
BHPA Incident Report: GBR-2018-8069

INCIDENT	Paragliding tandem incident.
Aircraft Type:	Niviuk Takoo 4, size 44 tandem paraglider fitted with Charly Quick-Out quick release karabiners. Niviuk Transat tandem pilot harness. Gin Safari-Passenger harness.
Certification:	EN-B
Manufacture Date:	April 2018. 20 hours.
Location:	Parlick Hill near Chipping in Lancs.
Date and Time:	11 th August 2018, 14:00.
Type of Flight:	Ridge soaring tandem flight.
Persons Involved:	Tandem Pilot, Pilot A. Passenger, Pilot B.
Injuries:	Pilot A suffered damage to his arm and shoulder. Pilot B suffered damage to her hands, arms and shoulder as well as significant spinal damage.
Nature of Damage:	No other damage.
Pilot's Rating/Licence:	Pilot A holds a BHPA Advanced Pilot rating and tandem licence. Pilot B holds a BHPA Pilot rating.
Pilot's Age:	Pilot A - 43. Pilot B - 42.
Pilot's Experience:	Pilot A gained his BHPA Club Pilot rating in September 2007. He gained his Pilot rating in January 2008 and his Advanced Pilot rating in June 2014 with an exam score of 94%. Pilot A gained his BHPA Tandem licence in July 2014. Pilot A is a registered Club Coach with the Pennine Soaring Club. Pilot A states that he has approximately 1500 hours airtime, of which approximately 400 are on tandem. Pilot B gained her BHPA Club Pilot rating in April 2011 and her Pilot rating in March 2013 with an exam score of 96%. Pilot B's hours are unknown.

Information Sources: Statement from Pilot A, statement from Witness A, Met office aftercast, Pennine Soaring Club site guide and Niviuk Takoo user manual. Pilot B was invited to make a statement but declined.

1.0 Synopsis

On 11th August 2018, at approximately 14:00, Pilot A, who was flying tandem at Parlick hill in Lancashire with Pilot B as his passenger, lost control of the glider while kiting the wing back up the hill. Pilot A and Pilot B, who was still attached to Pilot A at the time, were dragged across the slope where they collided with a derelict drystone wall. Pilot B sustained serious injuries.

2.0 History of the flight

On Saturday 11th August 2018 Pilot A and his partner, Pilot B, went to Parlick hill, near Chipping, with the intention of flying tandem together. Pilot A had checked the weather forecast, which reported light winds from the south.

Pilots A and B arrived at the hill at approximately 11:30 and proceeded to walk up the southerly take off. They had approximately 2 to 4 flights where they managed a few beats of the slope before losing height due to the light winds. They slope landed each time and then kited the glider back up the slope while still attached in tandem.

After a further flight, at approximately 14:00, Pilots A and B were kiting the glider back up the southwest slope when they were caught by a gust of wind. They were dragged backwards, slowly at first, and then more rapidly. Pilot A applied both controls hard in an attempt to bring the glider down. They stopped being dragged and the glider was stable above their heads. The wind then picked up and Pilots A and B were dragged across the slope and into a derelict drystone wall. Before hitting the wall, Pilots A and B had rotated, which resulted in Pilot B hitting the wall first with Pilot A hitting into her. They were then dragged over the wall where Pilot A was able to deploy the Quick Out karabiners releasing the paraglider. Realising Pilot B was seriously injured, Pilot A made her stable then phoned the emergency services. The emergency services arrived approximately 40 minutes later, and Pilot B was taken to Preston hospital.

3.0 Focus

Based on the information available, the Investigation considered the site, the paragliding equipment, the weather conditions and the actions of Pilots A and B.

