

## AIRPROX REPORT No 2010009

Date/Time: 4 Mar 1626

Position: 5414N 00148W  
(4nm E GASKO)

Airspace: Scottish FIR (Class: G)

Reporter: Durham Radar

Ac 1 Ac 2  
Type: FK70 Tucano

Operator: CAT HQ AIR (TRG)

Alt/FL: 3500ft 2500ft  
(QNH 1028mb) (RPS 1026mb)

Weather: NR VMC CAVOK

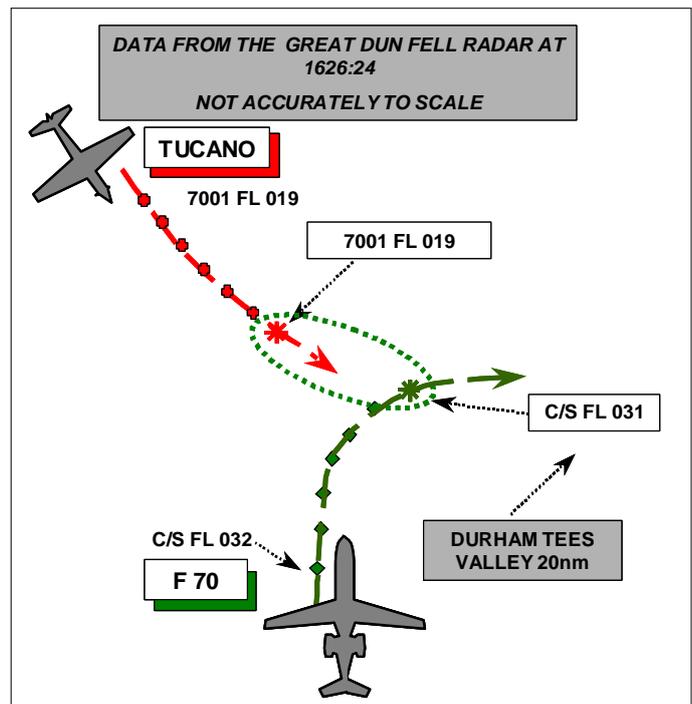
Visibility: NR 30km

Reported Separation:

1200ft V/1nm H NR

Recorded Separation:

1200ft V/2.3nm H



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

**THE DURHAM TEES VALLEY RADAR CONTROLLER** reports that at about 1523, he descended an FK70, heading 350° inbound for an ILS approach to RW05, to 3500ft on the QNH of 1028mb. The Supervisor previously noted on radar a 7001 squawk, S of Warcop and NW of GASKO, tracking SE indicating 2500ft so he (the controller) turned the FK70 on to 005° to tighten it up towards the FAT and still achieve separation. Shortly after, the SSR of the ac previously squawking 7001 disappeared but he continued tracking the primary contact until it 'partially faded' from radar about 20nm W of the airfield. The blip then re-appeared 3nm NE of GASKO shortly followed by an SSR return. At that time it was 6nm NE of the FK70, indicating 2500ft, the latter descending through 4500ft for 3500ft. Although the FK70 had already reported visual with the airfield, he called the traffic adding "if not sighted turn right heading 090 degrees". Soon after as the FK70 was passing 4100ft, he requested the pilot to level at the first opportunity and he responded, "level at 3500ft". The turn was made but it was immediately clear to him that separation was being eroded, so he issued an avoiding action turn onto 120° believing the 7001 to be manoeuvring and instructed the FK70 to climb to 4500ft to achieve some extra vertical separation albeit not the full 3000ft. When he saw the 7001 contact pass about 1nm behind the FK70 and 1000ft below, he turned it on to 360° and descended it to 3000ft.

After establishing the FK70 onto the localiser, he observed the 7001 change to a 4576 squawk, which is allocated to RAF Linton-on-Ouse. After being relieved from duty, he telephoned the Supervisor at Linton and established the identity of the Tucano.

