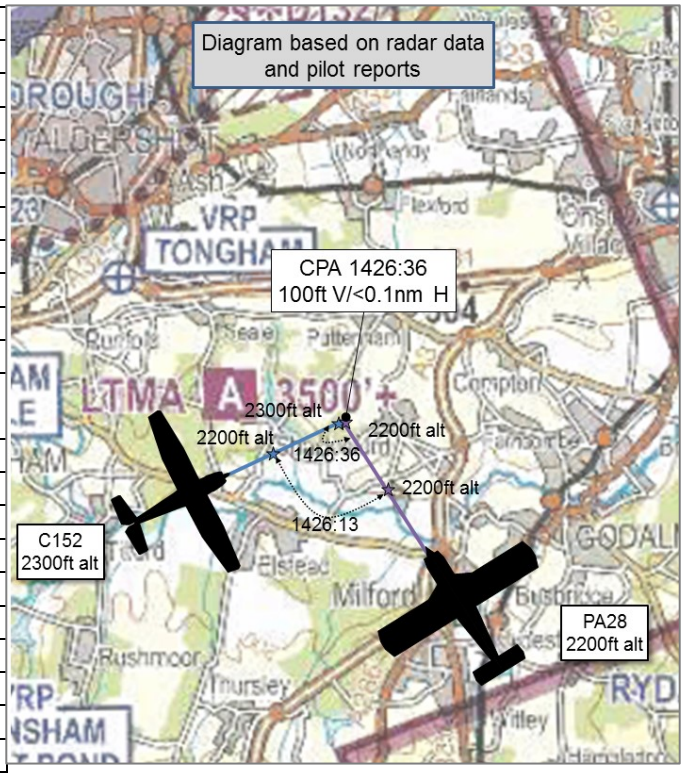
AIRPROX REPORT No 2016234

Date: 02 Nov 2016 Time: 1426Z Position: 5112N 00041W Location: 3nm SW Guildford

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C152	PA28
Operator	Civ Trg	Civ Club
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Basic
Provider	Farnborough	Farnborough
Altitude/FL	2300ft	2200ft
Transponder	A,C	A,C,S
Reported		
Colours	White	White, blue, green
Lighting	NK	Nav, beacon
Conditions	VMC	VMC
Visibility	10km	>10km
Altitude/FL	2200ft	2400ft
Altimeter	QNH (1006hPa)	QNH
Heading	060°	NW
Speed	90kt	105kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	100ft V/0.5nm H	Not seen
Recorded	100ft V/<0.1nm H	



THE CESSNA 152 PILOT reports that they were returning to their base after a training detail in the Frensham Ponds area. When overhead Guildford at 2200ft, the student shouted that there was an aircraft very close, above and to the right in the 2 o'clock position. The instructor's view was still obscured by the Cessna's high wing. By the time the instructor acquired the aircraft visually, it was below and in the 8 o'clock position. He commented that this illustrates the need to position the aircraft regularly to check for other aircraft in blind spots.

He assessed the risk of collision as 'High'.

THE PIPER PA28 CHEROKEE PILOT reports that he had not seen the other aircraft. Additionally, there were no relevant radio reports from either LARS or the reporting aircraft. There was fairly heavy traffic at the time, and a number of aircraft were seen from time to time in the area, but none in an Airprox situation. As there was no report/indication whatsoever of an Airprox at the time, SSR, QNH and heading/track data had not been retained. He was routing via Farnborough and Daventry to his destination. He did not ask LARS for a Traffic Service because they had told other contacts that it was not possible.

THE FARNBOROUGH LARS CONTROLLER was not able to complete a report because he was unaware of the Airprox until about 2 months after it had occurred.

Factual Background

The weather at Farnborough was recorded as follows:

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EGLF 0211420Z 35007KT 300V010 CAVOK 10/02 Q1024=
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Analysis and Investigation

CAA ATSI

The initial pilot report referred to the event occurring on 3 November and the investigation was commenced to obtain evidence in relation to this date. However, neither the radar evidence (obtained from Swanwick) nor RTF recordings obtained from Farnborough, (the C152 was receiving a Basic Service from Farnborough) could identify the event. It was later established, some two months after the event, that the Airprox likely took place on 2 November 2016. The radar evidence was still available but the RTF recordings were not, due to the elapsed time. Because the ATSU providing the service to the reporting aircraft was not advised of the occurrence at the time there was no unit report either.

By correlating the narrative in the pilot report and using the radar evidence for the 2 November, an event was observed to have occurred in the vicinity of Guildford that matched the time, altitudes and trajectory reported by the C152 pilot. The other aircraft was identified as a PA28, which is also consistent with the C152 pilot report. Figure 2 indicates that CPA occurred at 1426:35 with a horizontal distance of less than 0.1nm and 100ft vertically between the aircraft. It is not known what service the other aircraft was receiving, (although given the SSR code it also appeared to be working Farnborough LARS). The C152 was in receipt of a Basic Service, where ATC are not required to monitor individual flights, and collision avoidance is the responsibility of the pilot. If it becomes evident that there is a risk of collision ATC shall issue Traffic Information but only if they actually observe the potential confliction.

