

AIRPROX REPORT No 2012019

Date/Time: 20 Feb 2012 2008Z (Night)

Position: 5818N 00621W (CPA
4.1nm N Stornoway -
elev 26ft)

Airspace: Scot FIR (Class: G)

Reporting Ac Reported Ac

Type: S92A Tornado GR4

Operator: Civ Trg HQ Air (Ops)

Alt/FL: 2000ft 2000ft
QNH (1011hPa) NK

See radar snapshots below.

Weather: VMC CLBC VMC

Visibility: 20km 10km

Reported Separation:

0ft V/1-1.5nm H Not seen

Recorded Separation:

0V/1.3nm H

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE S92A (S92) PILOT reports that he was flying an IFR training flight from Stornoway, squawking 7000 with Modes C and S, transmitting blind simultaneously on the APP frequency (ATC was closed) and Scottish FIS who provided a BS; TCAS 1 was fitted.

During the outbound leg from SAY, heading 355° at 120kt following the NDB 18 Approach Plate at 2000ft in VMC (night), when about 3nm N from SAY, they received an audio warning 'Traffic Traffic'. A TCAS contact was indicated in the front left position (10 o'clock) of the ac at about 2-3nm. A second 'Traffic Traffic' warning was then heard and avoiding action was taken by immediately turning to the R and initiating a descent and turning the searchlight on. During the turn the other ac was seen paralleling them on an E'ly track at a similar height and about 1-1.5nm away. During the turn, Scottish Control informed them there was a radar contact 2nm on their LH side but by then they were visual with the contact. Had the avoiding action not been taken he believes there would have been a High risk of collision; this view was agreed by Scottish in a subsequent discussion.

Earlier in the flight, as they departed the airfield, communication was made with the other ac [Callsign given] who had called Stornoway ATC. The helicopter pilot relayed that ATC was closed but they would be conducting approaches to RW18 at Stornoway. The Tornado pilot informed them that they were 45nm SW of Stornoway, routeing to 15nm to the W before returning feet wet, low level to Lossiemouth [he thought]. There was no further communication between the ac but he (the S92A pilot) continued to transmit 'blind calls' on the Stornoway ATC frequency.

He reported the incident to the Supervisor at Scottish Control after landing and assessed the risk as being high.

THE TORNADO GR4 PILOT reports flying a night low-level tactical training flight in the UKNLFS, squawking 7001 with Mode C. The report was made after viewing the mission replay system; the RT excerpts are as recorded.

At 1954 they contacted Scottish West Coast FIS (127.275) and asked if there was any traffic in the [West Coast] area; they were informed "no traffic to affect". Then at 2001:50, a free call was made to

Stornoway APP (iaw Lossie SOPs) stating their intentions; Coastguard XXX replied stating the, *"Tornado C/S from Coastguard XXX, Stornoway is closed. We're making blind calls on the frequency. We're operating an NDB 18, 3nm south of the field climbing to 2000ft"*. The Tornado crew replied, *"Tornado C/S we are 40nm to the south, routeing inland to the west of Stornoway at low level before boxing to the north before recovering to Lossie feet wet"*.

The helicopter pilot replied S92A: *'Coastguard xxx that's copied, will continue blind calls on frequency'*.

During a simulated attack (SAP) [TFR-Loft-TFR] run at 2006:25, a call was heard stating *'beacon outbound'*. At about 2008 they completed the recovery from a loft manoeuvre, then climbed to level at 2000ft amsl, heading outbound on 105° at 450kt to point 24 on the map provided. As the crew passed point 24 at 2008.03, they began a descent back to low-level. At 2009:55 they made a blind call *'en-route'*, to which the helicopter pilot replied, *"copied ?????"* (word unreadable).

They were informed of the incident later by the SFSO; they did not see the helicopter and assessed the risk as being low.

THE SCOTTISH AREA CONTROLLER reports he was called on 127.275 by a S92 helicopter, airborne from Stornoway who advised that he was going to do some practice NDB approaches but that ATC had closed at 1945; he requested and was given a BS. His position correlated with a 7000 squawk O/H Stornoway and the controller understood that to be him but did not give him a radar service.

He had been told about a Tornado ac that was operating in the area by the previous controller and he could see a 7000 squawk about 15/20nm SW of Stornoway, which he understood to be the Tornado. He told the helicopter that there was a Tornado operating in the area and passed the position of the traffic that he could see. Shortly afterwards he saw the Tornado turn N and he passed further information to the helicopter. The helicopter pilot advised him that he had spoken to the Tornado on the Stornoway frequency (123.5) and they had exchanged information. Sometime later the 7000 squawk turned towards the helicopter a couple of miles N of Stornoway airfield and he again passed TI and the pilot replied that he had it on TCAS. When they were within about 2 miles of each other the other traffic turned away to the NE. The helicopter then told the controller that in his conversation with the Tornado he had been told that he would not be coming within 15nm of Stornoway.

The S92 pilot did not say at the time that he was filing an Airprox and the controller only learnt of this sometime later.

