ACCIDENT

Aircraft Type and Registration:	Jodel DR1050-M Excellence, G-JODL
No & Type of Engines:	1 Continental Motors Corp O-200-A piston engine
Year of Manufacture:	1960 (Serial no: 99)
Date & Time (UTC):	24 September 2017 at 1730 hrs
Location:	Lashenden (Headcorn) Airfield, Kent
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Wing, stabilator, main and tail landing gear and propeller damaged. Probable shock-loading of engine
Commander's Licence:	Private Pilot's Licence
Commander's Age:	48 years
Commander's Flying Experience:	144 hours (of which 19 were on type) Last 90 days - 25 hours Last 28 days - 5 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and enquiries made by the AAIB

Synopsis

The pilot, who had limited experience flying tailwheel aircraft, initiated a baulked landing when he experienced directional control difficulties. The aircraft departed the side of the runway, struck a fence and came to rest in a hedgerow. Three sheep were injured, two fatally.

History of the flight

After completing a tailwheel aircraft conversion course during the morning, the pilot was returning to Lashenden in the late afternoon, from a consolidation flight around the local area. His first approach to the grass Runway 10 was made in a light south-easterly wind, but he initiated a go-around prior to touchdown, because he was not confident of a satisfactory landing. Following a further circuit of the airfield, he set the aircraft down onto the runway but then sensed the groundspeed was faster than he expected.

As the aircraft rolled along the runway, it became evident that the landing run was longer than expected and the pilot thought this might be due to an element of tailwind. He then encountered difficulty maintaining directional control and sensed that a gust of wind caused the aircraft to turn left. Aware that he was now heading towards the side of the runway, he initiated a baulked landing by advancing the throttle and by applying right

rudder pedal to try and overcome the aircraft's tendency to turn further left as the power increased. Despite his efforts the aircraft continued to turn left, departed the runway and accelerated over an adjacent area of mown grass.

The pilot saw a wire fence and trees ahead but managed to lift off, heading for a clear area between the trees. As the aircraft approached the fence he thought he had gained sufficient airspeed and pulled the nose back to climb over the fence. Although the mainwheels did not appear to make contact, he heard the underside of the fuselage rub the wire and the tailwheel was snagged momentarily, turning the aircraft further left and causing the nose to drop. The aircraft then touched down again on the far side of the fence and traversed an adjacent field, at high power, striking three sheep in its path. It then crossed a stream and came to rest in an overgrown hedgerow on the northern bank (Figure 1). The pilot undid his lapstrap and diagonal shoulder strap, made a radio call, and turned off the fuel and electrics before climbing out un-injured. Two of the sheep suffered fatal injuries.

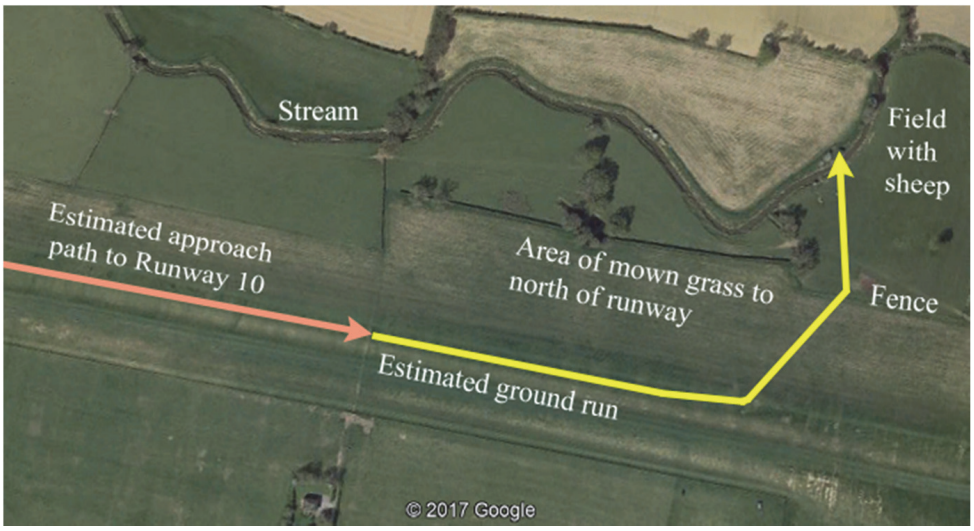

Figure 1

Aerial view of the eastern portion of Lashenden airfield with G-JODL's estimated track
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Recorded information

A Closed Circuit TV (CCTV) system recorded the aircraft touchdown, on its mainwheels only, approximately 40% of the way along the 1,250 m runway and adjacent to a windsock, which was hanging limp. After approximately 250 m, the tailwheel made ground contact and the aircraft began to turn left. The right wing then lifted and the aircraft headed towards the left side of the runway and out of the camera's field of view.

The recorded wind data for the airfield indicated that at the time of the accident the wind was from approximately 110º at less than 5 kt. There was no indication of any large fluctuation in the wind direction throughout the afternoon or early evening.

Pilot's assessment

After gaining his licence on nosewheel aircraft, the pilot commenced tailwheel differences training, on another Jodel type, almost six months before the accident. His training later switched to the accident aircraft and he had logged approximately 19 instructional hours in this aircraft, during which he was made familiar with circuit flying at Lashenden. That morning the pilot completed approximately 2.5 hrs of dual training, in a wind that was gusting up to 14 kt, before the instructor signed-off his differences training.

Although the pilot initially thought that a tailwind component increased his groundspeed, he later decided that his approach speed may have been faster than the circumstances required; the aircraft was relatively light and there was little wind. After reviewing the CCTV recording, he recalled that, during the landing, he thought the aircraft was going to balloon if he raised the nose, but he had not appreciated that only the mainwheels were on the ground. This probably explained why he thought there were directional control "difficulties" and he realised the left turn was not initiated by a gust of wind but more likely occurred when the tailwheel eventually made ground contact.

During the earlier go-around, the pilot stated that he had kept the aircraft straight by applying sufficient right pedal to overcome the aircraft's tendency to turn left. However, he realised that he did not manage to achieve the same result during the attempted baulked landing. A contributory factor in this may have been the gyroscopic force which, when the tail of a tailwheel aircraft is raised during takeoff, augments the other forces that try to turn the aircraft left with a power increase.

In retrospect the pilot decided that he should have initiated a go-around or baulked landing sooner. He also assessed that, by trying to take off again when he was heading towards the side of the runway, the outcome had probably been worse than if he had stopped the aircraft, even though this might have led to a ground loop.