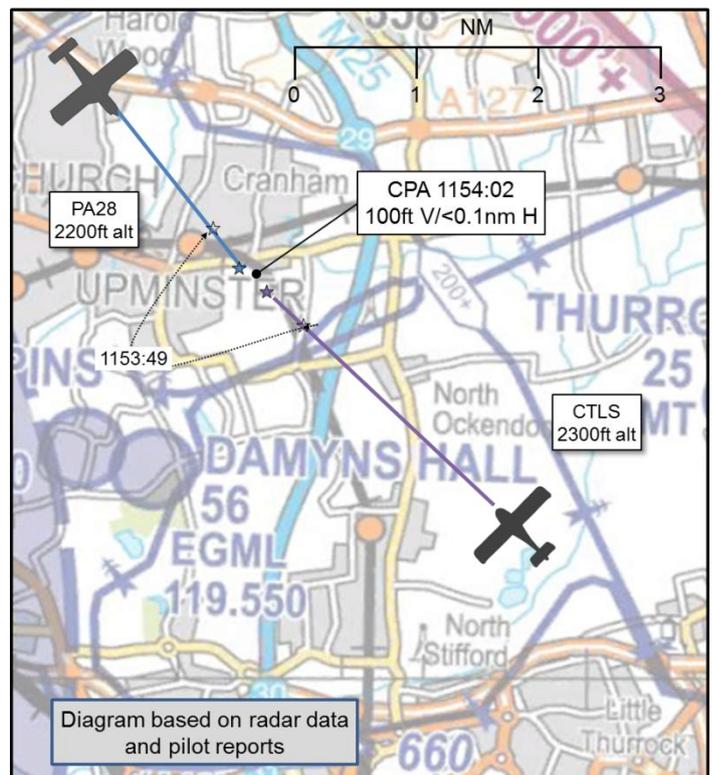


**AIRPROX REPORT No 2014071****Date/Time:** 1 Jun 2014 1154Z (Sunday)**Position:** 5133N 00015E  
(2nm NE Damyns Hall)**Airspace:** Lon FIR (Class: G)**Type:** Aircraft 1 Flight Design CTLS  
Aircraft 2 Piper Warrior**Operator:** Civ Pte Civ Pte**Alt/FL:** 2360 QNH (1022hPa) 2300 QNH (1022hPa)**Conditions:** VMC VMC**Visibility:** 10k >10K**Reported Separation:**

100ft V/0m H 150ft V/0m H

**Recorded Separation:**

100ft V/&lt;0.1nm H

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

**THE CTLS PILOT** reports flying a white and red aircraft with all lights illuminated and SSR transponder Mode 3A and C selected. The aircraft was equipped with a portable traffic collision system, although the pilot doesn't recall seeing any warning on it. The pilot reported that he was on a VFR flight from France and was receiving a Basic Service from Southend LARS. The aircraft was on autopilot and he was flying at 2360ft; he reported that he tended to fly at unusual levels to avoid other traffic. He had just passed abeam Damyns Hall, and his attention was focussed out of the port window towards the centre of London. As he looked forward again he saw a contact on an opposite bearing, slightly above and closing very fast. He reacted by pushing the stick forward, disengaging the autopilot. The other aircraft passed directly overhead and the whole incident was over in less than 3 seconds. He opined that they would not have collided even without the avoiding action, but that the vertical distance was estimated at 100ft. He reported the incident to Southend ATC, at which point the other aircraft gave his callsign and location and confirmed that he had just flown over him. The passenger in the CTLS also held a PPL and, in discussing the incident together afterwards, they concluded that the incident occurred halfway through a 1½ hour flight when scan was poor due to the distraction of looking out of the port window.

He assessed the risk of collision as 'High'.

**THE PA28 PILOT** reports flying a blue and white aircraft with transponder Modes 3A and C selected. He did not have a TCAS fitted. He was in the cruise at 2300ft and had just completed his cruise checks when he saw the other aircraft approximately ¼nm away. He did a slight roll to the right and pitched up; the other aircraft passed 150ft beneath him.

