

**AIRPROX REPORT No 2014134**Date/Time: 7 Aug 2014 1758ZPosition: 5208N 00002W  
(8nm SW Cambridge)Airspace: LON FIR (Class: G)Aircraft 1 Aircraft 2Type: C560XL Quantum MicrolightOperator: Civ Exec Civ ClubAlt/FL: 1600ft 1600ft  
QNH (1014hPa) QNHConditions: VMC VMCVisibility: 10km 20kmReported Separation:

0ft V/1nm H 300ft V/0m H

Recorded Separation: NK**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

**THE C560XL (C56X) PILOT** reports flying a predominantly white aircraft with all lights illuminated and SSR transponder selected with Mode A, C and S. The aircraft was fitted with TCAS. Flying IFR in VMC at 160kt, he was undertaking a NDB approach to RW05 at Cambridge and was descending to 1600ft when ATC warned him about an aircraft on the SW side of the airfield, not in contact with ATC. He looked for, and saw, this aircraft, and then received further traffic information from ATC about an ultralight aircraft approximately 8nm from CAM NDB southeast bound. He saw the ultralight at 1600ft within 1nm of his position as he was approaching the base turn point and took avoiding action by turning and climbing above it at a safe distance. In doing so he turned towards the runway so, with the runway in sight, he continued his approach visually. He believed the ultralight pilot had not seen him. He noted that Cambridge ATC were not using the radar at the time and were very vigilant in their passing of Traffic Information.

He assessed the risk of collision as 'Medium'.

**THE QUANTUM FLEX-WING MICROLIGHT PILOT** reports flying at blue and white aircraft without any lights or SSR transponder. He reports that he was on a solo cross-country training flight at 1600ft. Whilst flying straight and level on a heading of 180° in the vicinity of Royston, an aircraft flew directly overhead on approximately the same heading, passing an estimated 300-400ft above. He had not seen the aircraft approach as it was behind him and assumed the pilot had decided to "buzz" him but, because the vertical separation was adequate, had not considered it to be an Airprox, (although he noted that this assumed the other pilot was visual with him throughout the manoeuvre). After passing overhead, the other aircraft turned in a wide arc until it was north by a distance of 3-5 miles, heading towards Cambridge. He felt no effects of wake turbulence and, although he experienced some surprise at seeing the other aircraft, he was not unduly concerned by it. He mentioned it in passing to his instructor on his return.

He assessed the risk of collision as 'Medium'.

**THE CAMBRIDGE CONTROLLER** reports that, whilst working as ADI/APP combined, he cleared the C56X for an NDB approach on RW05. As the pilot reported beacon outbound he noticed an aircraft to the west of the airfield by 8-10nm at an estimated 1500ft. He passed Traffic Information to the C56X, who reported visual. Shortly afterwards he noticed a microlight to the right of the C56X and again he informed the pilot, ensuring that he made it clear it was not radar derived Traffic Information.

The C56X pilot was not initially visual but, shortly afterwards, reported that he was visual and taking avoiding action. The pilot then confirmed that he was happy to continue the approach.

## Factual Background

The weather at Cambridge was reported as:

METAR EGSC 071750Z 02004KT 350V060 9999 SCT046 22/11 Q1014

## Analysis and Investigation

### CAA ATSI

The C56X pilot was operating an IFR flight inbound to Cambridge and was in receipt of a Procedural Service from Cambridge Approach. The Cambridge controller was providing a combined Aerodrome and Approach Control service, without the aid of surveillance equipment. (The UK AIP page AD 2.EGSC-9 (29 May 2014) states, for Radar: 'Available intermittently Mon-Fri during normal working hours and by arrangement only'). ATSI had access to Cambridge RTF and area radar recording, together with the written report from the controller and both pilots.

At 1749:20 the C56X, inbound from the southwest, contacted Cambridge Approach and reported descending to 4000ft on QNH 1014 hPa with information 'H'. The controller advised of 'no delay' and cleared the C56X for the NDB approach for runway zero five with further descent to 3000ft. The C56X crossed the beacon and completed the entry procedures before crossing the beacon outbound at 3000ft on a southwesterly track. At 1755:30 the C56X reported beacon outbound and was instructed to report base turn complete.

