

# Introduction to white water safety

## Planning and Preparation

Making a safe decision on where to go is a very important part of being a white water paddler. It is essential to choose a river that matches your own skills and abilities as well as the skills, experience and needs of the others you will paddle with. Initially it can be challenging to work out where the best places to go might be, so paddling with more experienced people will be very helpful. Speaking to other paddlers about the river and the white water features you will encounter can also be a good source of information, but do consider that their experience and skills may be different to yours. Consider the information that you have access to as a paddler to help you make your decisions.

## Guidebooks and River Information Online

There are numerous guidebooks available which have detailed information about white water rivers. Much of this information is also available online and can be used to help with your planning. Do bear in mind that this information is intended to be a guide and that your experience of the river may well be different to that in the description and, in some situations, the river may have changed since the guidebook was written.

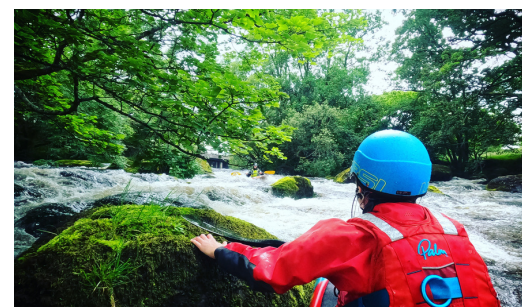
## Weather Forecasts and Recent Weather

Some rivers rise and fall quickly, whereas others can stay at higher levels for a prolonged period. Understanding the impact that current and previous rainfall will have on your intended venue is integral to your preparation and being able to check the weather report close to the time of your paddle is very helpful.

## Water Levels

It can be difficult to know what level a river is if you are unfamiliar with it, as simply looking at it may not give you all of the information you need. Whilst there are visual clues that we might be able to pick up, such as the colour of the water being muddy and the water level being higher on the banking, having accurate information will help you to make your decisions. This information is available at a range of sources online and there are paddler-specific apps that you can download on your phone which will give you clear and current information.

If you are not sure where to paddle, paddling with a club, organised group or a white water leader/coach could be a great way to help you get out on the water safely.



# Your clothing, equipment and craft

When we get ready for white water paddling, we want to make sure that we have considered the environment we will paddle in and the situations we may need to overcome. Our craft should be set up, checked and ready to go on the river and we need to be ready to perform rescues as well as potentially be rescued ourselves. Alongside the clothing and equipment choices we make, we should ensure that we dress as “clean” as possible, by removing or minimising any loops, loose webbing or equipment which could become caught in the white water environment.

## Your Personal Flotation Device (PFD)

A PFD designed for the white water paddler is typically high buoyancy, is strong and durable and often has additional features such as large pockets for kit storage. It is essential that it fits well and does not ride up on the body when paddling or swimming. Ensure that your PFD has the correct markings to show that it meets the minimum legal requirements such as CE/EN-ISO.

## Drysuit/Wetsuit/Top and Bottoms

Drysuits are a very popular option for the white water paddler as they are warm, durable and keep the water out very well. Wetsuits are a great alternative if you are starting out, but tend to be less warm for a white water paddler in colder temperatures, but can be very durable and long lasting. Separate top and bottoms can be some of the most versatile layers to wear and can be really comfortable to paddle in, however, if you swim the water will work its way between the layers. If you are swimming on multiple occasions, separate tops and bottoms tend to not be a very dry option.

## Helmet

A good fit is critical when choosing a helmet for white water. It is essential that there is minimal movement in any direction when the helmet is worn and it should give coverage of the front, back and sides of the head. Bear in mind that not all helmets are constructed the same and some helmets will feature greater impact protection and structural integrity. Ensure that your helmet has the correct markings to show that it meets the minimum legal requirements such as CE/EN-ISO.





## Footwear

We need to be able to perform a lot of different tasks in our footwear including moving on the river bank, swimming in the river and, of course, paddling. If we are assisting with a rescue, we may need to get out of our boat quickly and onto rocks that could be slippery. Having good ankle support and traction on the sole will be very beneficial in this situation.

## Phone and Keys

When you carry these items on the river, make sure that they are with you rather than in your boat. If you do take a swim, you could risk losing these essential items which could leave you stranded and unable to call for help. Keeping these items in a purpose-made waterproof pouch or case and storing them somewhere that they won't fall into the river when you open your PFD pocket is a really good idea.

## Knife and/or Rescue Saw

Whilst we do everything we can to prevent needing to use our knife, if we do need to use it we want it to work well. Your knife should be stored somewhere that is easily accessible (most PFDs have purpose made knife pockets) it should be able to be opened easily with one hand and the blade should lock in place in use. You should aim to regularly check your knife to make sure that it is sharp and rust free and that it still functions as you would intend it to. A rescue saw can also be essential in some situations which may involve needing to cut wooden parts of a canoe, or required to remove wooden debris from the river.

