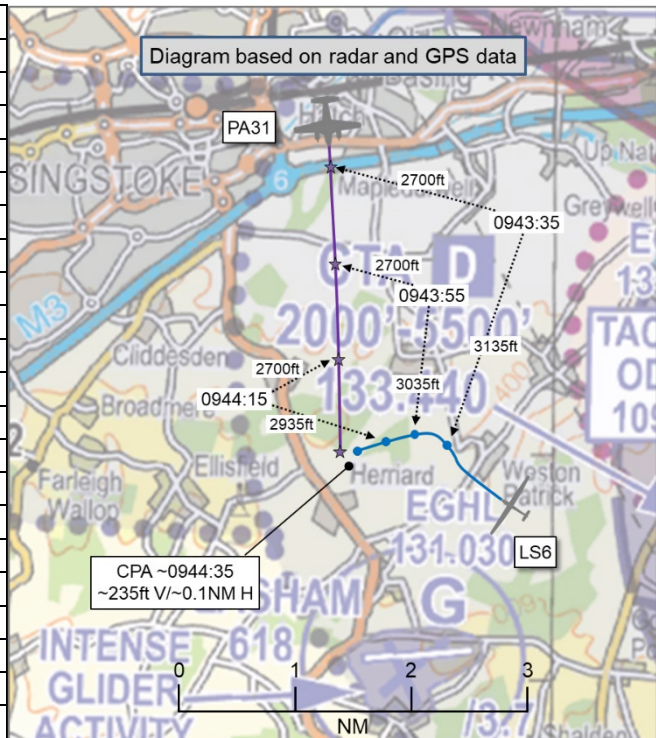


AIRPROX REPORT No 2024146

Date: 01 Jul 2024 Time: ~0945Z Position: 5113N 00103W Location: 2NM N Lasham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	LS6	PA31
Operator	Civ Gld	Civ FW
Airspace	Odiham MATZ	Odiham MATZ
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out ¹
Provider	Lasham	Farnborough West ²
Altitude/FL	~2935ft	2700ft
Transponder	Not fitted	A, C, S+
Reported		
Colours	White	White
Lighting	None	Anti-col, strobes, bcn
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2800ft	2500ft
Altimeter	QNH	QNH (1018hPa)
Heading	250°	180°
Speed	60kt	150kt
ACAS/TAS	FLARM	TAS
Alert	None	TA ³
Separation at CPA		
Reported	50ft V/100m H	500ft V/1km H
Recorded	~235ft V/~0.1NM H	



THE LS6 PILOT reports that they had been thermalling and had been on a course for the next thermal, and had heard and almost simultaneously seen the PA31 as it had appeared from under their starboard wingtip. A visual scan from south-to-north took around 15sec and [the sighting of the PA31] had been as they had been completing a scan. Owing to the estimated 150kt closing speed and relative positions, an earlier sighting would have been unlikely in the conditions. This had been an incident within the environs of the busiest gliding site in the UK.

The pilot assessed the risk of collision as ‘High’.

THE PA31 PILOT reports that [they recall that] they had called Odiham⁴ for MATZ penetration prior to Farnborough and believe they [may have] been speaking to them at the time and think that they [may have] told them of a primary contact which they thought corresponded to a glider they could see which they hadn’t perceived as a direct threat as it had been turning away in what looked like a thermal circle so thought nothing much of it (apologies if their recollection is imperfect).

The pilot assessed the risk of collision as ‘Low’.

THE FARNBOROUGH CONTROLLER reports that the Watch Manager on duty had reviewed the event and there had been no involvement from Farnborough. They believe that one of the aircraft had been squawking 7011 (Solent listening).

¹ Pilot reported a Traffic Service with Farnborough.

² Pilot displayed a Solent Listening squawk at the time of CPA.

³ PA31 pilot reported as having been visual with a glider that ‘seemed to correspond with the TCAS return, no threat had been perceived’.

⁴ Odiham has no record of this event.

Factual Background

The weather at Odiham was recorded as follows:

METAR EGVO 010920Z 25008KT 9999 FEW035 SCT300 17/08 Q1018 NOSIG RMK BLU BLU=

Analysis and Investigation

Military ATM

A request for information was received from the Airprox Board dated 23rd October which had been outside the timelines for retrieving any radar/comms data. The passing of Traffic Information regarding Lasham gliders is a daily occurrence at Odiham and is not an event that would be considered unusual.

