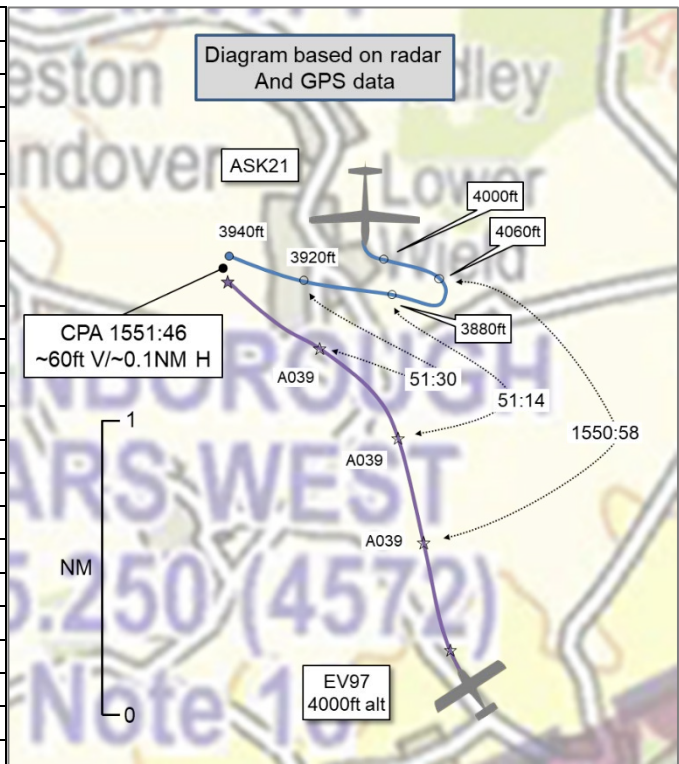


**AIRPROX REPORT No 2022114**

Date: 22 Jun 2022 Time: 1552Z Position: 5110N 00106W Location: 3NM SW Lasham

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASK21	EV97
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Farnborough LARS West
Altitude/FL	3940ft	4000ft
Transponder	Not fitted	A, C
<b>Reported</b>		
Colours	White, Orange	'Aluminium', Blue
Lighting	None	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2800ft	4000
Altimeter	QFE (NK hPa)	QNH (NK hPa)
Heading	'North'	~350°
Speed	50kt	78kt
ACAS/TAS	FLARM	PilotAware
Alert	None	None
<b>Separation at CPA</b>		
Reported	100ft V/0m H	Not Seen
Recorded	~60ft V/~0.1NM H	



**THE ASK21 PILOT** reports that they were heading north at 2800ft on Lasham QFE. The threat aircraft overflew them on the same heading, directly overhead and approximately 100ft above.

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

**THE EV97 PILOT** reports that they were on a return flight from [departure airfield], flying in good weather. They had flown down earlier and were in the area of Lasham at around 1100 and had noted the glider activity on the route down. They were keeping a good lookout as usual, aware of the activity earlier in the day. They have [EC equipment] in their aircraft as an addition to their visual lookout. They have marked the reported Airprox point on their SkyDemon and analysis shows that they made a small dog-leg to the west. Why they did this they can't recall but they have two possible explanations. If [their EC equipment] notified them of a 'danger' aircraft and they could not see it, they would manoeuvre to seek contact, it is possible that is what happened here but they can't be sure, they do not recall seeing any aircraft in close proximity. The second possible explanation is that they saw another aircraft and adjusted to avoid or get a better view. They state that neither they nor their passenger saw the glider or, if they did, they did not feel in any danger.

**THE FARNBOROUGH LARS WEST CONTROLLER** reports that the RT recording has been reviewed and the [EV97] was routing via Lasham under a Basic Service, on a busy frequency. Due to the time that has passed, they have no recollection of the event.

**Factual Background**

The weather at RAF Odiham was recorded as follows:

METAR EGVO 221550Z 07009KT CAVOK 26/10 Q1012 NOSIG RMK BLU BLU

## Analysis and Investigation

### Farnborough ATSU Investigation

[The EV97 pilot was] under a Basic Service with Farnborough LARS West and routed close to Lasham, a very busy active glider site. LARS West and Zone were operating as a band-boxed frequency. The frequency was busy, but assessed as manageable. The majority of the aircraft on frequency were LARS West tracks, with a few, sporadic zone transits.

At 1534:47 [the EV97 pilot] called on the LARS West frequency and was asked to pass their message:

1534:51 "[EV97 c/s] a Eurostar from [departure airfield] to \*unintelligible\* Banbury, currently 4000 feet 1012 just abeam Thorney Island, routing direct to Oxford, request Basic Service and I'm going to stay clear, fly over the top of the Odiham stub."

1535:10 (LARS controller) "[EV97 c/s] Farnborough QNH 1012, squawk 0434 Basic Service."

