

## ACCIDENT

<b>Aircraft Type and Registration:</b>	Piper PA-28-161 Warrior II, G-BTRY	
<b>No &amp; Type of Engines:</b>	1 Lycoming O-320-D3G piston engine	
<b>Year of Manufacture:</b>	1981 (Serial no: 28-8116190)	
<b>Date &amp; Time (UTC):</b>	13 September 2020 at 1655 hrs	
<b>Location:</b>	Enstone Airfield, Oxfordshire	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - 1
<b>Injuries:</b>	Crew - None	Passengers - None
<b>Nature of Damage:</b>	Damage to left main landing gear, left wing and tailplane	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	73 years	
<b>Commander's Flying Experience:</b>	18,400 hours (of which 1,415 were on type) Last 90 days - 112 hours Last 28 days - 38 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

## Synopsis

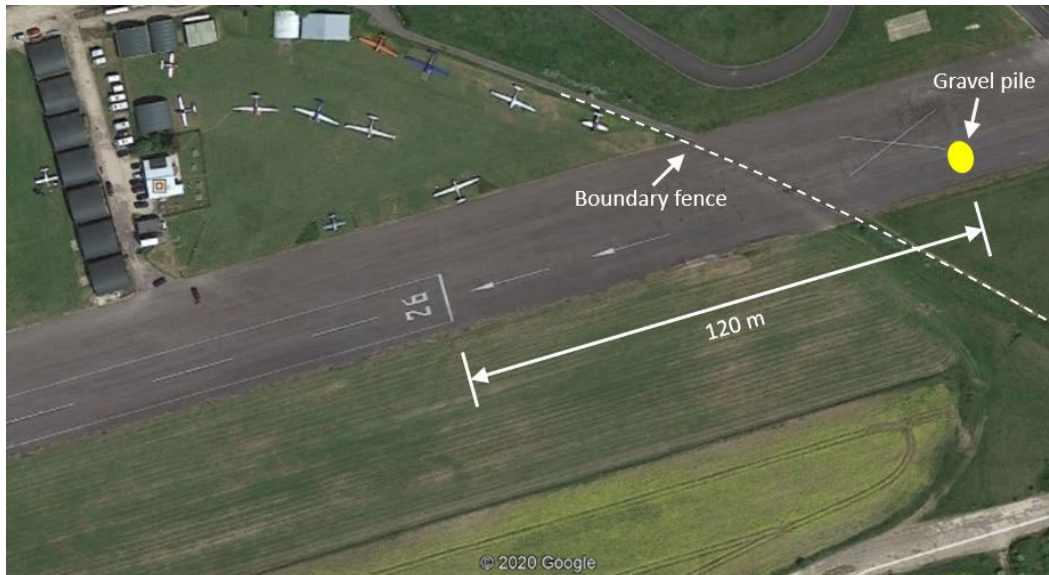
Whilst on final approach to land on Runway 26 at Enstone Airfield the pilot allowed the aircraft to descend too low and the aircraft struck a pile of gravel, causing the left main landing gear to detach from the aircraft. The pilot went around and diverted to Oxford Airport which had better fire and rescue services than Enstone Airfield. The aircraft departed the runway on landing at Oxford Airport, damaging the left wing and tailplane.

## History of the flight

The pilot was returning to Enstone Airfield from Ledbury Airfield and, as the wind was light, he positioned the aircraft on a long final for Runway 08 to avoid landing into the setting sun. As the aircraft approached the airfield the pilot announced his intention to land on Runway 08 on the airfield's Air/Ground frequency, and he heard a radio call in response stating that the runway in use was Runway 26. The pilot replied stating that he would join downwind for Runway 26.

He was then observed to fly a circuit to the north of the airfield, to position the aircraft on an approach for Runway 26. The pilot stated that he found the glare of the setting sun distracting as he approached the runway, but that he could see the white frangible airfield boundary fence and runway markings clearly enough to continue the approach. An instructor in an aircraft that was waiting to depart at the Runway 26 holding point stated that G-BTRY was very low on the final approach.

The aircraft's left main landing gear tyre struck the top of a 3.5 m tall light-coloured pile of gravel that was being stored on a disused section of the airfield, outside the airfield boundary fence. The gravel pile was on the runway extended centreline, approximately 120 m from the runway threshold (Figure 1).

