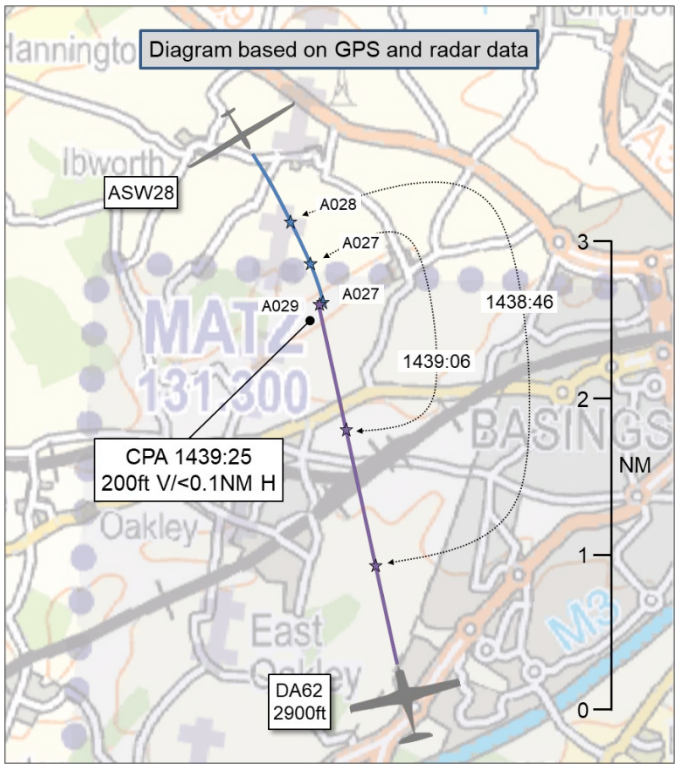
AIRPROX REPORT No 2024078

Date: 04 May 2024 Time: 1439Z Position: 5116N 00110W Location: 2NM W Basingstoke

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASW28	DA62
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	Lasham Traffic	Solent Radar
Altitude/FL	2700ft	2900ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White	Grey
Lighting	None	"*Full*"
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2700ft	2900ft
Altimeter	QNH	QNH
Heading	160°	350°
Speed	70kt	150kt
ACAS/TAS	FLARM	TAS
Alert	None	TA
Separation at CPA		
Reported	50ft V/200m H	200ft V/0.5NM H
Recorded	200ft V/<0.1NM H	



THE ASW28 PILOT reports that, returning from a cross-country flight into Herefordshire, they were on final-glide towards Lasham. They had been gliding 'straight' for 20NM with small course adjustments (seeking rising air, as indicated by the clouds) to optimise the glide. There were several other gliders following a similar route, which they had known from [their EC device] and/or visual contact. Although descending overall since their last thermal (3NM north of Lambourn, [Berkshire]), their flight computer and rule-of-thumb both indicated they would arrive at Lasham at over 1000ft AGL. They were squawking 7000, and on the Lasham frequency.

Glancing at another glider (about 1km ahead and slightly higher), they saw two large translucent circles and a thin lateral line. For a split second they were puzzled but then recognised it as a light twin-propeller plane. It was quickly evident that it was moving to the right in their field of vision, was slightly above them, and that they would not collide. It was perhaps 2-4sec from first sight until it had passed just behind them, 50-100ft above. They were not conscious of having seen the top or bottom surface of the wings, nor the fuselage profile, and have no impression of colour or markings, or noise. By the time they had recognised it for what it was and for where it was going, there were no useful avoidance actions that they could have taken. They had no instinctive urge to push/pull/whatever. They don't know if the other pilot took any avoiding action. Had they seen it 5sec earlier (and assuming their assessment of its general heading was correct), they would have avoided it by turning right and diving.

