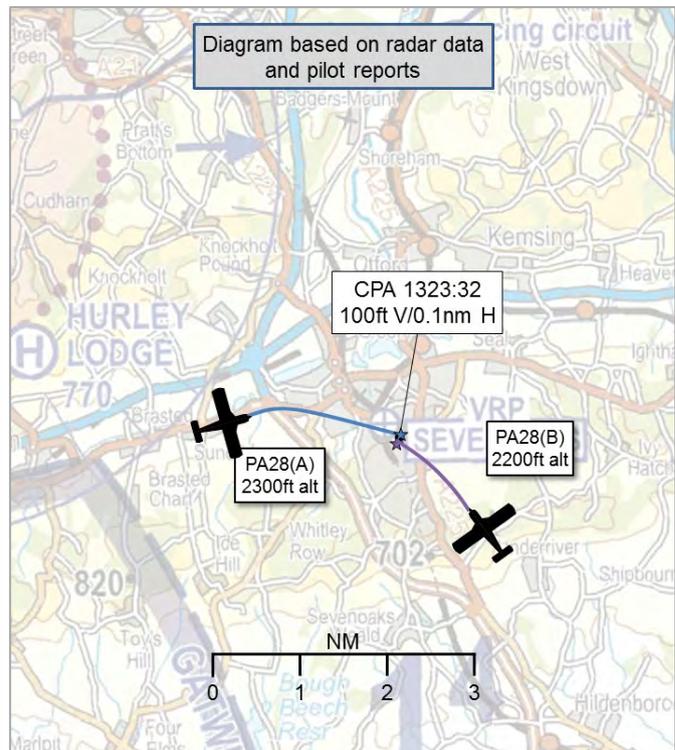


AIRPROX REPORT No 2018085

Date: 15 May 2018 Time: 1323Z Position: 5116N 00011E Location: Sevenoaks VRP

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28(A)	PA28(B)
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Biggin Hill
Altitude/FL	2300ft	2200ft
Transponder	A, C, S	A, C
Reported		
Colours	White, Blue	Mauve, White
Lighting	Strobe Anti-Col, Landing	NK
Conditions	VMC	VMC
Visibility	>10km	8km
Altitude/FL	2200ft	2200ft
Altimeter	QNH (1019hPa)	NK
Heading	110°	300°
Speed	100kt	90kt
ACAS/TAS	Pilot Aware	Not reported
Alert	None	Not reported
Separation		
Reported	100ft V/130m H	0ft V/100m H
Recorded	100ft V/0.1nm H	



THE PA28(A) PILOT reports that he had just departed Redhill on a short flight to Lydd. The weather conditions were good, albeit a little bumpy, and with a moderate haze to the south. He was new to Redhill, and getting to grips with the best approach/departure routes beyond the VRPs. There is a ridge just south of Sevenoaks, and he found himself tracking east towards Sevenoaks at 1400ft beneath the Gatwick CTA. He could see that at 1400ft he would not assure 500ft clearance from the ground/obstacles and so, once clear of the CTA, he climbed to 2200ft and turned towards Lydd. He had requested a frequency change from Redhill TWR at the Gatwick CTA boundary and, when he reached the top of his climb to 2200ft and having completed a clearing turn during that climb, he began tuning his radio to Farnborough LARS East. As he was doing this he looked up and saw an aircraft in his 1-2 o'clock, same level, tracking towards him on a collision course. He first went to turn right, following the rules of the air, but quickly established that he was too close for that action to avoid a collision, so commenced a sharp dive and a very slight left turn. The other aircraft did not appear to alter course. He reported the Airprox to Farnborough Radar in his initial call. They told him they were too busy to take the details at that time but came back 5 minutes later to take the details. He reported the Airprox as 1nm South East of Sevenoaks, at altitude 2200ft, 1019hPa; the other aircraft was low-wing, possibly a PA28. He considered that the other aircraft had right of way and stated that it did not appear on his PilotAware traffic alerting system. He opined that contributing features were a busy phase of flight and his choice of track near a busy VRP.

He assessed the risk of collision as 'High'.

THE PA28(B) PILOT reports that he was informed by Biggin Hill of the outbound traffic. He spotted the other aircraft at about ½nm separation, pointed it out to his passenger, and confirmed 'Traffic in sight'. The PA28(A) was on a reciprocal parallel heading, one hundred feet above, and about 300ft to his right. He banked slightly to the left, not as avoiding action, just to ensure the separation. When the

approaching PA28(A) was nearly abeam it abruptly dived and went from being one hundred feet above him to about 50 feet below as they passed. He assumed the PA28(A) pilot was avoiding entering the London TMA. He didn't, and does not, consider this an Airprox.

He assessed the risk of collision as 'None'.

