

AIRPROX REPORT No 2014092

Date/Time: 14 Jun 2014 1139Z (Saturday)

Position: 5205N 00013E
(10nm SW Cambridge)

Airspace: LON FIR (Class: G)

Aircraft 1 Aircraft 2

Type: F50 Tecnam P92

Operator: CAT Civ Pte

Alt/FL: 1600ft 2000ft

Conditions: VMC VMC

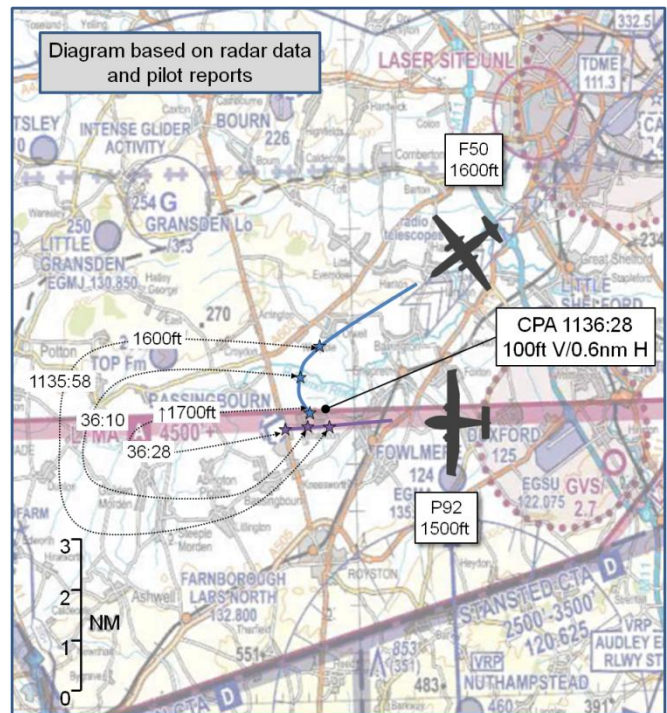
Visibility: 10K 15km

Reported Separation:

NK V/500m H NK

Recorded Separation:

100ft V/0.6nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

CONTROLLER REPORTED

THE CAMBRIDGE CONTROLLER reports he was controlling the F50 inbound from the west and providing a Procedural Service. The aircraft was cleared for an NDB approach to RW05 and was asked to report base-turn complete. Traffic Information was passed on various other aircraft operating under a Basic Service. A light-aircraft was observed from the VCR, which appeared to be at a similar level and routing westbound. The controller gave traffic information, and transmitted blind to see if the pilot was listening on the frequency. At 1139, the F50 reported a TCAS RA and reported climbing to 1800ft, visual with the unknown aircraft. Shortly afterwards the pilot reported clear of the conflict and happy to continue visually.

THE F50 PILOT reports operating with all lights illuminated and SSR Mode 3A and C selected. The aircraft was fitted with TCAS. He was flying an instrument approach at Cambridge at 1600ft when he first received a TCAS TA informing him of traffic at the same altitude, he became visual with the traffic in the opposite direction and then received a TCAS RA instructing him to climb 200ft. He followed the RA and the other traffic which went beneath him 500m away. Once he was clear he elected to continue the approach visually.

He perceived the severity of the incident as 'Low'.

THE TECNAM P92 PILOT reports flying a white aircraft with all lights illuminated and SSR transponder Modes 3A and C selected. He reported flying on a round-Britain trip visiting various airfields and Duxford was the final one. He took off from the 06 grass and, because he wasn't given any specific departure instructions, he turned left and climbed to 400ft below the cloud base. He was aware of Cambridge ILS approach so he routed on a heading of 250° (which would also keep him clear of a royal flight at Brize Norton) and, when clear of Duxford, he requested a frequency change to Farnborough. He did not see the conflicting traffic, nor did he receive any warnings from Duxford.

Factual Background

The Cambridge weather was reported as:

METAR EGSC 141120Z 01008KT 340V050 9999 SCT014 SCT035 18/14 Q1025

Analysis and Investigation

CAA ATSI

The F50 was operating an IFR flight inbound to Cambridge and was in receipt of a Procedural Service from Cambridge Approach. The P92 was operating VFR on a flight from Duxford to a private site, and was in receipt of a Basic Service from Duxford.

The Cambridge controller was providing a combined Aerodrome and Approach Control service, without the aid of surveillance equipment. The incident occurred on a Saturday and the Cambridge UK AIP entry page AD 2.EGSC-9 (29 May 2014) states for Radar:

'Available intermittently Mon-Fri during normal working hours and by arrangement only'.

An Air Traffic Monitor (ATM) was available to the controller. ATSI had access to Cambridge RTF and area radar recording, together with the written report from the controller and both pilots.

