

AIRPROX REPORT No 2014084

Date/Time: 1 Jun 2014 1310Z (Sunday)

Position: 5143N 00025E
(20nm N DET)

Airspace: London TMA (Class: A)

Aircraft 1 Aircraft 2

Type: B737 D328

Operator: CAT CAT

Alt/FL: FL55 6000ft
QNH (NK hPa)

Conditions: IMC IMC

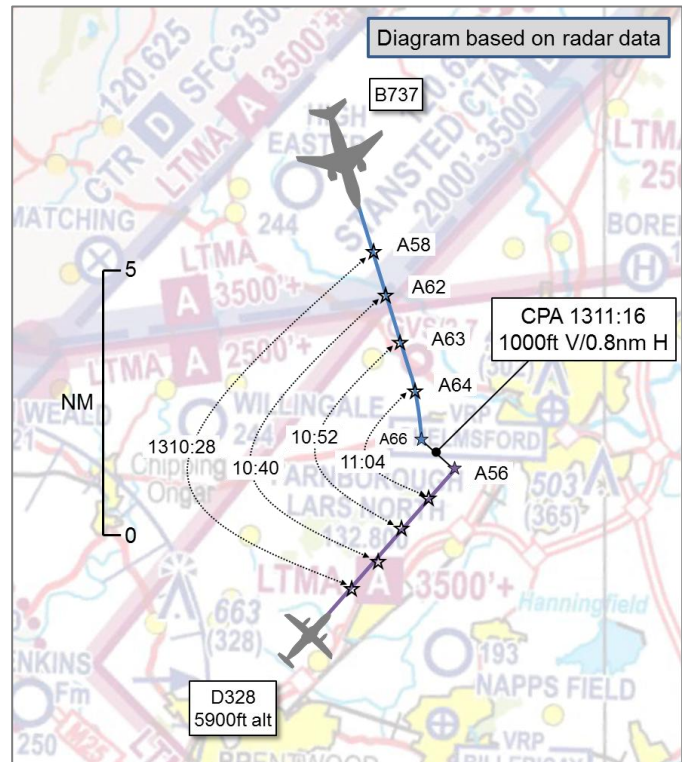
Visibility: 10km NIL

Reported Separation:

900ft V/3nm H 300ft V/1nm H

Recorded Separation:

1000ft V/0.8nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE B737 PILOT reports departing Stansted Airport (STN) IFR in IMC; at the time of the Airprox he was 900ft above and 5nm horizontally from cloud. The aircraft's lighting state was not reported. He was carrying out a Detling (DET) Standard Instrument Departure (SID), routeing direct to DET at 4000ft, in communication with London Control. He was then instructed to climb to FL70. TCAS displayed traffic at 15nm which he continued to monitor. Climbing through FL55, at standard Rate Of Climb, he noticed the traffic descending through his level at 10nm. After ATC instructed a turn onto heading 270°, he received a TA. During the turn, he received an RA climb for 2-3 seconds. He reported the RA to ATC; he was visual with the traffic at the time.

He assessed the risk of collision as 'Low'.

THE DORNIER D328 PILOT reports being under IFR in IMC (in cloud) in communication with London Control [the same frequency as the B737]. Strobes, HISL and navigation lights were illuminated; SSR Modes C and S were selected; TCAS was fitted. He departed London City airport (LCY) on a Clacton (CLN)7U SID on a track of 066° inbound to the CLN VOR, climbing to 6000ft. As he levelled off his TCAS displayed traffic closing from his 10 o'clock position climbing through 6000ft, which then levelled at 6300ft. As the traffic closed on his aircraft he received a TCAS RA descent. He did not see the other aircraft. After receiving a 'clear of conflict' message he climbed back to 6000ft.

He assessed the risk of collision as 'High'.

THE SWANWICK TERMINAL CONTROL (TC) NE DEPS CONTROLLER reports that the D328 departed LCY on a CLN SID. He instructed the pilot to climb initially to 6000ft, heading 045°. He then dealt with other aircraft, including a flight which required non-standard RT. The B737 pilot called on a STN SID and he gave a clearance to route direct to DET at 4000ft. He subsequently instructed him to climb to FL70. Whilst monitoring other aircraft on the frequency, in particular in the Brookmans Park (BPK) area, the Short Term Conflict Alert (STCA) drew his attention to the developing situation between the B737 and the D328. He issued avoiding action to the B737's pilot but the pilot did not respond. He then immediately gave avoiding action to the pilot of the D328. At the time, the B737 was observed at 6300ft, then FL63, with the D328 maintaining 6000ft. Traffic Information was passed to both aircraft, and the pilot of the B737 reported visual. He later confirmed that he had

received a TCAS climb. He observed the D328 at 5700ft, but did not confirm on the RT that the pilot had received a TCAS descent.

