

## ACCIDENT

<b>Aircraft Type and Registration:</b>	Cessna 172S Skyhawk, G-MEGS	
<b>No &amp; Type of Engines:</b>	1 Lycoming IO-360-L2A piston engine	
<b>Year of Manufacture:</b>	2008 (Serial no: 172S10723)	
<b>Date &amp; Time (UTC):</b>	16 May 2015 at 1550 hrs	
<b>Location:</b>	Perranporth Airfield, Cornwall	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - None
<b>Injuries:</b>	Crew - None	Passengers - N/A
<b>Nature of Damage:</b>	Propeller tips abraded, structural damage to fuselage frames and bulkheads, lower skin deformed	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	68 years	
<b>Commander's Flying Experience:</b>	112 hours (all of which were on type) Last 90 days - 7 hours Last 28 days - 5 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

## Synopsis

The pilot was relatively inexperienced and operating into a cliff-top airfield, with the onshore surface wind at the maximum demonstrated crosswind for the aircraft. A damaging hard landing ensued, though this was not recognised until after the aircraft had returned to its home base.

## History of the flight

The pilot, who had about 40 hours as pilot-in-command, hired the aircraft from a club at Cambridge Airport and flew to Perranporth Airfield, via Garston Farm Airstrip near Bath. He reported that he had flown into Perranporth twice before (both on the same day) about six months previously. On this occasion, he arrived overhead the airfield ten minutes before it was due to close. For unknown reasons, he was unable to contact Perranporth Radio. So, Newquay Airport ATC (located 9 nm to the NE) provided a relay, by telephone, to inform him that the runway in use was 05 and the surface wind was from 320° at 15 kt. The pilot reported feeling under some pressure due to the airfield closing time and, although he had considered asking for an alternative runway<sup>1</sup>, commenced an approach to Runway 05, intending to land with full flap (Flap 30).

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### Footnote

<sup>1</sup> Perranporth's licensed runways are 27/09 and 23/05

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In a frank report, the pilot described his speed being about 75 kt towards the end of the approach, 10 kt faster than intended. During the landing flare, the aircraft ballooned and he held the aircraft's attitude. It landed heavily and the pilot heard a bang, which he thought came from the landing gear.

On 20 May, four days later, the pilot flew the aircraft back to Cambridge Airport, having noticed no defects during his pre-flight inspection, when he focused his attention on the landing gear. On 21 May, a pre-flight inspection by another pilot noted damage to the tips of the propeller blades and the aircraft was withdrawn from service. The subsequent maintenance inspection revealed significant damage to the skin and frames, consistent with a heavy landing. The aircraft had not operated since its return from Perranporth.

### Weather

Before departure, the pilot noted that the TAF for Newquay Airport, covering the period 0900 hrs to 1800 hrs, forecast: wind from 320° at 16 kt, greater than 10 km visibility and few cloud at 3,000 ft.

### Pilot Operating Handbook

The C172S Pilot Operating Handbook states that the maximum crosswind demonstrated is 15kt. In *Normal Procedures*, it recommends that pilots use the minimum flap setting required for the field length when landing in a strong crosswind. It highlights that '*maximum allowable crosswind velocity is dependent upon pilot capability as well as airplane limitations*'.

### CAA advice

The CAA's Safety Sense Leaflet 1, *Good Airmanship*, Section 28, states:

- a. *'Know the maximum demonstrated cross-wind for the aircraft type you are flying and factor this for your experience and recency.*
- b. *Remember, that was obtained by a test pilot! If the wind approaches what you have decided is your own limit, be ready to divert. You may retain better control on landing by not using full flap.*
- e. *If another runway which is more into wind is available, use it....'*

### Safety action

The flying club, from which the pilot hired G-MEGS, has introduced more constraining weather and currency requirements for pilots with less than 100 hrs pilot-in-command. In order to monitor flight planning, they have introduced a cross-country checklist, requiring pilots to complete details of their intended flight and obtain authorisation from an appropriate staff member.

## Discussion

The weather forecast for Newquay, available before departure, suggested that the wind at Perranporth was likely to be at or close to the maximum demonstrated crosswind for the aircraft, whichever runway was in use. The conditions were, therefore, likely to be challenging for an inexperienced pilot operating into a coastal airfield, with the wind passing over sea cliffs, producing turbulence. Also, arriving at his destination shortly before the airfield closed did not seem to allow the pilot sufficient time to consider contingencies or alternate plans of action.

The pilot commented that, if faced with a similar situation in the future, he would divert to the into-wind runway at Newquay.