

AIRPROX REPORT No 2012157

Date/Time: 10 October 2012 1215Z

Position: 5705N 00110W
(EG D613A)

Airspace: EG D613A

Reporting Ac Reported Ac

Type: Tornado GR4 Tornado IDS

Operator: HQ Air (Ops) Foreign Mil

Alt/FL: 15150 15200
QNH (1010hPa) QNH (NR)

Weather: VMC CLAC VMC CAVOK

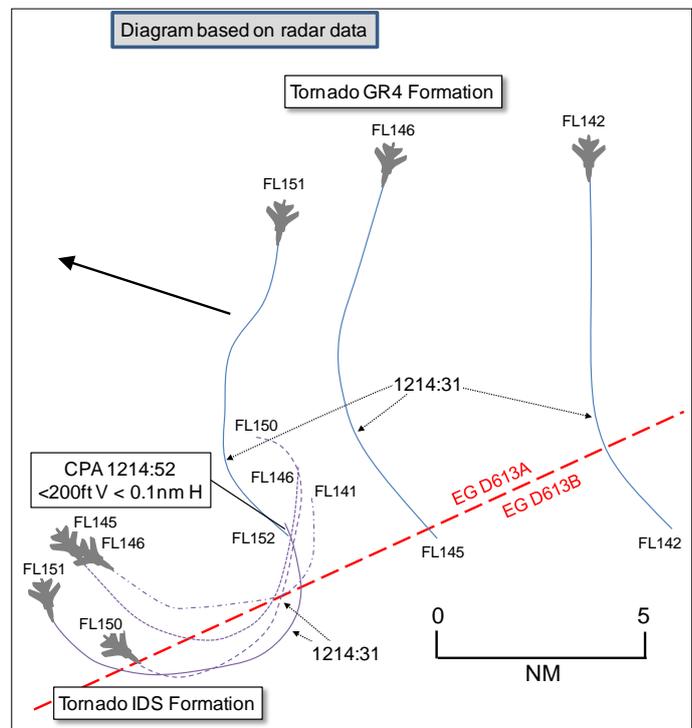
Visibility: 100km >10km

Reported Separation:

250ft V/100m H 500ft V/250m H

Recorded Separation:

<200ft V/<0.1nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

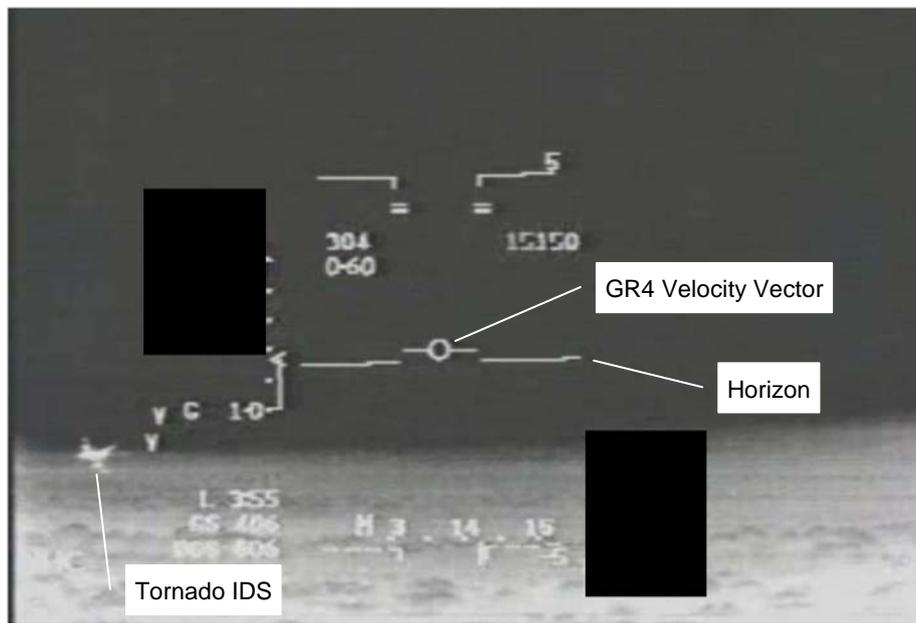
THE TORNADO GR4 PILOT reports flying as number 2 of a 3 ac formation, itself part of a larger package of 'blue force' ac, during the pre-start 'marshalling' phase of an Exercise CQWI sortie. He was operating under VFR in VMC with a BS from an AWACS ac and was expecting to see other ac in close proximity. The camouflaged grey ac had navigation lights and HISLs selected on. The SSR transponder was selected on with Modes A, C and S. The ac was not fitted with an ACAS. As he tracked S with the other 2 formation ac, 3 other ac were observed closing from the R. After approximately 10sec a fourth ac was observed at a range of 2nm closing rapidly from the R, just below him but not on a collision heading, in a level, hard L turn. The fourth ac, identified as a Tornado IDS, continued its L turn onto what appeared to be a collision heading and the GR4 pilot started a climb. The conflicting ac passed underneath his L wing at an assessed range of 100m and height separation of approximately 250ft. Initially the crew assessed that, although the incident was close, it did not warrant an Airprox and they did not want to stop the exercise. With hindsight, having viewed the HUD video, it was apparent there was potential for collision to have occurred.

He assessed the risk as Medium.

