

## **AIRPROX REPORT No 2014218**

**Date/Time:** 15 Nov 2014 1338Z (Saturday)

**Position:** 5154N 00212W  
(1.4nm W Gloucester Airport  
- elevation 101ft)

**Airspace:** Gloster ATZ (Class: G)

**Aircraft 1**                      **Aircraft 2**

**Type:** Ikarus C42                      TB20

**Operator:** Civ Trg                      Civ Pte

**Alt/FL:** 1000ft                      1000ft  
QNH (998hPa)                      QNH (998hPa)

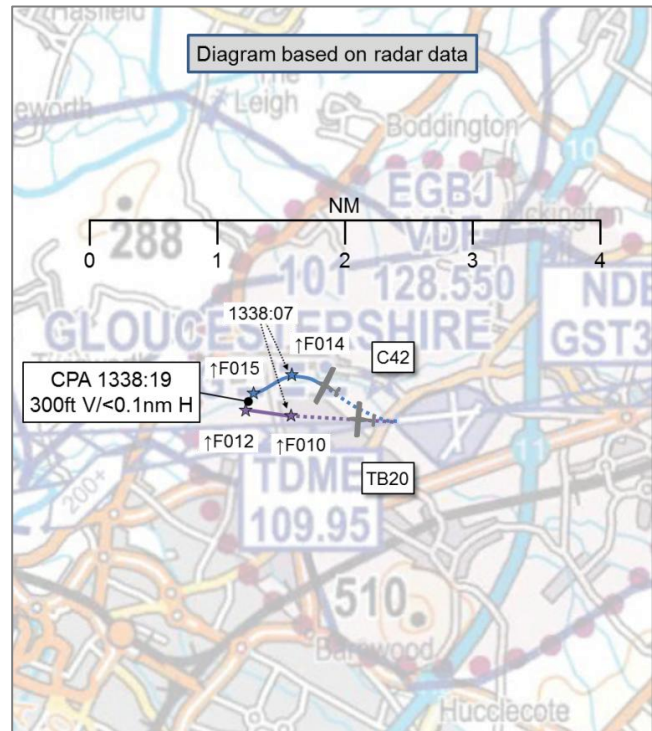
**Conditions:** VMC                      VMC

**Visibility:** 9km                      9km

**Reported Separation:**

0ft V/250ft H                      Not Seen at CPA

**Recorded Separation:** 100ft V/0.1nm H



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

**THE IKARUS PILOT** reports conducting an instructional sortie in the right-hand seat with the student pilot flying from the left seat. The white aircraft did not have lighting fitted; the SSR transponder was selected on with Modes A, C and S; the aircraft was not fitted with a TAS. The pilot was operating under VFR in VMC, in receipt of an 'ATZ Service' from Gloster Tower, he recalled. He was cleared to take off, with a Westerly departure 'after noise abatement'. At 500ft, at the Airfield boundary, the student turned 10° right onto 280° for noise abatement. They then heard Gloster Tower clear the TB20 pilot for takeoff, also on a Westerly departure. The TB20 pilot was asked whether he was visual with the Ikarus, to which he replied in the affirmative. Passing 1000ft in a climb, heading 280° at 65kt, the Ikarus instructor requested the student make a left turn onto 270° to 'regain outward heading'. The student replied he could not because another aircraft was coming alongside them. The instructor looked to the left and, as the TB20 emerged into his view, he saw it was overtaking on the left, abeam them, and climbing through their level at a range of 200-300ft. The instructor took control and turned right, by which time the TB20 had climbed above them and was well ahead. The instructor stated that he considered that a high risk of collision had occurred because if they had turned left without the student looking, or had the instructor, in the right-hand seat, been handling the controls and turned left, they would have collided with the overtaking aircraft. The instructor noted that, in accordance with the Rules of The Air, he would not have expected the TB20 pilot to overtake on the left and not to overtake at so close a distance.

He assessed the risk of collision as 'High'.

**THE TB20 PILOT** reports departing from Gloucester Airport. The white and blue aircraft had fin and wing strobes and landing light selected on, as was the SSR transponder with Modes A, C and S. The aircraft was not fitted with a TAS. The pilot was operating under VFR in VMC, in receipt of a Basic Service from Gloster Tower. He took off from RW27 about 1-2min after the Ikarus had also departed from RW27 to head west. They both adopted a heading of 280° at the upwind end of the runway for noise abatement. He lost sight of the other aircraft once established in the climb and, concerned by his closing speed and seeing there was no traffic to the left, he commenced a gradual left turn as soon as possible after noise abatement onto a heading of 255°. Passing about 1000ft in the climb he heard the other pilot notify the Tower of an Airprox, stating the TB20 had passed within 200yd of him.

