



**Australian Government**

**Australian Transport Safety Bureau**

# Runway incursion involving a Bombardier DHC-8, VH-QOP

Gladstone Airport, Queensland, 17 April 2014

**ATSB Transport Safety Report**  
Aviation Occurrence Investigation  
AO-2014-073  
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#### **Addendum**

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# Runway incursion involving a Bombardier DHC-8, VH-QOP

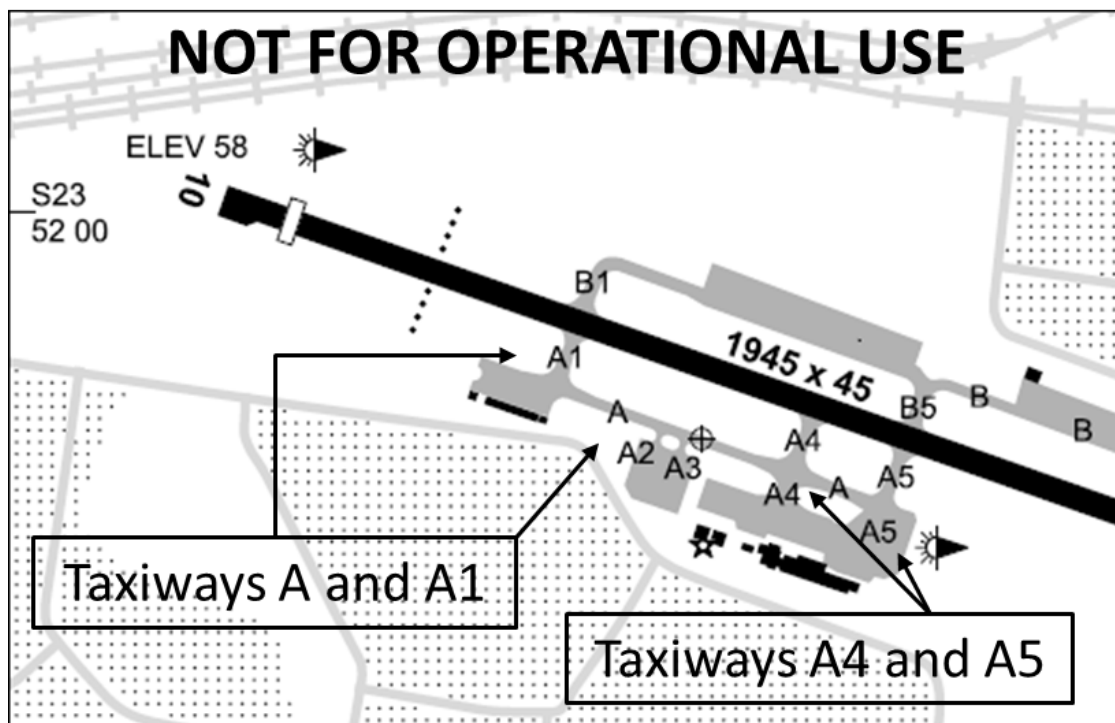
## What happened

On 17 April 2014 at about 1705 Eastern Standard Time, the crew of a Bombardier DHC-8, registered VH-QOP, commenced taxiing at Gladstone Airport, Queensland, for a scheduled passenger service to Sydney, New South Wales. Although the sector was to be flown by the first officer as the pilot flying, the captain was taxiing the aircraft because the aircraft has a single nose-wheel steering tiller, accessible to the left seat pilot only.

Prior to taxi, the crew made a radio call on the Gladstone Common Traffic Advisory Frequency (CTAF)<sup>1</sup> indicating their intent to use runway 10 for departure. As they commenced taxiing, the crew were aware that an ATR-72 was inbound to Gladstone. Soon after the crew of VH-QOP reported that they were taxiing, the crew of the ATR-72 reported that they were 5 NM from Gladstone, on final approach to runway 10.

Noting the position of the ATR-72, the crew of VH-QOP elected to taxi in a westerly direction along taxiway A, planning to enter the runway via taxiway A1 after the ATR-72 had landed. The crew commented they would probably have used taxiway A4 or A5 to enter the runway had it not been for the inbound ATR-72. Although they were not all that familiar with Gladstone Airport, the crew of VH-QOP were aware that runway entry via taxiway A4 or A5 was more common, if the air traffic situation allowed (Figure 1).