## Throwbag

Having a throwbag easily accessible to use during a bank based rescue can give you other options when supporting other paddlers on the water. The bag should be free of any large loops/handles at the rescuers end and should only have a loop big enough to clip a karabiner to at the bag end. Checking that the rope is tied securely into the bag and that the rope is in good condition will help to maintain this piece of rescue equipment.



## **Tapes and Karabiners**

Some rescues require the use of a simple tape and karabiner and depending on the situation they can be used for a wide range of tasks on the river. We should store our tape and karabiner in a pocket so that we don't risk losing it or becoming tangled in it when we paddle. The most practical karabiners for white water are the larger HMS style ones with a screwgate to make the karabiner lock. It can also be a good idea to have a second, spare karabiner in a pocket which gives you additional options during a rescue.

## **Whistle**

Whilst we don't do it very often, being able to attract attention if you need it can be very helpful. There are many different whistles available for paddlers and are usually made of solid plastic which makes them more durable and suitable for the water.

## **Packed in your drybag**

Most paddlers will take a small drybag out onto the water with them when they paddle. Not only can it be a great place to store some snacks or a drink, but it would be worth considering having things like a first aid kit, group shelter and some spare clothing with you in case you need them. A conversation with the people you are paddling with about what you have in your boat is a really good idea before you start any paddling trip.

## **Paddling a Canoe or Kayak?**

Check that the kayak is comfy (but not too tight) and that you can get in and out of it easily. If you are paddling a canoe, make sure that you can easily remove your feet and legs from underneath the kneeling thwart. Check that any fittings haven't worked loose over time and that all handles are still solidly attached.

## **Paddling a SUP?**

If paddling a SUP on white water it is essential that the leash is removed completely from the board. Any non essential bungees and tie down straps on SUPs should be removed to reduce the risk of being caught in the event of a swim.

## **Airbags**

Fitting airbags into a canoe/kayak will make any rescue significantly easier and helps to protect your boat from damage as it will float higher in the water (remember you can also fit airbags into the bow of a kayak by removing the footrest). Paddlers from all canoe and kayak white water disciplines should use airbags as you can end up needing a rescue even if you are in a competition or at a managed "park and play" type venue. Airbags will always make better flotation for canoes and kayaks than foam blocks for moving water. They are lighter and can fill the space in your boat better making rescues simpler. When it comes to choosing the size of an airbag, bigger is always better as the more water you can displace the easier your boat is to recover.

## **Mark your contact details on your craft**

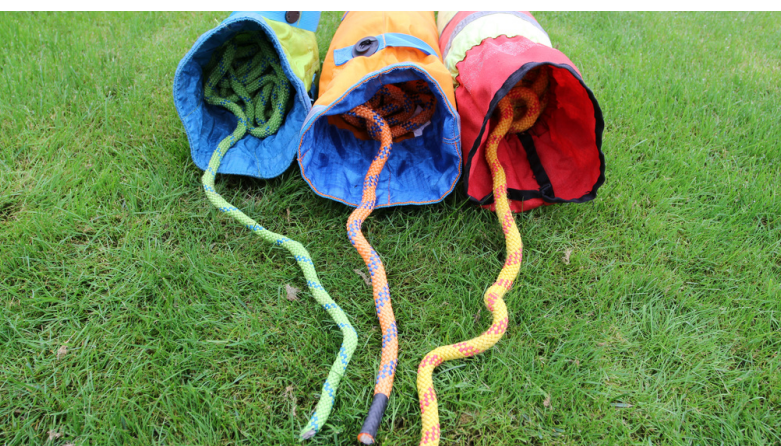
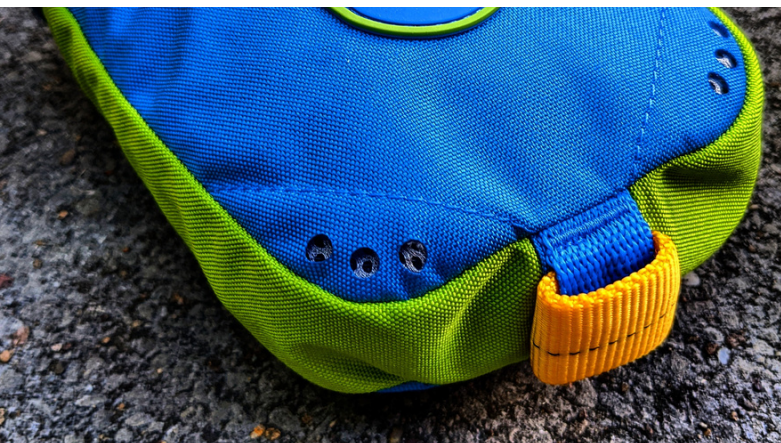
Putting your name and contact information somewhere on your boat or board can be helpful if you do end up losing it on the river during a swim.



