

**AIRPROX REPORT No 2015150**

Date: 11 Sep 2015 Time: 1012Z Position: 5202N 00002W Location: 2nm NW of BKY

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	C150
Operator	Civ Club	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	AGCS
Provider	Cambridge	Gransden Radio
Altitude/FL	1900ft	NK
Transponder	A, C	Selected off
<b>Reported</b>		
Colours	White, Blue Stripe	NK
Lighting	Nav Lights	NK
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1900ft	2400ft
Altimeter	QNH (1016hPa)	QNH (1015hPa)
Heading	313°	160°
Speed	105kt	80kt
ACAS/TAS	TAS	NK
Alert	None	NK
<b>Separation</b>		
Reported	0 V/100m H	NK
Recorded	NK V/0.1nm H	



**THE PA28 PILOT** reports that he was flying VFR and tracking inbound to BKY on a heading of 149°. Approximately 1nm north of BKY he executed a 30° AoB level turn to the right onto a heading of 313° to his next waypoint of Littlington. During the turn, he contacted Cambridge Approach and requested a frequency change to Old Warden. Cambridge terminated his Basic Service. As he rolled wings level from the turn, he saw a white C150 in his 10 o'clock position, same altitude, heading roughly east, at a range of approximately 100m. He began a full-power climbing right turn, keeping tally on the other aircraft as he did so. The Cessna turned gently right and passed behind his aircraft. He could easily identify the type and read the registration. He had not had time to change frequency to Old Warden, so he re-established communications with Cambridge Approach and reported the Airprox. He had carried out a good lookout prior to his right turn, being mindful of the visual obstruction caused by a low-wing configuration such as the PA28. He apportioned no blame to the other pilot, but reinforced his need for a vigilant lookout during every flight.

He assessed the risk of collision as 'Medium'.

**THE C150 PILOT** reports he believed this was a non-event. The test candidate saw the opposing traffic in excess of 1/2 nm away; indicated she had seen it, and took standard avoiding action by turning right and maintaining height and speed. The other aircraft was observed from the left seat doing a strange diving turn manoeuvre. Some minutes later he believed the same aircraft climbed from a manoeuvre to pass below the left-hand side in the opposite direction.

He assessed the risk of collision as 'None'.

## Factual Background

The weather at Little Gransden was recorded as follows:

METAR EGTC 110950Z 12012KT 9999 FEW020 18/11 Q1015

## Analysis and Investigation

### CAA ATSI

The pilot of the PA28 reported the Airprox just after completing a right turn of almost 180°, just to the north of Barkway (BKY) VOR. Prior to the right turn, the PA28 had been receiving a Basic Service from Cambridge Approach which was being provided without the use of surveillance equipment. During the right turn, the service had been terminated at the request of the pilot of the PA28 and so was not in receipt of an ATC service when the Airprox occurred. However, the pilot reported back onto the Cambridge frequency to advise them of the Airprox, and was advised that Cambridge had no knowledge of the other aircraft. The BKY VOR is approximately 13nm south-southwest of Cambridge.

The C150 pilot reported observing the other aircraft make an unusual diving manoeuvre which contradicts the report from the PA28 of making a climb. Having reviewed the radar, it is not possible to observe a CPA; although the PA28 remains in radar cover throughout, there is no other radar contact observed at the time stated (when the PA28 turns at BKY – Figure 1).

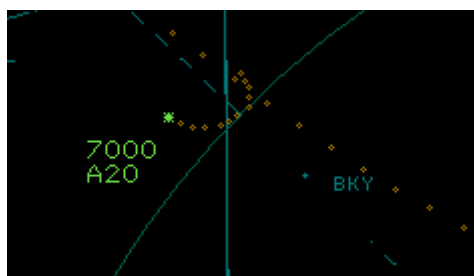


Figure 1: Swanwick MRT at 1010:10 (The P28 has code 7000)

However, there were two unknown primary only contacts observed manoeuvring approximately 5nm northwest of BKY a couple of minutes prior to the Airprox (Figure 2). The C150 was not positively identified on radar but may have seen either of these two unknown aircraft and confused one of these with the PA28 that reported the Airprox, especially as one of these unknown aircraft remained in the vicinity throughout the time and made multiple manoeuvres.

