



Three Harbours Strategy

2024-2028

Published September 2024

Executive Summary

The nature and climate crises are impacting the Three Harbours of Langstone, Chichester and Pagham and will escalate over coming decades. This partnership has a unique opportunity to work together to make the most of the enormous potential within these harbours. And our strategic aims define this ambition:

- **Reimagine** – the future to illustrate the ‘art of the possible’ engaging the public and stakeholders in a wildlife rich vision and improved environment for the Three Harbours.
- **Reverse** – the pressures on water quality, the lifeblood of our environment.
- **Restore** – upscale active restoration of habitats in order to supercharge biodiversity and carbon capture.

This strategy sets out how we weave together the strands of nature recovery work across the Three Harbours to bring about this change.

We need an agreed strategic approach that draws partners together around a shared long-term vision and mission. This will allow us to prioritise interventions in the short term. This strategy is the starting point, giving focus to the points of leverage that make the most difference to the delivery of the vision and mission. Rather than fragmented effort and resource, we will use this strategy to steer activity, ensure projects complement each other and realise multiple benefits where possible, that are future proofed.

We need an integrated plan that builds on this strategy to prioritise where to place our resources and when. Having visibility across the different programmes of work allows us to align projects quickly and effectively, finding ways to collaborate, and streamline activity with immediate effect. It also means we can proactively seek out investment to accelerate the pace of change. The 2028 Outputs set out what we aim to deliver in the next 4 years and the Year One Plan identify the immediate activities that will provide pace and momentum.

We need a natural capital approach that complements existing approaches of protection, that may be insufficient on their own, to tackle the threats from multiple sources. This approach will enable us to identify the social and economic value of the natural environment and highlight the benefits of nature-based solutions that come from investing in a healthy and thriving environment.

Our strategic objectives capitalise on the strengths of the partnership which is already bearing fruit. They specify how we will realise our aims; with thorough and collaborative **engagement** that builds a mandate for change, through co-designed **delivery** of the integrated plan and supported by **advice** and guidance for our partners and broader stakeholders.

This strategy represents the collective ambition of the partnership which will achieve far more together than the sum of its parts. It sets our mission towards a resilient and thriving vision for 2050 with the strategic aims and objectives for 2028 brought into clear focus.

We have this opportunity to work together to forge a different, hopeful path for future generations. Let's grasp it!

Our partners



CHICHESTER HARBOUR CONSERVANCY

HELP US TO #RENATURE SOUTH DOONS NATIONAL PARK



CHICHESTER HARBOUR PROTECTION & RECOVERY OF NATURE



BLUE MARINE FOUNDATION

Havant BOROUGH COUNCIL



Sussex Wildlife Trust



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Why?

The opportunity

The Three Harbours of Langstone, Chichester, and Pagham provide an internationally important mosaic of wet grassland, intertidal, and coastal habitats which are crucial for wildlife and a key resource for people. These harbours and the catchments that flow into them represent a unique stretch of coastline on the South Coast and include the Medmerry realignment – a ground-breaking showcase of restoration of these habitats (see case study page 36). The coastline is complex, meandering and constantly evolving with the tides and ocean power, providing an extensive interface between the marine and important terrestrial habitats such as coastal dunes, coastal grassland and grazing marsh. Internationally important saltmarsh and seagrass habitats intersperse across the vast (often undervalued) mudflats and creeks. (See page 30 for an illustrative map of the scope of the Three Harbours).

The harbours host the largest mixed seabird colonies on the south coast and a significant proportion of the UK's wintering waders and waterfowl. Internationally rare chalk streams support specialised wildlife, such as kingfisher, mayfly and water crowfoot. The oyster and shellfish industries have seen declines over recent decades but are evocative of the richness of marine life that once thrived here – and could again. The harbours and seas support critically endangered European eels, and sea trout which are threatened by increasing water temperature, poor water quality and barriers to migration. Eighteen species of bat, plus the greater mouse-eared bat – previously thought extinct in the UK – find refuge in our dark skies. Endangered water voles have a stronghold in the ponds, streams, and ditches on the Manhood Peninsula. And the only known rookery of harbour seals in the Eastern English Channel breed on the undisturbed mudflats in our harbours.

The exceptional nature of this landscape is recognised with 44% of the catchment protected and a host of specific designations¹ specifically for the habitats and species that are special to these harbours. There are eleven local and national nature reserves located within around the Three Harbours. Chichester Harbour is designated as a National Landscape (formerly known as an Area of Outstanding Natural Beauty (AONB)), most of the inshore seabed is now protected from damaging trawl fishing, and wildlife corridors connect the harbours, to the South Downs National Park to the north.

Medmerry has just had its ten-year anniversary. It was the largest managed realignment scheme on the open coast in Europe and the first of its kind. In 2013, the Environment Agency created 7 km of new flood bank, protecting around 300 homes and creating 300 hectares of new wetland wildlife habitat – mudflats, tidal lagoons, saltmarsh, and wildlife-friendly farmland. It was designed to compensate for the loss of internationally important habitats elsewhere. It retains high levels of global interest from academics

¹ Chichester Harbour SSSI, Langstone Harbour SSSI, Pagham Harbour SSSI, Chichester and Langstone Harbours SPA, Pagham Harbour SPA, Chichester and Langstone Harbours Ramsar, Pagham Harbours Ramsar, Pagham Harbour MCZ, Pagham Harbour LNR, Solent Maritime SAC

who study its evolution in the face of coastal forces and the speed of habitat colonisation.

A significant number of projects are underway that recognise the potential of this area and aim to restore it to healthy, thriving conditions. Solent Seascape Project is a 5-year project which aims to restore key habitats including across the Three Harbours. Chichester Harbour Protection and Recovery of Nature (CHaPRoN) is a partnership that was established to respond to the decline in the condition of the harbour. The Manhood Peninsula Partnership has been working with the community for decades looking at addressing local environmental, social and economic challenges posed to the area by climate change. However, greater focus has historically been given to Chichester Harbour due to its National Landscape designation (formerly known as Area of Outstanding Natural Beauty) so attention and investment into Langstone and Pagham harbours is needed to level up restoration of these equally precious landscapes. This is just a snapshot of the multiple initiatives that this partnership is working with – seeking to unite them under this strategy.

These coastal wetlands are surrounded by the urban developments of Portsmouth, Havant, Chichester, and Bognor Regis. Local residents are also invested in the beauty and nature of this landscape – they are often vocal in their need to protect and restore nature and are concerned about the threats to their environment. The community pressure even resulting in our local water quality issues making national news. Nature based tourism, shipping, fishing, and food production are important economic sectors on the low lying coastal plain and so many local businesses are heavily invested in a clean and healthy environment.

Together all these factors paint a picture of enormous opportunity; the uniqueness and significance of the landscape and wildlife, the important protections and designations, projects that are already providing energy and momentum and the community's concern for their environment and nature recovery. This combined potential needs to be harnessed under an integrated approach. This strategy aims to do just that.



The challenge

These opportunities interface with the many challenges this land and seascape face. Having been a source of solace and famed for their natural riches for generations, the harbours are now threatened by declining water quality and increasingly marginalised wildlife and habitats. The coastal habitats that boost biodiversity and provide feeding and breeding grounds for wildlife, filter nutrients, stabilise our coastline, buffer tidal energy during storms, and store carbon have suffered substantial decline. The large human populations living in and around this landscape place considerable demands upon the natural systems that the harbours support.

The Condition Review of Chichester Harbour Sites: intertidal, subtidal and bird features (2021) was a catalyst for concerted effort to reverse the threats and pressures and restore the features of Chichester Harbour. The main intertidal habitats and bird features were assessed as 'unfavourable declining' condition – largely due to the continued loss of saltmarsh, the poor quality of saltmarsh and mudflat habitat, and the continued decline of several bird species (wintering and nesting). Given the connectivity and shared issues with Langstone and Pagham Harbours', it is likely that decline would not be isolated to Chichester Harbour and assessments of Langstone and Pagham are now underway.

These multiple crises interact. We are still learning about how these issues impact each other and have a compound effect on the natural systems across the landscape. But we can categorise the most significant as follows –

- Coastal squeeze – when coastal habitats can't migrate landwards, often due to hard coastal defences, they shrink and degrade. The supply of sediment to support habitat health and growth is disrupted. This has been a major contributor to the loss of saltmarsh, and along with other pressures, has meant Langstone and Chichester Harbour combined have lost over 70% since the mid-20th century.
- Climate change – flooding and its impacts on local communities, disrupted weather patterns affecting farming cycles, more frequent and severe weather events, sea levels rising and seas warming. Farmers report increasing drainage problems from flood water and salination of soils due to seawater inundation.
- Water quality – nutrients and pollutants from water companies, farming, landfill, microplastics and highways impact our water environment. Harbours are smothered in algal growth in the summer which restricts foraging and reduces the oxygen in the sediment that is crucial to life in the mudflats. The local fishing industry in Langstone Harbour is struggling because of the effect of pollution on shellfish areas, along with other pressures such as overfishing, disease and competition from invasive species, with commercial operators declining by 50% in the past 10 years².

