

REPORT

2023

coastal partnership east



Our CPE vision and purpose

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.

Purpose

To co-create climate resilient approaches to coastal management with our communities and partners.

To manage our coast supported by robust evidence, integrated investment and coastal planning and a blend of traditional and innovative engineering solutions.

To support the Norfolk and Suffolk coast to transition from current erosion risk and future predicted risk towards a resilient future, to support change where it is needed and give those affected by erosion options where they currently do not exist.

To take a collaborative approach in developing well-planned sustainable solutions that deliver wider outcomes for people, businesses and the environment and ultimately create a viable coast.

Introduction and backward look – outgoing Chair David Ritchie



David Ritchie Outgoing Chair

Welcome to Coastal Partnership East's Annual Report. We aim to provide you with a view across the breadth of our work locally, regionally, and nationally.

It has been a few years since we have produced this report largely down to several external factors. We have faced a national pandemic, a challenging time for our economy leading to the rise in the cost of living, which has resulted in an increase in the cost and availability of materials, services, and labour. A changing climate, increased storminess and coastal erosion have impacted our communities. It is with sadness we have seen properties demolished and communities displaced. Such are the challenges faced by all coastal local authorities, their communities, businesses and partners around the UK.

But we have collectively shown resilience across all these challenges. We have demonstrated that by working together, local authorities, partners, businesses, and communities, we can achieve more. We can and we are doing things differently. We have shown that we can respond swiftly to support those at most need. Our communities in Thorpeness, Pakefield and Hemsby have been supported with interim measures to allow access and time to develop options for the future. We have shown our teams' ability to manage and successfully deliver major projects in Lowestoft and Cromer and Mundesley. We have seen the successful development and delivery of the UK's first sand scaping scheme in Bacton, working closely with private sector companies to protect an important source of energy for the UK.

Our national work is changing policy and practice and enabling change to happen that will benefit those at most risk in Norfolk and Suffolk.

I have been proud to be part of Coastal Partnership East. I was one of its founding Elected Members in 2016 and was heavily involved in its development and formation. Since then, the team has grown, and the partnership has gone from strength to strength. Our capital programme is ambitious. We have significant projects to deliver; the Lowestoft Flood Protection scheme and Cromer and Mundesley projects. As well as new adaptation and resilience programmes, East Suffolk Council and Great Yarmouth Borough Council are managing and delivering the Resilient Coasts project and North Norfolk District Council the Coastwise project. Funded through the national Flood and Coastal Innovation Programme, they will all play a part in supporting communities, businesses, the environment, and the economy to become more resilient to coastal change.

I know that I leave the Partnership in safe hands. I hope as you read through this annual report and the accomplishments and

plans, you will see how we are working hard, from the Board through to our dedicated and passionate team of officers, to deliver our vision to develop options for people, economies, and the environment to transition to a climate resilient coast.

I wish you and our Partnership well.

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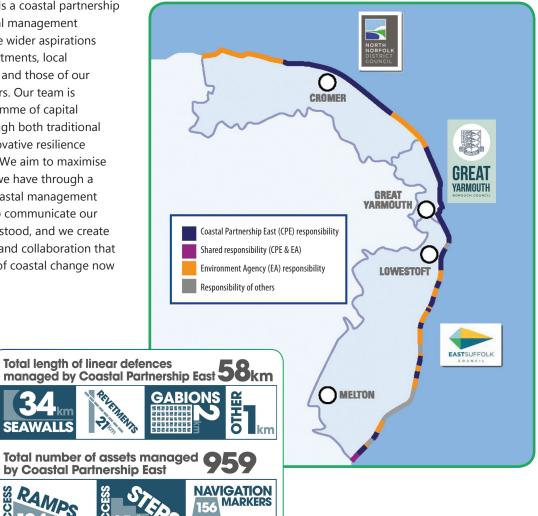
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Who is Coastal Partnership East (CPE)?

CPE was formed in 2016 to bring together the expertise of the coastal management officers across Great Yarmouth Borough Council, North Norfolk District Council and East Suffolk Council.

Our multi-skilled team include specialists in engineering, coastal science, engagement, communication, incident and crisis management, media, partnership funding, planning and policy. CPE manage almost 60% of the coast between Holkham in Norfolk and Landguard Point in Suffolk, some of which is managed through hard coastal defences and in other areas natural erosion is taking place on one of northwest Europe's fastest eroding coasts. Over 352,000 people live in our coastal zone and many more work on and visit it. Almost 3,000 permanent homes are at known erosion risk, this equates to 7,500 people, many of these in socially deprived areas and many thousands more properties are at risk associated with holiday accommodation and coastal businesses.

Our diverse coastal zone needs a coastal partnership that can deliver flexible coastal management solutions that also support the wider aspirations of national government departments, local authority plans and strategies and those of our local communities and partners. Our team is delivering a prioritised programme of capital and revenue investment through both traditional coastal management and innovative resilience and adaptation programmes. We aim to maximise the local authority resources we have through a team that is resilient to the coastal management challenges we face. We aim to communicate our work clearly, so it's well understood, and we create opportunities for co-creation and collaboration that benefit those at greatest risk of coastal change now and for the future.



GROYNES

Head of Partnership Karen Thomas - Foreword



Karen Thomas Head of Partnership

Having worked in the marine and coastal sector for 25 years, I would say that we are now facing our greatest challenge – climate change and its effects: notably sea level rise and increased storminess. In Norfolk and Suffolk our soft eroding coast is already very vulnerable. Erosion impacts wider community and society as it undermines livelihoods, investment and accessibility and areas of our coast become blighted. But it is also an integral part of a dynamic healthy coastal system; cliffs erode and feed beaches, which in turn provide natural defences, habitats, and places we love to visit.

We are seeing an unprecedented pace of change and we can no longer continue to react. We must plan now if we want options that are resilient for the near and far future. I am convinced we need a monumental shift in thinking from all sectors and communities, underpinned by innovative solutions and bespoke policy to ensure we can be resilient to increased erosion, and that time is now.

The ambitious COP26 target of a 1.5°C cap in global temperature rise will still mean 0.5m sea level rise for our coast this century as a minimum and 1m rise being more likely. The UK Climate Change Committee Risk Assessment report (UKCCCRA, June 2021) stated that not enough is being done to mitigate and manage coastal risks across all sectors. This is associated with sea level rise, increased storminess and associated flooding and erosion. A further UKCCC risk assessment in April 2023 stated that we are still not responding quickly enough.

We must rise to this challenge with a shared purpose to cocreate adaptative and resilience approaches that meet the needs of those living working and enjoying our coast.

At Coastal Partnership East (CPE) we are shifting gear as we enter an ambitious period of delivery of almost £0.6B of capital schemes alongside our new innovative adaptation and resilience delivery programme.

