

Guidance

Taking an adaptive approach: Thames Estuary 2100

How the Environment Agency reviews the impact of climate change on the Thames Estuary and updates planned work and timescales.

From: **Department for Environment, Food & Rural Affairs** (</government/organisations/department-for-environment-food-rural-affairs>) and **Environment Agency** (</government/organisations/environment-agency>)

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Applies to England

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Thames Estuary 2100 (TE2100) takes an adaptive approach to managing the risk of flooding in London and the estuary. We monitor how the estuary and climate is changing and adapt our approach in response. We do this by carrying out reviews every 5 years and updating this Plan every 10 years.

We monitor indicators of change every 5 years. These include changes to the following in the estuary:

- the number of people
- the number of homes and businesses
- habitat for wildlife
- the condition of flood defences

We also track and assess:

- updates to climate change projections, including the rate of sea level rise
- changes to government policy
- updates to scientific guidance

Every 10 years, we review and update the Thames Estuary 2100 Plan, to make sure it's still relevant and takes account of all these changes. Doing this means we can respond to changes to:

- the climate
- the economy
- the environment
- society

In 2021, we published the key findings from our [10-year monitoring review \(https://www.gov.uk/government/publications/thames-estuary-2100-te2100/thames-estuary-2100-key-findings-from-the-monitoring-review\)](https://www.gov.uk/government/publications/thames-estuary-2100-te2100/thames-estuary-2100-key-findings-from-the-monitoring-review). This confirmed that:

- the Plan provides benefit to 1.42 million people, 586,000 homes and £321 billion of residential property
- sea level in the estuary has risen over the last century
- sea level rise in the estuary has accelerated over the last few decades
- most tidal flood defences are still in a good condition - but defences are deteriorating faster due to climate change
- we need to improve our understanding of how we will manage the Thames Barrier and closures of the barrier over time

We will continue to work with partners and community organisations to collect data for monitoring changes.

[Find out more about major updates to Thames Estuary 2100 between 2012 and 2023 \(https://www.gov.uk/guidance/major-updates-to-thames-estuary-2100-from-2012-to-2023\)](https://www.gov.uk/guidance/major-updates-to-thames-estuary-2100-from-2012-to-2023)

Phases of this Plan

This Plan can be divided into phases over the next century. These phases outline how to reduce the impacts of climate change.

Phase 1 (2010 to 2035): maintain defences, establish the vision for future adaptation and plan for the future

Phase 1a (2010 to 2022):

- decide how to manage defences
- maintain defences to required standards and prepare to adapt them in the future

Phase 1b (2023 to 2035):

- develop visions for future riversides, including upgraded defences, more wildlife habitat and better access for the public
- plan for defence upgrades
- maintain defences to required standards

Phase 2 (2035 to 2050): reshaping riversides and delivering wider benefits

- upgrade defences in line with visions for future riversides, taking a carbon net zero approach and enabling climate resilient growth
- decide on an option for the future of the Thames Barrier (the end-of-century option) by 2040

Phase 3 (2050 to 2100): the future of the Thames Barrier

- put in place the preferred option for the future of the Thames Barrier by 2070
- make further upgrades to flood defences before the year 2100

The Environment Agency and our partners have agreed on actions to adapt the Thames Estuary to climate change. The actions include a choice of possible options for the future of the Thames Barrier.

[Find out about roles and responsibilities for these actions](https://www.gov.uk/guidance/find-your-role-and-responsibilities-thames-estuary-2100)

[\(https://www.gov.uk/guidance/find-your-role-and-responsibilities-thames-estuary-2100\)](https://www.gov.uk/guidance/find-your-role-and-responsibilities-thames-estuary-2100).

The timing of the phases may change in response to future monitoring reviews and updates to this Plan. The regular review cycle provides us with the latest data and evidence to make major decisions across each phase. This includes which option to choose for the future of the Thames Barrier.

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