No: 10/91 **Ref: EW/G91/06/14** **Category: 1c**

Aircraft Type and Registration:	Taylor Monoplane, G-BGIK
No & Type of Engines:	1 Volkswagen 1600 piston engine
Year of Manufacture:	1980
Date & Time (UTC):	14 June 1991 at 1400 hrs
Location:	Rushbrook Farm Estate, Rushbrook, Suffolk
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - Minor Passengers - N/A
Nature of Damage:	Aircraft destroyed
Commander's Licence:	Private Pilot's Licence
Commander's Age:	33 years
Commander's Flying Experience:	135 hours (of which 23 were on type)
Information Source:	Aircraft Accident Report Form submitted by the pilot together with strip examination of engine by AAIB

The pilot reported that whilst in cruising flight he experienced difficulty with the engine. It started to misfire when full power was required but ran satisfactorily at lower power settings. He therefore applied carburettor heat for some 45 seconds, but obtained no improvement. He then operated the choke/mixture control with no noticeable effect. Some minutes later the problem disappeared and full power was restored.

Shortly afterwards the pilot noticed a private farm landing-strip ahead, orientated approximately 24/06. At this time he was flying into wind on a westerly heading and he elected to carry out a precautionary landing.

Unfortunately, a large flock of birds took flight from the runway as he was on his approach. He therefore decided to go-around. Full power was applied and the aircraft climbed satisfactorily to about 150 feet agl at which point all power failed.

At the time the aircraft was climbing at about 65 kt passing over the upwind end of the field. The pilot lowered the nose to maintain gliding speed and throttled back slightly in the hope of re-gaining some

power from the engine. However, insufficient power was available to maintain level flight, and the areas ahead and to the right were obstructed by respectively woods and buildings. On descending through approximately 100 feet agl the pilot executed a left turn still in the hope of restoring some power and making a circuit.

The pilot became aware of a ditch ahead of him which he realised that it would be necessary to clear. Shortly after this, at a height estimated by him to have been between 50 and 70 feet, the left wing suddenly dropped and the aircraft entered a dive. The pilot reported that the speed increase in the dive was sufficient to enable some measure of control to be regained, permitting him to raise the nose and wing enough to reduce the force of the impact. On striking the ground, the aircraft turned over a number of times before coming to rest upright.

A strip examination of the engine and carburettor was carried out after the accident. This revealed no direct evidence to account for the loss of power. The magnetos were too severely damaged to enable testing to take place. The extent of destruction of the aircraft prevented any effective examination of the fuel system or recovery of a fuel sample for analysis.

The pilot expressed his view that the carburettor heat system was ineffective, producing little if any engine rpm drop on selection. Examination of the air system indicated that its mechanical operation was correct, but the source of the heated air was unusual, being cylinder cooling air, rather than the more usual arrangement of hot air drawn from within an exhaust muffler.