Since taking over the role as Head of Partnership in 2019 I remain as excited at the challenge and opportunity this moment brings and, on behalf of the team, am proud to set out our ambition through the 2022-2026 CPE Business Plan. Our Plan embeds the new Environment Agency (EA) National Flood and Coastal Erosion Risk Management Strategy and Department of Food and Rural Affairs Coastal Policy into our local authority coastal management priorities. We have worked hard to attract funds from national government programmes including our Resilient Coasts project for East Suffolk and Great Yarmouth Borough Councils and the new Coastwise project for North Norfolk District Council both funded by the EA's Flood and Coastal Innovation Programme.

We cannot protect everywhere forever, so our new Vision sets out how we will rise to the coastal challenge we face. Our work will continue to deliver significant benefits through traditional coastal management but now we will also have resource to build on our innovative resilience and adaptation approaches which we have been co-developing with our communities at greatest risk of erosion and tidal flooding.

As such, CPE, informed by our work over the next five years, will co-create a new coastal management framework for the Norfolk and Suffolk coast that properly acknowledges the latest climate change and sea level rise predictions.

We aim to give our communities and businesses options that do not currently exist for those facing erosion. With our stakeholders nationally and locally, we will understand the value of our coast's natural, historic, cultural, and built environments and use this to support the change we need to all make to transition from the coast we have now to a coast that can deal with the impacts of climate change. We will set out a new agenda to ensure we understand and value coastal viability not just property numbers at risk and in doing so set out why 'Our Coast Matters' locally and nationally.

The success of our work will depend on working with a broad range of stakeholders and recognise that we cannot do this through the single lens of coastal engineering. Many of our fantastic coastal communities and partners are already committed to working towards co-created solutions that deliver resilient coastal places and environments on our dynamic coast.

Partnerships, collaboration, and co-creation of approaches will be critical to ensure we have both traditional and new innovative options for our coastal communities, businesses and environment through integrated coastal planning, landscape, funding, and investment routes. All our work will deliver multiple outcomes for society, the economy, and the environment. We will do our best to support tailored solutions that meet the wider outcomes. To achieve all of this takes a great team and I would like to personally thank my CPE colleagues and elected members who are exemplars for coastal management, all our colleagues in the three councils working hard on your behalf and our wider national and international coastal practitioner network for their support, notably the Coastal Group Network and Local Government Association Coastal Special Interest Group.

We will continue to develop our team and grow our expertise to meet the challenges and opportunities that working on this beautiful, dynamic, and challenging coast and look forward to meeting the challenge of coastal change with you together.





Data and information are at the heart of everything we do. We use it to develop an integrated approach to coastal management that is flexible to the demands of climate change and sea level rise. This data underpins our decisions and plans with regard to erosion risk and our ability to communicate this to stakeholders.

This theme is largely carried out by members of our Coastal Team which is comprised of coastal advisors who have a background and experience that spans Flood and Coastal Erosion Risk Management (FCERM), coastal geomorphology and hydrodynamics, Geographic Information Systems and data science, education, teaching, and community engagement.

Our Coastal Team seeks to drive a strong partnership with coastal monitoring service providers so that we can get

the best, most innovative data available to us in order to inform our investment in both our capital, and repairs and maintenance programmes. We also seek to prioritise investment in both strategic data gathering and targeted analysis, and we aim to find synergies with our partners who may also be collecting data in order to maximise the data available and to reduce cost. We continue to work with the Anglian Coastal Monitoring Group regarding data collection.

We have been feeding into National Coastal Erosion Risk Mapping (NCERM2) and reviewing initial data provided by the Environment Agency (EA).

We have been working with the Resilient Coasts Project to procure drones for regular monitoring across the Coastal Partnership East (CPE) frontage.

NEXT STEPS:

- Continue to contribute to EA's NCERM2 data.
- Begin to collect monitoring data using newly acquired drones.
- Begin work on understanding Natural Capital, what it means for our frontages, and develop a robust approach of data collection and analysis in line with the aims of Resilient Coasts
- Use Anglian Coastal Monitoring Programme and CPE data collection to complete research on coastal processes for the delivery of innovative adaptation approaches along a complex coast.
- Request national review of Shoreline Management Plan data and monitoring programme data.
- Use strategic monitoring reports and analysis to inform repairs and maintenance budgets (five year forward look)

Create a Climate-Ready Coast

At CPE we are looking to develop a resilient, flexible approach to coastal planning and development that gives communities and businesses along our coast a variety of options with the necessary time to adapt to coastal change.

Our Coastal Team seeks to demonstrate the impacts of climate change and sea level rise on our coast, whilst gaining an understanding of the associated risks posed to buildings, assets, and infrastructure. We aim to develop planning policies with local authorities, adaptation policies and practices in line with FCERM 2050 Strategy and Defra policy, and a consistent adaptation and emergency operational response along our frontages. We aim to do this whilst keeping wider sustainability in mind through supporting carbon positive policies.

EA Great Yarmouth Epoch 2 works have been completed. We are working with EA for plans for Epoch 3.

Great Yarmouth Borough Council were also awarded levelling up bid so we are working with them as part of the Resilient Coasts Project to see what we could deliver in terms of innovative flood defence, habitat creation and place making.

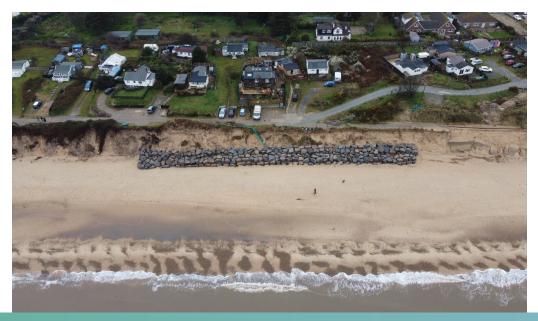
The Broadland Futures Initiative initial options have been presented and we continue to work as part of the Internal Project Team.

Planning Permission and a Marine Management Organisation (MMO) licence have been approved for a 1.3km rock berm in Hemsby, however, there is a significant funding shortfall.

Pakefield has undergone urgent works with a rock berm now in place and we are supporting the community with a funding strategy.

NEXT STEPS:

- Develop resources to communicate how data collection and research on coastal processes delivers innovative approaches along complex coast.
- Develop relationship with Planning Teams across all three partner councils.
- MSc student review of the Coast Protection Act 1949 with interviews across the Coastal Group Network and Local Government Association Coastal Special Interest Group
- Develop an adaptation policy that can be applied consistently across CPE.
- Develop a carbon and sustainability baseline for our coast.
- Prepare a case study on recent erosion events to document the impact of erosion and climate change on our coast and use the learning from this to feed into developing consistent emergency response.