He assessed the risk of collision as 'Low'.

**THE GLOSTER TOWER CONTROLLER** reports the Ikarus pilot was cleared for takeoff from RW27, departing to the west. The TB20 pilot was subsequently cleared for takeoff, also to the west and after having been passed Traffic Information on the Ikarus. At a position approximately 2nm west of the airfield, the Ikarus pilot reported that the TB20 pilot had overtaken him and passed quite close. It was the opinion of the Ikarus pilot that this situation required an Airprox; the pilot estimated the separation to be 200yds.

## Factual Background

The weather at Gloucester was recorded as follows:

METAR EGBJ 151320Z 00000KT 9000 FEW009 SCT012 12/10 Q0998=

The UK AIP AD 2.EGBJ-10 (dated 14 Nov 2013), Paragraph EGBJ AD 2.21(d) for noise abatement RW27 states:

‘Departures Runway 27 - All departing aircraft are to execute a 10° right turn when passing the upwind end of the runway. Tracking 280 MAG, climb through 600ft QFE before turning left. Avoid overflight of the village and church on the right. Jet aircraft are to climb through 1400 ft QNH before executing any turn. Aircraft unable to comply with 10° turn after take off should advise ATC and climb straight ahead through 1400 ft QNH.’

The Gloster ATZ consists of a circle of 2nm radius centred on the longest notified runway (09/27) and extending to a height of 2000ft above the surface (elevation 101ft).

## Analysis and Investigation

### CAA ATSI

CAA ATSI had access to Gloster RTF and area radar recording together with written reports from the Aerodrome Controller and the pilots of both aircraft.

Both pilots were departing from Gloster Airport on a local VFR flight to the west and were both in receipt of an Aerodrome Control Service from Gloster Tower. The Gloster ATSU were operating split Aerodrome and Approach control without the aid of surveillance equipment.

Both pilots had reported ready for departure. At 1335:00, the Ikarus pilot was given clearance to line up and wait. At 1335:30, the TB20 pilot was advised “...*behind the departing Ikarus, via alpha two, line up runway two seven behind, you’re number two for departure, number one is the Ikarus*” which was acknowledged correctly. At 1336:10, the following RTF exchange occurred:

ATC “[C42 C/S] *the departing Eurostar is in the circuit, after noise abatement, on track to the west, runway two seven clear for take off, surface wind northerly two knots*”

C42 “*Clear for take off [C42 C/S]*”

ATC [1336:50] “[TB20 C/S] *the departing Ikarus is westbound, fixed wing circuit active, after noise abatement on track to the west, runway two seven, clear for take off, surface wind three five seven two*”

TB20 “*Er clear for take off clear for take off two seven and er visual with the Ikarus er [TB20 C/S]*”

ATC [1337:22] “[TB20 C/S] *are you visual with the Ikarus, correction the Eurostar*”

TB20 “*Affirm [TB20 C/S]*”

At 1337:46, the Ikarus started to show on radar, 0.7nm from the end of the runway, indicating FL012 which converts to an altitude of 795ft using the Gloster QNH 998hPa. The Ikarus pilot then started to take up a track of 305°. At 1338:07, the TB20 appeared on radar, 0.9nm west of the airfield, tracking 282°, indicating FL010 (600ft), Figure 1.

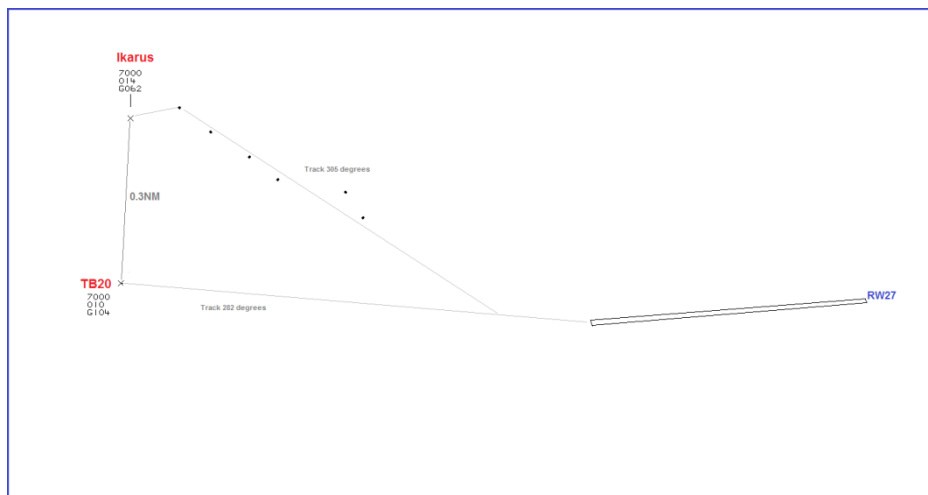


Figure 1 – Swanwick MRT at 1338:07

At 1338:15, the Ikarus pilot had commenced a left turn and was converging with the TB20. The distance between the two aircraft was 0.2nm, Figure 2.

