



Australian Government

Australian Transport Safety Bureau

Misaligned take-off involving Beechcraft B200C King Air, VH-FDI

Brisbane West Wellcamp Airport, Queensland, on 24 February 2026



ATSB Transport Safety Report

Aviation Occurrence Investigation (Short)

AO-2026-062

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Investigation summary

What happened

Just after midnight on 24 February 2026, a Royal Flying Doctor Service, Queensland Section, Beechcraft King Air B200, registered VH-FDI, with one pilot, a doctor and a nurse on board, taxied at Wellcamp Airport, Queensland, for a flight to Bundaberg. While taxiing for take-off, the aircraft conducted a 180° turn on the turn pad at the end of runway 12 and shortly after, commenced take-off. The aircraft was incorrectly aligned with the right runway edge lights and struck a turn pad edge light during the take-off roll. Parts of the damaged light impacted both propellers and dented the fuselage.

After recognising a ground strike had occurred, the pilot rejected the take-off, cancelled their flight plan with air traffic control, returned to the parking apron and grounded the aircraft.

What the ATSB found

The ATSB found that the incident took place in dark ambient conditions, limiting the visibility of the taxi guidance line markings which were not followed during the turn to line up. Instead, the aircraft was turned tighter, which aligned it with the right edge of the runway.

The pilot perceived the aircraft to be aligned with the runway centreline after they misidentified the right runway edge lights as centreline lights and did not recognise the misalignment by other contradictory cues available at the time.

What has been done as a result

The Royal Flying Doctor Service, Queensland Section, reviewed internal procedures for checklist management, entering and backtracking runways, conducting 180° turns, and requirements around identifying and lining up on runways.

The next version of the flight operations manual will be amended to:

- require the 'before take-off checklist' be fully completed prior to entering the runway
- include clear guidance on checklist interruption management, requiring that, when resuming a checklist, the pilot returns to the previously completed item before continuing.

Further, a notification will be issued to all pilots highlighting the importance of ensuring positive runway centreline environment is established before applying take-off power.

Safety message

A number of factors known to influence misaligned take-off occurrences were identified in this investigation, including dark ambient conditions and taxiway guidance markings. Dark ambient conditions have been consistently identified in similar occurrences and can reduce available visual cues, limiting the ability of pilots to identify their position during line-up.

Operators should consider the regular use of turn pad guidance line markings which will orientate aircraft with the centre of the runway if followed completely, particularly where the area of the turn pad extends wider than the runway width.

Pilots should crosscheck all available cues to confirm their position prior to take-off at night.

The investigation

The ATSB scopes its investigations based on many factors, including the level of safety benefit likely to be obtained from an investigation and the associated resources required. For this occurrence, the ATSB conducted a limited-scope investigation in order to produce a short investigation report, and allow for greater industry awareness of findings that affect safety and potential learning opportunities.

The occurrence

On 24 February 2026, a Beechcraft B200C King Air aircraft, registered VH-FDI, was being operated from Wellcamp Airport, Queensland, by the Royal Flying Doctor Service (RFDS), Queensland Section, on an aeromedical flight to Bundaberg Airport.

On board were the pilot and 2 medical crew. The conditions during the midnight departure were dark with little moonlight, low cloud, but otherwise good visibility.

The aircraft taxied from the terminal apron at 2355 (23 February) on taxiway A, before entering and backtracking¹ runway 12 at taxiway G. The pilot then taxied along the runway centreline towards the runway 12 threshold (Figure 1).

The flight was planned via instrument flight rules,² the pilot notified Brisbane Centre of their intended departure from Wellcamp Airport and made appropriate radio broadcasts via the common traffic advisory frequency (CTAF), in preparation for their departure.

¹ Backtracking: to taxi on a runway-in-use, in the opposite direction to the aircraft's take-off or landing direction.

² Instrument flight rules (IFR): a set of regulations that permit the pilot to operate an aircraft in instrument meteorological conditions (IMC), which have much lower weather minimums than visual flight rules (VFR).

