Accident

Aircraft Type and Registration:	Piper PA-28-181, G-EPYW	
No & Type of Engines:	1 Lycoming O-360-A4M piston engine	
Year of Manufacture:	1977 (Serial no: 28-7790557)	
Date & Time (UTC):	14 August 2024 at 1128 hrs	
Location:	Rochester Airport, Kent	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Damaged beyond economic repair	
Commander's Licence:	Other	
Commander's Age:	79 years	
Commander's Flying Experience:	155 hours (of which 155 were on type) Last 90 days - 7 hours Last 28 days - 3 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot, R/T transcription provided by the Flight Information Services Officer, plus further enquiries	

Synopsis

The pilot experienced a period of high workload following a go-around and change of runway-in-use. The aircraft overran the runway due to landing long at a higher than recommended speed. It cleared the airport boundary fence, crossed a road, and came to rest within a wooded embankment. The pilot was uninjured.

History of the flight

The pilot was conducting a cross-country flight from Lydd to Rochester Airport. He contacted Rochester AFIS when 10 nm from the airfield, where he was informed that the runway in use was to be confirmed when he was nearer, as the wind was variable.

The pilot was later informed by the Flight Information Services Officer (FISO) at Rochester that the wind direction had settled for Runway 02. The pilot did not feel comfortable with the final approach and chose to go around. At the same time, the FISO informed "G-YW LAND AT YOUR DISCRETION 02 SURFACE WIND 290 AT 5 KT, BUT AT THAT SPEED YOU MIGHT WANT TO GO AROUND."

The pilot executed a go-around, and entered into a left-hand circuit. While on the downwind leg the FISO advised "G-YW YOU MIGHT WANT TO DO A 180 AND COME IN ON 20. THE WIND HAS CHANGED DIRECTION AND FAVOURING 20. 180 THERE AND COME IN FOR 20." The pilot acknowledged the change of runway, and flew a climbing right-hand orbit to reposition.

The pilot selected two stages of flap, felt the approach was stable, reduced the throttle to idle, flared, and G-EPYW touched down on Runway 20. The aircraft bounced several times, and the pilot applied both brakes hard, but felt the aircraft was “skidding” and not slowing. The aircraft approached the airfield boundary, and the pilot recalled pulling back hard on the yoke in an attempt to aerodynamically stall and slow the aircraft. It subsequently became airborne, cleared the airfield boundary fence and a local road before coming to rest partway down a wooded embankment. The pilot was able to exit the aircraft and was uninjured.

Accident site

The wooded embankment was located to the south of the airfield boundary, and sloped steeply downwards towards a motorway, see Figure 1 for an image showing the final location of the aircraft

