

**ACCIDENT**

<b>Aircraft Type and Registration:</b>	Maule MX-7-160, N3110J	
<b>No &amp; Type of Engines:</b>	1 Lycoming O-360-C4F piston engine	
<b>Year of Manufacture:</b>	1994 (Serial no: 19031C)	
<b>Date &amp; Time (UTC):</b>	23 June 2016 at 1830 hrs	
<b>Location:</b>	Near Alford, Aberdeenshire	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - 1
<b>Injuries:</b>	Crew - None	Passengers - None
<b>Nature of Damage:</b>	Substantial damage, beyond economic repair	
<b>Commander's Licence:</b>	Commercial Pilot's Licence (Federal Aviation Administration, USA)	
<b>Commander's Age:</b>	53 years	
<b>Commander's Flying Experience:</b>	1,185 hours (of which 620 were on type) Last 90 days - n/k hours Last 28 days - n/k hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

**Synopsis**

The pilot reported that he was attempting to find a landing area, when he encountered a severe downdraft and was unable to climb clear of rising terrain.

**History of the flight**

The pilot reported that he had planned to fly from a privately operated strip at Fledmyre Field, Forfar, in Angus, to Meikle Eindovie, a location near Alford, Aberdeenshire. He selected Meikle Eindovie in the flight planning overlay from the Garmin GPSMap 496 airfield database - it was listed as a microlight/sports airfield site, with its airfield information and coordinates pre-entered in the GPS database - and flew en-route at 3,000 ft to a position indicated on the GPS as being overhead Meikle Eindovie. On arrival, he was not able to identify a landing area, so he descended to a height of 600 ft agl, deployed landing flap and circled the position indicated by the GPS.

After three orbits, and still unable to identify the landing area, the pilot was turning to the north when he noticed the VSI indicating a high rate of descent. He applied power and attempted to climb but was not able to clear steeply rising terrain. The aircraft struck a wall and a fence, flipped inverted and suffered substantial damage. The pilot and passenger, who were both wearing lap straps, with a diagonal shoulder strap, were not injured and were able to evacuate the aircraft through their respective side windows. During the accident, the Emergency Locator Transmitter activated, which alerted the emergency services.

The pilot concluded that the accident was caused by a mountain wave which he had encountered while flying at low level on the lee side of the Grampian Mountains.

### **Accident site**

The accident site was situated on open ground between two hills located approximately 1.6 nm south of Alford and 1.4 nm south-west of Meikle Endovie Farm.

### **Meteorology**

The pilot reported that there was a southerly wind of 25 mph in the area of the accident. A Met Office observation at 1800 hrs at Cairn Gorm summit, 30 nm to the south-west of the accident site, recorded a surface wind from the south-south-east at 11 kt. The 1820 hrs METAR for Aberdeen Airport, located 15 nm to the east of the accident site, indicated a surface wind from 160° at 7 kt, CAVOK and no significant weather.

### **Airfield information**

Meikle Eindovie, the destination reported by the pilot, is not a recognised airfield. So, the AAIB contacted the manufacturer of the pilot's GPS, who confirmed that Meikle Endovie is not in the current database.

### **Other information**

The twenty-fifth edition of the Aircraft Owners and Pilots Association (AOPA) Air Safety Institute (ASI) Nall Report<sup>1</sup> identifies manoeuvring at low level as a high risk phase of flight and states: *'the vast majority of fixed-wing maneuvering accidents share a common element: the sequence is initiated at low altitude.'*

### **Discussion**

The pilot reported that the accident occurred while he was manoeuvring the aircraft at low level, in search of his destination airfield. The surface wind was reported to be from the south and the pilot indicated that the aircraft struck the ground while it was on a northerly heading. Recent analysis of general aviation accidents in the USA has identified manoeuvring at low level as a high risk phase of flight. The airfield that the pilot was attempting to locate does not appear to exist.

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### **Footnote**

<sup>1</sup> Issued August 2016. The report analyses General Aviation accidents in United States (US) national airspace and on flights departing from or returning to the US or its territories, or possessions, during the most recent year.