
BHPA Incident Report: GBR-2018-5514

INCIDENT

Aircraft Type:	Apco NRG Pro paraglider, size 17.5. Serial number 337112BA. The paramotor was a Parajet Maverick with Moster 185 plus engine. The paramotor appeared to be in very good condition. The parachute was an Apco Mayday 16 SLT, serial number 657082. It was manufactured in 2015 and appeared to be in very good condition. It had not been deployed but was correctly installed.
Certification:	Load test only. Passed March 2015.
Manufacture Date:	February 2015. Glider hours are unknown.
Location:	Pilling, Lancashire.
Date and Time:	Sunday 3 rd December 2017 at approximately 12:45pm.
Type of Flight:	Powered paraglider cross country flight.
Persons Involved:	Powered paraglider pilot – Pilot A.
Injuries:	Internal injuries, fatal.
Nature of Damage:	The engine unit and cage sustained significant impact damage to the upper left side. The left side alloy pivot arm was bent in to the right. The propeller tips were both smashed off. The paraglider appeared to be undamaged by the impact but had been significantly damaged by the emergency services during their attempt to resuscitate the pilot.
Pilot's Rating/Licence:	Pilot A had previously held a BHPA Club Pilot hill rating. He was not a current member of the BHPA.
Pilot's Age:	54
Pilot's Experience:	Pilot A was known to be an experienced paramotor pilot who ran a non-BHPA paramotor training school. His exact hours and current experience are unknown.
Information Source:	Site visit, equipment inspection, witness statements and witness interviews. Met Office aftercast.

Synopsis

At approximately 12pm on Sunday 3rd December 2017 Pilot A took off from a field near Pilling in Lancashire. He flew two or three circuits of the field before heading in a southeasterly direction towards Garstang. After approximately twenty minutes Pilot A was seen to be flying low over a row of houses on the Garstang road, just outside the village of Stake Pool. At this point he was seen to descend rapidly in a spiral from a low altitude and crash in an adjacent field. Pilot A was attended immediately by local residents and the emergency services arrived shortly after. Pilot A was pronounced dead at the scene.

History of the flight

On the morning of Sunday 3rd December at approximately 11am five paramotor pilots arrived at a field close to Ridge Farm near Pilling in Lancashire with the intention of flying their paramotors. After having coffee and discussing the weather conditions two of the pilots, Pilot A and Pilot B, began to set up their equipment in preparation for flight. The others attempted to free the van belonging to one of the pilots that had become stuck in the soft ground.

Pilot A took off at approximately 12:00pm with a good, clean launch having told Pilot B that he was just going for a short flight before returning and flying with the others. Pilot A was not using a GPS navigational aid for this flight. Pilot A flew two or three circuits of the field then headed in a southeasterly direction towards Garstang.

At approximately 12:30pm Pilot A was seen by Witness A to be flying in a southeasterly direction, roughly parallel with the Garstang Road and at a height estimated by the witness to be 30-50m AGL. Witness A then describes how the glider suddenly spiralled from the air. Pilot A was also seen by a second witness to pass at a height of approximately 15m over her grandmother's house on Garstang road with the glider in a spiral, before crashing in an adjacent field. Local residents were quickly at the scene and called the emergency services. CPR was given until the air ambulance arrived. Pilot A was pronounced dead at the scene.

Additional information

Weather conditions

The weather on the day was bright with scattered cloud cover and cloud base in excess of 700m. Witnesses stated that the wind was from the northwest at approximately 8 to 12mph. Those who flew during the time of the incident reported the conditions to be smooth with no turbulence, though the wind at altitude was stronger.

An aftercast was obtained from the Met Office. A summary of the findings is as follows:

"Conditions across the area of interest were generally benign with reasonable cloud bases, good visibilities, and light to moderate north-westerly winds of around 08-11 KT below 500FT.

