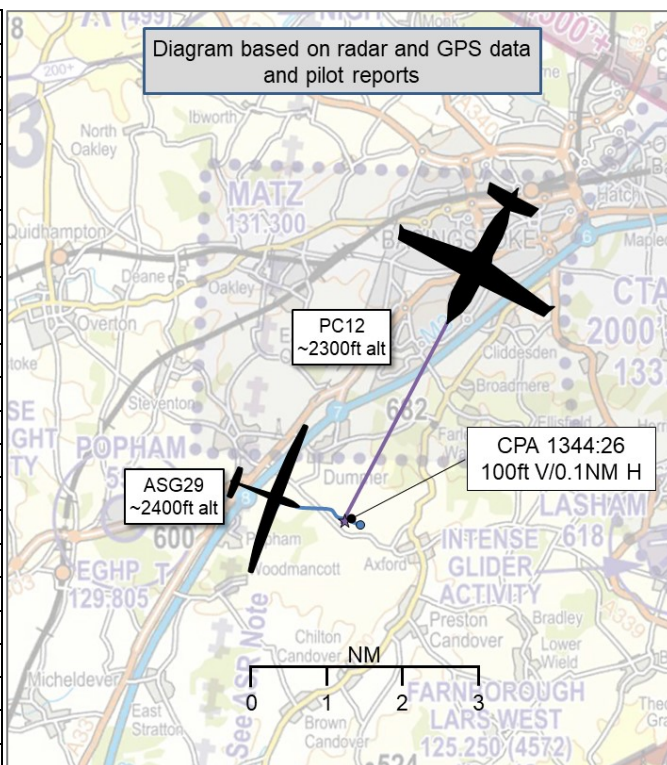


**AIRPROX REPORT No 2020089**

Date: 02 Aug 2020 Time: 1344Z Position: 5111N 00109W Location: 3NM east Popham

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASG29	PC12
Operator	Civ Gld	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Solent
Altitude/FL	2400ft	2300ft
Transponder	Off	A, C, S
<b>Reported</b>		
Colours	White	Grey, Beige
Lighting	None	Nav, Strobe, Wing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2450ft	2400ft
Altimeter	QNH (1020hPa)	QNH (1016hPa)
Heading	100°	200°
Speed	60kt	180kt
ACAS/TAS	FLARM	TCAS II
Alert	None	None
<b>Separation</b>		
Reported	100ft V/30m H	200ft V/300m H
Recorded	100ft V/0.1NM H	



**THE ASG29 PILOT** reports they had been flying for about 3 hours and decided that they would return to base and land. They left the area near Popham and set a straight-line course at about 100°, flying at about 60kts IAS, plus an additional 12kt tail wind was displayed. All was uneventful until they suddenly noticed an aircraft appear from nowhere to their left flying fast from north-to-south and what appeared to be about 100ft vertically below them. It was grey metallic with a T-tail and looked like a Pilatus. It never made any avoiding action. They noted the time on their watch as just after 13:45 UTC and their navigation display read 2450ft AMSL, QNH 1020mb. The plane vanished quickly. They could easily have been 100ft lower or a few fractions of a second earlier and then collided. There were a lot of other gliders in this area too. They attached a chart that shows FLARM tracks for 1/2 hour before and after the incident. This is now an even more congested area squeezed between areas of controlled airspace.

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

**THE PC12 PILOT** reports that it was busy with glider and light aircraft activity on the day along the route. They were receiving a Traffic Service from Farnborough and picked up the destination airfield ATIS early, after confirmed receipt of a Traffic Service, to avoid distraction from lookout near Lasham. Being good weather and a Sunday they expected traffic density to be high. 2400ft was maintained for the duration of the flight. Although a higher altitude was considered, with experience in the airspace, gliders can be found in the area of Lasham across to the west of Popham between 2000ft and 5000ft. The usual instruction to join their destination airfield is below 2000ft, so to avoid steep descents later they planned to maintain 2400ft and expect a service from Farnborough to assist with Traffic Information. There were multiple reports given to lookout for. They recalled that at that moment they were looking for 3 contacts and had spotted at least 2/3 contacts. To help mitigate the risk, a reduced speed was used with the autopilot to assist their ability to keep their eyes outside, along with utilising all external lights of the PC12. All lights were on, including recognition lights/wing ice light to assist visibility to other aircraft. Basingstoke is the usual location at which they change frequency to

Southampton which often diverts lookout momentarily as it is a single crew aircraft, however, they don't recall this being an issue at the time of the incident, they believe handover took place once passing abeam Lasham [UKAB note: handover occurred at Basingstoke, 4NM north of the Airprox location]. They believe that due to the angle of convergence of the glider it reduced their ability to spot the traffic until late. At the time the glider was seen it appeared to be routing away from their position. They believe, based on what they saw, that the glider had seen and avoided them before they made visual contact with them. Shortly after, they made visual contact with another 2 gliders above and clear of them routing away. Along with looking for other traffic reported by Farnborough LARS, they sighted 3 gliders and 3 single engine aircraft along their route on the day, so it was a busy period. From their recollection the incident glider was given as Traffic Information to them but with 'no altitude reported'. They had been prioritising looking for the incident glider as they believed they had spotted the other traffic reported to them. There were at least 5-6 reports of traffic over the course of this flight.

