

**Gulfstream III,
N103CD**

**Biggin Hill Airport,
Kent**

24 November 2014

Accident

Investigation Synopsis

The aircraft lined up for takeoff in conditions of reduced visibility. The crew believed that the lights they could see ahead were runway centreline lights when they were actually runway edge lights. The aircraft began its takeoff run but ran off the paved surface and onto grass. The commander closed the thrust levers to reject the takeoff.

Information available to the pilots allowed them to develop an incorrect mental model of their route from the holding point to the runway. Environmental cues indicating that the aircraft was in the wrong position for takeoff were not strong enough to alert the pilots to the fact that they had lost situational awareness.

One Safety Recommendation has been made.

Safety Recommendation 2015-038

The following safety recommendation was made:

Safety Recommendation 2015-038

It is recommended that the International Civil Aviation Organisation initiate the process to develop within Annex 14 Volume 1, 'Aerodrome Design and Operations', a standard for runway edge lights that would allow pilots to identify them specifically, without reference to other lights or other airfield features.

Date Safety Recommendation made: 03 December 2015

LATEST RESPONSE

Response received: 28 August 2019

In response to the request for a follow-up to the response sent by ICAO to the Air Accidents Investigation Branch (AAIB) on 26 January 2016, the matter was reviewed by the Visual Aids Working Group (V AWG/14), an expert group of the Aerodrome Design and Operations Panel (ADOP). The VA WG considered environmental cues such as weather, pilot's flight technique, runway light perception under low visibility, additional pavement at the beginning of the runway, the over-paved pavement on the right-hand side of the runway as contributing factors to the pilot's loss of situational awareness. In terms of physical characteristics, changing the colour of runway edge lights and current guidance in Annex 14, Vol I, Attachment A, Section 22 providing good design practices that can reduce the potential for runway confusion were also considered.

The VA WG concluded that to address instances where the hazard is aerodrome specific, such as the Biggin Hill incident, the procedures in Chapter 3 of Procedures for Air Navigation Services (PANS) - Aerodromes (Doc 9981) may be considered to recommend that the aerodrome operator conduct a safety assessment, as part of the risk management process of the aerodrome safety management system, with consideration to modifying the complex movement area environment.

Other related guidance can be found in Doc 9157, Aerodrome Design Manual, Part 1 -Runways, Part 2 - Taxiways, Aprons and Holding Bays, and Part 4 - Visual Aids and Doc 9870, Manual on the Prevention of Runway Incursions. No amendment to Annex 14 was considered necessary.

Safety Recommendation Status **Closed**

AAIB Assessment **Not Adequate**

Action Status

RESPONSE HISTORY

Response received: 26 January 2016

ICAO states that Safety Recommendation 2015-038 will be referred to the Aerodrome Design and Operations Panel (ADOP) within ICAO for further study. In reviewing the recommendation, the ADOP, including its various specialised working groups, will take into account possible contributing factors such as additional pavement width at the beginning of the runway and the need for appropriate fog dispersal at aerodromes. The next meeting of the relevant ADOP Working Group is scheduled for the first quarter of 2016.

AAIB Assessment – Not Adequate Open

(SRIS Reference: GB.SIA-2015-0038)