

## AIRPROX REPORT No 2014018

Date/Time: 1 Mar 2014 1608Z (Saturday)

Position: Blackbushe ATZ

Airspace: Lon FIR (Class: G)

Aircraft 1                      Aircraft 2

Type: C152                      TB20

Operator: Civ Trg                      Civ Pte

Alt/FL: 800                      800  
QFE (990hPa)                      QFE (989hPa)

Conditions: VMC                      VMC

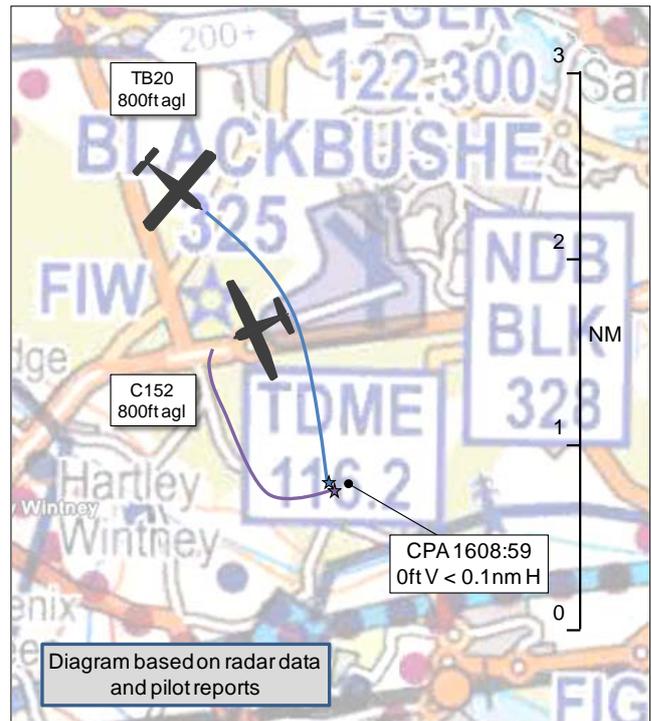
Visibility: 30k                      30k

Reported Separation:

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

Recorded Separation:

100ft V/<0.1nm H



## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

**THE C152 PILOT** reports flying a blue and white aircraft with a red flashing tail beacon illuminated. He had his transponder selected with 3A and C, but the aircraft was not fitted with a TCAS. He was flying in the Blackbushe visual circuit with a student, who was the handling pilot. They had completed 3 circuits, and were on the fourth, when they heard the TB20 call for visual join. Having completed the climb to circuit height, they looked left, didn't see any traffic, and so completed a level turn downwind. As they rolled out of the turn, the instructor asked the student to continue the roll so that they could see to their left, at which point they saw the TB20 "looming large" in their 9 o'clock, 150m away. The instructor took control and instinctively pushed the control column forward. The next time he saw the other aircraft it was on his right, he reported the close encounter to ATC and the other pilot concurred. The TB20 was now flying a wide downwind circuit to the right of the C152, and asked his intentions, the C152 pilot reported downwind to touch and go and slowed down for the approach, by which time the TB20 had pulled ahead and went around on the dead side.

He assessed the risk of collision as 'High'.

**THE TB20 PILOT** reports flying a white and green aircraft with tail beacon, nav lights and landing light on, and SSR transponder with 3A,C and S selected. The aircraft was not fitted with a TCAS. He reported calling Blackbushe when he was approximately 12nm NW of the airfield, for a standard join crosswind, and being given circuit information which included 3 aircraft "ahead or in the circuit" and one other joining. The sun was low in the sky, and visibility to the SE/SW was impaired due to the glare, although visibility in other directions was excellent. The passenger spotted the C152 first, and the pilot saw it about 5 seconds later in his 2 o'clock "passing at a lower level". He banked hard to the right and climbed. The pilot stated that the other aircraft was into sun from his position, and that as the C152 was flying quiet tight circuits he was initially unsure as to whether it was actually in the circuit or was joining, which was why he asked for a confirmation of intentions. To avoid further conflict with the C152 he flew as far south of the circuit as practicable and slowed the aircraft to 90kts, but concluded that he would not be able to slot in behind the other aircraft and elected to go around from final, climbed into the overhead and rejoined on the deadside. The

pilot opined that although he knew the other aircraft had priority as it was established in the circuit, the position of the sun was the main factor for not seeing it earlier, he stated that he had already conducted basic pre-landing checks prior to entering the circuit, and had not yet commenced configuring the aircraft for landing. He also noted that, with hindsight, given the difficult position of the sun and the busy circuit, a hold outside the circuit or an overhead join might have given him better overall situational awareness.