# Safety fundamentals

## The Clean Principle

Keeping a clean profile with your kit and equipment on white water is an essential principle to adhere to. This means being aware of any loops or snagging points that might be present on our kit and equipment and removing them or reducing them where we can.



We can apply the clean principle in these areas:

### Our clothing, equipment and craft

- Any karabiners carried should be kept in closed pockets on your PFD;
- Any tapes should be stored in a pocket;
- Phones and keys should be stored in a pocket;
- Loops on shoelaces should be kept to a minimum;
- Remove your leash if paddling a Stand Up Paddleboard on white water as the risk of entrapment is very high even if using a quick release waist belt;
- If paddling a canoe, ensure that any swimlines, painters or ropes used in the canoe are stored securely away from the paddler;
- In a kayak, ensure that your footrest is suitably in place as per the manufacturer's recommendations, it is essential that it is secure and that your feet cannot move past or underneath it;
- When carrying a throwline, we should ensure that it only has a small loop or attachment point at the bag end which only needs to be big enough to clip a karabiner to. At the end of the rope, any handles should be removed and the line should be knot free throughout.



# Your priorities on the water

Following this simple protocol can help you to make decisions on the water and to keep yourself and others safe.

## Self

Remember, you are the most important person and you cannot help others if you are not safe. Do not put yourself in unnecessary risk during a rescue.

## Team

The safety of the team is next most important and we can typically work together to help in a rescue if required.

## Casualty

The person requiring any help or assistance on or in the water comes as our next priority. It is understandable that we want to give our attention to someone who is in need, but it is essential that we do not put ourselves in danger when we offer assistance.

## Equipment

Looking after or recovering kit and equipment is lowest on our list of importance. In many situations on white water, the recovery of equipment can actually be quite straightforward and if we prioritise it in this order, we can reduce the risk to ourselves and others.

In most normal paddling situations, we can manage all of these priorities quickly and effectively on white water. Using this protocol, all paddlers can look to take responsibility and ownership of their own actions and, if able, can play a part in a rescue.





# Safe paddling

## Communication

Paddling as a group requires effective communication and talking about the plan for the river trip before you start goes a long way to avoiding issues.

At times we may need to use signals, especially if we have a large obstacle such as a rock, or a corner that we cannot see around.

Usually we can keep our signals simple, and often only need to be able to signal the following things:

- Stop in an eddy
- All go
- One person go
- Come to me
- Go this way

Whatever you decide to do, the key is making sure everyone knows what the signals are and understands their use.

## Line of Sight

It is essential on the river that everyone can be seen by someone else at all times, however, we don't have to actually be able to see every single group member. It is preferable if we can all see each other constantly, but realistically this can't always happen; therefore, we maintain line of sight through the group. This means that, as a paddler, you can always see another paddler (either below or above you) and that you are never left out of sight from the rest of the group. If a group of paddlers are all mindful of this principle, it is very easy to maintain.

## Avoidance

A common theme through everything we do on the water is to avoid unnecessary hazards and risks. This could mean portaging a rapid that you think might be above your skill level, taking a line of less risk/consequence on a section of white water and keeping vigilant for hazards and obstacles. Before you start your paddle, take time to discuss with your group about the potential hazards that you might face and how you might deal with them if they arise.

## Positioning

Whenever we paddle as a group on white water, we can all be in useful positions, even if we are being led by someone else and/or we are not that experienced. The most useful place for a more experienced paddler could be in an eddy ready to assist with a rescue and those with less experience could be waiting close by to give support if they can. Even being on the bank to relay a signal back up a longer rapid could be a very useful place to be and, of course, from this position you may be able to help with a rescue.





# Moving as a team on whitewater

When we are running the river, we may come across a rapid or feature which means that we need to change the way in which we are paddling as a group. Typically, this will be when the river increases in difficulty, has additional hazards or becomes steeper or narrower. When we are challenged by these features, asking the following questions can be very helpful:

- Can I see the required route on this rapid?
- Can I paddle this line (and have I paddled something like this before?)
- Can we put safety in place to help if required?
- What are the consequences if I swim (and what is the likelihood of this happening?)

Typically, with a simple change in our tactics, we can manage challenges presented by white water very easily.

Our options for paddling as a group on whitewater might consist of:

**All go** – Nice and quick for easy water.

**Paddling in smaller groups** - This is more controlled than everyone paddling at the same time, but still quick.

**One at a time** – Great for when we want to look after just one paddler on a more challenging rapid.

**Eddy hop** – Useful to slow things down and maintain line of sight.

As we will have a variety of skill levels in the group, we may find that we may be able to change or adapt our approach for individual paddlers or to raise/lower the level of challenge as required.





