



Australian Government

Australian Transport Safety Bureau

Landing on an occupied runway involving Beech Aircraft Corporation B200, VH-ZOK

Horsham Airport, Victoria, 18 December 2016

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Addendum

Page	Change	Date

Landing on an occupied runway involving Beech Aircraft Corporation B200, VH-ZOK

What happened

On 18 December 2016, at about 1047 Eastern Daylight-saving Time (EDT), a Beech Aircraft Corporation B200 aircraft, registered VH-ZOK (ZOK), was on descent to Horsham Airport, Victoria. The pilot, copilot, and six passengers were on board the charter flight.

Horsham Airport was hosting a gliding competition from the 12-20 December 2016 and a notice to airmen (NOTAM)¹ had been published with information on the event (see *NOTAM* section below).

At about 1000 that morning, the director of the gliding competition conducted a briefing for the glider pilots and other people involved in the event. At the briefing, the selected take-off point for the conditions on the day and the schedule for marshalling the gliders out to the take-off point were discussed.

After the briefing, two ground personnel associated with the event went out to the take-off point for the gliders on runway 17 and began to lay out the 14 ropes that would be attached to the gliders and the launch aircraft. Seven ropes were placed lengthwise on the grass within the runway strip² on each side of the bitumen runway,³ where it was planned the gliders would launch from. Later in the day, the ropes were to be attached to each glider and their respective tow aircraft to launch the gliders.

At the time when the event ground personnel were laying out the ropes, a powered aircraft was conducting circuits on runway 08 (Figure 1).

¹ A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

² A runway strip, for a runway without an instrument approach, includes a graded area around the runway (in this case a grass area) and stopway, intended to: (1) to reduce the risk of damage to aircraft running off a runway; and (2) to protect aircraft flying over it during take-off or landing operations.

³ The runway is a defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Figure 1: Map of airport showing runways 08 and 17 and the approximate location of the ground personnel



Source: Google earth, modified by the ATSB

As ZOK approached the circuit, the pilot was aware of one other aircraft on the common terminal advisory frequency (CTAF) that was on the downwind circuit leg for runway 08. The other aircraft was significantly slower than ZOK and the wind direction was about 140 degrees, and the wind speed was about 7 kt.⁴ The pilot of ZOK elected to land on runway 17. The pilot gave an inbound broadcast on the CTAF and another as they joined downwind for runway 17.

As ZOK turned onto the base circuit leg, the aircraft on runway 08 had just landed and was backtracking to vacate the runway. A broadcast on the CTAF was made alerting the pilot of ZOK to the NOTAM. The pilot of ZOK believed the voice was that of the pilot that had just landed. The pilot of ZOK was not able to identify any gliders in the air so continued with the approach. ZOK turned onto the final approach and the pilot was able to see the bitumen part of the runway was clear.

The ground personnel noticed the sound of another powered aircraft and looked up to see the landing lights of an aircraft on final approach for runway 17. The ground personnel were located on the grass on both sides of the runway and each moved back about 10 to 15 m within the runway white gable markers.⁵

As ZOK was on short final, again a radio communication was broadcast on the CTAF indicating that runway 17 was closed that there was ground based activity on the runway and that ZOK should go around. Again, the pilot of ZOK believed the voice was that of the pilot that had just landed. The pilot and copilot double-checked the bitumen runway and did not identify any person on the runway. As the pilot believed that the runway was not closed, given the height of the aircraft above the ground and the risks associated with going around at this height, the pilot continued with the landing.

The aircraft landed just past the threshold and taxied the full length of the runway, turned around and back tracked runway 17 to access the aircraft parking bay near the airport terminal. While backtracking, the pilot noticed two people either side of the runway on the grass about 50 m from

⁴ Maximum wind gusts recorded was 15 kt.

⁵ Runway 17 was 24 m wide, total width of the runway strip to the white gable markers was 80 m.

the runway 17 threshold. The pilot, copilot, six passengers, and two ground personnel were not injured and the aircraft was not damaged.

Pilot comment

The pilot had received a copy of the NOTAM during their preparation for the flight. Their understanding of the NOTAM was that there was a gliding competition at the airport and that runway 17/35 was available by prior arrangement. The critical hours for the competition were from 1200 to 1400. The preferred runway for the gliding competition was runway 17/35 but they could change to runway 08/26 if required.

The pilot indicated that although their arrival time was outside 1200 to 1400 they contacted the competition director on the phone number provided in the NOTAM to discuss their arrival and departure. The pilot reported that they rang on the Saturday, the day prior to the flight.

The discussion with the acting competition director concerned the glider flying and their subsequent departure time from Horsham, as that may have posed a conflict with returning gliders and how that separation would be arranged. The pilot indicated that at no stage in the conversation was it mentioned that runway 17/35 was closed to powered aircraft or that there would be people on the runway setting up for the gliders to depart. The pilot indicated that the conversation ended with the pilot believing that there was no problem with the arrival as it was outside the critical time. At the time of their departure from Horsham, the pilot planned to contact the competition director if there was any glider activity.

