



# Severn Bore



**Safety Guidance for Surfers, Canoeists,  
Small Craft and River Bank Users in the  
Upper Severn Estuary**

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## **1. Welcome to the Bore**

In 1955 Colonel 'Mad Jack' Churchill slipped his hand made 14ft surf board into the River Severn and prepared to do something extraordinary and ground breaking – he was about to become the first person to ever surf a tidal bore. After sliding down the steep mud banks he waited alone in the seemingly tranquil river for a wave that travelled up from the sea. A single wave but with but one with amazing strength, for unlike ocean waves that are energy moving through still water, the bore wave is actually the head of a great slab of water 12 miles long , thundering up the Severn. Before the Bore the river flows to the sea, afterwards the river reverses and flows inland for an hour before it slacks and retreats with amazing speed.

Things have changed since Jack's day. There are now many people surfing the Bore in all sorts of craft from belly boards, short boards and longboards. More recently, canoeists, high-powered craft and rigid-hulled inflatable boats have added to the numbers of people who gather on the water to experience the Bore waves. Times have changed but the challenge and dangers from the tide are still the same.

This guide has been produced to warn surfers, canoeists, users of other craft and river bank spectators of the many hazards which may be encountered and advise how some of the pitfalls might be avoided. Be very aware that Bore surfing is not to be taken lightly. Even with experience it is testing and potentially dangerous. There are no lifeguards to pull you out if you get in trouble.

Your safety is your own responsibility.

We hope that this information, which includes contributions from well-respected local river users, will help maintain continued safe, responsible and considerate use of the river.

## **2. Environmental Considerations.**

Much of the River Severn and its estuary is protected by to a number of international and national environmental designations. These include Special Protection Area, Ramsar and Site of Special Scientific Interest citations. The estuary has also been recommended as a possible Special Area of Conservation.

These designations extend seawards from a line crossing the river between Fretherne and Awre, and bore riders are advised not to venture further downstream than Hock Cliff thereby avoiding any potential for, or perception of, impact on the designated areas.

### **3. Be Prepared.**

A thorough knowledge of the area in which it is intended to surf, canoe or use a boat is essential. Much of the area can be viewed from the shore from the roads and footpaths on each side of the river.

Visit the area at low water to see where the deeper water lies and where the higher patches of sand and mud are located. This will give you an idea of where the wave might break. Look out also for obstructions such as rock outcrops, remains of vessels and fishing equipment which may be seen at low water but which may only just be covered at the time the Bore moves through.

The strength of the currents should not be underestimated. Before the arrival of the Bore, a very strong downstream flow exists in the river.

This is particularly significant around Newnham where it will be difficult to paddle straight across the river. You are going to be swept downstream quicker than you can imagine, in currents stronger than any you may have experienced in the ocean.

That is only part of the problems which may be encountered, for when the Bore arrives the incoming water fights the out going current and produces a turmoil of whirlpools, stoppers and powerful confusing currents. If caught in this kind of water, there is one thing to remember – relax! You are never going to overcome the strength of the tide so just accept where it is taking you and use your wits and local knowledge to avoid obstacles and obstructions. You will eventually end up on the bank but not necessarily where you wished.

Weather forecasts are readily available from various sources; use them and be aware of the effects of pressure and wind direction on the timing and height of the wave. Low pressure and SW winds can increase the size of the wave and speed it up making it arrive earlier. The reverse is true with high pressure and northerly winds.

Fresh water levels affect the height of the wave significantly. Lots of rain can make the wave in the estuary end of the river, near Newnham, bigger. But it will be then too deep upstream to produce a wave. Conversely, low water levels can diminish the estuary wave but produce impressive clean faces upstream.

#### **4. Access to the River.**

There are very few points which offer easy access or exit from the river. Slipway access is privately owned and the consent of the owners should be sought. There are no public slipways, and most access is over the river bank which will be very muddy and often rocky and slippery. Slips and falls are commonplace; a twist or sprain in this environment, particularly when carrying a board or canoe, could have serious consequences.