Figure 1: Aircraft movement overview

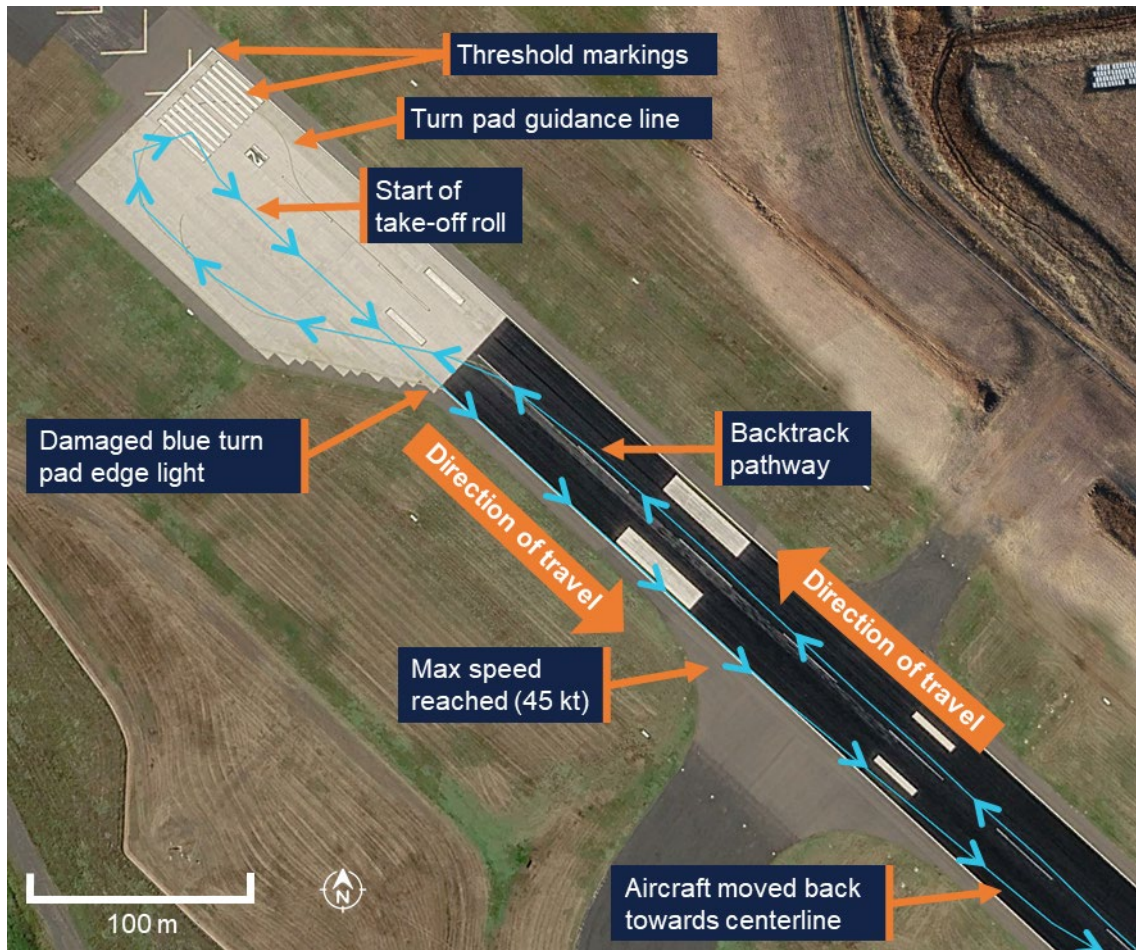
Source: Google Earth, annotated by the ATSB

The pilot recalled completing all the required take-off and line-up checks while backtracking on the runway.

At the end of the runway, the pilot conducted a 180° right turn. When entering the turn pad, the pilot initially turned left to allow room for the right turn, then part-way through the turn identified the right runway edge lights and anchored their alignment with these lights. Although recorded data indicated the aircraft initially followed the turn pad guidance line, the pilot reported that they did not recall seeing the turn pad guidance line or the threshold markings,³ and did not use the markings to orient the aircraft during the turn (Figure 2).

³ Threshold markings identify the beginning of the runway that is available and suitable for landing and take-off. They consist of a white line across the width of the runway and a series of white longitudinal stripes of uniform dimensions (often referred to as 'piano keys').