Figure 1: Excerpt from Gladstone aerodrome chart



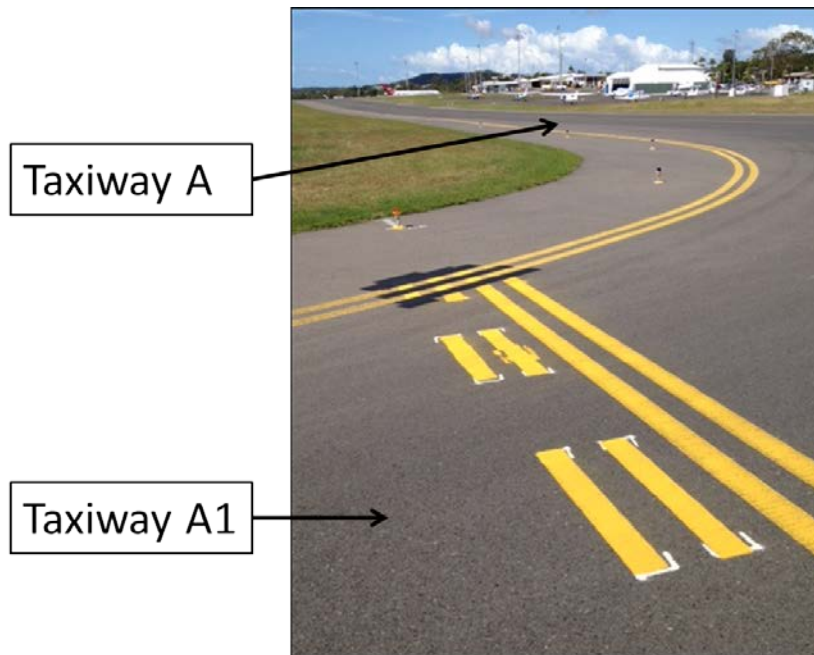
Source: Airservices Australia – modified by the ATSB

<sup>1</sup> The CTAF is the frequency on which pilots operating at a non-towered airport should make positional broadcasts.

Heavy isolated showers were passing over the airport at around the time the crew of VH-QOP were preparing for departure. The crew noted that weather to the east of the airport appeared to be more intense than weather to the west and with this in mind, they contemplated using runway 28 for departure. As they taxied, the crew discussed departure options and reviewed performance data to assess the suitability of using the opposite-direction runway 28 under the prevailing conditions. At the same time, they remained mindful of the ATR-72 on final approach to runway 10.

The crew of VH-QOP made a right turn from taxiway A onto taxiway A1 as the ATR-72 was on late final approach, but did not notice the holding point line near the commencement of taxiway A1 (Figure 2). The crew inadvertently continued over the holding point line before coming to a stop on taxiway A1, as the ATR-72 continued its approach and landed.<sup>2</sup>

**Figure 2: Holding point line on taxiway A1 (looking in a south-easterly direction)**



Source: Gladstone Airport Corporation

A ground-based observer noticed VH-QOP continue over the holding point line, and was concerned that the aircraft may be about enter the runway in front of the ATR-72 on late final approach. The observer monitored the progress of VH-QOP until it came to a stop, noting that the main wheels of the aircraft were just beyond the holding point line as the ATR-72 landed. The observer also commented that a shower of rain was passing over the airport at about the time that VH-QOP entered taxiway A1.

After the ATR-72 landed, the crew of VH-QOP made a call on the CTAF advising of their intention to enter and back-track for a departure from runway 10. The crew taxied forward onto the runway as the ATR-72 exited via one of the centre taxiways (A4 or A5). The crew of VH-QOP momentarily turned to the east as they entered the runway to allow further assessment of the weather in that direction, before turning to the west and back-tracking to the threshold of runway 10 for departure. VH-QOP then departed without further incident.

<sup>2</sup> The crew of the ATR-72 were not interviewed during this investigation. It's unclear if the crew of the ATR-72 noticed that the DHC-8 had continued over the holding point line before stopping.

## Crew comments

The crew were aware of the position of the ATR-72 as they taxied, and aware that the ATR-72 was on final approach to runway 10 as they neared taxiway A1. At all times, the crew planned to hold clear of the runway until after the ATR-72 had landed.

The crew of VH-QOP were not aware that they had taxied over the holding point line with the ATR-72 on final approach, until later advised of the incident. The crew commented that a number of factors may have led them to inadvertently continue beyond the holding point line on this occasion, including:

- The crew were busy as they taxied, assessing how weather in the area might affect their departure, and assessing the suitability of runway 28 for departure (including a review of relevant performance data).
- The tarmac surface was wet following heavy showers. As such, the holding point line may have been less prominent than might normally be the case, particularly noting the time of day (late afternoon) and possibly the position of the sun in relation to their taxi direction.
- The crew were not particularly familiar with Gladstone Airport, and even less familiar with taxiways A and A1. They were not aware of the position of the holding point line on taxiway A1.