Capital programme, repairs and maintenance

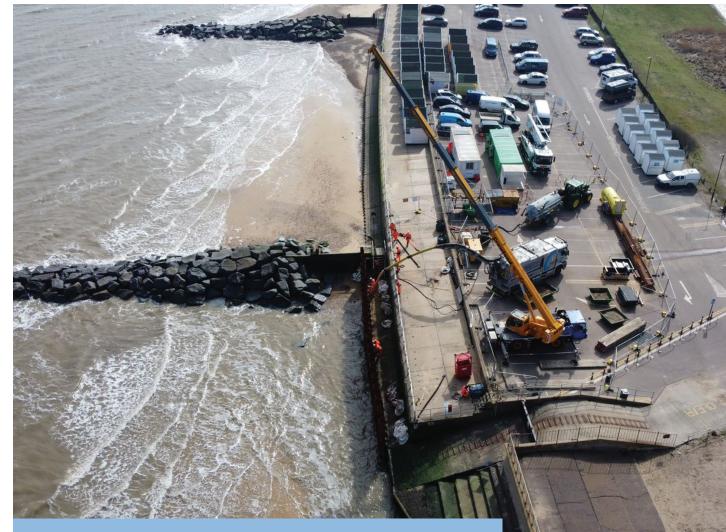
Our Engineering and Operations Team work closely with the Environment Agency and Scape to deliver our capital programme. The team also manages our traditional and adaptive assets, wider infrastructure, and make sure our delivery plans demonstrate value for money.

We are continuing to develop existing relationships with Asset Management (East Suffolk Council), Property Services (North Norfolk District Council) and Property Team (Great Yarmouth Borough Council) to identify potential opportunities and challenges along our coast and explore future collaboration and support between the teams.

We are also working with Balfour Beatty plc to assess our current supply chain to identify efficiencies and savings and Coastal Hub / resource support.

We are responsible for repairs and maintenance on in excess of 58km of coast protection defences. This is an extremely important part of the work we do. We maintain structures such as groynes, revetments, seawalls, beaches and rock armour. We set out the work required and then appoint and manage the contractors. Our Engineering and Operations team work closely with our supply chain, including the East Suffolk Water Management Board on our repairs and maintenance work in East Suffolk.

To inform our repairs and maintenance work, our Engineering and Operations team carry out regular inspections to understand what condition our assets are in, monitor beach levels, health and safety for the public, and condition of the cliffs. We developed and utilised an innovative asset inspection tool and are embracing technical advances in asset inspections.



To find out about repairs and maintenance work we are currently undertaking, please see https://www.coasteast.org.uk/latest-news-repairs-maintenance

Summary of work across Coastal Partnership East's programme

Lowestoft Flood Protection

- Submission of Transport Works Act Order
- Completion of the detailed design of the tidal barrier
- Confirmation of construction costs
- Secure funding and enter into the construction phase contract

Cromer and Mundesley

- Obtain Marine Management Organisation licence and planning permission
- Confirm construction costs
- Secure additional funding
- Enter into the construction phase contract
- Start construction autumn / winter 2023

South Denes

Development of outline business case for longer term approach

Hemsby

- Emergency works outline business case
- Development of outline business case for longer term approach

Pakefield

Development of outline business case for longer term approach

Thorpeness

 Development of outline business case for longer term approach

Repairs and Maintenance

 Ongoing regular inspections and maintenance of our assets

Resilient Coasts

- Innovation and research into alternative approaches to adaptive coastal management
- Nature based solution opportunities around our coasts

Procurement and Project Management Processes:

- Project Management Framework development
- Standardising our procurement approaches including our Dynamic Purchasing System

Social Value and environmental benefits to be included in all our contracts, specifically:

- Biodiversity Net Gain
- Carbon footprint reductions
- Social value
- Waste reduction

Risk based investment:

- Packaging and capitalising works
- Maximising efficiencies for example, procuring Cromer and Mundesley together
- Regular asset inspections to develop proactive programme
- Call to Action for Resilient Coasts test alternative approaches and products



Supporting viable climate-resilient communities and businesses

The Coastal Partnership East (CPE) Business Plan (www.coasteast.org.uk/our-business-plan) 2022-2025 sets out the monumental shift in thinking needed from all sectors and communities, underpinned by innovative solutions and bespoke policy to ensure that our communities and businesses can be resilient to increased flood risk and erosion. Partnerships, collaboration and co-creation of approaches are critical to ensure that we have both traditional and new innovative solutions. Working together, across councils and partners, communities and businesses creates the environment in which this can best be achieved.

CPE have a dedicated team of communications and engagement professionals, working to the Chartered Institute of Public Relations Code of Conduct. Our team works with internal colleagues, coastal communities, businesses, partners such as the Environment Agency, Anglian (Eastern) Regional Flood and Coastal Committee and the East Suffolk Water Management Board, and at a national level with colleagues at the Local Government Association Coastal Special Interest Group, Coastal Group Network and others to ensure that we are providing the highest level of expertise and professional advice and support.

We work with and as part of, coastal community groups and partnerships to ensure that we are fostering and maintaining co-creation and collaboration across all of our work, helping to create a future shaped by those affected by a changing climate and coast.



East Anglian Annual Coast and Estuaries Conference

Our Partnership has been responsible for the organisation of an annual coastal conference since our formation in 2016 and for some of our team, since its inception in 2012. Initially starting as a Suffolk Coast Forum event only, it subsequently developed to include the Norfolk Coast Forum and now, in 2023, we are delighted to have the opportunity to extend this to include Essex, launching the first East Anglian Coast and Estuaries Conference, in partnership with the coastal forums and the Anglian (Eastern) Regional Flood and Coastal Committee. Our conference is now both in person and live-streamed, reaching a wider audience and allowing for greater involvement. Another development this year is an important adjustment to ensure that we are making the conference more inclusive, with accommodations for those who are neurodiverse.

Social, digital and virtual engagement

Around 77.9% of the UK population use social media. Of those, 98% access information on a mobile device, meaning that information is accessed on the move. UK users spend approximately 110 minutes per day accessing information from social media. With that level of usage our social media approach has to be comprehensive.

Coastal Partnership East (CPE) have a Social and Digital Media Plan, supported by a programme of social listening and monitoring. We forward plan with partners and organisations to include relevant campaigns as well as ensuring that social and digital media forms a part of our planned project work and repairs and maintenance programme.

To support the development of our reputation, CPE develop and design our own social and digital media campaigns. #ProudToBeCPE ran from June 2022 for 12 months. These included films of our team speaking about why they enjoyed their role and were #ProudToBeCPE. The result of the campaign was a 15.55% increase in users, a reduction in bounce rate and over 4,700 views of the films across platforms. Further campaigns of this nature are planned.

