



**Australian Government**

**Australian Transport Safety Bureau**

# Runway incursion involving Hawker Beechcraft Corporation B200, VH-FDG, and vehicle

Blackall Airport, Queensland, 28 February 2016

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

Page	Change	Date

# Runway incursion involving Hawker Beechcraft Corporation 200, VH-FDG and vehicle

## What happened

On the night of 28 February 2016, at about 0230 Eastern Standard Time (EST), a Hawker Beechcraft Corporation B200 aircraft, registered VH-FDG (FDG), was on descent to Blackall Airport, Queensland. The pilot, a doctor and a nurse were on board the aeromedical flight.

Earlier at about 0220, an ambulance driver was dispatched to Blackall Airport by the ambulance coordination centre to meet FDG and facilitate the transportation of a patient. The ambulance driver was the only occupant of the vehicle.

The pilot conducted a RNAV instrument approach to runway 24 at Blackall Airport. On descent, the pilot tried to contact the ambulance driver on the UHF channel but was unsuccessful. The ambulance driver arrived at the airport at about 0231 and noticed that the runway 24 lights were on (the pilot activated the runway lights at about 25 NM using the pilot activated lighting system),<sup>1</sup> and looked to see if the aircraft could be seen or heard, looking for the aircraft in both directions of the runway.

At about 4.5 NM from Blackall, the pilot noticed the stationary ambulance flashing lights close to the terminal building. The terminal building was located about 90 meters from the runway holding point and about 190 m to the runway centre line (Figure 1).

**Figure 1: Blackall airport runway 24**



Source: Google earth, modified by the ATSB

<sup>1</sup> Pilot activated runway and taxiway lighting is activated by a series of timed transmissions using the aircraft's very high frequency radio, on either a discrete or the local airport communication frequency.

As the ambulance driver did not see or hear the aircraft, and was of the understanding that a runway inspection for animals was required to be completed before the aircraft arrived, they drove quickly down the taxiway towards the runway.

As FDG passed over the threshold of runway 24, and the pilot noticed the flashing lights of the ambulance on the taxiway passing through the holding point, and traveling at speed toward the anticipated touch down point of the aircraft. The pilot initiated a missed approach<sup>2</sup> and climbed out at about 20 ft above the runway.

At about the same time as the pilot initiated a missed approach, the ambulance driver saw the aircraft and stopped the ambulance near the runway white gable markers for runway 24 (Figure 1). The ambulance driver returned the vehicle back to the terminal and parked near the terminal building under the terminal floodlights with the vehicles flashing lights on.

The pilot climbed the aircraft to circuit height and was unable to contact the ambulance driver on the UHF channel, so contacted the ambulance coordination centre using the aircraft's SAT phone. On the downwind leg of the circuit, the pilot was unable to see the ambulance, so elected to climb and enter a hold pattern about 5,000 ft above the airport to extend the SARTIME<sup>3</sup> on the HF radio.

The coordination centre contacted the ambulance driver and instructed them to contact the pilot on a VHF channel<sup>4</sup> (the vehicle VHF radio was not capable of being set to the common traffic advisory frequency (CTAF)). After about 10 minutes, the driver determined that they needed to contact the pilot on the UHF radio, and then was able to communicate with the pilot.

After the ambulance driver conducted the runway strip inspection, as requested by the pilot, the pilot descended the aircraft, and landed without incident.

### ***Pilot comment***

The pilot reported that there was a low moon and a clear night with good visibility and turbulence below 5,000 ft. There was about 25 knots crosswind from the left of runway 24. As the wind was coming from the left, the right wing of the aircraft obscured the vehicle traveling toward the runway until the pilot levelled the aircraft for a landing. The last time the pilot saw the vehicle it was stationary at the terminal.

The pilot indicated that it is not normal to request a strip run at Blackall Airport, as a high fence around the perimeter of the airport seems to keep the kangaroos out.

### ***Ambulance driver comment***

The driver indicated that some of the airport buildings may have obscured the approaching aircraft and as the airport lights are very bright, they may have made it more difficult to see the aircraft from where the ambulance was located.

The ambulance driver reported that all the external lights of the ambulance were on including the red and blue flashing lights, red rotating beacon and vehicle headlights. The ambulance may have been difficult to see by the pilot after the missed approach, as the driver parked the vehicle close to the terminal under the bright terminal lights, where the driver believed (at the time) the vehicle would be easy to see.

The vehicle was equipped with a UHF and a VHF radio, a SAT phone, and a portable handset. The ambulance driver commented that in some placements the UHF radio is not needed or rarely used so it was easy to forget that there was a UHF radio fitted to the vehicle.

The driver was informed during a one-day induction course, three days prior to the incident, that a strip run was needed to be performed before the aircraft could land at night.

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<sup>2</sup> An approach to land that is aborted for any reason, followed by a go around.

<sup>3</sup> Time nominated by a pilot for the initiation of search and rescue action if a report from the pilot has not been received by the nominated unit.

<sup>4</sup> Audio communications transcript provided by ambulance operator.