The pilot indicated that runway 17 was selected for landing as it was the runway that was most appropriate for the wind conditions. Another aircraft was landing on 08, which was significantly slower than ZOK and this could result in a potential conflict as the other aircraft back tracked to clear runway 08, as well as catching up to it in the circuit.

The pilot was aware that there may be glider activity and had briefed the copilot to be extra vigilant. They both ensured that there were no gliders in the area at the time. They were not aware that there might be people working on the runway and at no stage noticed any people or vehicle on the runway.

The pilot commented that it would be hard to see a person against the grass section of the runway when travelling at about 200 km/h and that it was the bitumen part of the runway that they physically landing on.

The pilot also commented that they⁶ have not experienced a situation where people were on the runway and had not communicated their intentions on the CTAF to arriving or departing aircraft.

Event ground personnel comment

The event ground personnel believed that runway 17/35 was closed for the gliding competition. They reported that the active runway for powered aircraft was runway 08 and a powered aircraft was operating on that runway. There was no traffic expected and generally, at that time of the morning there is not much wind.

A radio to communicate on the CTAF was located in the vehicle that was used by the ground personnel. As they were setting up on runway 17, near where the equipment was stored, the ground vehicle had not been used to transport the ropes and was not located on or near the runway. They did not feel that the radio was needed at this time.

At the time of the incident, the ground personnel were reported to be wearing bright yellow high visibility vests.

The ground personnel reported that the NOTAM had been written the same way for many years.

⁶ Gender-free plural pronouns: may be used throughout the report to refer to an individual (i.e. they, them and their).

Acting competition director (16 December 2016 NOTAM contact)

The acting competition director remembered speaking to the pilot two days prior to the expected arrival of ZOK.⁷ The acting director’s understanding of the conversation was that:

- the arrival time would not conflict with the launching of the gliders
- the pilot was aware the NOTAM was in force and that the pilot did not want to interfere with the glider traffic
- the pilot mentioned that they would be able to land in a 15 kt crosswind, which further indicated that they were happy to land on runway 08/26.

The acting director believed that the pilot understood that runway 17/35 was ‘closed’⁸ to powered traffic and that the pilot would use 08/26, which was the active runway for all powered aircraft, however this was not specifically discussed.

The pilot of ZOK rang two days prior to their arrival and in that time the weather conditions can change.

The acting directors understanding of the NOTAM was that:

- 17/35 was ‘closed’ to all powered traffic
- there was high glider activity in the area
- if anyone wanted to use 17/35 they had to ring the competition director up to 30 minutes before using that runway, but this was not specified in the NOTAM.

The vehicle that the ground personnel had available included a rotating flashing beacon (the vehicle was not used at the time of the incident).

The grass on the runway strip had been specially mowed for the event.

Competition director

The competition director indicated that the airport operator issued the NOTAM and they understood that the NOTAM closed runway 17/35 to non-glider related traffic during daylight hours. The NOTAM had been written this way for about 3 to 4 years. The wording of the NOTAM had evolved over 10 years. About 3 to 4 years ago, the wording changed from ‘closing’ runway 17/35 to powered aircraft for a short period, to ‘closing’ it to powered aircraft for the entire day to give powered pilots better notice.

The competition director indicated that they did not believe a general discussion of potential operations at unspecified times constituted either a request for or a granting of permission to use runway 17/35.

The director reported that generally at that time of the year the wind favours runway 17 and it could not be determined which runway would be the most suitable for the glider operations more than 2 hours ahead of time.

The director indicated that similar incidents have happened over the years but on this occasion, there were people and equipment on the runway strip. A search of the ATSB occurrence database did not find any reported events involving landing powered aircraft (see *Previous incidents* below).

The director indicated that permission for an aircraft to land or take off on runway 17/35 would need to be discussed at the time as it depends on the:

- operational situation
- wind

⁷ The pilot of ZOK reported that this conversation occurred the day prior to the flight, on the Saturday. The ATSB was not able to locate a gliding event official that remembered talking to the pilot on the Saturday. The official that was the main contact for every day except the 16 December does not remember talking to the pilot.

⁸ Not available without prior approval. – The convention in Australian NOTAM is to use the phrase ‘NOT AVBL’ rather than ‘CLOSED’ - [Airservices Australia](http://www.atsb.gov.au/airservices/australia).

if gliders are on the strip waiting to be launched.