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

**THE SOLENT CONTROLLER** reports that they received notification of the Airprox on the 20<sup>th</sup> of August 2020. They have no recollection of the event.

## Factual Background

The weather at Odiham was recorded as follows:

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METAR EGVO 021350Z AUTO 26008KT 9999 FEW050/// SCT070/// 21/10 Q1016
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## Analysis and Investigation

### NATS ATSI

The unit was made aware that an Airprox had been filed by a glider against a PC12 aircraft, in the vicinity of Popham and Lasham, having viewed the radar replay, Solent were working the PC12. The PC12 was in the vicinity and at the reported height of the Airprox report from the glider, there was no report on Solent's frequency by either the PC12 pilot or the glider pilot. Having viewed radar and R/T replays, the PC12 had just been transferred to Solent from Farnborough one minute before the stated time on the Airprox report passing a primary contact a short time later in a position that again would fit with the Airprox report. Nothing was reported on Solent's frequency on the day. The controller was not aware of any Airprox as nothing was reported on their frequency, they did however provide the PC12 pilot with generic Traffic Information on numerous contacts in their vicinity and also passing Traffic Information on a northbound AA5 that was at a similar altitude as the PC12. This was all that the controller could do as the Airprox occurred outside controlled airspace and they weren't working any of the other traffic. The controller couldn't remember the event as they were only made aware over two weeks later that an Airprox had been filed. The PC12 pilot had also been passed generic Traffic Information by Farnborough prior to being transferred to Solent.

### UKAB Secretariat

The ASG29 and PC12 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>1</sup> If the incident geometry is considered as converging then the PC12 pilot was required to give way to the ASG29.<sup>2</sup>

The radar replay displays a primary track that corresponds with the GPS log file the ASG29 pilot provided, although it is not possible to determine this fully. The PC12 is squawking 3663. Neither aircraft alters course when the PC12 passes behind the ASG29.

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<sup>1</sup> SERA.3205 Proximity.

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

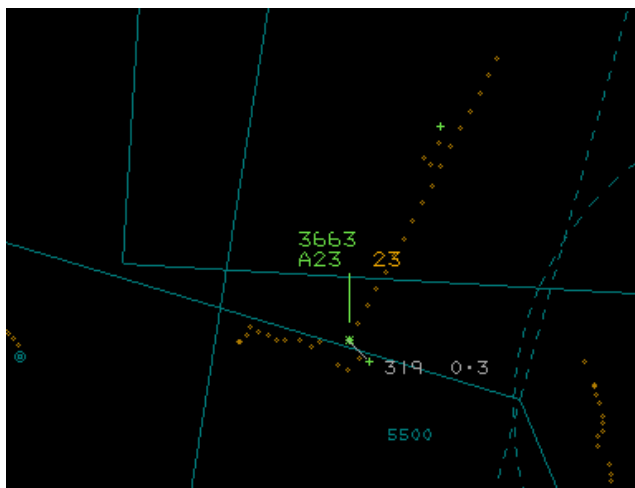


Figure 1: 1344:26

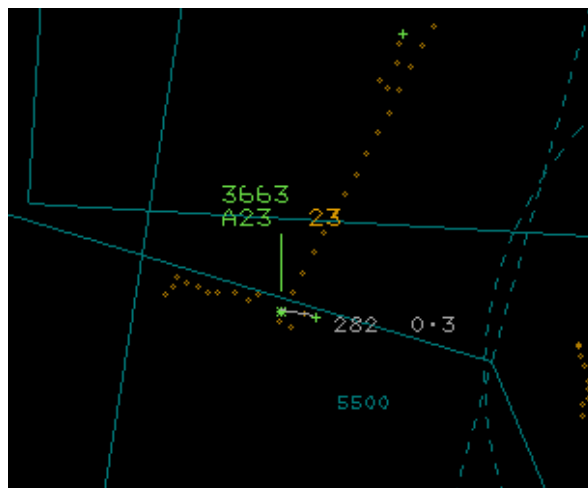


Figure 2: 1344:30 CPA

## Comments

### BGA

We are encouraged by the airmanship displayed by the PC12 crew in trying to mitigate the threat of a very busy area for all types of aircraft. It is unfortunate that the electronic warning systems were incompatible with each other.

