AAIB Bulletin No: 12/95 **Ref: EW/G95/08/16** **Category: 1.3**

Aircraft Type and Registration:	Luscombe Silvaire 8E, G-BRUG
No & Type of Engines:	1 Continental C85-12F piston engine
Year of Manufacture:	1946
Date & Time (UTC):	15 August 1995 at 1715 hrs
Location:	Dudmoor Farm, Christchurch, Dorset
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - 1
Injuries:	Crew - None Passengers - None
Nature of Damage:	Wing leading edge, cowl and windscreen damaged, left main leg broken and adjacent cabin floor structure buckled; fuselage and engine flooded
Commander's Licence:	Commercial Pilot's Licence with Instrument Rating
Commander's Age:	34 years
Commander's Flying Experience:	5,370 hours (of which 865 were on type) Last 90 days - 165 hours Last 28 days - 66 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and AAIB telephone enquiries

The airstrip in use was level, had a usable length of 950 feet and the surface was of short dry grass which had been last cut 24 hours before. The runway used was 16 and the wind was 230°/08 kt. It was the pilot's practice, when using a farm strip, to walk the strip and note the obstacles. Having calculated the required take-off distance allowing for surface, slope and ambient conditions, he would make a stop/go decision at the runway half way point based on whether the aircraft had accelerated beyond 45 mph. Having completed his pre-take-off checks the pilot established full power while holding the aircraft on the brakes. He released the brakes and the aircraft accelerated normally with the tail being raised to minimise drag during the take-off run. At an IAS of 53 mph. he lifted off but had only reached a height of about 6 feet when engine power reduced with no signs of backfiring or rough running. The pilot immediately decided to land ahead. The aircraft entered the tall nettles and undergrowth beyond the end of the runway and decelerated rapidly. It reached the bank of the River Avon and entered the water at a low speed. The aircraft pitched inverted in the water and the windscreen blew in. The occupants became

disorientated and the cockpit filled with water and river bed debris and weed. The pilot managed to release both harnesses but both doors were jammed and he had to push his door with his feet to force it open and escape. Having surfaced he had to return to help his passenger escape through the same exit. Neither occupant was injured. The river weed proved a hazard to rescuers who tried to reach the aircraft from the bank. The pilot considered that the lessons learned from the accident were to have the harnesses tight for takeoff and to land straight ahead as slowly as possible with the aircraft under control.

When he examined the aircraft after it had been recovered from the river the pilot noted some grit and sediment in the fuel strainer bowl. An engineer who examined the aircraft and stripped the engine and carburettor found that there was also a loose O-ring in the bowl but he did not consider that the debris and O-ring were sufficient to have caused a significant restriction to flow through the strainer if they had come in contact with it. The strainer itself was clear. The engine and carburettor were stripped but no defect or mechanical failure was found and both magnetos operated when dried out. Fuel was found in both tanks and flow through the supply lines to the carburettor showed no sign of any restriction.

The reported ambient temperature was 24°C with a dewpoint of 15°C. These temperatures indicate that there was a risk of 'serious' carburettor icing at 'descent power' or below (CAA Safety Sense Leaflet 14). Following his usual practice with this aircraft the pilot had completed his power checks and, when ready for takeoff, had run the engine up to full power with carburettor alternate air selected 'HOT', selecting it to 'COLD' as he released the brakes.