During the COVID19 pandemic we identified the need for alternative ways to engage our coastal communities and businesses. During this time, we introduced the use of virtual engagement rooms. These rooms are based on basic gaming technology and allow the users to 'walk' virtually around a drop in similar to visiting a village hall. Since introducing this type of engagement, we have seen a significant increase in the interest from those in age demographics 18 to 25 and 35 to 45. In some cases, such as our Pakefield virtual engagement room, the visitor numbers have reached an astounding 3000 unique visitors.

We are now providing advice to other local authorities and national groups about how this works and the benefits.



Commemorating 1953 and looking back at 2013

For the 2022 coast and estuary conference we produced clips of local people who remembered the events of 1953 and 2013. Such was the popularity of these pieces of social history that, in partnership with the Anglian (Eastern) Regional Flood and Coastal Committee and the Environment Agency we produced an hour-long film. The film was to be provided to parish councils, schools and organisations to help with commemoration of 1953 during its 70th anniversary. However, the quality of the film meant that interest grew beyond what was anticipated. The film has now been provided to over 40 parish councils, schools and historical societies. It has been screened in three local cinemas to over 600 people and has had over 5,000 views on YouTube. We have received multiple messages of thanks from people about taking the time to remember those impacted by these events. The film was also shown at the Suffolk Show and the Royal Norfolk Show.

Innovative Investment in our Coast – resilient funding and finance

Our Funding Team have taken on a critical role in securing funding for our partnership's projects including working with non-governmental organisations, businesses, and local and national government agencies. Our role within Coastal Partnership East (CPE) is to make a compelling case for investment in flood and coastal resilience to unlock potential funding pots. We create convincing proposals that highlight each project's objectives and explain how the funding provided will achieve them.

The whole community approach to coastal management is a foundation for increasing individual preparedness, and it engages all members of the community as vital partners in enhancing community resilience to the adapting coastline. By aligning resilience goals with a culture of self-reliance, community self-sufficiency, and mutual aid, effective implementation of a funding plan can be maximised.

Overall, we aim to use our expertise to make a meaningful impact on the communities we serve.

The importance of flood and coastal infrastructure goes beyond protecting homes, businesses, and utilities.

It can also generate exciting opportunities, such as opening up land for development, creating new beach destinations, and stimulating tourism in underdeveloped areas. However, realising these benefits requires more than just rhetoric. We must gather compelling evidence and engage with investors and partners to secure the funding needed to turn these opportunities into reality. Investment in flood and coastal infrastructure is crucial to protect our communities and businesses from the devastating effects of flooding and erosion across our coastline. With the increasing threat of climate change, it is more important than ever to invest in an adaptive resilient community that can withstand the impact of extreme weather events. We must think of new innovative and adaptive ways in remaining resilient and our role within the Funding Team is seeking out and creating new funding streams to support the Partnership's projects. Our Funding Team are supporting the Lowestoft Flood Protection scheme, which will develop flood defences for Lowestoft, encompassing tidal walls and a tidal barrier, to protect the local economy and existing jobs in the windenergy sector, alongside homes and businesses. The Funding Team are working on a combination of government funding, East Suffolk Council, New Anglia Local Enterprise Partnership Growth Deal, Flood Defence Grant in Aid, Local Levy, Green Finance and local authority contributions.



The Funding Team are also supporting the Partnership's capital projects:

- Applications for Flood Defence Grant in Aid have been submitted and approved for both Pakefield and Thorpeness for the value of £97k each.
- We are exploring additional claims for Pakefield and Thorpeness due to increased costs for both projects.
- The 2021 urgent works in Thorpeness will be incorporated into the business case for the full project.
- The 2022 urgent works in Pakefield were funded by East Suffolk Council and Resilient Coasts.
- Claims for Flood Defence Grant in Aid are being submitted for Southwold and Corton and Gunton
- Demolition grants will need to be applied for in Hemsby, due to the ineligibility for the Bellwin scheme. Funding for the emergency works will need to be secured via an outline business case, as well as for the main scheme when appropriate.
- Cromer and Mundesley has gained traction, with grant applications submitted for both projects to draw down from confirmed outline business case funding. Additional grant claims are being submitted as a result of inflation.



This year, we plan to use funding to implement measures that will reduce the risk of flooding in coastal areas. This may include funding hard defences and improving and enhancing natural flood defences such as wetlands. By investing in these solutions now, we can create a safer and more sustainable future for our coastal communities.

Due to a changing climate and our coast being one of the fastest eroding coastlines in northwest Europe it is key we explore adaptation with the communities and how our Funding Team can support new innovate methods to create a resilient and adaptable climate change ready community. However, it is important to remember that effective flood and coastal infrastructure requires evidence-based decision-making and ongoing investment. We will continue to gather data and evaluate the effectiveness of our measures to ensure that we are making the most of our resources and protecting our communities to the best of our ability.

Resilient Coasts

Resilient Coasts is an innovative adaptation and resilience project funded as part of the Environment Agency's Flood and Coastal Innovation Programme.

Coastal Partnership East on behalf of East Suffolk Council and Great Yarmouth Borough Council made a successful bid to Defra's Flood and Coastal Resilience Innovation Programme (FCRIP). £8.4m was awarded to test and demonstrate innovative practical actions to reduce damage, disruption, and loss from flooding and coastal erosion. The evidence and learning are informing future approaches to, and investments in, flood and coastal erosion risk management across the UK.

What is Resilient Coasts?

Norfolk and Suffolk have some of the fastest eroding coasts in Europe, with over 2,500 homes at direct coastal risk and thousands more properties and businesses directly and indirectly affected by loss of property, infrastructure, and utilities. Resilient Coasts is implementing an ambitious resilience programme for the East Suffolk and Great Yarmouth coastal frontage, that delivers real adaptation and resilience options for our communities. We will be managing and delivering the Project.

Resilient Coasts is working across nine pilot locations. The pilot areas in East Suffolk are Thorpeness, Southwold and Pakefield, Lowestoft and Corton and Gunton. In Great Yarmouth the pilot areas are Winterton, Hemsby and Great Yarmouth itself. Because of the nature of the frontage and similarities between other pilot sites, the frontage at Shotley is also a pilot area. The work will be delivered in close collaboration with our coastal communities.

How will the project benefit communities?

Resilient Coasts is an exciting and innovative five-year project. It is already establishing resources co-created with communities, businesses, and partners to increase the resilience of our coast for many years to come.

The Project will create a resilient coast by:

- Engaging with our communities.
- Creating emergency and incident response plans.
- Seeking to minimise damage and disruption to local businesses.
- Creating new tools for monitoring and managing our coast.
- Delivering options that support naturally functioning coastal areas.
- Investigating areas for improvements to policy and practice, notably, innovative funding, finance, and change management.