THE TORNADO IDS PILOT reports committing S-bound as one of a 4-ac formation during Ex CQWI, operating under VFR with 'tactical control' from an AWACS ac. The ac was camouflaged grey with navigation lights and HISLs selected on. The SSR transponder was selected on with Modes A, C and S. The ac was not fitted with an ACAS. After the exercise start, the formation reacted to a simulated threat and turned 180°, on to a N'y heading. As soon as the threat had ceased to be a factor the formation started to turn back to their original track. At that point he saw a conflicting Tornado at a range of 1nm in his 12 o'clock position and 'eased off' his L turn for deconfliction. After the 2 ac passed, he continued the flight inbound to the exercise target.

He assessed the risk of collision as Medium to High.

[UKAB Note(1): A still frame from the Tornado GR4 HUD video, taken shortly before CPA, is reproduced below:



BM SAFETY POLICY & ASSURANCE reports that this Airprox occurred within EG D613A on 10 Oct 12 between a Tornado GR4 and a Tornado IDS; both ac were operating under VFR in VMC in receipt of a BS from a Sentry Weapons Controller (WC) whilst participating in Ex CQWI. All heights/altitudes quoted are based upon SSR Mode C from the radar replay unless otherwise stated.

The WC reported that due to the anticipated complexity of the sortie and the expectation of comms jamming, a BS was applied to all exercise ac. The WC was providing a BS to approx 20 ac comprising the OCA package, all operating within a close proximity (Figure 1 refers).



Figure 1: Screenshot from NATS Radar Replay – the subject ac are at centre in red.

At the time of the Airprox, 5 ac, including the reporting and reported ac, were manoeuvring within a block of airspace approximately 1nm W-E by 2nm N-S, from FL140 to FL152 (Figure 2 refers – subject ac have SSR Mode 3A of 1542 and 1522).

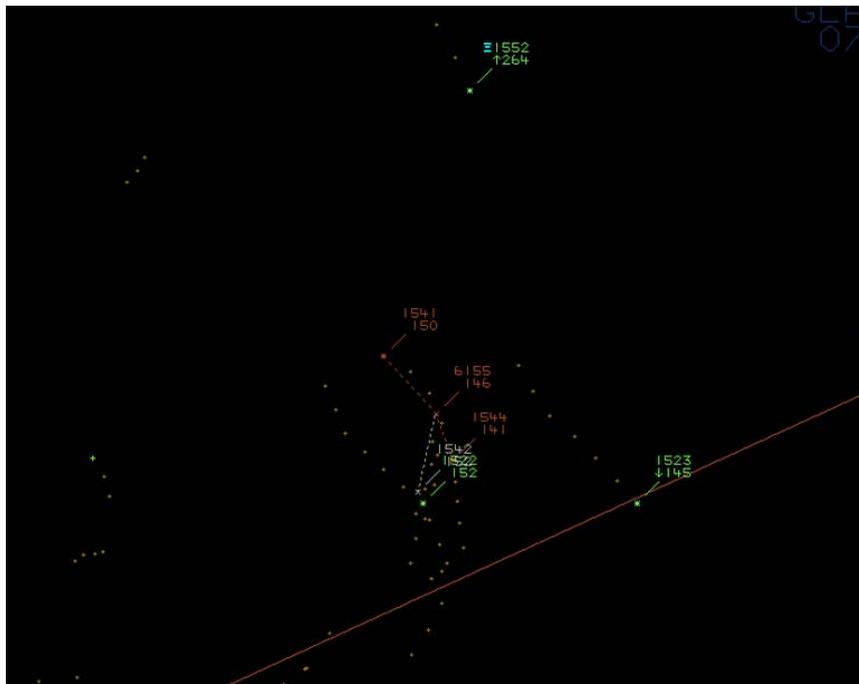


Figure 2: Screenshot from NATS Radar Replay of CPA.

Given his requirement to provide tactical information to the OCA package, the WC was operating on a relatively large range scale, thus his ability to differentiate individual ac within the package was reduced. Consequently, the WC had no opportunity to provide a warning to either crew of their proximity to other ac within the OCA package. It is also reasonable to argue that the crews involved were aware of these limitations and that “see and avoid” was the primary means of deconfliction.

HQ AIR (OPS) comments that the potential for Airprox is always heightened during large exercise activities but deconfliction plans and safe altitudes for the individual elements are considered during the exercise planning process. On this occasion the Tornado IDS formation reacted to a simulated threat and their turn back took them into conflict with the Tornado GR4 formation. Both formations were flying iaw the exercise plan and exercised the ‘see and avoid’ principle, iaw their operating conditions. The RAF Lossiemouth investigation has identified planning issues and reiterated the need for a Tornado ACAS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar photographs/video recordings, reports from the weapons controller involved and reports from the appropriate ATC and other operating authorities.

The military training Member commented that this kind of event was normally not reported as an Airprox but dealt with at the Exercise debrief level. The debrief and subsequent Lossiemouth Occurrence Review Group Investigation had identified the root cause as inadequate mission planning and the Board accepted this conclusion. A number of other issues were identified in the unit investigation, including the desirability of co-locating all strike package aircrew at the same base during an exercise; the use of VTC for full monitoring of the brief and debrief if aircrew cannot be co-located; fitting of ACAS to participating ac and improvements to computer planning tools to allow visual identification of confliction issues.

Board Members established that the conflicting formation members were operating iaw the regulations and mission plan and agreed unanimously that the Airprox was due to a confliction between the participants whilst they were operating under VFR with a BS and hence were responsible for collision avoidance. Both formation members ‘saw and avoided’; it was the GR4

pilot's responsibility to give way initially (Rule 9) and he climbed slightly; the IDS pilot altered his course to the R (Rule 10) as he approached a head-on position, both thereby providing effective and timely actions to prevent ac collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict between exercise participants.

Degree of Risk: C.