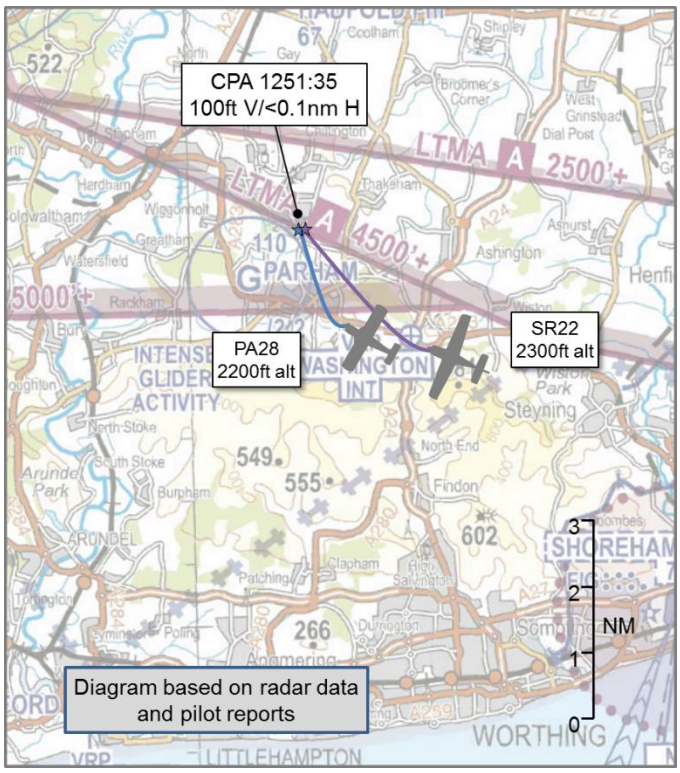
AIRPROX REPORT No 2017269

Date: 24 Nov 2017 Time: 1251Z Position: 5056N 00027W Location: NW Washington VRP

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	SR22
Operator	Civ Trg	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Not yet agreed	None[1]
Provider	Farnborough	Shoreham
Altitude/FL	2200ft	2300ft
Transponder	A, C	A, C, S
Reported		
Colours	White, Blue	White, Silver
Lighting	Strobes, Beacon	Nav, Strobes, Landing
Conditions	VMC	VMC
Visibility	>10km	10km
Altitude/FL	2200ft	2100ft
Altimeter	QNH (1011hPa)	QNH (1011hPa)
Heading	310°	320°
Speed	95kt	166kt
ACAS/TAS	Not fitted	TCAS I
Alert	N/A	TA
Separation		
Reported	<100ft V/0m H	200ftV/0.75nm H
Recorded	100ft V/<0.1nm H	



THE PA28 PILOT reports that he was on a training sortie, with an instructor on-board. They left Shoreham on RW02 and routed to the Washington VRP. At 800ft, after passing Lancing College, they turned onto a heading of 310° to follow the A283 to the VRP, climbing to 2200ft. Once level, they changed frequency to Farnborough and were given a squawk. About 2nm from the VRP, a grey and white aircraft appeared from the top of the windscreen, travelling across the aircraft from a 5:30 position to an 11:30 position; it was within 100ft vertically. They continued the rest of the flight as normal, but once back at Shoreham, they contacted the Tower to ask whether they knew which aircraft had passed them. ATC reported that a Cirrus had taken off after them, and had reported that it was passing them.

He assessed the risk of collision as 'High'.

THE SR22 PILOT reports that an aircraft departed Shoreham ahead of him, stating on frequency that it was 'going north'. This aircraft departed, one landed, and then another departed who was remaining in the circuit, so he waited for it to turn crosswind before commencing his take-off roll. He was therefore several minutes behind the first aircraft and, whilst looking out, was surprised to catch it up only 6nm from Shoreham. A contact showed on TCAS ahead and 200ft below as he levelled at 2100ft. This contact then dropped off TCAS and he didn't recall any 'alert' as he passed the other aircraft; he subsequently confirmed this with his passenger, who also stated that there was no TCAS alert. He became visual with the aircraft at 1.5nm because he had been looking starboard, where he expected to see an aircraft that had departed to the north to be. Having seen it late, he preferred to remain visual rather than turn to the east and lose visual contact; he assessed they would pass clear and above, although closer than desirable. He could see the aircraft as he overtook it on his port side, on a similar heading and below him. With hindsight, whilst he could see the aircraft as he approached, and had

[1] Although the pilot reported being on a Basic Service, this was not agreed with Shoreham ATC.

time to assess the relative positions, the other aircraft's pilot sitting on the left would probably not have seen him until he passed over him. However, he did not consider there to be any risk of collision. Since the incident he has become aware of the blind spot created by the glass-fibre framing and he thought the PA28 was hidden behind that for some of the incident, he is now conscious of the need to make significant head movements overcome this when scanning.

He assessed the risk of collision as 'None'.

THE SHOREHAM CONTROLLER reports that the PA28 pilot reported [after subsequently landing] that an SR22 passed 100ft over him in the vicinity of the Washington VRP. The PA28 departed at 1244hrs and the SR22 at 1247hrs. The PA28 changed to the Farnborough frequency at 1249hrs.