Figure 2: Aircraft movement details

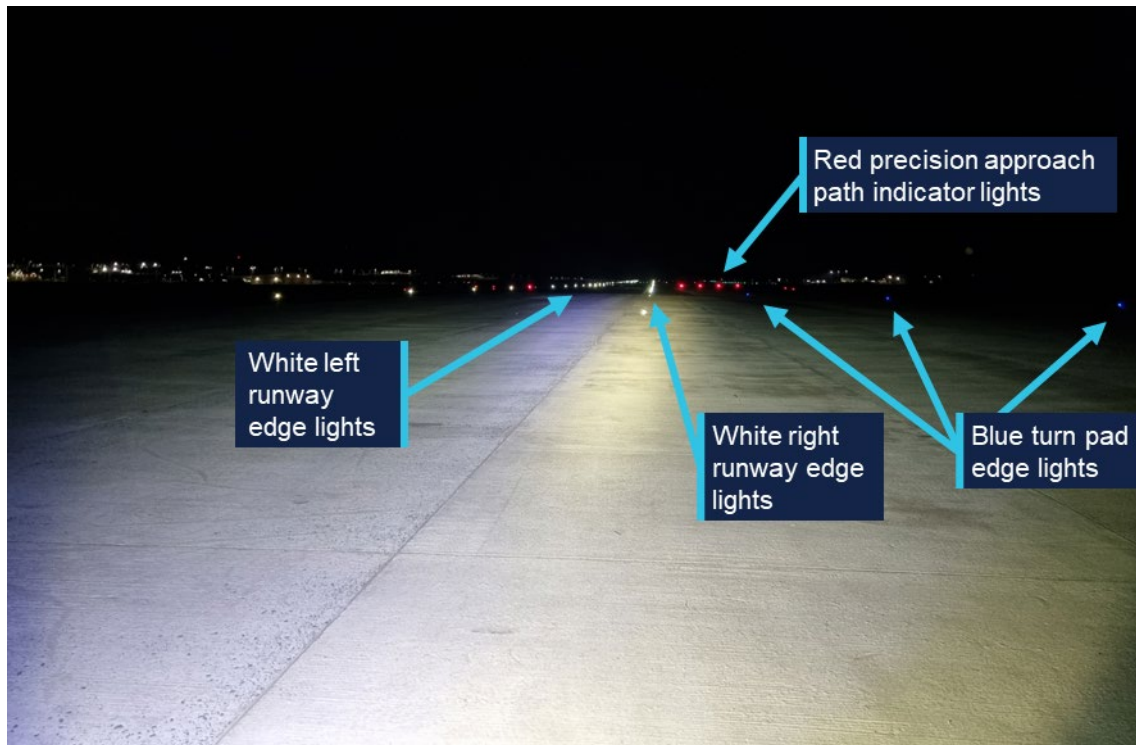


Source: Google Earth, annotated by the ATSB

The aircraft was now in the centre of the concrete turn pad but misaligned with the white lights of the right runway edge for take-off. The pilot reported mistaking the right runway edge lights for centreline lights, however, no centreline lights were present at Wellcamp Airport.

The pilot did not recall seeing the left runway edge lights which were about 45 m to the left of their lined-up position, nor did they recall seeing the blue turn pad node lights spaced in a diagonal direction along the start of the right turn node edge. They also did not identify the red precision approach path indicator (PAPI) lights close to the right runway edge lights (Figure 3).

Figure 3: Reconstructed view of the runway 12 lighting when lined up with the right edge



Source: Wellcamp Airport, annotated by the ATSB

The pilot commenced the take-off roll and at 0003 (24 February), the aircraft's front wheel struck an elevated blue turn node light, leaving blue marks on the wheel tyre (Figure 4, right).

The pilot heard a bang during the take-off roll, detected the misaligned position, rejected the take-off and steered left towards the runway centreline. They then cancelled their flight plan, returned to the terminal apron and notified the aerodrome reporting officer (ARO), who subsequently conducted a runway inspection and identified the runway light damage (Figure 4, left).

