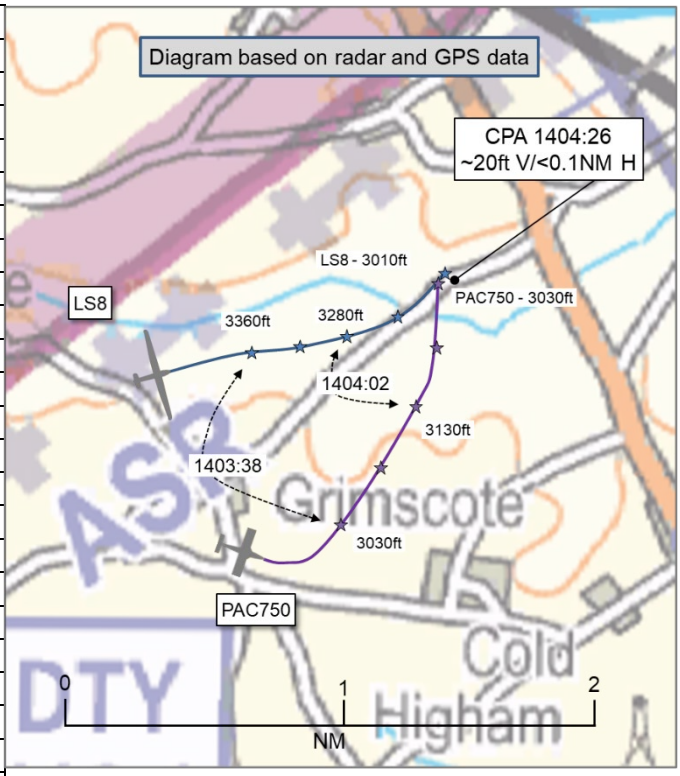
AIRPROX REPORT No 2023172

Date: 07 Aug 2023 Time: 1404Z Position: 5211N 00103W Location: 5NM WSW Northampton

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	LS8	PAC 750XL
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	None
Provider	N/A	N/A
Altitude/FL	3010ft	3030ft
Transponder	A, C, S	A, C, S+
Reported		
Colours	White	NR
Lighting	None	NR
Conditions	VMC	NR
Visibility	>10km	NR
Altitude/FL	3000ft	NR
Altimeter	QNH	NR
Heading	090°	NR
Speed	70kt	NR
ACAS/TAS	FLARM	NR
Alert	None	NR
Separation at CPA		
Reported	0ft V/100m H	NR
Recorded	~20ft V/<0.1NM H	



THE LS8 PILOT reports that they had been heading back to [destination airfield] having declared an out and return task to Great Malvern. Approaching southwest of Northampton, and just west of the M1 at about 4000ft QNH, they had spotted a white twin engine aircraft [they recall] flying in what appeared to be random height and direction. It had eventually headed on an easterly track, parallel to their track, about 2km to the south and about 1000ft below. It had then climbed and turned directly towards the LS8 at the same height. The LS8 pilot reports having had to dive steeply otherwise the other aircraft would have hit them [they judged]. It had not appeared to have taken any avoiding action. It had then flown off to the north. The LS8 pilot noted that with hindsight they should have called Cranfield or Northampton Sywell to ask it the aircraft had taken off from their field. The LS8 pilot reports that they had had their Mode S transponder on as well as ADSB-out. Their [TAS] had also been on.[…]. When the LS8 pilot had reached their destination airfield they reported that one other glider pilot had told them that they had had a similar issue with a white twin engine aircraft and would be reporting it.

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

THE PAC750 PILOT reports that the incident had taken place during a training flight from [departure airfield] to [destination airfield]. Soon after departing […] they had carried out some basic manoeuvres e.g. stalling, medium level and steep turns. On completion they had resumed their flight to [destination airfield]. The location of Husbands Bosworth was discussed, identified and the area avoided. The glider had come into their peripheral vision from the left side and from under the left wing. The pilot reports that they had assumed it had seen them first and quite late as it had seemed to be descending and turning left to avoid. The PAC750 pilot pitched-up sharply in response. The remaining flight had been uneventful.