Factual Background

The Stansted weather was recorded as follows:

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METAR EGSS 011250Z VRB04KT 9999 FEW046 19/09 Q1022=
METAR EGSS 011320Z 36005KT 290V050 9999 FEW047 20/09 Q1022=
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Analysis and Investigation

CAA ATSI

ATSI had access to reports from the NE Deps controller and the pilots of the B737 and the D328, area radar recordings and the RTF transcript of the TC NE Deps frequency. ATSI also had access to the unit investigation from the ATSU.

At 1307:48, the D328 pilot called on the NE Deps frequency approaching 4000ft on the CLN7U SID from LCY. The D328 pilot was instructed to fly heading 045° and to climb to 6000ft.

At 1308:35, the B737 pilot called on the NE Deps frequency climbing to 5000ft on a DET1S SID from STN and was instructed to route direct to DET.

At 1309:54, the B737 pilot was instructed to climb to FL70. The aircraft was passing 4800ft, 10.8nm north of the D328 which was at 6000ft (Figure 1).

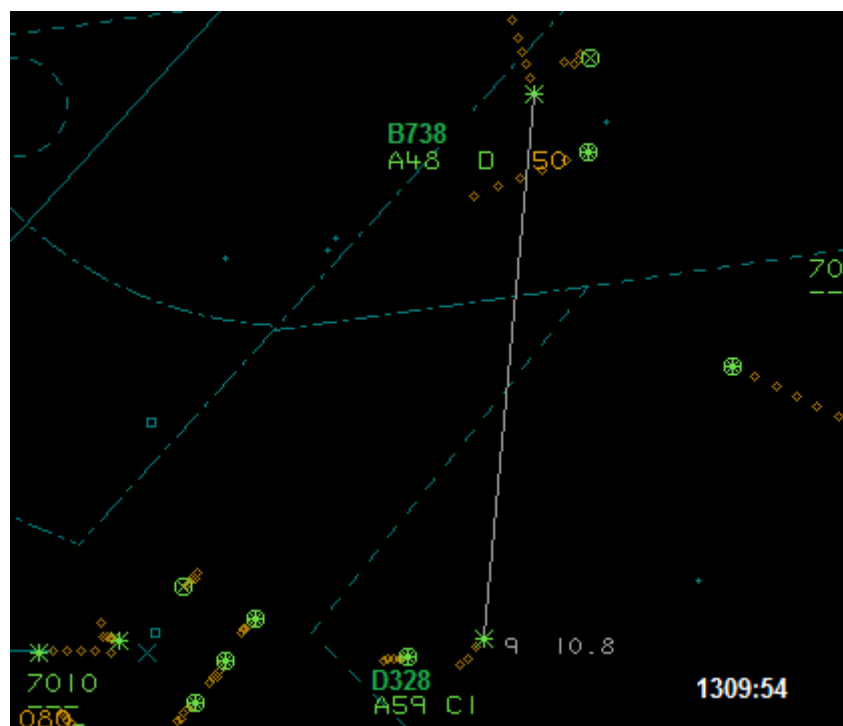


Figure 1.

At 1310:51, low level STCA activated, with high level activating at 1310:58 (Figure 2). As high level STCA activated, the NE Deps controller instructed the pilot of the B737 “*avoiding action turn right now heading 270 degrees*”. This was not read back by the pilot. The controller instructed the pilot of the D328 “*avoiding action turn right now heading 095*”. There was a ‘crossed’ transmission with the B737’s pilot requesting the controller to say again and another aircraft stating “*TCAS climb*”.