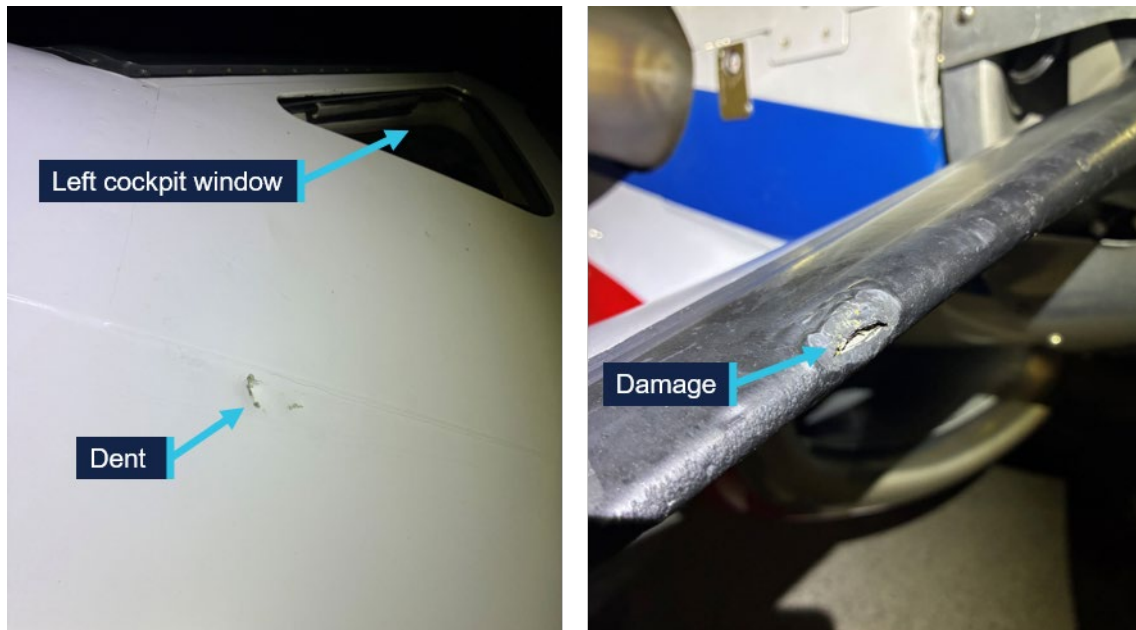
Figure 4: Damaged blue turn node light (left) and blue marks on the aircraft front wheel (right)



Source: Wellcamp Airport (left) and RFDS (right)

On impact with the front wheel, debris from the frangible⁴ blue turning node light caused minor damage to both aircraft propellers, and a dent to the aircraft fuselage below the left cockpit window (Figure 5).

Figure 5: Dent on aircraft fuselage (left) and damage to one of the left propeller blades (right)



Source: RFDS

The aircraft sustained minor damage which prevented further flight until repaired.

Context

Pilot information

The pilot held a Commercial Pilot (Aeroplane) Licence and a valid class 1 and 2 aviation medical certificate. Having joined the RFDS in 2016, the pilot reported a total flying time of 9,794 hours, with 5,691 of those being on the King Air B200. They reported operating at a range of aerodromes, most without centreline lights or turn pads. In contrast, their home base at Brisbane Airport had centreline lighting. The pilot's logbook showed that they had conducted at least 1,790 night take-offs previously.

The ATSB assessed the pilot's rostered sleep opportunity, reported sleep obtained, quality of sleep leading up to the flight, time on duty, as well as the time of the occurrence and concluded it was unlikely that the pilot had experienced a level of fatigue known to have an adverse effect on performance.

Aircraft information

VH-FDI was a Hawker Beechcraft Corporation B200C King Air (Figure 6) manufactured in the United States in 2010 and issued with serial number BL-162. The aircraft was a pressurised, low-wing, twin turbine-engine aircraft with retractable landing gear. The

⁴ Frangible: easily broken, shattered, or fragmented upon impact.

aircraft had a certified maximum take-off weight of 5,670 kg and could be operated by a single pilot.

Figure 6: VH-FDI, a Hawker Beechcraft Corporation B200C King Air



Source: RFDS

Meteorological information

Between 2230 and 0030, the Bureau of Meteorology meteorological reports for Wellcamp Airport identified an easterly wind at 10–11 kt, nil to few⁵ oktas of cloud with a base of 2,100 ft to 2,300 ft above the aerodrome, and visibility in excess of 10 km.

The pilot recalled that the lighting conditions during the taxi were dark, and there was no ambient airport lighting around the turn pad and runway 12 threshold areas to enhance visibility.

Airport information

Wellcamp Airport was a certified, non-controlled aerodrome, capable of supporting operations for aircraft as large as Boeing 747-800. Runway 12/30 was 2,870 m long and 45 m wide and featured a large runway turn pad⁶ near the threshold of runway 12. The turn pad included a paved area that was about 90 m wide and was offset on the right side of the runway. The runway threshold markings were situated on the turn pad pavement extending only to the width of the runway (Figure 2).

