AAIB Bulletin No: 4/2005

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Category: 1.3

Aircraft Type and Registration:	DHC-1 Chipmunk 22, G-AOSU	
No & Type of Engines:	1 Lycoming O-360-A4A piston engine	
Year of Manufacture:	1950	
Date & Time (UTC):	19 December 2004 at 1245 hrs	
Location:	Easterton Airfield, near Elgin, Scotland	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - 1 (Serious)	Passengers - N/A
Nature of Damage:	Aircraft extensively damaged	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	62 years	
Commander's Flying Experience:	2,576 hours (of which 596 were on type) Last 90 days - 8 hours Last 28 days - 4 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

The aircraft was returning to the airfield after a short flight in the local area, the airfield was covered in a light layer of snow. The aircraft joined the right base leg for Runway 27 at a height of 1,000 feet above airfield level (aal) and the pilot then closed the throttle and selected full flap before turning onto final approach in preparation for a glide landing. On this occasion the pilot was particularly keen to land on the first third of the grass runway because the upwind end was wet and soft. It was apparent that the aircraft was very high and, in order to lose height, he executed a tight S turn, initially banking to the left. As the aircraft rolled out of the second left turn the pilot suddenly realised that he was now too low on the approach, as well as being to the right of the nominal runway centre line. He decided to continue although he would be landing diagonally to the runway direction, which was not an unusual practice at this airfield. In doing so the landing would be more into the surface wind, which was from 190° at 10 kt. Having made his decision, the pilot was conscious that he was flying into the low winter sun, which was sitting just above the horizon. The pilot remembered nothing else before becoming conscious of being placed in an ambulance.

He reported that witnesses had seen the aircraft drop its left wing and descend from about 100 feet aal into the field immediately short of the airfield. The left wing struck the ground first and the aircraft came to rest upright. It was estimated that there were 10 gallons of fuel on board prior to the impact and this spilled on to the surface; however, there was no fire. The pilot, who was unconscious, was lifted out of the aircraft by observers of the accident and taken to hospital, where he was treated for a laceration to his head and back injuries.

In a fulsome and frank report the pilot concluded that he had stalled the aircraft in the final turn. He explained that he often closed the throttle at some point on the approach to the runway in order to maintain his skills for the future possibility of an engine failure. On this occasion he was confident that he would be able to land from the approach. However, having lost more height in the S turn than he expected he later believed that he had become "locked" into the task of landing without power, although he could have opened the throttle and gone around. He also considered that the angle and direction of the sun might have been a factor in distracting him from maintaining his scan of the air speed indicator.

The pilot surmised that the unexpected height loss in the S turn might have been the result of wind shear, which is a feature at that location with southerly winds. Of note, for a period of time during the S turn the aircraft would have been on a northerly heading and consequently flying downwind. The pilot also considered that his back injuries could have been worse but for the dynafoam cushion which was fitted to his seat.