

**ACCIDENT**

<b>Aircraft Type and Registration:</b>	Beech 58 Baron, N80HC	
<b>No &amp; Type of Engines:</b>	2 Continental IO-520 piston engines	
<b>Category:</b>	1.3	
<b>Year of Manufacture:</b>	1975	
<b>Date &amp; Time (UTC):</b>	4 July 2005 at 1648 hrs	
<b>Location:</b>	Wellcross Farm, Slinfold, West Sussex	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - 1
<b>Injuries:</b>	Crew - None	Passengers - None
<b>Nature of Damage:</b>	Collapsed nose landing gear and slight damage to the tips of two of the right propeller blades	
<b>Commander's Licence:</b>	FAA Private Pilot's Licence	
<b>Commander's Age:</b>	63 years	
<b>Commander's Flying Experience:</b>	1,607 hours (of which 108 were on type) Last 90 days - 28 hours Last 28 days - 9 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

**History of the flight**

The aircraft had completed an uneventful transit from Guernsey to Wellcross Farm, Sussex. The weather was good with isolated thunderstorms, one of which had recently passed over Wellcross Farm Airstrip. The runway had a short grass surface orientated 04/22, 650 m long by 40 m wide with an initial upslope on Runway 22. The weather on arrival was surface wind calm, visibility 10 km and broken cumulo-nimbus cloud at 2,000 ft.

The aircraft was configured with landing flap and gear down, and a normal approach was made to Runway 22 at an approach IAS of 80 kt. The aircraft touched down approximately 35 to 40 m from the threshold and because

the runway slopes up at that point, braking was not initiated until approximately 200 m along the runway. Initially as the brakes were applied, the aircraft appeared to accelerate and despite modulating the application of the wheel brakes, the braking action was very poor. The pilot decided that it was too late to initiate a go-around so the braking was continued with little effect. It was apparent to the pilot that an overrun of the runway was inevitable and so he attempted to steer the aircraft to the right into an adjacent wheat field. During the turn the aircraft skidded sideways through about 110°. The pilot selected the mixture levers to CUT OFF and turned the magnetos to the OFF position. Shortly afterwards, the

aircraft departed the right side of the runway where the nose landing gear entered a drainage ditch and collapsed. The aircraft came to rest and both occupants vacated the aircraft through the normal exit.

### **Landing performance data**

The landing roll distance for the type is quoted to be 318 m (1,044 ft). This distance will apply to the aircraft landing at maximum weight on a hard, dry surface in still air conditions. CAA Safety Sense Leaflet No 12 ('Strip Sense') states that aeroplane performance must be appropriate for the proposed strip and that pilots using a strip must be fully familiar with the contents of Safety Sense Leaflet 7B (Aeroplane Performance) or AIC 12/1996 (Pink 120) 'Take off, Climb and Landing Performance of Light Aeroplanes'. The content of the Safety Sense Leaflet is available on the Internet from the CAA's website and within LASORs.

### **Analysis**

The pilot considered that the accident occurred due to the poor runway friction and aquaplaning caused by the short wet grass and pools of standing water resulting from the recent thunderstorm.

Applying the cumulative performance factors listed in Safety Sense Leaflet 7B indicates that the practical required ground roll length was in the order of 591 m for level, wet grass on firm soil. Moreover, the initial upslope on Runway 22 would slightly reduce the length required but only if the wheel brakes were applied immediately after touchdown, which they were not. No factors are offered for a flooded runway surface or standing pools of water because the predicted increase in landing rollout is unquantifiable. Consequently, it was probably the partially 'flooded' condition of the strip that was the prime causal factor in this accident.