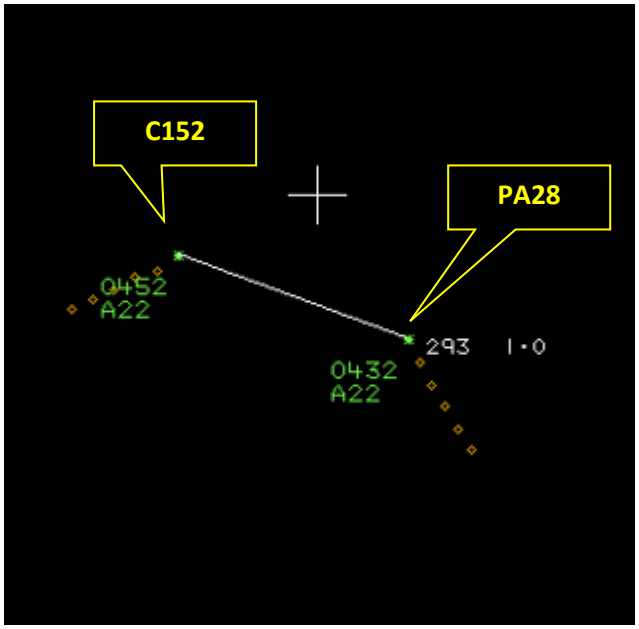


Figure 1 – Swanwick MRT 1426:10.

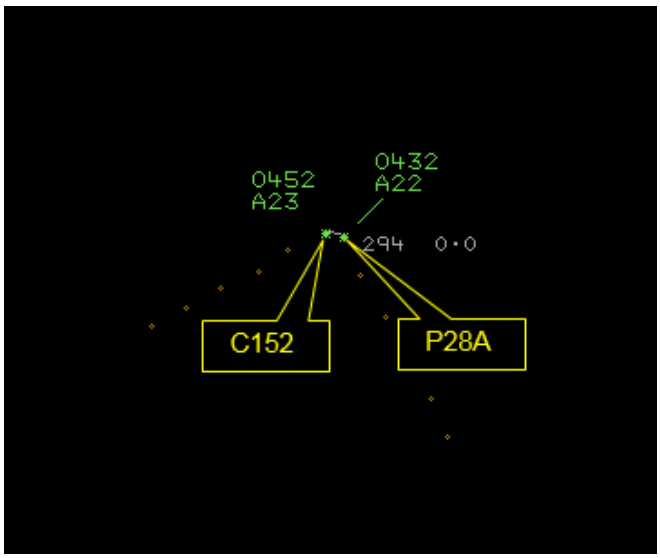


Figure 2 – Swanwick MRT 1426:35. (CPA)

UKAB Secretariat note: Whilst CPA (Figure 2) shows the C152 at 2300ft and therefore above the PA28, prior to this the aircraft had been converging at approximately the same height, Figure 1 shows the relative positions 30 seconds prior to CPA, with both aircraft indicating 2200ft on the radar. Radar tolerances mean that it is feasible that the PA28 could well be higher than the C152 at this point, as described by the C152 pilot.

UKAB Secretariat

The C152 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]. Because the incident geometry is considered as converging then the C152 pilot was required to give way to the PA28[2].

Comments

THE C152 FLYING CLUB'S HEAD OF TRAINING commented that this appears to be a classic converging, high-wing, low-wing incident. The low-wing aircraft was above and to the right of the high-wing Cessna. On converging tracks and descending neither pilot would have easily seen the other. This incident occurred in an area of frequent, high traffic density. All instructors have been advised to be extra vigilant, especially when returning to the airfield from the local flying area, because there are 6 active airfields all within 10nm of the location of this incident. In good VMC it is usual practice, during transit and during training exercises in the Frensham Ponds area, to ask for a Basic service from Farnborough LARS West. Farnborough often alert pilots of conflicting traffic even though they are not obliged to do so under a Basic Service. They should be commended for doing this and should continue to do so. However, given that they do this from time to time, there could be a sub-conscious recognition that they do this and it is therefore expected. All flying club instructors have been advised to request a Traffic Service whenever possible and to manage, appropriately, the consequences to the disruption to the flow of instruction.

Summary

An Airprox was reported when a C152 and a PA28 flew into proximity at 1426 on Wednesday 2nd November 2016. Both pilots were operating under VFR in VMC and were in receipt of a Basic Service from Farnborough LARS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, area radar recordings and reports from the appropriate ATC and operating authorities.