Factual Background

The weather at Biggin Hill was recorded as follows:

METAR EGKB 151320Z 35008KT 300V070 CAVOK 20/11 Q1019=

Analysis and Investigation

CAA ATSI

The PA28(B) pilot was passed traffic information by the Biggin Hill controller and spotted the conflicting aircraft at about half a mile distant, on a parallel heading, a hundred feet above and about 300ft to the right. The Biggin Hill controller passed timely traffic information and, under the terms of a Basic Service, whether traffic information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller.

The following radar replay snapshots are included to illustrate the developing situation up until CPA at 1323:23 when the aircraft were separated by 0.1nm laterally, and 100ft vertically.

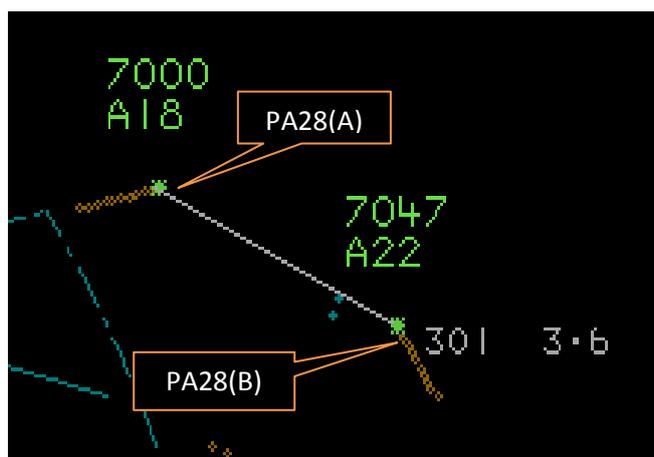


Figure 1: 1322.03 aircraft were 3.6nm & 400ft apart



Figure 2: 1322.47 Biggin Hill controller passed traffic information to the pilot of PA28(B)

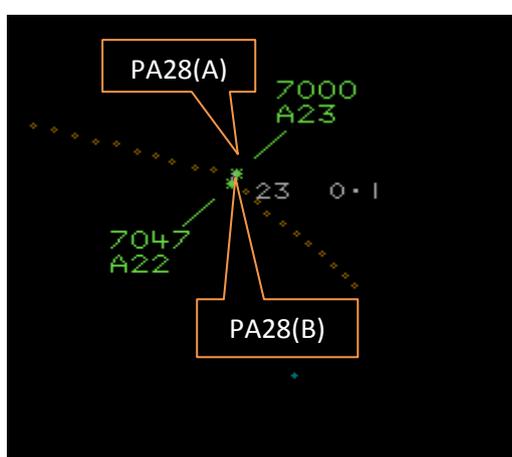


Figure 3 - 1323.23 - CPA occurred

UKAB Secretariat

The PA28(A) and PA28(B) pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as head-on or nearly so, then both pilots were required to turn to the right². If the incident geometry is considered as converging then the PA28(A) pilot was required to give way to the PA28(B)³.

Summary

An Airprox was reported when a PA28(A) and a PA28(B) flew into proximity near Sevenoaks VRP at 1323hrs on Tuesday 15th May 2018. Both pilots were operating under VFR in VMC, the PA28(A) pilot was changing frequency and not in receipt of a service, and the PA28(B) pilot in receipt of a Basic Service from Biggin Hill.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, transcripts of the relevant R/T frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board first began by discussing the actions of the PA28(B) pilot. They were informed that the Traffic Information provided by Biggin ATC to him actually related to a different aircraft and not the PA28(A) (Biggin ATC has no radar and were simply providing Traffic Information based on previous information of aircraft in their area). Notwithstanding, members commended the Biggin ATCO for their diligence in passing Traffic Information whilst only providing a non-surveillance Basic Service. Fortuitously, this had served to focus the PA28(B) pilot's scan towards the PA28(A)'s location such that he was able to acquire it in time to assess that, in his perception, only a slight bank to the left was required to ensure sufficient separation. Although accepting that the PA28(B) pilot adjusted his track slightly to avoid the PA28(A), the Board opined that he could have made a greater and more obvious turn to increase separation, or performed a wing-waggle to demonstrate to the PA28(A) pilot that he had seen him. In this respect, members went on to discuss what constituted 'suitable separation' and agreed that when sighting conflicting traffic, pilots should assume that the other pilot does not have visual contact and may make unexpected or unpredictable manoeuvres; pilots should determine their avoidance requirements taking that possibility into account, and also consider the potential for concern by pilots who may not share their level of comfort regarding separation when suddenly confronted with an aircraft at short range that they had not previously sighted.

The Board then turned to the actions of the PA28(A) pilot. They noted that he was probably less used to operating in the busy airspace in that area than the PA28(B) pilot, and that this, and startle from his unexpected late sighting of the PA28(B), had likely resulted in their different assessments of collision risk. Members noted that the PA28(A) pilot was 'heads-in' the cockpit prior to CPA and it was only when he looked up that he saw PA28(B) close by. Prioritisation of in-cockpit tasks versus lookout was a perennial problem and, recognising that some time had to be given to looking in the cockpit, a GA member reminded the Board of the importance of 'looking-out before you look-in' and breaking up in-cockpit tasks into small 'bite-sized' chunks (such as setting one frequency digit at a time interspersed with further scanning outside the cockpit). Notwithstanding, the Board agreed that the timing of the incident had been unfortunate regarding the PA28(A) pilot's need to change frequency, and agreed with his comments regarding the use of VRPs as turning points. Nevertheless, members wished to commend him for his full and frank report which had provided much useful context to the debate.

