

**Aviation Safety Investigation Report
199603184**

**British Aerospace Plc
BAe 146**

02 October 1996

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Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199603184 **Occurrence Type:** Incident
Location: 65km NW Morawa, (ALA)
State: WA **Inv Category:** 4
Date: Wednesday 02 October 1996
Time: 2135 hours **Time Zone** WST
Highest Injury Level: None

Aircraft Manufacturer: British Aerospace Plc
Aircraft Model: BAe 146-100
Aircraft Registration: VH-NJE **Serial Number:** E1104
Type of Operation: Air Transport Domestic Passenger Scheduled
Damage to Aircraft: Nil
Departure Point: Karratha WA
Departure Time: 1953 WST
Destination: Perth WA

Approved for Release: Wednesday, October 30, 1996

The aircraft planned to track from Karratha to Perth via Morawa. This track used the Karratha navigation aids and the Morawa non directional beacon (NDB) as the only aids for more that 500 NM. The Morawa NDB has a rated coverage of 50 NM. As the aircraft was not fitted with area navigation systems, it relied solely on off-set fixes from navigation aids not on track to supplement the information from the two on-track aids. The aircraft had previously experienced tracking difficulties on the route and these were exacerbated by the known interference between the Morawa NDB and Laverton NDB. The Laverton NDB has the same frequency as the Morawa NDB. A computational error by the crew, associated with an unexpected wind shift, combined with the deficient tracking aids to cause the aircraft to deviate from the required track.

Since the incident, the operating company has directed that any of its aircraft without area navigation systems are to track on routes that pass over navigation aids which provide accurate enroute tracking information.