He assessed the risk of collision as 'Medium'.

## **Factual Background**

The weather at Farnborough was recorded as:

METAR EGLF 011550Z VRB03KT 9999 FEW042 07/M00 Q1001

## **Analysis and Investigation**

### **CAA ATSI**

ATSI had access to area radar recordings and written reports from both pilots together with RTF recording and transcript of the Blackbushe Information frequency.<sup>1</sup> The Blackbushe FISO did not witness the event and did not file a report.

The C152 was operating VFR in the left-hand circuit at Blackbushe and was in receipt of an Aerodrome Flight Information Service from Blackbushe Information on frequency 122.3MHz. The TB20 was operating VFR on a flight to Blackbushe and was in receipt of an Aerodrome Flight Information Service on the same frequency.

The TB20 pilot contacted Blackbushe Information stating that they were 14nm to the northwest of Blackbushe requesting joining instructions. The TB20 was informed that there was one aircraft on the dead-side with two in the circuit for RW25 left-hand.

At 1606:30 the TB20 pilot reported at 6nm northwest of Blackbushe and was informed that there was one ahead joining. The C152 pilot reported final for touch and go and was advised touch and go at the pilot's discretion. At 1608:01 the TB20 was 1nm northwest of the airfield with the C152, airborne again, turning crosswind (Figure 1).

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<sup>1</sup> The recording of the Blackbushe Information frequency is voice activated and there appears to be a discrepancy between its time of the recording and the time stamp of the area radar recordings. An adjustment of minus 2 minutes and 30 seconds has been made to the time of the Blackbushe Information recordings to approximately reflect the situation as indicated on the radar recordings.

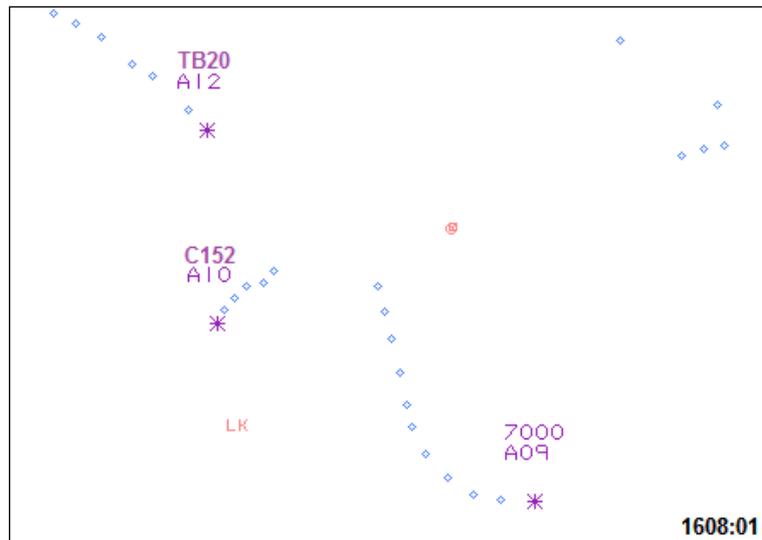


Figure 1.

As the C152 turned downwind the two aircraft converged (Figure 2) until the aircraft were less than 0.1nm/100ft apart (Figure 3).

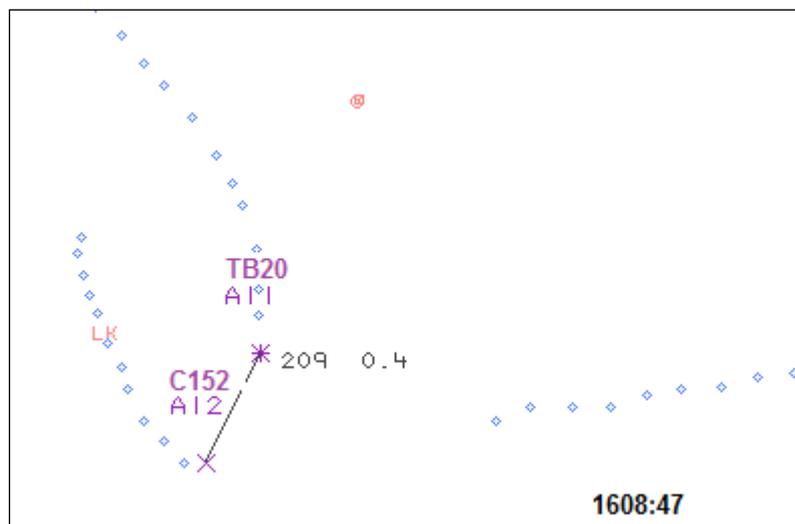


Figure 2.

