British Hang Gliding and Paragliding Association

REPORT

Investigation of a paragliding accident
which occurred at Newgale beach, Pembrokeshire,
on Sunday 28th August 2011
in which the pilot suffered fatal injury.

Introduction

On 28/08/2011 the British Hang Gliding and Paragliding Association (BHPA) received reports of an air accident at Newgale beach, Pembrokeshire that had resulted in the death of the pilot. The BHPA is authorised to carry out investigations into serious and fatal hang gliding and paragliding accidents by the Air Accident Investigation Branch of the Department for Transport and to produce reports under its delegated authority. The BHPA tasked Mr David Thompson, BHPA Senior Technical Officer, to investigate the accident and submit a report to the Flying and Safety Committee (FSC) of the BHPA for ratification.

BHPA investigation serial number: IR 11/070

Summary

On the 28th August 2011 a group of paraglider pilots met at Newgale in Pembrokeshire with the intention of flying the local cliff site. At approximately 10.30am the local school CFI gave the pilots present a site briefing. The briefing included a warning about likely turbulence to the north of take-off due to the prevailing wind direction, and that the area should be avoided. At approximately 1.30pm a CP rated pilot, flying an Advance Epsilon 6 paraglider, was seen to be flying north towards the area of the cliffs that had been highlighted as potentially turbulent in the site briefing. While in this area, the glider suffered an asymmetric collapse causing the pilot to lose control and crash into the cliff face before falling to the beach below sustaining fatal injuries. The Investigation concluded that the incident occurred as a result of the pilot flying in an area he had been warned to avoid because of the likelihood of turbulence in the prevailing conditions, and then losing control of his paraglider.

This document is confidential until ratified.

Date ratified by the BHPA Flying and Safety Committee: 14th December 2011

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 three sections.

Section 1 - Factual information

Section 2 - Analysis

Section 3 - Conclusions

SECTION 1 - FACTUAL INFORMATION

1.1 History of the flight

On the morning of 28th August 2011, at approximately 10am, a number of paraglider pilots arrived at a flying site at Newgale beach in Pembrokeshire. The paraglider pilots included the Chief Flying Instructor (CFI) of the local paragliding school accompanied by his students and tandem passengers and a number of qualified pilots. There were approximately 15 to 18 people in all.

At approximately 10.30 the CFI gave a site briefing attended by the students and the qualified pilots present. Pilot A was one of those qualified pilots. The briefing included a warning about flying too low as the wind was off to the north and would result in turbulence downwind of the numerous promontories.

Shortly before the site briefing Pilot A had been in conversation with one of the other qualified pilots. The pilot recalled how he mentioned to Pilot A that he should avoid the rocky spur (Maidenhall Point) to the north of take-off due to the risk of rotor as the wind was off to the north. He stated that he mentioned this to Pilot A as he had experienced turbulence in that area some weeks earlier in similar wind conditions.

At approximately 11am the pilots began flying. It had been agreed that no more than five pilots would fly at any given time due to the limited size of the site.

At approximately 1pm Pilot A launched his paraglider with the assistance of one of the qualified pilots. His launch went without incident. The pilot who assisted Pilot A to launch stated that; "…he looked confident in the air. I kept my eye on him for a while but once I saw him do a few passes up and down the cliffs I took my attention from him."

At approximately 1.35pm Pilot A was seen to be flying along the cliffs in a Northerly direction. It appeared to some as though he was going to attempt a top landing in the take-off area but instead he continued north towards Maidenhall Point. As he continued north he began to lose height and was seen to be close in to the cliff face. At approximately 110 – 120 metres south of Maidenhall Point Pilot A's glider suffered a 50-60% asymmetric collapse. The glider turned sharply and dropped towards the cliff face. Pilot A struck the face of the cliff with some force approximately half way down the cliff. Pilot A appeared to be unconscious and was initially being supported by his glider, which was still almost fully inflated. After approximately 2 – 3 minutes Pilot A started to raise his head but at that point he slipped down the cliff face and fell the remaining 15 metres on to the rocks below.

Pilot A was initially attended by the lifeguards and then shortly after by the air ambulance crew. Pilot A was evacuated to hospital where he was pronounced dead.