THE FARNBOROUGH CONTROLLER reports that he had no knowledge of the incident at the time and could not recall any relevant details.

Factual Background

The weather at Shoreham was recorded as follows:

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METAR EGKA 241250Z 01005KT 9999 SCT030 08/05 Q1011=
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Analysis and Investigation

CAA ATSI

At 1244:18, the PA28 was cleared for take-off from Shoreham RW02 with a left-hand turn out. With circuit traffic then departing between, at 1247:10 the SR22 was cleared for take-off, also with a left-hand turn out.

The SR22 is first visible on radar at 1248:04 (Figure 1). The aircraft displaying 3763 to the north of the SR22 indicating an altitude of 800ft, is the circuit traffic that departed between the 2 aircraft.

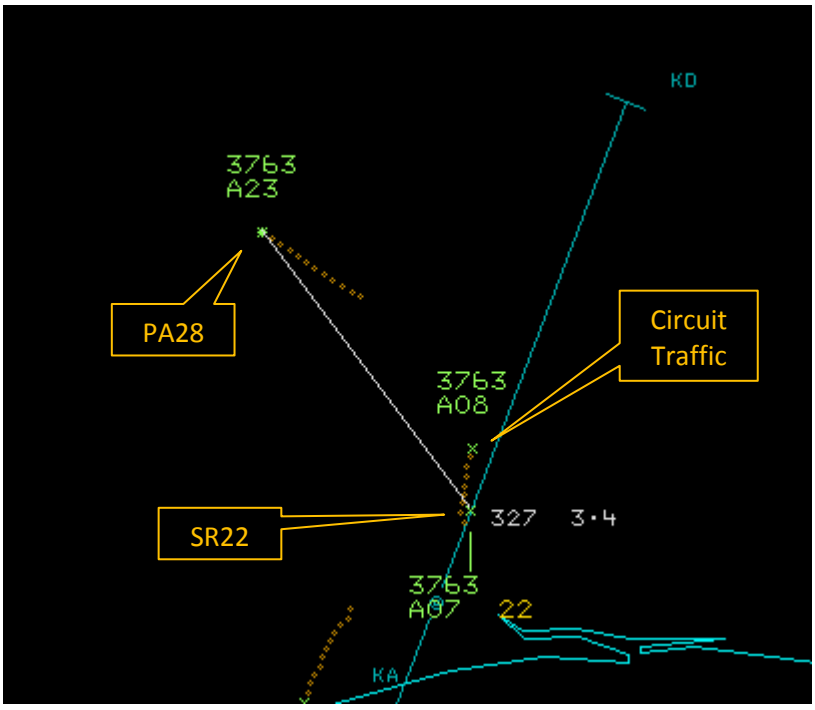

Figure 1 – 1248:04

The PA28 pilot requested a frequency change to Farnborough West at 1249:32, and was instructed to squawk 7000. At 1249:56 the PA28 selected code 7000 (Figure 2).

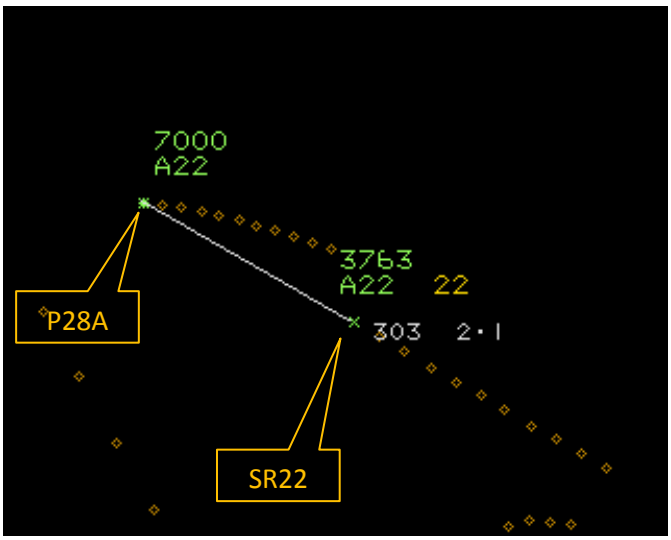

Figure 2 – 1249:56

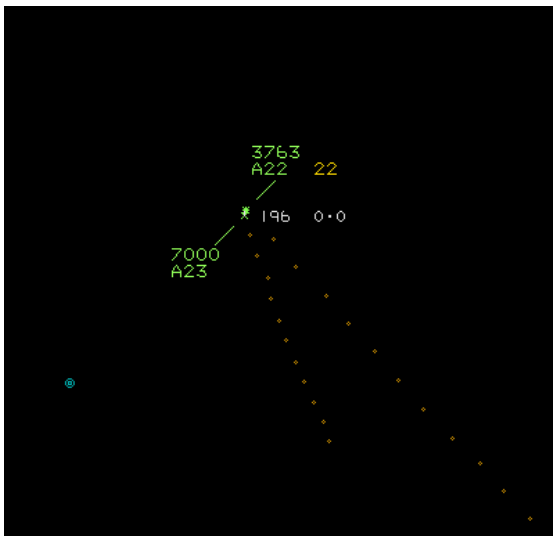

Figure 3 – 1251:35

At 1251:10, the PA28 contacted Farnborough LARS West and requested a Basic Service but was instructed to stand-by. CPA occurred at 1251:35 (Figure 3) with 100ft and less than 0.1nm between the two aircraft. At the same time, the SR22 reported to Shoreham that they were passing the other departing aircraft and requested a frequency change to Farnborough. They were then instructed by Shoreham to squawk 7000.