The Board began its discussions by agreeing wholeheartedly with the comments made by the C152 flying club's head of training. He had summed up the situation well, and also made valid comments about the selection of ATS by the C152 pilot. In this latter respect, members were pleased to note that the operator has advised their instructors to request a Traffic Service whenever possible in future.

The Board commented that it was unfortunate that the C152 pilot had not reported on frequency that he intended to file an Airprox. By doing so, he would have alerted other pilots and ATC to the incident and would have prompted them to make appropriate notes and retain any recordings that might assist in the investigation. Compounding this, when he did complete his report he unfortunately mistakenly appended the wrong date, and this caused considerable delay in identifying the incident and thereby notifying the PA28 pilot.

For his part, although there were some details that he could not recollect, the PA28 pilot was able to report that he had not seen the C152. He commented that he was also in receipt of a Basic Service from Farnborough LARS and added that he would have requested a Traffic Service but, because he had heard another pilot being refused the service (presumably because the controller was too busy he opined), he decided not to make the request. The issue of pilots not requesting a service with Farnborough LARS because they seemed too busy was one that had featured often in previous Airprox. Members could understand his reticence, and the Board had made previous

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

recommendations about Farnborough LARS availability in the past. However, based on the notion that 'if you don't ask, you don't get', they opined that the PA28 pilot should still have made the request because only the controller could know his workload and capacity to provide a service; the situation could well have changed and he may then have been provided with a Traffic Service.

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

- **ATC Conflict Detection and Resolution** and **Flight Crew Compliance with ATC Instructions** were both assessed as **inapplicable** because neither pilot was receiving an ATS that included provision of Traffic Information.

- Flight **Crew Situational Awareness** was considered **ineffective** because, although both pilots were in communication with the same controller, the level of service that they had requested meant that neither pilot knew about the close proximity of the other aircraft.

- **Onboard Warning/Collision Avoidance Equipment** was **inapplicable** because neither aircraft was fitted with such a system.

- **See and Avoid** was assessed as being **ineffective** because the PA28 pilot did not see the C152 and the C152 pilot only saw the PA28 at too late a stage to take any avoiding action. This lack of sighting was probably exacerbated because the low-wing aircraft (the PA28) was above the high-wing aircraft (C152) and both were likely in each other's potential blind spots as they converged. Members commented that this highlighted the need to ensure a robust lookout at all times by moving one's head to overcome cockpit obscurations, and dipping/raising the wing to ensure that blind spots were cleared.

The Board then turned its attention to the cause of the Airprox. Members acknowledged that because both pilots were operating in Class G airspace it was ultimately their responsibility to 'see and avoid' each other. It was apparent that the C152 trainee had only seen the PA28 at a very late stage, and the instructor had only seen it after it had passed; the PA28 pilot reported that he had not seen the C152 at all. It was quickly agreed that the cause of the Airprox was a non-sighting by the PA28 pilot and effectively a non-sighting by the C152 pilot. Turning to the risk, it was clear to the Board that the two aircraft had passed significantly close to each other. Accordingly, it was apparent that separation had been reduced to the bare minimum and that providence had played a major part in avoiding a collision. The Airprox was therefore assessed as risk Category A.

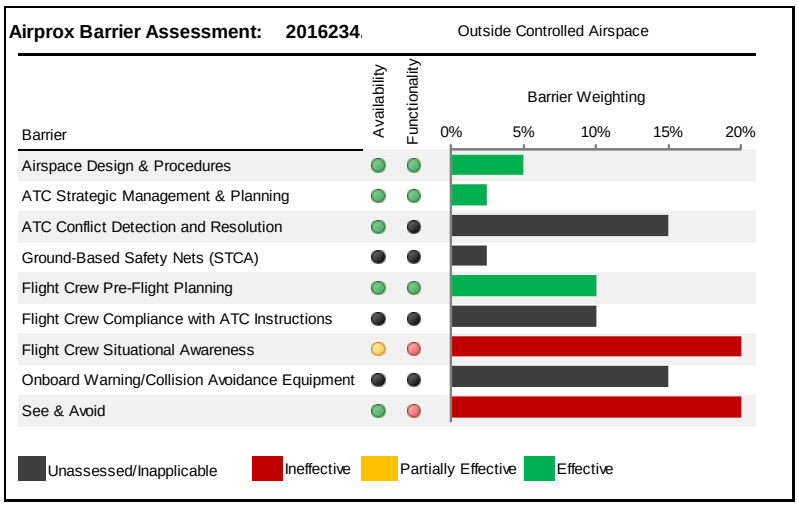
PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A non-sighting by the PA28 pilot and effectively a non-sighting by the C152 pilot.

Degree of Risk: A.

Barrier Assessment:

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).[3] 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 Unassessed/Inapplicable). The chart thus illustrates which barriers were effective and how important they were in contributing to collision avoidance in this incident.

[3] 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.