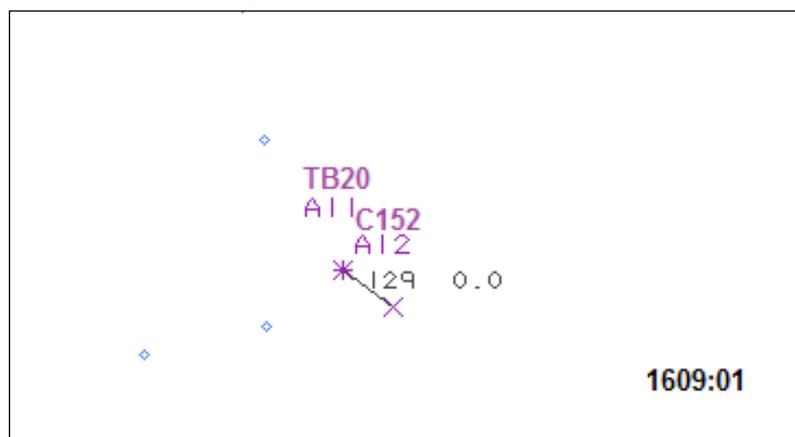


Figure 3.

The pilot of the C152 stated on the Blackbushe Frequency “*that was a bit close erm whoever that was er TB twenty*”. The Blackbushe FISO asked the TB20 what their position was, but the transmission was crossed with one from the TB20 pilot.

The C152 reported downwind for touch and go and the Blackbushe FISO informed the pilot that they had traffic on their right. The C152 replied “*affirm that’s [TB20 c/s] he er got a bit close*”. The TB20 reported that they would extend downwind and that they were late downwind. Another aircraft that was joining reported that they would join “*behind the traffic on late downwind*” and the FISO replied that there were two ahead “*er parallel*”. The TB20 asked what the intentions of the aircraft on his left were and the FISO informed the pilot that the C152 was doing circuits. The C152 and the TB20 flew parallel to each other on the downwind leg and turned left base with the C152 on the inside track (Figure 4).

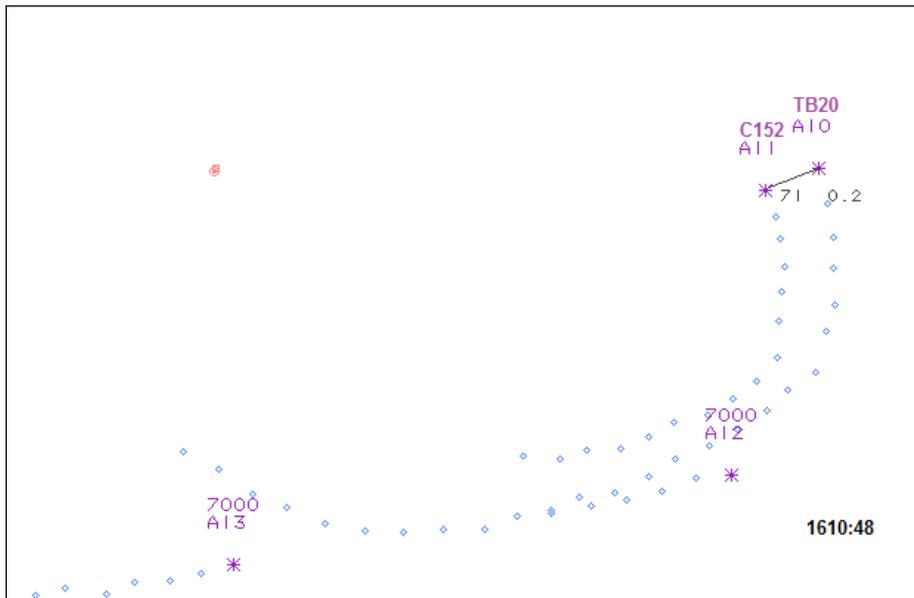


Figure 4.

The TB20 turned onto final ahead of the C152 (Figure 5) and subsequently went around, rejoining the circuit on the deadside and landing safely. The C152 completed its touch and go.