He assessed the risk of collision as 'Low'.

**THE SOUTHEND CONTROLLER** reports that he was providing a Basic Service to the CTLS when the pilot reported that he had just had an Airprox with an aircraft in the opposite direction approx 200ft above him. When asked, he said it was a white and red PA28. An unknown 7000A squawk was observed on the radar indicating 2300ft. Immediately afterwards the pilot of the PA28 made first contact with Southend and reported that he believed it was him involved as he had just seen a high-

wing microlight go under him, he was given a squawk and, when identified, this correlated with the 7000A that had been in the vicinity of the microlight at the time of the event.

## Factual Background

The Southend weather was reported as

EGMC METAR : 011150 VRB03KT 9999 FEW043 19/11 Q1022=

## Analysis and Investigation

### CAA ATSI

The Airprox occurred 1.7nm to the northeast of Damyns Hall airfield. At 1146:50 the CTLS was 11.8nm to the southwest of Southend Airport tracking northwest at 2300ft (QNH 1022) and in receipt of a Basic Service from Southend Radar. The PA28 was not in receipt of an air traffic service.

At 1152:53 the CTLS passed 2.1nm east abeam Damyns Hall airfield at 2400ft. The PA28 was 3.3nm north of Damyns Hall airfield, tracking southeast at 2200ft and squawking 7000. The distance between the two aircraft on reciprocal tracks was 4.3nm.

At 1153:46 the distance between the two aircraft had reduced to 1nm and at 1154:02, just prior to the CPA (Figure 1), the horizontal distance was 0.1nm and vertical distance 100ft.

CPA is estimated to have occurred at 1154:03 as the aircraft crossed on reciprocal tracks. The next sweep of the radar at 1154:06 showed that the two aircraft had passed and were diverging with both indicating an altitude of 2300ft (Figure 2).

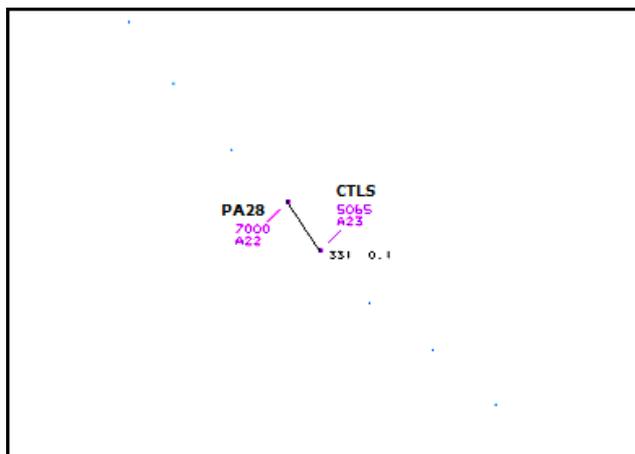


Figure 1 – Swanwick MRT at 1154:02

At 1154:26 the following RTF exchange occurred:

CTLS *"(CTLS)c/s er we've just had an Airprox with an aircraft going in the opposite direction about two hundred foot above us"*

ATC *"(CTLS)c/s roger and any idea of the colour or type of aircraft"*

CTLS *"Looked like a P A two eight white with red (CTLS)c/s"*

PA28 *"Southend Radar (PA28)c/s just about to call you and overheard the previous conversation I think it was actually us just saw a high wing microlight go underneath opposite direction"*

ATC *"(PA28)c/s roger just report your position"*

PA28 *"Just er just east of Damyn Hall aerodrome currently three er two thousand three hundred feet"*.