RESILIENT COASTS Great Yarmouth & East Suffolk

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

This means:

- Exploring new ways of approaching coastal solutions.
- Joining up town and neighbourhood plans into a single masterplan.
- A masterplan approach that allows for enhanced leisure, tourism, nature, and access benefits to the community.
- Adaptation options and fund-raising opportunities.
- Joining with partners to look at coastal frontages as a whole.
- Opportunities for community involvement and co-creation at the heart of the project.
- Legacy working with young people to build a resilient community for future generations to come.

This is an exciting opportunity for the community to work with key partners to co-create and shape the future of their coast and help build a resilient and enjoyable coast for many generations to come.

To find out more about FCRIP please go to www.gov.uk/guidance/flood-and-coastal-resilience-innovation-programme

What have we achieved so far?

The Project is being delivered over a five year programme which is already off to a good start, providing benefit to our coastal communities. Below is some of the progress made to date, the most significant of which is the support provided to the community in Pakefield; allowing them to maintain critical access whilst options for the future are explored.

- Delivery of a co-funded adaptation rock pipeline at Pakefield attracting £700k of external funding.
- Project delivery team in place.
- Monitoring and evaluation framework in place.
- Work at pilot sites in Great Yarmouth to deliver adaptive flood resilience options with communities and partners underway.
- Contracts are in place to enable work to start in Great Yarmouth for initial community engagement and to establish the current level of resilience working with Groundwork, the London School or Economics and Zurich Flood Alliance.
- Contracts are in place for a feasibility study, in partnership with and part funded by The Crown Estate, to explore the possibility of a sand scaping scheme between Gorleston and Lowestoft. This work is being undertaken by Royal Haskoning DHV who led the UK's first sand scaping scheme in Bacton, North Norfolk.

- A contract is in place with Balfour Beatty to support asset management plans and a 'call to action' from students through to industry professionals for innovative ideas and options to support a changing coast.
- Community drop ins and meetings have been held in pilot sites at Thorpeness, Pakefield, Southwold and Hemsby to introduce the Project.
- The 'Moving Minds' concept supporting adaptation through better conversation, was launched at a workshop at the Flood and Coast 2023 conference. This concept seeks to open the conversation around the challenge of changing minds and responses to adaptation and transition; through effective consideration of this area, and a meaningful journey to ownership of change.
- Raising the profile of the Project and gathering evidence through national meetings, our workshop at the Flood and Coast 2023 conference, Local Government Association Coastal Special Interest Group, Coastal Group Network, Royal Society round table discussions, and Westminster.





Coastwise

COASTWISE

What is Coastwise?

Coastwise is an innovative adaptation and resilience project funded as part of the Coastal Transition Accelerator Programme within the Environment Agency's Flood and Coastal Innovation Programme.

Coastwise is an initiative that will work with individuals, communities, businesses, infrastructure owners, government and others to explore and demonstrate how coastal places can plan and take actions to prepare and transition from coastal erosion risk.

Between now and 2027 North Norfolk District Council is delivering Coastwise. This aims to generate transferable learning to shape future government approaches to managing coastal erosion through supporting communities in planning and preparing for coastal change.

The two local authorities selected for the initial phase of this programme are East Riding of Yorkshire and North Norfolk. These two locations were chosen as they have the highest erosion rates in England and, by comparison to other areas, a large number of properties at risk.

In North Norfolk, Coastwise will focus on the eroding coast from Weybourne to Happisburgh. North Norfolk District Council are one of the partner authorities forming Coastal Partnership East. Outputs and learning from Coastwise will be shared across Coastal Partnership East and nationally.

What is the coastal transition challenge in North Norfolk?

Action needs to be taken now to explore how local authorities, communities, individuals and national government can best work together to prepare and plan for coastal erosion.

Over the next 100 years, it is predicted that over 1,000 homes will be lost to erosion in North Norfolk. Erosion will impact whole communities as it also threatens businesses, roads, footpaths, utilities (sewage, water, electric), beach access, heritage assets (churches, lighthouses, listed buildings), wellbeing and much more.

The consequences of erosion are profound and require advance planning to 'transition' to being more prepared. Coastwise will involve working together in North Norfolk to develop nationally useful practical actions, policy, funding and finance options to do this.

Contact the Coastwise team

Contact details – **Coastwise@north-norfolk.gov.uk** Email us to sign up to our newsletter. Visit our website for project updates: www.north-norfolk.gov.uk/coastwise

To learn more about the Environment Agency's Coastal Transition Accelerator Programme and Coastwise visit https://engageenvironmentagency.uk.engagementhq. com/ctap



Why is the North Norfolk coast eroding?

Coastal erosion of the soft cliffs in North Norfolk is a natural process that has been happening for thousands of years. From the late 19th century, erosion risk management structures were constructed along the coast.

Since then, these structures have stopped or slowed erosion in many places. This reduces the sand and gravel that would have naturally been released from the cliffs which replenish our beaches. Consequently, our beaches have been reducing in size which then allows wave energy to reach our cliffs. Many of our defence structures are well past their designed lifespan and are deteriorating. Continued maintenance and renewal of these across the whole coast is neither affordable, technically feasible nor environmentally sustainable.

Climate change is affecting all of us, and coastal communities are at the forefront of this change due to rising sea levels and shifts in weather patterns, which together are accelerating coastal erosion.

What will Coastwise do?

Coastwise involves working together to co-develop transition plans for the future to suit the needs of North Norfolk communities affected by coastal erosion.

The programme runs until 2027 and will deliver practical actions identified in the plans, which could include:

- Rolling back property and facilities at immediate risk of coastal erosion
- Improving and replacing damaged community infrastructure
- Repurposing land in coastal erosion zones for different uses, such as temporary car parks and restoring and creating habitats

Our communities will need funding to continue to transition to a changing coast into the future, so alongside the practical actions, one of the Coastwise priorities will be to investigate how to finance this into the future.

Coastwise will help North Norfolk plan and prepare for ongoing coastal erosion by developing and trialling practical options which could be used in other places. It is a national example, which will be learnt from to help other communities at risk.

Key outcomes for Coastwise:

 More prepared and resilient coastal communities.
Supported, resourced and prepared local governance for coastal erosion transition.
Informed and impacting national and local policy, strategies, plans and processes for coastal management.



Lowestoft Flood Protection

The Lowestoft Flood Protection scheme is about developing a way forward to reduce the risk of flooding from the sea, rivers and from extreme rainfall. The Project covers the areas of Lowestoft deemed to be at significant risk from tidal flooding between the Outer Harbour and the western end of Lake Lothing at Mutford Lock; from river flooding along Kirkley Stream, and from surface water flooding both adjacent to Kirkley Stream and other key areas identified to the north and south of Lake Lothing.