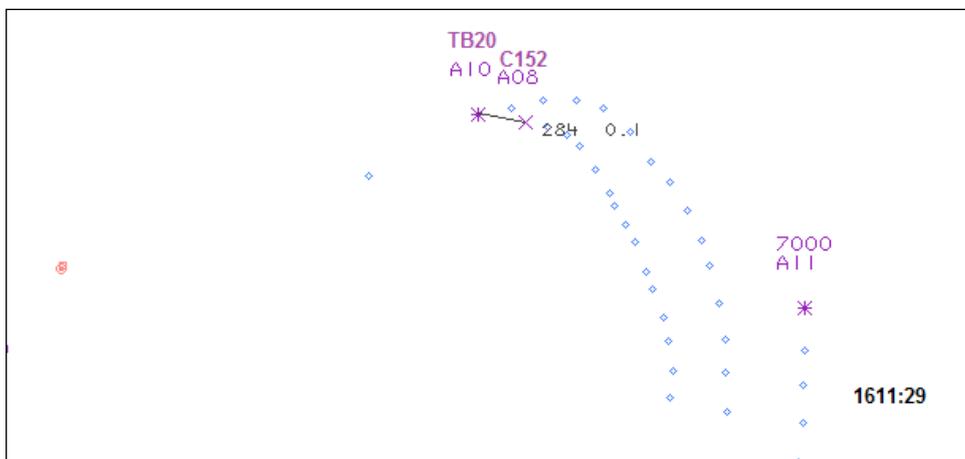


Figure 5.

The report from the pilot of the C152 stated that before they turned downwind they couldn't see any traffic. As they completed the downwind turn they saw the TB20 in their 9 o'clock and approximately 150m.

The report from the pilot of the TB20 stated that they were aware that there were three aircraft ahead and on entering the circuit they saw at least one aircraft ahead on the downwind leg. The pilot subsequently saw the C152 in his 2 o'clock, passing at a lower level. He banked hard to the right and climbed. He subsequently flew as far to the south of the circuit as practicable, slowed to 80-90kts then concluded that he would be unable to slot in behind the C152 so went around on final.

CAP797, the Flight Information Service Officer Manual, Section 1, Chapter 1, paragraph 1.1 states:

'FISOs shall issue information to aircraft in their area of responsibility useful for the safe and efficient conduct of flights. They are not permitted to issue instructions...  
...Pilots therefore are wholly responsible for collision avoidance in conformity with the Rules of the Air'.

The FISO passed traffic information to the TB20 regarding the circuit activity before the TB20 joined the traffic pattern.

### **UKAB Secretariat**

Traffic joining the visual circuit is required to conform to the pattern of traffic formed by other aircraft intending to land at that aerodrome<sup>2</sup>. Both aircraft shared an equal responsibility for collision avoidance.<sup>3</sup>

### **Summary**

An Airprox was reported on 1<sup>st</sup> March 2014 between a TB20 and a C152, both pilots were VMC, and both were in the Blackbushe visual circuit at 800ft. The C152 was turning downwind following a touch and go, whilst the TB20 was joining crosswind. The TB20 took avoiding action by turning right and climbing.

### **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 photographs/video recordings, and reports from the appropriate ATC and operating authorities.

The Board discussed the actions of the TB20 pilot and agreed with the pilot's own assessment that he would have been better placed to have waited outside the circuit if he was uncertain of the position of the traffic. Alternatively, having been given traffic information, he could have undertaken an overhead join, which may have given him more time to assimilate the whereabouts of circuit traffic. The Board opined that the pilot should have been aware that the sun was going to be a potential problem at that time of the day as he joined the circuit, and that he should have factored this into his planning.

Turning next to the C152 pilot, the Board praised his pro-active approach to lookout in the visual circuit and his subsequent avoiding action. The Board commented that this incident

<sup>2</sup> Rules of the Air 2007 (as amended), Rule 12 (Flight in the vicinity of an aerodrome)

<sup>3</sup> *ibid.*, Rule 8 (Avoiding aerial collisions)

once again highlighted the need for good lookout at all times in the visual circuit, and the need for instructors to instil this good practice into their students.

Considering the cause, the Board agreed that it was that the TB20 pilot who had flown into conflict with the C152 pilot, who was already established in the visual circuit. As for the risk, it was assessed that although taken at a late stage, the avoiding action of both pilots had more than likely materially altered the outcome. This had prevented a collision but had still resulted in safety margins being much reduced below the normal; the Board determined that the combined avoiding action had reduced the risk from Category A to that of Category B.

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

<u>Cause:</u>	The TB20 pilot flew into conflict with the C152 pilot, who was established in the Blackbushe circuit.
<u>Degree of Risk:</u>	B
<u>ERC Score</u> <sup>4</sup> :	20

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<sup>4</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.