

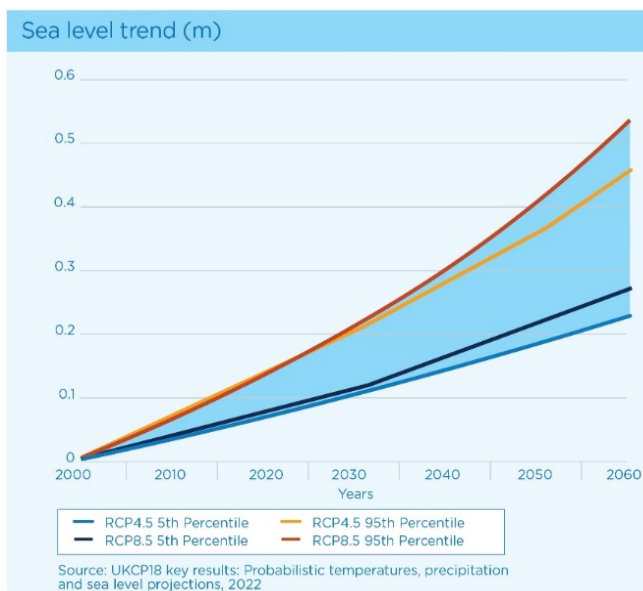
Future Trend: Sea Level

Trend definition and relevance to DWMP

Climate change is increasing global air and ocean temperatures, accelerating ice melt and contributing to rising sea levels. For wastewater infrastructure, this increases the risk of flooding and damage to low-lying assets, while higher tidal levels can reduce the capacity of tidal sewer outfalls by prolonging periods of tidal surcharge. These effects have the potential to impair the performance of wastewater networks and treatment works. The vulnerability of wastewater assets to sea level rise will be assessed as part of the resilience assessment within the DWMP.

Within the DWMP, responding to this trend is likely to require increased investment to improve the resilience of wastewater treatment works, sewer networks and tidal outfalls to increasing flood risk and associated pollution. It will also require continued collaboration with the agencies responsible for managing tidal flood risk and the long-term sustainability and eventual replacement of the Thames Barrier.

Trend description, uncertainty and potential impact on our region



- Similarly to high river flows, climate change is driving increases in both average sea levels and extreme (storm surge) water levels.
- In the Thames Water region, tidal flood risk primarily affects water levels in the River Thames estuary and River Lee, both downstream of the Thames Barrier or upstream during barrier closures. Exposure to this risk is largely managed through the operation of the Thames Barrier. Through our resilience assessment within the DWMP, we will examine any increased exposure of our assets to flood risk downstream of the Thames Barrier.
- The figure shows that, by 2055, sea levels in London are projected to rise by approximately 0.26m to 0.52m above the 1981- 2000 baseline sea level¹.
- This trend is expected to continue, potentially requiring the replacement of the Thames Barrier and associated defences around 2070². In the shorter term, barrier closures are likely to become more frequent. The Thames Estuary 2100 (TE2100) programme sets out how flood risk from climate change will be managed³.
- While climate and hydrological science confirms that sea levels will continue to increase, the precise timing and magnitude of change remain uncertain. Impacts are expected to be relatively moderate in the short term but increasingly significant over the medium and long term.

Stage of DWMP used	
Risk assessment	✓
Plan development	✓
Impact/Importance	
Short term (2035)	Low
Medium term (2045)	Low
Long term (2055)	Medium
Example PIs affected by this trend	
	Storm overflow performance
	Emergency overflow performance
	Internal flooding



References

- 1 Met Office (2018), UKCP18 Key Results spreadsheet, UK Climate Projections 2018 (UKCP18).
view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.metoffice.gov.uk%2Fpub%2Fdata%2Fweather%2Fuk%2Fukcp18%2Fscience-reports%2FUKCP18-Key-results.xlsx&wdOrigin=BROWSELINK (Accessed: March 2025).
- 2 Guidance: The Thames barrier, How the Thames Barrier works, and when it is scheduled to close, Environment Agency, 30.03.26
www.gov.uk/guidance/the-thames-barrier.
- 3 Collection: The Thames Estuary 2100 (TE2100), How the Environment Agency and its partners are protecting the Thames Estuary from flooding caused by climate change, DEFRA and Environment Agency, 19.04.23, Updated 1.08.2023. www.gov.uk/government/collections/thames-estuary-2100-te2100.

