

AIRPROX REPORT No 2011119

Date/Time: 9 Sep 2011 1921Z (Night)

Position: 5345N 00215W (6nm ESE
Blackpool - elev 34ft)

Airspace: LFIR (Class: G)

Reporting Ac Reported Ac

Type: B737-300 C172

Operator: CAT Civ Pte

Alt/FL: 2800ft↓ ↓3000ft
QNH (1006mb) RPS (1002mb)

Weather: VMC CLBC VMC CLAC

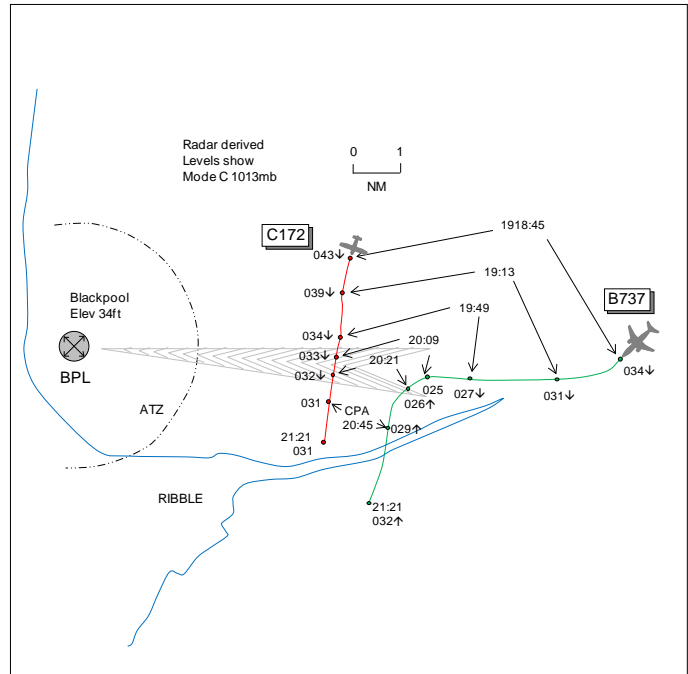
Visibility: 10km >10km

Reported Separation:

Nil V/1nm H Not seen

Recorded Separation:

200ft V/1.3nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE B737 PILOT reports inbound to Blackpool, IFR and in receipt of a PS from Blackpool Approach on 119.95MHz, squawking with Modes S and C. The visibility was >10km flying 100ft below cloud in VMC and the ac's nav, strobes, inboard and outboard landing lights were all switched on. Following the procedural turn onto final approach for RW28 the controller informed them of traffic that was felt to be in conflict during their ILS approach (the controller had seen this traffic visually and on the radar relay screen). They had a TCAS contact in their 2 o'clock range 5nm 800ft above and descending rapidly on a converging track to their ac and the ILS C/L. At the time they were heading 278° at 150kt at approximately 2800ft QNH at 9nm final and descending. The traffic was not visual to them owing the cloud cover and it was not in contact with Blackpool. The TCAS symbol became 'proximate' traffic but no TA or RA was generated. They made the decision to break-off the approach to the S and began a climb once the traffic was in their 5 o'clock position. He estimated separation to be nil vertically and 1nm horizontally. A climb was made to 4000ft in order to be above MSA and a second procedural approach was made without further incident. An Airprox call was made to Blackpool ATC before the conflicting flight called on frequency, the pilot mistakenly thinking he was talking to Liverpool Approach, before departing to the S. He assessed the risk as high.

THE C172 PILOT reports en-route to Liverpool initially under IFR and under a BS from London Information on 125.475Mhz, squawking 1177 with Modes S and C. The visibility was >10km flying 700ft above cloud in VMC, he thought, and the ac's nav and strobe lights were switched on. Before departure he checked the NOTAMS and AIP to see Blackpool's closing time which was 2000(L), he thought. Whilst en-route from Carlisle to Liverpool he tuned into the Blackpool ATIS but all he received was a carrier wave which confirmed that Blackpool was closed. He commenced descent from 4500ft RPS 1002mb to 3000ft and as he became visual with the ground at 3100ft he carried on to level-off at 2900ft to remain below the Manchester TMA N of Liverpool. As he levelled-off he looked to his R and saw the RW lights at Blackpool. He spoke to Blackpool Approach who asked if he had flown through the C/L of RW28. He informed them that he had and the pilot of a B737 informed Blackpool that an Airprox would be filed. He thought the Airprox occurred about 9nm NE of Blackpool when he was VFR; however, he did not see the other ac.

