ACCIDENT

Aircraft Type and Registration:	Cessna 150L, G-OKED	
No & Type of Engines:	1 Continental Motors Corp O-200-A piston engine	
Year of Manufacture:	1973 (Serial no: 150-74250)	
Date & Time (UTC):	23 November 2018 at 1420 hrs	
Location:	Clipgate Farm Airfield, Kent	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Slight damage to end of propeller blade, collapsed nosewheel landing gear and damaged engine cradle	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	78 years	
Commander's Flying Experience:	747 hours (of which 166 were on type) Last 90 days - 15 hours Last 28 days - 2 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

Approaching the grass runway with a tailwind the pilot extended more flap to regain the intended glidepath, then retracted it partially. The landing flare was longer than expected and the aircraft skidded on the damp grass surface before hitting a hedge. Subsequent inspection revealed that the flap had retracted more than intended. Retracting flap while continuing an approach may be hazardous.

History of the flight

The purpose of the flight was to check the serviceability of the aircraft's radios, which took longer than the pilot expected. On return to the airfield at Clipgate Farm the pilot established the aircraft on the approach to Runway 20, at an airspeed of 65 mph and with flap 30° set. When he determined that the aircraft was higher than intended, he selected flap 40°. Then, after regaining his intended glidepath and maintaining 65 mph, he re-selected what he thought was flaps 30°. He stated that he used the flaps in this way to increase drag temporarily, as he would with a glider's airbrake.

The weather conditions were hazy, and because the sun was shining in the pilot's eyes he could not read the airspeed indicator during the final stages of the approach.

The pilot recalled that the flare lasted longer than he expected. After landing, applying brakes caused the aircraft to skid on the grass and it collided with a hedge at the end of the runway. He described the impact as light, but the nosewheel hit a tree stump which broke its mounting support tubes. The aircraft tipped forward and the propeller became embedded in the ground.

The pilot reported that although the windsock appeared limp, there may have been a tailwind above the trees which he had forgotten to consider during the approach. Also, on re-inspecting the grass runway surface after the accident, he believed it was damper than he had originally thought.

After the accident, the aircraft's flaps were found set at 20°, not 30°. The pilot surmised that, when he retracted the flaps during the approach, he did so further than intended.

The pilot considered that he was distracted by frustrations with the radios, and that he should have gone around and landed on the reciprocal runway.

Analysis

A tailwind component and a damper than expected runway surface would both increase the aircraft's landing distance. Landing with less flap extended would reduce drag and increase the airspeed at which the aircraft could be flown safely, which would also increase the landing distance required.

Conclusion

The pilot used flap as an airbrake, then retracted it partially before landing. This, a tailwind during the approach and a damp runway, increased the landing distance required and the pilot was unable to stop the aircraft in the distance available.

Use of flaps as airbrakes

Unlike airbrakes, which can be used to increase drag or decrease lift (or both) over a range of airspeeds, the extension of flaps usually increases lift, increases drag and reduces the airspeed at which an aircraft can be flown safely. Retracting flaps whilst continuing an approach may be hazardous, particularly if the pilot inadvertently retracts them more than intended.