

REPORT

**Investigation of a paragliding accident
which occurred at Algodonales, Spain
on 19th March 2009
in which the pilot
was fatally injured**

Introduction

On 16th April 2009 the British Hang Gliding and Paragliding Association (BHPA) received reports of an air accident at Algodonales, Spain that had resulted in the death of a paraglider pilot. The BHPA convened an investigation headed by David Thompson to look into the accident and submit a report to the Flying and Safety Committee (FSC) of the BHPA for ratification.

BHPA investigation serial number: IR 09/028

Summary

On the 19th March 2009 a BHPA Club Pilot (novice) rated pilot aged 63 was flying his UP Kantega 2, DHV 1/2 rated paraglider at a site in Algodonales, Spain while on a paragliding holiday. Shortly after 2pm, having been in the air a few minutes and gaining some height, the pilot was seen by witnesses to be in a rapid 'nose down' spiral dive. The pilot did not appear to make any attempt to recover from the spiral or to deploy his emergency parachute. The pilot spiralled down until crashing into the hill amongst rocks and thorny vegetation. The pilot died from his injuries before reaching hospital.

This incident was not reported until four weeks after the event, a delay that seriously compromised the investigation. From the limited evidence the investigation was unable to positively establish a reason for the events on the day though it is suspected that an asymmetric collapse initiated the spiral dive. The investigation therefore concluded that the pilot died from injuries sustained, having spiralled into the ground at high speed.

This Document is confidential until ratified.

Date ratified by the BHPA Flying and Safety Committee: 12th November 2009

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APPENDICES

None

THE STRUCTURE OF THE REPORT

The structure of this report conforms to that recommended in the BHPA Technical Manual and is intended to follow the principles pertaining to AAIB reports. It is divided into four sections plus the Appendices:

Section 1 - Factual information

Section 2 - Analysis

Section 3 - Conclusions

Section 4 - Safety Recommendations

Date: _____ Signed _____

SECTION 1 - FACTUAL INFORMATION

1.1 History of the flight

On Thursday 19th March 2009, shortly after 2pm, the pilot took off from a flying site in Algodonales, Spain. The pilot had arrived in Algodonales with a friend some 5 days before to begin a guided paragliding holiday. The pilot had flown the same site on Sunday 15th towards the start of the holiday during which flight he suffered a large symmetric front deflation which recovered rapidly. He had then completed 3 flying days at Cenes, Granada where the flying weather had been better.

The highly experienced guide and former BHPA paragliding instructor stated that on the days leading up to the incident "*[the pilot] did quite well in the broken thermals at Cenes...and his landings and approaches were good.*"

On the day of the incident there were approximately 20 - 30 pilots already flying in the light thermic conditions. Shortly after 2pm the guide, who had moved away from the launch area to help another pilot whose glider had become entangled in a thorny bush, noted that the pilot had laid out his paraglider in preparation for launch. On looking around again he noticed that the pilot was no longer there and so assumed he had taken off. On 'scanning' the sky he briefly saw the pilot some 100-200m to the left of take off in a spiral dive. The pilot then dropped below the level of the hill and out of the guide's view. The guide stated that it was a 'full' spiral dive with the leading edge of the glider facing the ground. He also states that there may have been a small 'tip cravat'.

A witness who was in the air at the time states that the pilot rotated in the spiral in excess of 8 times (8 times 360 degrees) before the impact and that in his opinion there would have been enough time to deploy an emergency parachute. Two forestry workers stated that they had seen the crash and that the pilot was 'shouting' up to the point of impact. None of the witnesses saw the pilot attempt to recover from the spiral or attempt to deploy his emergency parachute.

The pilot crashed in an area some 200m below and to the left of take off in a very rocky and thorny part of the hillside at approximately 14.15. The guide was first in attendance approximately 15 minutes after the incident; the emergency services had already been called. A helicopter arrived after approximately 45 minutes and at approximately 15.50 the fire service and police arrived. The police transferred the pilot to a stretcher at 16.00 at which point he lost consciousness, stopped breathing and CPR was started. Medics then arrived at 16.10 and CPR

was carried out when necessary for a further hour. At 17.00 more doctors arrived with an ECG and manual ventilator. At approximately 18.30, just over 4 hours after the crash and still about 1km from the helicopter, attempts to revive the pilot were stopped.