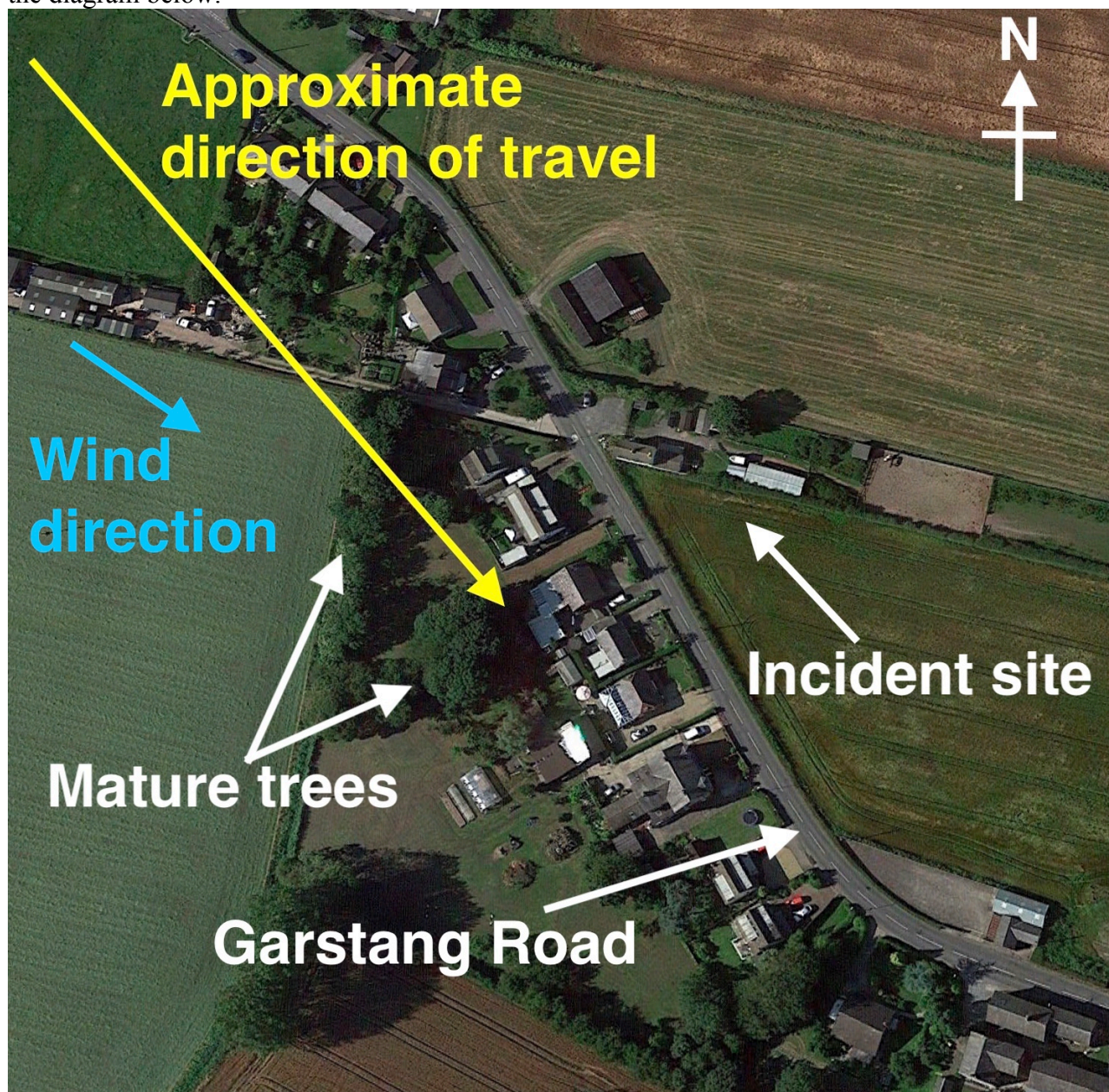
At 5000 FT AMSL, the forecast winds are 350 20 KT, with an air temperature of plus 2 degrees Celsius."

This is in accordance with the statements from the other pilots present. The conditions would be considered suitable for paramotoring.

Incident site

The incident occurred in a flat, rural area with a number of farms and small villages. The area would be considered ideal for paramotoring due to the number of potential take-off and landing areas and the lack of any significant built up areas. There is also little in the way of ground based obstructions likely to cause mechanical turbulence, unless flying at a low altitude. Any obstructions, mainly in the form of buildings and trees, tended to be situated along the line of roads heading into

and out of local villages. At the time of the incident Pilot A was seen to be flying at a relatively low altitude, parallel to the Garstang road. He had just passed a line of mature trees when he was seen to descend rapidly in a spiral. Pilot A's flight path and the prevailing wind direction are shown on the diagram below.



It is possible that Pilot A encountered turbulent air as a result of flying low and on the lee side of the mature trees and buildings, resulting in a loss of control and crash. The turbulence may have been exacerbated by the fact that the trees were downwind of other buildings and trees along the line of the road Pilot A was following.

It cannot be completely ruled out that the incident occurred as a result of a control input initiated by the pilot. However, given Pilot A's experience, it is unlikely that he would intentionally attempt a manoeuvre at low altitude that would increase the risk of a loss of control.

The investigation finds that the altitude of the pilot while flying over and into the lee side of mature trees was a significant factor in this incident.

Apco NRG Pro Paraglider

The glider and motor appeared on inspection to be in very good condition. Due to the nature of the damage sustained in the incident and subsequent efforts of the emergency services, it was not

possible to have the equipment flight tested or checked against the manufacturer's specifications. However, there is no evidence to suggest either the glider or paramotor were not airworthy. The Apco NRG Pro 17.5 has a recommended "all up" weight range of 90-125kg. It is estimated that Pilot A's all up weight was approximately 110kg and therefore within the recommended range.

Apco state that the NRG Pro glider is designed for

"...pilots who have the skills to handle the speed, performance and agility the wing offers.

Previous slalom racing experience and sufficient training is required to safely fly NRG Pro.

The wing is not suitable for beginner leisure pilot."

The wing is designed to be fast and highly manoeuvrable and is aimed at slalom racers and experienced pilots. The dynamic nature of the wing means that collapses can also be dynamic, and extremely demanding for the pilot in terms of recovery to normal flight. As well as requiring a high level of skill, recovery may also require a substantial amount of ground clearance, possibly as much as 100-200m or more. A significant loss of control at low level will almost certainly result in the pilot hitting the ground.

In this instance, given the height at which the incident occurred, the Investigation finds that the Apco NRG Pro glider was a factor the incident.

Findings

The Investigation found that the incident occurred as a result of the pilot losing control of the glider at an altitude that made recovery unlikely, possibly due to flying through lee side turbulence produced by the trees and buildings that lined his route.

Recommendations

None