The main risk from tidal flooding is caused by a tidal surge that develops in the North Sea along the eastern coastline of the United Kingdom as was demonstrated by the events in 1953 and most recently in December 2013. Lowestoft has very limited existing tidal flood defences and without further investment, the town will remain at significant risk.

The risk from river flooding was demonstrated by the event in July 2015 along Kirkley Stream. The risk of surface water flooding from extreme rainfall events has been considered within a number of local flood risk zones. In both cases it is important to consider the zone or area that contributes to the flood risk rather than a specific location where the flooding occurs.

Why do we need flood defences in Lowestoft?

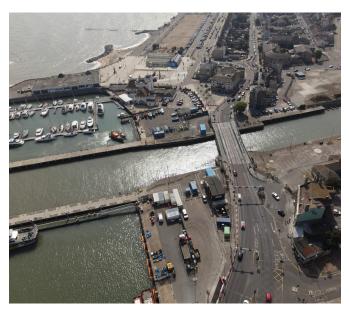
The December 2013 tidal surge flood event, which resulted in 90 homes and 143 businesses being affected, highlighted the inadequacy of Lowestoft's flood defences and the impact it has on existing and potential growth for the town. This was further reinforced by the flooding in the Kirkley area of Lowestoft in 2015 and 2019 following extreme rainfall events. This demonstrated Lowestoft's vulnerability to all forms of flooding from the sea, rivers and extreme rainfall.

Solutions are needed to address all these forms of flooding to offer the best possible flood risk management for Lowestoft.

Lowestoft has very limited existing flood defences and, without further investment, there is a risk that the instances of flooding will increase as the impacts of climate change increase. Unless we act there is a risk that in the future losses to property and businesses from flooding within Lowestoft will become unsustainable and will prevent any future growth.

The first two phases of the project have been completed already. Phase one covered property level resilience and delivered localised flood protection to over 120 homes in Lowestoft. Phase two addressed the localised protection to properties adjacent to the Kirkley Stream are of Lowestoft through the introduction of a pumping station and these two phases were completed in 2021.









Tidal Floodwalls

Tidal floodwalls are in place along Hamilton Road and Waveney Road to the north and around the Royal Norfolk and Suffolk Yacht Club (RNSYC) and South Pier to the south. They are a mixture of solid floodwalls, demountable defences, floodgates and glass floodwalls. The glass floodwalls run around the Royal Norfolk and Suffolk Yacht Club and the South Pier to maintain views of the marina and port and to prevent tidal water impacting upon the Town centre.

Construction of the tidal floodwalls began in April 2021 and will be fully complete in autumn 2023.

Next Steps

- Completion of the Tidal Barrier design, value engineering and design check by a third party.
- Procurement of consultant and contractor teams for the construction of the Tidal Barrier.
- Progressing the TWAO process. A TWAO can take up to two years to be approved but we are working with our partners and stakeholders to make sure that we address concerns as early as possible.
- Construction for the Tidal Barrier will start following completion of the TWAO process. We are currently anticipating a mid-2024 start date and a forecast completion of spring 2027.

Due to a number of external factors, it is anticipated that additional funding for the Project will be required to complete the works. Additional funding has been pledged by East Suffolk Council and the Environment Agency and work continues to identity routes to bridge the forecasted shortfall.

Tidal Barrier

The Lowestoft Tidal Barrier will be built across the channel entrance to Lake Lothing on the seaward side of the Bascule Bridge. Taking the form of a 40m mitre flood gate, the Tidal Barrier will be the second largest of its kind in the UK. The Tidal Barrier requires a Transport and Works Act Order (TWAO). This is granted by the Secretary of State and is needed when construction can change or affect navigation.



Lowestoft Flood Protection

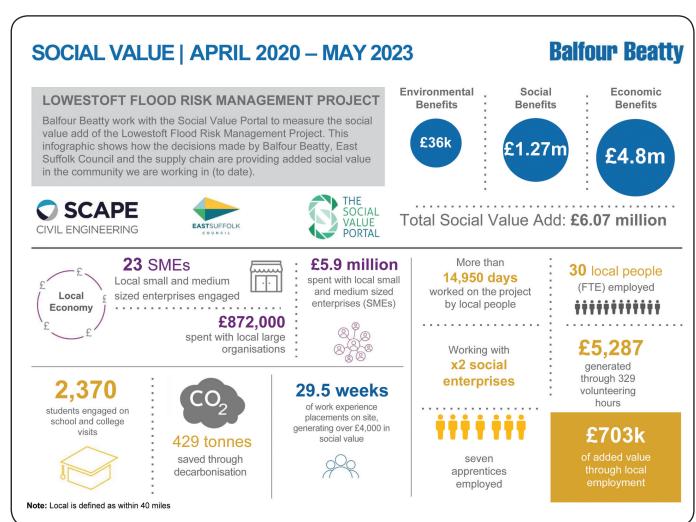


Working with the Community

A vital part of the scheme is working with and consulting local communities, businesses and organisations. Public consultations have taken place over the lifetime of the scheme and engagement with communities and businesses will continue until the scheme is complete.

Our social value work in Lowestoft has focused on creating apprenticeships, reducing carbon emissions, hiring NEETs, saving car miles, and initiatives to support older, vulnerable, and disabled people. We have also engaged local students, community groups and charities with the project through our community engagement work.





The data is subject to a verification process which is currently underway, so the figures may change

Ready to respond

Our team have a role to play in supporting each of the partner local authorities before, during and after adverse weather affecting the coastline. This could be a significant tidal surge, such as December 2013 or it could be the increased storminess with high winds that we experienced earlier in March 2023 as Hemsby in particular, was impacted by Storm Otto.

Our role during events such as these is to provide emergency advice and support to our partner local authorities and to work closely with the Resilience Forums in Norfolk and Suffolk. When required, we also work directly with Blue Light responders and the Environment Agency (EA). Our support is drawn from across the full range of Coastal Partnership East expertise from engineering through to crisis communications management.

In Lowestoft and Felixstowe, we have specific roles to play during an emergency.

In Lowestoft we are responsible for ensuring the safe and timely installation of temporary flood barriers. We do this in partnership with the East Suffolk Water Management Board who provide operation resource and expertise. The temporary flood barriers have been operational since November 2016. We have worked closely with all professional partners such as the Blue Light services, the EA, Associated British Ports and the Suffolk Resilience Forum to develop a deployment plan and operational protocols. This plan now includes the completed sections of the Lowestoft Flood Protection tidal walls. The temporary barriers will be used to reduce the risk of flooding to people and property impacted by flooding from tidal waters in Lake Lothing. The temporary flood barriers will be used until the completion of the Lowestoft Tidal Barrier scheme.

