

No: 9/91

Ref: EW/G91/07/09

Category: 1c

Aircraft Type and Registration: Luscombe 8A, G-AKTT

No & Type of Engines: 1 Continental A65-8 piston engine

Year of Manufacture: 1948

Date & Time (UTC): 6 July 1991 at 1422 hrs

Location: Astle Farm, Chelford, Cheshire

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - 1

Injuries: Crew - None Passengers - 1 (minor)

Nature of Damage: Collapsed undercarriage, engine damage and damage to the underside of the aircraft and to the propeller

Commander's Licence: Private Pilot's Licence

Commander's Age: 24 years

Commander's Flying Experience: 166 hours (of which 23 were on type)

Information Source: Aircraft Accident Report Form submitted by the pilot

The pilot had planned to fly from Carlisle airport to Halfpenny Green airport, a direct distance of 104 nm. The pilot stated that he departed Carlisle with a full tank of fuel, 12 imperial gallons, which gave a range of about 300 nm in still air. The initial part of the flight proceeded as planned; along the M6 motorway to abeam the Warton Control Zone followed by a turn to Preston Samlesbury airfield to avoid the zone. From this point a build up of thunder clouds caused the pilot to deviate considerably from his planned route, even to the point of doubling back at one stage. He then intended to fly south along the Low Level Visual Flight Route which lies to the west of Manchester Airport. This route is established to enable aircraft, not fully equipped for flight in controlled airspace, to cross the Manchester Control Zone and requires no communication with Manchester ATC. Cloud build up in the corridor again forced the pilot to deviate from his intended route. He eventually arrived 10 miles east of the corridor near Chelford, 7 miles south of Manchester Airport. He made a positive identification of his position overhead Jodrell Bank. At this point the pilot decided that the continual rerouting had reduced his fuel on board to a level that gave him an endurance of only 30 minutes, which he considered precluded further safe flight. He carried out an uneventful precautionary landing in a field at Astle Farm.

The pilot refuelled the aircraft but decided that the field in which he had landed was too short for a successful take-off. He therefore moved the aircraft to an adjacent field which afforded a longer take-off run. The pilot estimated the length of the field in the direction of take-off to be about 400 metres. and he reported that the surface consisted of fairly long tufted grass with a slight downhill slope, that it was 300 feet amsl and the ambient temperature was 23°C. There was a six foot fence at the end of the proposed take-off run. The Owner's Manual recommends a take-off distance of 192 metres; this is for a new aeroplane in ideal conditions. The Civil Aviation Authority has produced a "pink" Aeronautical Information Circular (90/1990) and a "General Aviation Safety Sense Pamphlet 7A" giving advice on take-off performance when the conditions are not ideal. In this case the 192 metres should be factored by 2.5% for the height amsl, a further 10% for the higher temperature and a further 25% for the surface. An additional safety factor of 33% should then be applied, resulting in a required field length of 360 metres.

As he was within the Manchester Control Zone the pilot tried to contact Manchester Air Traffic Control prior to take-off. He was unsuccessful and so elected to take-off anyway. The take-off was into a wind which he estimated to be 5 kt. The aircraft became airborne at the end of the field but failed to clear the fence and the undercarriage struck it three feet from the top. The take-off having been arrested the aircraft came to a stop 10 metres beyond the fence. The one passenger was reported to have suffered minor injury.

The pilot subsequently visited the site and measured the field and found it to be 310 metres long.