Line markings and lights on the runway and turn pad assisted pilots in turning and lining up their aircraft for departure. The white runway edge lights on the turn pad were flush with the surface of the runway and did not protrude. In contrast, the blue turn node lights

⁵ Few: an amount of cloud covering the sky of between 1–2 oktas (eighths)

⁶ A specially designed paved area at the end of a runway that allows aircraft to safely make a 180° turn, especially when the runway is too narrow for larger aircraft to turn around on their own.

were elevated. The markings and design were consistent with the requirements of the Civil Aviation Safety Authority Part 139 Manual of Standards.

The pilot reported that the painted lines and markings appeared less prominent in the dark ambient conditions at the time, while the right runway edge lights were highly noticeable.

Wellcamp Airport did not have, nor was it required to have, runway centreline lighting.

Operational information

The RFDS *Flight Operations manual FCOM2 – B200 section 3.5.2 Line up* procedure stated that:

The entry onto a runway is a critical phase of aircraft operation where observation of other aircraft and animals is a safety of flight issue, particularly at night.

Minimise the time spent with head and eyes inside the cockpit by completing as many of the ground checklists as practicable before entering and/or backtracking the runway.

There is no line up allowance promulgated in the AFM [Aircraft Flight Manual]. The aircraft should be lined up as close as practicable to the runway end.

The RFDS *B200 Normal Procedures Checklist* contained sections for ‘before take-off checks’ and ‘line up checks’.

However, neither of the above documents contained information about 180° turns, turns via turns pads, or specified centreline alignment checks prior to take-off. The pilot reported that specific turning techniques were not used in RFDS aircraft operations.

RFDS operations involving remote area medical emergency transport by their very nature, occur at unprepared, non-certified, and often narrow runways in addition to operations at larger all-weather, major airports.

Previous research

The ATSB research report [*Factors influencing misaligned take-off occurrences at night*](#) (AR-2009-033) was published in 2010 following the review of 24 misaligned take-offs that occurred at night in Australia and overseas. The report identified 8 common and recurring factors that contributed to misaligned take-offs at night, including:

- confusing lights/markings
- extra runway pavement, and
- no centreline lighting.

Related occurrences

Runway lighting events at Wellcamp

A review of the ATSB occurrence database found 2 runway lighting occurrences were reported on 15 March and 11 August 2024 at Wellcamp Airport whereby routine runway inspections identified tire marks and damaged edge lights on runway 12. The timing of the events and the aircraft involved could not be determined, however no damaged aircraft were reported at the time, and the occurrences were not investigated further by the ATSB.

Misaligned take-off

A review of the ATSB occurrence database found 5 reported incidents of similar misaligned take-offs in the 3 years prior to February 2026.

ATSB investigation [AO-2023-027](#)

Between June 2023 and April 2024, 3 misaligned take-offs occurred at Perth Airport, Western Australia. Each occurred before first light and in all 3 incidents, when entering runway 06 from taxiway V, the pilots taxied past the turn onto the centreline and lined the aircraft up along the runway edge lighting on the far side of the runway to where they entered. The investigation found that in each incident, the pilots believed they had correctly aligned the aircraft with the runway centreline, prior to taking off. Several factors known to increase the risk of a misaligned take-off in the dark were identified from the investigation:

- In terms of the runway environment, there was an unlit and unmarked extended pavement area on each side of runway 06, which made the runway appear wider.
- In relation to the available airport lighting, the lead-on lights from the taxiway continued across the taxiway to the other side, meaning there was limited guidance when taxiing to the runway's centreline.
- Recessed edge lights at the start of runway 06 could be mistaken for centreline lighting.
- There was limited ambient airport lighting around taxiway V and runway 06 to enhance visibility.
- The taxi lighting on one of the aircraft was reported by the pilots as being of limited benefit.
- The required runway markings were reported by 2 of the incident pilots to be difficult to see at night.

ATSB occurrence brief [AB-2024-026](#)

On 13 May 2024, at 0537 local time, the pilot of an Aero Commander 500-S aircraft conducted a take-off from Brisbane Airport runway 01 from the intersection of taxiway A7. While turning onto the runway, the pilot inadvertently lined up along the left side runway edge lighting instead of the runway centreline. During the take-off roll, the pilot recognised the aircraft was left of the centreline and took corrective action to reposition the aircraft on the runway. The underside of the aircraft had minor damage and several runway lights were also damaged.