² Reported by Langstone Harbour Board from their vessel records and UK Sea Fisheries Annual Statistics. In 2013, before the oyster fishery collapsed, there were some 60 commercial fishing boats operating in Langstone; this now stands at 16.

- Land use – habitat loss and damage from development, lack of land to meet the differing needs for adaptation, increased disturbance through recreation, noise, light, litter and pollution from increased populations and poor behaviour.

Attempts to mitigate these issues have been underway for decades, using regulatory protections as a key tool to limit the threats to designated areas and the water environment. But the escalation of these pressures has meant we are still seeing a dangerous decline in our habitats, species and ecosystems. The protection approach is insufficient on its own and was not designed to tackle the multiple threats we are now seeing. We need new tools in addition to protections to give nature a fighting chance. We also need to bring communities on board with the need for adaptation in how we manage our coastlines rather than maintaining the status quo.

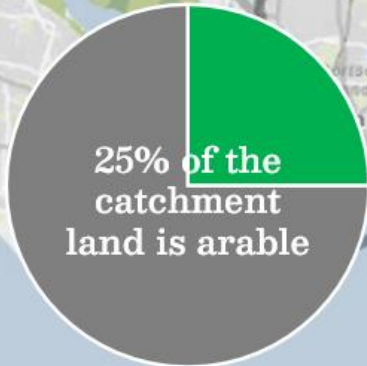
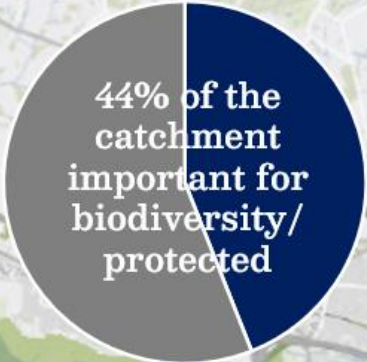
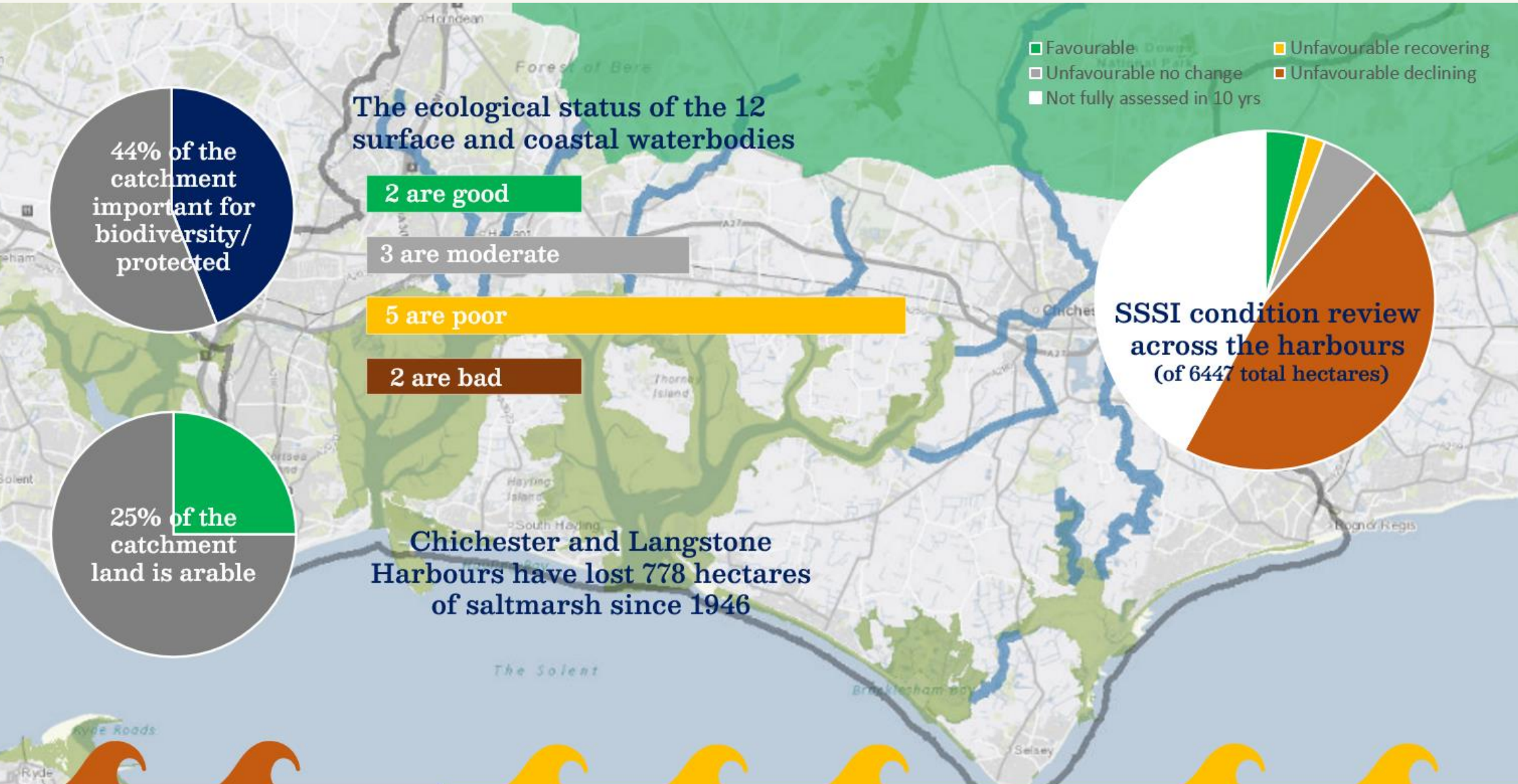
One of the key challenges we face is that multiple organisations are making efforts to restore the harbours and their catchments. Regulators, local authorities, water companies, environmental NGOs, wildlife charities, farmers, landowners, and academics all play different, but equally important, roles in the drive to reverse the decline.

The Solent is a hot spot for restoration activity with a vast array of projects and initiatives, tackling various issues from different angles. But as a result, the effort to mitigate these numerous threats and pressures is fragmented and not sufficiently joined up. No single organisation has a full view of the activity taking place. There are conflicting priorities as to how the land should be used to meet different needs. In addition, greater focus has historically been given to Chichester Harbour due to its status as a National Landscape (formerly AONB) with Langstone and Pagham harbours not benefitting from the same level of funding and attention. Without an overarching strategy and ability to prioritise activity, agreeing an integrated plan for recovery would be difficult and opportunities are not being realised to best effect.

To deliver at pace and at scale, we need all these organisations to unite behind a forward-looking strategy that takes a new approach to nature recovery, uses modern tools and brings together a cohesive integrated plan. This holistic approach will help us to align strategies, plans and funding cycles, and share skills, tools and expertise. It will enable us to understand the biggest and quickest wins and what will achieve the greatest impact from our shared efforts and collective investment.



The State of the Three Harbours



Chichester and Langstone Harbours have lost 778 hectares of saltmarsh since 1946





Origin story

The Three Harbours partnership was born from the Harbours Summit which brought together senior leaders of twenty plus partnering organisations. In 2021, they agreed three target areas of focus – water quality, biodiversity and carbon capture. They commissioned the partnership to agree an ambitious vision for nature recovery, a joint strategy, and to bring together an integrated plan. The key word here is integrated. They recognised that the current state of affairs is not sustainable – collaboration and the need to build on and strengthen existing partnerships is critical. The partnership has been building towards this strategy so that it can set out how it will weave together the work of so many partners and projects. This way we will achieve more together than we would separately.