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

THE DA62 PILOT reports that the area is known for intense glider activity so they [kept a] good lookout with the aircraft autopilot engaged. The aircraft was TAS-equipped, but many gliders have no [compatible] EC equipment and do not show up. The TAS gave a Traffic Alert of an aircraft 2NM ahead, slightly to the right with a stable height difference of 200ft above. To the left, they counted, and were visual with, three other gliders, so took no action so as not to fly into the path of something they hadn't

seen. Instead, they kept visual contact with the 'TA' traffic they could see, ready to take avoiding action if needed. As it happened, as the 'TA' traffic got closer, they became visual with both that, and another glider, passing 200ft almost directly underneath, so they are glad they did not descend or take any rushed action.

They do not view the risk of collision as significant. They were with another pilot and were both focussed on looking-out for traffic flying through this known busy area and were able to keep an eye on the traffic. All aircraft lights, including landing and taxi lights, were on to provide as much chance for others to see them too. The aircraft was flown at a low power setting for a slower speed to help aid their lookout and collision avoidance if it was required. They could [see] from the traffic screen that one glider that was showing up, [but they] were both visual with both gliders from around the 2NM distance. It was clear both gliders were going to pass by with no collision risk or the need for avoiding action.

The cloudbase was around 3300ft in the area and they did not want to fly higher as they would be less likely to see other traffic around cloud or in IMC. The traffic screen showed plenty of other aircraft just below, and in, the cloud layer - so they remained VFR with a good distance from cloud to provide the best see-and-avoid conditions. [The pilot of the DA62 opined that] it would be terrific if all gliders and powered aircraft had to conform to EC output as in the USA with ADS-B out (such that all traffic would be visible on the screen) but knowing that is not the case, they do not rely on their TAS as being a wholly accurate source of information. It's one source, but keeping a lookout and see-and-avoid is still required in intense glider areas such as this.

The pilot assessed the risk of collision as 'None'.

Factual Background

The weather at Odiham was recorded as follows:

```
METAR EGVO 041450Z AUTO 13003KT 9999 OVC076/// 15/07 Q1009
```

The following NOTAM was published for a gliding competition at Lasham:

H2245/24
Q) EGTT/QWGLW/IV/M/AW/000/054/5111N00102W004
A) EGHL B) FROM: 24/05/04 09:00 TO: 24/05/06 16:00
E) GLIDING COMPETITION. UP TO 75 GLIDERS AND 6 TUG ACFT MAY OPR WI
3NM RADIUS: 511112N 0010155W (LASHAM AD) DAILY ROUTE INFO 01256 384900. AR-2024-2665/AU3.
LOWER: SFC
UPPER: 5400FT AMSL
SCHEDULE: 0900-1600

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft were positively identified from Mode S data. Both pilots kindly supplied GPS track data for their respective flights. The diagram was constructed and the separation at CPA determined by combining the different sources.

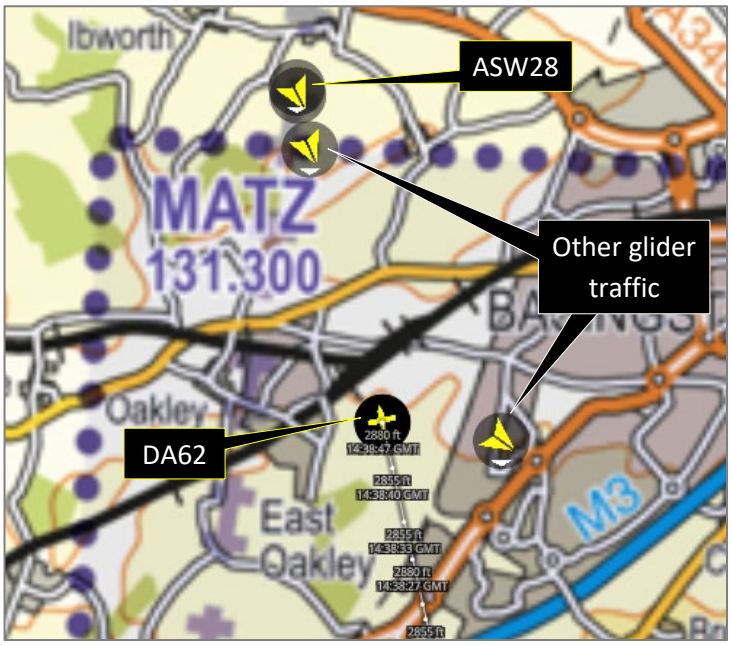


Figure 1 – Aircraft positions at 1438:50 (multiple data sources)

