

## AIRPROX REPORT No 2012106

Date/Time: 24 Jul 2012 1455Z

Position: 5142N 00057E (12nm NE  
Southend - elev 55ft)

Airspace: CAS (T)      (Class: D)  
Southend CTA

Reporter: Southend APR

1st Ac      2nd Ac

Type: PA34      Jabiru

Operator: Civ Trg      Civ Pte

Alt/FL: 3000ft      2300ft  
QNH      QNH (1016hPa)

Weather: VMC CLOC

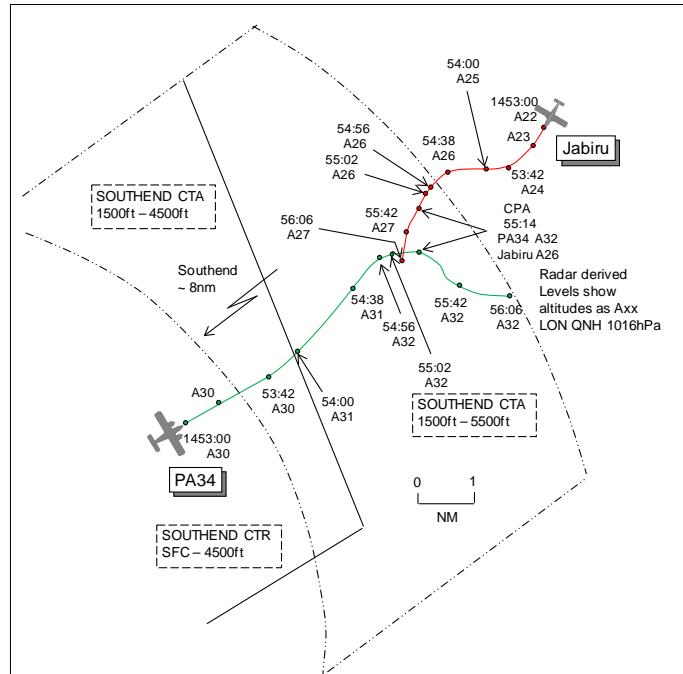
Visibility: >10km      VMC CAVOK

Reported Separation:

Not seen      Not seen

Recorded Separation:

600ft V/0-0.8nm H



## **CONTROLLER REPORTED**

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

**THE SOUTHEND APR** reports that the PA34 was an IFR departure towards CLN at altitude 3000ft. A 7000 squawk was observed tracking towards the CTA from the NE at altitude 2400ft. Several blind transmissions were made to establish contact with the ac. TI was passed to the PA34 flight which had requested a TS on leaving the CTA. The unknown contact entered the CTA indicating an unverified altitude 2500ft. Avoiding action was given to the PA34 pilot and the unknown ac passed down the port side of the PA34 by approximately 400ft and 1nm. The PA34 flight was subsequently instructed to resume its own navigation once it had passed the traffic. At 1456Z an Atlas Control squawk (1501) appeared on the display which was followed by a telephone call to him from Atlas advising of the unknown traffic's c/s; its first call to Atlas Control was when the ac was inside the Southend CTA. Two minutes later the traffic established communication; the controller advised the pilot that the ac was inside CAS before issuing a Southend squawk code. Owing to computer problems Atlas Control was unable to find the details of the Jabiru for en-route clearance through R112 so the flight was instructed to remain outside R112. Another flight requested transit clearance and entry into R112 as well as the PA34 from the NE. Owing to workload he was unable to accept handovers from Atlas or release CAT traffic waiting departure from Southend. The Jabiru flight was eventually given clearance from Atlas and continued en-route when S of the CTR/CTA.

**THE PA34 PILOT** reports departing Southend, IFR on an IR revalidation flight and in receipt of a RCS from Southend on 130.775MHz, squawking an assigned code with Modes S and C; I/F screens were in use. The visibility was >10km in VMC and the ac was coloured white and blue; lighting was not reported. Southend Approach instructed them, "avoiding action turn R heading xxx°". He took control from the candidate and immediately turned onto the assigned heading; the conflicting traffic was not seen. He was unaware that an Airprox had been filed until later in the day when informed by his company.