Factual Background

The weather at Cranfield was recorded as follows:

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METAR EGTC 071350Z 27011KT CAVOK 19/08 Q1018=
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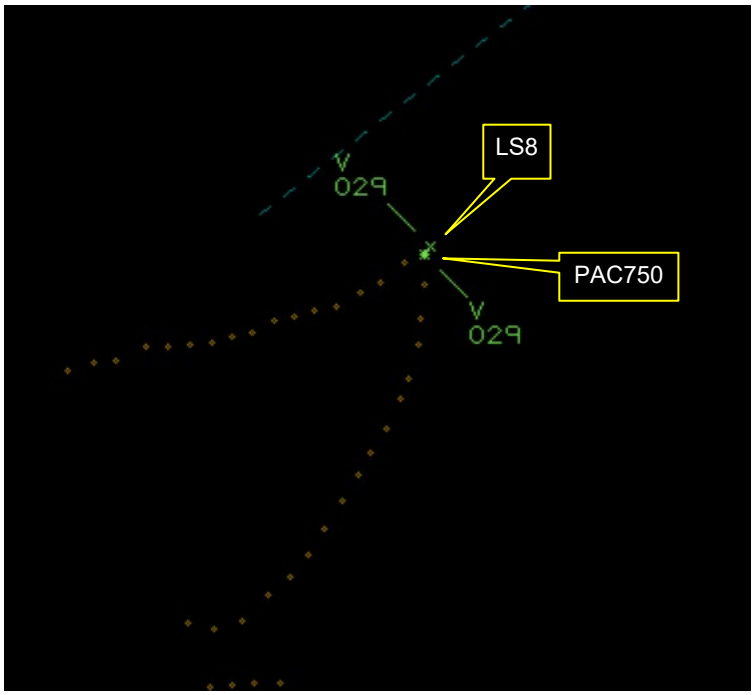
Analysis and Investigation

UKAB Secretariat



CPA 1404:26 ~20ft V/<0.1NM H

The LS8 and PAC750 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 PAC750 pilot was required to give way to the LS8.[2]

Comments

AOPA

Whilst thorough flight planning preparation is essential, gliders do fly outside the circuit, until there is commonality in electronic conspicuity, effective lookout during HASELL checks is paramount, as gliders can be very difficult to spot.

BGA

It's always wise to clear the area using HASSLL/HASEL checks before performing manoeuvres that involve rapid changes in altitude.

Carry-on electronic conspicuity (EC) devices are now relatively inexpensive. While no single EC device will detect all other airspace users, using any one of the available EC devices can only [help to] reduce the risk of an Airprox.

[1] UK Reg (EU) SERA.3205 Proximity.
[2] UK Reg (EU) SERA.3210 Right-of-way (c)(2) Converging.

Summary

An Airprox was reported when an LS8 and a PAC750 flew into proximity 5NM west-southwest of Northampton at 1404Z on Monday 7th August 2023. Both pilots were operating under VFR in VMC, neither pilot in receipt of an Air Traffic Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and GPS tracking information. 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 looked at the actions of the LS8 pilot. They had been engaged in an out-and-return task to Great Malvern and had observed a 'Twin' approximately 2km to their south flying what had appeared to be in a random direction and height (UKAB analysis of the event has shown there to have been only the PAC750 and other gliders in the area). The LS8 pilot had been monitoring the progress of the other aircraft and had noted that its manoeuvring had been unpredictable. Members therefore felt that a more prudent course of action might have been to have taken earlier action to increase separation (**CF3**). The Board agreed that, in the event, the PAC750 had turned towards the LS8, climbing steeply, and the only course of action open to the LS8 pilot at this stage had been to dive steeply because they believed the other aircraft would have hit them.

Board members noted positively the LS8 pilot's carriage and use of both a transponder and TAS, expressing disappointment that the equipment that they had been carrying appeared to have been unable to receive any emissions from the PAC750 (**CF2**) and that they had therefore received no warnings of its presence.

