

## ACCIDENT

<b>Aircraft Type and Registration:</b>	MCR-01 ULC, G-TDVB	
<b>No &amp; Type of Engines:</b>	1 Rotax 912 ULS piston engine	
<b>Year of Manufacture:</b>	2004	
<b>Date &amp; Time (UTC):</b>	12 January 2008 at 1230 hrs	
<b>Location:</b>	Willingale Airfield, Essex	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - None
<b>Injuries:</b>	Crew - None	Passengers - N/A
<b>Nature of Damage:</b>	Propeller and canopy shattered, T-tail flying surfaces damaged	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	74 years	
<b>Commander's Flying Experience:</b>	2,064 hours (of which 557 were on type) Last 90 days - 25 hours Last 28 days - 8 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

### Synopsis

A downslope landing on a wet grass runway surface resulted in a runway overrun and damage to the aircraft when it subsequently nosed over.

### History of the flight

The pilot had flown from his home base at Plaistowes Airfield to Willingale. It was his first flight into Willingale and he joined through the overhead. During the join, he noted a westerly wind and was told by an unidentified person on the ground using the microlight Unicom, that Runway 02 was in use. The pilot made an approach to Runway 02 at 50 kt and touched down near the beginning of the runway. The braking was initially good but as the downslope increased, the runway surface became very

soft and the braking less effective. G-TDVB overran the end of the runway by a few metres and nosed over. The pilot, who was wearing a full harness, was uninjured though trapped and was helped from the aircraft by local microlight pilots.

### Airfield

Willingale Airfield has a single grass runway orientated 02/20 which is approximately 400 m long. The pilot reported that it has a slight downslope which increases towards the end of the runway.

### MCR-01-ULC performance

The manufacturer's performance figures state that

the MCR-01-ULC requires 270 m of hard runway for landing (including airborne distance). It also states that a factor of 20% should be added for grass and 40% for unimproved strips. Using the 20% addition, the landing distance required increases to 324 m and using the 40% addition, a landing distance of 378 m is required.

In Safety Sense leaflet 7 (*Aeroplane Performance*), the CAA recommend that 10% is added to landing distances for every one degree of downslope. There are also additional factors to add if the grass is wet.

The pilot of G-TDVB stated that he normally operates from a 350 m grass strip with no difficulties and routinely has, in his estimation, a ground roll of no more than 150 m on landing.

The aircraft manufacturer confirmed that for a full flap approach, 45.5 kt was the theoretical approach speed and that 50 kt was not unreasonable for normal approaches. The manufacturer also confirmed that a ground roll of 100 m to 150 m was normal for a full flap landing.