



**Australian Government**

**Australian Transport Safety Bureau**

# Runway excursion involving Cessna 207, VH-MIA

East Wallabi Island, WA, on 16 September 2018

**ATSB Transport Safety Report**  
Aviation Occurrence Investigation  
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#### **Addendum**

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# Runway excursion involving Cessna 207, VH-MIA, at East Wallabi Island, WA

## What happened

At about 0845 Western Standard Time<sup>1</sup> on the 16 September 2018, a Cessna 207, registered VH-MIA (MIA), operated by Kalbarri Scenic Flights, took off to conduct a scenic flight from Kalbarri, West Australia (WA), to East Wallabi Island, WA. A pilot and three passengers were on board the aircraft.

The pilot had conducted a short scenic flight lasting about 45 minutes earlier that morning. She had around 30 minutes between flights to prepare the aircraft for the second flight.

The pilot advised that she briefed the passengers on the safety aspects of the aircraft before taking off. The flight proceeded past the township of Kalbarri and then along the shoreline before heading to East Wallabi Island, part of the Abrolhos Islands, at about 2,500 ft above mean sea level.

The aircraft overflew the island and the pilot reported that she observed the windsock was indicating an easterly wind, which was a crosswind for both runways. She decided to join runway 36 on the mid-crosswind leg of the circuit. The pilot reported that she touched down on the runway abeam the taxiway (see Figure 2), which normally gives her enough runway length to stop the aircraft. However, on this occasion, she could not stop the aircraft and overran the runway end by approximately 1 metre (Figure 1). The aircraft was not damaged and there were no injuries to the pilot or passengers.

**Figure 1: VH-MIA after runway excursion**



Source: Sue McAuliffe

<sup>1</sup> Western Standard Time (WST): Coordinated Universal Time (UTC) + 8 hours.

## ***Runway strip***

The runway strip on East Wallabi Island is a privately owned unsealed strip. It is 637 m long and 30 m wide. The pilot reported that it slopes down slightly in the middle and has soft sand at one end. The windsock is on the western side of the runway on a slight hill.

**Figure 2: East Wallabi Island runway and Kalbarri, North Island and East Wallabi Island**



Source: Google Earth, annotated by ATSB

## ***Weather at East Wallabi Island***

East Wallabi Island does not have a dedicated weather forecasting service, but weather observations from North Island, which is 20 km north-west of East Wallabi Island, indicated that the wind was from the south at approximately 8 knots. This would indicate that the wind was almost all tailwind at the time the aircraft landed.

## ***Pilot comments***

The pilot reported she had checked the weather before they had departed on the first flight that morning.

The pilot reported that the approach and landing appeared normal until the aircraft did not slow after the aircraft touched down on the runway. She had slowed the aircraft to 80 kts on the final leg of the approach and touched down at the normal speed. She applied brakes as normal, released and then reapplied the brakes, to ensure the wheels did not lock, as this was a gravel strip.

The pilot reported that she used the position of the taxiway along the runway as her decision point as to whether she was going to conduct a go-around. As everything felt normal at that stage, she did not conduct a go-around.

The pilot reported that she was not fatigued. She had a day off the day before the incident. She had slept normally and had risen at her normal time of around 0530. She had arrived at the airport at around 0700, which gave her plenty of time to prepare for the flights. She was not feeling time pressure and the workload for the flight was normal.

She also advised that she had flown to the island a number of times and knew the strip well.

## ***Operator comments***

The operator reported that the aircraft was loaded within the aircraft limits.

The operator has discussed the incident with the pilot. They have stressed the importance of checking the windsock on the final leg of the circuit to ensure there is no downwind component,

especially on a short runway. The operator and the pilot have also discussed the importance of using all available weather data, in particular the observations page on the Bureau of Meteorology website before going flying.

### **Previous occurrences**

A review of the ATSB occurrence database for similar occurrences identified that in the last 10 years there were 14 incidents where a tailwind contributed to a runway excursion on landing. Of these, 11 were excursions where the aircraft ran off the end of the runway. Seven of these aircraft sustained substantial damaged.

### **Safety analysis**

While the pilot advised she had checked the wind as they overflew the runway to join the circuit for runway 36, weather information received from the Bureau of Meteorology indicated that there was a southerly wind at the time the aircraft landed. The ATSB could not clarify if the pilot misread the windsock or the wind direction had momentarily changed when they joined the circuit and returned back to the southerly direction before the aircraft landed. The aircraft most likely landed with a tail wind component resulting in a faster ground speed at touchdown and the aircraft overrunning the end of the runway.

The pilot's decision to land the aircraft adjacent to the taxiway reduced the available stopping distance available. Using the full runway strip, would probably have allowed the pilot to stop the aircraft on the runway.

### **Findings**

These findings should not be read as apportioning blame or liability to any particular organisation or individual.

- It is likely that the aircraft landed with a tailwind component resulting in the aircraft overrunning the runway.
- The pilot's chosen landing position did not use the full runway strip length, reducing the stopping distance available.

### **Safety message**

This incident highlights the importance of, where possible, landing with a headwind. Landing with a tailwind could result in an increase in the required landing distance by 21 per cent for the first 10 kts of tailwind, according to the United States' Federal Aviation Administration [advisory circular no. 91-79A](#) *Mitigating the risks of a runway overrun upon landing*. They also advise that for some smaller general aviation aircraft (for example a Cessna 152), the landing distance required will increase by 10 per cent for every 2 kts of tailwind. If a pilot is not expecting a tailwind component, there is a significant risk that the aircraft will overrun the runway when operating on a short runway. One way of reducing the chances of landing with a tailwind is to include a check of the windsock during pre-landing checks and to conduct a go-around if a tailwind is detected.

Runway excursions continue to be a safety concern around the world with the Transport Safety Board of Canada recently releasing its [Watchlist 2018](#), which lists runway overruns as one of its two aviation safety concerns for 2018.

## General details

### Occurrence details

Date and time:	16 September 2018 – 0930 WST	
Occurrence category:	Incident	
Primary occurrence type:	Runway excursion	
Location:	East Wallabi Island, WA	
	Latitude: 28° 26.47' S	Longitude: 113° 43.68' E

### Aircraft details

Manufacturer and model:	Cessna 207	
Registration:	VH-MIA	
Operator:	Kalbarri Scenic Flights	
Serial number:	20700738	
Type of operation:	Charter - passenger	
Persons on board:	Crew – 1	Passengers – 3
Injuries:	Crew – 0	Passengers – 0
Aircraft damage:	Nil	

## 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.

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 operations involving the travelling public.

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.