Vision

Our clearly defined vision captures the future we want to see in 2050:

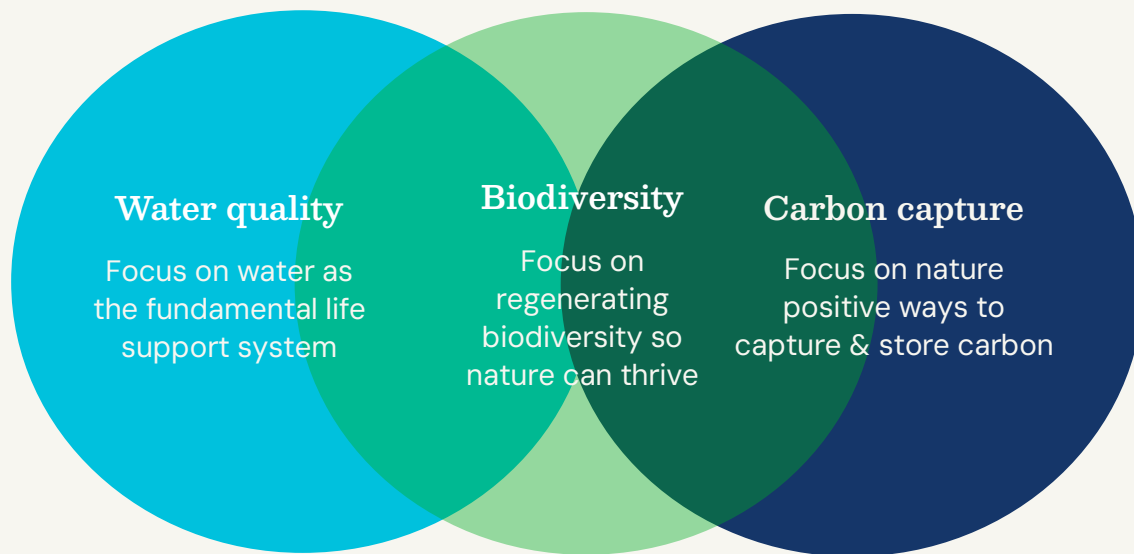
We envisage a healthy and thriving water environment where restored and connected sea and landscapes are resilient to a new climate reality, enabling people and nature to adapt and flourish – together.

Mission

Our mission sets out how we will achieve this.

Reverse the decline and help nature thrive across Chichester, Langstone and Pagham Harbours, through the expertise, network and resource of the Partnership.

Areas of focus



These three areas of focus are still broad, but they capture the key drivers for restoration across this landscape. Taking a natural capital approach (full explanation at page 32) will help us to zero in on the actions that will deliver the greatest benefit for nature and society.

Improvements to water quality, sustainable water quantity, and improvements to water function remove the pressure on ecosystems in the water environment, allowing habitats to recover and the levels of biodiversity to bounce back. In turn, certain types of species and habitat, when allowed to thrive, not only support a myriad of other species but also provide ecosystems services. For example, saltmarsh, seagrass, oysters, reed beds and kelp help to filter, clean, and regulate the flow of water, illustrating that water quality and biodiversity have a mutually beneficial relationship.

The third focus area – almost all healthy habitats absorb and store carbon, though their effectiveness and the speed at which they do this varies, with some species and habitats, such as saltmarsh and seagrass, fixing and storing multiple times more carbon per area than land forests³. Innovative coastal management using nature-based solutions can help protect and increase these marginal habitats and boost biodiversity and sequester carbon, whilst maintaining and increasing coastal defence from sea level rise. Therefore, a further reciprocal relationship exists between restoring biodiversity and capturing and storing carbon.

By prioritising activities that hit the sweet spot of all three – improve water quality, boost biodiversity, and restore carbon sinks, we get the best possible return for nature. This is the natural capital approach where we identify the benefits nature provides and focus our efforts on where the returns are greatest. Looking at these three areas of focus and how they interact also enables us to take a system level view of the function of the landscape in a way that highlights the intrinsic value of nature. We can also take strategic approach to ensure we use land in a future-proofed way that delivers the benefits we will need in a changing climate.

³ <https://oceanservice.noaa.gov/ecosystems/coastal-blue-carbon>



Three themes

Fragmented approach – > Getting on the same page –> Agreed strategic approach

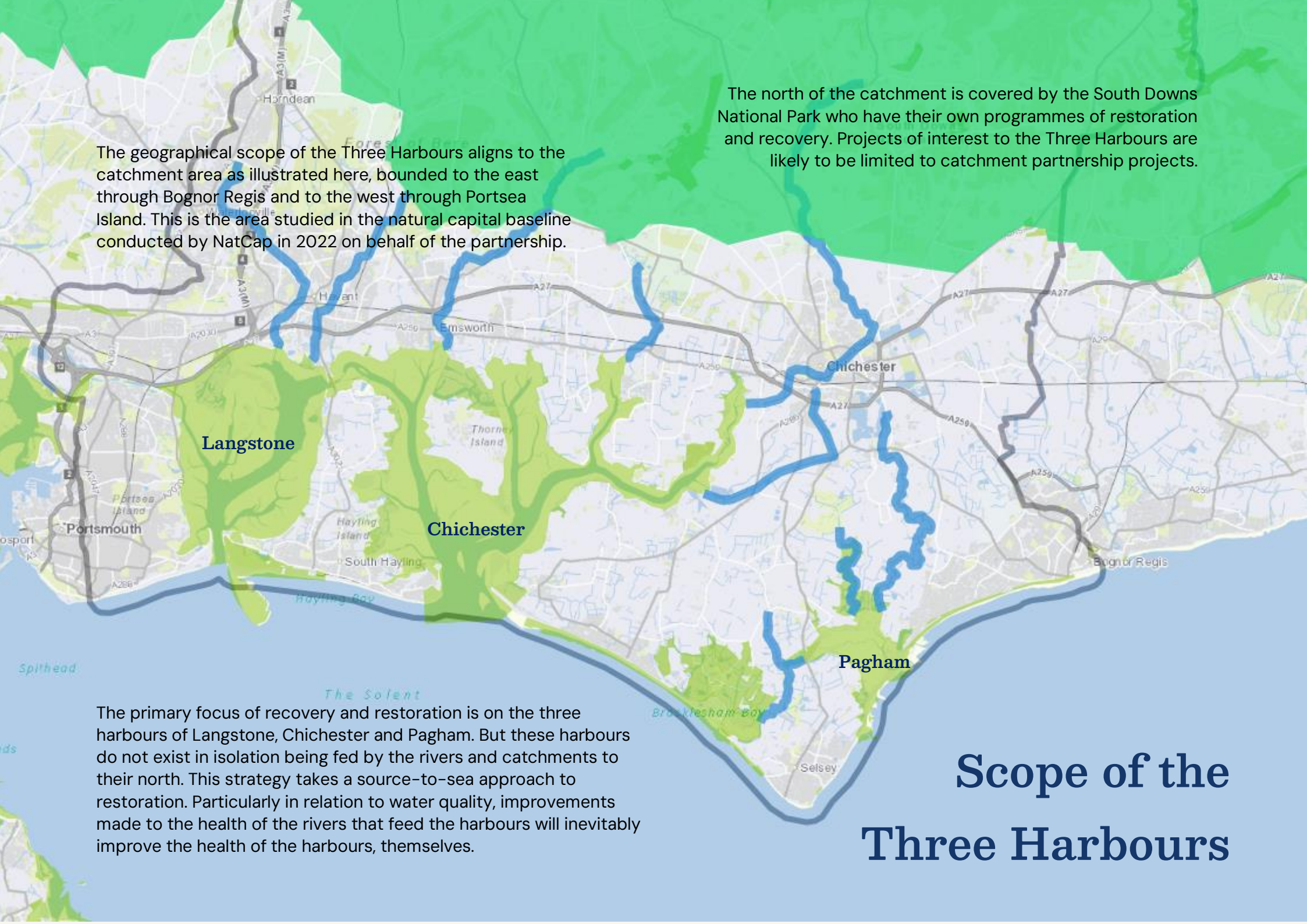
Effort and resource are currently spread too thinly across numerous projects and initiatives without a joined-up plan. We need to be pulling in the same direction and this strategy brings partners together around a shared longer-term vision and mission. This will help us to steer activity towards addressing the most pressing issues, ensure projects complement each other, contributing towards achieving the long-term vision, that delivers the most for nature. This approach will mitigate the stop-start momentum of funding availability, with a project pipeline to deliver the strategy developed to make best use of funding sources.

Working in silos –> Visibility and alignment of activity –> The integrated plan

Whilst there is plenty of collaboration across the landscape, partners are currently unable to keep track of all the work that is taking place. So this is inhibited, there is duplication of effort – and opportunities to affect change are missed. A long-term vision addressing land use is required to ensure we are able to meet future needs rather than short-term opportunities. Mapping all of the relevant work and future ambition onto a single integrated plan allows us to hold an overview of what is going on and build upon the Local Nature Recovery Strategy on a more local scale. It enables us to align strategy, planning and funding cycles, prioritise actions which will have the biggest impact with funding available, schedule projects so they complement each other, and maximise output from our shared energy and collective investment.

Protection is not enough – > More tools in the toolbox –> Natural capital approach

The condition of the natural habitat is in worrying decline, impacted by a whole suite of issues. Whilst regulatory protections are essential in preventing loss, they lack the mechanisms and funding to tackle the threats from multiple sources. We need a new approach that values biodiversity and the services provided by our natural world. A natural capital approach identifies the social and economic value of the natural environment and highlights the benefits of nature-based solutions in achieving its outcomes. It assesses how natural assets and ecosystem services are likely to change in a new climate reality so that we can adapt and work towards a resilient landscape.



The geographical scope of the Three Harbours aligns to the catchment area as illustrated here, bounded to the east through Bognor Regis and to the west through Portsea Island. This is the area studied in the natural capital baseline conducted by NatCap in 2022 on behalf of the partnership.