1.2 Injuries to persons

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

1.3 Damage to the aircraft

The glider sustained some fabric and line damage consistent with the fall down the cliff face. There was no other damage.

1.4 Other damage

N/A

1.5 Personnel information

The pilot was a 42-year-old male. He began a course of paragliding instruction with a BHPA school in December 2010. He completed four training days in December and reached the BHPA Elementary Pilot (EP) stage on 24th December 2010. On the 9th January 2011 the pilot began his BHPA Club Pilot (CP) training with the same school. His Student Training Record book shows he completed a total of eight days on the CP course before being given his BHPA Club Pilot rating temporary certificate by the school on 14th July 2011. The CP registration documents were never received by BHPA head office and so Pilot A was never formally recorded as a CP pilot. The temporary certificate has not been located. Pilot A had flown at the Newgale site on two previous occasions during his CP training, once tandem with his instructor and once solo.

The incident flight was the pilot's first flight since gaining his CP rating.

1.6 Aircraft information

The paraglider was an Advance Epsilon 6, serial number SN 3329P51147. Apart from the damage sustained in the incident the glider was in 'as new' condition, consistent with this being its first flight. The Epsilon 6 is rated as an LTF 1/2 and would therefore be considered suitable for a pilot of this level.

The harness was an Advance Axess 2 (air), size large. The chest strap had been set to 50cm. The harness was also in 'as new' condition. The harness contained a Gin Yeti (40) parachute, serial number SN Q9888.

The pilot was wearing a Plus Max paragliding helmet with chin guard. The helmet suffered considerable damage.

1.7 Meteorological information

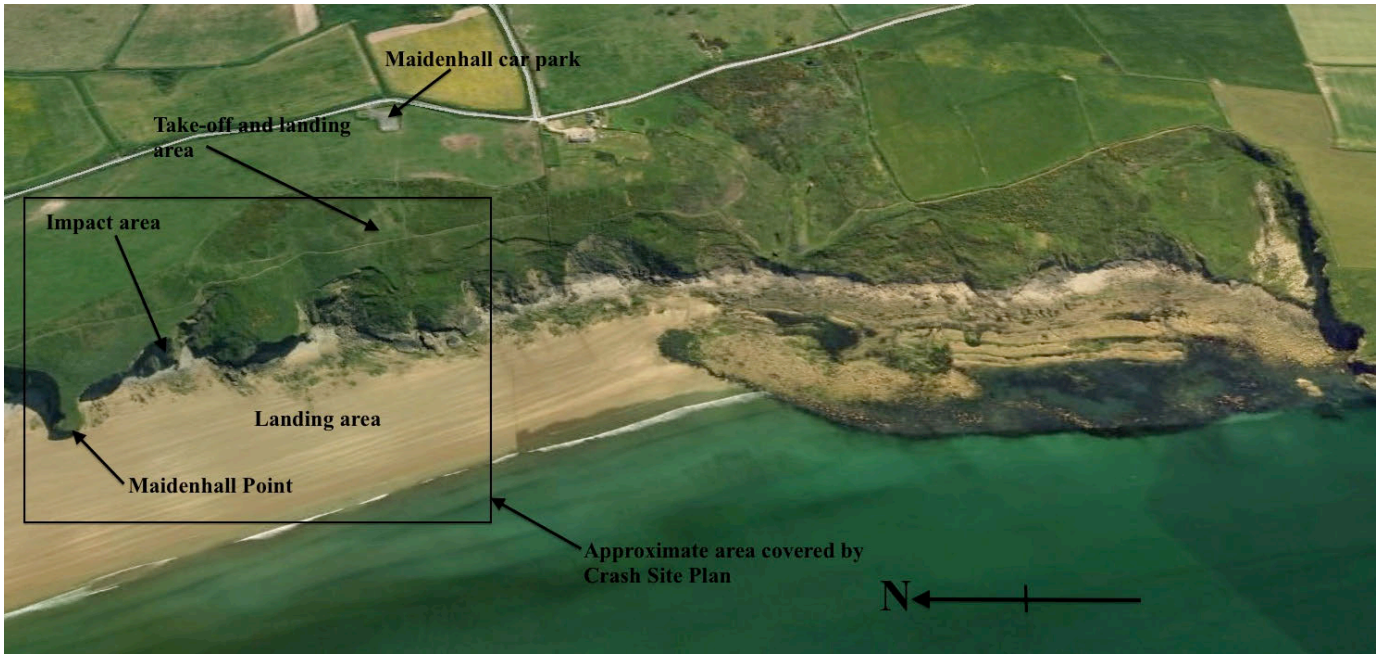
A summary provided by the Met Office states that there was an unstable north-westerly air-flow dominating the area with winds light to moderate. At 13.00h, the observation point at Milford Haven recorded a wind speed of 11knots in a north-westerly direction. Evidence from the paraglider pilots present on the day gives the wind ranging from 12 to 16 miles per hour, picking up briefly to about 20mph at about 12.30 and fluctuating from westerly to north-westerly throughout the day. Visibility was good with prolonged sunny periods and a small amount of cloud cover.

