

## AIRPROX REPORT No 2010019

Date/Time: 16 Mar 1035

Position: 5256N 00106E  
(Salhouse)

Airspace: London FIR/LFA5 (Class: G)

Reporting Ac      Reported Ac

Type: BK117-C1      Tornado GR4

Operator: Civ Comm      HQ AIR (OPS)

Alt/FL: 500ft      725ft  
(RPS 1022mb)      (NK)

Weather: VMC CAVOK      VMC NK

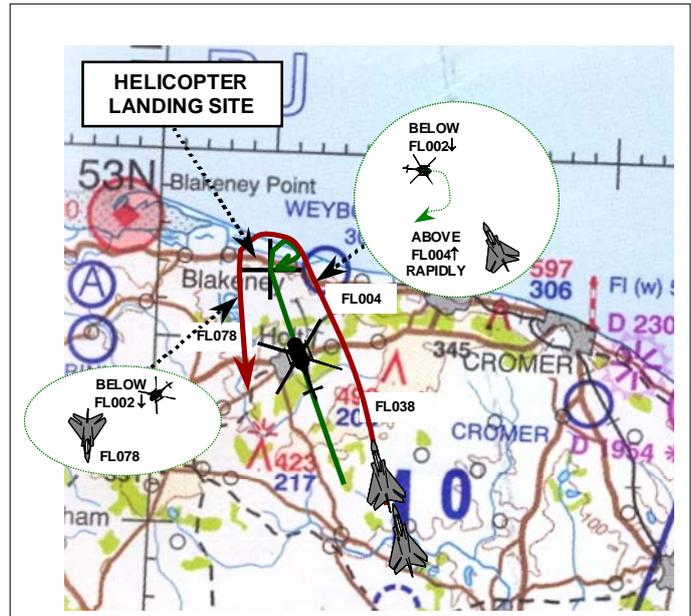
Visibility: 20km      9999m

Reported Separation:

300ft V/NK      NK

Recorded Separation:

NR See Note UKAB (1)



## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

**THE BK117-C1** pilot reports that he was flying a yellow ac on a Helimed flight answering an emergency call to Salhouse from Norwich in a TCAS (1) equipped ac and they were squawking 0020. While heading 350° at 135kt, as they were about to carry out the landing site identification 1min before landing, he received a call from Norwich Radar, who were providing him with a BS, passing TI regarding 2 military jets descending behind them and heading N. He checked the TCAS and simultaneously received a TA indicating an ac at 2nm in his 6 o'clock at about 500ft. After acknowledging the call, he checked the TCAS again and noted that the TA was now indicating 1nm and 300ft above so he elected to take avoiding action by descending straight ahead and he called Norwich Radar informing them of his descent. At about 100ft in the descent he made a right turn to try to acquire the ac but he did not see it so he continued the right turn and landed into wind (240/05) just to the N of the A149 at Salhouse. Since he only saw the other ac on TCAS he did not assess the risk.

After landing he was approached by an ambulance paramedic who commented on the close proximity of 2 military jets; he estimated their distance to be less than 1000m.

He was aware that a military exercise was in progress and that NOTAM HO493/1 was active, centred on a point approximately 1nm E of his intended landing point.

**THE TORNADO PILOT** reports that at the time of the incident they were conducting an exercise close air support flight in support of an Army Joint Tactical Air Controller (JTAC) operational work-up. A NOTAM was published for the exercise. Subsequently a civilian aeromed helicopter filed an Airprox but the crew were unaware of the incident and the ac did not show on the post flight analysis of the HUD/HDD video.

**ATSI** reports that the BK117, outbound from Norwich Airport on a Cat A flight to Salhouse, established communication with Norwich APR at 1028, the pilot confirming he was, "outbound northerly request Basic Service". The helicopter was approximately 4nm NNW of the airport, at FL003 (altitude 500ft on QNH 1021mb), squawking 0020, the Air Ambulance Helicopter Emergency Medivac code. The controller confirmed a BS and the pilot read it back. The next transmission from the helicopter was at 1034:03, when the pilot reported "approaching scene letting down" and the controller acknowledged the call.

