

## **AIRPROX REPORT No 2012048**

Date/Time: 2 Apr 2012 0903Z

Position: 5322N 00050W (8.5nm SE  
Doncaster/Sheffield)

Airspace: LFIR (Class: G)

Reporting Ac Reporting Ac

Type: BE90 PA31

Operator: Civ Comm Civ Comm

Alt/FL: 1900ft 2000ft  
QNH (1011hPa) QNH (1012hPa)

Weather: VMC CLBC VMC CLBC

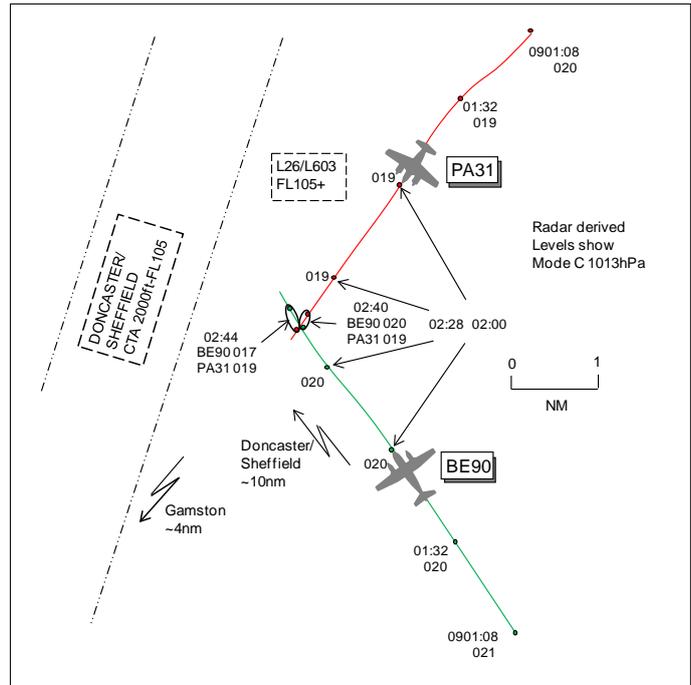
Visibility: 20km >10km

Reported Separation:

300ft V/50m H 200ft V/Nil H

Recorded Separation:

50ft V/<0.1nm H [see Note (1)]



**BOTH PILOTS FILED**

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

**THE BE90 PILOT** reports flying solo en-route to Doncaster/Sheffield, VFR, and in receipt of a BS from Doncaster on 126.225MHz squawking an assigned code with Modes S and C; TCAS was not fitted. The visibility was 20km flying 1200ft below cloud in VMC and the ac was coloured white/grey with strobe, beacon and nav lights all switched on. After his initial call he was told to standby and, owing to his late release from the previous agency, as he was approaching the CTR boundary he turned R to remain outside CAS. After receiving clearance to enter the CTR VFR and a BS he turned towards Doncaster Airport. Soon after establishing on heading 310° at 150kt, level at 1900ft QNH 1011hPa, he looked R to see a light twin-engine ac about 800m away on an approaching/converging heading and a little above his level. He descended 200-250ft to increase separation while maintaining visual contact with it, estimating he passed 300ft below and 50m clear of it at the CPA. He assessed the risk as medium.

**THE PA31 PILOT** reports flying a survey flight from Gamston, VFR, monitoring Gamston frequency 130.475MHz and squawking 7000 with Modes S and C; TCAS was not fitted. The visibility was >10km flying 1500ft below cloud in VMC and the ac was coloured white/purple; ac lighting was not reported. He departed Gamston for a survey in the East Midlands area. In order to prepare the ac for the survey he had to fly straight and level for 2min at 2000ft and elected to do this to the NE of Gamston where he knew it would not interfere with anybody, just monitoring the Gamston frequency as he was not far from the aerodrome. When complete he headed back towards the East Midlands area heading 200° at 150kt maintaining 2000ft QNH 1012hPa while getting closer to Gamston. Although the Wx was good in the area, he was looking further towards East Midlands where clouds were building up. About 8-10nm on the GAM 050°R he first noticed a twin-engine ac, possibly a King Air, passing below very close, about 200ft; this ac had been hidden by his ac's LH engine nacelle. It was already too late to take any kind of avoiding action. He was initially unsure if it was an ac as it was 3sec after that he saw it already on his R rear quarter of his ac. He assessed the risk as high.

**THE DONCASTER RADAR CONTROLLER** reports the BE90 flight called on frequency requesting joining instructions VFR. The flight was given a BS and instructed to join not above 2000ft routing towards L base RW20. Two minutes later the BE90 pilot requested to report an Airprox, stating he

was flying straight and level on a NW'ly track at altitude 1900ft when he saw an ac, possibly a PA31, on his R tracking SW about 50ft above and that he had descended 200ft to avoid.