UKAB Secretariat

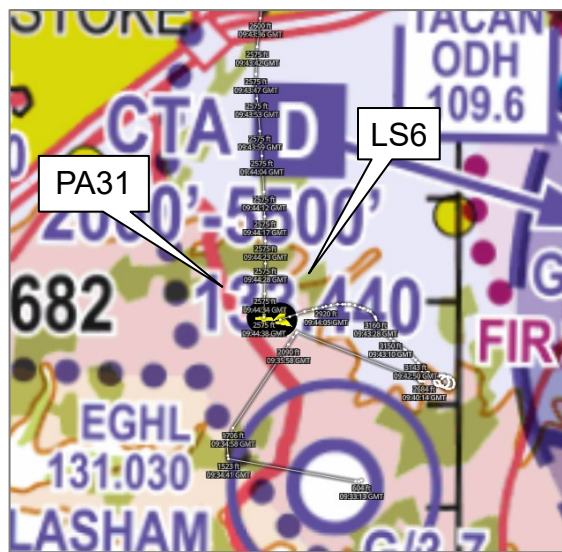


Figure 1: Airspace Analyser Tool image at CPA ~0944:35.

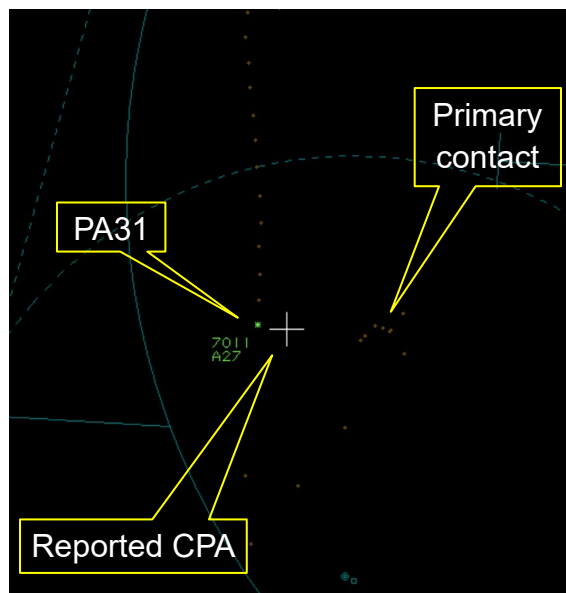


Figure 2: CPA ~0944:35 White cross marks reported CPA position. The primary radar contact cannot be confirmed as the LS6.

The PA31 was tracked via primary and secondary radar and seen to head southwards at a relatively constant altitude of 2700ft. A primary radar return appeared inconsistently towards the left 10 o'clock

of the track of the PA31 ahead of CPA but cannot be positively identified as the LS6. The LS6 can be tracked via its onboard electronic conspicuity equipment and the diagram at page 1 is constructed as a combination of radar and GPS data. On radar, the PA31 displayed a VFR (7000) squawk until 1min prior to CPA (approximately 5NM north of Odiham) when the displayed squawk switched to the Solent Listening squawk (7011).

The LS6 and PA31 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.⁵ If the incident geometry is considered as converging then the PA31 pilot was required to give way to the LS6.⁶

Comments

AOPA

When flying close to one of the busiest gliding sites in the UK it might have been prudent to give them a call to improve everyone's situational awareness. Also, take note of the advice given in the Skyway Code and by GASCo for the avoidance of airspace using the 'Take 2' principle. In this case, had both pilots been on the same frequency and had both pilots been transmitting, this could have improved everyone's situational awareness.

BGA

UK glider launch sites are listed in UK AIP ENR 5.5 and labelled on CAA 1:500,000 and 1:250,000 charts with a "G" symbol, visible in the chart segment in Part A. A greater density of gliders (and aircraft towing gliders) may be expected in nearby Class G airspace at any time during daylight hours, and at any altitude up to cloudbase. Where winch launching is used, the maximum winch launch altitude is listed in the AIP and marked on CAA charts; this is 3700ft AMSL at Lasham (indicated on the chart by "/3.7" near the "G" symbol).

Lasham airfield is home to one of the largest gliding clubs in the world, with more than 220 gliders based there. On a good cross-country soaring day a high number of pilots, often approaching 100+, launch from here in the late morning, each thermalling locally to gain height before setting off on cross-country flights. Areas of Farnborough Class D controlled airspace created immediately to the east in February 2020 have created a choke point by funnelling any north/south transit traffic that chooses (or is restricted) to remain in Class G airspace above 2000ft AMSL through the Lasham area, while simultaneously concentrating local glider traffic into the same area. An increased frequency of Airprox involving gliders near Lasham is the likely result.