1.8 Aerodrome and approved facilities

Newgale beach occupies the northern half of St Brides Bay in Pembrokeshire. The area used for paragliding is located at the southern end of the beach where the cliffs extend for approximately one mile to the south, and range in height from 15 – 70 metres (see site plan below).

The take-off area is situated on the sloping, grassy area just northwest of the Maidenhall car park. Landing is at the same area or on the beach. The cliffs are generally west facing, though they are undulating with many bowls and gullies. In these undulating areas the cliff can be facing anything from northwest round to southwest.

Site Plan



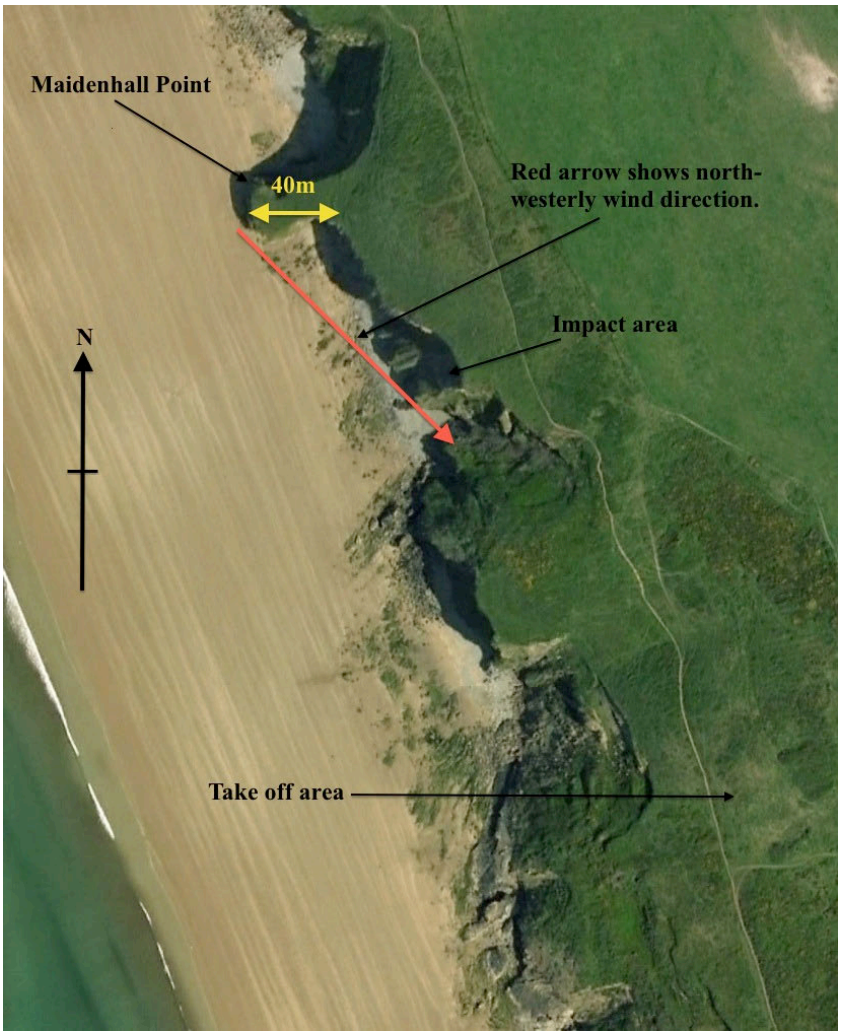
1.9 Flight recorders

N/A

1.10 Wreckage and impact information

The area where the incident occurred lies approximately 100 metres southeast of an outcrop known as Maidenhall Point (see Site Plan below). In this area the cliffs are approximately 30 metres high and face southwest. The cliffs here are steep and have rocks at the base.