**THE JABIRU PILOT** reports being unaware that an Airprox had occurred until contacted by UKAB 2 days post incident. The flight was with a passenger from Clacton to Rochester, VFR and in receipt of a BS from Atlas then Southend squawking assigned codes with Modes S and C. The visibility was 20nm in CAVOK VMC and the ac was coloured white/blue; no strobe lights were fitted. The other ac was not seen by either himself or his passenger and, at the given reported position [12nm NE Southend], he was flying into sun heading 220° at 80kt and 2400ft QNH 1016hPa with a high workload changing squawk codes and changing frequencies.

**ATSI** reports that the Airprox occurred at 1455:13UTC, 12nm NE of Southend Airport, within the Southend Control Area CTA-1, Class D temporary controlled airspace (CAS(T)), which extended from an altitude of 1500ft to the base of CAS (5500ft: LTMA-8 & 4500ft: LTMA-7). The Southend CAS(T) was notified as active between 13 July 2012 and 15 August 2012, as part of the Olympic Airspace requirements.

The PA34 was operating on a local IFR training flight, having just departed from Southend Airport and was in receipt of a RCS. The Jabiru M/Light was operating VFR on a flight from Clacton Airfield to Rochester Airport and was not in receipt of an ATS.

CAA ATSI had access to Southend and ATLAS RT recordings, area radar recording, written reports from the Southend controller and both pilots.

The Wx for Southend Airport is provided: METAR EGMC 241450Z 10010KT CAVOK 25/12 Q1017=

At 1449:00 the PA34 departed from Southend RW06 and was transferred to Southend Radar, squawking 5051.

At 1450:22, the PA34 flight contacted Radar, "*Southend Approach (PA34 c/s) climbing two thousand feet maintaining a heading zero six zero.*" The controller replied, "*(PA34 c/s) Southend Radar Radar Control Service say again your altitude.*" The PA34 pilot replied passing 1700ft for 2000ft and the controller then instructed the PA34 flight to climb to altitude 3000ft. At 1452:11, the PA34 was instructed to resume own navigation and the PA34 pilot responded, "*Resuming own navigation direct Clacton (PA34 c/s).*"

The ATSU indicated that the controller had become aware of the unknown ac operating NE of Southend CTA-1 and using a non-operational display equipped with Mode S was able to determine the c/s of the Jabiru.

At 1453:00 the PA34 levelled at altitude 3000ft, with the Jabiru M/Light at 2200ft and in the PA34's 12 o'clock at a range of 8.4nm.

At 1453:42, the controller transmitted, "*Southend Radar transmitting blind to aircraft (Jabiru c/s).*" There was no reply from the Jabiru flight.

At 1454:01, the controller passed the PA34 flight TI, "*(PA34 c/s) in your twelve o'clock at five miles opposite correction crossing right to left indicating two thousand five hundred feet unverified may enter the control zone from the northeast if not sighted turn right heading zero nine zero degrees.*" The PA34 pilot replied, "*Turning right zero nine zero degrees (PA34 c/s).*"

The ATSU indicated that the Jabiru was tracking W as if turning away from CTA-1. At 1454:18, the radar shows the Jabiru at 2500ft QNH, 3.6nm NE of the PA34 which is indicating 3100ft QNH.

At 1454:37, the controller made a second blind transmission to the Jabiru with no reply.

By 1454:56, the Jabiru had turned L entering CTA-1, base 1500ft, at an altitude of 2600ft with the PA34 tracking NE.

At 1455:01, the controller gave avoiding action, “(PA34 c/s) avoiding action turn right now heading one one zero degrees.” The PA34 pilot replied, “Turning right heading one one zero degrees (PA34 c/s).” The radar shows at 1455:02 shows the 2 ac on reciprocal tracks at a range of 1.3nm.

The controller then passed TI, “(PA34 c/s) affirm traffic in your left eleven o'clock one mile indicating two thousand six hundred feet unverified,” which the PA34 pilot acknowledged.