At 1756:13 the controller advised the C56X about an aircraft which the controller had sighted from the VCR about 7 to 8 miles west of Cambridge. This aircraft was not involved in the Airprox and the C56X pilot reported the traffic in sight and was happy to continue with the approach.

At 1758:00 the controller transmitted "(C56X) I'm visual I believe with a Microlight on your righthand side is that the one you have in sight" and the C56X pilot responded "Oh negative we got him in sight now" – Figure 1.

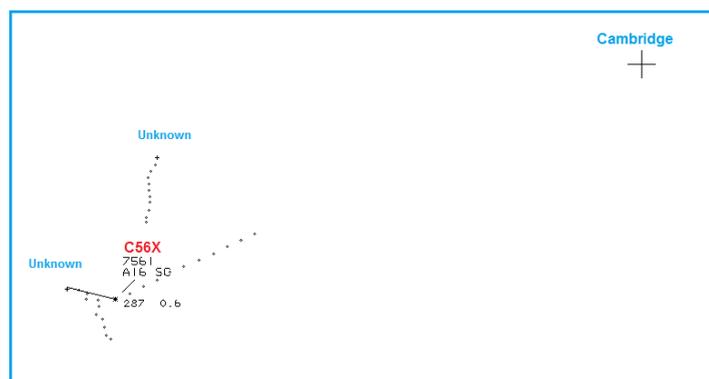


Figure 1 – Swanwick MRT at 1758:00

Neither of these contacts was believed to have been involved in the Airprox.

The C56X pilot's written report indicated that when approaching the 8.5DME point for base turn they spotted the Quantum Microlight at 1600ft within 1nm and took avoiding action. At 1758:35 radar recording showed the C56X had commenced a left turn and had climbed to 1800ft. At 1758:56 the C56X had reversed the turn to the right and at 1759:22 the Quantum Microlight started to show on the radar recording tracking south-southeast (Figure 2).

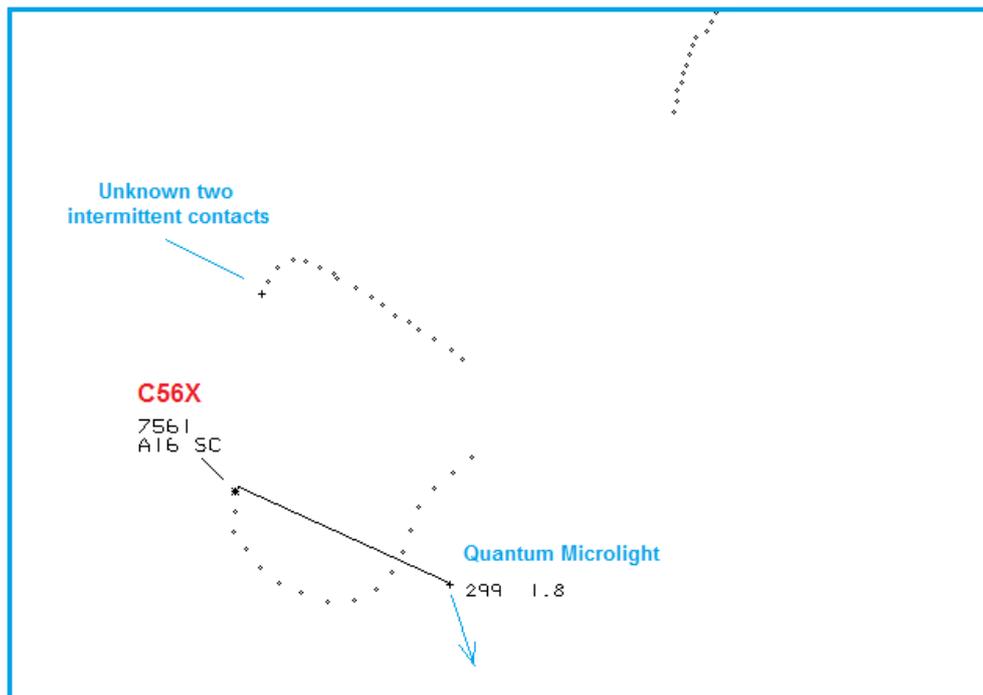


Figure 2 – Swanwick MRT at 1759:22

At 1759:10 the C56X pilot reported “Er (C56X)c/s we had to do avoiding action turn and returning inbound the field this time”. The C56X pilot confirmed that he was happy to pick up the procedure from base leg. At 1759:40 the controller advised “(C56X)c/s I still have the Microlight in sight it appears to be approaching the final approach er now at about er one zero miles do you have him in sight”. The C56X pilot responded “Yeah he’s on my right hand side about one mile over and on the righthand side (C56X)c/s”.

