

Water Landing Safety Section update:

Safety excerpt by Iain Clarke SAFA, and COM's SPHGC, April 2023

We have seen a couple of pilots ditching their paragliders into the sea due to poor weather conditions. So, it may be time for a review on the dos and don'ts if it looks like you are heading for a water landing.

The Civil Aviation Orders are quite clear that you must maintain a safe distance to glide back to land. There are several other conditions, depending on what type of aircraft you are flying. Here are the links for [CAO 95.8](#), [95.10](#) and [95.32](#). You are looking for the sections headed Flight Conditions.

If you are going to fly over water get as much altitude as you can and try to stay within gliding distance of a suitable landing area.

Failing that, for all aircraft avoid the surf. If it looks like a water landing is unavoidable and you are near a beach, avoid the surf line and land outside of any breaking water. The surf is turbulent, and you can be pulled over when you try to stand up, even if it is shallow.

What gear should you carry? A hook knife that is easily accessible is always recommended. PFDs are not always recommended for hang gliders and Weightshift Microlight aircraft. PFDs come with automatic and non-automatic inflation mechanisms. The auto-inflation mechanism relies on a small bead dissolving in water, releasing a spring-loaded pin that punctures the gas cylinder. The time to inflate can vary between 10-30 seconds. In a hang glider it may trap you under the sail. In a weight shift microlight it may wedge you into the wreckage.

Assuming you have clear water there are a couple of things to think about and prepare for. When you land, you will be faced with a chaotic environment. You may go under before returning to the surface. If the water is cold, you will probably experience a convulsive gasp which can cause you to inhale water and very quickly lead to drowning.

The actual water landing itself presents different hazards for our different aircraft. For hang gliders, there are a couple of techniques that will improve your chances of survival. If time permits, stand in the control frame and unclip the harness, lean back to slow the glider and weight shift side to side to direct the glider. Drop into the water just before touchdown. The helmet and harness are both floatation devices as they are lined with closed-cell poly-foams, however, the harnesses have large foam areas behind the feet and may up-end the pilot.

If time does not afford the above technique, prepare by unzipping your harness, get ready to unbuckle your leg straps and land outside the surf zone with a strong flare, rather than having the A-Frame force the nose in. Unbuckle your leg straps and swim away.

If this is not possible, immediately move to the back to get your head above the surface behind the trailing edge for your first breath. The glider generally lays flat on the surface for some time as air is trapped in the sail and tubes. Follow your hang loop forward with one hand and undo your carabiner, exit the glider at the rear. It may take several attempts to get the carabiner both undone and unhooked. Non-hooking carabiners are supplied with some harnesses as standard fitment and are ideal if you often fly along the coast.

We recommend testing and rehearsing the extent of your rearward movement and/or unhooking capability during your next hang check whilst someone has the nose of your glider.

Weight-shift microlight aircraft present very real hazards in these situations, as there is no safe way to ditch due to the wing being so high. When the pod hits the water, it stops so quickly that the wing will fly at speed into the water. This pushes the control bar back

against the pilot's chest or abdomen. Next, the wing will snap at the keel and each side of the wing will fold around the Trike pod. This makes it nearly impossible for you, the pilot, to get the wing control bar forward and it will make it extremely hard for you to get out.

Do not forget that the aircraft will be sinking rapidly, and you will still have to get your seat belts and communication cables detached. If you do, you will then have to navigate through all the wires and wing sail and find your way up to the surface, which will be challenging. The other thing to be mindful of is the clothes you are wearing. A standard trike flight suit could weigh as much as you do once wet.

If you are flying a paraglider, your wing will likely fill with water and sand and will try to pull you under or out to deeper water. A paraglider harness could possibly flip you over and force you face-down in the water, because it has foam protection or an inflated airbag. The wing suspension lines can potentially ensnare you and you could become entangled. All this while you are trying to keep your head above water and breathing.

Powered paraglider rigs also present their own hazards. The fuel tank will tend to float you face-down when empty. The fuel though is lighter than water so must also be treated as a buoyant structure. Flotation bladders can be fitted to the shoulder straps that will assist in keeping your face out of the water.

You can prepare for an imminent water landing in a few ways. Make sure your hook knife is easily accessible and ready for use if required. As you get very close to the water, start unbuckling your harness; if you have leg-straps leave those to last. Just before impact, roll forward out of your harness into the water, allowing your gear to fly on past you.

Recently the NSWHPA was successful in obtaining some grant funding from the NSW Office of Sport for the development of a Paraglider Water Rescue Training video, intended for use among the Surf Life Saving Community.

The **Sydney Paragliding and Hang Gliding Club (SPHGC)** was directly involved with the Surf Life Saving Sydney Northern Beaches branch (SLS SNB) in the development of the rescue techniques and the production of the video. It has been a big effort on the part of these

organisations to get to the final product. The video was developed so that SLS personnel would understand some of the hazards and challenges in rescuing a paragliding pilot who has landed their aircraft in the ocean. It is not aimed at the education of pilots in avoiding and managing a water landing but there is still some value in paragliding pilots, indeed all pilots, viewing the video to gain some appreciation of the difficulties involved.

The NSWHPA have made this video available, and you can view it [here](#).

[Paraglider Water Rescue Video](#)

But remember that if you can, don't land in the water! Instead, maintain a safe distance to glide back to land at all times.

More rescue video links:

[Water Landings: Paraglider Safety by Jocky Sanderson](#)

[Paramotor: Water Crash and Rescue – Ryan Irwin](#)

The following Safety Gear has been tested and it's concluded that in the event of an unfortunate water landing it's best to have one than not.

PFD's

[Crewsaver 165 - Inflatable type](#)

[Yak Blaze 50N PFD](#)

Hook Knife:

[Mystic Hook Knife 2.0 with safety pouch:](#)