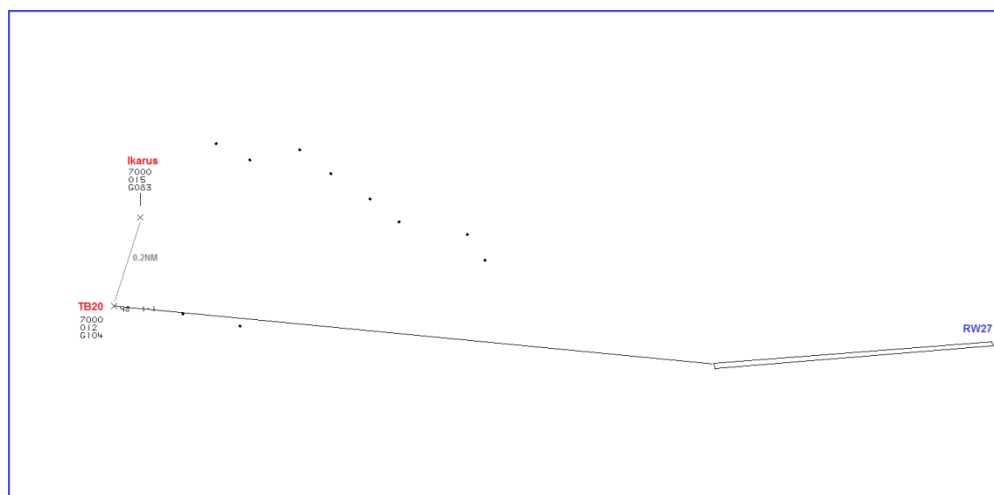


Figure 2 – Swanwick MRT at 1338:15

At 1338:19, the radar showed the Ikarus tracking approximately 240° and 300ft higher than the TB20. The horizontal distance between the two aircraft was 0.1nm and the TB20's groundspeed was 18kt faster than that of the Ikarus, Figure 3.

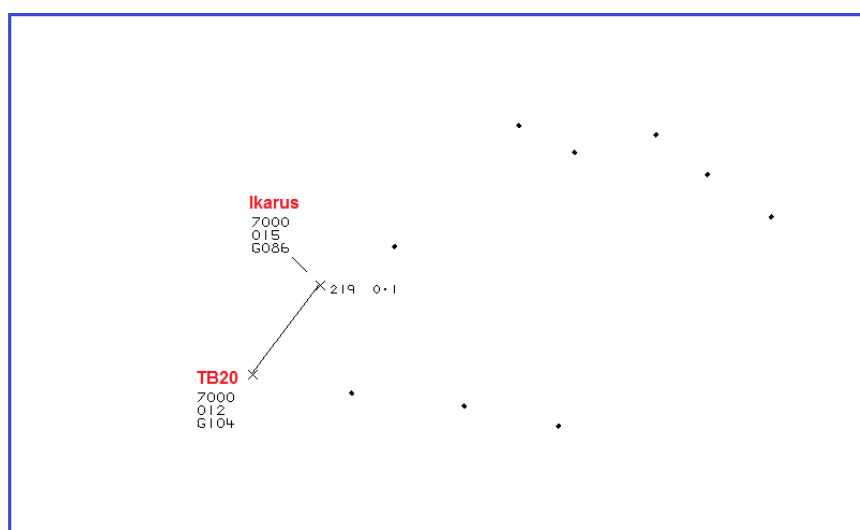


Figure 3 – Swanwick MRT at 1338:19

At 1338:27, both aircraft were indicating FL015 (1100ft) with the TB20 0.1nm ahead of the Ikarus, Figure 4.

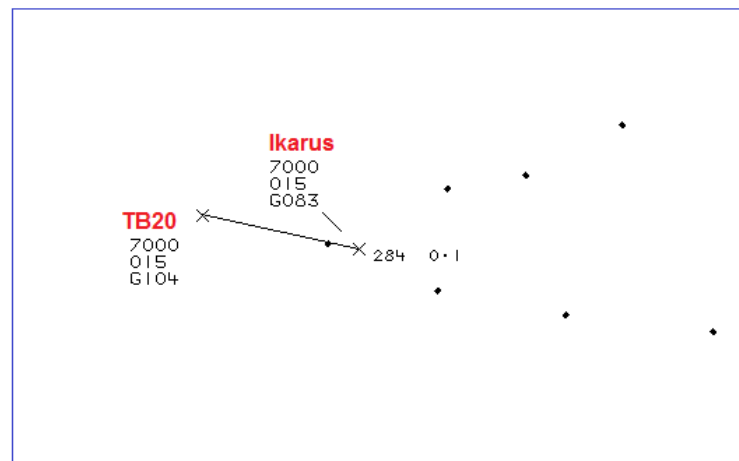


Figure 4 – Swanwick MRT at 1338:27

At 1338:32, the following RTF exchange occurred:

