



RESILIENT COASTS

Great Yarmouth & East Suffolk

For people. For the environment. For the economy. Forever



What is Resilient Coasts?

Resilient Coasts is an £8.4 million, five-year project that aims to support coastal communities at risk from erosion to enable them to adapt to coastal change and become more resilient.

The project is creating practical tools that will help our unique coastal communities to plan for their future. We will work alongside communities in pilot locations, enabling individuals, businesses, and community groups to be actively involved in their future. It includes:

- Continuing to help support those communities at the highest risk of erosion
- Helping communities discuss and plan for adapting to climate and coastal change
- Co-creating plans with communities
- Mapping what is at risk
- Investigating alternative technology and engineering practices
- Understanding how the coast is changing
- Looking at funding sources, including a seed fund for communities at risk

The project will be completed in 2027. It is being managed by Coastal Partnership East on behalf of East Suffolk Council and Great Yarmouth Borough Council, and is funded by the Environment Agency and Defra, as part of their Flood and Coastal Resilience Innovation Programme.

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What are the challenges?

The project will tackle challenges both strategically and locally by working with residents, businesses, industry, government organisations, and landowners. Resilient Coasts will result in longer term plans that mean:

- Addressing funding gaps
- A joined-up approach to coastal issues with infrastructure and industries
- Better tools to work with future generations
- Longer term plans that mean communities are prepared and safe
- New technology to provide up to date information in communicating risk
- New innovative engineering solutions that will work on our dynamic coast

The Resilient Coasts project will use innovation to identify long-lasting resilience solutions for the whole coast. We are gathering evidence to influence policy nationally to make change locally.

Could this money be spent on defences?

£8.4 million sounds like a lot of money, but it does not buy much in the way of defences. £1 million at today's prices would buy just 50 metres of rock.

We have a coast that is beautiful, dynamic and rapidly changing. Whilst it is important to try and protect areas where people live, we need to balance this with the natural environment and a plan for the future.

As the project progresses, there will be people in our coastal communities who are at imminent risk of losing their homes, or who have already seen their homes demolished. It is vital that we work to find ways to help communities to address the challenges they are facing and find new, realistic, long-term solutions.



Knowing what is at risk and where...

There is currently a lot that we are still learning about how our coast works and how the North Sea is shaping it in the face of accelerated coastal change and sea level rise.

In order to understand the impacts, we need to carefully collate and map all the 'things' we value along our coast, including as:

- Homes and businesses
- Churches, religious/community buildings and other heritage and culture assets
- Buried infrastructure, such as pipelines and electricity cables
- Roads
- Private water supplies
- Septic tanks
- Land with community value, such as well-used footpaths, community playing fields and woodland

There is not a map that currently does this so we need to create it so that we can better

understand what is at risk and how we can plan for it, as well as seek opportunities to manage and develop our coast in a more sustainable way for the future.

We are continuing to identify data, talking to both public and private organisations. We are also exploring ways that we can present the map and risk data to communities, and to coastal practitioners in a way that is meaningful for both.

It is vital that we explore new ways of quickly collecting and using data, which ties in to other areas of Resilient Coasts, like our technology and engineering objectives.

In addition to this, we are working with the Environment Agency to provide information for the National Coastal Erosion Risk Map update (NCERM2), demonstrating the national reach of the project.



We have made good progress. We have collected a lot of data from existing sources and are developing a prototype map which can show different information in different layers.

Our coast is unique, but with our map we are aiming to provide specialised erosion timelines based upon those unique features, such as nesses, that travel along the coast over time.

As part of the NCERM2 process, we are assessing the condition of our coastal assets, like groynes and seawalls, to gain a more realistic idea of the actual levels of protection they are giving.

Technology and Engineering

We already monitor, maintain, and repair our coast, but as it continues to change we need to do this as efficiently and effectively as possible to deliver value-for-money approaches. In order to improve how we do things, we have to take into account the best approach for people, the natural environment, and getting the best value for money.

To do this, we need to look at new and emerging building materials and approaches, including nature-based solutions in addition to traditional hard defences. We have already engaged with engineering companies, and others, to gather information on new and innovative approaches and materials.

By using better monitoring, we can improve our understanding of what is happening on the coast, improving our predictions and forecasting. It will allow us to recommend the most appropriate options for defences and where they are best used.

We are working towards a fully costed asset management plan, which means we will know exactly how much each sea defence scheme will cost to implement, maintain and decommission.



We have already commissioned a report on the options for decommissioning assets, which can then be applied for our project sites. We have also purchased six small drones to improve our ability to monitor coastal processes and to give better, more accurate data. These also give us the ability to access cliffs, assets, and beaches at times and locations when we might otherwise be unable to or when it is too dangerous.

A specialist GIS and Remote Sensing Officer has also been recruited, expanding the drone and mapping capability.

Funding

Currently there is no funding for coastal communities at risk of erosion to access to help them adapt and become more resilient. If they are not eligible for Flood and Coastal Erosion Risk Management Grant in Aid (FCERMGiA), then they have no financial help. We are developing a seed fund for communities to be able to apply for funding towards resilience measures. This will help to give communities independence in their resilience plans. We are developing the mechanisms to invest in a pot of money which will form the basis of this seed fund and allow it to grow.



