ACCIDENT

Aircraft Type and Registration:	Pegasus Quik, G-CDSA
No & Type of Engines:	1 Rotax 912ULS piston engine
Year of Manufacture:	2005 (Serial no: 8144)
Date & Time (UTC):	6 July 2013 at 1500 hrs
Location:	Bycross Farm, Herefordshire
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - 1
Injuries:	Crew - None Passengers - 1 (Minor)
Nature of Damage:	Damage to leading edges of wing and propeller
Commander's Licence:	National Private Pilot's Licence
Commander's Age:	60 years
Commander's Flying Experience:	220 hours (of which 80 were on type) Last 90 days - 14 hours Last 28 days - 5 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

Synopsis

The aircraft had touched down at a short farm strip on a very warm day and at a high landing weight. The pilot felt that he was not going to stop in the distance available and tried to steer the aircraft off the runway to the right. However, it tipped onto its left wing and came to a halt on the runway 20 m from a hedge at the end.

History of the flight

On a very warm day (about 25°C), the pilot was landing at Bycross Farm for the first time, following a short flight from another farm strip. He observed the windsock indicating light and variable winds and decided that they were favouring grass Runway 09, which he had earlier established was 300 m long. He realised that, due to the runway length and because the aircraft was close to its maximum gross weight, he would have to touch down near the runway threshold. However, there were farm buildings, trees and a campsite on the approach which he had to overfly at a reasonable height. Eventually, he closed the throttle at about 150 ft agl and, at a speed of 60 mph, flew a glide approach as close to the obstructions as he felt was safely possible.

After what he described as a smooth landing on the mainwheels, at 55 mph, the pilot lowered the nosewheel and commenced braking; he estimated that he had used about a third of the runway at this point. As he applied the brakes, he felt that the wheels were locking and the aircraft was skidding in a straight line along the grass. He released the brakes and tried applying them several

more times but to no avail. Still travelling at an estimated 15 mph, he realised that he might not stop before the end of the runway so he steered the aircraft to the right in the hope that it would increase the available stopping distance. However, the aircraft continued in a straight line and became unbalanced. It tipped onto its left side and came to a halt about 20 m from the hedge at the end of the runway, damaging the wing and propeller. The pilot was uninjured and his passenger suffered minor bruises on her legs.

Discussion

The pilot gave a full and frank analysis of the factors which he believed may have contributed to the accident, bearing in mind that the aircraft was heavy, the weather was hot and the strip was short. They include the following;

- He had underestimated the distance required to stop whilst recognising that there would be a reliance on the brakes, given the high landing weight and warm weather conditions.
- He should have been aware that applying the brakes at high speed ran the risk of the wheels skidding and increasing the ground roll.
- He might have been able to reduce the ground roll if he had pulled the control bar fully back to increase the drag from the wing. This is an emergency technique recognised in the aircraft's operating manual but which cautions that it could result in damage to the nose landing gear due to the higher loads it generates.
- The strip had recently been mown and the cuttings left on the surface. This may have rendered the surface more prone to skidding.

CAA Safety Sense Leaflet No.12, *'Strip Flying'*, contains information for pilots operating into such fields. It includes advice on assessing the strip prior to a flight and relevant operating and flying considerations. It also recommends adding a 43% safety factor to the aircraft manufacturer's published figure for the landing distance from 50 ft. For this flight, applying this factor would have resulted in the calculated Landing Distance Required exceeding the Landing Distance Available.