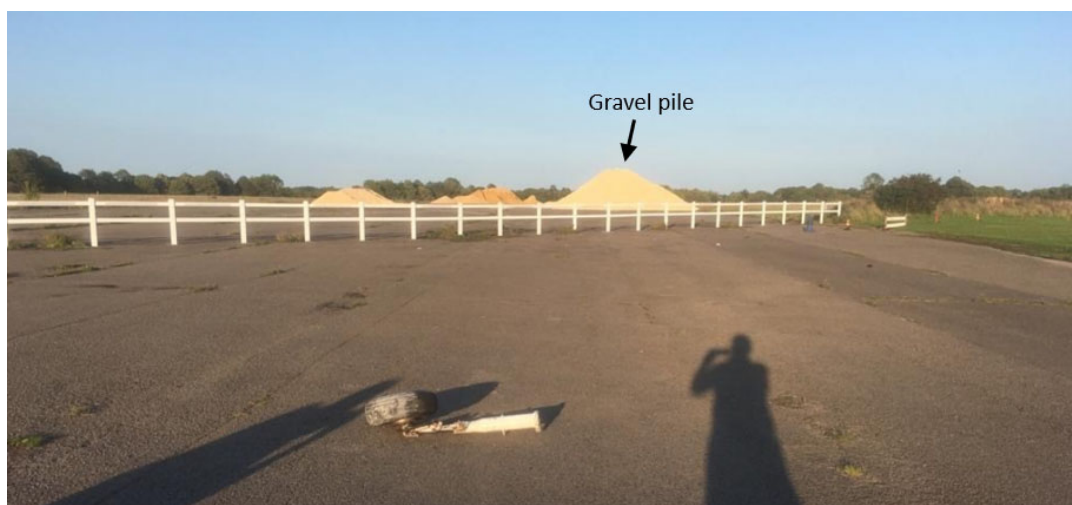


**Figure 1**

Gravel pile and Runway 26 threshold

(image © 2020 Google, Image © Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies)

The impact caused the left landing gear leg to detach from the aircraft (Figure 2). The instructor made a radio call to the pilot, informing him that he had lost his left landing gear leg and that he should go around. The aircraft was observed to briefly touch down on the right main landing gear before the pilot applied power and the aircraft climbed away.



**Figure 2**

Gravel pile and detached landing gear leg

Having appraised the situation, and discussed his options with the instructor by radio, the pilot decided to divert to Oxford Airport as it had better rescue and firefighting equipment than Enstone. The instructor called Oxford Airport ATC by phone to brief them on the situation and to expect G-BTRY to arrive shortly. The pilot contacted Oxford Airport by radio and landed on Runway 19. Shortly after touchdown the aircraft left the runway's paved surface to the left, coming to rest on the grass (Figure 3). The damage to the aircraft was limited to the left wing and the tailplane, and neither the pilot nor his passenger were injured.

The pilot stated following the accident that he had been aware that the disused portion of the airfield was being used for the storage of sand and gravel.



**Figure 3**

G-BTRY after landing at Oxford Airport

### **CAP 793 Safe Operating Practices at Unlicensed Aerodromes**

CAP 793 provides guidance on the recommended layout, physical characteristics and visual aids appropriate to safe operating practices at unlicensed aerodromes. Chapter 4, section 5 contains the following guidance in relation to obstacles:

#### *Obstacles*

*5.1 Anything that, because of its height or position, could be a hazard to an aircraft landing or taking off should be conspicuously marked if it cannot be practicably removed or minimised.*

## Conclusion

The aircraft struck the gravel pile because it was too low on the final approach to Runway 26. The top of the gravel pile formed an angle of  $1.7^{\circ}$  to the Runway 26 threshold, well below a normal approach path angle of  $3^{\circ}$ . It is likely that the glare from the sun on the final approach, combined with the pilot's visual focus on identifying the runway threshold contributed to him allowing the aircraft to descend too low on the approach. The lack of a conspicuous marking on the top of the gravel pile, as recommended in CAP 793, probably contributed to the pilot's lack of perception of this obstacle.

## Safety action

The airfield operator commented that following the accident the landowner of the disused portion of the airfield had reduced the height of the gravel piles and ensured that subsequent gravel storage occurred further away from the airfield boundary, to remove the hazard to aircraft.