Attachment to a zip wire failed

The Issue

A participant in a zip wire activity became detached from the system at a height of approximately 8 metres from the ground. The participant landed on all fours on soft ground, remarkably sustaining only bruises. The attachment system, utilised without incident for 36 years, uncommonly uses only improvised harnesses, as in the photo left below.

![Photo of an improvised harness and karabiner](image)

Outcome

In essence there appears to have been a miss-clipping of the doubled sling that attached the participant to a karabiner on the zip line cable. The sling should have been threaded through the harness with a twist so that in the event of just one loop being clipped, the sling would ‘larks foot’ preventing detachment.

At the time of the incident it is likely that there was no twist in the sling. Also, rather than clipping in the second loop, it passed through the karabiner and was held in place by the boys hands grasping this tail and the attached loop of the sling for support below the karabiner. There were therefore 2 errors. However, to an observer the attachment would appear to be correct as hands would hide the loose end. The instructor responsible for checking the attachment failed to notice something was amiss.

Several factors may have contributed to this incident. The relative complexity of harness and means of attachment, the excitement of the moment, the positioning of the participant’s hands, and the relative inexperience of the instructor responsible for the attachment of participants to the zip line.
A simplified single sling attachment is now used, with a further backup unweighted attachment to the zip line.