The controller informed the C56X pilot that the Microlight hadn’t called Cambridge and the C56X continued the approach without further incident.

The Quantum Microlight pilot’s written report indicated flying straight and level on a solo cross-country training flight and when approaching Royston on a southerly track at 1600ft, an aircraft overflew him from behind at 300ft to 400ft above and the aircraft then turned right towards Cambridge Airport.

The C56X was in receipt of a Procedural Service. CAP774, UK Flight Information Services, Chapter 5, Paragraph 5.1 and 5.5 state:

‘A Procedural Service is an ATS where, in addition to the provisions of a Basic Service, the controller provides restrictions, instructions, and approach clearances, which if complied with, shall achieve deconfliction minima against other aircraft participating in the Procedural Service. Neither traffic information nor deconfliction advice can be passed with respect to unknown traffic.

The controller shall provide traffic information, if it is considered that a confliction may exist, on aircraft being provided with a Basic Service and those where traffic information has been passed by another ATS unit; however, there is no requirement for deconfliction advice to be passed, and the pilot is wholly responsible for collision avoidance. The controller may, subject to workload, also provide traffic information on other aircraft participating in the Procedural Service, in order to improve the pilot’s situational awareness’.

The controller was vigilant and having observed the unknown traffic from the VCR he passed appropriate traffic information which resulted in the C56X pilot acquiring both unknown aircraft on his right hand side. The C56X then sighted the Quantum Microlight as he started the base turn and took avoiding action.

## UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and for not flying into such proximity as to create a danger of collision<sup>1</sup>. The geometry was a 'converging' situation so the C56X pilot was required to give way<sup>2</sup>, which he did.

### Summary

An Airprox was reported when a C56X and a Quantum Mircrolight flew into proximity on 7 Aug 2014, 8nm south-west of Cambridge. The C56X pilot was operating under IFR in VMC and was receiving a Procedural Service from Cambridge; the Quantum Mircrolight was VFR and VMC not under a ATS. The C56X pilot received Traffic Information from the Cambridge controller which enabled him to see the Mircrolight and take avoiding action. The Mircrolight pilot did not see the C56X until after CPA.

### **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 controllers involved.

The Board first commended the Cambridge controller for his timely and accurate Traffic Information, which had enabled the C56X pilot to see and avoid the conflicting traffic. The Board also commended the pilot of the C56X for his look-out, and avoiding action, whilst still acknowledging that it was his responsibility to avoid the micro-light, which he did.

Noting that he was a student, the Board wondered whether the micro-light pilot had been sufficiently briefed on the proximity of Cambridge Instrument Approaches, and opined that pilots of cross-country exercises should take into careful consideration other airspace users and the pattern of traffic at airfields when planning their routing – especially at the altitude that he was flying at, which was very likely to conflict with airfield approach tracks. The Board noted that it had previously made a recommendation to the CAA that a chart be produced outlining the IFR holding patterns in the UK (Airprox number 2014126), and considered that this would provide a very valuable aid for assisting in deconfliction of flight paths for pilots planning and flying cross-country routes.

In looking at the cause of the Airprox, the Board agreed that this had been a simple conflict in flight paths that had been resolved by the C56X pilot. They assessed that this event represented normal operations in Class G airspace wherein normal safety standards had pertained; the risk was therefore categorised as E.

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

Cause: A conflict in flight paths resolved by the C56X Pilot.

Degree of Risk: E

ERC Score<sup>3</sup>: 4

<sup>1</sup> Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).

<sup>2</sup> *ibid.*, Rule 9 (Converging).

<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.