

Boeing 747-436, G-BNLE, 14 January 1996

AAIB Bulletin No: 4/96 Ref: EW/G96/01/03 Category: 1.1

Aircraft Type and Registration: Boeing 747-436, G-BNLE

No & Type of Engines: 4 Rolls-Royce RB211-524G2-19 turbofan engines

Year of Manufacture: 1989

Date & Time (UTC): 14 January 1996 at 1203 hrs

Location: Runway 12 Cardiff Airport, Wales

Type of Flight: Positioning Flight

Persons on Board: Crew - 2 Passengers - None

Injuries: Crew - None Passengers - N/A

Nature of Damage: None

Commander's Licence: Airline Transport Pilot's Licence

Commander's Age: 52 years

Commander's Flying Experience: 14,140 hours (of which 3,173 were on type)

Last 90 days - 174 hours

Last 28 days - 59 hours

Information Source: Aircraft Accident Report Form submitted by the pilot

The aircraft was being flown, without passengers, on a positioning flight from London Heathrow to Cardiff for maintenance. The weather at Cardiff was surface wind 120°/10 kt, visibility 5 km with nil weather, VMC to the south of the airfield and IMC to the north.

At 1154 hrs the aircraft was transferred from Bristol to Cardiff Approach Control and was identified on radar 5 nm to the north of Bristol on a radar heading of 290°. The commander's request for radar vectors to a downwind left-hand circuit to Runway 12 was acknowledged by the Cardiff controller and he was instructed to maintain 3,000 feet on the Cardiff QNH. The commander also advised Cardiff that he had copied ATIS information 'L'. Information 'M' timed at 1150 hrs gave the surface wind as 120°/18 kt, visibility 20 km with nil weather, 1/8 cloud at 1,200 feet and 3/8 cloud at 4,800 feet.

At 1156 hrs, with the aircraft 9 nm north-east of Cardiff descending to 2,500 feet, the commander was asked if he had the airfield in sight. The commander confirmed that he did and was given clearance to "CONTINUE DOWNWIND LEFT-HAND FOR A VISUAL APPROACH TO RUNWAY 12 NOT BELOW 2,500 FEET UNTIL ADVISED BY TOWER, THE CIRCUIT IS ACTIVE AND SAINT ATHAN ALSO ACTIVE TO THE SOUTH-WEST". A few moments later the aircraft entered some low cloud and the crew asked for radar vectors. The controller acknowledged this request and instructed the aircraft to turn onto a heading of 300° for vectors to the ILS. The controller also transmitted that he would position the aircraft outbound for about 6 nm and then turn it onto a left base. At 1159 hrs, on the controller's instruction, the aircraft descended to 1,700 feet and turned onto a heading of 230°. The controller asked the commander "WILL SIX MILE FINAL BE TOO TIGHT?". The commander replied "FINE". At 1202 hrs the controller could see that the aircraft was approaching the extended centreline just inside 6 nm and gave the commander clearance to "DESCEND WITH THE ILS OR VISUALLY AS YOU WISH, BE ADVISED SAINT ATHAN TO THE SOUTH OF THE APPROACH TRACK IS ACTIVE; CONTACT THE TOWER".

A few moments later the crew transmitted on Cardiff Tower frequency "WE SEEM TO BE WELL DISPLACED TO THE LEFT OF THE RUNWAY WE'RE GOING AROUND TO THE RIGHT". The crew then added "WE SEEM TO BE VECTORED INSIDE THE TOWER ARE WE CLEAR TO TURN AND RE-ESTABLISH ON FINAL?". The controller then transmitted "JUST CONFIRM YOU'RE GOING FOR RUNWAY 12 AT CARDIFF NOT RUNWAY 08 SAINT ATHAN?". The crew replied "WE'RE GOING FOR RUNWAY 12".

The aircraft commander subsequently told the controller that he would like to turn to the right onto a southerly heading and be re-vectored for another approach. The aircraft was transferred back to the approach frequency and an approach and landing at Cardiff was flown without further incident.

An investigation carried out by the operating company showed that as the aircraft turned onto base leg at 1,500 feet the visibility reduced in an area of low cloud. Furthermore forward visibility was further reduced as the aircraft faced into sun. Ground contact was maintained by the crew but they lost contact with the airfield. Runway 08 at St Athan however was observed by the crew and the aircraft was repositioned for an approach onto that runway. At 1,000 feet the crew realised their mistake and a go-around was initiated.

The company considered the following factors as contributory to the incident:

1. A lack of practice in conducting visual circuits.
2. Failure to confirm the aircraft's position using all navigational equipment available.
3. No warning was published on the Aerad letdown chart, used by the crew, informing them of the presence of St Athan Airfield on short finals to Cardiff.

Follow-up action

As a result of this incident, and discussions with the AAIB, Aerad have amended approach charts M1 (CARDIFF ILS/DME 12, effective 01 February 1996) and P1 (CARDIFF NDB/DME 12, effective 01 February 1996) to include warning note No 6 that reads: 'Caution: St Athan A/D lies under final approach track 2.5 nms prior to threshold'. This action was also recommended by the company as a result of their internal investigation.

Cardiff International Airport, in agreement with the Principal Inspector ATC, Central Region, Safety Regulation Group, have also issued a Temporary Operating Instruction No 2/96, revising the following procedures reproduced below:

RADAR VECTORED ILS APPROACHES TO RUNWAY 12

IFR aircraft are to be vectored so that they establish on the ILS to Runway 12 at a range of not less than 8nms from touchdown. Requests for pilots to position on finals at a lesser range than this are not to be approved.... Aircraft carrying out a Radar Vectored ILS approach to runway 12 are to be retained on the Approach frequency until they are at a range of 4nms from touchdown.

RADAR MONITORING OF ILS APPROACHES TO RUNWAY 12

The approach Radar controller is responsible for ensuring that the pilot of the aircraft reports "localiser established" and the aircraft's radar return indicates that this has been achieved.

After transfer to Aerodrome Control, Approach Radar Controller's are reminded to remain vigilant in case any aircraft appear to position towards RAF St Athan.

RADAR TO VISUAL APPROACHES TO RUNWAY 12

The Approach Radar Controller is responsible for ensuring that any IFR aircraft carrying out a Visual Approach to Runway 12 appears to be correctly positioned for that runway prior to transfer to Aerodrome control.

Previous Incident

On 10 August 1995 at 1140 hrs a McDonnell Douglas MD-87, registration SE-DHG, (reported in AAIB Bulletin 12/95) also attempted to land at St Athan instead of Cardiff. On this occasion the approach charts used by the crew, supplied by SAS, did not show the presence of RAF St Athan. As a result of this incident SAS amended and issued a new approach chart. The company also issued a warning notice to crews.