Thames Estuary 2100 Plan – what is it?

The Thames is a tidal river. This means that it susceptible to the impacts of sea level rise and therefore tidal flooding. The Thames Estuary 2100 Plan has been put in place to restore and adapt the flood defences along the Thames Estuary because without adapting, it will not be able to withstand the higher water levels predicted for the near future. Many of the current flood defences will come to the end of their useful life between 2030 and 2060 (gov.uk, April 2023).

The Thames Estuary 2100 Plan was first published in 2012 and reviewed in 2023. It aims to protect 1.42 million people, protect £321 billion worth of property, infrastructure, and habitat from tidal flooding (JBA Consulting, June 2025).

Environment Agency IBA Consulting The Environment Agency manages flood risk across the UK and is the main BA Consulting provide technical and engineering expertise to help develop solutions to organisation responsible for developing the Thames Estuary 2100 plan. It has worked challenges posed by climate change. They work alongside the Environment Agency to alongside partner organisations (listed below) to ensure the aims of the plan are review and analyse the effectiveness of the Thames Estuary 2100 Plan. JBA analyse the achieved. The Environment Agency is responsible for providing flood risk information economic costs involved in delivering the 2100 Plan and the impact the Plan will have to councils, maintaining 12% of the flood defences in the Estuary, operating major on local communities and stakeholders. This helps ensure that the Plan is worth flood barriers in the estuary and reviewing and updating the Plan. pursing. They do this using computer modelling and GIS. Environment JBA Employs 1057 geographers*. Geography is the top degree! Employs 147 geographers*. Geography is the top degree! Agencv Met Office City of London Greater London GREATER Essex Port of London Thames Essex THAMES PORTOF Wildlife Corporation Authority LONDON Landscape ANDSCAPE Authority Government service that LONDON CITY AUTHORITY STRATEGY Trust Strategy forecasts the weather and This is a government A government administration that uses weather and data Non-profit administration ٠ A self funding public Non-profit organisation that governs and provides science to inform organisation that organisation that works to works with local community trust that oversees services for residents and governments, businesses implement policies of the works to conserve groups to improve the maritime and the public about the Mayor of London and help business in the Square and protect wildlife transportation. The landscape along the Mile. This includes making weather and our changing improve services for local by managing Thames. This might be includes overseeing the the area sustainable for climate nature parks and people, such as housing, through restoring habitats navigational safety of people, the economy and Headquarters: Exeter providing outdoor education and transport or increasing land used for the River Thames and the environment Employs 166 learning infrastructure helps to conserve the recreation Employs 66 geographers* Headquarters: **Employs 101** • Less than 10 employees; 3 river's environment geographers*, across Lots of Operational geographers. Roles Essex geographers* Headquarters Essex roles including roles in Meteorologists and **Employs 8** include project managers 10 geographers* Headguarters London planning and policy **Foundation Scientists** geographers* and policy officers

*All number of geographers data sourced via LinkedIn, 27 May 2025 and 2 June 2025

Who are the organisations leading the Thames Estuary 2100 Plan?

Who are the partner organisations involved?

Royal Geographical Society with IBG

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What role do **geographers** play?

Read through each job profile before completing the activities. Each role is based on a real job available to those with a geography degree.

Senior programme officer at a governmental administration organisation

This role sits in the climate change team where you are working to create climate change policy that will ensure London is a sustainable city for local communities and businesses. You will be an expert on climate change policy, including how to write policy and conduct policy research (a bit like a fieldwork investigation). This involves analysing data to monitor the social, cultural and economic impacts of climate change on London. Your work will inform decisions about how London is going to adapt to climate change and continue to grow its economy and thrive as a global city. You will help empower local businesses, councils and communities to take climate action by providing them with detailed policies to follow and implement to ensure that London's social, economic and cultural life thrives.

Climate change adaption officer at wildlife conservation charity

This role involves advocating for nature-friendly flood engineering strategies that work with natural processes to help reduce the impacts of flooding (such as soft engineering strategies). You will work with organisations to develop adaptation plans, give advice to landowners about what they should do in response to increased flood risk, and prioritise the protection and restoration of natural habitats. You'll need to provide climate change expertise and lead and develop sustainable projects that protect nature and improve biodiversity. This involves organising events and workshops, and delivering presentations to various audiences, like local businesses or community groups to educate them on the importance of conserving habitats along the Thames.