The north of the catchment is covered by the South Downs National Park who have their own programmes of restoration and recovery. Projects of interest to the Three Harbours are likely to be limited to catchment partnership projects.

The primary focus of recovery and restoration is on the three harbours of Langstone, Chichester and Pagham. But these harbours do not exist in isolation being fed by the rivers and catchments to their north. This strategy takes a source-to-sea approach to restoration. Particularly in relation to water quality, improvements made to the health of the rivers that feed the harbours will inevitably improve the health of the harbours, themselves.

Scope of the Three Harbours

What are we going to do?

Strategic aims and objectives

Our strategic aims and objectives are where all partners unite behind a common purpose. We need to have a shared understanding of the priorities, pulling in the same direction – we need to be on the same page – and this strategy is that page. Partners may all have different roles to play in delivering this strategy, but it brings us together in agreement that this is the best way forward.

The aims and objectives focus on points of leverage where the partnership can make the greatest difference and use its strengths to deliver the most value. They identify the areas where we will see compound benefits rather than isolated wins.

These are set with a view towards 2050 to give longevity but with outputs that we aim to deliver by 2028 to ensure there is clear focus for the immediate term. This means they are future-proofed to allow us flexibility and agility to adapt to future scenarios and changes in our context. The strategy will be monitored and reviewed 5-yearly, but the strategic objectives will remain focused on these themes.

To balance out the high-level, long-term view of this strategy, and to recognise the need for pace and a bias for action, we have included the year one plan at the end of this section. This plan will focus on an agreed set of immediate actions for the Three Harbours to deliver by July 2025, so we can start to advance our mission.

Aims

The aims expand upon our mission and guide our actions. They align with existing programmes and strategies, drawing partners into a shared purpose. They provide the foundation of a broad programme of work that maps existing and planned initiatives and identifies the gaps that we need to lean into and prioritise further work. Where the evidence points to significant benefits being realised and where those benefits bolster and enhance each other.

Reimagine

The future - to illustrate the 'art of the possible' engaging the public and stakeholders in a wildlife rich vision and improved environment

Reverse

The pressures on water quality, the lifeblood of our environment.

Restore

Upscale restoration of habitats in order to supercharge biodiversity and carbon capture.

Objectives

These objectives explain what the partnership needs to do to meet these aims.

The partnership is relatively new and needs to mature by building the supporting mechanisms to help it deliver its mission and by embedding the partnership aims and objectives within key stakeholders' programmes of works. In the immediate term, the key piece of work is developing the integrated recovery plan along with supporting arrangements that help the partnership function better, and align with parent and sister programmes and communicate the purpose of the partnership to create a catalyst for action.

Engage

Local communities and stakeholders forming a mandate for change.

Deliver

The Integrated Recovery Plan, co-designed with stakeholders and the public.

Advise

Build and share expertise and guidance on all aspects of nature recovery and funding approaches.

These strategic aims and objectives are expanded upon over the following pages.



Strategic aims – what will we do

Reimagine – the future to illustrate the ‘art of the possible’ engaging the public and stakeholders in a wildlife rich vision and improved environment.

More ambitious and cohesive thinking will allow us to reimagine the future of the harbours to the benefit of its wildlife, local communities, farmers, visitors, recreational users and businesses. We will find ways to reach a broader cross section to encourage involvement in our changing future and what we all want to see in the harbours and catchments.

The threats and changes that we face in the coming decades and the necessary adaptations, such as how we manage flood defences, are not often well understood by the public, although awareness is growing as we face increasing coastal inundation, flooding, heatwaves, and unpredictable weather. Along with the Environment Agency and Coastal Partners, the Three Harbours needs to help local communities to understand the adaptation needed whilst building a vision that is both realistic and hopeful balancing community and environmental needs. We can help connect the dots between tackling the threats we face, adapting to a climate changed future and reaping the rewards of thriving harbours.

Local communities that have a deeper connection to the value of nature can be a force for good in helping us to restore our harbours and local countryside. This goes hand in hand with their ability to access these beautiful green and blue spaces and enjoy that connection and the mental health benefit through recreational opportunities. Working with local businesses including the fishing industry, we can help to adapt practices that support sustainability and restore the health of our environment.

The impact of intensive agriculture on biodiversity and water quality is well documented. Farmers, particularly those operating within farming clusters, are adapting their practices, as awareness of the benefits of nature-friendly farming – not just for biodiversity and water quality – but also for agricultural sustainability grows. The partnership needs to support farmers as they evolve their role by working with them on the solutions and demonstrating the win/win opportunities that benefit both farmers and nature. In this area which boasts highly productive farmland, balancing the need for food production with the natural systems is fundamental to a functioning landscape.

By listening to the science and using case studies we can explore the art of the possible and ensure that this vision is overwhelmingly beneficial for all stakeholders – and galvanises everyone in their role to deliver it. We will bring in scientists and experts to

Existing partner projects

Local Nature Recovery Strategies (LNRS) will work with stakeholders to agree priorities for nature recovery and, through engagement with landowners, will recommend actions in locations that are best suited to meet those priorities.

Solent Seascape Project will work with local stakeholders and communities to develop and co-create a long-term seascape recovery plan, that supports better management of existing Solent marine and coastal habitats.

help educate on the challenges, opportunities and solutions. We will harness this energy, creativity, and opportunity to build momentum and drive, to innovate and invest in a beautiful and thriving landscape.

We will tell this story of recovery and make this something that everyone wants to be part of – a mandate for change that is, not only desired, but fought for.

By 2028 these are the outcomes we aim to deliver:

Outcome 1	Work with partners to establish a collaborative public engagement programme exploring new methods to connect with, inform and empower diverse members of the local community.
Outcome 3	Explore recognition of the entire low-lying area of the Three Harbours as an important, integrated, natural asset, achieving the landscape scale required to maximise its full environmental assets.

(See pages 27–30 for more details in the high-level plan)

Reverse – the pressures on water quality, the lifeblood of our environment, and key habitats.

The water quality crisis is where the strength of this partnership really needs to come into force. It is very apparent that this is an enormous and complex challenge. One that requires bold, ambitious, collaborative action that is grounded in evidence.

A priority for the Three Harbours is reducing nutrients entering the harbours. Over the last two decades, mitigation policies and measures have meant a reduction in nutrients and pollution in the harbours. However, the impacts of algal growth continue to cause deterioration of priority habitats across the harbours. Research to identify key sources of nutrients entering the harbours is underway (see right). We know there are mutual benefits for farmers in reducing their run-off and farmers are already changing their practices in light of this. The partnership will work with farmers and water companies to reduce nutrients entering the harbour to levels that sustain healthy habitats.

To ensure that new sources of nutrients do not further exacerbate the existing issue, new developments and other projects which could increase the nutrient load upon protected sites in the Solent, must demonstrate nutrient neutrality. Where mitigation is required to reduce nutrients, this could include working with water companies to construct wetlands, changes in land management or retrofitting Sustainable Urban Drainage within the catchment. Mitigation projects that reduce nutrients whilst delivering multiple other benefits would make best use of mitigation funding.

Using nature-based solutions such as connecting water courses to their floodplains and introducing riparian buffers that absorb nutrients have numerous other benefits. Initiatives that restore natural function and slow the flow of water through the catchment, not only reduce nutrients and pollutants in the water environment but also help reduce flooding. Water is held better through the seasons, extending water resources, alleviating drought conditions and restoring habitats and ecosystems, allowing the health of our waters to recover. This in turn improves biodiversity, food production, water provision, recreation and the health of our seas. The case for this needs to be made to everyone whatever their interest, whether that's a farmer who needs to maintain soil fertility, sea

Existing partner projects

University of Portsmouth are developing a model for analysing water quality data over the last 2 decades and identifying trends across the Solent.

The Manhood Farming Cluster Group are taking measures to reduce nitrate inputs and soil disturbance alongside creating and managing habitat along water courses for farmland birds and pollinators.

Southern Water have commissioned a source apportionment study with University of Brighton, the results of which will be key to mitigating sources of nutrients and pollution.

Clean Harbours Partnership – citizen science together with UoP have tested the impact of pharmaceuticals across Langstone and Chichester harbours.

Arun and Rother River Trust (ARRT) have funded the Riverfly project (citizen science/evidence based) on the River Ems with a view to roll out to other watercourses that feed into the harbours.

With partners, Langstone Harbour Board are exploring a seaweed aquaculture trial to investigate how it interacts with the marine environment. Research will focus on remediating excess nutrients in the water, habitat provisioning and social interaction.

swimmers wanting to avoid illness, or water companies wanting to tackle pollutants.

New ways to mitigate water quality issues need to be trialled and accelerated particularly in reducing background nitrates where research is still in its infancy. We are lucky to have Solent Seascape Project's oyster projects in the Three Harbours and are keen to explore other aquaculture innovations that provide further ecosystem services.