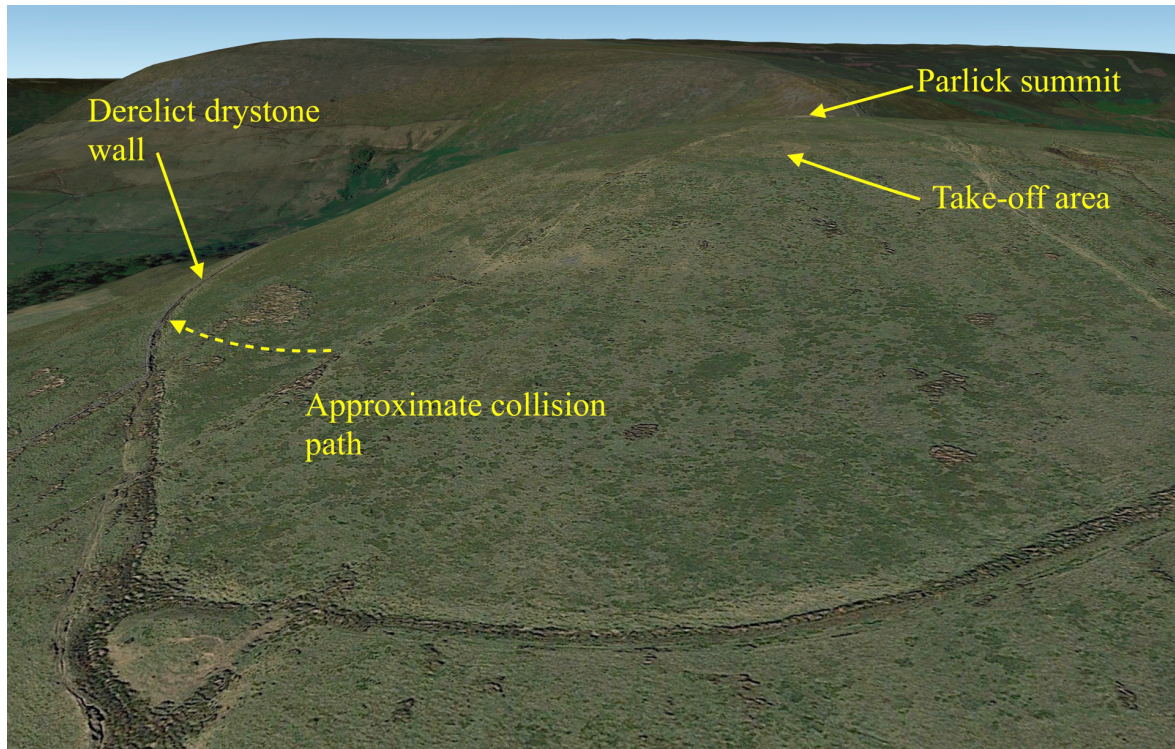
3.1 The site

Parlick hill is a large landmass in the northwest of England. It has an east facing slope running south from Wolf Fell, a south facing slope at the southerly end of Parlick hill and a west facing slope running north from Parlick up to Fair Snape Fell. Parlick sits at a height above sea level of 432m giving a top to bottom of just under 200m. The hill is predominantly covered by moorland scrub with clumps of tussocky grass and is cut into large areas by fencing and drystone walls. To the southernmost end of the westerly face is a derelict remnant of a drystone wall. It is situated approximately two thirds of the way up the slope, running in a north south direction for approximately 200m. It is this wall into which Pilot A and pilot B collided.

The Pennine Soaring Club site guide rates the site as suitable for Club Pilot rated pilots. There are no notable warnings regarding the site other than being aware of potential sea breezes and being careful not to get too close to the saddle area that links the west and east facing slopes when the wind is strong.

The following diagram shows a Google Earth image of the south face of Parlick Hill with the take-off and incident sites noted.

Parlick Hill south face



The following two photos show the derelict drystone wall viewed from ground level, from above and below.

Drystone wall as viewed from above.



Drystone wall viewed from below.



In general, Parlick Hill would be considered as being ideal for both paragliding and hang gliding, though pilots would need to be aware of the presence of features such as walls and fences.

3.2 The paragliding equipment

The Niviuk Takoo 4 tandem paraglider has an all-up weight range of 140-240kg. Niviuk describe the glider as being designed for professional and recreational pilots. At a stated all-up weight of 195kg, Pilots A and B were well within the certified weight range for the glider.

3.3 The weather

The weather on the day was sunny with light southerly winds. The Met Office aftercast summary describes the conditions as follows:

“On the day of the 11th of August 2018, the area surrounding Parlick Hill in Lancashire was initially under a transient ridge of high pressure. This was giving generally settled conditions with little low cloud and good visibility across the area. An approaching warm front would introduce lowering cloud bases with some precipitation, but not until later in the day.

At the time in question, the general conditions at Parlick Hill would be similar to those observed at Blackpool Airport, with respect to the cloud and visibility.