THE BLACKPOOL APPROACH CONTROLLER reports working ADC/APP combined and providing a PS to an inbound IFR B737; there was no other known traffic on frequency. Once the B737 had

completed the procedure turn for the ILS/DME RW28 he saw from the VCR an ac routeing S crossing the RW28 approach. This correlated with a contact observed on the ATM crossing the FAT at 6nm descending through altitude 4000ft. He passed the information to the B737 flight stating he wasn't using a surveillance derived service although he could visually see the ac from the VCR which correlated to the ATM information; the crew reported, "we see him on TCAS 800ft above". The B737 crew elected to turn away from the traffic before it presented a TCAS RA. Once the crew were happy to take further instructions they made another approach and landed safely. Information on the conflicting ac, the C172, came from its pilot's later erroneous call on frequency against its D/F trace, the pilot's position confirmation and the London FISO, who apparently had the C172 flight under a BS, not realising that Blackpool was open. The B737 crew advised that they were filing an Airprox.

THE SWANWICK FISO reports working the C172 flight from N to S from Carlisle to Liverpool at 5000ft RPS 1002mb. He requested the flight's intending routeing and the pilot responded via Kirkby VRP. A BS was applied and the flight was given the Liverpool Wx. The pilot reported an initial descent to 3900ft then further to 2000ft and when the flight was slightly S abeam Warton (as seen on the FID) he suggested the flight transfer to Liverpool 119.85Mhz. He was relieved for a break several minutes later. The oncoming FISO moments later told him that Blackpool had called to say that a B737 flight had had an Airprox with a 1177 squawk whilst it was on approach to RW28 triggering a TCAS RA, he thought. He later spoke to the Blackpool controller who advised that they were operating procedurally at the time but had a limited display showing the 1177 squawk.

ATSI reports that the Airprox occurred at 1920:22 UTC, in Class G airspace, 6nm on the final approach to RW28 at Blackpool Airport.

The B737 was an IFR flight inbound to Blackpool Airport from Palma and C172 was operating IFR inbound to Liverpool from Carlisle and in receipt of a BS from London FIS (N) on frequency 125.475MHz.

CAA ATSI had access to area radar recordings, together with RT recordings from Blackpool Approach and London FIS, together with written reports from the 2 crews, the Blackpool controller and the London FISO.

METAR: EGNH 091820Z 19008KT 9999 SCT030 18/15 Q1006=
METAR: EGNH 091850Z NIL=
METAR: EGNH 091920Z NIL=
METAR: EGGP 091920Z 20010KT 9999 SCT033 BKN044 19/16 Q1006=

Official night at Blackpool calculated from the UK AIP GEN 2-7-2 was 1915 UTC.

The C172 pilot's written report indicated that the pilot had checked the UK AIP which showed that Blackpool closed at 2000 (Local time). The UK AIP page AD 2 -EGNH-1-5, states:

'Hours of operation: Winter 0700-2100 and Summer 0600-2000.'

The C172 pilot's written report indicated that the pilot had tuned into the Blackpool ATIS and received a carrier wave only, which the pilot indicated, confirmed his belief that Blackpool was closed. (The B737 flight later reported in receipt of ATIS 'F').

The C172 pilot contacted London FIS at 1840:20, reporting 15nm S of Carlisle at an altitude of 4500ft and, requesting a BS. The C172 flight was instructed to squawk 1177 (FIS) with Mode C. This was acknowledged. At 1854 the C172 pilot reported climbing to an altitude of 5000ft and at 1857 London FIS passed the C172 pilot the Liverpool Wx, '1850 17006KT 130V190 9999 SCT033 BKN042 19/16 Q1006='. The pilot acknowledged the QNH 1006. At 1908 the C172 pilot passed an ETA for Liverpool as 1934.

At 1909:22, London FISO advised the C172 pilot that the flight details had been passed to Liverpool. At 1910:28, the C172 pilot confirmed a routing to enter the Liverpool CTR at Kirkby VRP and the FISO asked the pilot to report 5nm before Kirkby.