The F50 had been cleared to descend to 3000ft on QNH 1025 for the NDB approach to RW05 and was instructed to report beacon outbound. The F50 crossed the CAM(NDB) tracking southwest and duly reported beacon outbound. At 1134:35 the F50 was 4.6nm southwest of Cambridge and the F50 pilot reported passing 1800ft. The controller responded "(F50)c/s roger report base turn complete and traffic I can see from the control tower on your left-hand side is a light aircraft appears to be crossing the final approach westbound approximately one thousand feet". The F50 pilot replied "We have it on TCAS er (F50)c/s"- Figure 1.

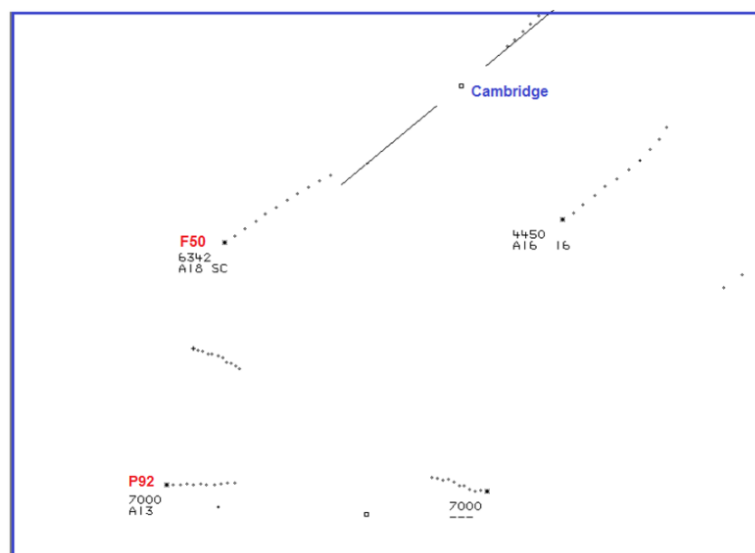


Figure 1 – Swanwick MRT at 1134:35

The controller also passed traffic information regarding a Tiger Moth which was visual with the F50 and likely to pass behind the F50. The F50 pilot reported the Tiger Moth in sight. At 1135:34 the following RTF exchange occurred:

ATC "Unknown traffic er crossing the zero five final approach at approximately nine miles you on frequency?"

ATC "(F50)c/s er I think I'm visual with on er it's crossing the final approach at approximately nine miles westbound I believe similar level"

F50 "(F50)c/s we have on TCAS" [Figure 2]

ATC "Roger he's not on frequency"

F50 "Visual with the traffic"

ATC "Thank you".

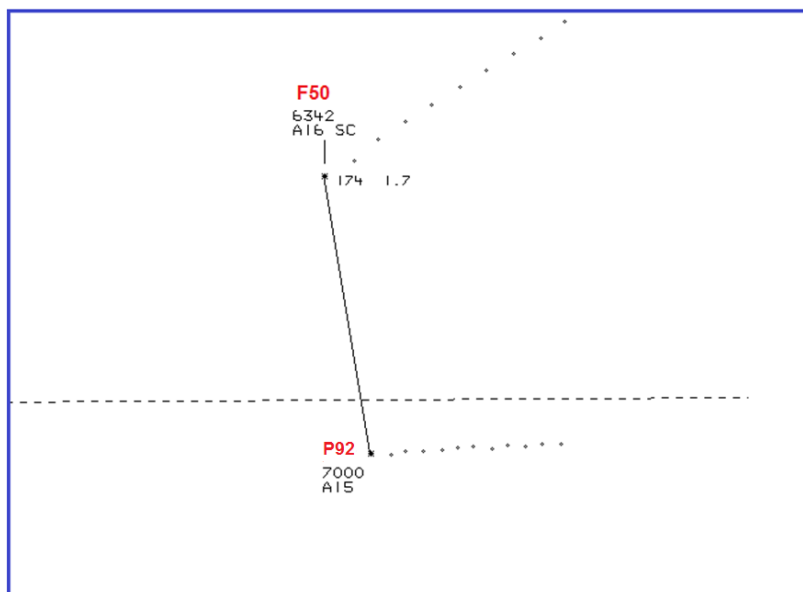


Figure 2 – Swanwick MRT at 1136:05

The F50 commenced the base turn and, at 1136:22, the horizontal distance between the two aircraft was 0.8nm – Figure 3.