In Felixstowe we work in partnership with the EA. Here we have a protocol in place that helps to inform us and our partners when the flood gates in Felixstowe need to be closed. The protocol not only covers the closing of the gates in the event of a tidal surge but also high winds, which may cause the tide to overtop the promenade. Resilience is also extremely important, and we are proud to be the leading partner helping to provide better resilience through plans and actions to businesses across the Norfolk and Suffolk coast through the Resilient Coasts project.



Investing in our people and partnerships – governance, strategy, policy, and resource Looking forward to 2024 and beyond

Knowing Our Coast

We continue to build the evidence base to understand our dynamic coast so we can plan and prioritise management decisions now and for the future with sea level rise. Through innovative approaches like new drone technology, radar and app-based survey tools we are creating an efficient but more detailed picture of how our coast is working and will evolve that informs future management and investment. Later this year we will receive the Environment Agency's National Erosion Risk Maps (NCERM) for our coast, and this will be a key tool in mapping and managing risk. Ahead of that we are developing a new coastal spatial map, and this will overlay our coastal features and the things we all value so the erosion and tidal flood risks can be defined in 2024 and form the basis for community and partner discussions about risk and how we manage it. This will be a critical time for discussions and a massive first step in planning for a future resilient coast.

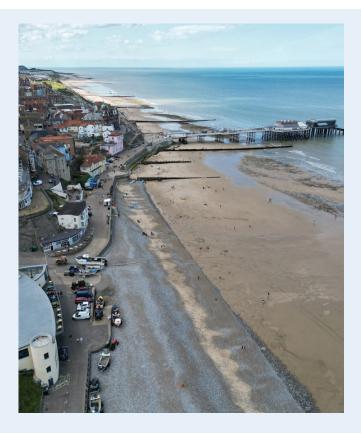


Delivering Resilient Assets

As the year progresses, we will reach major milestones for two key capital projects in our programme. With North Norfolk District Council, our Cromer and Mundesley coastal protection scheme will begin. With East Suffolk Council, the Lowestoft Flood Protection tidal walls will be completed in September 2023, and we will be submitting our Transport and Works Act Order for the Lowestoft Flood protection tidal barrier in August to seek permission to progress the scheme through the Secretary of State. We are working closely with the Environment Agency and local stakeholders to ensure over 2400 homes and over 980 businesses are better protected from tidal flooding and erosion for these locations.

Having trialled the Social Value tool in Lowestoft where we have demonstrated over £6M of added social value to date and we'll be applying this to all our larger projects to ensure we maximise capital investment and enable jobs and opportunities for local people and businesses and improve health and wellbeing through our schemes. We are developing nature-based solutions through sand scaping concepts and are excited to support the RSPB UNESCO bid for a North Atlantic Flyway through the East Coast Flyway application.

Using high quality procurement processes that deliver good value for money we continue to attract industry leaders to support and deliver our work to deliver



innovation in both our traditional and adaptive approaches. We are attracting wider interest and support from different sectors to bring the best skills we can to the Norfolk and Suffolk Coast to help meet the challenges of sea level rise and climate change.

Innovative Investment

We cannot deliver our ambitious plans for this coast without funding, and we are working hard on new mechanisms to raise funds for our capital programme that demonstrate the delivery of wider benefits but also a potential adaptation funding mechanism through our Resilient Coasts and Coastwise projects. We have a number of initiatives planned with the Environment Agency nationally, notably the Green Finance team to support new ways of working and we continue to support local communities and businesses in developing funding strategies that will deliver local projects that don't typically attract central government funds. A new project this year will be to bring UN Sustainability goals into all our work and trial levering new funds through this approach.

Climate Ready Coast

In 2023 and beyond will be about working even more closely with our local authority Planning Policy teams to roll out new supplementary planning policy and supporting the development of planning policies that can facilitate coastal change. A number of locations will be trialling different approaches to community-led resilience planning and communities are exploring the use of coastal strategies, neighbourhood plans, and emergency plans as potential tools through the Resilient Coasts and Coastwise projects. New emerging work to engage infrastructure providers in discussions about their resilience and future investment are underway. The new Shoreline Management Plan (SMP) Explorer portal is also launching this year providing a great one-stop shop for those interested in finding out more about coastal management and SMP policies for their area and our team have been working to support its development and launch both locally and nationally.

Supporting viable climate resilient communities and businesses

We continue to engage and support our communities and businesses to be prepared for and resilient to coastal change and strive to maintain and enhance vibrant coastal economy and environment. New innovative tools to help people 'vision' their future coast using Geographical Information Systems, virtual and augmented reality tools and citizen science will all play a big part in supporting those most affected by flood and coastal risk in imagining what a viable coastal place can look like for them so we can plan for that. We continue to develop plans and strategies with democratically elected members and key partners at the Suffolk and Norfolk Coast Forums and work closely with the Anglian (Eastern) Regional Flood and Coastal Committee (RFCC) engagement sub-committee. We joined the RFCC, along with other Risk Management Authorities at this years' Royal Norfolk Show and Suffolk



Show, demonstrating the breadth of our work to over 95,000 people who either work, live, visit or benefit from our coast. A significant milestone this year is the first East Anglian Coast and Estuaries Conference on 12th October at Wherstead Park. The conference has been running for 11 years and in 2021 extended from Suffolk to include Norfolk. This year, in the national Year of the Coast, we are pleased and proud to welcome the Essex Coast Forum, meaning that the conference now represents three counties, reflecting the challenges and opportunities now and for the future.

Investing in a Resilient Team

We continue to develop our team and build capacity, knowledge and resilience and establish ourselves as national exemplars. Many of the team are now members of professional bodies and we continue to develop our training to match the experience we need for this challenging but hugely rewarding field of work. We are developing a Coastal Hub concept with Balfour Beatty to create a focus for skills and expertise in our industry and looking to the future how we will encourage the next generation of coastal managers to want to come and work on our coast. The team are all #ProudtobeCPE and we work hard to align all we do with our local authorities' corporate strategies as well as contribute to national discussions that support our coast needs.



Working nationally

We continue to work with the Local Government Association (LGACSIG) to ensure we raise up the challenges facing our coast alongside 140 other coastal local authorities nationally. The LGACSIG is 'uniquely placed to influence government agencies and support local authorities to deliver on a range of coastal issues'. In addition to our local work our officers actively lead on coastal adaptation and beach and water safety and are directly involved with landfill and funding and finance working groups. The LGACSIG is calling for a dedicated coastal minister to ensure the unique challenges and opportunities of coastal places are giving 'One Voice' at national political level. Our Partnership provides Lead Officers to two of the working groups, adaptation and beach and water safety.