### ***Aircraft operator comment***

The aircraft operator conducted an investigation into the occurrence and noted the following:

- Blackall is a security-controlled airport. All persons wishing to access the airport 'airside' are required to undertake an airport induction program prior to access.
- Blackall airport has standard low intensity runway lighting for runway 06/24, spaced at 60 m intervals each side of the runway. The pilot had activated the lights remotely using the pilot activated lighting system. Blue sideline lights are provided for the taxiway and the apron has floodlighting.
- The instrument approach to runway 24 was being carried out not due to poor weather, but to facilitate a stable arrival and a runway aligned approach. The approach ensures terrain clearance and provides slope guidance during the approach to the runway.
- Blackall is a certified airport. All vehicles entering the flight strip are required to both listen out for air traffic, and broadcast intentions, on the CTAF prior to entering the flight strip, and again once clear of the flight strip.
- The ability to communicate with a vehicle operating 'airside' enables the pilot to confirm that the vehicle will be clear of the runway prior to landing, and to pass any specific instructions as required, for example an instruction to douse vehicle headlights and flashing hazard lights. Other information may be exchanged, for example confirmation that an airstrip has been inspected and is clear of animals.
- Night operations at regional, rural, and remote airstrips present a significant animal strike hazard. To mitigate the risk, the operator prefers that all aerodromes that present an animal hazard are inspected prior to the aircraft landing. A request by the pilot for a driver to conduct a strip check is communicated through the coordination centre and not directly to the driver. This removes the opportunity for the pilot to brief the driver directly.
- There is an internal publication listing details of many unregistered aerodromes and private airstrips in Queensland. The publication contains some entries warning of animal hazards, but does not specify the appropriate person or organisation to carry out an inspection at each location.

### ***Ambulance operator comment***

The ambulance operator conducted an investigation into the occurrence and noted the following:

- A company induction was conducted on the driver's day off prior to commencing work for the first time at Blackall. There was a lot of information to cover during the allocated one-day induction schedule.
- An airport operator induction program existed that should be completed by anyone accessing the Blackall Airport. The program had not been made available to the driver at the time of the incident. The person who the driver had replaced had been based at Blackall for about 13 years and had indicated that they had not conducted an airport induction course.
- The driver was not informed, or aware, that when the runway lights were on at night that the arrival of the aircraft was imminent.
- The conduct of strip inspections for animals at Blackall was not based on a written agreement.
- Blackall Airport is a certified airport and required that vehicles accessing the taxiway, runway, and/or runway strip have a VHF radio suitable for use on the CTAF. The ambulance had a UHF and VHF radio but the VHF radio was not capable of accessing the CTAF. At the time of the incident, the UHF radio was not turned on.

### **Safety action**

Whether or not the ATSB identifies safety issues in the course of an investigation, relevant organisations may proactively initiate safety action in order to reduce their safety risk. The ATSB has been advised of the following proactive safety action in response to this occurrence.

### ***Aircraft operator***

As a result of this occurrence, the aircraft operator has advised the ATSB that they are taking the following safety actions:

- Runway strip inspections will continue for night operations at aerodromes with known or suspected animal hazard, where appropriate ground personnel can safely conduct the inspections.
- Formal procedures will be developed in conjunction with the ambulance operator detailing safety procedures for those rural/regional stations where a request for a runway inspection is likely.
- Appropriate procedures will be developed for requesting airstrip inspections, including advice on the different requirements for CTAF and non-CTAF aerodromes, for incorporation in the airstrip data manual.
- Closer safety liaison between the respective ambulance and operator safety departments.

### ***Ambulance operator***

As a result of this occurrence, the ambulance operator has advised the ATSB that they are taking the following safety actions:

- Staff that undertake work at the Blackall Airport will attend the airport operator induction program.
- Establish consultative arrangements with key stakeholders.
- Review the local UHF/VHF radio communications procedures between the operation centre, aircraft operator, airport operator, and ambulance attending the airport.
- Review of induction programs for staff in consultation with the aircraft operator and the airport operators to ensure that the induction consists of specific guidance material that covers all aviation safety requirements for staff who may undertake work at the airport. All new and existing staff will participate in the revised induction program.
- Review induction workbooks to ensure that the workbook reflects all aviation safety requirements for staff who may undertake work at an airport or aerodrome. Once the workbook has been reviewed, all new and existing staff will be provided with a copy of the workbook.
- Conduct a review of the Blackall standard operating procedures to ensure that the procedures cover all aviation safety requirements.

## **Safety message**

The International Civil Aviation Organization (ICAO) has identified runway safety as one of its priorities and has been working with countries and aviation organisations globally to reduce runway safety accidents. ICAO has developed a runway safety [website](#), which offers a range of information and products to assist the aviation community to improve runway safety.

In addition, ICAO has published a [Manual on the prevention of runway incursions \(Doc 9870 AN/463\)](#), available from the ICAO website. The manual includes information on the prevention of runway incursions. The manual discusses that deficiencies in design, training, technology, procedures, regulations and human performance can result in a system breakdown and safety being compromised.

Additional information on runway safety is also available from the Airservices Australia webpage [Runway safety](#).

In addition, Airservices Australia has published a guide for airside drivers, [The airside drivers guide to runway safety](#), which focuses on four aspects of operating safely on an aerodrome:

1. planning your airport operation
2. airport procedures



3. communications
4. airport markings, signs and lights.

## General details

### Occurrence details

Date and time:	28 February 2016 – 0236 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Near collision	
Location:	Blackall Airport, Queensland	
	Latitude: 24° 25.67' S	Longitude: 145° 25.72' E

### Aircraft details – VH-FDG

Manufacturer and model:	Hawker Beechcraft Corporation 200	
Registration:	VH-FDG	
Serial number:	BB-2012	
Type of operation:	Aerial work - EMS	
Persons on board:	Crew – 3	Passengers – 0
Injuries:	Crew – 0	Passengers – 0
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.