

ACCIDENT

Aircraft Type and Registration:	Bombardier Challenger 350, LN-JHH
No & Type of Engines:	2 Honeywell HTF7350 turbofan engines
Year of Manufacture:	2017 (Serial no: 20702)
Date & Time (UTC):	30 May 2023 at 0850 hrs
Location:	Dundee Airport
Type of Flight:	Commercial Air Transport (Passenger)
Persons on Board:	Crew - 3 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Damage to left winglet
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	55 years
Commander's Flying Experience:	8,100 hours (of which 700 were on type) Last 90 days - 51 hours Last 28 days - 39 hours
Information Source:	Aircraft Accident Report Form submitted by the commander and further enquiries by the AAIB

Synopsis

Whilst being marshalled on the main apron the left wingtip of the aircraft collided with a lamppost. Neither the flight crew nor the marshaller were aware how close the wingtip was to the lamppost. Wing spotters positioned to mitigate this risk saw the impending collision and attempted to signal the aircraft to stop but neither the flight crew nor the marshaller saw the signals.

The airport operator intends to enhance its guidance to ground crew. The aircraft operator issued a notice to its pilots reminding them about standard marshalling signals.

History of the flight

The aircraft landed on Runway 27 at Dundee Airport at 0847 hrs and was instructed to vacate via Taxiway B and park nose to the south on Stand 1B with the marshaller. It was daytime and CAVOK.

A marshaller was positioned at the head of the stand and two 'wing spotters' were positioned on the end of the apron (Figure 1). Another aircraft was already parked on the adjacent stand (Stand 1A).

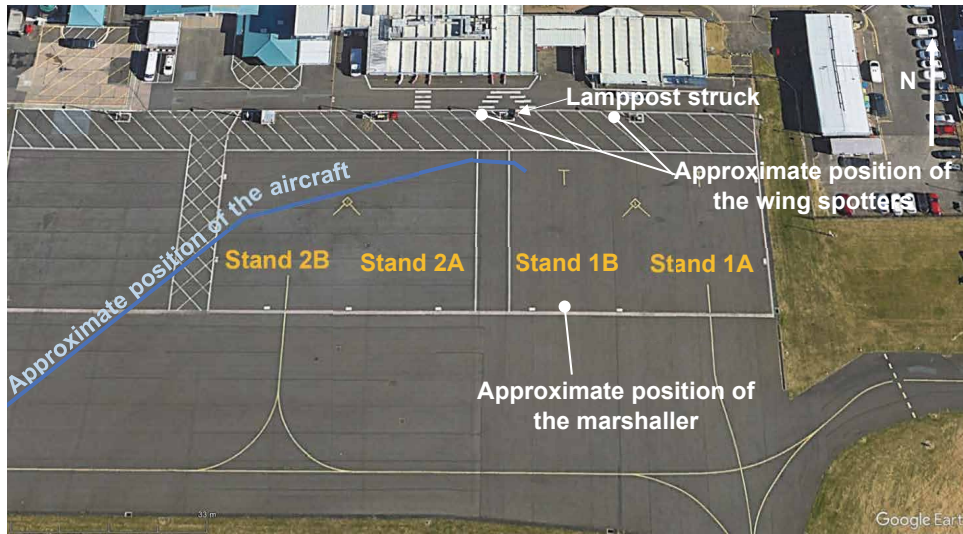


Figure 1

Apron at Dundee Airport showing approximate path of the aircraft and position of the marshaller and wing spotters

The marshaller started marshalling the aircraft as it approached the apron, and the flight crew followed the instructions. As the aircraft approached the edge of the apron both wing spotters could see that a collision was imminent and attempted to signal to the marshaller and the flight crew to stop the aircraft. However, the marshaller was looking at the aircraft and the flight crew were looking at the marshaller so neither saw the signals from the wing spotters. The winglet on the left wingtip collided with a lamppost on the edge of the apron and the aircraft came to an abrupt halt.

Figures 2 and 3 show the aircraft after the collision.

CCTV evidence showed the wing spotters started to signal the aircraft to stop 4 seconds before the collision.



Figure 2

Aircraft after the collision



Figure 3

Damage to the left winglet and lamppost

Recorded information

The occurrence was captured on CCTV. Figure 4 shows the sequence of events. The marshaller is out of shot on the left of the images.

Organisational information

Following the airport operator's investigation into this occurrence it commented that the white hatched area at the top of the apron is intended as a safety buffer zone. No part of the aircraft should enter this area whilst manoeuvring. It intends to instruct wing spotters to stand on the outer edge of the buffer zone rather than inline with the lampposts, to ensure the buffer is maintained. It also intends to:

- Conduct a review of its marshalling training package.
- Consider the introduction of direct headset communications between marshaller and wing spotters.
- Consider a two-stage marshalling process with two marshallers for circumstances similar to the accident.

The aircraft operator issued an Operational Order to all its pilots reminding them about standard marshalling signals.



Figure 4

CCTV footage of the occurrence (time stamps are local time)

Analysis

Whilst marshalling the aircraft onto the apron the marshaller directed the aircraft too close to the edge of the apron. From his position at the head of the stand it would be difficult to judge how close the wingtip on the far side of the aircraft was from the lampposts. They did not notice the wing spotters signalling for the aircraft to stop as they were looking at the aircraft. The wing spotter nearest the struck lamppost would have been obscured by the aircraft so could not be seen by the marshaller.

The flight crew did not notice that the left wingtip was too close to the lamppost. The commander commented that it is difficult to judge the wingtip clearance due to the wing sweep. They also did not see the wing spotter signalling for the aircraft to stop as their attention was on the marshaller.

Conclusion

A collision occurred because neither the flight crew nor the marshaller noticed the aircraft was too close to the lamppost. The wing spotters positioned to mitigate this risk were unable to prevent the collision.