

# Detailed guide: The Thames Barrier

*Updated:* New information added 8 October 2018.

The Thames Barrier is one of the largest movable flood barriers in the world. The Environment Agency runs and maintains the Thames Barrier as well as London's other flood defences.

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The Thames Barrier

## **Forthcoming scheduled closures**

The Environment Agency operates the Thames Barrier every month for maintenance and testing. Once a year, they also test the barrier at a high spring tide (normally September or October). They may begin closing and re-opening the gates up to an hour before the times listed below.

- Thursday 11 October 2018 9:15am to 11:45am
- Tuesday 13 November 2018 9:35am to 12.05pm
- Thursday 13 December 2018 9:45am to 12:15pm
- Thursday 10 January 2019 9:05am to 11:35am
- Monday 11 February 2019 10:10am 12:40pm

- Tuesday 12 March 2019 9:45am to 12:15pm
- Tuesday 9 April 2019 9:55am to 12:25pm

Very occasionally, the Environment Agency may need to change or cancel a closure at short notice. Please call the Thames Barrier to check: 020 8305 4188.

## Forecasting closures

The Environment Agency receives information on potential tidal surges from weather satellites, oil rigs, weather ships and coastal stations. They can forecast dangerous conditions up to 36 hours in advance, and will close the barrier just after low tide, or about 4 hours before the peak of the incoming surge tide reaches the barrier.

They get information from a range of mathematical computer models that forecast expected sea and river levels. This is supplemented by data from the [Met Office](#) and real-time information provided by the [UK National Tidegauge Network](#). This hydrological and meteorological data is fed into the control room every minute from a wide network of tide, river, pressure and wind gauges.

The decision to close, or not, is based on a combination of 3 major factors:

- the height of the tide (usually a spring tide) measured at the Thames Estuary
- the height of the tidal surge, which naturally accompanies each tide
- the river flow entering the tidal Thames, measured as it passes over Teddington Weir

Find up-to-date data for river and sea levels at the [Thames Estuary](#) and [Teddington Weir](#).

The barrier has no individual trigger level for closure. The closing process is guided by a mathematical matrix that considers the river flow, tide and surge at the time. The final decision for closure lies with the Thames Barrier Duty Controller.

## How the Thames Barrier works

The Thames Barrier spans 520 metres across the River Thames near Woolwich, and it protects 125 square kilometres of central London from flooding caused by tidal surges. It has 10 steel gates that can be raised into position across the River Thames. When raised, the main gates stand as high as a 5-storey building and as wide as the opening of Tower Bridge. Each main gate weighs 3,300 tonnes.

The barrier is closed under storm surge conditions to protect London from flooding from the sea. It may also be closed during periods of high flow over Teddington Weir to reduce the risk of river flooding in some areas of west London including Richmond and Twickenham.

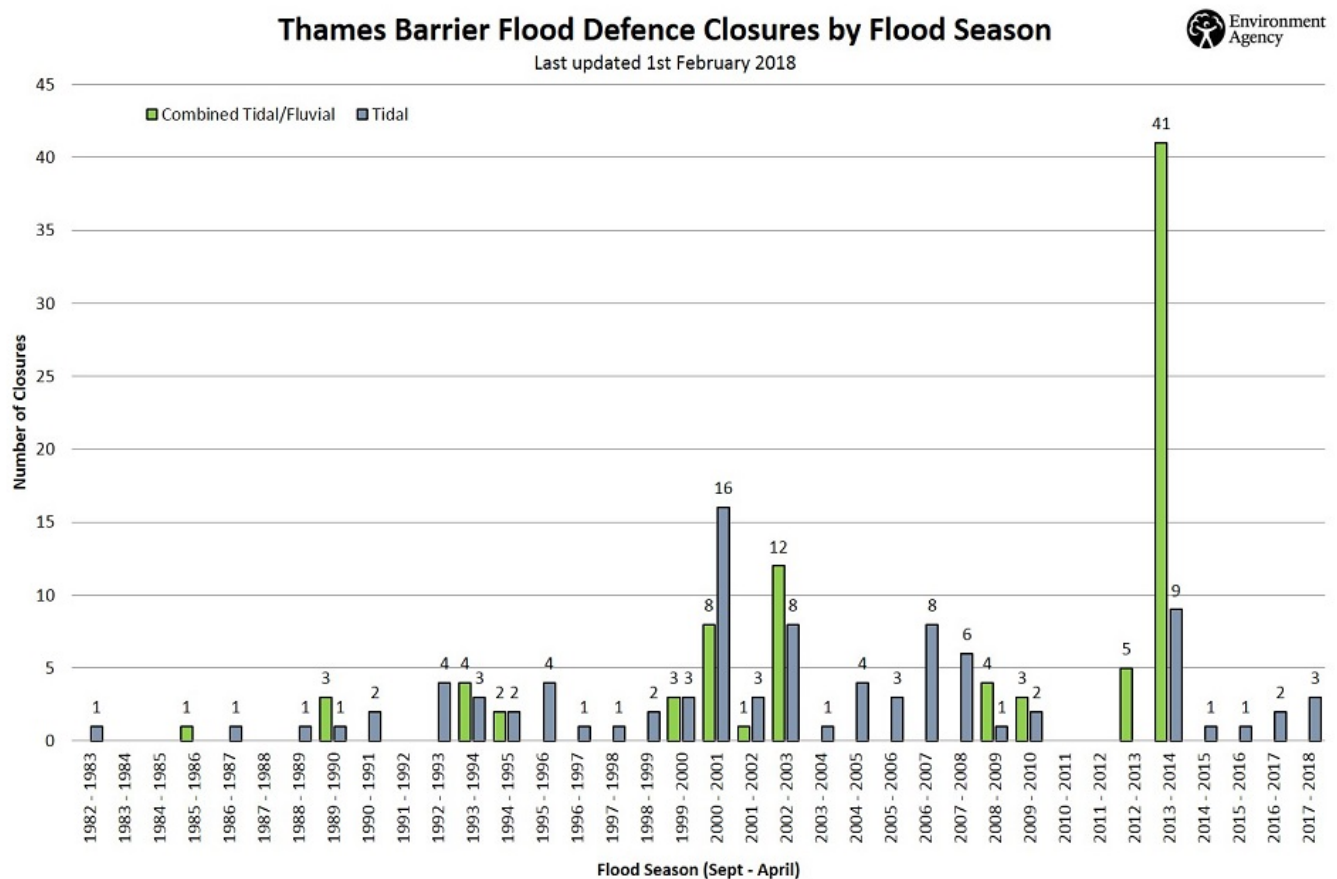
The Thames Barrier will then remain closed over high water until the water level downstream of the Thames Barrier has reduced to the same level as upstream. This is a managed process to provide for different circumstances, and takes about 5 hours. The Thames Barrier is then opened, allowing the water upstream to flow out to sea with the outward-bound tide.