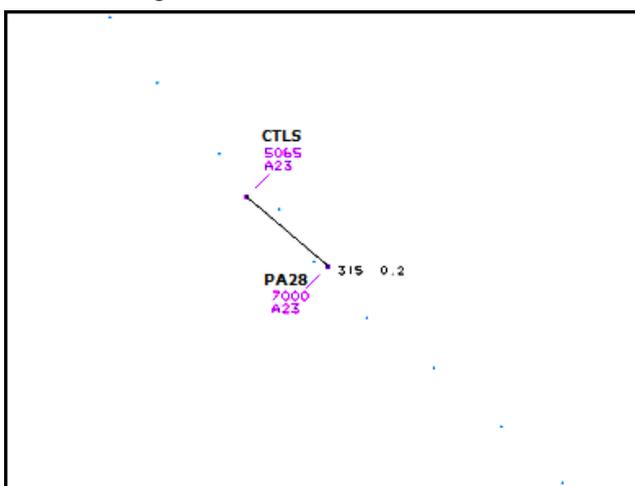


Figure 2 – Swanwick MRT at 1154:06

The PA28 was subsequently instructed to squawk 5062 and was identified by Southend Radar at 1156:21.

It was not possible to absolutely determine the vertical separation at CPA. Just prior to CPA radar recording indicated that the CTLS was 100ft above the PA28. However the pilots of both aircraft reported that the PA28 had been the higher of the two aircraft, 100-200ft above the CTLS. The PA28 pilot's written report indicated a level of 2300ft and the CTLS pilot as 2360 ft. It was noted that prior to the Airprox the Mode C of the PA28 (squawking 7000 – unverified) was fluctuating between 2200ft and 2300ft and was likely 2300ft +/- 100ft.

[UKAB Note: Within its specification, SSR Mode C can be up to 200ft in error and this could easily account for any discrepancy between the recording and visual report].

The CTLS was operating VFR in receipt of a Basic Service, where the pilot is ultimately responsible for collision avoidance. The controller was not required to monitor the CTLS and was unaware of the PA28 until it called after the occurrence.

### **UKAB Secretariat**

Both pilots shared an equal responsibility to avoid a collision and not to fly into such proximity as to create a danger of collision.<sup>1</sup> The geometry is considered to be head-on, so both pilots were required to manoeuvre to the right.<sup>2</sup>

### **Summary**

An Airprox was reported on 1<sup>st</sup> June 2014 at 1155 between a Flight Design CTLS microlight and a PA28. Both pilots were operating in Class G airspace, the CTLS was receiving a Basic Service from Southend and did not receive any Traffic Information. Both pilots report seeing the other late and taking avoiding action: the recorded separation was 100ft vertically and less than 0.1nm horizontally.

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

Information available included reports from the pilots of both aircraft, transcripts of the relevant RT frequencies radar photographs/video recordings and reports from the air traffic controller involved.

The Board first discussed the actions of the PA28 pilot and agreed that it was unfortunate that he had not called earlier to request a service with Southend Radar because this may have alerted the CTLS to his presence. This was especially pertinent as several Board members opined that this was a busy piece of airspace that was acting as a funnel due to the constraints of the airspace in the area. The Board wondered whether his cruise checks had distracted him at an unfortunate time, and noted his somewhat more relaxed impression of the severity of an event with a head-on CPA of circa 100ft and <0.1nm (he assessed the risk of collision as low in his report), and his 'slight roll and pitch up' which did not seem to correlate with the CTLS pilot's assessment and actions.

For his part, the CTLS pilot acknowledged that he had been distracted by looking out towards London, and the Board agreed that this highlighted the need to be vigilant with all-round lookout at all times. The Board considered whether the CTLS would have been better served under a Traffic Service, but accepted that this level of service was not always available as it heavily depended on controller workload.

In discussing the cause, the Board were unanimous in their decision that this was a late sighting by both pilots, and that the risk was Category B; although avoiding action had been taken to prevent a collision, safety margins had been much reduced below normal.

<sup>1</sup> Rules of the Air 2007 (as amended), Rule 8 (avoiding Aerial Collisions).

<sup>2</sup> Ibid. Rule 10 (Approaching head-on).

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

Cause: A late sighting by both pilots.

Degree of Risk: B.

ERC Score<sup>3</sup>: 20.

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<sup>3</sup> Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.