From the GPS data file, the ASW28 had been at 2818ft Pressure Altitude at the moment of CPA. A suitable correction was applied and its altitude AMSL was determined to have been 2710ft. The Mode C readout had been 2700ft. The altitude of both aircraft has been shown in the diagram with reference to Mode C data.

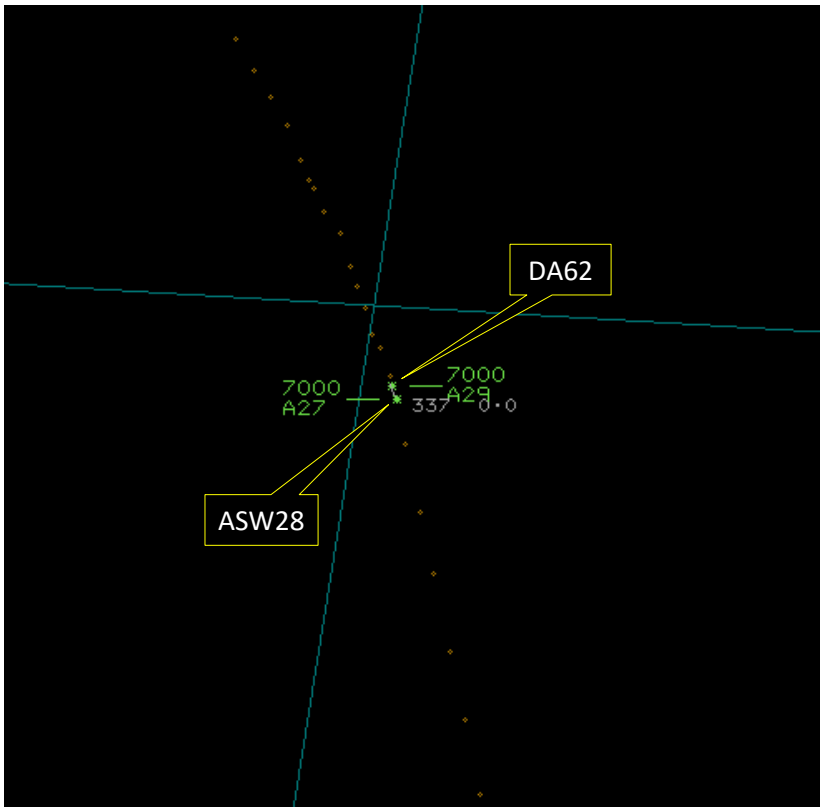


Figure 2 – Aircraft positions at 1439:26 (approximately 1sec after CPA)

The ASW28 and DA62 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 head-on or nearly so then both pilots were required to turn to the right.[2]

Comments

AOPA

An electronic conspicuity device alerted the pilot of the DA62 to the other aircraft involved. Notwithstanding, the pilot recognised the limitations of current electronic conspicuity technology. As both aircraft had been transponder-equipped, a radar-based service from a local ATC unit could have been of assistance in earlier notification of other traffic. Once notified of traffic, an effective lookout acts as the final barrier to a mid-air collision.

BGA

This incident once again highlights the difficulty of visually acquiring an aircraft approaching head-on on a near-reciprocal course.

