

**Aviation Safety Investigation Report  
199601455**

**Unknown  
Aeroplane**

**06 May 1996**

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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](http://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:** 199601455      **Occurrence Type:** Incident  
**Location:** Adelaide, Aerodrome  
**State:** SA      **Inv Category:** 4  
**Date:** Monday 06 May 1996  
**Time:** 1740 hours      **Time Zone:** CST  
**Highest Injury Level:** None

**Aircraft:** Unknown  
**Manufacturer:**  
**Aircraft Model:** Aeroplane  
**Aircraft Registration:**

**Serial  
Number:**

**Type of Operation:** Air Transport Domestic High Capacity Passenger  
Scheduled  
**Damage to Aircraft:** Nil  
**Departure Point:**  
**Departure Time:**  
**Destination:** Adelaide SA

**Approved for Release:** Wednesday, May 8, 1996

#### Factual Information

Following an aircraft arrival to runway 23, a house owner in Lyons St Brooklyn Park complained that several tiles had dislodged from the house roof, some ridge capping had lifted and a very strong, turbulent wind gust had hit the house.

At about the time of the incident, between 1730 and 1745 CST, five aircraft had made landings on runway 23 at Adelaide; there were no departures from this runway.

The surface weather conditions at the time were a wind of 150 degrees at 10 knots, temperature of 20 degrees Celsius and QNH 1023 mb. An inversion had formed, probably between 500 and 1,000 ft.

The house in Lyons St is located about 150 m to the right of the runway 23 extended centreline and about 1,000 m from the runway 23 touchdown zone.

#### Analysis

Aircraft landings on runway 23 during this period in order of arrival were a Boeing 737, a Piper Navajoe, a Boeing 727 and two Airbus A 320s. The Navajoe and one of the A320s joined the circuit on a long final approach. The other three aircraft joined from the right at about 3 km and 800 ft.

The radar data indicated that the approaches were identical from 3 km, all five aircraft passing 400 ft at 1.5 km. Beyond this point, estimates of altitude and distance were not accurate.

The house had been subjected to wind turbulence in the past. Although not so severe, previous turbulence had rattled windows and doors. On these previous occasions, the owner reported that the aircraft involved was a Boeing 727.

It is probable that the damage was caused to the house when the wake turbulence or wing vortices from one of the jet aircraft drifted across from a low level and reached the ground at the house's position.

### Findings

1. A house at 12 Lyons St Brooklyn Park suffered roof damage.
2. The house is about 1 km from the touchdown zone of runway 23 and 150 m to the right of the extended centreline.
3. About the same time, five aircraft landed on runway 23.
4. Each aircraft passed 1.5 km at about 400 ft.
5. The surface wind was 150 degrees at 10 knots.
6. It is probable that the downwash of one of the jet aircraft reached the ground at the house's position.