Turning to the PAC750 pilot, members expressed some disappointment at the lack of detail to have been reported on this event and wished to urge those involved in Airprox to respond positively when asked to contribute to the investigation of such events, recalling that the role of the UKAB is to analyse, assess and report the circumstances, factors contributing to and risks of collision for all Airprox occurrences in UK airspace, and to communicate its findings, lessons identified and associated recommendations to relevant sections of the UK aviation regulatory and operating organisations and the broader aviation communities. It is a fundamental tenet of the UKAB that the Board never apportions blame or liability. It is important that the Board is offered individual recollections of events to enable their work to fulfil the above role. The Board opined that without a clear knowledge of the equipment carried and used by the PAC750, it was difficult to accurately assess and understand the lack of interaction between it and the LS8. As neither pilot had been in receipt of an air traffic service, and no interactions between the equipment on either aircraft had been recorded, it was accepted that neither pilot had had any situational awareness of the other aircraft ahead of the event (**CF1**) and that the PAC750 pilot had seen the LS8 at such a late stage that it could be considered to be an effective non-sighting (**CF4**).

When determining the risk of the Airprox, members considered the reports of both pilots and agreed that safety margins had been much reduced below the norm and, although the LS8 pilot had gained sight of the PAC 750, it had been at a late stage and fortunate that they had been able to take avoiding action to increase the separation. Nevertheless, the Board thought that safety had been much reduced and that there had been a risk of collision (**CF5**) and assigned a Risk Category B to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023172			
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	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			
3	Human Factors	• Incorrect Action Selection	Events involving flight crew performing or choosing the wrong course of action	Pilot flew close enough to cause concern
4	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			
5	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 Assessment[3]

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

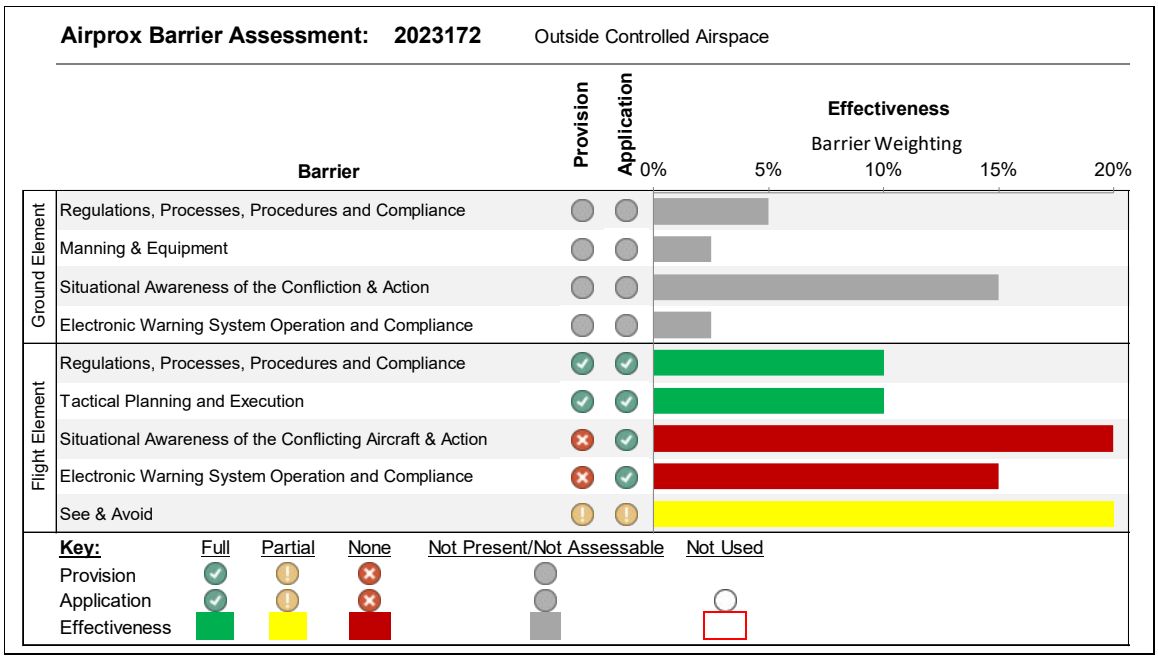
Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither the LS8 or PAC750 pilots had any Situational Awareness of the presence of the other aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the electronic conspicuity equipment carried by the LS8 was unable to detect the emissions from the equipment carried by the PAC750.

See and Avoid were assessed as **partially effective** because the LS8 pilot saw the PAC750 early enough to have taken action to increase separation but elected to monitor its progress and the PAC750 pilot saw the LS8 at such a late stage that it could be considered effectively a non-sighting of the LS8.

[3] 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: 2023172
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