## ATSB comment

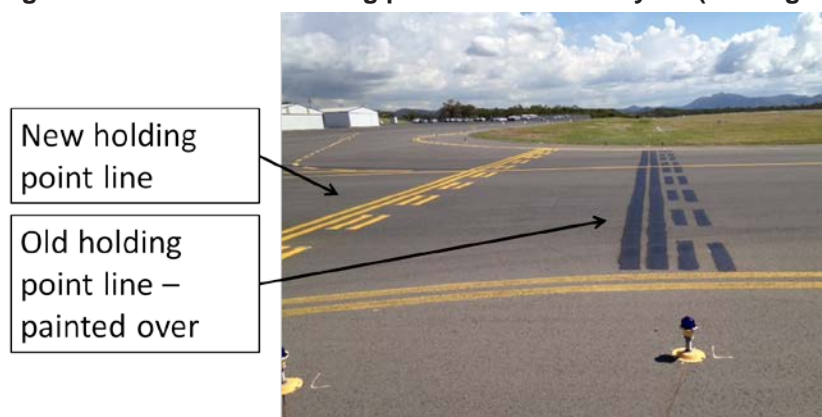
A runway incursion is defined in *Procedures for Air Navigation Services — Air Traffic Management - Doc 4444* as:

Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.

Although the crew of VH-QOP stopped well short of the runway surface and were aware of the aircraft on final approach, the incident still falls within the definition of a runway incursion given the 'incorrect presence' of the aircraft within the runway flight strip<sup>3</sup> as the ATR-72 landed.

While it does not appear to have been a factor in this incident, it is noteworthy that the holding point on taxiway A1 had been moved back from the runway a small distance about a week prior to this incident (associated with airport infrastructure improvements). A new holding point line was painted, and the old line painted over with dark grey paint.

**Figure 3: New and old holding point line on taxiway A1 (looking in a westerly direction)**



Source: Gladstone Airport Corporation

<sup>3</sup> In general terms, the flight strip is known as the area surrounding the runway which is cleared of obstructions to reduce the risk to aircraft using the runway for take-off or landing.

Available data indicates that the airfield lighting was active at the time VH-QOP inadvertently proceeded over the holding point line.<sup>4</sup> Although the airfield lighting was active, the holding point lights (amber lights adjacent to the holding point line) and other surface movement lighting may not have been illuminated because the lights are also controlled by a daylight sensing system.

## Safety message

This incident highlights the importance of careful attention to airfield markings during ground manoeuvring, especially when crew workload is elevated, and when a crew is unfamiliar with the airport layout. This message applies equally to all airside vehicle operators.

ICAO Doc 9870 *Manual on the Prevention of Runway Incursions* provides a considerable amount of information regarding the contributory factors often associated with runway incursions. A copy of the manual, along with a wide range of other information regarding runway incursions, is available at [www.skybrary.aero/index.php/Portal:Runway\\_Incursion](http://www.skybrary.aero/index.php/Portal:Runway_Incursion).

A range of information regarding runway safety (including runway incursions) is also available on the Airservices Australia website at [www.airservicesaustralia.com/flight-briefing/pilot-and-airside-safety/runway-safety/](http://www.airservicesaustralia.com/flight-briefing/pilot-and-airside-safety/runway-safety/)

## General details

### Occurrence details

Date and time:	17 April 2014 – 1705 EST	
Occurrence category:	Incident	
Primary occurrence type:	Runway incursion	
Location:	Gladstone Airport, Queensland	
	Latitude: 23° 52.18' S	Longitude: 151° 13.37' E

### Aircraft details

Manufacturer and model:	Bombardier DHC-8-402	
Registration:	VH-QOP	
Operator:	Sunstate Airlines	
Serial number:	4238	
Type of operation:	Air Transport High Capacity	
Persons on board:	Crew – Unknown	Passengers – Unknown
Injuries:	Crew – Nil	Passengers – Nil
Damage:	None	

## About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

<sup>4</sup> Airfield lighting was activated by the Airport Safety Officer at the request of another aircraft inbound to Gladstone, about 15 minutes before VH-QOP taxied.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

## About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.