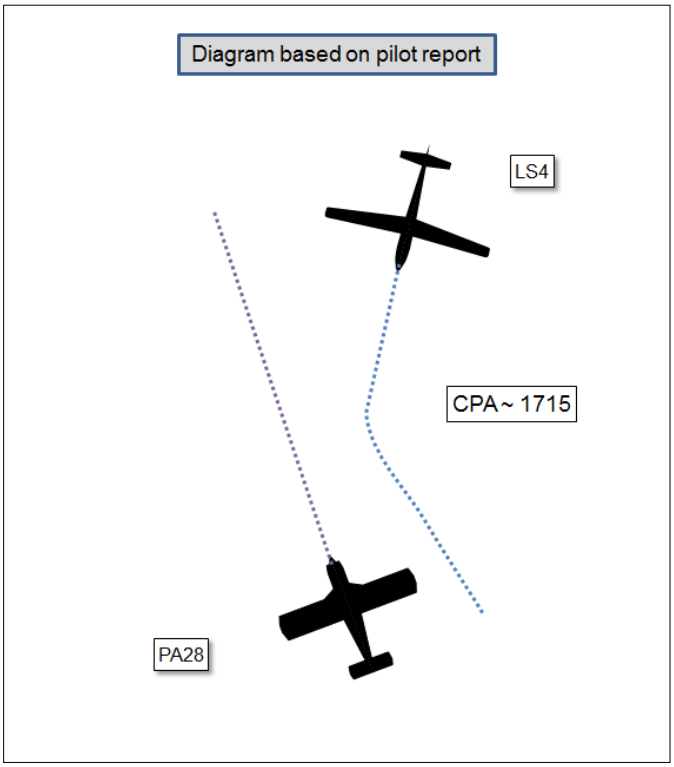
AIRPROX REPORT No 2016227

Date: 22 Oct 2016 Time: 1715Z Position: 5054N 00031W Location: SW of Parham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	LS4 Glider	PA28
Operator	Civ Club	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	NK
Service	None	
Provider	Parham	
Altitude/FL	NK	NK
Transponder	State/Modes	
Reported		
Colours	White	White, Blue
Lighting	NK	NK
Conditions	VMC	
Visibility	>10km	
Altitude/FL	2000ft	
Altimeter	NK	
Heading	180°	
Speed	45kt	
ACAS/TAS	FLARM	
Alert	Unknown	
Separation		
Reported	0ft V/30m H	NK
Recorded	NK	



THE LS4 PILOT reports that he had been on a southerly heading for approximately 2-3 minutes when he saw the PA28 slightly right of his 12 o'clock as it appeared from behind his compass. He banked hard left and levelled his wings when he determined the risk of collision had passed. The aircraft passed so close he could hear the engine and see the exhaust out of the bottom of the cowling. He does not believe the PA28 pilot saw him because there was no change in the PA28's heading. After he had passed the PA28 he turned right to try to identify the aircraft and flew through the PA28's prop wash. From the first sighting to the aircraft passing him was about 5 seconds. The sun was low in his 2 o'clock and in the PA28 pilot's 7 o'clock.

He assessed the risk of collision as 'High'.

THE PA28 PILOT could not be traced.

Factual Background

The weather at Shoreham was recorded as follows:

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METAR EGKA 221650Z 03006KT 9999 FEW034 12/08 Q1014

METAR EGKA 221720Z 03004KT 9999 FEW038 10/07 Q1014
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Analysis and Investigation

UKAB Secretariat

The LS4 and PA28 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]. If the incident geometry is considered as converging then the PA28 pilot was required to give way to the LS4[3].

Comments

BGA

The South Downs ridges are much used by gliders in a northerly wind, and this incident occurred fairly close to Parham gliding site. An especially good lookout is required in these conditions in this area.

Summary

An Airprox was reported when an LS4 and a PA28 flew into proximity at 1715 on Saturday 22nd October 2016. The LS4 pilot was operating under VFR in VMC and not in receipt of a Service. The PA28 pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilot of the LS4 aircraft.

The Board began their discussion by looking at the actions of the PA28 pilot. The Board were disappointed that the PA28 pilot could not be traced as a report from the PA28 pilot would have enabled them to gain a greater understanding of his actions during this incident. However, members quickly agreed that, whilst the area he was in can be busy with gliders and other aircraft, he was not unreasonably close to any gliding sites. Agreeing with the BGA's comments, GA members noted that the Parham area can be particularly busy in good gliding conditions, and it behoved all who flew in that area to keep a sharp lookout; unfortunately, it seemed that the PA28 pilot had simply not seen the glider in what was a near head-on aspect.

