

SERIOUS INCIDENT

Aircraft Type and Registration:	Boeing 737-8AS, EI-ENT
No & Type of Engines:	2 CFM 56-7B turbofan engines
Year of Manufacture:	2011
Date & Time (UTC):	7 February 2012 at 1204 hrs
Location:	On approach to London Gatwick Airport
Type of Flight:	Commercial Air Transport (Passenger)
Persons on Board:	Crew - 6 Passengers - 125
Injuries:	Crew - None Passengers - None
Nature of Damage:	None
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	31 years
Commander's Flying Experience:	4,347 hours (of which 4,047 were on type) Last 90 days - 199 hours Last 28 days - 70 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and subsequent AAIB enquiries

Synopsis

During a visual approach to London Gatwick Airport in hazy conditions, ATC vectored the aircraft onto the final approach track sooner than the pilots expected, which resulted in the aircraft being above the intended 3° glidepath. The increased workload to regain it, together with other cockpit duties, distracted the pilots. The aircraft descended below the intended glidepath until they were alerted by a call from ATC and an EGPWS caution, and saw the PAPIs.

History of the flight

The aircraft was descending into London Gatwick Airport after a scheduled flight from Shannon Airport. The pilots were expecting to carry out an ILS approach

to Runway 08R and had briefed accordingly. During the descent, ATC informed the pilots that an ILS approach was not available and that the aircraft would be given radar vectors for a visual approach. The PF programmed the flight management computer so that vertical navigation (VNAV) path information on the navigation display (ND) would correspond to a 3° glidepath. The aircraft was flown with the autopilot engaged during the descent towards the final approach path with LVL CHG¹ mode engaged. The pilots were

Footnote

¹ LVL CHG autopilot mode in the descent is one in which the engine thrust is reduced to idle power and the aircraft pitch attitude is adjusted to maintain the speed selected on the Mode Control Panel (MCP).

asked by ATC if they could accept an early turn onto the final approach with a corresponding reduction in the number of track miles to touchdown, which they accepted. The aircraft was now higher on the vertical profile than the pilots expected but they assessed that, by using flap and speed brake, they could regain the correct glidepath and carry out a stable approach. Shortly afterwards, ATC requested that they reduce speed.

By approximately 4,500 ft, the aircraft was configured with landing gear down and flaps at 15° and the PF selected lateral navigation (LNAV) to intercept the final approach track. At 2,200 ft, the aircraft was established on the final approach track and was approaching the 3° glidepath from above, descending at 1,500 ft/min. The pilots noticed the VNAV indication that they were approaching the glidepath but omitted to engage VNAV. The aircraft continued to descend through the glidepath until, at approximately 1,000 ft, the EGPWS generated a terrain caution and the pilots saw the PAPIs. ATC informed them that the aircraft appeared slightly low and asked them if they were “visual”. The PF disconnected the autothrottle and autopilot, reduced the rate of descent and, after re-establishing the correct

approach angle, continued the approach. The aircraft landed without further incident. Both pilots stated that, due to haze, they could not see the PAPIs until about the time of the terrain alert, and that as they could see the ground and runway throughout the approach there was no risk of ground collision.

Analysis

The pilots accepted a shortened approach from ATC which resulted in the aircraft being above the ideal approach path. The pilots used a combination of flap and speed brake to increase the rate of descent in order to re-establish the approach path and to comply with the ATC speed constraint. The combination of the shortened approach track, the requirement to regain the correct glideslope and other routine cockpit duties increased crew workload. Although the pilots noticed the VNAV path information on the ND, the increased workload distracted them from engaging the VNAV mode on the autopilot that would have enabled the aircraft to follow a 3° glidepath. The aircraft remained in LVL CHG mode and descended through that glidepath. The pilots were alerted to the situation by a combination of the ATC call, the terrain caution and seeing the PAPIs.