

Bell Weir weir refurbishment

Issue 1

15 January 2026

We are going to be carrying out an extensive refurbishment of the weir complex at our Bell, Weir lock and weir complex on the River Thames in Egham, Surrey. At a total cost of £22m, the work will ensure the weir continues to help us manage the level of water in the river to support:

- **safe navigation of the river by recreational and commercial boats**
- **provision of drinking water**
- **the river's ecology**
- **managing the risk of flooding**

What do weirs do?

The very earliest forms of weirs in the Thames were simple barriers installed to trap fish or to raise water levels to power a mill. Modern weirs are substantial and sophisticated structures, carefully engineered so that water levels upstream of them can be raised or lowered for the purposes listed above. Some weirs are solid barriers with no moving parts, and some have adjustable gates in them. Most weir complexes on the Thames, including the one at Bell Weir, are a mixture of both.

In all, the Environment Agency owns, maintains and operates 44 lock and weir complexes along the 135 miles of navigable non-tidal river Thames, and one on the River Kennet where it joins the Thames at Reading in Berkshire. They are operated by specially trained staff from our River Thames Waterways department.

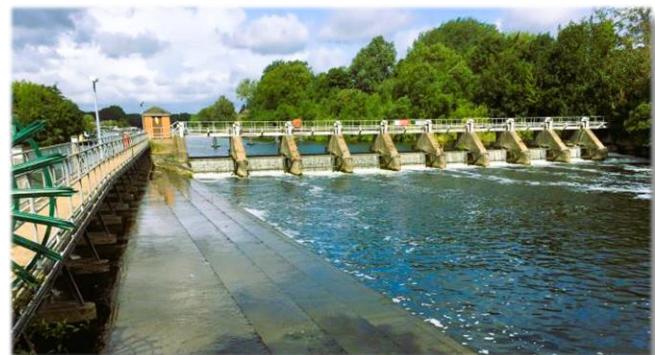
The weirs at Bell Weir

Bell Weir's weir complex is comprised of a 'fixed crest' weir, and another weir with 10 adjustable 'radial' gates – 9 large, and one small.

The fixed crest weir is a 50m long solid wall. It raises the level of the water until it reaches the point where it flows over the top. The radial gate weir is referred to as the main weir. Each gate in

the main weir can be adjusted individually to allow fine control of the upstream water level.

The radial gates in the main weir are shaped like the arc of a circle, with the convex curved section facing upstream. This design makes it easier for the gates to move through the water. Arms on both sides of each gate extend back to the operating mechanism, which raises or lowers them as required. Radial gates are our preferred type of gate for the non-tidal River Thames, due to their effectiveness and reduced risk of being blocked by debris – such as fallen trees – compared to other types of weir.



Bell Weir's fixed crest and radial gate weirs

What does the work involve?

Bell Weir's weir complex had its last major refurbishment in 1967. Almost 60 years on our regular structural surveys, through which we monitor its condition, have shown that it is now in need of another extensive refurbishment. This will be a major and complex engineering project.

We will replace all 9 of the large radial gates in the main weir, the walkway structure over them and the mechanical and electrical operating equipment. We will also modify the fixed crest weir, mechanising the operation of the 'summer boards' which we use to raise the height of the weir during dry spells, enabling us to hold back more water. This will make the process safer for our staff and more efficient.

The small radial weir gate will be replaced with a new multi-species fish and eel pass.

This will allow fish and eels to migrate to areas either upstream or downstream of the weir where food, shelter and spawning conditions may be more favourable, helping to increase the number, spread and diversity of fish and eel populations in the Thames. The design of the new large radial gates has been modified to ensure that the weir complex retains the same overall water level management capability as before.



Much of the weir's structure is now suffering corrosion

When and how will work be done?

We plan to start work in spring 2026 and complete it by autumn 2027. Our contractor will start setting up the site in February 2026. We will replace no more than two weir gates at a time, so that we can still continue to manage water levels. When weir gates are to be replaced, we will install a dam around them and pump out the water so that work can be carried out safely in dry conditions.

We will establish a temporary construction compound with access to the river at Runnymede Pleasure Ground. Vehicle access will be from the A308 using an existing entrance to the car park.

We will also establish a smaller, satellite compound on the southern bank next to the weir. We will use barges to transport construction machinery and materials by river.

Bell Weir lock will remain operational throughout.

There will be some disruption while work is being carried out. This will include a small increase in traffic, the visual impact of construction equipment and our presence at Runnymede Pleasure Ground. We will, however, do all that we reasonably can to reduce any disruption while we carry out this essential work.

Unfortunately, we will need to temporarily divert the Thames Towpath (Thames Path National Trail) at Runnymede Pleasure Ground while work is being carried out. We do apologise for the unavoidable inconvenience this will cause, but at the same time, we are excited about upgrading your local weir complex to ensure it helps us manage water levels in the area for many more years to come - to manage flood risk, maintain a good habitat for fish and other species, and to support all forms of boating.

More information

There is more information about the work we are carrying out online at: <https://bit.ly/3YE3OuB>

Alternatively, use the QR code below:



The information online will be updated regularly. We will also send out updates to this newsletter when there is significant progress to report, or developments to make you aware of.

Contact us

If you would like to contact us about any aspect of our work on Benson Weir, please email us at enquiries_thm@environment-agency.gov.uk. You can also phone our National Customer Contact Centre on 03708 506 506 (Monday to Friday, 8am to 6pm).

Thank you for your understanding and co-operation.