The Board then considered the actions of the LS4 pilot. Members acknowledged that the PA28 had appeared from behind the glider's compass and commented that this reinforced the need to actively scan the area ahead of the aircraft whilst also moving one's head to mitigate any obscuration. Noting that the glider pilot had taken emergency avoiding action to avoid the PA28, due to the late sighting, some members wondered about the wisdom of turning back to identify the other aircraft, and the subsequent flight into the prop wash, which was perhaps not the most prudent manoeuvre.

The Board then looked at the safety barriers that were relevant to this Airprox and decided that the following were the key factors:

- **Situational Awareness** was assessed as being **ineffective** because neither aircraft was on the same frequency or in receipt of an Air Traffic Service that would have alerted them to the other aircraft's presence.

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

- **Collision Avoidance Systems** were considered **ineffective** because although the LS4 was fitted with FLARM, it was not able to detect the PA28; presumably because the PA28 was not FLARM equipped.

- **See and Avoid** was considered **partially effective** because the LS4 pilot only saw the PA28 at a late stage and the PA28 pilot probably did not see the LS4.

The Board then considered the cause of the incident and members quickly agreed that the LS4 pilot had seen the PA28 late and, although they did not have a report from the PA28 pilot, they believed that the PA28 pilot had not seen the LS4. The incident was therefore assessed as a late sighting by the LS4 pilot and a probable non-sighting by the PA28 pilot. Turning to the risk, a discussion ensued about whether the LS4 pilot had materially altered the separation by his emergency avoiding action at such a late stage. Most members agreed that his description of the incident indicated that he had not, and so the Board also quickly agreed that there had been a serious risk of collision that had only been prevented largely by providence; therefore Board members assessed the risk as Category A.

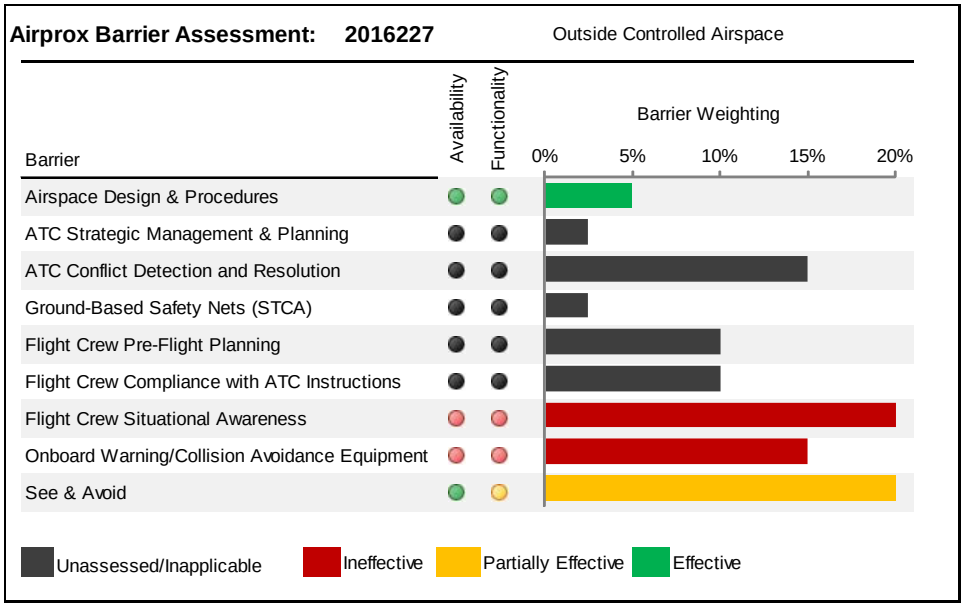
PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by the LS4 pilot and a probable non-sighting by the PA28 pilot.

Degree of Risk: A.

Barrier Assessment[4]:

Modern safety management processes employ the concept of safety barriers that prevent contributory factors or human errors from developing into accidents. Based on work by EASA, CAA, MAA and UKAB, the following table depicts the barriers associated with preventing mid-air-collisions. The length of each bar represents the barrier's weighting or importance (out of a total of 100%) for the type of airspace in which the Airprox occurred (i.e. Controlled Airspace or Uncontrolled Airspace).[5] The colour of each bar represents the Board's assessment of the effectiveness of the associated barrier in this incident (either Fully Effective, Partially Effective, Ineffective, or Unassessable/Absent). The chart thus illustrates which barriers were effective and how important they were in contributing to collision avoidance in this incident.



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

[5] Barrier weighting is subjective and is based on the judgement of a subject matter expert panel of aviators and air traffic controllers who conducted a workshop for the UKAB and CAA on barrier weighting in each designation of airspace.