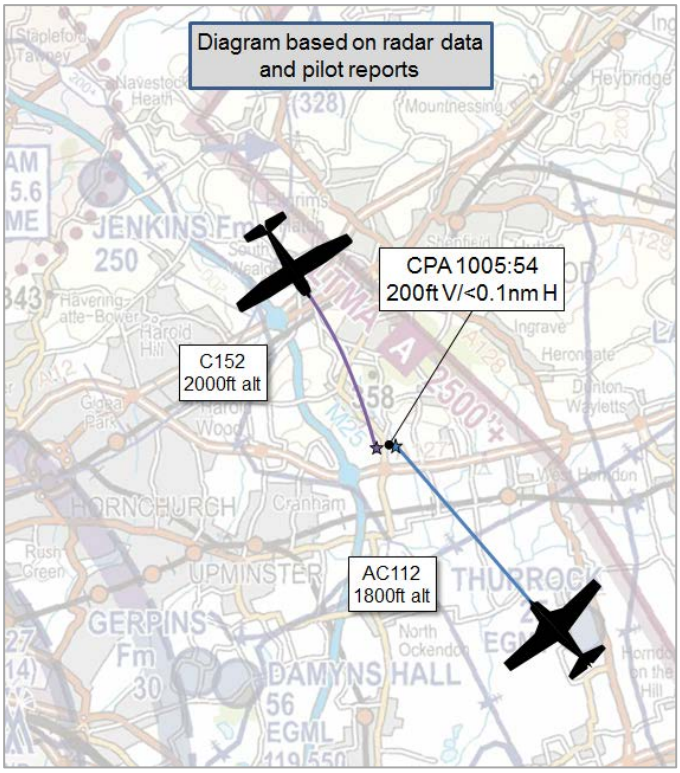
AIRPROX REPORT No 2018206

Date: 03 Aug 2018 Time: 1005Z Position: 5134N 00017E Location: 2nm south Brentwood

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AC112	C152
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out[1]	Basic
Provider	Farnborough	Southend
Altitude/FL	1800ft	2000ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Red, White	White, Red
Lighting	Beacon, Strobe	Nav
Conditions	VMC	VMC
Visibility	>20km	>10km
Altitude/FL	1900ft	2000ft
Altimeter	QNH (1023hPa)	NK
Heading	295°	160°
Speed	124kt	93kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	50ft V/100m H	Not reported
Recorded	200ft V/<0.1nm H	



THE AC112 PILOT reports that he was at the top of the initial climb, approaching 1900ft, and had begun to reduce power to cruise. He had already changed to Farnborough North when he left the circuit at Thurrock but, probably because it was a sunny day, the frequency was busy and he couldn't find a gap to make the initial call. He had selected a cruise altitude of 2000ft because his intention was to transit Heathrow airspace after passing Denham inbound to Waltham. He scanned the area in front of the aircraft, and to both sides, before looking at the Tacho and Manifold Pressure, then looked back out, then back in to the EGT, and then leaned the mixture. While doing this he picked up the C152 in his peripheral vision moving from right to left. By the time he reacted it was in his 12 o'clock, slightly above. He perceived that the pilot of the C152 reacted at the same time, and both aircraft turned right. His aircraft passed behind the C152 in a right turn. He lost sight of the C152 at that point because it was behind him and so he resumed his original course. He assumed that the C152 was positioned such that its position was obscured by either the right-side windscreen frame and door pillar or it was in a position slightly above his aircraft and obscured by the roof. Had neither pilot reacted he would have passed behind the C152 but considerably closer than they did by turning right. Since this incident he has ordered a PilotAware collision warning system.

He assessed the risk of collision as 'Medium'.

THE C152 PILOT reports that he was on an instructional flight, teaching a PPL student. He first saw the other aircraft in his 1 o'clock and was about to turn right but the other aircraft was already passing by. He is sorry he didn't see the other aircraft sooner.

He assessed the risk of collision as 'Low'.

[1] Waiting for a gap in transmissions to establish a service.

Factual Background

The weather at London City was recorded as follows:

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METAR EGLC 030950Z AUTO 04003KT 9999 NCD 27/17 Q1022
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Analysis and Investigation

UKAB Secretariat

The AC112 and C152 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[2]. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right[3].

Summary

An Airprox was reported when an AC112 and a C152 flew into proximity at 1005hrs on Friday 3rd August 2018. Both pilots were operating under VFR in VMC, the AC112 pilot waiting to establish a service with Farnborough and the C152 pilot in receipt of a Basic Service from Southend.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft and radar photographs/video recordings.

The Board began by looking at the actions of the AC112 pilot. The GA member commended him for carrying out the correct method of scanning to ensure his lookout was optimally prioritised whilst also attending to in-cockpit tasks. It was simply unfortunate that the C152 was flying a reciprocal track (with minimal crossing vector such that it was either obscured or stationary in the field of view until the last moment), and that they encountered each other at an inopportune time in respect of his lookout scan. Nonetheless, the AC112 pilot did see the C152, albeit late. The Board were heartened that the AC112 pilot had decided to purchase a PilotAware electronic collision warning system for his aircraft as a result of this Airprox; in this instance, both aircraft were transponding and it was likely that the PilotAware would have alerted him to the C152's presence.