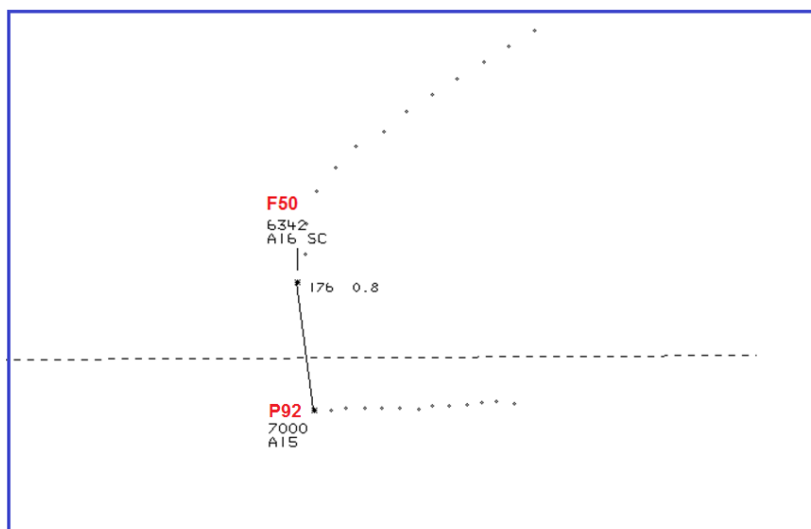


Figure 3 – Swanwick MRT at 1136:22

At 1136:30 the F50 passed abeam the P92 at a horizontal distance of 0.6nm and a vertical distance of 100ft – Figure 4.

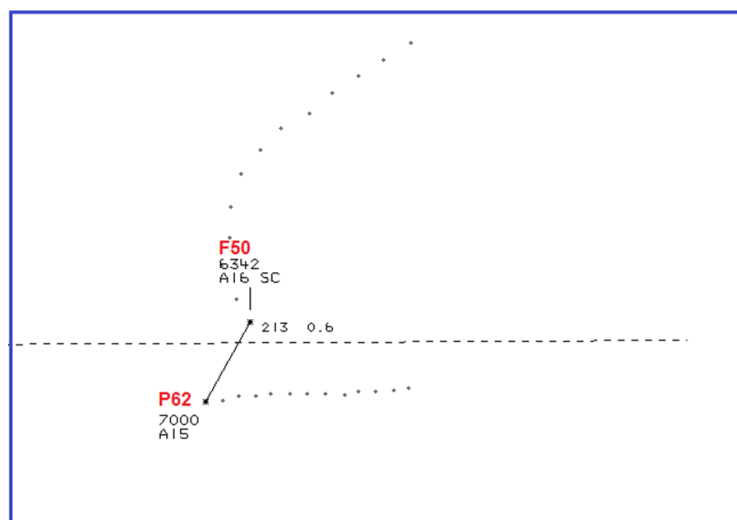


Figure 4 – Swanwick MRT at 1136:30

At 1137:28 the F50 pilot reported “Yeah we got a resolution advisory er on that traffic approaching in the er in our approach area er we had a resolution climb and we are now visual for the zero five at seven and a half miles.” The F50 confirmed that he was clear of the traffic and continued the approach without further incident.

The F50 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 conflict 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 observed the unknown traffic [P92] from the VCR and passed appropriate traffic information which resulted in the F50 pilot acquiring the P92 both on TCAS and visually.

UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and for not flying into such proximity as to create a danger of collision¹. If the geometry was considered to be a ‘converging’ situation, the P92 pilot was required to give way² (although he did not see the F50).

Summary

An Airprox was reported on 12th June 2014 at 1139 between a F50, which was inbound to Cambridge for an NDB approach and receiving a Procedural Service from Cambridge, and a Tecnam P92 departing from Duxford. The F50 received Traffic Information from the Cambridge controller, saw the P92 displaying on his TCAS, was visual with the P92 as he turned towards it, and received a TCAS RA which he actioned by climbing. The P92 pilot did not see the F50.

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

² *ibid.*, Rule 9 (Converging).

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, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board first looked at the actions of the Tecnam pilot and noted that, because his routing was clear of the Cambridge “feathers”, it was a reasonable assumption on his part that he didn’t need to call Cambridge and could go straight from the Duxford frequency to Farnborough’s. Turning then to the F50 pilot, the Board noted that he had been given information about the other aircraft both on TCAS and by ATC, yet he still turned inbound towards it, triggering a TCAS RA. There commenced a discussion on the merits of TCAS in Class G airspace, with some Board members believing that this was a benign incident wherein the F50 pilot had been happy with his separation (he had reported the severity of the incident as low), but that had resulted in an Airprox report solely because of the fact that he had declared a TCAS RA to the Cambridge controller.

In considering the actions of the controllers, the Board wondered whether Duxford was required to liaise with Cambridge on outbound departures, but noted that in this instance it may well have been assumed that the Tecnam would not affect Cambridge traffic anyway. For his part, the Cambridge controller was praised for his timely Traffic Information, especially because this was derived from the ATM without the aid of surveillance equipment.

In assessing the cause, the Board concluded that the incident had occurred because the F50 pilot had turned into conflict with the Tecnam P92 despite receiving Traffic Information. However, they assessed that he had done so in full knowledge of the P92’s presence, content that sufficient separation would be achieved, and that the subsequent generation of a TCAS RA in Class G airspace had been actioned appropriately. The Board therefore agreed that the risk was Category E; normal operations, safety standards and procedures had pertained.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	The F50 pilot turned into conflict with the P92, despite receiving Traffic Information.
<u>Degree of Risk:</u>	E.
<u>ERC Score</u> ³ :	50.

³ 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.