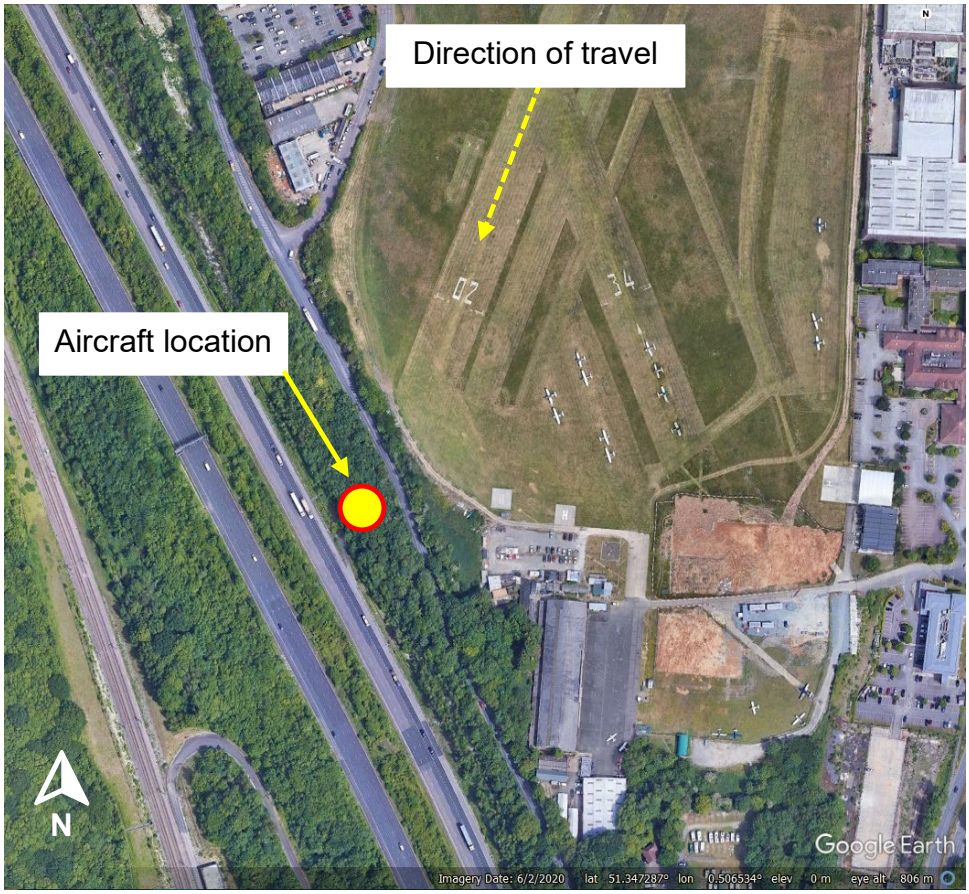

Figure 1

Final location of the aircraft

Both of the aircraft’s wings had struck trees, and had detached from the fuselage which resulted in a fuel leak (Figure 2).