At 1455:14, the PA34 is in the R turn passing 0.8nm ahead and 600ft above the Jabiru (CPA).

At 1455:42, the controller advised, “(PA34 c/s) clear of traffic turn left heading zero three zero degrees.”

At 1456:40, the Jabiru flight (inside CTA-1) contacted ATLAS control on frequency 118.725MHz and reported squawking 1501. The ATLAS controller identified the Jabiru flight and asked the pilot to confirm that he had spoken to Southend. The Jabiru pilot replied that he would give Southend a call.

At 1457:44, the Jabiru flight contacted Southend Radar, “Southend Radar (Jabiru c/s).” The Southend controller replied, “(Jabiru c/s) Southend Radar squawk five zero five four QNH one zero one seven you are inside Southend controlled airspace.”

The Jabiru pilot requested clearance to route via the Southend O/H routeing to Rochester and in receipt of an ATLAS code. The Jabiru flight was subsequently asked to hold in the Southend CTA-1 pending approval by ATLAS for the ac to enter the Olympic restricted airspace EG R112.

At 1507:48, the Jabiru flight was given a clearance to enter R112 and transferred to ATLAS control on 119.975MHz.

The Jabiru pilot's written report indicated that at the time of the occurrence his workload was high, setting a squawk and changing frequencies.

The controller was aware of the Jabiru operating NE of CTA-1 and tried to establish two-way communication.

When the range between the ac was 5nm the Southend controller gave the PA34 a tactical R turn of 30° and passed TI regarding the Jabiru.

When the Jabiru entered the Southend CTA-1 without first obtaining a clearance, the controller gave avoiding action with updated TI. The Manual of Air Traffic Services (MATS), Part 1, Section 1, Chapter 5, Page 13, paragraph 15.2, states:

‘If radar derived, or other information, indicates that an aircraft is making an unauthorised penetration of the airspace, is lost, or has experienced radio failure: IFR flights shall be given avoiding action and traffic information shall be passed.’

It is not clear why the Jabiru pilot did not comply with the Air Navigation Order, Rules of the Air, Rule 29(1) which states:

Subject to Rule 31, before an aircraft flies within Class B, Class C or Class D airspace during the notified hours of watch of the appropriate air traffic control unit, the commander of the aircraft shall:

- (a) cause to be communicated to the appropriate air traffic control unit a flight plan which complies with paragraphs (2) and (3) (as appropriate); and
- (b) obtain an air traffic control clearance to fly within that airspace.

The Airprox occurred when the Jabiru ac entered the Southend CTA-1 Class D CAS without first obtaining an air traffic control clearance, which brought the Jabiru into conflict with the PA34.

The Southend Radar controller tried to establish RT contact with the Jabiru flight and continued to monitor the flight, passing appropriate TI and then avoiding action to the PA34 flight when the Jabiru penetrated CAS.

**BM SAFETY MANAGEMENT** reports that the Airprox occurred between a PA34 operating IFR within the Southend CTA in receipt of a RCS from Southend APP and a Jabiru operating VFR in receipt of a BS from ATLAS Control TAC 1.

All heights/altitudes quoted are based upon SSR Mode C from the radar replay unless otherwise stated.

The incident sequence commenced at 1453:56 as the Jabiru pilot made initial contact with the ATLAS Allocator (Alloc) and was instructed, "...standby, looking for your flight plan." The Alloc's workload was assessed by the Supervisor as high, with multiple flights free-calling for an ATS and the unit having suffered a failure of the electronic flight strip system. At this point, the Jabiru was 5.2nm NE of the PA34, tracking SW'ly, indicating 2400ft. Significantly, the Jabiru was 1nm NE of the boundary of the Southend CTA, the base of which was 1500ft.

At 1454:40, the Alloc confirmed that the authorisation number passed by the Jabiru pilot was correct and gave them, "...permission to transit Romeo 1-1-2, Basic Service, the London Q-N-H 1-0-1-6" which was read back. At this point, the Jabiru was 2.7nm NE of the PA34, tracking W'ly, indicating 2600ft; the PA34 was tracking NE'ly, indicating 3100ft. At 1454:56, the Jabiru entered the CTA.

