

ACCIDENT

Aircraft Type and Registration:	Luscombe 8E Silvaire Deluxe, G-BPZE	
No & Type of Engines:	1 Continental Motors Corp C85-12F piston engine	
Year of Manufacture:	1946	
Date & Time (UTC):	8 July 2007 at 1130 hrs	
Location:	Hardwick Airfield, Norfolk	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - 1 (Minor)	Passengers - 1 (Minor)
Nature of Damage:	Damage to aircraft nose area and tail structure	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	51 years	
Commander's Flying Experience:	142 hours (of which 60 were on type) Last 90 days - 20 hours Last 28 days - 8 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The aircraft was taking off from a soft grass strip and failed to get airborne before striking the standing crop at the end of the runway.

History of the flight

The Luscombe 8E Silvaire Deluxe is a high-wing, tail-dragger aircraft, fitted with an 85 HP Continental C85-12F engine. Hardwick Airfield is an unlicensed airfield with two runways: Runway 13/31 is 1,000 m long with a concrete surface, and Runway 17/35 is a 500 m grass strip.

The pilot arrived at the airfield at approximately 1100 hrs and checked the conditions. The windsock and ATIS from Norwich indicated that the wind direction was

220° with a wind speed of around 5 kt and so he elected to use the grass strip. He completed the pre-flight checks and taxied along the length of the runway to the threshold of Runway 17. The taxi required very little engine power and this confirmed to the pilot his assessment of the runway condition as firm. The grass was dry and although not long, it had not been cut recently.

Arriving at the threshold, the pilot then turned the aircraft to head down the runway in order to complete the engine power and pre-departure checks. The pilot then applied full power for the takeoff. The aircraft accelerated normally, and after a short distance the tail lifted off. At approximately three-quarters of the runway distance, where the pilot normally would have expected the

aircraft to become airborne, the speed seemed low and the aircraft did not lift off. The pilot steered the aircraft towards the left side of the runway which appeared to have a longer distance remaining. At the very end of the runway the aircraft did lift off, but as it did so the wheels struck the tops of the standing crop in the field beyond the runway. The aircraft continued into the crop and pitched nose down, flipped over and came to rest inverted. Both occupants sustained minor injuries but were able to release their harnesses and evacuate the aircraft unaided.

Following the accident the pilot observed from the windsock that the wind seemed to be varying between 220° and 320° at about 5 kt. The pilot considered that

the lower than expected airspeed at the end of the takeoff run was due to the variable wind conditions and the surface of the runway being less firm than he had judged while backtracking along the runway. He had used this runway on several previous occasions, with the same aircraft loading, without any concerns about takeoff performance.

The CAA General Aviation Safety Sense Leaflet 7B '*Aeroplane Performance*' contains advice on many aspects of takeoff and landing performance and advises that takeoff distance to 50 ft can be expected to increase by at least 25% if the ground is soft. Leaflet 12C '*Strip Sense*' contains additional advice on operating from grass strips.