After landing, the FK70 pilot telephoned and said they could see the contact on TCAS but not visually and he accepted the explanation of the avoiding action. The controller asked if he would be filing an Airprox report and he said he would not.

Later the Tucano pilot telephoned to say he was operating legitimately in Class G airspace and enquired as to why an Airprox was being filed and he (the controller) explained that it was due to separation being eroded. The Tucano pilot also stated that he was visual with the FK70 continuously and he estimated from his TCAS that they passed 2nm behind the FK70.

**THE FK70 PILOT** reports that he did not consider the event an Airprox. He was at about 20nm to run to Durham Tees Valley on a radar vector to intercept RW05 localiser, level at 3500ft when ATC gave TI on a pop up contact and a right turn onto heading 090°. He then saw the traffic on his TCAS 1500ft below just as he was told to “turn right heading 120° and climb to 4000ft”. The TCAS showed that the traffic had levelled at 2500ft, as they turned away and climbed to 4000ft. He did not see the other ac or receive any TCAS warning but estimated (from TCAS) that its at its closest it was 1200ft below and about 1nm away.

ATC said that they would file an Airprox report and that it was probably a military ac.

**THE TUCANO PILOT** reports that he was returning from a singleton low-level training sortie, squawking 7001 in a black ac with TCAS 1 fitted. The weather was good and he was heading 120° at 240kt in Class G airspace to the NW of Linton on Ouse having climbed out of the LFS to 2500ft RPS when he saw a large civilian twin jet ac about 2nm ahead and around 1000ft to 2000ft above them. It was heading N and then banked away to the NE and, as they watched it, the range indicated about 1.2nm on the TCAS. They were visual with the ac at all times and he perceived no collision risk at any time.

After he landed he was contacted by the ATC Supervisor at Linton who told him that Durham were filing an Airprox with an ac on recovery. He contacted the Durham Tees Valley Supervisor, who he believed was the controller of the ac at the time and asked why he had been filed against when he was in Class G airspace with significant horizontal and vertical separation. The Supervisor explained that he had the Tucano's squawk on radar and saw that it was level at 2500ft heading towards Linton and then the Squawk was lost. The Supervisor then told him he descended the inbound ac to 3500ft and the Tucano's squawk reappeared causing the FK70 to get a TCAS warning.

**ATSI** reports that the Airprox occurred at 1626:24, 4nm E of GASKO in Class G airspace below Airway P18. (GASKO is a reporting point on P18 and positioned 25nm to the SW of Durham Tees Valley (DTV) Airport). The base of Class A CAS in the vicinity of GASKO is FL125.

The DTV METAR was: EGNV 1620 33003kt 9999 FEW026 07/M01 Q1028

The FK70 was released to DTV in CAS maintaining FL140 en-route for GASKO and in receipt of a RCS. Durham Radar instructed the FK70 to continue on heading 335° and gave a descent to FL90 for vectors for an ILS approach to RW 05. At 1622:32 he gave further descent to an altitude of 3500ft, QNH 1028mb and, as the FK70 left the base of P18, he advised, “...leaving controlled airspace deconfliction service”. The FK70 was then instructed to turn right onto a heading of 350° to provide separation in the descent from known VFR traffic, squawking 7051, that had reported at 4600ft on QNH 1028mb and tracking SE.

Durham Radar then observed an unknown contact squawking 7001, indicating A2500, to the S of Warcop Danger Area and tracking SE. At 1624:30, in order to achieve separation from this unknown traffic and also tighten up the approach, Radar instructed the FK70 to turn right heading 005°. The radar recordings show the unknown contact indicating FL017 (A2100ft), 15nm NW of the FK70 and then subsequently fading from radar. At that point the FK70 pilot reported the field in sight but Radar advised that they will continue to vector the aircraft due to the known VFR traffic at 4600ft, “...just clearing the centreline southbound”.