The Lasham aerodrome VHF channel (131.030MHz), shown on CAA VFR charts, is typically monitored by Lasham-based gliders flying in this area. If transiting nearby, a brief broadcast call on this channel using "Unattended Aerodrome" phraseology (CAP 413 §4.162 et seq) could help avoid conflicts and increase everyone's situational awareness.

The EC equipment fitted to almost all gliders warns of impending conflicts with other similarly-equipped aircraft. This system mitigates the risk of Airprox with other gliders, but basic installations do not detect aircraft equipped only with transponders or ADS-B out (such as "Mode S+"), as the PA31 had been in this case. However, recent versions of this EC equipment can optionally include a 1090MHz receiver subsystem, and thereby warn of conflicts with transponder and ADS-B out equipped aircraft. Updating glider EC hardware to add such a 1090MHz receiver subsystem would provide a useful additional safety barrier in airspace with a high density of transponder or ADS-B out equipped aircraft.

⁵ (UK) SERA.3205 Proximity.

⁶ (UK) SERA.3210 Right-of-way (c)(2) Converging.

Summary

An Airprox was reported when an LS6 and a PA31 flew into proximity 2NM north of Lasham at approximately 0945Z on Monday 1st July 2024. Both pilots were operating under VFR in VMC, the LS6 pilot Listening Out on the Lasham frequency and the PA31 pilot Listening Out on the Solent Radar frequency.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers (ultimately discovered to be uninvolved) 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 firstly discussed the actions of the LS6 pilot, noting that they had been on a local flight and had been listening out on their airfield frequency. Members noted that although the pilot had utilised electronic conspicuity equipment common to many gliders, it had not been extended to include ADS-B based transmitters which, in this case and linked to a lack of mutual radio communication, had denied them situational awareness of the passing PA31 (**CF2**). Members felt that as the LS6 had not been fitted with external lighting it had made see-and-avoid a more difficult task for the PA31 pilot. The Board noted that the LS6 pilot had been scanning the horizon between bouts of thermalling and had spotted the PA31 at a very late stage, effectively a non-sighting (**CF5**) as there had been no time to react. The Board wished to again encourage all operators to do all they could to build situational awareness for themselves and others in their vicinity.

Members went on to review the actions of the PA31 pilot, noting that they recalled that they had been in receipt of Air Traffic Services at various stages of their flight but, recognising that this is a particularly busy area for gliders, opined that a passing blind call to Lasham (**CF1**) could have helped alert others to their presence. The Board wondered about the route taken by the PA31 pilot, recognising that Lasham is marked on the flying chart and is a popular operating area for gliders, particularly in the summer, and that it had been highly likely that gliders would have been operating at that time, allowing at least generic situational awareness of gliding activity for the PA31 pilot (**CF2**). Members suggested a wider passage might have reduced the possibility of interaction with others. In carrying collision avoidance equipment, the PA31 pilot had increased the likelihood of being made aware of other operators in the area but, unfortunately, the equipment carried by the LS6 and the PA31 had been 2-way incompatible (**CF3**). The PA31 pilot reports having seen the glider at the point it had been thermalling but ultimately had flown close enough to the LS6 to cause some concern for its pilot (**CF4**).

Members noted the paucity of Air Traffic Services reporting in this case, accepting that the LS6 pilot had been listening out only but that the PA31 pilot had been utilising various agencies as they had tracked south and that reporting an Airprox event at the time it occurs to whichever unit they are operating with allows for the collation of useful contributory data by all involved.

Concluding their discussion, members agreed that it would have been helpful if the pilot of the PA31 had called out on the Lasham frequency as they had passed through the area but had agreed that, although safety had been degraded and that the LS6 pilot had been concerned by the proximity of the PA31, ultimately, the separation between the aircraft had been such that no avoiding action had been necessary, and no risk of collision had existed. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024146			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	Flight Elements			
	• Tactical Planning and Execution			

1	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
• Situational Awareness of the Conflicting Aircraft and Action				
2	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				
3	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				
4	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern
5	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

Degree of Risk: C.

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:

Tactical Planning and Execution was assessed as **partially effective** because the PA31 pilot could have elected to make an information call to Lasham as they had approached the area.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the LS6 pilot had no situational awareness of the presence of the PA31, and the PA31 pilot had only generic situational awareness of the presence of the LS6.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because although both aircraft had carried electronic conspicuity equipment, neither had been able to detect electronic emissions from the other aircraft.

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: 2024146		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 Conflicion & 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	■	■	■	■	□			