

ACCIDENT

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|--|---|-------------------|
| Aircraft Type and Registration: | Denney Kitfox Mk 2, G-TWTW | |
| No & Type of Engines: | 1 Rotax 582 piston engine | |
| Year of Manufacture: | 2006 (Serial no: PFA 172-11730) | |
| Date & Time (UTC): | 25 March 2017 at 1300 hrs | |
| Location: | Redlands Airfield, Wiltshire | |
| Type of Flight: | Private | |
| Persons on Board: | Crew - 1 | Passengers - 1 |
| Injuries: | Crew - None | Passengers - None |
| Nature of Damage: | Damage to landing gear, fuselage, engine and propeller | |
| Commander's Licence: | National Private Pilot's Licence | |
| Commander's Age: | 64 years | |
| Commander's Flying Experience: | 395 hours (of which 120 were on type) Last 90 days - 4 hours Last 28 days - 2 hours | |
| Information Source: | Aircraft Accident Report Form submitted by the pilot | |

Synopsis

Following an engine failure when crosswind after takeoff, the pilot turned downwind and made a forced landing on the runway of departure. As it touched down the aircraft skidded sideways, and both main landing gear legs collapsed before the aircraft stopped. Both the pilot and passenger were uninjured.

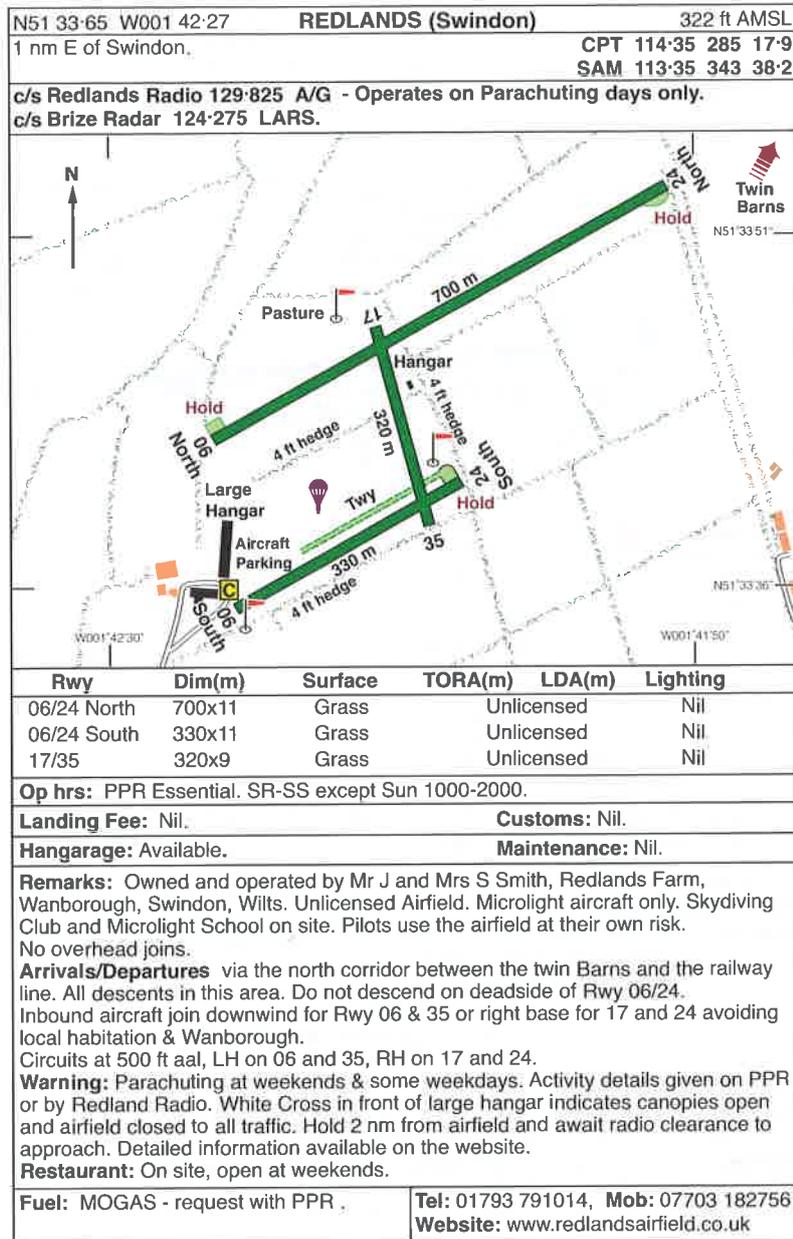
History of the flight

The pilot took off from Runway 06 North at Redlands Airfield with a north-easterly wind of approximately 15 kt and with good visibility. At 350 ft agl, he turned left onto a crosswind leg and shortly after this the engine failed. Believing he had insufficient time to select an alternative landing site, the pilot decided to land back on the runway and he turned left onto a downwind heading.

Once he had determined that he had proceeded far enough downwind to have sufficient landing distance available, the pilot lowered the nose, to maintain a safe speed, and turned steeply towards his chosen landing point. Although the aircraft touched down on the runway, there was insufficient height to complete the turn and the aircraft skidded sideways, causing both main landing gear legs to collapse.

The aircraft stopped close to a hedge, which has a gap through which the runway passes at approximately its mid-point, see Figure 1 for a layout of the airfield. There was some

distortion of the airframe which prevented the doors from opening easily, but the occupants were able to apply sufficient force to exit the aircraft un-assisted.



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Figure 1

Layout of Redlands Airfield

Pilot's assessment

Inspection of the engine indicated that the clip holding the supply pipe to the oil filter had failed and oil had escaped, leading to the seizure of one piston. The pilot reflected that he benefitted from having considered his response to an engine failure many times in the past. He noted that he remained calm and flew the aircraft, but had insufficient time to complete

the forced landing checks or transmit a MAYDAY call. He believes he could have achieved these actions if he had prepared better by thinking more about these drills before flying.

He also noted this runway is unusual because there is a hedge running across the upwind end, as well as the one with the gap through which the runway passes near the mid-point. His unfamiliarity with the airfield led him to believe the hedge near the midpoint was the hedge at the end of the runway so, if he had appreciated the layout better, he could have turned earlier and had sufficient landing distance beyond the first hedgerow. This would have meant he had more height in hand and therefore more time to complete the turn and stabilise the final approach.

AAIB comment

Although the pilot of this aircraft assessed that his best course of action was to turn downwind and aim to land back on the runway, pilots are usually advised against attempting such action from a low height. The CAA's 'Skyway Code'¹ refers to engine failures on page 133 stating,

'If a failure happens shortly after take-off, landing ahead is safer than attempting to turn back. Assess the area immediately in front of you and pick the place that is likely to cause the least damage.'

Footnote

¹ <http://caa.co.uk/General-aviation/Safety-information/The-Skyway-Code/>