Notice to airmen (NOTAM)

The NOTAM for the glider flying competition was issued and applicable from 1000 on the 12 December 2016 to 2100 on the 20 December 2016 during sunrise to sunset (Figure 2). The NOTAM indicated that:

- there was intensive glider flying confined to runway 17/35
- the use of runway 17/35 during sunrise to sunset by other aircraft was only by prior arrangement with the competition director
- runway 08/26 may be used for glider flying if runway 17/35 was not suitable
- glider traffic information was available on the CTAF 118.8 and visiting aircraft should plan to arrive or depart outside the hours of 1200 to 1400 local time if possible
- phone numbers were provided to contact the director for further details. On 16 December, a different mobile number was provided to contact the director.

Figure 2: NOTAM

<pre style="font-family: monospace; font-size: 0.9em;"> INTENSIVE GFY CONFINED TO RWY 17/35 USE OF RWY 17/35 DURING HJ BY OTHER ACFT ONLY BY PRIOR ARRANGEMENT WITH COMPETITION DIRECTOR. RWY 08/26 MAY BE USED FOR GFY IF RWY 17/35 NOT SUITABLE. GLIDER TRAFFIC INFORMATION IS AVBL ON CTAF 118.8 VISITING ACFT SHOULD PLAN ARRIVE OR DEPART OUTSIDE HRS 0100 - 0300 UTC IF POSS. CTC DIRECTOR XX XXXX XXXX MOBILE XXXX XXX XXX FOR FURTHER DETAILS EXCEPT ON 16 DEC (AEDT) MOBILE IS XXXX XXX XXX FROM 12 112300 TO 12 201000 HJ </pre>	<p>C19/16</p>
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Source: Airservices Australia, phone numbers redacted by the ATSB

The Horsham airport operator forwarded a copy of the NOTAM wording to CASA prior to submitting the NOTAM to Airservices Australia to be issued. CASA provided a response to the airport operator that based on the information provided they had no objection to the proposed NOTAM.

Previous incidents

A search of the ATSB database identified one other notification in the last ten years that involved a glider event and a powered aircraft at Horsham Airport. In 2016, during final approach, three gliders were required to manoeuvre to ensure separation from a single-engine aircraft that was taxiing up and down the runway at high speed before taking off. No radio calls were heard from the single-engine aircraft.

Safety analysis

The pilot of ZOK had received a copy of the NOTAM while conducting their preparation for the flight. After reading the NOTAM, they assessed that if they contacted the competition director prior to the flight, they could use runway 17/35.

They believed that by ringing the competition director before the flight, they had made a prior arrangement to use runway 17 and, as the intended arrival time was outside the ‘critical’ hours of 1200 to 1400 specified in the NOTAM, their arrival would not interfere with the competition. As neither party specifically talked about runway 17/35, a connection was not made that there was a different understanding of what the NOTAM meant and that permission was not nor could it have been granted to use runway 17/35 when the weather conditions for the launch day were not known.

The gliding club believed that the NOTAM ‘closed’ the runway to all aircraft during daylight hours, apart from the gliders and tow aircraft taking part in the competition. Due to this interpretation, the ground handlers for the event did not make any radio calls before they entered the runway strip to prepare for the competition. Nor did they carry the radio that was available in their vehicle.

The NOTAM is also not clear when permission is needed to use runway 17. The pilot assessed that as they had contacted the director and discussed the flight, they had made an arrangement to use the runway. The competition director believed that there was a requirement for the pilot of an aircraft intending to use runway 17/35 to contact them on the day of the flight.

An opportunity to alert the pilot that there was ground activity on the runway was missed, as the ground vehicle, which had a rotating beacon, was not used (located near or on the runway) due to the close proximity of the equipment to the launch site. In addition, the ground personnel did not have a radio with them to communicate on the CTAF.

Findings

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

- Landing on runway 17, the pilot of ZOK was not aware that two people were located inside the white gable markers denoting the runway strip and that ropes were located beside the runway in preparation for launching gliders.
- The NOTAM for gliding operations was open to misinterpretation.

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.

Airport operator

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

Improved wording to the NOTAM issued for future gliding events will be developed with gliding event officials and CASA so prior approval would need to be obtained within two hours of the intended use of the runway, to ensure that current weather conditions and gliding operations could be considered at the time.

Safety message

This incident highlights the critical importance of communications and as discussed in the CASA Flight Safety Australia magazine September-October 2012, [Mind your language](#) the importance of what you say and how you say it for both the written and spoken word, ‘your words matter-make no mistake’. The article identifies three ways that NOTAMs fail in relevance, ambiguity, and readability. NOTAMs should always be clear and concise and leave no room for misinterpretation.

General details

Occurrence details

Date and time:	18 December 2016 – 1055 EDT	
Occurrence category:	Incident	
Primary occurrence type:	Runway event	
Location:	Horsham Airport, Victoria	
	Latitude: 36° 40.18' S	Longitude: 142° 10.37' E

Aircraft details

Manufacturer and model:	Beech Aircraft Corp B200	
Registration:	VH-ZOK	
Serial number:	BB-1275	
Type of operation:	Charter - Passenger	
Persons on board:	Crew – 2	Passengers – 6
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.