

SERIOUS INCIDENT

Aircraft Type and Registration:	Airbus A319-131, G-EUOG	
No & Type of Engines:	2 International Aero Engine V2522-A5 turbofan engines	
Year of Manufacture:	2001 (Serial no: 1594)	
Date & Time (UTC):	2 October 2019 at 0736 hrs	
Location:	London Heathrow Airport	
Type of Flight:	Commercial Air Transport (Passenger)	
Persons on Board:	Crew - 6	Passengers - 96
Injuries:	Crew - None	Passengers - None
Nature of Damage:	None	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	59 years	
Commander's Flying Experience:	17,341 hours (of which 5,887 were on type) Last 90 days - 101 hours Last 28 days - 18 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

G-EUOG taxied out to Runway 27L at London Heathrow Airport for a flight to Leeds Bradford Airport. The planned departure intersection was N2W (TORA¹ 3,380 m). As the aircraft taxied out, the Pilot Monitoring (PM) asked for intersection N4E (TORA 2,702 m) which was granted by ATC. After starting the second engine and completing the checklist, the aircraft departed from N4E using takeoff performance data calculated for N2W.

History of the flight

The crew completed pre-flight preparations for a flight from London Heathrow Airport to Leeds Bradford Airport. Both crew members were conscious that it was a very short flight and in preparation for this they discussed the destination as well as the departure during the pre-flight preparations.

The aircraft taxied out using a single engine for a departure from Runway 27L at Heathrow. The figures for the takeoff performance had been calculated from N2W. During the taxi out, the PM mistakenly requested N4E for departure which gave a TORA 678 m shorter than from N2W. Both intersections are shown in Figure 1. This was not intentional from the PM. The new intersection was rapidly approved by ATC leaving the crew little time

Footnote

¹ TORA: Takeoff Run Available.

to complete their pre-departure duties. The crew started the second engine and were cleared to line up for departure. Aircraft performance from the new intersection was not discussed or entered into the Flight Management Guidance Computer (FMGC).

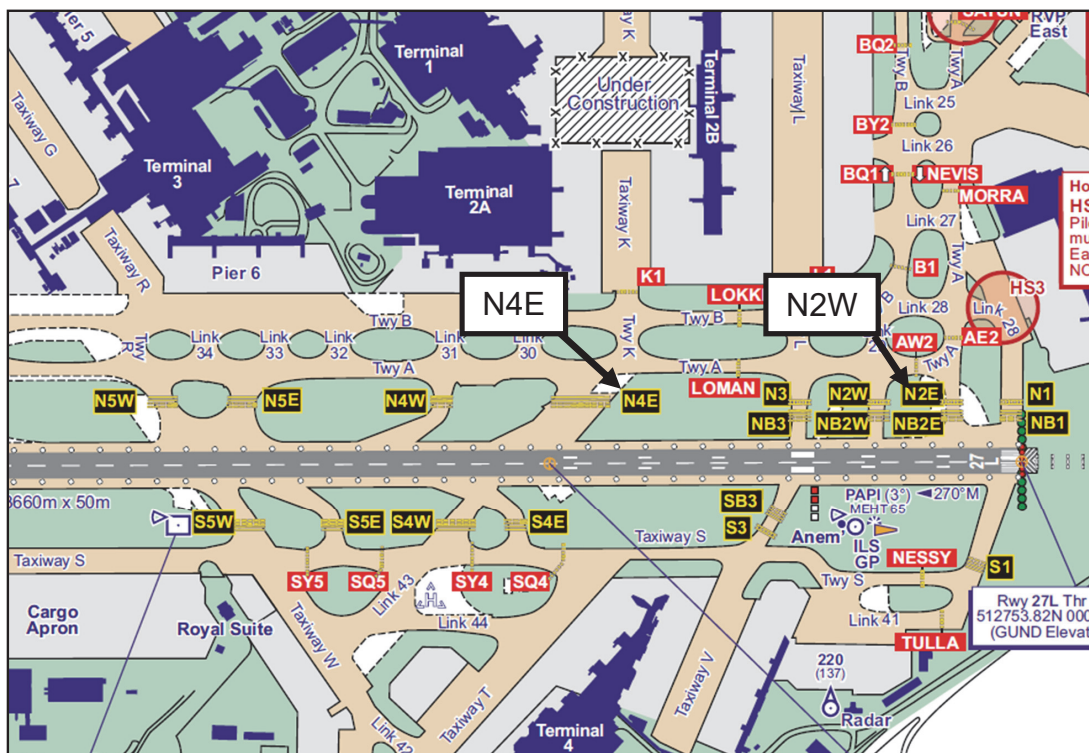


Figure 1

Holding points for Heathrow Runway 27L

As the aircraft lined up on the runway, the Pilot Flying (PF) realised that the figures for N4E had not been entered into the FMGC and asked the PM if he was happy to continue with the departure. The PM did not realise that the question related to takeoff performance but instead assumed it was about completion of the rapid engine start and departure process. Since he was content that both were complete, he replied positively. From his experience, the PF felt that the performance was adequate and, given that the PM also seemed happy, he elected to continue. The takeoff was unremarkable. The calculated takeoff performance included a thrust reduction and the PF did not select full thrust during the takeoff.

With such a short sector, the event was not discussed in flight but the post-flight debrief revealed a different understanding between the two pilots. The PM had not realised that he had asked for a different intersection from the one used in the performance calculation. The crew reported the incident to the operator as soon as they were able.

Both crew felt that the rushed departure contributed to them commencing the take off with incorrect performance figures in the FMGC. They commented that either declining the rapid line-up clearance or informing ATC they were not ready could have prevented this incident from occurring. Heathrow is also their home base and both crew members had departed from N4E on previous flights, so the use of the intersection was not unusual.

Analysis

As a result of a mistaken request for a different intersection the crew departed with aircraft performance figures calculated for a runway length 678 m longer than was actually available. Rushing to complete the pre-takeoff procedures, familiarity with the airport, and the lack of a shared mental model between the crew contributed to what could have been a significant event. Fortunately, the aircraft was light, with a limited payload and fuel for only a short flight, so the takeoff was unremarkable and the takeoff performance was not compromised.

AAIB comment

Takeoff performance data errors come in many types, including data entry errors, selection errors, mistaken takeoff point errors and change of runway or intersection errors. Despite extensive training and standard operating procedures, performance errors continue to occur on many different aircraft types throughout the world. Whether at a familiar home base or at a challenging, limiting runway, takeoff performance calculations require time free from interruptions and distractions, concentration and co-ordination, as well as adherence to standard operating procedures, to reduce the possibility of errors being made.

The CAA and AAIB continue to work with operators, manufacturers, and EASA in seeking measures that may further mitigate the risks of takeoff performance data errors. These include raising awareness of the nature of the risks to crews and operators, trying to quantify the risks using flight data monitoring programmes to look for errors, and exploring the possible development of a technological barrier to warn crews when errors have been made.