MATS Pt1, Ch 11, Page 8, Para 5.6.3 states that:

‘The deconfliction minima against uncoordinated traffic are:

- 5nm laterally (subject to surveillance capability and CAA approval); or
- 3000 ft vertically and, unless the SSR code indicates that the Mode C data has been verified, the surveillance returns, however presented, should not merge.’

At 1625:30 the unknown contact reappeared 7.5nm NW of the FK70, indicating FL016 (A2000) tracking SE and converging so in an attempt to achieve the deconfliction minima the controller passed TI, "...pop up traffic left ten o'clock range seven miles manoeuvring indicating altitude two thousand feet if not sighted turn right heading zero nine zero degrees" and the FK70 pilot responded "er right heading zero nine zero it's not in sight...". Radar then advised, "okay it's now moving slowly southbound at the moment indicating 2300ft stop descent at the earliest possible level". The FK70 pilot reported levelling off at 3500ft and at 1625:47 Radar gave, "Roger avoiding action turn right heading 120 degrees that traffic now northwest of you three miles tracking southbound indicating 2300ft". At that point the radar recording shows the distance between the ac to be 5.6nm. The FK70 was then instructed to climb to an altitude of 4500ft.

At 1626:35 Durham Radar instructed the FK70 pilot to turn left onto N and advised, "Previously called traffic passing behind you by one mile south eastbound indicating two thousand six hundred feet." Radar recordings show the unknown traffic indicating FL021 (A2500) passing 2.3nm behind the FK70 that had commenced the climb passing FL032 (A3600).

At 1627 the Durham Radar advised the FK70 "...clear of traffic descend to altitude 3000ft". The FK70 is then given vectors for a normal approach to the ILS RWY05.

It was later established that the unknown contact was a Tucano returning to RAF Linton-on-Ouse after a low level sortie.

MATS PT1, Chapter 11, Page 7, Para 5.1.1 states:

'A Deconfliction Service is a surveillance based ATS where, in addition to the provisions of a Basic Service, the controller provides specific surveillance derived traffic information and issues headings and/or levels aimed at achieving planned deconfliction minima, or for positioning and/or sequencing. However, the avoidance of other traffic is ultimately the pilot's responsibility'.

And Para 5.6.5 states:

'High controller workload or RTF loading may reduce the ability of the controller to pass deconfliction advice and the timeliness of such information. Furthermore, unknown aircraft may make unpredictable or high-energy manoeuvres. Consequently, it is recognized that controllers cannot guarantee to achieve these deconfliction minima; however, they shall apply all reasonable endeavours. The pilot shall inform the controller if he elects not to act on the controller's deconfliction advice. The pilot then accepts responsibility for initiating any subsequent collision avoidance against that particular conflicting aircraft. However, the controller is not prevented from passing further information in relation to the conflicting traffic, if in his opinion it continues to constitute a definite hazard'.

**HQ AIR (TRG)** comments that the crews of the ac involved did not consider this incident an Airprox. This seems to be perceived a loss of separation by the controller but after examination of the facts there was no reduction of safety or increased risk of a collision.

## **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 recordings, reports from the air traffic controller involved and reports from the appropriate ATC and operating authorities.

The Board noted that neither pilot considered this to be an Airprox, but since the Controller had submitted an Airprox Report, a full investigation was conducted iaw normal procedures.

In providing a DS in Class G airspace, the Durham Radar controller was required to attempt to achieve 5nm/3000ft separation between the inbound FK70 against unknown contacts. It appeared to the Members that he had done this to the best of his ability but the track/alt of the Tucano was such that this was not going to be possible. However, his actions were, in the view of specialist controllers, entirely reasonable and appropriate.

The Board noted that both pilots were aware of and visual with the other ac at an early stage and were content that their flightpaths would not conflict. Both ac were TCAS equipped (the Tucano albeit TCAS1) and neither ac received a TCAS warning. That being the case the Board agreed that there had been no conflict and therefore no associated risk or reduction in normal safety parameters.

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

Cause: Controller perceived conflict.

Degree of Risk: C.