

<b>Aircraft Type and Registration:</b>	Mooney M20J, N61MF	
<b>No &amp; Type of Engines:</b>	1 Lycoming IO-360-A3B60 piston engine	
<b>Year of Manufacture:</b>	1979	
<b>Date &amp; Time (UTC):</b>	8 May 2005 at 1618 hrs	
<b>Location:</b>	Fairoaks Airport, Surrey	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - 3
<b>Injuries:</b>	Crew - 1 (Minor)	Passengers - 3 (Minor)
<b>Nature of Damage:</b>	Substantial damage to airframe, propeller and engine	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	45 years	
<b>Commander's Flying Experience:</b>	274 hours (of which 51 were on type) Last 90 days - 10 hours Last 28 days - 5 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

### History of the flight

The pilot and three friends had flown from Fairoaks to Cherbourg before returning to Fairoaks. The weather for the flights was generally good with some rain shower activity over southern England. The 1520 hrs Fairoaks weather was: surface wind 310°/14 kt, CAVOK with Runway 24 in use. A shower had recently passed over the airfield and the runway was wet. Fairoaks has a single asphalt runway orientated 06/24, 813 metres long and 27 metres wide. The landing distance available for Runway 24 is 800 metres.

When established on a wide, left downwind leg the pilot lowered the landing gear and reduced IAS to 100 kt before lowering the first of the two stages of flap. The aircraft descended on the base leg and was turned onto the final approach for Runway 24 at a height of 500 feet. The approach speed was 80 kt IAS and the surface wind was 330°/09 kt. The approach was turbulent with some compensation for the left drift required and the pilot continued the approach. Over the threshold, at a height he estimated between 20 and 30 feet, the pilot was unhappy with his positioning and carried

out a go-around. He retracted the flap and landing gear in the climb and carried out a left hand circuit at the normal height of 1,000 feet using set turning points marked by ground features.

Having configured the aircraft with landing gear and two stages of flap lowered, the pilot turned the aircraft onto the final approach for Runway 24. The second approach was less turbulent and was again flown at an approach speed of 80 kt IAS with no drift compensation required. The approach appeared to be normal although, as the aircraft passed over the threshold, the pilot recalled thinking that the approach did not seem to take as long as normal. The pilot flared as normal but the aircraft continued to float just above the runway surface, eventually touching down at or just after the runway mid-point. Realising that insufficient braking distance remained before the end of the runway, the pilot executed a baulked landing procedure by applying maximum engine power but he did not have time to retract the landing gear or the flaps. The aircraft cleared the airfield boundary fence before it impacted a grass field on the runway extended centreline and passed through a wooden fence. During the impact the engine and outboard section of the left wing detached.

The pilot isolated the fuel and electrical services and together with the passengers, he vacated the aircraft through the normal exit. The airfield Rescue and Fire Fighting Services were promptly on the scene and were joined shortly afterwards by other emergency services.

## **Conclusion**

The pilot thought the most likely cause of the accident was that the threshold speed he achieved was higher than the customary 80 kt. This may have been because he had recently been flying a different type of aircraft with a higher approach speed and there may also have been a slight tailwind component on the final approach. He also stated that the low drag characteristics of the Mooney M20 make it susceptible to prolonged 'floating' if the threshold speed is too high; he did not recall the threshold speed but he estimated that it was between 5 and 10 kt too fast. Having applied the brakes after touch down, the pilot also thought he should not have attempted the baulked landing but should have accepted what would have been a low speed overrun.