You can watch a video that shows how the Thames Barrier works:

[a video of how the Thames Barrier works](#)

## Thames Barrier closures

The Thames Barrier has been closed 182 times since it became operational in 1982 (correct as of February 2018). Of these closures, 95 were to protect against tidal flooding and 87 were to protect against combined tidal/fluvial flooding.



Thames Barrier closures since 1983 as of February 2018.

If you have an enquiry about the Thames Barrier, or would like to receive a project pack, email: [kslenquiries@environment-agency.gov.uk](mailto:kslenquiries@environment-agency.gov.uk).

## The future of the Thames Barrier

The Thames Estuary 2100 plan sets out how flood risk will be managed in the Thames estuary to the end of the century and beyond. It also recommends what actions the Environment Agency and others will need to take in the short term (the next 25 years), medium term (the following 15 years) and long term (to

the end of the century).

The plan is based on current guidance on climate change, but is adaptable to changes in predictions for sea-level rise and climate change over the century.

More information can be found on the [Thames Estuary 2100 page](#) .

## Visiting the Thames Barrier



Tripadvisor 2017 certificate of excellence





New Thames Barrier cafe and information centre

The centre has an additional conference room and improved outdoor seating area, which allows the Environment Agency to offer more availability for group talks and conferences. This new room has additional cover for winter group talks. For more Information call 0208 305 4188.

Thames Barrier price list

[Thames Barrier Information Centre price list 2018](#)

(PDF, 137KB, 1 page)

Thames Barrier conference rooms leaflet

[Thames Barrier conference rooms leaflet](#)

(PDF, 1.79MB, 2 pages)

**The Environment Agency is currently upgrading the disabled lift, and the lift is out of service as of 4 September 2018 meaning there is restricted access to the Café. However, entrance to the Information Centre downstairs and toilets is still possible.**

Please check opening times.

Date	Open	Last entrance to Information centre	Closed
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Thursday to Sunday, 3 September to 21 October 2018	10am 4:30pm	5pm
Monday to Sunday, 22 October to 28 October 2018	11am 3pm	3:30pm
Thursday to Sunday, 29 October to 3 April 2019	11am 3pm	3:30pm

- Please note that the Information Centre and Café will be closed on 18 October 2018 due to uninspected maintenance occurring on the roads around these facilities.

This webpage will be updated once the new lift is completed. The Environment Agency apologises for any inconvenience this may cause.

## Group talks

Once a month you can pre-book onto guided tours at the Thames Barrier  
[Booking form 2018](#)  
(PDF, 151KB, 3 pages)

. Please note, due to security, there is no access onto the Thames Barrier structure itself. It is not suitable for children under the age of 5. This offer is not available to groups over 5 people.

You can now book a group tour with afternoon tea  
[Thames Barrier group talk and afternoon tea 2018](#)  
(PDF, 385KB, 1 page)

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On the first Sunday of each month you can pre-book onto a guided group talk.. Due to popular demand, there is the option to add a vintage cream tea to your group talk with no minimum numbers.

Guided group talk and entrance to the information centre only £6.50 PP  
(approx one and half hours)

Guided group talk and cream tea £19.50pp (approx two and half hours)

Full payment is required in advance when you call to book your date. To book, email [thamesbarrierenquiries@environment-agency.gov.uk](mailto:thamesbarrierenquiries@environment-agency.gov.uk) or call on 0208 305 4188.

You can also arrange larger group visits (for more than 5 people) by filling in this  
[Booking form 2018](#)  
(PDF, 151KB, 3 pages)

and emailing it to [thamesbarrierenquiries@environment-agency.gov.uk](mailto:thamesbarrierenquiries@environment-agency.gov.uk).