As a very general rule-of-thumb, sailplanes returning to the circuit are more likely to be found at circuit altitude plus 1000ft for every 5NM, although high performance ones will mostly be following a shallower profile. Those local soaring or flying cross-country could be at any altitude from low-level up to cloud base and above.

## Summary

An Airprox was reported when an ASG29 Glider and a PC12 flew into proximity 3NM east of Popham at 1344Z on Sunday 2<sup>nd</sup> August 2020. Both pilots were operating under VFR in VMC, the ASG29 pilot not in receipt of a service and the PC12 pilot in receipt of a Basic Service from Solent Radar.

## **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 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board began by looking at the actions of both the Farnborough and Solent controllers. Initially the PC 12 was on a Traffic Service on the Farnborough frequency, the controller passed Traffic Information on a number of unknown aircraft that were visible on their radar screen. When the PC12 pilot changed to Solent Radar the pilot changed to a Basic Service. Under a Basic Service the controller is not required to pass Traffic Information unless they believe a definite risk of collision exists, nevertheless the Solent controller passed Traffic Information to the PC12 pilot on a number of unknown contacts. The Board agreed that both controllers had provided Traffic Information to the PC12 pilot to ensure they had sufficient generic situational awareness that there was a high level of activity in the area that they would be transiting through.

Turning to the actions of the ASG29 pilot, the BGA member said that, although they did not know why the pilot had opted to select the transponder off (**CF3**) the BGA actively encourage pilots to have the system selected on whenever possible to allow both Air Traffic units and aircraft fitted with collision warning systems to utilise the information that can be gathered from a transponder to alert others of the presence of the glider. In this instance, if the ASG29 pilot had selected the transponder on, the PC12s TCAS II would have alerted the pilot of the presence of the ASG29 and, may have, provided information that would have prevented this incident. Both aircraft were fitted with an electronic warning system but, unfortunately, they were incompatible and therefore neither pilot received an alert (**CF4**).

The Board then looked at the actions of the PC12 pilot. The PC12 pilot had decided to fly the cruise at 2400ft to avoid a steep descent into their destination. Members agreed that the best course of action would have been to climb to a higher altitude to deconflict from the known glider activity as much as possible (**CF1**), the BGA member said that in the area between Popham and Lasham the majority of gliders will be at the lower levels. Members then discussed why the PC12 pilot had requested a Traffic Service from Farnborough but then accepted a Basic Service from Solent, whilst still in an area of high traffic density. A member said that due to COVID-19 staffing restrictions, Southampton had capacity issues that affect their ability to provide a full service to all aircraft. To mitigate this a system had been implemented to prioritise aircraft inbound to Southampton and operating within controlled airspace over those outside controlled airspace who were transiting through the area. Regardless, the PC12 pilot had received suitable Traffic Information from the Solent controller (**CF2**) and was looking for the numerous contacts reported to them. The GA members said that, with changes to airspace classifications in busy uncontrolled airspace, it can be noticeable that aircraft are squeezed into narrower areas which pilots should be aware of and should adjust their tactical planning to take account of the increased risk associated with these changes.

Finally, the Board turned to the risk. Neither pilot saw the other aircraft in time to affect the separation (**CF5**). Regardless the aircraft were separated by 100ft vertically and 0.1NM horizontally, the Board agreed that there was no risk of collision, a Risk Category C.

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

### Contributory Factors:

2020089			
CF	Factor	Description	Amplification
<b>Flight Elements</b>			
<b>• Tactical Planning and Execution</b>			
1	Human Factors	• Flight Planning and Preparation	
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>			
2	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
<b>• Electronic Warning System Operation and Compliance</b>			
3		• Any other event	ASG29 Transponder switched off
4	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
<b>• See and Avoid</b>			
5	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots

Degree of Risk: C.

### Safety Barrier Assessment<sup>3</sup>

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

<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

**Flight Elements:**

**Tactical Planning and Execution** was assessed as **partially effective** because the PC12 could have flown at a higher level and avoided the majority of the gliders in the area.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **partially effective** because the PC12 pilot had generic information that there was glider activity in the area. The ASG29 pilot did not have any information about the PC12.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because both aircraft were fitted with an electronic warning system but they were incompatible.

**See and Avoid** were assessed as **ineffective** because neither pilot saw the other aircraft in time to affect the aircraft separation.

