

Piper PA-22-160 (Modified) Tri-Pacer, G-BSED, 21 June 2002

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Category: 1.3

Aircraft Type and Registration:	Piper PA-22-160 (Modified) Tri-Pacer, G-BSED	
No & Type of Engines:	1 Lycoming O-320-A1A piston engine	
Year of Manufacture:	1958	
Date & Time (UTC):	21 June 2002 at 1345 hrs	
Location:	Cheyne Farm, Stonehaven	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Damage to left wing, landing gear, elevator, propeller, engine and cowling.	
Commander's Licence:	Private Pilots Licence	
Commander's Age:	45 years	
Commander's Flying Experience:	498 hours (of which 128 were on type)	
	Last 90 days - 8 hours	
	Last 28 days - 3 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries by the AAIB	

The aircraft, which had been modified in the 1970s to fit a tailwheel, was taking off from a private airstrip. The surface wind was principally down the runway at 10 to 13 kt, but was varying to the left and right. When accelerating through approximately 50 mph, the aircraft experienced a gust of wind from the left, which caused it to veer to the left. Following corrective control inputs, the aircraft started to oscillate right and left before the left main wheel departed the grass runway and entered long grass. The aircraft then veered sharply to the left and continued into a wire fence. There the left main wheel dropped into a furrow causing its associated landing gear to collapse. As it did so, the aircraft slewed 80° to the right and came to a stop. The aircraft was extensively damaged. The pilot and his passenger were unhurt and were able to vacate the aircraft unaided.

The pilot estimated that the runway was 510 metres long and six to seven metres wide, and that the wire fence was approximately 13 metres from the runway centreline. He assessed the grass at the

side of the runway as six to eight inches long, and commented that during June and July it is thicker than at other times of the year. The aircraft was based at this airstrip and the pilot had flown from it about 100 times in the past four years.

Civil Aviation Publication (CAP) 428, entitled 'Safety Standards at Unlicensed Aerodromes' states, in its introduction, that it *'provides guidance to the owners and operators of unlicensed aerodromes on the physical standards that should be met and the facilities that should be provided in order that the aerodrome may be used safely by those pilots wishing and permitted to use it.'* Later, on the subject of the *'Physical Characteristics of the Aerodrome'*, it states that *'there are certain minimum physical characteristics which it is important to meet if potential flying hazards are to be minimise'*

The publication gives recommended minimum dimensions for runways and runway strips. For runways less than 800 metres in length (short runways), it advocates a minimum width of 18 metres. The associated runway strip should be at least 60 metres wide ie 30 metres either side of the runway centreline.

Guidance on the use of private airstrips is given in CAA General Aviation Safety Sense Leaflet Number 12C, entitled Strip Sense. It advises that, on grass runways, *'as a rule of thumb, the grass length should be no more than 30% of the diameter of the wheel.'* In the event of a wheel encountering grass in excess of this figure, a large increase in wheel drag would result.

The owner of the site has increased the lateral dimensions of the runway and runway strip since this accident.