At 1911 the B737 flight contacted Blackpool Approach, in receipt of ATIS information 'F' descending to FL050 on course to BPL(NDB). The B737 crew confirmed that the ac had left CAS and a PS was agreed. The B737 was given further descent to an altitude of 3000ft on QNH 1006. The B737 crew reported 5nm S of the BPL(NDB), passing 7000ft for 3000ft and was cleared for the ILS/DME procedural approach to RW28.

At 1914:34, the B737 crew reported beacon outbound passing 6500ft descending to 3000ft. The controller asked the B737 crew to report procedure turn complete. (The ILS/DME procedure has an outbound QDR of 098° from the BPL and at 6 DME a procedure turn L to establish inbound on the LOC QDM 278° from the N.)

At 1915:54, the radar recording shows the B737 outbound in the procedure indicating FL058 (converts to an altitude of 5611ft on QNH 1006 with 1mb equal to 27ft). The C172 was 6.7nm N of the B737, indicating FL053 (altitude 5111ft QNH).

At 1916:20, the C172 pilot reported to London FIS that he was descending to an altitude of 2900ft. The C172 pilot's written report indicated that he commenced a descent from 4500ft to 3000ft and that at 3100ft the pilot became visual with the ground. The pilot indicated that he then decided to continue descent to 2900ft in order to remain below the Manchester TMA to the N of Liverpool.

At 1916:48, the Blackpool controller instructed the B737 flight to descend with the procedure.

At 1918:47, the Blackpool controller passed TI to the B737 crew regarding an ac observed visually from the VCR that appeared to be crossing final approach at 5nm. At 1919:10, the B737 crew reported the traffic on TCAS 800ft above the B737 at an altitude of 3700ft. The B737 crew then reported established at 9 DME. The controller cleared the B737 to land.

At 1919:49 the B737 crew requested to break-off the approach to the L owing to traffic 600ft above and descending. This was approved and the B737 crew reported turning L onto a heading of 120° and the controller approved a climb to 4000ft. The radar recording shows the B737 at 8nm from touchdown indicating FL027 (2511ft QNH). The C172 is indicating FL034 (3211ft QNH) and crossing from R to L, in the B737's 1230 position at a range of 3nm.

[UKAB Note (1): By 1920:09 separation has reduced to 2nm, the B737 has just levelled at FL025 (2311ft QNH) with the C172 in its 12 o'clock, descending through FL033 (3111ft QNH). Twelve seconds later at 1920:21, the radar recording shows the B737 having commenced a L turn and climbing through FL026 (2411ft QNH), with the C172 indicating FL032 (3011ft QNH) and crossing the RW28 approach, 1.6nm to the W of the B737, which then steadies on a track of 190°, parallel to that of the C172. The CPA occurs at 1920:45, the C172 level at FL031 (2911ft QNH) with the B737 1.3nm to its SE climbing through FL029 (2711ft QNH), 200ft below. Thereafter the horizontal separation increases slowly whilst the vertical separation decreases as the B737 climbs through the C172's level.]

At 1922:02 the C172 pilot advised London FIS that he was descending to 2000ft and at 1922:17, London FIS suggested the C172 flight contact Liverpool on frequency 119.850Mhz and change the squawk to 7000.

At 1924:10, the C172 pilot inadvertently called Liverpool on the Blackpool Approach frequency. When questioned, the C172 pilot confirmed that he had crossed the Blackpool approach working London FIS. The B737 pilot confirmed that he would be filing an Airprox and the C172 pilot acknowledged and apologised before being advised to transfer to Liverpool.

At 1925:11, the C172 pilot again called Liverpool, on the Blackpool frequency. This was corrected by the controller and the C172 flight changed frequency to Liverpool.

The B737 continued on the heading until clear of conflict and then routed to the BPL(NDB) and completed a further instrument procedure to land without further incident.

The B737 flight was in receipt of a PS from Blackpool Approach. The controller was not aware of the C172 in transit but observed an unknown ac from the VCR and passed TI which alerted the B737 crew, who reported observing traffic on TCAS. CAP 774, UK Flight Information Services, Chapter 5, Page 1. Paragraphs 1, states:

'A Procedural Service is an ATS where, in addition to the provisions of a Basic Service, the controller provides restrictions, instructions and approach clearances, which if complied with, shall achieve deconfliction minima against other aircraft participating in the Procedural Service. Neither traffic information nor deconfliction advice can be passed with respect to unknown traffic.'