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(1) Approaching head-on.

³ SERA.3210 Right-of-way (c)(2) Converging.

The Board then assessed the cause and risk. They noted that the PA28(B) pilot had PA28(A) in sight at 0.5nm and had turned slightly to increase the separation. Noting that at this point he had sufficient situational awareness to assess the situation whereas the PA28(A) pilot did not, they therefore agreed that the cause was the PA28(B) pilot had flown close enough to the PA28(A) to cause its pilot concern. Turning to the risk, the Board were mindful that the PA28(B) pilot was visual with the PA28(A) at an early stage and would not have allowed himself to collide; therefore they agreed that the risk was Category C, although safety had been reduced, there was no risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA28(B) pilot flew close enough to the PA28(A) to cause its pilot concern.

Degree of Risk: C.

Safety Barrier Assessment⁴

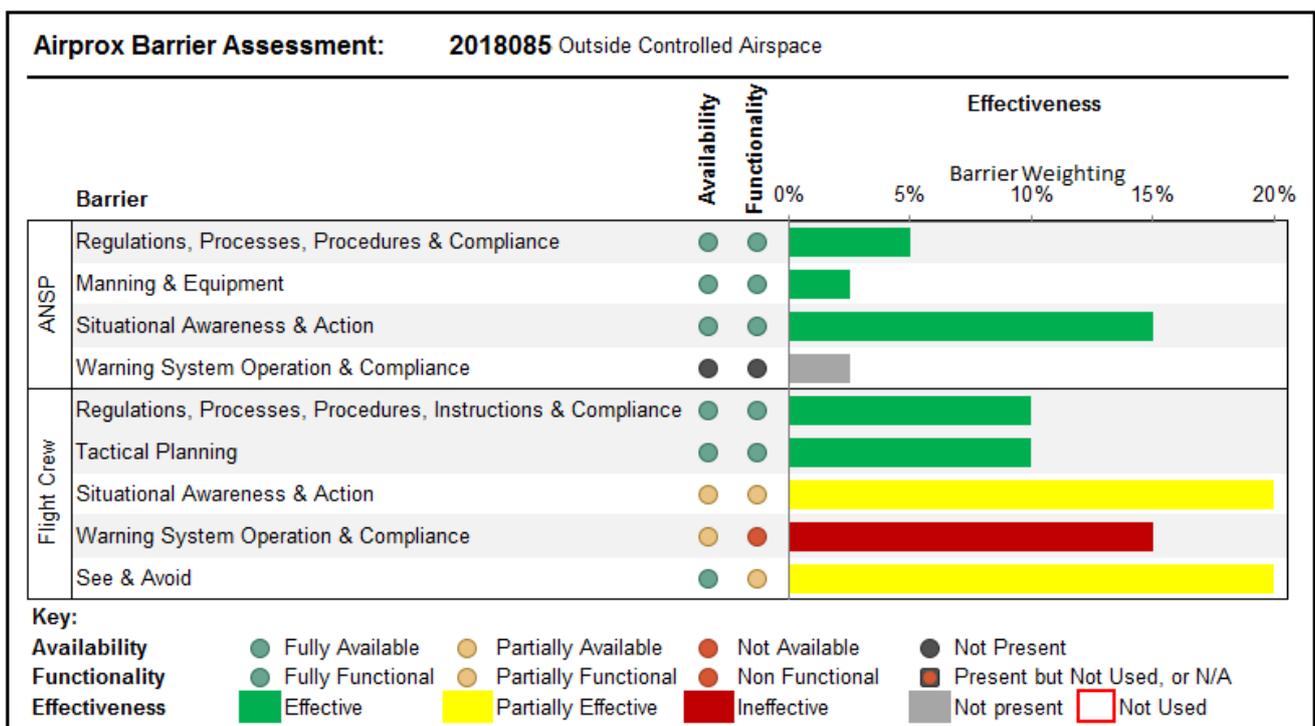
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew:

Situational Awareness and Action were assessed as **partially effective** because the PA28(B) pilot had Traffic Information on an aircraft in a similar position to PA28(A) which resulted in him seeing PA28(A), but the PA28(A) pilot did not have any specific information on PA28(B).

Warning System Operation and Compliance were assessed as **ineffective** because although the PA28(A) had PilotAware it did not alert even though PA28(B) was transponding.

See and Avoid were assessed as **partially effective** because although the PA28(B) pilot was visual with PA28(A) there was an opportunity to either increase separation further or make his presence more obvious; for his part, the PA28(A) pilot only saw the PA28(B) late.



⁴ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](http://www.ukab.co.uk).