**ATSI** reports that the Airprox occurred at 0902:41 UTC, 8.7nm to the SE of Doncaster/Sheffield Airport, within Class G airspace, between a BE90 and a PA31.

The BE90 was inbound VFR from Southend Airport and was in receipt of a BS from Doncaster Radar. The PA31 was operating from Retford/Gamston Airport on a VFR survey flight, monitoring Gamston Radio (A/G) frequency 130.475MHz and not in receipt of an air traffic control service.

Controllers at Liverpool provide the Doncaster Approach Radar service. The Doncaster 10cm radar is situated on the airfield at Doncaster/Sheffield and the PSR data is transported to Liverpool via a dual data communication channel link. The Claxby SSR data feed is provided by NATS. The workload was assessed as light/medium.

CAA ATSI had access to RT and radar recordings from Doncaster together with NATS area radar recordings and written reports from the controller and both pilots.

METAR EGCN 020850Z 24008KT 9999 FEW024 10/06 Q1011=

At 0900:18, the BE90 flight established contact with Doncaster Radar and, after being allocated the Doncaster/Sheffield Conspicuity squawk 6160, was instructed to standby. Doncaster Radar showed the BE90 positioned 16nm SE of Doncaster with the PA31 12nm N of the BE90.

At 0901:07, the BE90 pilot was asked to, "*pass your message*" and the following RT exchange took place:

BE90        "*(BE90 c/s) is a Beech ninety inbound to you from Southend er VFR currently er one two miles to the southeast at er two thousand feet er VFR requesting a VFR join.*"

Controller   "*(BE90 c/s) Doncaster roger and operating er Runway two zero the Doncaster QNH is one zero one one what service are you looking for when you're outside.*"

BE90        "*One zero one one just a Basic Service will be fine (BE90 c/s) we've got Charlie copied.*"

[Doncaster radar showed the distance between the 2 ac as 5nm (0901:32) with both ac indicating an altitude of 1900ft.]

Controller   "*(BE90 c/s) roger Basic Service you have cleared to enter the Doncaster control zone not above two thousand feet VFR routeing left base runway two zero.*"

BE90        "*Clear to enter not above two thousand feet VFR er and for left base runway two zero (BE90 c/s).*"

[UKAB Note (1): At 0902:28, using Claxby SSR data (at short range), the BE90 is tracking NW with the PA31 in its 2 o'clock at a range of 1nm. The BE90 is indicating FL020 (altitude 1940ft QNH 1011hPa) and the PA31 at FL019 (1840ft QNH). The 2 ac maintain their levels and tracks until 0902:40, with the PA31 in the BE90's 0230 position at a range of 0.2nm. The CPA occurs before the next radar sweep at 0902:44, which shows the ac having crossed, the PA31 is passing 0.3nm behind the BE90 which was indicating FL017 (altitude of 1640ft). At the CPA it is estimated that lateral separation was <0.1nm. However the vertical geometry shown on the radar recording does not accord with that reported by BE90 pilot who stated that the PA31 was first seen slightly above and his avoiding action descent increased the separation between their ac. The radar recording shows the BE90 100ft above the PA31, until just before the ac cross, and then 200ft below on the sweep

after the CPA. By interpolation this would put vertical separation as about 50ft however both pilots reported vertical separation of about 200ft.]

At 0903:08, as the BE90 entered CAS the following RT exchange occurred:

- Controller *“(BE90 c/s) just entering controlled airspace Radar Control report the field in sight.”*
- BE90 *“Entering controlled airspace er Radar Control wilco and er can I just report an Airprox.”*
- Controller *“(BE90 c/s) that is understood you were on a Basic Service there was seven thousand traffic observed in your vicinity but on a Basic Service you don’t pass traffic information - pass the details.”*
- BE90 *“I realise that just er saw quite late on my right slightly higher a light twin and I think maybe a P A thirtyone or similar and yeah I just say it’s for paperwork purposes I yeah so I descended a few hundred feet to keep well clear.”*

The controller, when asked about the observed 7000 squawk, indicated that it was not unusual to have 12 or so ac operating in the area on a BS and it was not normal practice to identify or monitor such flights. Had the pilot requested a TS, the controller’s normal practice would be to identify the flight, projecting a 1min predictive line from the ac label and passing appropriate TI when necessary. The controller indicated that the BE90 pilot had commented that he was fine with a BS and given the good weather conditions, the controller was content that the pilot was keeping his own lookout.

