ACCIDENT

Aircraft Type and Registration:	Cirrus SR 22, N8163P	
No & Type of Engines:	1 Continental IO-360 SER piston engine	
Year of Manufacture:	2004 (Serial no: 1391)	
Date & Time (UTC):	31 July 2020 at 1203 hrs	
Location:	Cotswold (Kemble) Airport, Gloucestershire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 2
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Damage to landing gear, propeller and left wing on N8163P and damage to the right wing on a parked aircraft	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	67 years	
Commander's Flying Experience:	698 hours (of which 199 were on type) Last 90 days - 5 hours Last 28 days - 1 hour	
Information Source:	Aircraft Accident Report Form submitted by the pilot and enquiries by the AAIB	

Synopsis

N8163P was about to touch down at Cotswold (Kemble) Airport when the left wing dropped and touched the runway. The pilot attempted a go-around, but the aircraft landed to the side of the runway and travelled across the grass before colliding with a parked aircraft. No injuries were sustained, but both aircraft were substantially damaged.

The loss of control occurred when the pilot delayed touching down because the aircraft landing ahead had not vacated the runway as he expected. Early decision making on initiating the go-around and aircraft handling at slow speed were identified as factors in this accident.

History of the flight

The pilot departed Solent Airport with two passengers for a flight to Cotswold (Kemble) Airport and first contacted Kemble Information en-route to request joining information and PPR[1] (Prior Permission Required). While downwind for Runway 08 he was informed that he was number two in the circuit with one landing ahead.

Footnote

[1] The Air Information Publication, Part 3, and Pooleys Flight Guide (2020) both state that the aerodrome is "*Strictly PPR by telephone*".

The pilot reported that the weather was good with a moderate crosswind and the approach was stable. His last observed airspeed was 78 kt with the intention of touching down at approximately 75 kt He was visual with the landing aircraft and planned his touchdown assuming the aircraft ahead would vacate the runway at the intersection adjacent to A3 (Figure 1). On reporting "final to land'", the Flight Information Service Officer (FISO) advised that the runway was occupied by an aircraft that was vacating the runway. However, it did not leave at A3, but carried on taxiing until it reached the end of the runway and vacated at A1. The pilot reported that he had to hold off the landing until he was given permission to "land at his discretion" as he crossed the threshold.

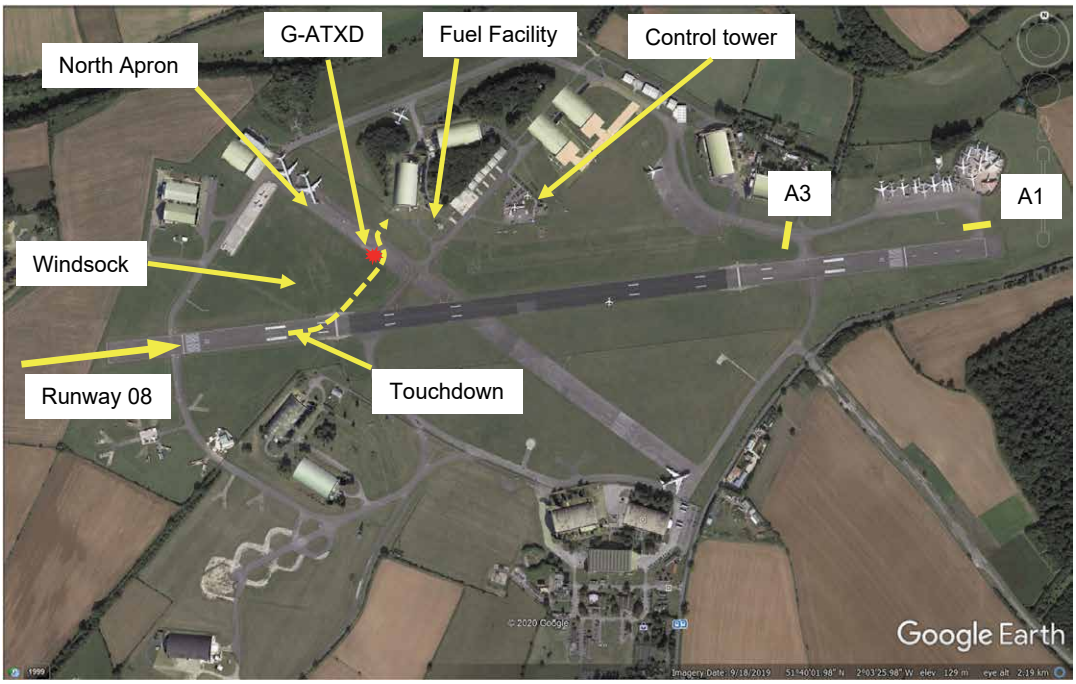

Figure 1

Cotswold (Kemble) Airport and track of N8163P

N8163P was still airborne when it reached the first touchdown zone markings. The left wing was then seen to drop and contact the runway. The aircraft touched down on the grass and travelled along the ground at an angle of approximately 45° to the left of the runway heading until it reached the North Apron where it collided with a parked Piper PA-30 aircraft, G-ATXD (Figure 2).