Crash Site Plan



1.11 Medical and pathological information

The pilot died as a result of multiple injuries.

SECTION 2 – ANALYSIS

The Investigation considered the training received by Pilot A. The Student Training Record Book (STRB) for Pilot A shows he a completed four days on an Elementary Pilot course followed by a further eight days on a Club Pilot course before being awarded his BHPA Club Pilot rating on 14th July 2011. Twelve days would be considered as average for most pilots to achieve CP level.

BHPA training systems and protocols requires that both the instructor and student sign off the various training exercises in the STRB as they are completed to the required standard. In the case of Pilot A this had been done in accordance with BHPA practice for the EP training but not for the CP. In the case of the CP training the exercises had been signed off by the instructor but not countersigned by Pilot A. After

interviewing the CFI and other students training at that time, the investigation is confident that all the required exercises had been completed. This is also backed up by the fact that the questions relating to asymmetric collapses and other related situations were answered correctly by Pilot A in the CP examination paper. The Investigation looked into why the CP had not been registered. Immediately after being awarded his CP by the school, Pilot A left the UK for approximately 4-5 weeks to carry out his work as an offshore safety supervisor. It is possible that he forgot, or did not have time to send in the CP registration documents prior to leaving for work. The Investigation is confident that the CP was awarded by the school on the 14th July as there is a congratulatory reference to this on the paragliding school twitter page and this is acknowledged by Pilot A shortly after, as well as by a number of other students and pilots. The Investigation does not consider the paragliding training to have been a factor in this incident.

The Investigation considered the currency of the pilot. Pilot A completed his last four days of training within a six-day period leading up to the 14th July. Due to work commitments it was then a little over six weeks before he was able to fly again. At this level of experience, i.e. newly qualified, a six-week lay-off may be significant in that there would have been a level of 'rustiness'. That said, Pilot A did everything right in choosing to make his first qualified flight with his instructor present and at a site he had flown before. The Investigation considers the level of currency of the pilot may have been a factor in this incident.

The Investigation considered the meteorological conditions in relation to the site. On the 28th August 2011 the prevailing wind was northwesterly in direction. That day, conditions experienced at the site ranged from west through to northwest and from 14 to 18mph (and for a short period about 20mph). The site is flyable in these conditions with westerly being the optimum based on the aspect of the hill. That said, if the wind is off to either the north or south then care must be taken to avoid any turbulence caused by the gullies and undulations along the length of the cliffs. In a northwesterly wind the area to the northeast of the red arrow (between the arrow and the cliff face) on the Site Plan would experience severe turbulence caused by the wind coming over Maidenhall Point. This would be extremely dangerous to paragliders, as it would be almost guaranteed to cause the glider to collapse. The fact that witnesses saw Pilot A lose a significant amount of height prior to the incident as he flew north would also indicate that the wind at this time was northwesterly as the southwesterly facing cliff in this area would be producing little or no lift. Pilot A had received at least two warnings about the dangers of flying in the area towards Maidenhall point, one formal at the briefing given by the school CFI, and one informal whilst chatting with one of the other pilots. The investigation can offer no explanation as to why Pilot A chose to fly in this area. The Investigation considered the decision of the pilot to fly in this area to have been the major factor in this incident.

The Investigation considered the actions of the pilot in reacting to the asymmetric collapse. BHPA CP training includes recovering from asymmetric collapses, both in theory and practice. Indications are that Pilot A had covered these aspects of the training. There is no evidence one way or the other that Pilot A attempted to regain control of his paraglider. That said, due to the nature of the turbulence encountered and proximity to the cliff face it is unlikely that the outcome of this incident could have been prevented even with immediate and skilled recovery actions.

SECTION 3 – CONCLUSIONS

The Investigation concludes that the incident occurred as a result of the pilot flying in an area he had been warned to avoid because of the likelihood of turbulence in the prevailing conditions, and then losing control of his paraglider.