



MINISTRY OF DEFENCE

Military Aircraft Accident Summary

MILITARY AIRCRAFT INCIDENT SUMMARY

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INCIDENT TO ROYAL AIR FORCE

BAe 146 CC2 ZE700

Date:	29 June 1994
Parent Airfield:	RAF Benson
Place of Incident:	Islay airfield
Operating Crew:	Six
Passengers:	Five
Casualties:	None

CIRCUMSTANCES

1. On the morning of 29 June 1994, BAe 146 CC2 ZE700 of The Queen's Flight (TQF) was scheduled to convey HRH The Prince of Wales from Aberdeen to Islay. The aircraft departed Aberdeen 23 minutes late and was flown for the majority of the transit with the captain and co-pilot occupying the right and left-hand seats respectively. The crew accepted that, because of the relatively short distance involved, there was little opportunity to make up sufficient time to arrive on schedule. About ten minutes before landing, whilst the aircraft was in descent, HRH replaced the co-pilot in the left-hand seat. He flew the remainder of the approach and landing as the Handling Pilot (HP) under the supervision of the captain, who was his usual pilot. The navigator was seated behind both pilots.

2. En route, the crew obtained the Islay airfield information which gave a surface wind of 250° at 20 knots, cloud cover of one okta at 500ft with four oktas at 1,000ft; both runways (RW 13 and RW 31) were available for landing, each offering a landing distance of 1,245m. Because of cloud cover and high ground to the South-East, the captain elected to fly a

procedural approach to RW 13, retaining the option either to land straight in with a tailwind, or to circle from that approach and land into wind on RW 31. The captain briefed his intentions but made no mention of the tailwind to the HP. In order to remain clear of cloud, the captain directed the HP to fly an abbreviated procedure which resulted in the aircraft being lined up on final approach for RW 13 at 3.8 nautical miles from the threshold, above the normal approach path and speed. From this position a steeper than normal final approach was required to reach the runway.

3. Twice during the final stages of the approach, Air Traffic Control passed the surface wind to the aircraft. The tailwind component of 12/13 knots, combined with the steep approach, excess airspeed and a failure to establish the aircraft in the correct approach configuration, led to the aircraft crossing the runway threshold 32 knots too fast. The aircraft initially touched down on its nosewheels with 784m of runway remaining; however, the mainwheels did not make firm contact with the ground. This delayed completion of the aircraft's weight on wheels logic circuits required to permit activation of the various stopping systems. Thus, despite the pilots' attempts to select the engines to ground idle and to deploy the spoilers, their actions were initially thwarted by the system logic. The aircraft finally settled with 509m of runway remaining. At this point the full range of stopping devices came into operation. Since the brakes had been applied before the full anti-skid protection system was activated, the inboard mainwheels had become locked, resulting in the right inboard main tyre bursting at 256m to the end of the runway, and the left inboard one becoming deflated with 150m of runway remaining. As the aircraft approached the end of the runway extension, and while still braking, the captain attempted to turn to the left onto a taxiway. However, the nosewheels left the paved surface, at low speed, and sank into soft ground. The aircraft's momentum slewed it around the nose undercarriage, which collapsed rearwards with the aircraft finally coming to rest almost at right angles to the runway. The aircraft was shutdown and the occupants evacuated from it immediately. They were met by the emergency services which had

reacted promptly. There were no injuries.

CAUSE

4. The Inquiry determined the cause of the incident was that the captain permitted a mishandled approach and landing to continue beyond a point from which a safe stop was possible. The Inquiry considered that, because of his failure to intervene when aircraft performance and aircraft limitations were exceeded in the final stages of the flight, the captain was negligent. For failure to advise the captain of the tailwind component, and to draw his attention to the inaccurate approach parameters, the Inquiry also deemed the navigator to be negligent.

SUBSEQUENT ACTIONS

5. The aircraft suffered damage to the underside of the fuselage and to the nose undercarriage. Temporary repairs were made at Islay and the aircraft was subsequently flown back to RAF Benson for further rectification and return to service. Administrative action has been taken against the aircraft captain and navigator.