The controller remembered observing the 7000 squawk but had judged at the time that, given the distance between the 2 ac, there was no need to pass any information. The controller was not monitoring the 2 flights and indicated that given the operating range of the radar display and the label overlap of the 2 ac, it was not immediately clear that the 2 ac were in very close proximity.

The BE90 pilot and controller had agreed a BS and the controller allocated the Doncaster conspicuity code. CAP774 UK Flight Information Services Chapter 2, Paragraph 1 states:

*‘A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot’s responsibility.’*

When the BE90 flight contacted Doncaster Radar, the distance between the 2 ac was 12nm, the weather was good and the controller was content that the pilot was maintaining his own lookout. There was no requirement for the controller to monitor the flight or pass any TI. When the BE90 flight was given a joining clearance, the distance between the ac was 5nm. The controller believed that the SSR labels had started to overlap as the range between the 2 ac had reduced and the controller had not been aware of the close proximity of the 2 ac. CAP774 UK Flight Information Services Chapter 2, Paragraph 5 & 6 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), and the pilot remains responsible for collision avoidance at all times. However, on initial contact the controller/FISO may provide traffic information in general terms to assist with the pilot’s situational awareness. This will not normally be updated by the controller/FISO unless the situation has changed markedly, or the pilot requests an update. 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 such a regular flow of specific traffic information shall request a Traffic Service. However, if a controller/FISO considers that a definite risk of collision exists, a warning may be issued to the pilot.’*

'Whether traffic information has been passed or not, a pilot is expected to discharge his collision avoidance responsibility without assistance from the controller/FISO.'

The PA31 flight, operating VFR in Class G airspace, was monitoring Gamston A/G Radio and was not in receipt of an air traffic control service. The BE90 pilot was content with a BS. Neither of the 2 pilots had requested a higher level of service, such as a TS, which would have provided TI and a better situational awareness of the traffic environment. CAP774 UK Flight Information Services Chapter 1, Paragraph 8 states:

'Fundamental to the provision of the UK FIS outside controlled airspace is the standard application of the services to prevent the boundaries between the services becoming confused. Agreement to provide a service and acknowledgement of that level of service by a controller/FISO and pilot respectively, establishes an accord whereby both parties will abide with the definitions of that service as stated herein. Once an accord has been reached the controller/FISO shall apply that service as defined...'

The controller and BE90 pilot agreed the provision of a BS and the controller was not required to monitor the flight or provide any TI. The controller was not aware that the 2 ac were in close proximity and was not able to provide a warning.

The Airprox occurred in Class G airspace when the pilot of the BE90 became concerned by the close proximity of the PA31. The BE90 flight was in receipt of a BS and there was no requirement for the controller to monitor the flight.

The situation was resolved when the pilot of the BE90 sighted the PA31 and descended to increase the vertical separation between them.

## **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 video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

As the incident occurred in Class G airspace, both crews were responsible for maintaining their own separation from other traffic through see and avoid. Although the Wx was suitable for VFR, a pilot Member thought that the PA31 pilot would have been better served talking to Doncaster while operating to the E of the CTA/CTR, particularly when he had been setting up his onboard equipment. He advised that survey ac frequently have additional instrumentation in the cockpit that can physically interfere with pilots' lookout and/or draw their attention into the cockpit; although it was not clear whether these were factors in this incident, he would always recommend a TS for survey flights. It was also unclear why the BE90 pilot had requested a BS. That said, a controller Member opined that as the inbound BE90 flight had been cleared to enter CAS, 1min before the CPA and was about to receive a RCS, he would have expected the controller to give a traffic warning on the converging PA31. The ATSI Advisor informed Members that the controller had seen the PA31's squawk when the subject ac were 10nm and 5nm apart but then did not monitor the flight's progress. Although under a BS a controller may pass a traffic warning under Duty of Care, in this case the controller judged that there was no need to pass a warning. The PA31 pilot reported looking ahead at Wx in the E Midlands area when he first saw the BE90 as it passed about 200ft below, too late to take any avoiding action, which Members agreed was effectively a non-sighting and part cause of the Airprox. The BE90 pilot saw the converging PA31, which had right of way under the RoA Regulations, about 800m away and slightly above, which was thought to be a late sighting and other part cause of the Airprox. He commenced an immediate descent to increase separation, estimating he passed 300ft below and 50m clear of it at the CPA. The visual sighting and prompt action taken by the BE90 pilot was enough to persuade the Board that any risk of collision had been quickly and effectively removed.

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

Cause: Effectively a non-sighting by the PA31 pilot and a late sighting by the BE90 pilot.

Degree of Risk: C.