At the time of the Airprox neither aircraft had agreed a service with a controller. Because both aircraft were operating in Class G airspace, the pilots were responsible for their own collision avoidance.

UKAB Secretariat

Under the standard application of ATS, a pilot and controller must agree a type of service, which then establishes an accord whereby both parties will abide within the definitions[2]. Although the SR22 had taken off from Shoreham under an Aerodrome Service, once outside the confines of the ATZ this no longer applied, therefore a Basic Service should have been requested by the pilot if he required it. This had not been agreed, ergo the SR22 was not receiving an ATS.

The PA28 and SR22 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[3]. The incident geometry is considered as overtaking and the PA28 pilot had right of way; the SR22 pilot was required to keep out of the way of the other aircraft by altering course to the right[4].

Summary

An Airprox was reported when a PA28 and a SR22 flew into proximity at 1251hrs on Friday 24th November 2017. Both pilots were operating under VFR in VMC, and neither was in receipt of an ATS. The PA28 pilot was in the process of obtaining a Basic Service from Farnborough, and the SR22 pilot had not requested a Basic Service from Shoreham.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies, radar photographs/video recordings, and reports from the appropriate ATC operating authorities.

[2] CAP774 Chapter 1, 1.9 Standard Application of ATS
[3] SERA.3205 Proximity.
[4] SERA.3210 Right-of-way (c)(3) Overtaking.

The Board first looked at the actions of the PA28 pilot. Noting that the SR22 was expecting the PA28 to be heading north, the Board wondered whether the PA28 pilot had made his routing clear when on the Shoreham frequency; if he had said he was routing via the Washington VRP then the SR22 pilot may have kept a better lookout in that direction. As it was, if the PA28 pilot had stated simply that they were departing north, then the SR22 pilot could justifiably expect them to be further to his right. As an aside, this led the Board to discuss the position of the Washington VRP, positioned as it was so close to Parham gliding site. GA members who had flown in that area explained that its position meant that aircraft were funnelled north from the VRP and, coupled with the CAS overhead, this meant that the area was a pinch-point. They reiterated CAA advice that, to avoid the risk of collision, pilots should not route directly overhead VRPs. That being said, there was very little the PA28 pilot could have done to avoid the SR22 given that without a CWS, they had no way of detecting it as it approached from behind, and had not yet agreed an ATS with Farnborough.

The Board then turned to the SR22 pilot. Accepting that he wasn't expecting to see the PA28 in the vicinity of the VRP, members noted that, nevertheless, he did receive TCAS indications of its presence and, once he had seen it at a range of about 1½ nm, he didn't take any action. Although he said he wanted to keep the PA28 in sight as he overtook, the GA members thought that his inaction was unwise and that he should have offset to the right; had the PA28 unexpectedly climbed, even just slightly, they opined that the SR22 pilot would not have been left with any options to avoid. Noting that the base of controlled airspace dropped down to 2500ft just ahead of their tracks, the Board thought it was likely that the SR22 pilot didn't want to climb; nevertheless, when he first saw the other aircraft he could have altered his course to the right to pass clear, as he was required to do under SERA rules. Members noted that the SR22 pilot had reported that he didn't remember receiving any warning from his TCAS as he overflew the PA28, and the Board thought that this was probably because, at the time, the PA28 pilot was changing the squawk to the one Farnborough had given and had likely deselected the transponder as he made the change. This demonstrated that TCAS should only ever be considered an aid to awareness, and not a substitute for robust look-out.

In determining the cause of the Airprox, the Board agreed that, because the SR22 pilot had seen the PA28 pilot at a range at which he could have taken action, he had flown into confliction with the PA28; they cited his inaction as a contributory factor. In assessing the risk, members thought that although the SR22 pilot had been visual with the PA28 as he approached from the rear, the separation was such that safety had not been assured, especially if the other pilot had chosen to alter their height; accordingly, the risk was assessed as Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The SR22 pilot flew into conflict with the PA28.

Contributory Factor: Inaction by the SR22 pilot on sighting the PA28 ahead.

Degree of Risk: B.

Safety Barrier Assessment[5]

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

Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **partially effective** because the SR22 pilot didn't comply sufficiently with the overtaking rule.

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

Situational Awareness and Action were assessed as **ineffective** because, although the SR22 had TCAS information, he didn't use it to increase separation.

Warning System Operation and Compliance were assessed as **partially effective**, although the TCAS TA cued the SR22 pilot to look in the right direction, he didn't subsequently alter his course of action.

See and Avoid were assessed as **ineffective** because although the SR22 pilot saw the PA28, he didn't take avoiding action.