The local wind regime on the day would be a generally light south to southwesterly flow, gradually backing south to southeasterly as the warm front approached the area. Wind speeds would be around 5 to 10 knots increasing slightly in the afternoon, with no indication of Lee Wave or Rotor

activity in the area. The conditions were also indicating a risk of moderate thermals, which would be in the range of 3 to 6 knots.”

Pilot A described in his statement how the tandem flights that day consisted of a few beats resulting in going down and slope landing. Depending on the size of a tandem glider and associated wing loading, an average tandem glider would require a minimum wind speed of approximately 10-12mph in order to gain height and achieve dynamic soaring flight.

Witness A, who is a BHPA Advanced Pilot rated paraglider pilot with 22 years experience, described how he considered the conditions to be too light for soaring flight when he arrived at the site approximately 1 hour after the incident occurred.

Pilot A goes on to describe how he and Pilot B were caught out by a gust of wind while kiting the glider back to the take-off area. This gust was powerful enough for Pilot A to lose control of the glider, resulting in being dragged across the slope. Pilot A goes on to describe how the wind eased and he was momentarily able to regain control of the glider, before the wind picked up again and they were dragged cross-slope into and over the drystone wall. This occurred on the southwesterly slope on the southern end of the hill where the wind would have been flowing around the hill rather than directly up the slope.

It is possible that Pilots A and B were caught out by a sudden increase in the prevailing wind speed that subsequently subsided. It is also possible that they were caught out by a sudden increase in the wind speed caused by thermic activity. It is not uncommon for thermal gusts to suddenly occur, given the appropriate meteorological conditions, and for those gusts to be significantly stronger than the prevailing winds. Depending on the nature of the gust, there may also have been an acceleration of the flow due to the Venturi effect as the air flowed around the side of the hill.

It is noted that the Met Office predicted a risk of moderate thermals. Based on the available evidence, the Investigation considers it more likely that the sudden increase in wind speed was the result of thermic activity.

3.4 The actions of Pilots A and B

Pilot A and Pilot B flew tandem together regularly. They had flown together at Parlick Hill many times. On the day of the incident they had 3 or 4 top to bottom flights, all resulting in slope landings in order not to fly all the way down to the bottom landing field. Having slope landed they would then kite the glider back up to take-off while still connected in tandem. This was their normal practice.

Kiting a glider back up the hill is a common practice among paraglider pilots. It is frowned upon at busy sites because of the possibility of the kited glider getting in the way of others who are airborne and/or are in the process of taking off or landing. It requires a good level of glider control and feel for the prevailing conditions. Kiting a glider while in tandem requires a greater level of glider control as the passenger has to be accounted for. There is a risk of tripping over one another on the uneven terrain due to the closeness of the pilot connected to the passenger. In this case there were no other pilots present on the hill and both pilots concerned were experienced and well practised in kiting the tandem glider together.

Pilot A stated that when he first lost control of the glider he was not unduly concerned as they were being dragged backwards but not quickly. When they began to be dragged more quickly Pilot A applied both brakes and was able to bring the glider to a halt. The glider was now stable above their heads. Pilot A stated that at this point he considered deploying the Quick Out karabiners but decided not to as he considered that they were now under control.

On being dragged the second time Pilot A was unable to regain control of the glider until after they collided with the drystone wall. Being on the southwest face of the hill meant it was likely that Pilot A and Pilot B were dragged more quickly than if they had been on the south facing slope, due to the air flowing across rather than up the slope. On regaining control, it was apparent to Pilot A that there was a problem as he had suffered an injured arm and

presumed that Pilot B was also injured. At this point Pilot A was able to deploy the Quick Outs and attend to Pilot B.

4.0 Findings

The Investigation found that the incident occurred as a result of Pilot A losing control of the tandem paraglider and being unable to regain control before colliding with a derelict drystone wall. The Investigation considered that the loss of control was a direct result of Pilot A being caught out by a gust of wind, while kiting the glider back up the southwest face of the hill, which was considerably stronger than the prevailing wind conditions.

The Investigation considered that the injuries sustained by Pilot B were exacerbated by the fact that, just prior to the impact, Pilot A and Pilot B had rotated meaning Pilot B hit the wall first and was then struck by Pilot A.