not Present/Not Assessable	Not Used	
Provision	✓	!	✗	○				
Application	✓	!	✗	○		○		
Effectiveness	■	■	■	■		□		