Water resources are coming under increasing pressure and the partnership has a role to play in raising awareness of how people, businesses and farmers can use water in smarter ways so that people and nature are more resilient to climate change.

There is already much evidence gathering and activity focused on this crisis, but the partnership should galvanise existing efforts, bringing water companies, regulators, farmers and landowners, local authorities and all other stakeholders together into a long-term coordinated evidenced plan of action.

We will work closely with CHaPRoN and other water quality groups to bring together an overarching approach to tackling the broad and complex challenges and develop an integrated blueprint for water quality recovery.

We have the opportunity to help shape water company plans over the coming decade and beyond, using blue and green infrastructure that also provides wider ecosystem benefits.

By 2028 these are the outcomes we aim to deliver:

Outcome 4 Begin establishing an integrated blueprint for water quality recovery building on the existing work of partners.

Outcome 5 Develop and begin delivery of at least **three flagship projects across the Three Harbours** that support landscape scale restoration, delivering on the aims of this strategy.

(See pages 27-30 for more details in the high-level plan)

Restore – upscale active restoration of habitats in order to supercharge biodiversity, carbon capture and provide flood defence.

The partners within the Three Harbours are already planning and executing many active restoration projects (see some examples right). These often focus on the habitats and species that deliver stacked benefits through ecosystem services in our harbours, such as saltmarsh, seagrass, oysters, and kelp. But we need bigger, better and more joined up. We need to include important terrestrial environments such as coastal dunes, coastal grassland and grazing marsh. And to balance all of this we need a strategic approach to maximise the benefits of the available land that is quickly diminishing.

Using the natural capital approach, the partnership will prioritise and bolster existing plans and draw these together into the integrated recovery plan. We will work with partners under the umbrella of the Local Nature Recovery Strategy (LNRS), to plug the gaps in the plan on priority activities and seek opportunities for collaboration in maximising the outcomes. The converging ambition for restoration along with a SPA condition review due in 2024 is putting the spotlight on Langstone Harbour. Bringing together a joint vision and robust plan will harness the opportunity and provide momentum.

In collaboration with our academic partners, using existing and newly commissioned evidence and learning from case studies, we will test and develop innovative approaches to delivering restoration at scale. We will use this evidence to ensure projects focus on the sites with the right conditions, the right habitat and species in the right climate resilient locations.

A source-to-sea approach allows us to take a holistic view of land and seascape restoration, understanding the relationships between a multitude of terrestrial and marine habitats. We will find opportunities to join up areas that are high in biodiversity, creating corridors through the catchment of a mosaic of habitats to improve resilience.

The Three Harbours partnership are working together to reshape our coastline and rivers working with nature to provide natural flood management to better protect communities for the future.

Existing partner projects

Solent Seascape Project, CHaPRoN and EA are trialling the beneficial use of dredged sediment as natural coastal management in Chichester Harbour.

Coastal Partners are working with the Environment Agency to co-ordinate delivery of the Habitat Compensation and Restoration Programme (HCRP). The HCRP is required to create new saltmarsh, mudflat and coastal grazing marsh habitats, to replace those lost to coastal squeeze.

Solent Seascape Project are restoring oyster beds in Langstone Harbour and, along with RSPB, creating new sea bird habitat across the Three Harbours.

Manhood Wildlife and Heritage Group is restoring and connecting wetlands across the Manhood Peninsula to improve wildlife habitat and flood risk management.

Life on the Edge is creating and restoring bird habitat across multiple sites in Langstone and Chichester harbours.

West Sussex River Trust (Arun and Rother River Trust) have a 10-year restoration plan for the Ems Catchment, which addresses issues of water quality, quantity, habitat, flooding and drought.

Such as creating and restoring saltmarsh instead of building higher and higher concrete walls. But this will require change and will mean moving away from hard coastal defences where there are opportunities to work with nature.

By 2028 these are the outcomes we aim to deliver:

Outcome 5 Develop and begin delivery of at least **three flagship projects across the Three Harbours** that support landscape scale restoration, delivering on the aims of this strategy.

Outcome 6 In addition to the flagship projects, **develop further opportunities and support partner activities to drive habitat restoration** that aligns to the priorities identified in the integrated recovery plan.

(See pages 27–30 for more details in the high-level plan)



Strategic objectives – how we will do it

Engage – Local communities and stakeholders forming a mandate for change.

We cannot deliver the mission without bringing the public and other stakeholders with us. The public have a role to play that extends beyond simply being aware of and in agreement with plans. Creating a mandate for our vision means more than consulting and informing. It means an ongoing discussion, a lot of listening, designing our plans with the public and stakeholders, and empowering them with ways to get involved to the extent that they too, are driving change.

All partners will want to engage the public on their work. But this could create a lot of duplication, confusion and stakeholder fatigue. We need to find ways to come together on how we conduct public engagement so that we are not competing over and exhausting a limited amount of attention. This requires a willingness to compromise and collaborate, but the benefit is that, together with joint resources, creativity, networks and expertise, we do much better than if we all engage in our small and limited way.

As covered under the aim to reimagine the future of the harbours, this means all partners coming together with local communities, landowners, farmers, and businesses to co-design our plans. Engaging at this scale naturally lends itself to a much broader conversation that can encompass all our partner's work. The Three Harbours will provide a trial site for Solent Seascape Project to use their State of Nature of The Solent report to engage stakeholders and the public as we co-design the restoration plan.

Engaging farmers and landowners as major custodians of the land is key in all of this. They need support in an increasingly complex and pressurised industry with demands to provide broader ecosystem services whilst still feeding the country. The partnership is keen to find ways to build on initiatives being pioneered by farming clusters and work with them to provide tools that smooth the path for nature-friendly practices.

Public interest and energy in nature recovery is at an all-time high, with the ongoing media spotlight highlighting the growing concern for the health of our water environment. We will channel this energy by providing easily accessible routes for engagement. But rather than just speaking to the converted – naturalists, bird watchers, visitors, sailors, we need to reach into new audiences – young people, local businesses, artists, community

Existing partner projects

Weald to Waves engage with the public and potential partners through a map of pledged land that visualises the corridors that are central to their delivery.

Arun and Rother River Trust are empowering citizens to protect their rivers with:

- Outfall Safari – Surveying urban pollution from outfalls.
- ObstacEELS – Recording river obstacles affecting the migration of fish, including the threatened European Eel.
- The Riverfly Project – Monitoring freshwater invertebrates (Riverfly) as indicators of river health.

They also have a storymap that allows you to explore local rivers and catchments and find out about the relevant water quality issues.

The proposed Chichester Harbour Investment and Adaptation Plan (CHIAP) aims to raise awareness of adaptive management approaches for the whole harbour, setting a holistic plan for people and the environment.

groups. We will find hooks that pique their interest, get them excited and direct them towards a range of ways to get involved.

Through citizen science they can contribute important monitoring and data that will help us make evidence-based decisions. Across our partners, we have numerous volunteer schemes that enable members of the public to get involved directly with restoration and conservation work. With peaks in public energy and interest, we can promote the growth of grassroots community projects and campaigns. Through increasing levels of understanding, we can promote human-nature connectedness and inspire permanent behaviour changes that alleviate the pressures on our natural systems.

By 2028 these are the outcomes we aim to deliver:

Outcome 1 **Work with partners to establish a collaborative public engagement programme** exploring new methods to connect with, inform and empower diverse members of the local community.

Outcome 2 **Engage broader stakeholders** such as landowners, farmers, business owners and community projects to explore the role they could play in delivering the strategy.

(See pages 27-30 for more details in the high-level plan)



Deliver – The Integrated Recovery Plan, co-designed with stakeholders and the public.

'Integrated' is a reoccurring theme in this strategy. Weaving together the work of our partners and stakeholders is our raison d'être.

The integrated recovery plan will be the convergence of all partners plans and projects including those generated through this strategy. It will show how the family of programmes and projects work together, making sense of the currently fragmented picture. Relationships will be visualised between sister programmes like CHaPRoN and the Habitat Compensation and Restoration Programme and parent programmes and strategies like Solent Seascape Project and LNRS. Working with the LNRS, we can ensure that activity in the Three Harbours is aligned with the wider restoration, and delivery across county lines of West Sussex and Hampshire LNRS complements each other.

In collaboration with Solent Seascape Project, once we have identified existing work, we can start engaging with the public and stakeholders to reimagine the future and co-design the plan that delivers our mission. Through discussions with stakeholders, particularly farmers who are often custodians of much of the land, we will identify the areas where nature recovery and restoration also provide mutual benefits and move us towards the future we all want to see.

Drawing on expertise and scientific evidence and using this strategy as our framework, we will use the development of the plan to inform and empower local communities on the threats and pressures and build understanding of priority actions that deliver the greatest benefit to both people and nature. The plan will be accessible to the public as a schedule and a map, so that we can continue the conversation with the public as it develops.