ATSI reports that an Airprox was reported 5nm to the N of Stornoway in Class G airspace at 2008:02 between a Tornado GR4 (Tornado) and a Sikorsky S-92A helicopter (S92).

The S92 was carrying-out practice approaches at the Stornoway NDB (SAY) while the airfield was closed and was in receipt of a BS from Scottish Westcoast Sector on 127.275 MHz whilst also transmitting blind on Stornoway APP frequency 123.500 MHz.

The Tornado was on a tactical low-level flight about to commence a return to Lossiemouth and was listening out on the Stornoway APP frequency.

CAA ATSI had access to recordings of RTF from Scottish Westcoast Sector (Scottish) and the Stornoway frequency, area radar recordings together with written reports from both pilots and the Westcoast Controller.

The Stornoway METARs for 1950 and 2020 were:

METAR EGPO 201950Z 21005KT 9999 FEW018 05/02 Q1012=
METAR EGPO 202020Z AUTO 23007KT 9999 FEW035/// 04/01 Q1012=

At 1946:40 the S92 was inbound to Stornoway and the pilot advised Stornoway APP that they would be dropping off two crew before departing again for some instrument training; Stornoway advised the pilot that ATC was closing and to continue with blind calls.

At 1959:40 the S92 reported departing from RW18 on the Stornoway frequency.

At 2002:00 the pilot of the Tornado called on the Stornoway APP frequency; the S92 pilot advised him that Stornoway was closed, and that they were transmitting blind on the frequency.

The written report from the S92 pilot stated that they were told by the Tornado pilot that the Tornado would be operating '45 miles Southwest of Stornoway, routing west by 15 miles before returning feet wet, low level to Lossiemouth'. The report from the Tornado pilot stated that they were '40 miles to the south, routing inland to the west of Stornoway at low level before boxing to the north before recovering to Lossie feet wet'. The ground-based RTF receiver at Stornoway only recorded the latter part of the conversation between the two ac which was "*Stornoway at er low level before boxing to the north and recovering er back to er Lossie feet wet*".

At 2003:20 the S92 pilot contacted Scottish and advised them that the ac was at 2000ft, operating overhead Stornoway and intended to do the NDB procedure to RW18; Scottish advised the S92 that there was a Tornado operating to the SSW of Stornoway by about 15nm heading N at about 1500ft. The pilot of the S92 advised Scottish that they were two-way with the Tornado on the Stornoway frequency and a BS was agreed.

The written report from the S92 pilot stated that during the outbound leg from SAY they received a TCAS traffic warning indicating traffic in their 10 o'clock position at a range of approximately 2-3nm. A second 'Traffic, Traffic' warning was given and avoiding action was taken by the pilot by turning to the right and initiating descent.

At 2007:40, as the S92 was in the turn, Scottish passed TI on the Tornado to the pilot of the S92, stating, "*Tornado in your vicinity now passing through your 12 o'clock range of about 2 miles showing you're the same altitude*". The S92 pilot obtained visual contact with the Tornado which was paralleling the S92's track. The minimum distance was 1.4nm [after the S92 had turned to the E] with both ac at 2000ft.

The Tornado subsequently tracked to the NE of Stornoway and advised on the Stornoway frequency that they were routing E at low level and were going en route.

As both ac were in Class G airspace, the respective pilots were ultimately responsible for collision avoidance.

In respect of a Basic Service, CAP774 the Manual of Flight Information Services, Chapter 2, paragraph 5 states:

'Pilots should not expect any form of traffic information from a controller/FISO, as there is no such obligation placed on the controller/FISO under a Basic Service outside an Aerodrome Traffic Zone (ATZ)...on initial contact the controller/FISO may provide traffic information in general terms to assist with the pilot's situational awareness... A controller with access to surveillance-derived information shall avoid the routine provision of traffic information... However, if a controller/FISO considers that a definite risk of collision exists, a warning may be issued to the pilot.'

The Scottish controller gave generic traffic information on the Tornado operating to the SSW to the S92 pilot and then passed a warning when the Tornado flew into proximity with the ac.

When the S92 pilot received a traffic warning on TCAS, avoiding action was taken. The Tornado was not TCAS equipped and the pilot of the Tornado did not see the S92.



Figure 1. Scottish Controller passes TI to Coastguard XXX. (2007:40)