# What to do when we swim

In any situation on the river, you are always the most important person. Having the mindset that you can get yourself out of the river and actively do something about your own rescue will be very helpful for yourself and those around you.

## Swimming Defensively

As soon as we are in the water we need to act quickly to get ourselves to safety. Initially we want to stabilise ourselves by swimming on our back with our feet downstream in a defensive position, keeping all of our body to the surface as much as we can. We do this because, if we try to stand up in moving water, we are putting ourselves at risk of entrapment which could quickly become a serious situation. By keeping our body (feet, hips, hands) up by the surface of the water we reduce this risk and we should only attempt to stand up when we are in calm/still water by the bank. Having our feet downstream means we can use our legs if we need to fend off rocks or obstacles that we cannot avoid.

## Changing Direction

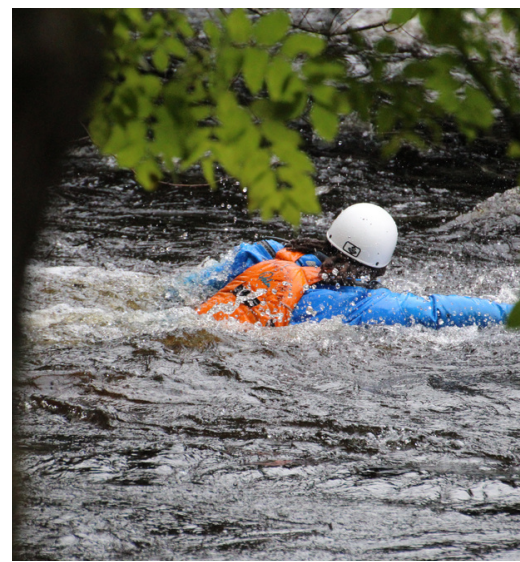
When we want to change our direction in the flow, we must avoid dropping our legs or arms low into the water. We bring our knees higher up towards our chest and use our arms to change where our body is pointing towards. Once we are pointing towards where we want to go, we can go back to the defensive swimming position or, if required, roll onto our front to swim aggressively.

## Swimming Aggressively

When we see the eddy (calm water) we want to swim to, we will need a burst of momentum to get us across the turbulent water that divides the flow and the eddy. To do this, we roll onto our front and adopt an aggressive swimming position. We continue to focus on keeping our body (including our hands) up near the surface of the water as we did when we were defensively swimming. Our angle is absolutely critical to our success and we shouldn't be afraid to swim directly across the eddyline towards our goal. It is important that, in this situation, we don't actually swim headfirst downstream as we will have nothing to absorb any impact from head-on collisions with rocks.

## What to do Once you are on the Bank

Once you have made it to the side, remember to keep moving down the bank to help recover your boat. Do be mindful of your own safety when you are travelling quickly down the riverbank as you don't want to put yourself at further risk.





## Receiving a Throwline

If we do receive a throwline from a bank based rescuer, we want to simply turn on our back into the defensive swimming position and hold the rope tightly across our chest. At this point it is then the rescuer's job to guide us into an eddy where we can get out of the water. Holding the rope in this simple position helps to avoid the risk of entanglement during a rescue.

## Using a Canoe Swimline

A swimline is an adaptation to the set-up of your canoe, which gives you the potential for a self-rescue on moving water.

A throwbag is attached to the strong point at the end of the canoe with the rope positioned ready to be deployed. Throwbags used for this purpose are typically longer bags with thicker rope and they are often 20 metres or more.

In the event of a capsize, a canoeist can flip their boat over, place their paddle in the boat, grab the rope from their swimline and head to shore. Once at the side they can make themselves stable and use the rope to recover the boat into an eddy downstream.

There may be times where a canoeist would not want to grab the swimline as it could cause further complications or risk entrapment. It is normally most effective on a deep rapid where the bank is close to hand with eddies to swim into.





# What if there is an emergency?

If there is a serious emergency on the water, being able to manage it and call for help is critical:

- Consider where you decide to land on the bank, it may be easier to gain help from one side or the other;
- Locate yourself on either a map or through using your phone/gps;
- Use your mobile phone to call for help (you could also blow your whistle to attract attention). Call emergency services giving clear information about your situation;
- Be mindful of keeping the casualty warm as well as yourself. What do you have that could help with this? A group shelter can be really helpful in this situation;
- Consider the difficulty that the emergency services may have in accessing your location. Is there anything you can do to help them find your position?



## Other helpful resources

There are many more resources which may be helpful to you, available at the British Canoeing Awarding Body Website

[Safety Resources](#)

[Leadership & Raft Guide Resources](#)

[Digital Library](#)