This is key to building a mandate for ambitious change. It requires a public that wants us to deliver this plan and wants to be instrumental in getting us there. Hence why the first strategic objective focuses on engagement.

This will mean a more refined immediate term, an adaptable medium term, and an aspirational longer term. It will be iterative so that we can constantly refine and tighten the focus and remain flexible to the changing context.

Having greater clarity on future projects will allow us to match them to appropriate funding opportunities as they arise, rather than reacting in a knee-jerk manner and shoehorning projects to meet funding criteria. Creating a prioritised pipeline of projects will help us avoid duplication, highlight potential for greater collaboration and enable us to package projects together to attract more funding and maximise the outputs.

By 2028 these are the outcomes we aim to deliver:

- Outcome 7 **Develop the Integrated Recovery Plan** – Mapping of all partnership projects (not solely Three Harbours) and potential restoration opportunities to provide an overview to inform improved collaboration and decision-making.

Outcome 8 **Embed the restoration ambition within the emerging LNRS** and use the stakeholder engagement required to evolve the LNRS as an opportunity to communicate the Three Harbours partnership and attract greater buy-in.

(See pages 27-30 for more details in the high-level plan)

Advise – Build and share expertise and guidance on all aspects of nature recovery and funding approaches.

We will use the network of the partnership to share knowledge and advice to break down barriers and find solutions. We know that there are many of us working in this sector, all having to constantly extend our knowledge base to accommodate a fast-evolving context. But we can better use our specialisms to the greater benefit of all, if we organise ourselves and this could be through an advisory network which particularly benefits farmers and landowners and those who are not immersed in nature recovery on a day-to-day basis.

Weald to Waves offer a match making service for those who need advice to link them with someone who can offer what they need. The Three Harbours could learn from this model to see if something similar could be provided or a collaboration is possible.

The pace of activity and information flow means that staying up-to-speed with the numerous projects, schemes, opportunities and evidence is a challenge for those working in this sector. The partnership will find smart methods to ensure relevant information is accessible and shared in an efficient and effective way across the partnership and with stakeholders.

There is a particularly significant learning curve around funding approaches. With so many new available or prospective funding streams – each having differing sets of rules and criteria – makes finding appropriate funding a complex task and opportunities can be easily missed. By collating expertise on emerging markets and funding streams, guidance can be shared with partners and broader stakeholders. This will enable us to match funding opportunities with different elements of the integrated recovery plan such as:

- capacity to evidence and develop plans and resource programmes
- research and data programmes
- delivery of projects including packaging up small scale initiatives into a more attractive investment
- incentivising landowners and farmers
- longer term funding to realise and sustain the benefits.

Changes to government grants and schemes over the coming years should ensure further funding is available to farmers where they are delivering improvements to nature and for the public good. But navigating these changes will remain a challenge and so the partnership has a role to play in helping to navigate this context and promoting schemes and collaborative projects that deliver against this strategy, ensuring our engagement with them is coordinated so as not to place additional burden on them.

By 2028 these are the outcomes we aim to deliver:

Outcome 9 **Provide materials and tools** that simplify and streamline collaboration with broader stakeholders particularly farmers and landowners.

(See pages 27–30 for more details in the high-level plan)

High Level Plan

Elements of the year one plan that are dependent upon resources and funding have a yellow indicator.

2028 Outputs – delivered over the next four years

1

Work with partners to establish a collaborative public engagement programme exploring new methods to connect with, inform and empower diverse members of the local community .

This should particularly tackle climate adaptation issues that will increasingly intersect with the interests of local communities as we drive forward nature restoration.

2

Engage broader stakeholders such as landowners, farmers, business owners and community projects to explore the role they could play in delivering the strategy.

3

Explore recognition of the entire low-lying area of the Three Harbours as an important, integrated, natural asset, achieving the landscape scale required to maximise its full environmental assets.

This would provide greater influence in local policy making and in attracting funding for protection and restoration. It would also stimulate better appreciation amongst local people and stakeholders of the value of the landscape. It would galvanise the partnership in managing the landscape and delivering restoration by aligning and integrating strategies and plans.

Year one plan – by September 2025

- **Further develop the Three Harbours vision** with community groups, exploring what it means for local people, to ensure delivery reflects local priorities and inspires and captivates the public.
 - This should align with CHaPRoN vision for Chichester Harbour and SSPs engagement process for developing a vision for the Solent Seascape Project.
 - It should also provide greater ambition and emphasis specifically for Langstone and Pagham.
- **Explore the use and viability of a standing citizens assembly** to engage local communities on the most challenging issues related to climate adaptation and nature restoration that intersect with community needs.

- **Identify and establish a communication route with appropriate stakeholders** to include landowners, farmers, business owners and community projects.
- **Progress a trial of Solent Seascape Project’s engagement process** to co-design our recovery/restoration plans with stakeholders. This would need to align with other elements of strategy delivery, such as the integrated recovery plan.

- No action in year one. Monitor opportunities and consider outputs of public engagement activities.

4

Begin establishing an integrated blueprint for water quality recovery building on the existing work of partners.

As part of the overarching integrated recovery plan, the integrated blueprint for water quality would identify the various roles different partners will play in reducing pollutants, improving water function, flood remediation, green and blue infrastructure and nature-based solutions.

This would include identifying and monitoring nutrient and pollution sources to enable us to address these as close to source as possible.

It will also enable us to shape 2030+ plans for green and blue infrastructure and nature-based solutions.

• **Together CHaPRoN and Three Harbours establish an initial cohesive programme of work**, building on the existing work of partners, that initiates the development of an integrated blueprint for water quality.

- Establish the measurable outcomes for water quality – what does ‘good’ look like
- Establish a water quality monitoring programme that provides an agreed baseline and measures against consistent parameters with continuous long-term data to help identify the priority actions to be taken and enable us to measure progress.
- Develop a landscape recovery bid (subject to a further round of DEFRA Landscape Recovery) (see below).
- Explore the viability of implementing a nutrient leaching tool for farmers as trialled in Poole Harbour.
- Develop a communications plan to help to inform local communities on important aspects of the complexity of water quality issues and to promote behaviour change. Include providing public access to research on water quality.

5

Develop and begin delivery of at least three flagship projects across the Three Harbours that support landscape scale restoration, delivering on the aims of this strategy.

This will enable us to step up active restoration, accelerating partner projects through improved collaboration. This should focus on Langstone and Pagham harbours where energy and investment has not matched Chichester Harbour whilst still supporting and enhancing work within Chichester Harbour.

This should balance focus on terrestrial environments, innovative coastal management and water health, responding to priorities identified in the integrated plan, and collaboration and funding opportunities that arise.

• **Begin scoping and/or development of at least three flagship projects across the Three Harbours** that are aimed at delivering landscape scale restoration. Initial actions would include:

- Working with Langstone Harbour Board as they review their management plan to commission a new environmental chapter that aligns with the SSP/THs trial of co-designing the restoration plan and as part of the THs integrated plan
- Develop a Landscape Recovery bid (subject to a fourth round) focussed on water health, habitat restoration and flood remediation for Manhood Peninsula and bordering land.

6

In addition to the flagship projects, develop further opportunities and support partner activities to drive habitat restoration that aligns to the priorities identified in the integrated recovery plan.

This element of the plan will be further refined as the integrated plan is developed.

• **Produce a report on beneficial use of dredged sediment (BuDS) opportunities** across the Three Harbours to inform priorities and projects.

- This would collate and review existing reports on BuDS to:
- Review strategic priority sites assessing against other potential priority habitat.
- Consider broader parameters relating to achievability.
- Identify further sources of sediment and logistical considerations

• **Investigate opportunities for seagrass restoration or introduction at Pagham and Medmerry** building on the work already taking place in Langstone and Chichester harbours.

7

Integrated recovery plan – Mapping of all partnership projects (not solely Three Harbours) and potential restoration opportunities to provide an overview to inform improved collaboration and decision-making. The integrated plan will evolve over time but could include:

Schedule of all partner projects against objectives to support gap analysis against priorities, identify collaborative opportunities and match projects to funding opportunities

Geospatial mapping of existing and potential projects building on mapping work conducted by partners

A visual map of connections between the objectives and outputs held by partners to support closer collaboration and improved effectiveness

• Develop the framework and first high-level iteration of Integrated Recovery Plan:

- Create framework and high level first iteration of a schedule of planned projects/programmes
- Develop geospatial mapping of projects, to better understand spread of existing and planned projects and the potential for future restoration
- Monitor partners use of the One Planet platform and consider its practical application for Three Harbours to visually map connections between partners objectives and outputs

8

Embed the restoration ambition within the emerging LNRS and use the stakeholder engagement required to evolve the LNRS as an opportunity to communicate the Three Harbours partnership and attract greater buy-in.

- Use the development of the **integrated plan to input into the LNRS** to ensure partnership projects benefit from visibility and buy-in from this process.