There is also no current way to encourage large and national organisations, like infrastructure companies that are based on or use our coast, to invest in adaptation. We are hoping that we can work with infrastructure providers in our region to create more collaborative ways to encourage integrated investment with strong links into the new Anglian (Eastern) Regional Flood and Coastal Committee economic subgroup, which we aim to set up in 2024. To build productive relationships with infrastructure companies, we are working with international experts in the field of infrastructure resilience, the International Coalition for Sustainable Infrastructure. They are giving us an international view and the expertise of lessons learned elsewhere.

We have identified a potential disparity in funding between areas of erosion that provide sediment to the coastal system, and other defended areas that are reliant on that material. We wish to build a better understanding of the release of coastal sediments, their movement through the coastal system, and the value that they bring. The hope is to demonstrate the benefit of formally recognising that value when managing policy transitions and to support the development of an adaptation fund.



We are working with consultants to develop a new holistic approach for economically evaluating rural coastal communities. This will be achieved by analysing, gathering, and reviewing data and information that are currently used for Flood and Coastal Erosion Risk Management appraisal guidance. A new framework will be developed from this to incorporate local, place-based economics and national accepted parameters for example, tourism, natural environments and offshore energy. We will use this to assess our frontages to inform adaptation and resilience measures for future management.

Helping conversations to happen

We need to find out how ready communities are to adapt to climate change and erosion. We also need to educate and improve awareness of these issues with young people and the wider community. This will enable us to have conversations about the future.

We will use the Environment Agency's 'Working Together' readiness assessment toolkit to understand:

- What is required within the community
- What adaptation is possible
- How we can invest wisely to get the best long-term outcomes

We will also ensure that community based resources are co-created with those communities. This will enable elected members to find it easier to engage with their wider community about adaptation to climate and coastal change, and finding common ground where we can work together.



We are working to introduce 'Hello Lamp Post' to our coast. This AI, two-way conversational tool will provide engaging and realistic conversations about our coast, informing the public and giving us valuable insight into visitors to the area.

A key aspect of this part of the project is increasing engagement with schools and young people. We are calling this 'Bringing the Coast into the Classroom'.

We will co-create a programme of activities aimed at increasing knowledge and understanding of climate and coastal change, which we hope will also increase the desire and ability to recruit into the coastal management sector. These activities

will be both virtual and physical, bringing new concepts to the next generation.

We are already having conversations with schools and other organisations as to how we can create a programme of exciting, interesting, and relevant educational materials and experiences for students of all ages.



Making community adaptation plans

Coastal Partnership East, our councils, and the communities along our coast are consistently reacting to coastal change and challenges as they happen. Communities face uncertainty, worry, and distress because they have no firm direction on how to plan ahead, how to think about the future, and how to solve the issues in a positive and controlled way. For each of our pilot communities, we aim to help them create an adaptation plan of their own, that our councils and partners can then support the community to deliver.



We are also looking at ways we can use existing Neighbourhood Plans, Shoreline Management Plans, and Local Plans, to see where we need to influence policy to make sure that adaptation and community resilience is at the heart of future coastal planning.

Discussions have already taken place with colleagues in the planning and planning policy teams and we are contributors on the Coastal Adaptation Supplementary Planning Document which was adopted in October 2023. We want communities to be involved in co-creating their adaptation plans. We know that options are limited right now and that is why we want to work hard through Resilient Coasts to create new options.

We know we cannot solve everything immediately, however we hope that the creation of these bespoke adaptation and resilience plans, developed with communities, will enable them to have affordable, achievable, and resilient options for the future of our rapidly changing coast.

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For the economy. Forever.





"We have one of the fastest eroding coasts in Northern Europe and as a result of that, we have significant challenges from sea level rise and climate change.

Since the Beast from the East in 2018, we have seen significant erosion at a number of locations on our coast and coastal communities losing their homes and businesses. Coastal officers want to do more to support our most vulnerable coastal towns, but we need to create new ways to fund and plan for the future that currently do not exist.

We need to look at both traditional flood defence options but also start to think about more innovative solutions so that we can transition to a more resilient coast for the future.

This Defra and Environment Agency Flood and Coastal Resilience Innovation Programme funding will give us the boost we need to develop as many solutions as we can over the five years. I and the Coastal Partnership East team, on behalf of East Suffolk Council and Great Yarmouth Borough Council, hope we can make a difference to those at immediate risk of erosion but also to our whole coast, so that we can deliver a more resilient outcome for the people who live and work here, our beautiful landscapes and wildlife, and for those who want to come and visit and enjoy our coast too."

Karen Thomas, Head of Coastal Partnership East

Our Vision

Through collaborative and innovative coastal risk management, we will enable options for people, economies and the environment to transition to a climate resilient coast.

This is the first of a series of newsletters that will describe, inform and update on the Resilient Coasts project.

In the meantime, to find out more you can visit our website
www.coasteast.org.uk/adaptation-and-resilience

Get in touch:

resilientcoasts@eastsuffolk.gov.uk