Figure 2

G-EPYW accident site

Recorded information

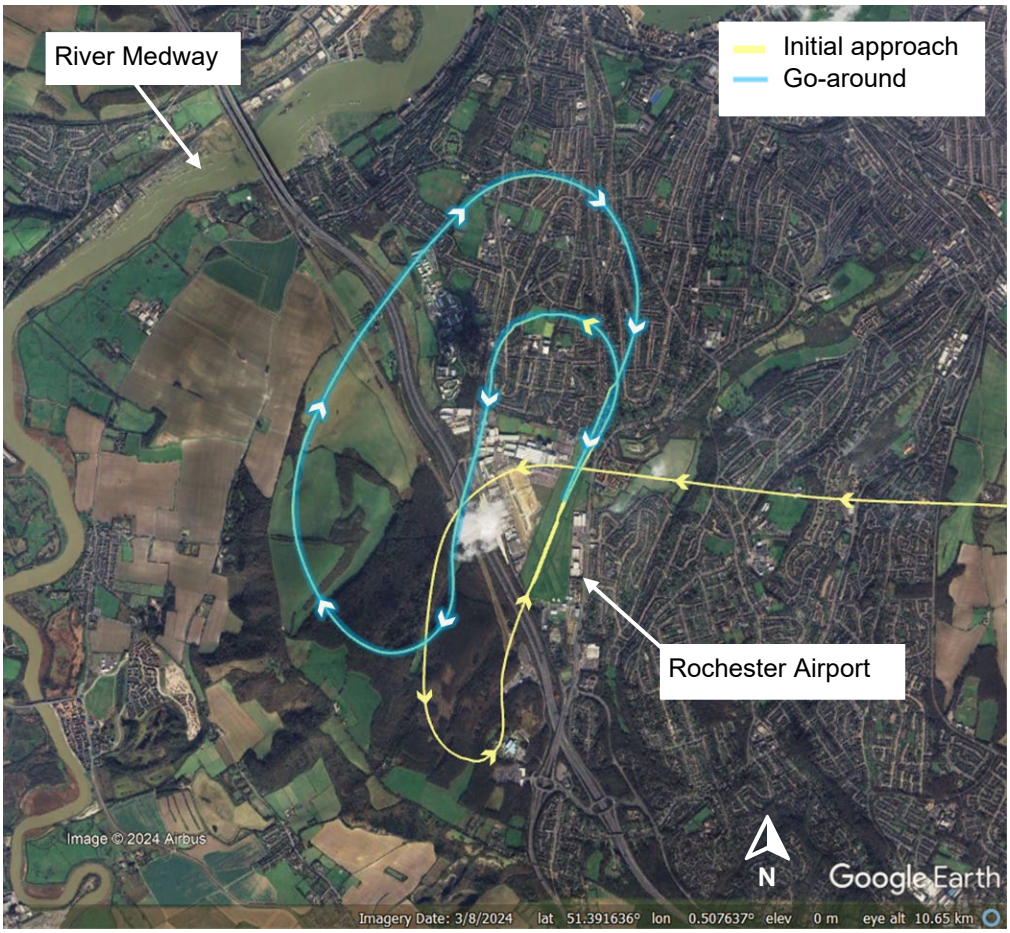

Figure 3

G-EPYW flight path

The pilot was using a flight-planning and navigation application, from which position data, altitude and ground speed were downloaded. Due to the low wind speed, the ground speed data is a good approximation of the aircraft's airspeed. After the go-around, the pilot repositioned by turning through 180º for Runway 20, climbing to a maximum height of 1,978 ft amsl over higher ground to the south-west of the airport (Figure 3).

The aircraft's ground speed at the landing flare was 91 kt, touching down approximately 190 m from the runway's threshold. CCTV captured the latter part of the landing roll on Runway 20, where the ground speed was decreasing from 75 to 60 kt. G-EPYW's ground speed was 45 kt at the airfield boundary.

Aircraft landing performance

The aircraft's POH states an approach speed of 75 kt, with a final approach speed of 66 kt using 40º of flap. This configuration with the aircraft's estimated mass of 934 kg gives a calculated landing distance of 381 m. Use of flap is at the pilot's discretion depending upon the landing conditions, and on the PA-28-181 can be safely operated within the airspeed range of between 49 kt and 102 kt.

Landing performance guidance

CAA Safety Sense Leaflet 09: Weight, Balance and Performance[1] includes takeoff and landing safety factors for different surface types and conditions when they are not accounted for in the aircraft's POH (Figure 4). The general safety factor covers for variations in pilot technique or aircraft performance from the manufacturer's figures, which assume ideal conditions and optimal technique. Use of the factors is not mandatory, but encouraged.

Applying the dry grass and general safety factors to the calculated landing distance of 381 m, gives a landing distance of 627 m.

Safety factors		
Condition	**Take-off**	**Landing**
Dry grass (up to 20cm)	x1.2	x1.15
Wet grass (up to 20cm)	x1.3	x1.35
Wet paved surface	-	x1.15
Soft ground or snow	x1.25	x1.25
General safety factors	x1.33	1.43

Note: You should apply this after the application of the other factors.

Figure 4

CAA Safety Sense Leaflet 09: Safety Factors

Footnote

1 Civil Aviation Authority Safety Sense Leaflet 09 Weight, Balance and Performance August 2024 https://www.caa.co.uk/media/wcebqozv/ssl09-caa-safety-sense-weight-balance-and-performance.pdf [Accessed January 2025].

Meteorology

Visibility was in excess of 10,000 m with broken cloud at 2,500 ft and QFE 999 hPa. The wind was variable, from 290º at 2 kt. The wind's variability during the morning changed the runway in use from Runway 20 to Runway 02 at 1110 hrs, and back to Runway 20 at 1128 hrs.

