ACCIDENT

Aircraft Type and Registration:	Jabiru J400, G-PUKA
No & Type of Engines:	1 Jabiru Aircraft Pty 3300A piston engine
Year of Manufacture:	2004
Date & Time (UTC):	27 January 2007 at 1210 hrs
Location:	Clutton Hill Farm, Near Bristol
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - 1
Injuries:	Crew - None Passengers - None
Nature of Damage:	Broken left landing gear, broken noseleg, damage to left wing and shock-loaded engine
Commander's Licence:	National Private Pilot's Licence
Commander's Age:	44 years
Commander's Flying Experience:	216 hours (of which 105 were on type) Last 90 days - 7 hours Last 28 days - 1 hour
Information Source:	Aircraft Accident Report Form submitted by the pilot

Synopsis

During the takeoff run, the pilot became concerned with the aircraft's slow acceleration and decided to stop. As he applied the brakes, the left landing gear encountered some bumps and partially failed. This caused the left wing to touch the ground, the noseleg to fail and consequently the propeller to strike the surface. The pilot concluded that the slow acceleration was due to the runway's soft surface as a result of recent rain.

History of the flight

The pilot was intending to operate a private flight with one passenger on board; the fuel tank was half full of fuel. He calculated the takeoff weight to be 563 kg, which is 137 kg less than the maximum allowed. The forecast surface wind was from 260º at 6 kt with a temperature of 9ºC but whilst preparing for departure, the pilot noted that the windsock indicated calm conditions. He therefore decided to take off using the grass Runway 07, which is 590 metres long and has a significant downhill gradient. The engine indicated full power during the takeoff run but the pilot believed the acceleration to be slower than normal. Having operated out of this airfield for 18 months, the pilot had designated a point 200 metres from the end of the runway at which he considered a takeoff could be safely rejected. On reaching this point he was still concerned with the acceleration and so he closed the throttle and applied full braking. The left landing gear encountered some bumps and partially failed, causing the left wing to touch the ground. To counteract the drag from the left wing, the pilot applied full right rudder; the

nose leg subsequently failed and the propeller struck the ground. The aircraft came to rest 15 metres from the end of the runway and the pilot and passenger, who were both wearing lap straps and diagonal harnesses, exited the aircraft through their respective doors.

The runway had recently been extended into an adjacent field and the boundary hedge removed to allow this. Bumpy terrain remains in the area where the hedge had been removed and this coincided with the point where the pilot rejected the takeoff.

Discussion

The pilot concluded that the slow acceleration on this particular takeoff was a result of the runway's soft surface due to heavy rain during the previous week. He noted that other types of aircraft with larger tyres appeared unaffected by the soft conditions.

The pilot also believes that the bump left by the hedge removal probably caused the partial failure of the left landing gear and subsequent bumps on the runway 'extension' caused the left wing to touch the ground. He no longer operates from this airfield as he feels that this model of aircraft is not suited to this particular runway surface under soft conditions.