The brief highlighted the complexity of the intersection with multiple lead-off lines into the runway as well the runway touchdown zone markings near the runway centreline markings that were both broken white lines.

ATSB investigation [AO-2025-034](#)

At 1807 local time on the evening of 1 July 2025, a Beechcraft King Air B200, with 2 pilots on board was taxiing for take-off at Hobart Airport. During a 180° turn using the runway 30 turn pad, the aircraft struck a taxi light with the right propeller. The aircraft incurred damage to the propeller and a turn pad edge taxi light was also damaged.

The ATSB found that the pilot flying subconsciously mistook the blue taxiway edge lights and double yellow line on the edge of the turning pad as taxi centreline guidance. This

resulted in the pilot deviating from the marked taxiway centreline towards the runway edge light, resulting in the propeller strike.

Safety analysis

Turn pad alignment

While taxiing on the turn pad at the end of runway 12, the pilot initiated a tighter right turn than the guidance line to line up for take-off. The pilot reported that this tight turn was an accepted operational practice as no specified operational procedure was provided for turn pads. The pilot also reported that they could not recall seeing the threshold markings, or the guidance line in the dark conditions, and stated that they were not intentionally using these features to guide the turn. As they progressed through the turn, they noticed the right runway edge lights and aligned the aircraft with these.

Following the turn, the aircraft was positioned in the centre of the 90 m wide turn pad with concrete visible to the right of the aircraft within the limits of the aircraft's forward lights, which likely reinforced the pilot's perception that they were lined up in the centre of the runway. While turn pads are both useful and necessary, they can increase the risk of misalignment at night where a wider paved area leads onto a narrower runway, as demonstrated via previous occurrences.

Centreline misidentification

When pilots taxi and take off during daylight conditions, they are normally presented with a wide range of visual cues by which they can navigate and verify their location. At night, however, the amount of visual information available is markedly reduced. Pilots rely more on the taxiway and runway lighting patterns presented to them and what can be seen in the field of the aircraft's taxi and landing lights. For instance, the painted lines and markings were reportedly less prominent to the pilot, while the right edge lights were highly noticeable and the pilot anchored their orientation towards these lights, mistakenly identifying them as the runway centreline.

The pilot then missed several conflicting cues to alert them of the aircraft's misalignment. Before completing the turn, the threshold markings were not identified by the pilot. Furthermore, the pilot did not identify the left runway edge lights 45 m away from the aircraft position on the turn pad. This would have contradicted their perception that the right edge lights were centreline lights, because only 2, rather than 3, parallel lines of lights were present.

Other available cues included the blue turn pad node lights spaced in a diagonal direction along the start of the right diagonal turn node edge. If perceived, the angle of the lights had the potential to alert the pilot to their alignment with the turn pad edge. Lastly, the pilot was unaware of the red precision approach path indicator (PAPI) lights visible to the right of the runway edge lights which indicated the area to the right of the aircraft was outside the runway surface.

None of the above cues sufficiently alerted the pilot to their misalignment with the right runway edge, and the pilot misperceived the right runway edge lights as the centreline lighting. The pilot then started the take-off roll from the turn pad, resulting in the aircraft accelerating faster than taxi speed by the time the edge of the runway was reached.

Findings

ATSB investigation report findings focus on safety factors (that is, events and conditions that increase risk). Safety factors include ‘contributing factors’ and ‘other factors that increased risk’ (that is, factors that did not meet the definition of a contributing factor for this occurrence but were still considered important to include in the report for the purpose of increasing awareness and enhancing safety). In addition ‘other findings’ may be included to provide important information about topics other than safety factors.

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

From the evidence available, the following findings are made with respect to the misaligned take-off involving Beechcraft B200C King Air, VH-FDI, at Brisbane West Wellcamp Airport, Queensland, on 24 February 2026.

Contributing factors

- The pilot diverged from the turn pad taxi centreline guidance which positioned the aircraft in the centre of the large turn pad which aligned with the right runway edge.
- While lining up on the runway at night, the pilot misidentified the runway edge lighting as the centreline and collided with an edge light during take-off.