Flood risk analyst at an engineering consultancy

This role involves working within the map team to develop and improve high-resolution flood maps. This involves working with geospatial and geo-located data to help build flood models and food defense databases. The maps that you create will show what will happen to a surrounding area when that area floods due to flooding. The maps will show changes to flood risk over time, which will help inform the work that needs to be done to reduce the impact of tidal flooding along the River Thames. You will work a lot with numerical data and GIS and your work will inform what strategies need to be put in place to ensure London is protected against increased risk of tidal flooding in the Thames Estuary.

Key Skills

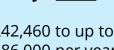
- You have a through understanding of climate change and environmental policy
- Good research skills, including analysing and \checkmark interpretating data
- Confident with using numerical data \checkmark
- Good at problem solving \checkmark
- Good time management \checkmark
- Motivated, proactive and organised

Key Skills Ĝ

- Thorough knowledge of climate change and local habitats
- Able to communicate complicated information to \checkmark different groups of people
- Innovative, resilient and self-motivated \checkmark
- \checkmark Committed to wildlife conservation
- Enthusiastic and inspiring communicator \checkmark
- Organized and works well in a team

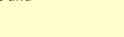
Key Skills

- \checkmark Strong GIS skills
- Able to handle data with confidence, have a strong numerical mindset and data analysis skills
- Positive attitude, enthusiastic about learning \checkmark
- Ability to work independent and as part of a team
- Problem solver \checkmark
 - \checkmark Able to communicate technical concepts to nontechnical audiences



£31,000 - £35,000

£42,460 to up to £86,000 per year in senior roles

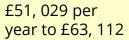


Salary

Salary

per year

Salarv





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to advise on each aim to ensure that the aim is met **A** - Take an **adaptive** approach to manage tidal flooding and create **climate** resilient communities. Who is the most **Explain why** Aims appropriate person This involves maintaining and improving flood defences, tracking changes in flooding help meet each aim? over time using mapping tools and using spatial data to help create resilient communities that are prepared for change. B - Protect and enhance the value of the Thames, its tidal tributaries and floodplain. Deliver social, cultural and commercial benefits for communities and A - Take an adaptive support resilient growth. approach to manage tidal flooding and create climate This includes working with local communities to improve land use around the river in a resilient communities. way that benefits them. C - Tackle the climate and nature crises by putting sustainability at the heart of this Plan. Restore ecosystems, reduce carbon emissions, and deliver environmental and **biodiversity net gain**. This includes replacing habitats that have been lost due to sea level rise B - Protect and enhance the value of the Thames. Activity 1a – Match the key word to its correct definition its tidal tributaries and floodplain. Deliver social, The interaction between biotic (living) and abiotic(noncultural and commercial Adaptive living) components in an environment benefits for communities and support Something being able to last into the future Climate resilient resilient growth. **Tidal tributaries** Land surrounding the river which is susceptible to flooding The ability of people and ecosystems to bounce back from C - Tackle the climate and Floodplain climatic hazards nature crises by putting sustainability at the heart Adjusting something to respond to changing situations Sustainability of this Plan. Restore ecosystems, reduce carbon Increasing the level of biodiversity (number of plant and emissions, and Ecosystems animal species) living in an environment deliver environmental and biodiversity net gain. Smaller river flowing from a larger river into the sea **Biodiversity net gain**

Activity 1b – Using the geographical professional job profiles, decide who is most appropriate person

There are 3 aims of the Thames Estuary 2100 Plan:

Activity 2 – Fieldwork exercise

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You are the Head of Climate Change at Greater London Authority and want to investigate how successful the Thames 2100 Plan has been for reducing the impact of flooding on local businesses. Create your own fieldwork investigation focusing on one of the Plan's aims (A, B or C). You must choose an aim, create a hypothesis and develop two methods of data collection (one primary and one secondary). Ensure to justify your methods of data collection and consider the limitations of each.

My investigation will focus on Thames Estuary 2100 Plan aim ...

A - Take an adaptive approach to manage tidal flooding and create
 climate resilient communities.
 B - Protect and enhance the value of the Thames, its tidal tributaries and floodplain. Deliver social, cultural and commercial benefits for communities and support resilient growth.

C - Tackle the climate and nature crises by putting **sustainability** at the heart of this Plan. Restore **ecosystems**, reduce carbon emissions, and deliver environmental and **biodiversity net gain**.

Hypothesis					
Null hypothesis					
Primary data collection What? Why?		Primary data collection Type of data	Secondary data collection What? Why?		Secondary data collection Type of data
Location	Limitations	Qualitative Quantitative Type of sampling strategy Stratified Random Systematic Number of samples	Location	Limitations	Qualitative Quantitative Type of sampling strategy Stratified Random Systematic Number of samples
		Justify – why are you going to collect this number of samples?			Justify – why are you going to collect this number of samples?