In addition Karen, as Head of Partnership, is the current East Anglian Coastal Group (EACG) Chair, one of seven coastal group leads around the country and uses her role to share the work of coastal practitioners from the Wash to the Thames to support the Coastal Group Network (CGN) Vision -

"A Strategic collaborative partnership that promotes the Coast - works with EA National colleagues to support the delivery of the FCERM Strategy ambitions and provides wider sector influence"

Both groups have great success in influencing and shaping the work we do on the coast, and we are very proud to take part in these networks on behalf of our local authorities and those we serve.

This year LGACSIG and CGN will be focussing on ensuring coastal local authorities can support the delivery of the Environment Agency's flood and coastal erosion risk management £5.2B programme through our own capital projects despite the economic and inflationary challenges of recent years. Innovative funding and finance options are developing, and new solutions are being explored to support central government spending and those who are already



at most risk of climate change impacts at the coast. We will be sharing good practice nationally and locally through our Flood and Coastal Innovation Programme work and ensuring we deliver adaptation and resilience on the ground and informing national climate change discussions as the new National Adaptation Plan emerges to ensure the coast is fully recognised and considered. Emerging work led by Coastal Partnership East (CPE) on 'Moving Minds' supporting conversations about coastal change will develop further. CPE are working with North West and Welsh colleagues on the resilience of key infrastructure and whether we can encourage infrastructure providers locally and nationally to work more closely with us on their investment programmes for the future. The significant issue of coastal landfill is rising up the agenda as a problem that needs urgent investment and planning. Working through the LGACSIG beach and water safety group, we are working with the Environment Agency, the RNLI and others to encourage some of our important local services such as lifeboat stations to prepare for the impacts of coastal change through resilience and adaptation plans. Nationally we will continue to take up opportunities to share evidence at

All Party Parliamentary Committees on all the relevant issues affecting the coast.

Finally, 2023 is the Year of the Coast so we want to make best use of this opportunity and start to raise the profile of our coast and why it is unique and so important to the national economy, history, culture and environment for our society. Our CPE Partnerships and Engagement Team developed a concept which has been adopted nationally through the LGACSIG, National Coastal Tourism Academy, OneCoast and Coastal Partnerships Network. #ourcoastourplace pledges for The Year of the Coast 2023 will launch in Parliament in September and will encourage everyone to make a measurable pledge for their coast. A website is in development in time for the launch. Our Partnerships and Engagement Team are part of the national team working to develop this and locally those attending the East Anglian Coast and Estuaries Conference will be able to make their pledge live. Those pledges collectively and the impact they make will help us with the strong narrative, that our coast matters.

Governance

MEET OUR BOARD





Clir James Bensly CPE Chair 2023-24, Cabinet Member for Tourism, Culture & Coastal Great Yarmouth Borough Council

Clir Kay Yule Cabinet Member for Planning and Coastal Management East Suffolk Council



Clir Harry Blathwayt Portfolio Holder for Coast North Norfolk District Council



Clir Paul Wells Cabinet Member for Environment & Sustainability, Waste & Licensing Great Yarmouth Borough Council



Clir David Beavan Deputy Leader and Cabinet Member for Housing East Suffolk Council



Cllr Callum Ringer Portfolio Holder for IT, Environmental & Waste Services North Norfolk District Council

MEET OUR OPERATING OFFICER GROUP



Nick Khan Strategic Director East Suffolk Council



Steve Blatch Chief Executive North Norfolk District Council



Bill Ogden Head of Property and Asset Management Great Yarmouth Borough Council



Philip Ridley Head of Planning and Coastal Management East Suffolk Council



Martyn Fulcher Director for Place and Climate Change North Norfolk District Council

Our Team



Karen Thomas

Coastwise NNDC

Coastal Management



Charles Krolik Root



Rob Goodliffe



Sophie Day



Colin Bye

GIS

Trazar Astley-Reid



Laura Winters



Peter Jermany







Sara Barratt

Charlotte Flight







Alysha Stockman





Sharon Bleese

Sharon Richardson Advisor





Lucy Goodman





Thomas Walker



Operations and Engineering



Tamzen Pope





Brian Farrow

Chris Finbow

GYBC/ESC Engineer



Fiona Keenaghan

Paul Patterson



Keith Roper





Balfours/CPE Apprentice

Thomas Hayden

Lowestoft Flood Protection

LTB Project Development Manager







Kya Plowman





Programme and Funding

JP Farthing

Lisa Mills



Balfour Beatty Secondee

Tom Chalker



Charlotte Betts



Freya Martin

Forward look – Cllr James Bensly (Chair, CPE Board 23-24)



Clir James Bensly Chair, CPE Board 23-24

"I am excited to embark on this journey with a clear vision for a sustainable future for our coastal regions." I am honoured to be appointed the Coastal Partnership East (CPE) Chair for 2023-24.

I am currently Portfolio Holder for Tourism, Culture & Coastal Management at Great Yarmouth Borough Council, and have been promoting Great Yarmouth's tourism and saving Hemsby coastline since my political career began back in 2016, so our coastal regions have always been a priority for me. CPE stands as a beacon of hope and collaboration for the coastal communities it serves.

As I take the helm as Chair, I am invigorated by the immense potential to shape a sustainable future for our coastal regions. With a forward-looking mindset and a passion for preserving our natural heritage, I am committed to leading CPE towards a future where resilience, innovation, and partnership thrive. Coastal regions face unprecedented challenges in the 21st century, from rising sea levels and extreme weather events to the consequences of human activities on our environment.

As Chair of CPE, I envision fostering a culture of resilience among our member communities. By prioritising strategic planning and implementing robust adaptation measures, we can safeguard our coasts and ensure the well-being of both our natural and human communities. No single entity can tackle the complex challenges faced by coastal regions alone. As Chair I am committed to fostering collaboration among various stakeholders, including government bodies, local communities, academic institutions, and environmental organisations. By creating a platform for shared knowledge, resources, and expertise, we can amplify our impact and drive collective action towards a sustainable future. Collaboration will be at the heart of our efforts to address climate change, preserve biodiversity, and promote responsible coastal development.

Stepping into the role of Chair for CPE is an honour and a privilege. I am excited to embark on this journey with a clear vision for a sustainable future for our coastal regions. By fostering resilience, embracing innovation, promoting collaboration, and engaging communities, we can make a tangible difference in protecting and enhancing our coasts. As Chair, I am committed to leading CPE towards a future where our coastal regions thrive, preserving their natural beauty and providing sustainable livelihoods for generations to come.

This Partnership will continue to strive for more positive and sustainable outcomes for our communities and coast.

coastal partnership east

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www.coasteast.org.uk