9

Provide materials and tools that simplify and streamline collaboration with broader stakeholders particularly farmers and landowners. This could include:

Guidance, information, and sign posting on locally available funding schemes and projects for farmers and landowners in a way that is easily accessible and user friendly.

Facilitating knowledge sharing, connecting partners and stakeholders on specific areas of expertise. This could be in the form of an advisory network or other method to share expertise and enhance the network.

Develop and maintain guidance on local funding schemes and projects.

- Explore the needs of farmers and whether further tools and materials could be developed that address existing challenges and pave the way for farmers looking to incorporate more sustainable practices and help to prioritise the options that are mutually beneficial for nature and food production.

10

Build partnership arrangements, funding strategies and programme management capabilities.

- **Agree partnership arrangements** and the operating framework that clarifies roles and responsibilities. Initially this will be through partners support of the strategy and establishing an Executive Board.
- **Establish a framework of measures of success** to track progress towards delivering the mission and vision.
- **Build a proposition to attract investment**, determine human resource needs and identify suitable funding streams for ongoing programme management.
- **Create a website** to enable the partnership to communicate effectively with its stakeholders and the public and host relevant content including the strategy and integrated plan.



Our approach

How do we fund it?

This all sounds ambitious and so the next question is – how do we fund it? Funding is a perennial issue but one that is evolving at pace. Restoration projects rarely have the luxury of having funding up front to develop their plans or are aware of budget limitations. We operate in an environment where we must build ambition and clear objectives and then make the case for funding, often from multiple streams.

The partnership benefits from expertise on the multitude of funding avenues:

- government grants and schemes
- mitigation schemes including offsetting carbon and nutrients
- private investment
- philanthropic investment

This is complex and requires careful navigation. But the current context means that bigger, ambitious more collaborative approaches are favoured. Being able to show broad partnership support, clearly setting out the benefits of our work, demonstrating a legacy and increasingly involving the public in the development of our plans, sets us in good stead to attract financial support.

Currently, funding is often offered for bidding with little notice and there is much competition within the same landscape. We need to clarify our priorities and prepare project plans so we can match the funding opportunities, as they become available, to the most urgent concerns.

This approach is already being used effectively across the Solent with projects attracting funding from the EU LIFE Programme, the Endangered Landscapes and Seascapes Programme, the Natural Environment Research Council (NERC), the Species Recovery Programme Capital Grant Scheme, the Green Recovery Challenge Fund and the National Lottery Heritage Fund amongst others.

Work is underway through the Seascape Restoration Research Network to better understand the application of existing or future funding mechanisms such as nutrient neutrality, the carbon code, the saltmarsh code, biodiversity net gain, blue carbon and flood risk attenuation. The Solent Seascape Project is working with accreditation organisations to develop methodology for creating validated biodiversity credits to be sold on the voluntary market. The project will also be working towards the creation of carbon and nutrient credits by scientifically measuring the ecosystem service benefits derived from seascape scale restoration.

Existing partner projects

Seascape Restoration Research Network is looking to develop a seascape restoration research agenda locally and UK wide that will be more relevant to private investment.

Sea the Value are exploring the value of marine biodiversity and developing green investment options, shifting our understanding and use of the economics of biodiversity.

Understanding the natural capital value of the landscape is key to unlocking these future funding avenues. Three Harbours will build its approach to consider how it taps into these funding mechanisms in the longer term.

The natural capital approach is a shift change in how we tackle the threats and pressures on our natural systems. It enables a clearer narrative of the problems to be tackled and the opportunities presented whilst promoting the benefits to the public and stakeholders. It helps us take a more holistic approach to integrating our plans and pins down how the benefits will be realised long term.

Natural capital and landscape scale approach

All indicators of nature's health are still in decline. Our economic system historically has valued human development as 'progress' and doesn't place equivalent value on the natural systems upon which all life depends. This has led to the issues explored at the beginning of this strategy; land use change, intensification of agriculture, development pressure, pollution – to name but a few.

In decades past, the key tools that have been deployed to safeguard the most important sites for nature have been through protecting and conserving species and habitats through regulations and protected areas such as the Habitat Regulations and Wildlife Countryside Act SSSIs, SPAs etc. It is clear these tools are insufficient on their own and were never designed to mitigate the multiple issues we must now confront. However, protections are essential in forming part of a broader approach to valuing nature and looking at the function of the landscape as a whole.

A new set of tools is developing that changes this balance. We can now quantify the value of these natural systems, and this promotes the benefits and attracts appropriate investment. It also drives alternatives to traditional solutions that manage our environment (typically grey infrastructure) replacing them with ecosystem services (green and blue infrastructure). However, this needs to be viewed in the context of how the landscape functions as a whole which can sometimes be missed if only viewed through a natural capital lens, which is highlighted below.

In 2022, the Three Harbours partnership conducted a natural capital baseline to better understand the socio-economic value of the natural landscape. This brought all the data and research on the state of the landscape into a single place. It looked at natural capital assets across the landscape such as landcover by different habitats such as forests and trees, saltmarsh, seagrass, arable land and built-up areas. The report baselines their current extent and where possible the condition of those habitats. It then identified natural capital flows where these natural capital assets work together to provide ecosystem services such as those set out in the box on the right.

Natural capital is the term used to describe those parts of the natural environment (species, habitats, communities, landscapes, soils, water, air) that provide essential ecosystem services, such as CO₂ sequestration and carbon storage, waterflow regulation, soil erosion protection, pollination and important areas for biodiversity. These services, in turn, underpin key societal benefits including, for example, equable climates, flood risk reduction, clean water, clean air, physical and mental wellbeing and thriving wildlife.

For the Three Harbours landscape, based on the current baseline information, the habitats that provide the highest levels of combined natural capital services are coastal saltmarsh, intertidal mudflats, littoral sediments, and seagrass.

The partnership will also benefit from the Solent State of Nature report which is due out later in 2024. This will provide a comprehensive analysis of existing habitat, pressures, opportunities and management measures. Both reports help us to prioritise action to restore these habitats that have the most potential in the recovery of the landscape. However, it is a complex and emerging picture, and we will continue to refine our understanding of the value of natural capital assets.

A natural capital approach also needs to be balanced with a landscape scale approach that recognises the intrinsic value of nature and the need to restore natural processes. Some elements of the natural system are difficult to value using a natural capital approach or there is a lack of sufficient data to inform assessments. Building our understanding of how the landscape functions as a whole and how certain elements interact with others will enable us to sense check ecosystem value. This allows us to identify activities that rebuild ecological integrity so that biodiversity bounces back and is resilient to current and future pressures.

How we operate

The Three Harbours is an informal partnership without a single lead organisation, though dedicated resources are funded by Southern Water and hosted by RSPB. It currently is not a legal entity in its own right and therefore cannot receive funding. It can, however, deliver projects through its partners, and much of the work set out in this strategy will coordinate and facilitate these activities.

As set out in the high-level plan, the partnership will continue to seek ways to strengthen its ability to deliver this strategy in the long-term. The first of these is to establish an Executive Board of senior leaders from key partnering organisations which will have ultimate accountability for delivering the strategy. It will also provide greater influence and visibility, help to overcome barriers and champion the work of the partnership.



Case studies

Poole Harbour

Poole Harbour is one of the largest natural harbours in the world, with many similarities to the Eastern Solent. It is similarly renowned and protected for its outstanding landscape, wildlife and fisheries, the nationally important landscape of the Isle of Purbeck and the scenic islands of the south shore. The busy Poole town centre and port on the north shore add similar pressures to the habitats and ecosystems in the harbour.

The combination of output from water treatment works and drainage from agricultural land has led to a doubling of nutrients entering Poole Harbour over the last 50 years. This results in algal growth smothering much of the mud flats and marine plant life and reduces the amount of food available for birds.

To tackle this problem, an Environment Agency and Natural England report set new targets to significantly reduce nitrogen and phosphorous discharge to levels that support ecological restoration by 2030. A number of approaches are being used to mitigate the main sources of nutrient emissions.

One of these is a ground-breaking farmer-led approach to manage nutrient losses that is approved by the regulator. The nitrate leaching tool, enables farmers to calculate the amount of nutrient they are losing from their land, field by field. This loss both impacts on the environment but also represents financial losses for the farmer. With this information and support from the scheme they identify actions to reduce these losses year on year along a glide path, to reach the target reduction by 2030.

The scheme allows catchment scale reporting to the regulator so that farmers can offset their nutrient losses under a voluntary trading scheme within the catchment. This means a more flexible approach for those using the scheme. It has been designed for farmers, by farmers. It works for any farm type or size and takes into account farming pressures at different times of the year, and works with the records farmers already keep.

The scheme was launched at the end of 2022, and since then 200 farmers over c45,000 hectares of land (making up around 72% of the agricultural land across the Poole catchment) have joined the scheme.

