

Vans RV-4, G-BZPH

AAIB Bulletin No: 11/2004	Ref: EW/G2004/07/07	Category: 1.3
Aircraft Type and Registration:	Vans RV-4, G-BZPH	
No & Type of Engines:	1 Lycoming O-360-A4M piston engine	
Year of Manufacture:	2001	
Date & Time (UTC):	4 July 2004 at 1050 hrs	
Location:	Lundy Island, Bristol Channel	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Main landing gear collapsed, damage to forward fuselage and engine compartment	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	37 years	
Commander's Flying Experience:	363 hours (of which 140 were on type)	
	Last 90 days - 30 hours	
	Last 28 days - 9 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and further AAIB enquiries	

History of the flight

The aircraft had taken off from a farm strip in Oxfordshire to attend a Popular Flying Association event on Lundy Island, which is situated 18 km from the Devon Coast. On arrival overhead the landing strip, the pilot flew an orbit to assess the conditions and to observe another aircraft fly a circuit and landing. Satisfied that conditions were suitable, and with a surface wind assessed by the pilot as north westerly at 10 kt, the pilot commenced an approach to Runway 24. The pilot reported that he touched down normally, at about 55 mph, close to the beginning of the strip but to the right of the notional centreline. The initial part of the landing roll was uphill, and as the aircraft reached the apex of the strip it encountered rougher ground which caused the aircraft to begin a series of bounces. As the bounces increased in severity, the pilot considered a go-around but rejected this as a course of action because of the lack of available strip length and the increasing possibility of the propeller striking the surface. Eventually the landing gear collapsed and the aircraft slid to a halt. The pilot and his passenger, who were both wearing five point harnesses, were uninjured and able to vacate the aircraft normally. The aircraft sustained damage to both landing gear, engine mount, firewall and forward fuselage skins.

Lundy Island Airfield

The island itself is a popular destination for wildlife enthusiasts, being sited on a major bird migratory route and surrounded by England's only statutory Marine Nature Reserve. Most of the island is designated a Site of Special Scientific Interest. The island is approximately 5 km long by 1 km wide and is aligned almost north-south. The landing strip is situated on top of the plateau, at an elevation of 400 feet amsl. The strip is approximately 400 metres in length and is designated north east / south west. The strip is referred to as 06/24, though Runway 24 is orientated 230°(M).

White marker posts defined the sides of the landing strip. At the time of the accident these did not extend for the full available length but were limited to the south west 200 metres of the strip length, being the second half of Runway 24. The markers are placed to give an approximate strip width of 50 metres and a windsock is located to the south of the marked strip. Following this accident the strip markers have been extended to the whole strip length.

The landing strip rises from both ends to an apex approximately in the centre of the strip. Commercial flight guides warn of the hazards from birds and livestock as well as the surface condition, which is variously described as '*rough*', '*quite rough*' and '*rough with rabbit holes and rocks*'.

This was the first of two accidents to occur at Lundy Island airfield on the same day. The second, involving Cessna 172 SE-IYF, is subject to an ongoing AAIB investigation.

Discussion

The pilot had some difficulty in identifying the precise landing area as the strip was unmarked for the initial part of the landing roll and the markers indicated an unusually wide strip. There was therefore considerable choice, in the lateral sense, as to where to land. As the markers were limited to the latter part of the runway their usefulness reduced as the aircraft neared the touchdown point. The pilot actually landed on the right side of the landing area, and although the surface was smooth initially it became "very rough" as the aircraft approached the apex. The pilot reported that the surface was less rough to the left of the notional centreline, although this could not be seen whilst on the approach or during the initial stages of the landing roll.

The pilot believed that he had landed close to the beginning of the available strip length, having cleared a stone wall at the boundary by a minimum safe distance. However, an observer on the ground thought that the aircraft had landed a considerable distance into the strip and at a higher speed than normal. This impression was reinforced when the same observer watched three other similar aircraft land, all of which appeared to him to touch down at slower speed and closer to the threshold of the strip. However, only one of these three aircraft was a RV-4, the others being a RV-6 and a RV-8, and all were flown solo whilst the accident aircraft carried two persons. Additionally, all of these aircraft landed to the left side of the wide strip whilst the accident aircraft had landed to the right. To the ground observer, who was situated to the south of the strip, this may have added to the impression that the accident aircraft had landed further into the strip than the other aircraft.

Conclusion

The pilot was unaware of the extent or severity of the rough ground on the landing surface and considered that his aircraft was unsuitable for the conditions that it encountered.