1535:17 (EV97 pilot) "0434, Basic Service, 1012."

Figure 1 below shows [the EV97's] Mode A not displaying on the Farnborough/Heathrow10 assigned radar, however the Heathrow Green<sup>1</sup> picked up [the EV97] and a glider, labelled as #0434 and #2514.



Figure 1 - 1549:00

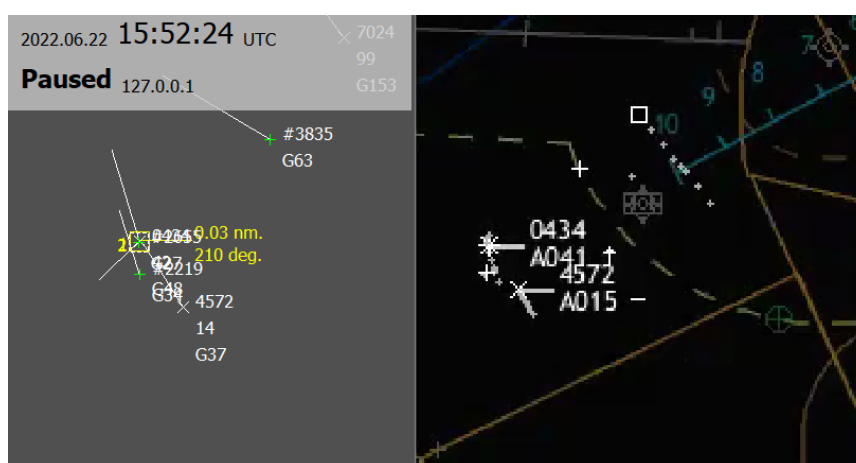
At 1551:28 [the EV97] could be seen on radar tracking approximately 3NM southwest of Lasham and a primary radar return could be seen in the vicinity of the aircraft, but faded from radar. The Heathrow Green radar did pick up a contact of which [the EV97] passed within 0.39NM, height unknown, Figure 2.

<sup>1</sup> Heathrow Green radar is only available as a replay only and not available live to ATCOs. It is solely an analysis/replay feature which displays codes assigned to aircraft which are not necessarily the same as the Mode C code.



Figure 2 - 1551:28

At 1552:24, [the EV97] could be seen on radar 3NM west-southwest of Lasham, tracking northwest-bound, and was observed to overfly a primary return, which was seen on the Heathrow Green, they got within 0.02NM, height unknown.



Screenshot 3 - 1552:24

The Airprox was not reported on the RT, at 1606 [the EV97 pilot] left the frequency.

This incident occurred as [the EV97] routed close to Lasham, which was busy with gliders as a notified gliding site. Whilst [the EV97 pilot] was on frequency under a Basic Service, no report of the Airprox was made to Farnborough. The controller does not retrospectively recall the incident.

CAP774 chapter 2 paragraph 2.1 states: *The avoidance of other traffic is solely the pilot's responsibility. Basic Service relies on the pilot avoiding other traffic, unaided by controllers/ FISOs. It is essential that a pilot receiving this ATS remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight.*

### UKAB Secretariat

An analysis of the NATS radar replay was undertaken and the EV97 was detected and identified by cross reference with the pilot report. The ASK21 was not detected by radar; however, the pilot kindly provided a GPS data file to the UKAB Secretariat detailing their flight. As different information sources were combined to produce the diagram and to measure CPA, it has been recorded as an approximation.

The ASK21 and EV97 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>2</sup> If the incident geometry is considered as converging then the EV97 pilot was required to give way to the ASK21.<sup>3</sup> If the incident geometry is considered as overtaking then the ASK21 pilot had right of way and the EV97 pilot was required to keep out of the way of the other aircraft by altering course to the right.<sup>4</sup>

## Comments

### AOPA

This is a known hot-spot of airspace where, since the airspace was changed, Airprox occur on a regular basis. It is AOPA's view that this airspace change is causing a funnel effect. Without a common protocol for EC there will be occasions where the equipment carried on each aircraft will not be interoperable. It is every pilot's responsibility for lookout, which is one of the primary mitigations for MAC, another being communication; unfortunately neither of these proved effective on this occasion. Appropriate ATC services should be used in busy airspace, and if refused a service, or access to airspace is denied by an ATC unit, pilots should file a FCS1522 form with the CAA, it also gives pilots the ability to report an Airprox on the frequency in use.

### BGA

Over 220 gliders are based at Lasham airfield, which is home to one of the largest gliding clubs in the world. In February 2020 new areas of Farnborough Class D controlled airspace were created immediately to the east of Lasham airfield; this has created a choke-point by funnelling through the Lasham area any north/south transit traffic that chooses (or is restricted) to remain in Class G airspace above 2000ft AMSL. The controlled airspace simultaneously concentrates local Lasham glider traffic into this same area. An increased frequency of Airprox involving gliders near Lasham is the likely result.