It is strongly advised that attempts to access the river should be avoided at the following locations:

- Hock Cliff - dangerous rocks are a hazard to all.
- Arlingham - deep mud and soft sandbars may be fine for those afloat but are treacherous for those walking. Stay on the grassy bank to watch.
- The Strand/Westbury - dangerous rocks will give problems to those trying to exit the river.
- Minsterworth Church - Church Rock is a notorious danger where the wave breaks into very shallow water over the rocks.

## **5. Hazards – Refer to diagrams on pages 8 and 9.**

**NB This list is not exhaustive and relevant local knowledge and experience should be obtained**

### **Spectators**

Spectators should be aware that standing close to the edge of the river may result in a soaking, or worse, as the wave passes. After the wave has passed, river levels rise rapidly and will continue to do so for some time.

### **Sandbanks**

It is most inadvisable to walk out onto sand banks. Soft or ‘quick’ sand may be encountered, and there is no guarantee that what was firm one day will be firm the next. Finding yourself struggling in soft sand or mud as the wave approaches is an unpleasant experience and may turn out to be your last.

Surfboarders are also advised that standing on sandbanks to wait for the wave can be dangerous, and it is better to wait in water deep enough to remain afloat.

### **Bore Riders and Boaters**

Bore riders and operators of small craft should be aware of the following:

#### **Between Hock Cliff and Epney (refer to diagram on page 8):**

The channel between Hock Cliff and Epney is ill-defined, flowing through drying sandbanks, and it dries in places. Depths vary considerably, with numerous shallow areas. Navigation is thus uncertain and may be dangerous.

During spring tide and Bore periods, the flow of the incoming tide is strong, covering the sandbanks rapidly which can lead to a risk of small craft being pushed onto the banks and overturned.

During spring tides the river level at Epney may rise by up to 4 metres within an hour. Of particular importance are the following:

- There is frequently an extensive area of soft sand or quicksand **(1)** on the Arlingham shore opposite the Priory (Hamstalls Channel)
- The main channel remains close to the Forest shore for five miles upstream of Box Rock **(2)**. There are many submerged rock outcrops and to be safe it is best to be at least 15 metres from the bank.

- At low water there is a significant mid-channel rock formation **(3)** just below the surface about 400m above the entrance to Bullo Dock
- Surfboarders should be aware of the potential for dangerous sands at the Newnham to Arlingham old ferry crossing **(4)**, where mobile sandbars are very treacherous. The sand here can also be soft and will easily trap an unsuspecting walker. There is little chance of escape if you sink below knee level.
- An outcrop of rock extends from the shore at Hawkins Pill **(5)**, midway between Newnham and Broadoak.
- A significant steel obstruction associated with a fishery extends from the shore 50m above the White Hart public house **(6)**. Surfboarders and canoeists are advised that at this point they should be at least 40m from the bank.
- In the remainder of the run to the Strand at Westbury **(8)** and through Broadstone towards Priding there are many large rocks.
- Significant remains of old vessels and large pieces of concrete with exposed steelwork are occasionally visible by those seeking a “shortcut” through the Stype channel **(7)**, **(9)**.

# Locations of significant hazardous areas, Hock to Epney



## **Between Epney and Stonebench (refer to diagram on page 10):**

Above Epney, the river is constrained by its banks and flows are nearly always downstream except near spring tides. Depths vary considerably, with numerous shallow areas including those at Stonebench and in the Eastern and Western Partings.

During spring tides, an in-going stream of up to 1½ hours may be experienced between Framilode and Gloucester from ½ hour to 2 hours after the time of high water at Avonmouth.

During spring tides the river level at Minsterworth may rise by up to 2½ metres within an hour and at Llanthony up to 2 metres in a similarly short time.

The following areas are of particular significance:

- Strong eddies, often forming whirlpools, are likely to be encountered as the river narrows above Longney Sands **(10)**
- A shallow, rocky area exists at **(11)**
- Between **(11)** and **(12)** and opposite Elmore Back is a stone loading chute with supporting structure which extends into the river
- Church Rock **(12)** is immediately adjacent to Minsterworth church and is a notorious danger spot as the wave here breaks into shallow water onto the rocks
- Throughout the area, overhanging trees, their branches and roots may be found at the riverbank
- Rocky areas and steep, muddy river banks may be encountered throughout the area.