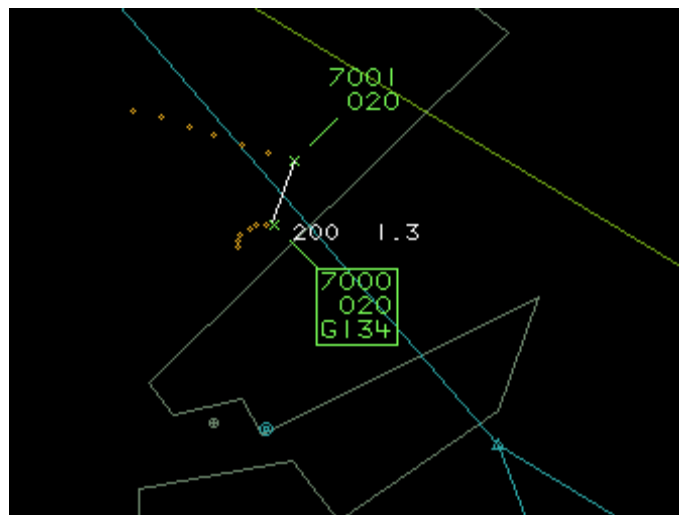


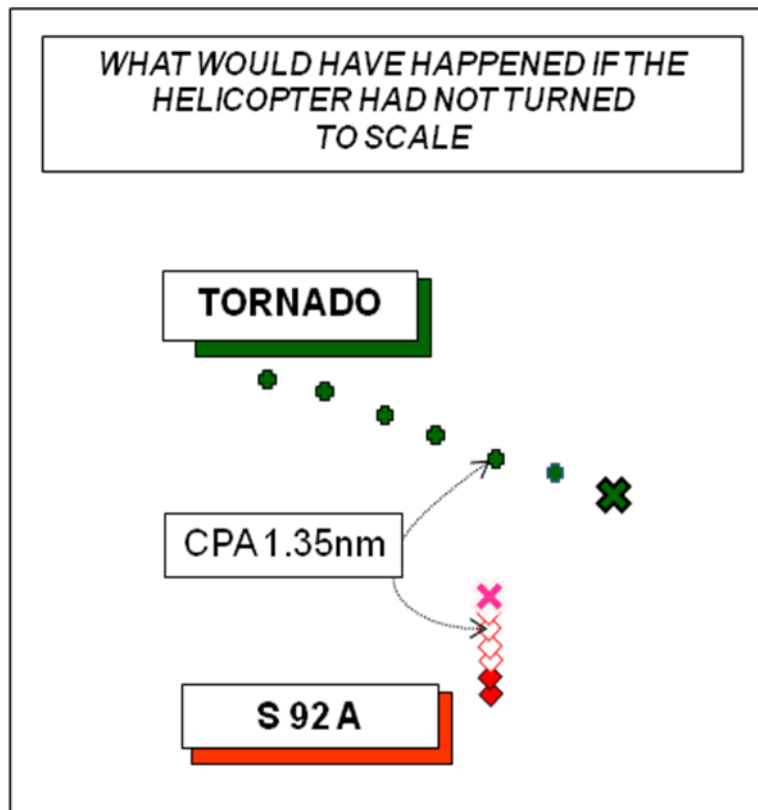
Figure 2. Closest point of approach 1.3nm & 0ft (2008:00)

HQ AIR (OPS) comments that the Airprox was a perceived conflict in Class G. Both parties took sensible precautions in establishing communications with other traffic, but neither was under a Traffic Service. This communication failed in that neither appeared to comprehend the intentions of the other. The Tornado crew did not appreciate that the S92 was actually routing to the north at 2000ft as they do not routinely carry NDB approach plates and had heard the report that the S92 was to the south of Stornoway. Equally, the Tornado crew's reference to "boxing" to the north appears not to have been understood by the S92 crew, who believed the Tornado would not approach within 15nm. In both cases, a longer but clearer description of routings may have assisted in the mutual understanding of the potential for conflict. It is interesting that neither crew felt the need to question the other's calls, apparently content that no conflict existed. The benefit of the S92's TCAS in this incident, coupled with the Tornado's requirement to operate IFF, is evident; fitment of TCAS to the Tornado fleet is still under consideration but is not yet funded, and it is very likely it would have increased the Tornado crew's SA on the S92.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the ScACC RT frequencies, radar recordings, reports from the air traffic controller involved and reports from the appropriate ATC and operating authorities.

The Board was shown a diagram (below) depicting what would have happened had the S92 not turned to the right (using actual G/S and headings taken from the Stornoway SSR). It showed that the Tornado would have passed from left to right through the S92's 12 o'clock at a distance of 1.3nm at the same alt (2000ft amsl). That being the case Members agreed that the S92's turn had not had the desired effect of increasing the separation between the ac.



The Board agreed that both ac had been operating legitimately in Class G airspace where 'see and avoid' is the principal method of collision avoidance. Stornoway Airport was closed and the Tornado would not have anticipated any local traffic in the area. Nevertheless, the crew called Stornoway in accordance with SOPs and were made aware of the presence of S92 and that it was conducting IF approaches; they would not, however, have been aware that RW18 NDB pattern conflicted with their planned route.

Although aware that the S92 was in the area, the Tornado crew did not see it and therefore were not able to increase the separation (perhaps vertically). Members opined that this might have been due to the background of cultural lighting from the town. The S92 pilot, seeing the Tornado approach from their left, initially only on the TCAS, opted to turn right and remain at 2000ft, the minimum alt for that sector; having turned to parallel the Tornado they first saw it visually on their left when it was overtaking them.

Although Members considered the separation reasonable (1.3nm H) and they agreed that was no risk of collision, they observed that had there been more effective communication between the ac regarding each other's intentions when they talked on the APP frequency, the incident would most likely have been avoided.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A non-sighting by the Tornado crew and effectively a non-sighting by the S92 crew.

Degree of Risk: C.