## Summary

An Airprox was reported when an ASK21 and an EV97 flew into proximity 3NM southwest of Lasham at 1552Z on Wednesday 22<sup>nd</sup> June 2022. Both pilots were operating under VFR in VMC, the EV97 pilot in receipt of a Basic Service from Farnborough LARS West and the ASK21 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 ASK21 pilot and a gliding pilot member commented 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 noted that, whilst manoeuvring, the ASK21 pilot would have had an opportunity to visually acquire the EV97, however, there would also have been obscuration at times when the glider's wing would have been high. Additionally, members noted that in the moments immediately prior to the Airprox, the EV97 would have been obscured again as it had been behind the ASK21 (**CF5**). Members were encouraged that the ASK21 pilot had been carrying EC equipment, however, it had not been compatible with that fitted to the EV97 (**CF3**) and, as a result, the pilot had not had any prior awareness of its presence (**CF2**). The Board agreed that the

<sup>2</sup> (UK) SERA.3205 Proximity.

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

<sup>4</sup> (UK) SERA.3210 Right-of-way (c)(3) Overtaking.

EV97 had been overtaking the ASK21 and, although the ASK21 pilot had become visual with the EV97, it had been too late for them to have taken any effective avoiding action (**CF4**).

Next, members considered the actions of the EV97 pilot and had been encouraged that they had briefed their passenger to assist with lookout and that they had been in receipt of an ATS, although noted that, under the Basic Service utilised, the pilot would have been unlikely to receive any Traffic Information. The Board again discussed the EC equipment that the pilot had been using and determined that it had not been compatible with that which had been carried by the ASK21 pilot (**CF3**); members went on to agree that the EV97 pilot had not had any awareness of the presence of the ASK21 (**CF2**). The Board also examined the geometry of the Airprox and a GA pilot member stated that the engine cowling of the EV97 would likely have obscured the ASK21 from the view of the EV97 pilot (**CF5**), and members agreed that this had contributed to them not having become visual with it at any point (**CF4**).

Next the Board considered the involvement of the Farnborough LARS West controller and it was stated that, as they had been providing a Basic Service to the EV97 pilot, they had not been required to monitor the flight (**CF1**). A controller member added that the glider had not been consistently detected by the radar or displayed to the controller at the time.

Finally, in assessing the risk of collision, the Board noted that the EC equipment carried by both pilots had not been interoperable with the equipment on the other aircraft, and that neither pilot had had any prior situational awareness regarding the presence of the other. The EV97 pilot had not become visual with the ASK21 and, although the ASK21 pilot had become visual with the EV97, it had not been early enough to have enabled them to have taken any avoiding action to materially increase separation. Therefore, the Board concluded that providence had played a major part in events, that the separation that had existed had been fortuitous and the bare minimum, and that there had been a serious risk of collision (**CF6**). As such, the Board assigned a Risk Category A to this Airprox.

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

### Contributory Factors:

	2022114			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
<b>• Situational Awareness and Action</b>				
1	Contextual	<ul style="list-style-type: none"> <li>ANS Flight Information Provision</li> </ul>	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
<b>Flight Elements</b>				
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
2	Contextual	<ul style="list-style-type: none"> <li>Situational Awareness and Sensory Events</li> </ul>	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>				
3	Technical	<ul style="list-style-type: none"> <li>ACAS/TCAS System Failure</li> </ul>	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>				
4	Human Factors	<ul style="list-style-type: none"> <li>Monitoring of Other Aircraft</li> </ul>	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
5	Contextual	<ul style="list-style-type: none"> <li>Visual Impairment</li> </ul>	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other
<b>• Outcome Events</b>				
6	Contextual	<ul style="list-style-type: none"> <li>Near Airborne Collision with Aircraft</li> </ul>	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:

#### Ground Elements:

**Situational Awareness of the Confliction and Action** were assessed as **not used** because, when providing a Basic Service, the controller is not required to monitor the flight.

#### Flight Elements:

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because neither pilot had had any prior awareness of the presence of the other aircraft.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because neither the EC equipment carried by the ASK21 pilot, nor that carried by the EV97 pilot, had been compatible with the EC on the other aircraft.

**See and Avoid** were assessed as **ineffective** because the EV97 pilot had not become visual with the ASK21 and, although the ASK21 pilot had become visual with the EV97, this had been at or soon after CPA.

Airprox Barrier Assessment: 2022114		Outside Controlled Airspace		Effectiveness				
Barrier		Provision	Application	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	✗	✗					
<b>Key:</b>		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	⚠	✗	●				
Application	✓	⚠	✗	●	○			
Effectiveness	■	■	■	■	■			

<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](#).