The C172 flight was in receipt of a BS from London FIS. CAP 774, UK Flight Information Services, Chapter 2, Page 1. Paragraphs 1 & 5, state:

'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.'

The C172 flight descended from 4500ft and became visual with the ground at 3100ft. It is not clear if the C172 flight was IMC, or above cloud at this point although the controller could see the C172 from the VCR. The radar recording shows that the C172 was passing 3300ft as it crossed through the approach for RW28. CAP774, UK Flight Information Services, Chapter 5, Page 1. Paragraphs 1, states:

'Pilots flying in the vicinity of aerodromes, ATS routes, or navigational aids where it is known that a Procedural Service is provided, are strongly encouraged to attempt to establish RTF contact with the notified ATS provider'.

The C172 pilot had assumed that Blackpool was closed and had checked the Blackpool ATIS frequency, but did not attempt to call Blackpool Approach.

The Airprox occurred when the B737 operating IFR and in receipt of a PS came into close proximity with the C172 which was in receipt of a BS with London FIS. The B737 crew became concerned, when the TCAS showed the C172 as being proximate and the B737 crew elected to break-off their approach to by turning to the S.

The Blackpool Approach controller observed the unknown traffic from the VCR and on the ATM, which resulted in the controller passing an appropriate and timely warning to the B737 crew which may have assisted in their early detection of the C172 on TCAS.

The London FISO was not aware of the B737 and under a BS the FISO was not required to monitor the C172.

The C172 pilot considered Blackpool to be closed and did not attempt to establish contact with Blackpool Approach. This was most likely due to the pilot misinterpreting local and UTC time when checking the AIP entry for Blackpool, which states that in summer, the period of operation is 0600-2000.

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 and FISOs involved and reports from the appropriate ATC authorities.

CAT pilot Members commended the actions taken by the B737 crew in recognising the potential for conflict with the C172 and breaking off the approach by turning L away from it. Controller Members also praised the Blackpool APP who saw the C172 visually from the VCR and passed a traffic warning to the B737 crew. As the incident was within Class G airspace both crews were responsible for maintaining separation from other traffic through 'see and avoid' and, even though the B737 was flying under IFR on an instrument approach, under the RoA the IFR C172 flight had right of way. It was unfortunate that the C172 pilot, during his pre-flight planning, had misinterpreted the UTC time stated in the AIP for Local and erroneously thought that Blackpool ATC would be closed. His mindset was further reinforced when he heard only a carrier wave on the Blackpool ATIS frequency, which Members could not resolve knowing the B737 had received the latest WX from the ATIS. Members thought that the C172 pilot could have clarified the situation by either calling on the Approach frequency or by asking the London FISO to check with Blackpool via telephone. If he had called Blackpool earlier, the APP could have given the C172 pilot TI on the B737 which was under a PS which may have prevented the Airprox occurring. As it was the C172 pilot had descended from his cruising level to remain below CAS, levelling-off as he crossed the FAT above the instrument approach flightpath profile. This descent, initially to MSA, was through a cloud layer and it was only when he saw the ground at 3100ft did he notice the approach and RW lights at Blackpool. It was this descent by the converging C172 which had caused the B737 crew concern as they were establishing on the ILS, flying just below the cloud layer and being unable to visually acquire the crossing traffic. The B737 crew, unaware that the C172 was going to level-off, elected to avoid in azimuth by turning away. Members, although cognisant that pilots are strongly discouraged from manoeuvring in azimuth with reference to TCAS indications owing to the known system inaccuracies, realised that the crew were faced with a potential conflict from unknown traffic; from the information available from TCAS and the Blackpool controller's warning, the B737 crew elected to manoeuvre laterally clear of the C172's flightpath, pre-empting a TCAS TA or RA, and monitored its relative track before climbing through its level. The radar recording shows the CPA as 200ft and 1.3nm with both ac on parallel tracks with the B737 pulling away from the C172. With all parties discharging their responsibilities within this Class G airspace, the Board agreed that this incident had quickly become benign, owing to the B737 crews actions, allowing it to be classified as a TCAS sighting report where normal procedures, safety standards and parameters pertained.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Sighting report (TCAS).

Degree of Risk: E.