Figure 2

Track of N8163P

During the collision, the left wing of N8163P struck the right wing of G-ATXD causing N8163P to slew to the left and travel sideways across the apron. N8163P finally came to rest on the grass between the apron and the fuel facility. All the occupants were helped to safety by the AFRS, who were quickly on the scene.

The pilot reported that he assumed the aircraft abruptly veered to the left and departed the runway due to a gust of wind. He did not recall hearing the stall warner operate. He reported that he attempted a go-around while he was on the grass but thought the high air temperature meant he did not get the lift he was expecting.

Aircraft damage

Both aircraft were badly damaged:

G-ATXD

The aileron and lower surface of the right wing were severely damaged. There was also a substantial fuel leak.

Figure 3

Damage sustained to Piper PA-30, G-ATXD

N8163P

There was abrasion damage to the left-wing tip consistent with it having contacted a hard surface and scratches that were most likely caused by the torn metal on the right wing of G-ATXD. Damage to the propeller blades was consistent with them striking soft ground or stones. The right main landing gear had broken off from the mounting structure and punctured a hole in the top skin of the wing. The right main wheel had detached and abrasions on the tyre were consistent with it being abraded as the aircraft slid sideways across the apron. The nose landing gear was twisted but remained attached.

Figure 4

Damage sustained to Cirrus SR22, N8163P

Meteorology

The weather reported by the airport was CAVOK, temperature 29°C, with the wind from 080° at 14 kt. Analysis of a Closed Circuit Television (CCTV) recording of the movement of the windsock, sited between the touchdown markers and the apron, showed the instantaneous wind to be approximately 160° and 15 kt when the aircraft crossed the threshold (Figure 5). While there was some movement of the windsock, there was no visual evidence of gusts.

Closed Circuit Television

From a CCTV recording, the attitude of N8163P appeared normal as it crossed the threshold when it then appeared to fly parallel with the runway. As it reached the first set of touchdown markers the left wing dropped and contacted the edge of the runway before the aircraft settled on its landing gear on the grass (Figure 5). The aircraft continued to travel across the grass on a heading approximately 45° to the left of the runway heading.

When the aircraft was several metres from the runway, the effect of the propeller wash could be seen on the grass and the aircraft appeared to have a slightly nose high attitude. The speed and attitude of the aircraft was constant, and the effect of the propwash on the grass was visible until the aircraft collided with G-ATXD.

Figure 5

Still from CCTV footage of N8163P as the left wing dropped

Analysis

The loss of control occurred as the pilot delayed touching down until the aircraft ahead cleared the runway.

The pilot had conducted several maintenance flights during the first public health restrictions and three local flights after they had been lifted in July 2020. All the flights were flown from Solent Airport. While the pilot was familiar with Cotswold Airport, having flown there many times before, he reported that he had not practiced crosswind landings for "some time".

The pilot reported that the approach was stable. The windsock close to the threshold showed that there was a relatively steady crosswind of around 15 kt, which was within the aircraft's crosswind limit of 21 kt. It is, therefore, unlikely that the wing drop occurred because of a gusting crosswind.

As the pilot checked the rate of descent to delay touching down, it is likely that it was the handling of the aircraft at low speed, while countering the effects of the crosswind, that resulted in the loss of control. The CCTV recording and abrasions to the wing tip show that the left wing struck the runway before the aircraft touched down on the grass. It is possible that the damage to the propeller occurred at this time, but it more likely occurred after the left main landing gear collapsed.

The pilot reported that his actions in attempting a go-around following the loss of control were instinctive. However, with an air temperature of 29°C, and a tailwind, the aircraft may not have had sufficient performance to become safely airborne before reaching surrounding obstacles. The collision with the unoccupied parked aircraft occurred at high speed and caused substantial damage to both aircraft.

Comment

This accident highlights the importance of making an early decision to go-around and to allow sufficient time for aircraft landing ahead to clear the runway. On this occasion clearance to land at 'the pilot's discretion' was not given until the aircraft reached the threshold. Following the loss of control, the wing tip struck the ground and the pilot would not have known the extent of the damage to the aircraft; therefore, it would have been a safer option to stay on the ground.

Continuing the go-around while the aircraft was on the ground and pointing towards a parking area, hangar and fuel facility increased the risk to third parties. Slowing the aircraft would have given the pilot and third parties more time to respond.