The DA62 pilot is to be commended for their good lookout, and for their awareness of glider traffic in the vicinity of Lasham, which is one of the busiest gliding sites in the world. As noted by both pilots, the ASW28 was part of a group of about 5 gliders en-route from a waypoint in the vicinity of Swindon to Lasham, where the pilots intended to land. Having achieved enough height to reach their destination without climbing further, these gliders were flying similar courses at similar levels, typically at speeds of 60-90kt (this is termed 'final glide' in gliding parlance). The DA62 pilot, flying a near-reciprocal course at a similar level in the same area, therefore encountered multiple gliders within a relatively short period.

Pilots flying in areas of intense gliding activity may see safety benefits from equipping with low-cost, carry-on TAS units capable of receiving transmissions from the EC equipment fitted to nearly all UK gliders, including this ASW28 and other gliders nearby at the time of this incident.

Summary

An Airprox was reported when an ASW28 and a DA62 flew into proximity 2NM west of Basingstoke at 1439Z on Saturday 4th May 2024. Both pilots were operating under VFR in VMC, the ASW28 pilot listening-out on the Lasham Traffic frequency and the DA62 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 and GPS track data. 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 pilot of the ASW28. Members wondered why they had not elected to have been in receipt of an ATS from a nearby service provider given that they were in possession of a FRTOL. It was agreed that it may have been prudent to have contacted the Farnborough LARS W controller in order to have gathered situational awareness on the presence of traffic in the area (**CF1**). Another member, with particular experience of gliding operations, explained that the pilot of the ASW28 may have considered that they would have gleaned more pertinent information regarding the traffic in their vicinity by having their radio tuned to the Lasham Traffic frequency, given that many glider pilots had been converging towards Lasham at that time. Turning to the consideration of electronic conspicuity (EC), members agreed that the EC device fitted to the ASW28 would not have been expected to have detected the presence of the DA62 (**CF4**).

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

Consequently, it was agreed that the pilot of the ASW28 had not had situational awareness of the presence of the DA62 until it had been visually acquired (**CF3**). Members appreciated that, once the DA62 had been sighted, its proximity had caused the ASW28 pilot concern (**CF7**) and there had been little time for them to have taken avoiding action. Nevertheless, members noted that the pilot of the ASW28 had not reacted to the geometry of the encounter by having taken instinctive and immediate emergency action. As such, members surmised that the pilot of the ASW28 may have felt that the DA62 had been uncomfortably close but, perhaps, the separation may not have reduced to quite the extent that they had initially perceived at the time.

Members next turned their attention to the actions of the pilot of the DA62 and noted that they had been listening-out on the Solent Radar frequency. Members agreed that it had been unlikely that relevant information would have been gleaned from that frequency and that an alternative, much nearer to the area in which they had been flying, would have been more appropriate. Members also agreed that it would have been most prudent to have been in receipt of an ATS whilst tracking through particularly congested airspace (**CF1**). Nevertheless, members noted that the pilot of the DA62 had received a TAS TA on a contact ahead of them (**CF5**) and agreed that that had provided situational awareness of the ASW28. Members noted that the pilot of the DA62 had visually acquired other gliders in the area but surmised that they may not have been aware that a gliding competition had been in progress, as promulgated by NOTAM H2245/24, and that many gliders had been converging towards Lasham.

Members were a little surprised that, despite having situational awareness of the ASW28 and another glider above it, both heading on a reciprocal course towards them, the pilot of the DA62 had not taken more positive action to increase separation by a more comfortable extent (**CF2**). Members noted that they had passed vertically between the two gliders and agreed that they had not fully appreciated the risk that their course of action, and proximity to the ASW28, had posed (**CF6**).

Concluding their discussion, members were in agreement that the pilot of the DA62 had flown close enough to have caused concern to the pilot of the ASW28 and that safety margins had been reduced. However, members agreed that the pilot of the DA62 had visually acquired the ASW28 in time for their flightpath to have been considered and that, ultimately, corrective action could have been taken, if required, to have avoided a further reduction in separation. Members agreed that, on balance, there had not been a risk of collision. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024078			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
	• Situational Awareness of the Conflicting Aircraft and Action			
2	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
3	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			
4	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
	• See and Avoid			
5	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

6	Human Factors	• Perception of Visual Information	~~Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement~~	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: C.