Ikarus *"Er [Ikarus C/S] that departing aircraft behind us has just overtaken us on the left hand side very close"*  
 ATC *"[Ikarus C/S] roger, contact approach one two eight decimal five five zero"*  
 Ikarus *"One two eight decimal five five zero and er can I contact you about that when I'm down, thank you"*  
 ATC *"Affirm the traffic was told about you"*  
 Ikarus *"Er it was about two hundred yards off on our left"*  
 ATC *"[Ikarus C/S] roger"*

The TB20 pilot was also transferred to Approach.

Both pilots were operating within the Gloster ATZ and in receipt of an Aerodrome Control Service. CAP493 (MATS Part 1), Section 2, Chapter 1, Paragraph 1.4 states:

'Aerodrome Control shall issue information and instructions to aircraft under its control to achieve a safe, orderly and expeditious flow of air traffic with the objective of: Preventing collisions between: aircraft flying in, and in the vicinity of, the ATZ...

...Note: Aerodrome Control is not solely responsible for the prevention of collisions. Pilots ... must also fulfil their own responsibilities in accordance with Rules of the Air.'

The TB20 was the faster of the two aircraft; however, both pilots were operating under VFR and, prior to the departure, the TB20 pilot had been passed appropriate Traffic Information regarding the Ikarus, which the TB20 pilot had reported in sight. The Aerodrome controller was likely assured that the TB20 pilot, having reported the Ikarus ahead in sight, would maintain his own visual separation.

### UKAB Secretariat

The Ikarus and TB20 pilots shared an equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision<sup>1</sup>. The incident geometry was considered as overtaking, the Ikarus pilot had right of way and the TB20 pilot was required to keep out of the way of the other aircraft by altering course to the right<sup>2</sup>.

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

<sup>2</sup> Rules of the Air 2007 (as amended), Rule 11 (Overtaking).

## Summary

An Airprox was reported when an Ikarus C42 and a TB20 flew into proximity at 1338 on Friday 3<sup>rd</sup> October 2014. Both pilots were operating under VFR in VMC, both in receipt of an Aerodrome Control Service from Gloster Tower.

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

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings, a report from the air traffic controller involved and reports from the appropriate ATC authority.

The Board first considered the controller's actions. They noted that he had cleared both the C42 and TB20 pilots to take off in turn, sequenced them as such, and had advised the TB20 pilot of the C42 pilot's general direction of departure, which the TB20 pilot would no doubt also have heard when the controller cleared the C42 to depart. The Board also noted that the controller asked the TB20 pilot if he was visual with a Eurostar in the visual circuit; minor confusion was caused as the controller referred to the departing C42 first, but the TB20 pilot had reported visual with the C42 in any case.

Turning to the pilots, the Board noted that the C42 pilot appeared to have turned some way beyond the noise abatement heading, taking up a track of about 305° rather than the 280° specified in the AIP. Members agreed that this error could easily be explained in terms of it being an instructional sortie with a student at the controls, and of itself was not a cause for concern. The Board also noted that the TB20 pilot had reported visual with the C42 prior to take-off, but had lost sight of it in the climb. He was rightly concerned by his degree of overtake of the C42 and had sensibly turned into an area which he judged to be clear of other traffic. Unfortunately, the seemingly innocuous error in the C42's departure track compounded the TB20's overtake as the C42 pilot turned left, such that the aircrafts' separation decreased markedly. However, members agreed that, fundamentally, it was the TB20 pilot's responsibility to avoid the C42, and that he was aware of such. They also agreed that he had made an effort to ensure such avoidance but, in the end, it was a fact that he had flown into conflict with the C42 having lost sight of it. The Board opined that the TB20 pilot may have been able to mitigate the situation by informing both the C42 pilot and Aerodrome Controller that he had lost sight of the C42. In doing so he would have increased situational awareness and perhaps been able to bring the C42 pilot's and Aerodrome Controller's lookout to bear.

The Board commended the C42 student for visually acquiring the TB20 before turning but, after some discussion, members agreed that chance had played a major part in the separation achieved, and that nothing more could have been done to improve matters.

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

<u>Cause:</u>	The TB20 pilot flew into conflict with the C42, having lost sight of it.
<u>Degree of Risk:</u>	A.
<u>ERC Score</u> <sup>3</sup> :	20.

<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.