**Locations of significant hazardous areas, Epney to Stonebench**



## **Between Stonebench and Maisemore:**

- In the Western Parting, a large rock exists mid-channel beneath the Over railway bridge. It is very shallow here and small craft should keep slightly to the starboard side of the centre of the channel.
- Immediately above and adjacent to Over railway bridge on the left bank, five steel cylinders have been driven into the river bed to protect the bridge.
- The river can become congested as it narrows; be aware that boats have been observed at speed in the confined waters in the vicinity of Over Bridge and the Parting.
- The abutments of Over road bridge project into the water which may lead to a need to take avoiding action.
- A great deal of fast-moving waterborne debris often accumulates in the section between the above bridges.
- Be very aware of the location of the weir at Maisemore. As the weir covers, the currents in this area will become extremely strong making exit from the river very difficult.

## **6. On the water.**

Once in the water, remember that prolonged immersion will result in hypothermia. It is essential that your exit is planned to ensure that you can do so quickly and without struggling.

Be aware that a great deal of debris may often accompany you on the tide. Wooden pallets, gas cylinders and heavy tree trunks and branches (often almost completely submerged) are usual.

As the favoured areas for surfing are closer to the banks, be very wary of overhanging trees and branches, of roots and of being lifted into the bank by the wave. Leashes have been known to become entangled, with obvious consequences.

In shallow areas, there may often be very little water ahead of the wave, and some of the obstructions referred to Section 3 above will barely be covered. This is equally significant for the operators of boats – it can be very difficult to estimate the depth of water available in some areas, and any craft touching the bottom is liable to be swamped or rolled over.

Remember that large waves also form behind the head of the Bore (see *photo*) and it is possible to lose sight of swimmers, prone surfers and canoeists.

When off the board, surfers should always avoid remaining in the middle of the river channel where they may be hidden from view of powered craft following the waves behind the Bore.

It is foolish and dangerous to operate boats or other craft in a manner which might endanger the lives of others in the water.



*Photo by kind permission of Mark Humpage – [www.mhweather.co.uk](http://www.mhweather.co.uk)*

Canoes and kayaks can be very unstable whilst on the wave and can end up broaching (sideways on) and out of control. In the narrower areas of the river and when there are high numbers of bore riders, the risk of collision is bound to increase.

Surfing at night is discouraged. Due to its rural nature the area can be particularly dark, and locating a person who was trapped or in difficulty would present problems. If night surfing is undertaken, additional precautions must be taken and a light of some kind carried to aid conspicuity.

**NB. The operation of Personal Watercraft is prohibited in the river upstream of Sharpness Point (see Byelaws).**

## 7. Gloucester Harbour Byelaws

Following a full and comprehensive consultation period involving representatives of river users and other stakeholders, the Trustees promoted Byelaws to control and regulate navigation in the Gloucester Harbour on the grounds of safety. The Byelaws were confirmed by the Secretary of State for the Environment, Transport and the Regions on 16 October 1998 and by the Secretary of State for Transport on 10 May 2006. The Byelaws apply throughout the Harbour area. The main points for users of the upper Severn relate to the need to:

- observe the 12 knot speed limit (except when waterskiing in the designated area),
- comply with the International Rules for Preventing Collisions at Sea (the ColRegs),
- navigate the vessel with care and caution and in such a manner as not to give grounds for annoyance to the occupants of any other vessel nor cause damage or danger to any other vessel, person or property,
- understand that, for the purposes of the Byelaws, "vessel" means ship, boat, raft or water craft of any description and includes non-displacement craft, seaplanes and any other thing constructed or adapted for floating on or being submersed in water (whether permanently or temporarily), a hovercraft or any other amphibious vehicle, and
- **understand that the operation of Personal Watercraft (i.e. any craft that is propelled by a waterjet, steered by handlebars and designed to be ridden on rather than in) such as Jetskis, Seadoos and Waverunners is prohibited in the river upstream of Sharpness Point.**