Aerodrome information

Rochester Airport's main grass runway 02/20 has 830 m landing distance available (Figure 5). The standard circuit pattern is bounded by the River Medway to the West and North. The airport offers an AFIS provided by licensed FISOs for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

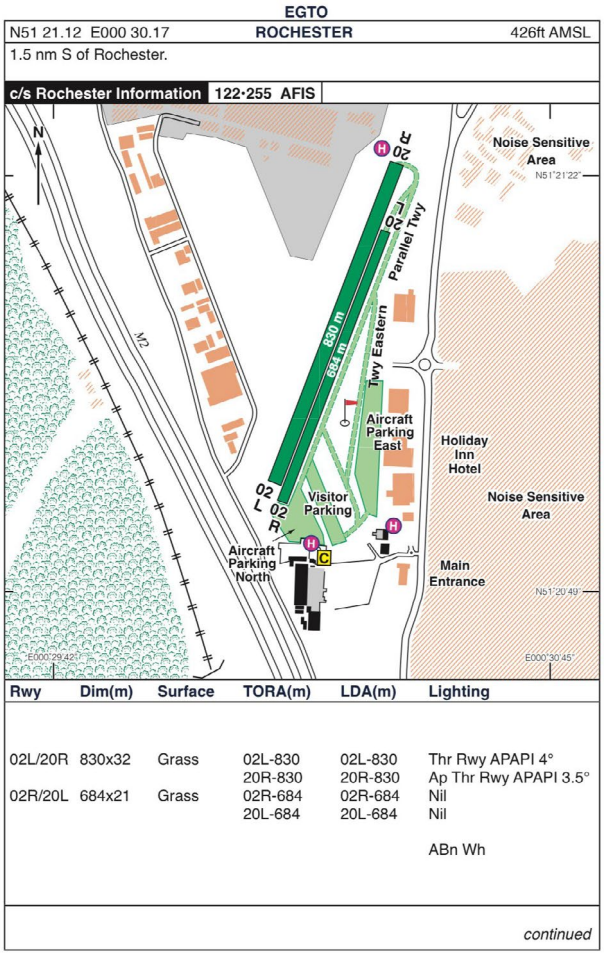

Figure 5

Rochester Airport plate (courtesy Pooley's)

Analysis

Managing a go-around can result in a high workload; the pilot's attention may already have been close to capacity when receiving runway change information, which would have further increased workload. This likely resulted in the FISO's suggestion being followed without

considering further implications. The resulting circuit with a shorter base and final legs and little headwind, lessened the time available to decrease the aircraft's speed which was not sufficiently reduced, resulting in landing long and an overrun. The pilot felt the approach was stable and chose to continue rather than go around. In hindsight, he recognised he had landed faster than normal.

The landing distance available at Rochester was sufficient for G-EPYW to land, using the CAA factors for grass and general safety, if the aircraft was configured at 66 kt and with 40º of flap. However, with a ground speed at the flare of 91 kt and touchdown point of 190 m, it is unlikely the aircraft could have stopped in the distance available.

If a pilot requires time to reduce their workload following receipt of information from a FISO, alternative actions can be taken as the information is not an instruction. Actions can include requesting the FISO to 'standby' before responding, not accepting the runway suggested and receiving alternative information to assist with landing, or requesting to leave the airfield area and then returning to re-approach. Safety Sense Leaflet 31 *'Distraction and Interruption in General Aviation Operations'*[2] provides strategies to help a pilot manage the impact of air traffic calls.

Conclusion

The pilot experienced a period of high workload following a go-around and change of runway-in-use. The aircraft overran the runway due to landing long at a higher than recommended speed. CAA Safety Sense leaflets 09 and 31 contain information to help pilots with assessing the impact of different surfaces on landing performance and managing interruptions during flight.

Footnote

[2] Civil Aviation Authority Safety Sense Leaflet 31 Distraction and Interruption in General Aviation Operations May 2023 https://www.caa.co.uk/media/apcbiav3/caa8230_safetysense_31_distraction_aw9.pdf [Accessed 11 February 2025].