At 1455:00, the avoiding action turn issued by Southend APP and reported by the PA34 pilot was evident on the radar replay. At this point, the Jabiru was 1.3nm NE of the PA34, tracking SW'ly, indicating 2600ft; the PA34 was indicating 3200ft.

Immediately following the Jabiru pilot's read back, at 1455:05, the Alloc instructed them to, "squawk 1-5-0-1." This was read back and the Alloc then instructed the Jabiru pilot to, "...continue ATLAS Control [TAC 1] 1-1-8 decimal 2-7-5" which was similarly read back. This point, 1455:14, was the CPA. The Jabiru was 0.8nm N of the PA34, tracking SW'ly, indicating 2600ft; the PA34 was tracking E'ly following the avoiding action turn issued by APP, indicating 3200ft.

At 1456:06 the SSR 3A code passed to the Jabiru was displayed on radar. At 1456:42, the Jabiru flight contacted ATLAS TAC 1 reporting, "Atlas control er (Jabiru c/s) squawking one five zero one". TAC 1 replied, "(Jabiru c/s) Atlas Control identified confirm you've spoken to Southend?" The Jabiru pilot replied, "Er negative, will give Southend a call now." Having confirmed the Jabiru's altitude as 2800ft on the London QNH, TAC 1 contacted Southend APP, who confirmed that the Jabiru had contacted them.

The CPA occurred before ATLAS had identified the Jabiru and there was nothing in the exchange of RT between ATLAS and the Jabiru pilot to suggest that the ac was proximate to either the Southend CTA or the PA34. On that basis, ATLAS was unable to affect the outcome of the incident.

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

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

It was unfortunate that the Jabiru pilot had called Atlas Alloc on the ICF first to obtain permission to enter R112, instead of establishing 2-way with Southend to obtain CAS transit clearance. Atlas Alloc's primary task was to correlate pilots' initial calls of c/s and approval number with previously filed Flight Plans and their associated fps before issuing a clearance, assigning a squawk, a TAC control position and frequency. During this sequence, somewhat protracted owing to a problem with the electronic fps system, Alloc would have been unaware of the ac's position owing to the nature of

the task. By the time the Jabiru pilot had selected the assigned Atlas squawk and then called Atlas TAC 1, he was inside CAS(T) and the flight was then transferred to Southend. Members commended the actions taken by the Southend APR throughout the incident sequence. He had seen the Jabiru tracking towards the CTA and had tried calling the flight on his frequency, but to no avail. The PA34 flight was given TI and a tactical R turn onto 090° when the Jabiru appeared to be turning R away from CAS but this was then upgraded to an avoiding action R turn onto 110° when the Jabiru turned L and crossed the CAS(T) boundary. Members agreed that it was this entry into CAS by the Jabiru pilot without clearance which had caused the Airprox.

Turning to risk, Members noted that neither aircrew had seen the other ac. The Jabiru pilot reported a high workload whilst speaking to Atlas; however, he was still responsible for maintaining his own separation from other traffic through see and avoid whilst actioning TAC's instructions. The PA34 flight was IFR on an IRT flight in which IR screens were in use. These screens are designed to obscure the pilot under test's lookout but can also make the examiner's lookout more difficult, particularly when turning and searching for other traffic. The examiner had taken control from the PF to execute the avoiding action turn issued but had not seen the Jabiru. The radar recording shows the ac passing with 600ft vertical and 0.8nm horizontal separation at the CPA with the PA34 having already crossed through the Jabiru's 12 o'clock and diverging. Even though the ac passed unsighted by both crews, the action taken by both the Southend APR and the PA34 crew were enough to allow the Board to conclude that any risk of collision had been effectively removed.

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

Cause: The Jabiru pilot entered CAS(T) without clearance and flew into conflict with the PA34, which he did not see.

Degree of Risk: C.