The Board then turned to the actions of the C152 instructor and noted that he hadn't seen the AC112 until just before CPA. Some members wondered whether he might have become task focused on teaching his student to the detriment of lookout, and GA members commented that maintaining a robust lookout was a vital activity for instructors given that their students may not be as adept as they in prioritising their attention to visual scanning. The Board also opined that it was unfortunate that the aircraft were on different frequencies whilst in the same area, and some members felt that this might be because of the lack of a clearly defined delineation between the Farnborough and Southend LARS areas on the VFR chart. On balance, the Board felt that Farnborough would have been the better frequency for the C152 pilot to use, although it was a fine judgement that was likely to have been influenced by other factors. However, had they both been on Farnborough's frequency then there was a chance that the AC112 pilot may have been aware of the C152 by hearing any preceding calls, if there had been any.

The Board then turned to the cause and risk of the Airprox and quickly agreed that the AC112 pilot had seen the C152 late (but did turn to avoid), whilst the C152 pilot effectively did not see the AC112 until CPA (and had only coincidentally been turning right at the time). Turning to the risk, the Board agreed that although the AC112 pilot had had enough time to carry out emergency avoiding action, safety had been much reduced below the norm; risk Category B.

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

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by the AC112 pilot and effectively a non-sighting by the C152 pilot.

Degree of Risk: B.

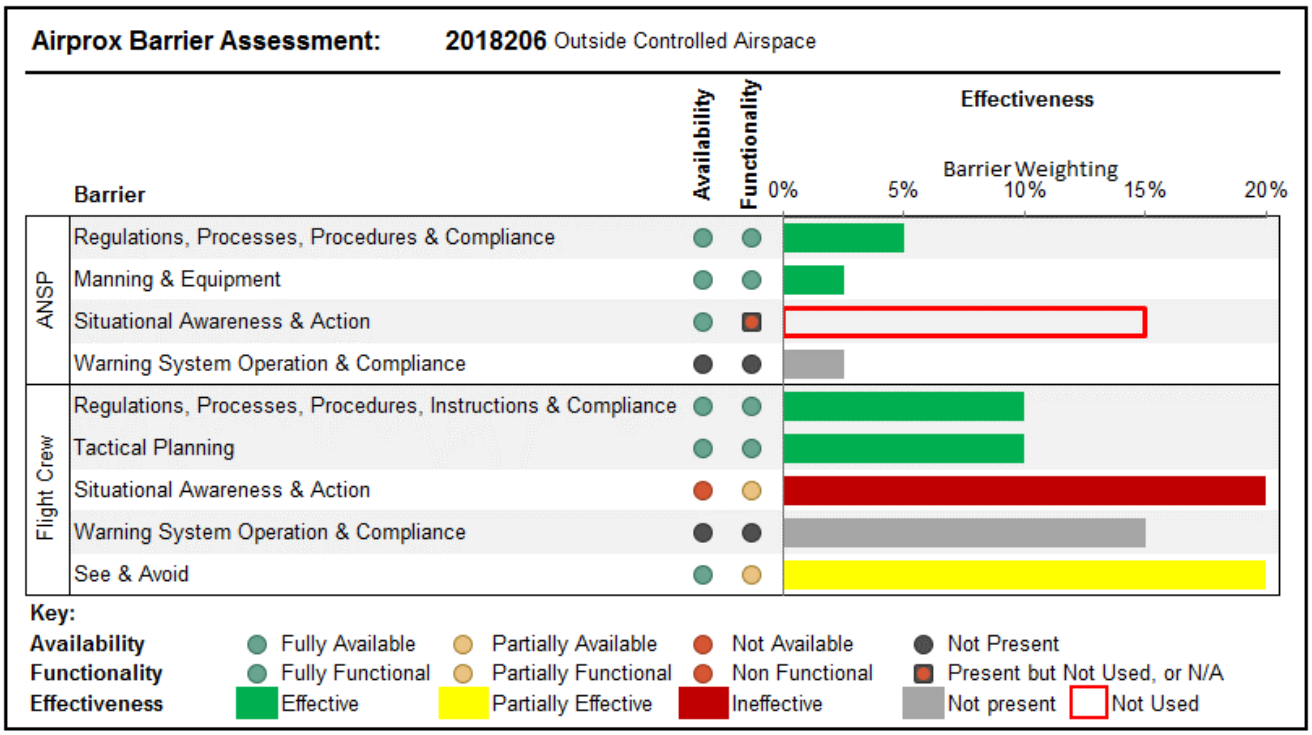
Safety Barrier Assessment[4]

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 **ineffective** because neither pilot had any SA on the other aircraft.

See and Avoid were assessed as **partially effective** because the C152 pilot did not see the AC112 until CPA, whilst the AC112 pilot only saw the C152 late and had to carry out emergency avoiding action.



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