

ACCIDENT

Aircraft Type and Registration:	Cirrus SR22, N374SR	
No & Type of Engines:	1 Continental IO550 piston engine	
Year of Manufacture:	2007 (Serial no: 2734)	
Date & Time (UTC):	26 May 2020 at 1400 hrs	
Location:	Fairoaks Airport, Surrey	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Damage to both wings, propeller, fuselage and landing gear	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	65 years	
Commander's Flying Experience:	451 hours (of which 144 were on type) Last 90 days - 5 hours Last 28 days - 4 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

After landing on Runway 24 at Fairoaks Airport, the pilot was unable to stop the aircraft in the distance remaining. N374SR left the paved surface of the runway, went through the airfield boundary fence and crossed a public footpath before colliding with trees. The pilot was uninjured and able to extricate himself from the cockpit without assistance. The runway overrun likely resulted from the combination of a high engine idle speed, little or no headwind and continuing with a deep landing rather than going around.

History of the flight

Witnesses reported that it was a hot day with good weather and a light and variable north-westerly breeze. Having flown from Gloucester Airport the pilot followed an aircraft ahead and positioned to land on Runway 24 at Fairoaks. He stated that the approach was uneventful and that he crossed the runway threshold as normal before flaring at a standard approach speed. Despite the selection of idle power, N374SR did not settle onto the runway as expected. The aircraft continued to float and eventually touched down at what an eyewitness described as "a considerable distance along the runway". By the time the pilot realised there was insufficient runway remaining in which to stop, he judged that, with trees in the overshoot flightpath, it was too late to safely go around.

Despite the application of full braking, the aircraft overran the runway, went through the airfield boundary fence and crossed a public footpath before colliding with trees (Figure 1). N374SR sustained significant damage to wings and fuselage, but the pilot was able to vacate unaided and uninjured.



Figure 1

N374SR after colliding with trees in the runway overshoot
(photograph ©Surrey Police)

Aircraft information

The pilot reported that when he selected idle in the flare the engine stabilised at approximately 1,000 rpm which was higher than he expected. After reviewing N374SR's technical logs, he noted that in preceding months the engine idle speed had been consistently at or above 960 rpm during power checks. He stated that a normal idle speed would be in the range 625 to 650 rpm. The pilot also reflected that at Gloucester Airport his landing roll had been longer than expected and more frequent braking than normal was needed to keep the taxiing speed under control.

Airfield information

Public footpaths cross through the undershoot at either end of Runway 06/24 at Fair Oaks. Signs are positioned next to the paths to alert passers-by to the potential hazard posed by aircraft taking off and landing as they walk through the extended centreline of the runway.

Additional information

Variable landing performance considerations, such as aircraft weight, runway surface conditions and the observed wind components can significantly affect the landing ground roll required to bring an aircraft to a halt. Deep landings, those achieved beyond the normal touchdown zone, can quickly lead to situations where the braking distance required exceeds the remaining runway available ahead. As a precaution against runway overruns, in Safety Sense Leaflet 1¹, *Good Airmanship*, the CAA recommends that pilots should go around if not 'solidly 'on' in the first third of the runway.' While other factors, such as minimising

Footnote

¹ Available at <http://publicapps.caa.co.uk/modalapplication.aspx?catid=1&pagetype=65&appid=11&mode=detail&id=1156> accessed 2 October 2020.

runway occupancy on very long runways, might also need to be taken into consideration, establishing a landing cut-off point before starting an approach makes the subsequent 'touchdown or go around' decision making process easier.

Analysis

The runway overrun occurred because the aircraft landed too far down the runway for it to be stopped in the landing distance remaining. It is possible that a higher than normal engine idle speed contributed to the aircraft floating rather than achieving a positive touchdown. Additionally, the north-westerly wind gave little or no headwind component to reduce the aircraft's groundspeed relative to its approach speed. A decision to go around would likely have been successful if made before the trees in the overshoot became a limiting consideration.

Comment

Runway overruns resulting from deep landings are a known hazard in aviation. Pilots can mitigate this risk with an awareness of their aircraft's landing performance capabilities and the runway's physical characteristics and by factoring the expected environmental conditions into their threat and error management considerations. It is good airmanship to decide on a 'touchdown or go-around' decision point before committing to an approach. Where obstacles could compromise a go-around flightpath, they should also be factored into the decision point selection process.