Shortly after the radar recording shows an ac (the subject Tornado) tracking NNW at high speed, 7.1nm SE of the BK117 but there is no Mode C displayed on either ac at the time. At 1034:25, the controller asked if the helicopter was still on the frequency and after confirmation from the pilot, he passed TI, "Roger military aircraft in your five o'clock range three miles northbound passing one thousand four hundred feet in descent it's two aircraft fast moving in about a three mile trail now passing a thousand feet in your four o'clock". Probably due to the helicopter's low level, there was no acknowledgement of this call heard on the RTF recording, but in his written report the pilot stated he received and acknowledged the transmission. At this time the radar recording shows the BK117 at FL002 (400ft) and the closest Tornado 4.5nm SE of it at FL022 (2400ft) and thereafter, the Tornado continues to close on the BK117. Five sec later the BK117 is at FL002 (400ft) and the Tornado is 3.9nm SE at FL016 (1800ft). The Mode C of the helicopter disappears at 1034:46 when the Tornado is 2nm SE at FL006 (800ft). Although the BK117 does not show on the radar recording at 1034:50, the Mode C of the Tornado, which is still tracking NNW, indicates FL004 (600ft); the Tornado subsequently, turns S and climbs.

The MATS Part 1, Section 1, Chapter 11, Paragraph 3.5, describes a BS:

'A controller with access to surveillance derived information shall avoid the routine provision of traffic information on specific aircraft, and a pilot who considers that he requires a regular flow of specified traffic information shall request a Traffic Service. However, if a controller considers that a definite risk of collision exists, a warning may be issued to the pilot'.

On this occasion, the controller observed the military traffic approaching and descending towards the BK117 and he reacted appropriately by issuing TI.

UKAB Note (1): The recording of the Cromer radar (5nm E of the position) shows the incident clearly. The Tornados are flying in line astern formation with the No 2 ac 1.8nm behind the leader who was squawking 3640 with Mode C. At 1034:21 they approach the helicopter landing site tracking 350° descending through FL038 just as the helicopter approaches the site from the S also tracking 350° and having descended to FL002. The helicopter continues to descend, passes over the site and enters a right turn disappearing below radar cover. It is not possible to determine how long the helicopter stays airborne (before landing) after it disappears below radar cover (possibly at about 300ft agl). The lead Tornado continues to descend to FL004 (800ft amsl/~600ft agl) and passes 1.46nm E of the helicopter landing site and commences a left turn and rapid climb to FL090 rolling out on S to pass 0.8nm W of the landing site. The No 2 passes slightly further to the E 20 sec later but turns left, also onto S, and passes almost over the landing site but with no SSR displayed (presumably he follows his leader and also climbs rapidly).

**HQ AIR (OPS)** comments that the timely provision of TI and sensible reaction from the helicopter maximised the separation achieved, however this still caused the helicopter to be concerned although the separation distance was not eroded to an unsafe degree.

## **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 and reports from the ATC and the Tornado Operating authorities.

The Board noted the professional approach of the BK117 pilot, in that even on a very short notice emergency flight he checked the NOTAMs and was aware that one of them affected his flight. This NOTAM was not, however, a prohibition or airspace closure but a warning, and Members agreed that he had been justified to proceed 'with due regard'.

The Board also noted that, even though not required to do so when providing a BS, the Norwich APR Controller observed the potential confliction between the Tornado(s) and the Helicopter and warned

its pilot of their approach, enabling him to correlate this information with his TCAS indications. Had the Helicopter pilot requested a TS this would have been provided routinely.

The Board considered this to be a preventable incident; had the Tornado crew or the controlling FAC been made aware of the Medivac Helicopter's route or area of operation, it was thought most likely that they would have discontinued their exercise temporarily to allow it to conduct an unhindered evacuation of the casualty. Both the Civilian Helicopter Member and the HQ Air (Ops) Member informed the Board that while there is no formal process in place to facilitate this, they agreed that a call on VHF Guard by the Helicopter pilot would have been relayed to the Tornado on UHF Guard by the D&D cell even in the relatively short time available. Members considered this a correct and appropriate use of the Emergency frequency.

The JFACSU advisor to the Board noted that the FAC (JTAC) had not been asked for a report into the incident. In the absence of such a report it was likely that the FAC had not seen the helicopter or that he did not judge there to be a conflict since FACs are trained to call an "abort" during any target run if a hazard arises due to the presence of intruders. [A recommendation In Airprox Report 2010004, together with revised procedures in the UKAB Secretariat, should address the role of FACs in Airprox reporting and investigation in future.]

Both ac had been operating legitimately in Class G Airspace where they shared an equal responsibility to 'see and avoid' other ac. That neither pilot saw the other ac suggested to Members that they had been well separated with the Tornado probably well into its dive recovery and in a steep climb and the Helicopter either on the ground or on its final approach with its pilot concentrating on the landing. Given the geometry of the encounter and the manoeuvres of both aircraft in the final stages, the Board considered that neither pilot could reasonably have been expected to see the other ac and this incident had been a conflict in Class G airspace with no risk of the ac colliding.

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

Cause: Conflict in Class G airspace.

Degree of Risk: C.