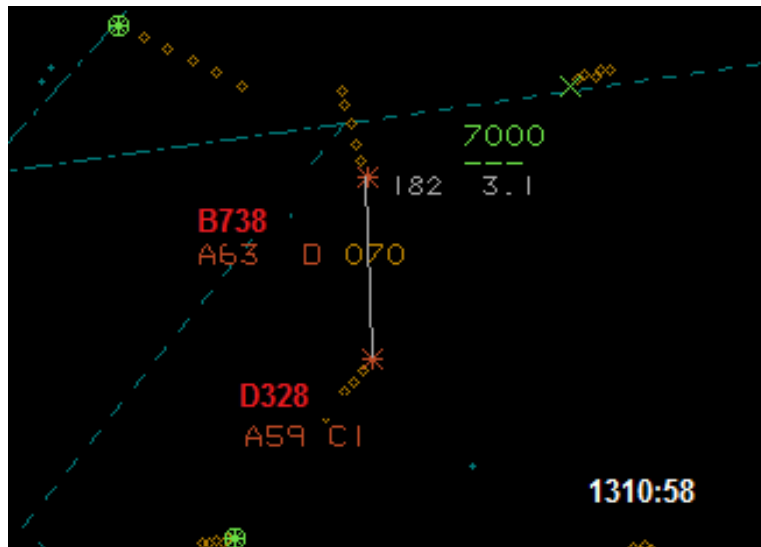


Figure 2.

CPA occurred at 1311:16, the minimum distance was 0.8nm horizontally and 1000ft vertically when 3nm/1000ft was the required standard separation. The controller instructed the D328's pilot "avoiding action you've got traffic off to your left hand side a thousand sorry climbing a thousand above". This was acknowledged by the pilot.

The pilot of the B737 was informed at 1311:15 "your traffic passing down your left hand side now er you're clear of traffic fly heading one eight zero degrees". Standard separation was restored at 1311:19. The report from the ATSU stated that, at interview, the controller could offer no explanation as to why he forgot about the presence of the D328 when instructing the pilot of the B737 to climb. The report from the ATSU also stated that, according to a simulated TCAS assessment, both crews would have already received and been acting upon TCAS RAs by the time avoiding action had been issued.

Summary

The Airprox occurred in Class A airspace of the London TMA when the TC NE Deps controller instructed the pilot of the B737 to climb through the level of the D328 without ensuring lateral separation. When STCA alerted the controller to the conflict he attempted to resolve the incident by issuing avoiding action instructions, however, neither crew were heard to read back the avoiding action, possibly because of crossed transmissions. Both pilots received and acted on TCAS RAs.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, transcripts of the relevant RTF frequency, radar recordings, reports from the controller concerned and reports from the appropriate ATC and operating authorities.

The Board first discussed the actions of the TC NE Deps controller. It was readily apparent that the cause of the Airprox was that he had cleared the B737 pilot to climb through the level occupied by the D328, and members noted that the controller could not explain why he had carried out this action. They wondered if the controller had been busy and might have been distracted by traffic elsewhere in the sector but a Civil ATC TC member, aware of the circumstances of the Airprox, was able to confirm that the controller was not busy at the time. Another Civil ATC member, who is valid on the TC North sectors, explained that such simultaneous traffic outbounds from Stansted and London City occur at least 15-20 times a day but that if pilots were left to follow their relative SIDs, vertical separation was assured. On this occasion, in accordance with their SIDs, the D328's pilot was climbing initially to 4000ft and the B737's pilot to 5000ft. Having then instructed the pilot of the B737 to climb to FL70 and route direct to DET (which would take it closer to the D328's track), the controller became responsible for ensuring its lateral separation from the D328. The ATC member

surmised that it was possible that the D328's SSR label had overlapped with other aircraft thus masking it from immediate observation; nevertheless, the presence of the D328 should have been apparent on the Flight Progress Board display.

The Board noted that the controller was alerted to the situation when the Short Term Conflict Alert activated. Although he then issued appropriate avoiding action turns to both flights, crossed transmissions meant that it was not possible to detect any read-back of the instructions by either pilot. It was noted that the pilot of the B737 subsequently reported that he had started the turn before receiving a TCAS RA; during the incident, a pilot reported a TCAS climb but the callsign of the flight was blocked because of the crossed transmissions.

The Board then discussed the degree of risk. It was agreed that there had been no risk of a collision. Not only had the controller issued avoiding action instructions to the two pilots, but they also had received and complied with TCAS RAs, the B737 to climb and the D328 to descend. Additionally the pilot of the B737 had reported that he had been visual with the D328. Because effective and timely actions had been taken to prevent the aircraft colliding, the Airprox was categorised as Class C.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	The Swanwick TC controller cleared the B737 pilot to climb into conflict with the D328.
<u>Degree of Risk:</u>	C.
<u>ERC Score</u> ¹ :	50.

¹ Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.