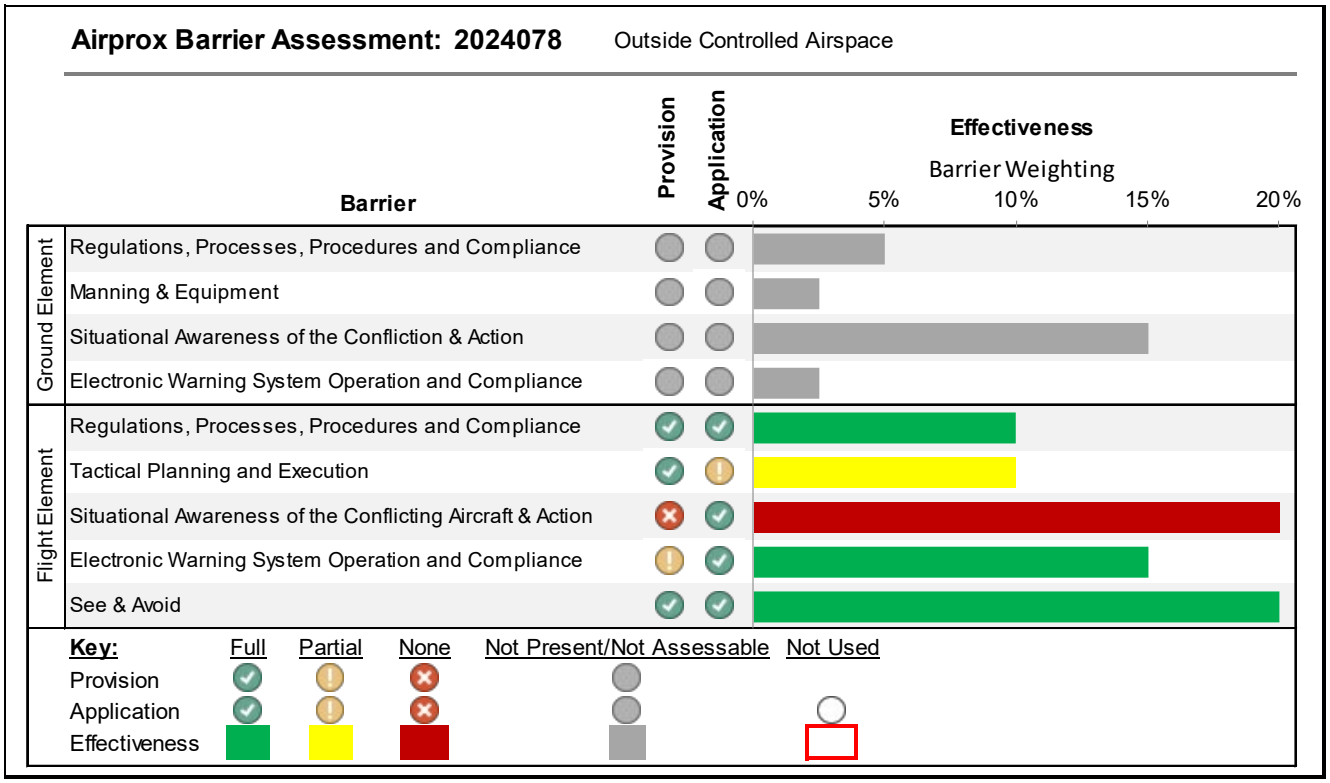
Safety Barrier Assessment[3]

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 neither pilot had been in receipt of an ATS whilst transiting through an area of known intense aerial activity.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the ASW28 had not had situational awareness of the presence of the DA62 until it had been visually acquired.



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