## 8. A Code of Conduct

*The British Surf Association has issued a Code of Conduct which has some relevance to bore surfing, and an adapted version is provided here for your guidance.*

- Novice surfers should not ride the Bore and any surfer should, before attempting to ride the Bore, gain local knowledge and familiarise themselves with the environment and potential dangers.
- All surfers should be able to swim at least 50 metres in open water.
- Ensure that you are covered by Public Liability Insurance for surfing.
- Keep your surfing equipment in good condition.
- Always wear a surf leash to prevent you from losing your surfboard (or bodyboard). For you your board is a safety device, to others it may be a lethal weapon.
- Have consideration for other water users including anglers, canoeists and swimmers.
- Never surf alone or immediately after eating a meal.
- Never surf at night.
- Be sure that you are aware of hazards.
- Always be sure that there is no-one obscured from view ahead of you.
- Never paddle across the river channel, particularly below Over Bridge, when powered craft are navigating.
- Never mix surfing with alcohol or drugs.
- Always wear a wetsuit.
- Wear protective headgear.
- Be considerate of other river and shore users especially when carrying your board to and from the water.
- When paddling out avoid surfers who are riding waves.
- When taking a wave see that you are clear of other surfers. Remember, if someone else is already riding the wave you should not take off.
- Be environmentally friendly. Always leave the river and other areas as you would wish to find them.

## 9. Popular places to surf and watch.

A large bore will often attract large crowds of viewers. Please respect the resident population and park your car sensibly so as not to cause obstruction or damage in the narrow lanes. Please keep to the public footpaths and roads as the adjoining land and accesses are privately owned.

While not so spectacular, the incoming tide and developing bore can be seen in the upper estuary at such places as Epney, Newnham and Fretherne, where times are 20, 60 and 85 minutes before Minsterworth respectively.

If you do intend to view the bore, keep strictly to the public roads and do not use vantage points which require walking on farmland, gardens or private driveways.

The bore can be observed from several locations which can be reached by road. The most popular of these are shown below.

West bank:

- Newnham on Severn. Park at the car park to the north of the village. The wave here can be good. It is usual to wait for the tide on the sand bar in the middle of the river. This means paddling across a strong current, especially in the winter months. It is a popular spot so look out for fellow surfers and such unexpected hazards as quick sand.
- The Severn Bore Inn on the A48. Park in the pub car park. The wave breaks around the bend down stream on the opposite bank. The wave here can be head high in good conditions but it gets very busy so be careful. It is easy to get swept into the bank and caught on trees.
- Minsterworth – the village has limited parking , but there is parking at the nearby Severn bore pub on the A48
- Over Bridge on the A40 outside Gloucester. The adjacent bridge can be used as a view point, but parking is limited and the main road fast and dangerous. As the wave rarely breaks all the way through the complex of three bridges, it's best to avoid disappointment and danger by getting in well above the bridges. There is a small layby on the road to Maisemore. This is usually full but gives a reasonable start point for the final straight. It's possible to surf for over a mile from here. A path leads down to the rivers edge. With luck it's possible to ride all the way up to Maisemore weir.

- Surfing near the weir is very difficult and can be dangerous. Good advice is to look out for the weir once the bridge at Maisemore has been passed. As soon as it is seen, pull off the wave and paddle for the bank. The currents here are some of the fastest on the river.

East bank:

- Weir Green – limited car parking.
- Stonebench – road is narrow with passing places, so parking is very limited.

None of these places are really suitable for more than a relatively small number of people, and it is the responsibility of individuals to ensure that they use the road in accordance with the law and the Highway Code, and with care and consideration for other road users.

**The Trustees have taken all reasonable care to ensure that the information contained in this publication is accurate. However, no warranty or representation is given that the information contained in it is complete or free from errors or inaccuracies, or that surfing or boating in the vicinity of the bore is free from risk. To the extent permitted by applicable laws, the Trustees accept no liability for any loss or damages or expenses of any kind. Anyone surfing or boating in the vicinity of the bore does so at their own risk.**



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