1.2 Injuries to persons

Injuries	Crew	Passengers	Others
Fatal	1		
Serious			
Minor / None	-	-	-

1.3 Damage to the aircraft

There is no evidence regarding damage to the paragliding equipment.

1.4 Other damage

N/A

1.5 Personnel information

The pilot was a male aged 63. He had joined the British Hang Gliding and Paragliding Association (BHPA) on 12th April 2005 and gained his Club Pilot (Novice) rating in January 2006. Total hours and hours on type are not known however, a witness has stated that the pilot was a regular costal flyer in his home area and also that he undertook annual paragliding foreign holidays, usually a week in duration. The pilot was described by the highly experienced paragliding guide as being “*methodical though his skills were very much lower intermediate*”.

1.6 Aircraft information

The paraglider was a UP Kantega 2, which is certified by the DHV at 1/2. The harness was a Sup Air ‘Alti-Rando’ lightweight harness. The emergency parachute was a Sup Air Ex-Light (size unknown). A witness who knew the pilot states that the equipment was less than 18 months old and in very good condition.

1.7 Meteorological information

The weather was reported by the guide as being light winds with light thermic activity.

1.8 Aids to navigation

N/A

1.9 Communications

No information.

1.10 Aerodrome and approved facilities

No information.

1.11 Flight recorders

N/A

1.12 Wreckage and impact information

The pilot crashed in an area of the hillside that was steep and covered in rocks and thorny bushes.

1.13 Medical and pathological information

No formal information was available though it is believed the pilot suffered badly fractured legs and may also have sustained a fractured neck.

1.14 Fire

N/A

1.15 Survival aspects

The pilot crashed in an area that was difficult to access being steep, rocky and covered with tall, thorny bushes. The helicopter was not equipped with a winch and so had to land some 1km from the crash site. The pilot was put onto a stretcher by the police and without any form of neck brace. The medics were refused permission to approach the pilot directly, on safety grounds, and eventually reached the pilot after about 2 hours having used a much longer route. The medics carried only basic lightweight equipment and at no point were intravenous fluids administered.

1.16 Tests and research

N/A

1.17 Organisational and management information

N/A

1.18 Additional information

None

1.19 Useful or effective investigation techniques

N/A

SECTION 2 - ANALYSIS

This incident was not reported until four weeks after the event, a delay that seriously compromised the investigation. The report is therefore based on the limited amount of evidence available.

The conditions on the day involved light winds and light thermic conditions. These would be considered as ideal for low airtime pilots wishing to practice their thermalling technique. The paraglider and equipment being used by the pilot were also of a type that would be considered suitable for that level of pilot. Unfortunately the equipment was not available for inspection though there is no reason, given the previous 3 days of flying, to suspect it was not airworthy.

Due to the lack of altitude gained by the pilot in the short period after his take off and his proximity to the hillside it is unlikely that he deliberately entered a spiral dive, by definition, a manoeuvre for losing height quickly. It is therefore likely that the pilot either accidentally entered the spiral having misjudged a 360 degree turn while thermalling, or that he suffered an asymmetric collapse that he failed to properly control resulting in the spiral dive. If the guide did see a small 'cravat' in one of the wing tips then it is more likely that a collapse was the initial cause. Without more evidence it is impossible to say for sure. Spiral dives of this type can generate huge 'G' force and result in downward speeds well in excess of 20 metres per second. This can be extremely disorienting and frightening if the pilot is neither expecting nor prepared for the manoeuvre. Even experienced pilots can become disorientated during extreme spirals. This can lead to a situation where the pilot suffers mental/sensory overload commonly known as 'freezing', especially in low airtime/experience pilots, and may explain why the pilot made no attempt to recover from the spiral or to deploy his emergency parachute. There is no question that the pilot blacked out (possible in high G force spirals) as the pilot was heard shouting by the forestry workers just prior to impact.

The pilot remained alive for between 3 and 4 hours after the incident. It is possible, with more prompt and thorough medical attention, the incident may have been survivable. However, no post-mortem evidence has been made available.

SECTION 3 - CONCLUSIONS

Due to the limited evidence the investigation was unable to positively establish what initiated the spiral dive. The investigation therefore concluded that the pilot died from injuries sustained, having spiralled into the ground at high speed.

SECTION 4 - SAFETY RECOMMENDATIONS

None.

APPENDICES

None.