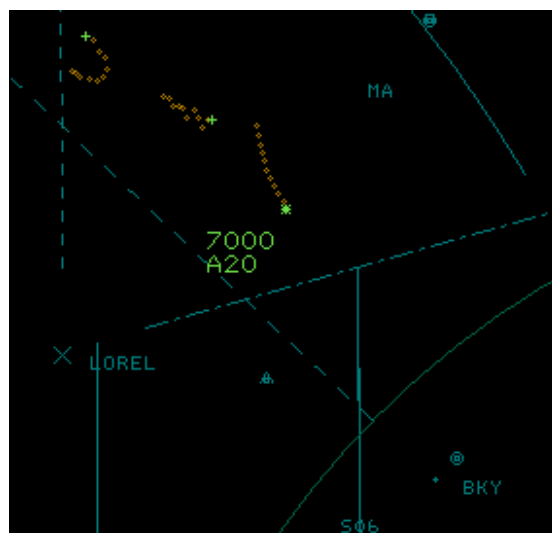


Figure 2: Swanwick MRT at 1008:01 (Prior to the Airprox)

## UKAB Secretariat

The PA28 and C150 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>1</sup>. If the incident geometry is considered as converging, and the C150 had the PA28 on its right as described by the PA28 pilot, then the C150 pilot was required to give way to the PA28<sup>2</sup>.

### Summary

An Airprox was reported when a PA28 and a C150 flew into proximity at 1012 on 11<sup>th</sup> September 2015. Both pilots were operating under VFR in VMC; the PA28 pilot had just terminated a Basic Service from Cambridge and the C150 pilot was in receipt of an Air/Ground Service from Gransden. The PA28 had completed a right turn 1nm north of BKY and was flying straight and level. The pilot saw the C150 crossing left-to-right approximately 100m away and carried out a climbing turn to avoid the aircraft. The C150 saw an aircraft manoeuvring and carried out standard avoiding action until clear of the aircraft. The radar recording shows three aircraft in the same area at the time of the reported Airprox; neither the PA28 nor the C150 report seeing more than one aircraft.

### **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

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

The Board determined, with the use of the radar recordings, that there were three aircraft in the same area at the time of the Airprox: Aircraft 1 – the PA28; Aircraft 2 – the C150; and Aircraft 3 – an unknown manoeuvring aircraft. Taking into account both pilot reports and the radar recordings, it was agreed that, in all probability, the PA28 pilot had seen the C150 crossing left-to-right and had carried out a climbing right turn to avoid, but did not see the unknown manoeuvring aircraft. Meanwhile, the C150 pilot saw the unknown aircraft carrying out manoeuvres and avoided this aircraft to the right (in accordance with the rules of the air) but did not see the PA28.

The Board then looked at the actions of the PA28 pilot and observed that it would have been more appropriate, due to his position, if he had contacted Farnborough LARS for a Traffic Service rather than maintain a non-radar service with Cambridge. Not only would this probably have negated unnecessary frequency changes, but it would also have offered the possibility of Farnborough providing radar-derived information. That being said, the Board noted that he had conducted a good lookout before his turn, and agreed with his own assessment of the importance of vigilant lookout during every flight. Some GA members also stressed this aspect, with the need to ensure that cockpit obscuration was not a factor by pro-actively moving one's head around the cockpit. The Board noted that the PA28 pilot had not reported seeing the third aircraft in the area, and wondered whether the PA28 pilot had become somewhat fixated on the C150 once he had seen it crossing at close quarters from left-to-right.

Turning to the C150 pilot, the Board first noted that the C150 had a transponder fitted but it was selected 'Off'. Members strongly advised that transponders should be left on, with ModeC/Alt selected so that ATC can provide other pilots with improved Traffic Information if appropriate, and those pilots whose aircraft are fitted with CWS can also gain situational awareness; given that the PA28 was fitted with a TAS, the board considered that this was a contributory factor. Turning to the specifics of the incident, it seemed to the Board that the C150 crew had probably become somewhat fixated on the aircraft they could see (the unknown manoeuvring aircraft) and that this had degraded their all-round lookout to the extent that they never saw the PA28 with which they came into conflict. As for the PA28 pilot, this highlighted the need for robust lookout scanning and self-discipline to maintain such scanning to avoid becoming focused on one particular aircraft or area.

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<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3210 Right-of-way (c) (2) Converging.

The Board then discussed the cause and risk of the Airprox and determined that it had been a late sighting by the PA28 pilot and a probable non-sighting by the C150 pilot. The Board agreed that the aircraft were in such proximity that safety margins had been much reduced from the norm, and that the actions of the PA28 pilot had had a material effect on increasing the separation. As a result, they assessed the risk as Category B.

**PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: A late sighting by the PA28 and a probable non-sighting by the C150.

Contributory Factor(s): The C150 transponder was 'Off'.

Degree of Risk: B.