Safety actions

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. All of the directly involved parties are invited to provide submissions to this draft report. As part of that process, each organisation is asked to communicate what safety actions, if any, they have carried out to reduce the risk associated with this type of occurrences in the future. The ATSB has so far been advised of the following proactive safety action in response to this occurrence.

Safety action by Royal Flying Doctor Service, Queensland Section to review operational procedures

The Royal Flying Doctor Service, Queensland Section, reviewed internal procedures for checklist management, entering and backtracking runways, conducting 180° turns, and requirements around identifying and lining up on runways.

The next version of the flight operations manual will be amended to:

- require the ‘before take-off checklist’ be fully completed prior to entering the runway
- include clear guidance on checklist interruption management, requiring that, when resuming a checklist, the pilot returns to the previously completed item before continuing.

Further, a notification will be issued to all pilots highlighting the importance of ensuring positive runway centreline environment is established before applying take-off power.

General details

Occurrence details

Date and time:	24 February 2026 – 0003 Australian Eastern Standard Time	
Occurrence class:	Incident	
Occurrence categories:	Ground strike, Rejected take-off	
Location:	Brisbane West Wellcamp Airport	
	Latitude: 27.5586° S	Longitude: 151.7942° E

Aircraft details

Manufacturer and model:	Hawker Beechcraft Corporation B200C	
Registration:	VH-FDI	
Operator:	Royal Flying Doctor Service of Australia (Queensland Section) Limited	
Serial number:	BL-162	
Type of operation:	Part 135 Australian air transport operations - Smaller aeroplanes-Standard Part 135	
Activity:	Commercial air transport-Non-scheduled-Medical transport	
Departure:	Brisbane West Wellcamp Airport, Queensland	
Intended destination:	Bundaberg Airport, Queensland	
Actual destination:	Brisbane West Wellcamp Airport, Queensland	
Persons on board:	Crew – 3	Passengers – 0
Injuries:	Crew – 0	Passengers – 0
Aircraft damage:	Minor	

Sources and submissions

Sources of information

The sources of information during the investigation included:

- the pilot flying
- Royal Flying Doctor Service, Queensland Section
- Wellcamp Airport
- Civil Aviation Safety Authority
- Airservices Australia
- Bureau of Meteorology
- Flightradar24.

References

Australian Transport Safety Bureau. (2010). Factors influencing misaligned take-off occurrences at night, Australian Transport Safety Bureau, Australian Government.

Civil Aviation Safety Authority. (2019). Part 139 Manual of Standards for Aerodromes, Civil Aviation Safety Authority, Australian Government.

Submissions

Under section 26 of the *Transport Safety Investigation Act 2003*, the ATSB may provide a draft report, on a confidential basis, to any person whom the ATSB considers appropriate. That section allows a person receiving a draft report to make submissions to the ATSB about the draft report.

A draft of this report was provided to the following directly involved parties:

- the pilot flying
- Royal Flying Doctor Service, Queensland Section
- Wellcamp Airport
- Civil Aviation Safety Authority
- Bureau of Meteorology
- National Transportation Safety Board
- Transportation Safety Board of Canada (TSB).

Submissions were received from:

- Royal Flying Doctor Service, Queensland Section
- Bureau of Meteorology
- Transportation Safety Board of Canada (TSB).

The submissions were reviewed and, where considered appropriate, the text of the report was amended accordingly.

About the ATSB

The **Australian Transport Safety Bureau** is the national transport safety investigator. Established by the *Transport Safety Investigation Act 2003* (TSI Act), the ATSB is an independent statutory agency of the Australian Government and is governed by a Commission. The ATSB is entirely separate from transport regulators, policy makers and service providers.

The ATSB's function is to improve transport safety in aviation, rail and shipping through:

- the independent investigation of transport accidents and other safety occurrences
- safety data recording, analysis, and research
- influencing safety action.

The ATSB prioritises investigations that have the potential to deliver the greatest public benefit through improvements to transport safety.

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

Purpose of safety investigations

The objective of a safety investigation is to enhance transport safety. This is done through:

- identifying safety issues and facilitating safety action to address those issues
- providing information about occurrences and their associated safety factors to facilitate learning within the transport industry.

It is not a function of the ATSB to apportion blame or provide a means for determining 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.

The ATSB does not investigate for the purpose of taking administrative, regulatory or criminal action.

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