

## BCU Environment Definitions

Where wind strengths or wave heights are mentioned these are as forecast, as it can be expected they may be encountered during the session/journey.

### Very Sheltered Water:

Quiet canals with easy bankside access and egress; small lakes, which are not large enough, and do not have difficult landing areas for problems to occur if there is a sudden change in conditions; specified sites on gentle, slow moving rivers. The definition implies weather conditions which are not in themselves likely to cause problems. Care must be exercised when water temperatures are low. At any point the paddler will not be >50 metres from the bank

### Sheltered Inland Water:

Flat water rivers, faster flowing, but not involving the shooting of, or playing on weirs or running rapids. Discretion and commonsense must apply when considering the use of lakes/lochs. To operate further than 200 metres from shore on a large lake can be a serious undertaking. To paddle in offshore breezes on large lakes requires the same degree of caution as for the sea. Water temperature (especially in Scottish lochs) must always be a consideration. Suitable lagoons or sections of sheltered bays of larger lakes can sometimes be designated "Sheltered" or even "Very Sheltered" water by careful and sensible selection. The definition implies normal conditions. Care must be exercised when water temperatures are low.

### Sheltered Tidal Water/Sea:

Small enclosed bays, where there is minimal possibility of being blown offshore; enclosed harbours, where there is minimal possibility of being blown offshore; defined beaches (a short section of beach with easy landing throughout, no tide races or overfalls beyond the beach), in conditions in which swimmers and beach craft could be happily operating winds not above force 3 (force 2 if offshore when greatest of caution must be exercised); the upper reaches of some suitable, slow moving estuaries during Neap tides. In all cases the wind and weather conditions must be favourable.

### Moderate Inland Water:

Large areas of open water which exceed the sheltered water definition, that are no more than 500m off shore and in wind strengths that do not exceed force 4.

### Moderate White Water:

Grade 2 white water or equivalent weirs. (This is extended to Grade 2(3) when using whitewater spec Kayaks).

### Moderate Tidal Water/Sea:

The definition involves: A stretch of coastline or estuary in close proximity to the shore, with available landings at every 1-2 miles / 1 hour and areas where it is not easy to land. Up to a maximum of 2 knots tide but not involving, tidal races, or overfalls, winds not above force 4 beaufort sea state 4 (if offshore the greatest of caution must be exercised), or the upper reaches of some estuaries; launching and landing through moderate surf.

**Moderate Surf:**

Beaches that are free of significant hazards (strong rips or undertow, tidal streams, rocks or groynes). An area of beach must be marked out to contain the group and prevent any loss of communication. The area selected must not interfere with other beach users – swimmers and surfers in particular; small to moderate waves – 3 feet maximum.

**Measurement of surf;** The “surfers” measurement is used throughout both this document and the BCU awards in surf. This is also used by surf forecasts obtained from telephone surf lines, the internet or wave buoys. It is in feet and refers to the ride-able mid section of the wave, not the peak to trough height. As a bench mark “4 feet “ is head height for a board surfer and on an average British beach break would provide conditions only suitable for the most experienced and capable kayak surfer. A swell of 6 inches to 1 foot is both appropriate and more than adequate for any novice group. Intermediate kayak surfers would find 2 feet of surf more than suitable for a learning experience.

**Wave Character;** The physical height of a wave is only part of the picture. The following factors all individually have a profound effect on a wave but combined can change swell dramatically; wind direction and strength; beach shape; type of break; height and state of tide; swell character (age, period, speed). All of these contrive to make 1 foot of swell a potentially serious and dangerous environment to take inexperienced client groups into.

**Advanced Inland Water:**

Large areas of open water which exceed moderate water and have winds in excess of force 4.

**Advanced White Water:**

Grade 3 white water for canoe. Grade 3 to 4(5) for kayak.

**Advanced Tidal Water/Sea:**

Any journey on the sea where tidal races, overfalls or open crossings may be encountered, which cannot be avoided; Sections of coastline where landings may not be possible or difficult; difficult sea states and /or stronger winds (force 4 or above), launching and landing through moderate surf.

**Advanced Surf:**

The surfing of reefs, points and offshore features; surfing from beaches where the surf height exceeds 3 feet or where stronger winds, cold conditions, rips, long shore drift, rocks or other potential hazards are involved.

## Definition of River Grades:

The International river classification of difficulty is used for white water grades (see below), with brackets used as per many modern guidebooks.

- Grade 2: Free passage. Irregular stream, irregular waves. Medium rapids, small stoppers, eddies, whirlpools and pressure areas
- Grade 3: Route recognisable. High irregular waves. Larger rapids. Stoppers, eddies, whirlpools and pressure areas. Isolated boulders, (small) drops and numerous obstructions in stream
- Grade 4: Route not always recognisable. Heavy continuous rapids. Heavy stoppers, whirlpools and pressure areas. Boulders obstructing stream, big with undertow.
- Grade 5: Inspection essential. Extreme rapids. Stoppers, whirlpools and pressure areas. Narrow passages, steep gradients and drops with difficult access and landing.
- Grade 2(3): The overall standard of the run is grade 2, but there may be a few (normally one or two) grade 3 rapids that can be easily portaged if required.
- Grade 4(5): The overall standard of the run is grade 4, but there may be a few (normally one or two) grade 5 rapids that can be easily portaged if required.