

## Thames Estuary 2100 (TE2100)

You have requested in-channel flood levels for the tidal river Thames. These have been taken from the Thames Estuary 2100 study completed by HR Wallingford in 2008. The modelled node closest to your site is **2.15**; the locations of nearby nodes are also shown on the enclosed map.

### Details about the TE2100 plan

The TE2100 plan is now live and within it are a set of levels on which the flood risk management strategy is based. The plan is the overarching flood management strategy for the Thames Estuary and therefore any development planning should be based on the same underlying data.

### Details about the TE2100 in-channel levels

The TE2100 in-channel levels take into account operation of the Thames Barrier when considering future levels. The Thames Barrier requires regular maintenance and with additional closures the opportunity for maintenance will be reduced. When this happens, river levels – for which the Barrier would normally shut for the 2008 epoch – will have to be allowed through to ensure that the barrier is not shut too often. For this reason, levels upriver of the barrier will increase and the tidal walls will need to be heightened to match.

### Why is there no return period for levels upriver of the barrier?

The levels upriver of the barrier are the highest levels permitted by the operation of the Thames Barrier. If levels and flows are forecast to be any higher, the Thames Barrier would shut, ensuring that the tide is blocked and the river maintained to a low level. For this reason the probability of any given water level upriver of the Barrier is controlled and therefore any associated return period becomes irrelevant. The Thames Barrier and associated defence system has a 1 in 1000 year standard which means it ensures that flood risk is managed up to an event that has a 0.1% annual probability. The probability of water levels upriver is ultimately controlled by the staff at the Thames Barrier.

### Why are the levels in west London higher than the defence crest levels?

In west London there is a heavy influence from upriver flows (fluvial flows). The flood defences are built to manage tidal flood risk only. With very high fluvial flows, the river levels in west London could be above the 0.1% annual probability tidal level.

### Why are the climate change/future west London levels lower than the 2008 levels?

The climate change levels are assessed to determine the future tidal defence levels. For this reason they only account for extreme tidal events and not extreme fluvial flow events. The 2008 levels include extreme flows from upriver (fluvial events) as well as extreme tidal events.

For further information about the Thames Barrier please visit our website at:

<https://www.gov.uk/the-thames-barrier>

Orchard House, Endeavour Park, London Road, Addington, West Malling, Kent, ME19 5SH.  
Customer services line: 01732 223 202

Email: [kslenquiries@environment-agency.gov.uk](mailto:kslenquiries@environment-agency.gov.uk)

Website: <https://www.gov.uk/government/organisations/environment-agency>

## Detailed FRA Map centred on TW9 4BD created 15 November 2017 [Ref: KSL 66463 UE]