<https://www.dorsetcatchments.co.uk/catchments/poole-harbour>

There are some key features of this approach that provide useful lessons for the partnership:

- Farmer-led ensures it works for farmers, allows them to adapt their businesses at their own pace and in their own ways.
- Puts environmental considerations at the heart of business decision making whilst incentivising farmers to drive reductions.
- This partnership with EA has created a regulatory approach that meets the needs of all parties.
- Recognising that farmers are custodians of the land and do not want to contribute damaging impacts on the environment.
- Identifying and reducing the nutrients at source is the most effective way of reducing the pressure on water quality.

Weald to Waves

Weald to Waves is a project that was born out of the recognition of the impact that modern farming practices are having on ecosystems across the countryside.

James Baird is a farmer at the Climping Gap on the West Sussex coastal plain. After seeing with his own eyes the destruction of precious rainforest habitat to make way for palm oil plantations, he realised that in many ways the UK is not that different. On home turf, our farming practices often mean depleting and disconnecting precious habitats to make way for modern agriculture. He decided to look at how his own farm could better support nature recovery.

“For me it was an awakening that our own food production systems here have got a lot to answer for. Who are we to tell the Indonesians and Malaysians to manage their habitats when ours are in such a degraded state?” – James Baird

A growing understanding of the need for improving connectivity between areas of high-quality habitat, led him to think about the role farmers can play in providing wildlife corridors. He brought together seven landowners across Sussex and initiated the project Weald to Waves in 2022, with the aspiration to create a corridor of nature recovery across the Sussex landscape down to the marine environment in Sussex Bay.

From there the project has grown to draw in other farmers and landowners who have pledged land in areas that are important for biodiversity to start joining the dots along corridors from the Ashdown Forest in the High Weald, following the Arun, Adur and Ouse rivers to the sea at Climping, Shoreham and Newhaven

The project has three goals:-

Goal 1 – To create a nationally significant wildlife corridor of 100 miles and over 20,000 hectares as a ribbon of largely contiguous natural habitat.

Goal 2 – To promote nature as a provider of vital ecosystem services; backed by sustainable farming and a reduction of the pollutants that are compromising our landscape and flowing into our waterways and marine environment.

Goal 3 – To engage people and communities across Sussex by creating new opportunities to understand, enjoy and protect nature so that communities can thrive alongside nature.

<https://www.wealdtowaves.co.uk/about/story/>

The partnership can learn from a number of approaches used by Weald to Waves:

- A farmer and landowner led approach that balances nature recovery with productivity.
- How to better support and engage farmers in evaluating the opportunities for nature recovery on their land through data, reporting and mapping.
- Providing an advisory network that matches different types of expertise with those who need it.
- Advise on how to use emerging funding streams and their application particularly for smaller scale projects and attract funding for projects.
- Storytelling to engage potential participants, stakeholders and the public in ways that tackle a diverse range of issues and barriers.
- Adur River Recovery could showcase new technologies around biofiltration and natural flood management.

Medmerry Nature Reserve

Medmerry is a fantastic example within the Three Harbours of a highly ambitious nature-based solution which is successfully reducing the risks of climate change impacts on the local community in Selsey.

Prior to 2013 the narrow shingle embankment at Medmerry was the only flood defence to protect low-lying farmland and local communities. The beach front was considered to be the highest risk site in South East England, with predictions that the sea would be likely to breach the barrier every year. The shingle barrier was artificially maintained, with a significant amount of public money spent each year, recycling and re-profiling it with a fleet of diggers. In 2008, the area experienced devastating coastal flooding that threatened hundreds of houses in the nearby towns of Selsey and Pagham. Over £5 million of damage was caused when the shingle bank was breached.

The concept for Medmerry was developed during a 2001 workshop organised by local residents and involving engineering, ecological and planning experts from the Netherlands and the UK. The experts studied the area and listened to local people to help develop a long term climate resilient strategy for the Manhood Peninsula.

Between 2011 and 2013, the Environment Agency (EA) constructed over four miles of new floodbank. They then breached the existing shingle beach to create the largest managed realignment scheme on the open coast in Europe (at the time). The £28 million project was designed to help protect local communities from flooding and create vital new intertidal areas for wildlife, replacing habitat that had been lost elsewhere along the Solent.

Today Medmerry is a wildlife haven managed by the RSPB, with bird populations flourishing, particularly wintering wildfowl. The nesting sites among the pools provide habitat for a growing number of birds such as avocet, lapwing, little ringed plovers, oystercatcher, and little terns nested for the first time in 2023. The reserve now includes a network of footpaths and cycleways that allow visitors to enjoy the natural beauty of the area while protecting sensitive habitats from disturbance. There has been an economic benefit to the area with tourism, new natural fish nurseries and new grazing land all emerging in the wetlands.

The scheme was recognized by the International Union for Conservation of Nature (IUCN) as a successful example of a nature-based solution to reduce the risks of climate change impacts on coastal communities.

Medmerry provides a powerful legacy for the Three Harbours to build upon by:

- Inspiring landscape scale climate adaptation.
- Illustrating effective nature-based solutions that provide multiple benefits to nature, local communities and the economy.
- Seizing further opportunities to maximise the benefits that could be achieved at Medmerry and the surrounding landscape.
- Providing a case study for the evolution and regeneration of coastal habitats.
- Creating a ground-breaking nature-based solution from the community upwards.

North Carolina Oyster Restoration and Protection

The people of eastern North Carolina have a deep and historical connection to the oyster reefs, historically having been a large and profitable resource. Through overharvesting, habitat loss, disease, and pollution, the harvest dropped by 85% by 1994. Recovery efforts have seen a major increase recently, though the harvest numbers are nowhere near the historical highs. The partnership recognised that, if oyster harvesting is to become a major part of North Carolina's coastal markets once again, strong commitments to conservation efforts must be made by government and businesses alike. They implemented a blueprint approach first issued in 2003.

The partnership conducted an economic analysis identifying how habitat enhancement projects in North Carolina improve the coastal economy and environment. This analysis demonstrated that every \$1 invested in the coastal habitat enhancement programs yields \$4 in benefits. And further expected benefits ranged from \$2 to upwards of \$12 for every dollar invested. Some of the other findings include:

- Investment of \$5 million in oyster restoration created over 50 jobs and approximately \$10 million in revenue benefits.
- Oyster reef restoration doesn't just help oysters, it also provides valuable habitat for black drum, blue crab, red drum, flounder, and other valuable fish species and protects Brown Pelican nesting habitat from erosion.
- An oyster bed may support over 300 different organisms at a time.
- One hectare of oyster reef provides on average \$10,000 (2011 data) in value – much of this through pollution removal.
- Adult oysters are capable of filtering 15–35 gallons of water a day.

The partnership brought together local and state government officials, engineers, developers, business leaders, shellfish growers, scientists and more to learn how North Carolina could tap into its coastal resources to boost the state's economy.

In 2021, the latest Oyster Blueprint identifies specific goals such as:

- Improving water quality to protect and restore shellfish growing waters;
- Building oyster sanctuaries and continuing to research protection methods
- Creating a cohesive oyster shell recycling program
- Building and monitoring oyster cultch reef to support wild harvest,
- Growing shellfish aquaculture to a \$45 million industry by 2025;
- Using living shorelines to stabilise estuaries that support oyster habitats, and protect them from future harvest.

It was also able to report on its successes so far, including:

- Increasing funding for oyster related programs by a factor of ten from 2003–2013
- Documenting that for each dollar invested, at least \$4.05 in benefits are realized
- Restoring nearly 450 acres of oyster habitat for both environmental benefits and harvest opportunities
- Growing the shellfish aquaculture industry from \$1M to \$5 M and increasing the number of farms in the state tenfold
- Documenting a doubling of annual oyster harvest from a low of 42,322 bushels in 2003 to 96,258 bushels in 2013

- Fostering the protection and restoration of the state's water quality to allow for the safe growing and harvesting of oysters, as well as the continued recreational enjoyment of the coast.

Local communities can support the work of the Blueprint by recycling oyster shells for use in oyster restoration, volunteering to build new oyster habitat, visiting an Oyster Trail site, and participating in the Coastal Federation's Adopt an Oyster program to support restoration efforts.

[Oyster Habitat Protection and Restoration | APNEP \(nc.gov\)](https://www.apnep.org/oyster-habitat-protection-and-restoration)

This inspiring story holds a number of lessons that this partnership can learn from:

- Building a strong evidence base that demonstrates the full range of benefits of habitat protection and restoration, that fosters support from a broad range of stakeholders.
- Making a clear economic case for coastal habitat enhancements.
- Using and promoting the cultural importance of oysters for the people and industries of North Carolina.
- Finding innovative ways to engage local people with clear routes for involvement.



What next?

The high-level plan on pages 27–30 sets out in broad terms what we intend to do over the next four years (2028 outcomes) and immediately (year one plan). We will continue to refine this plan with our partners, constantly looking for ways to strengthen and consolidate our activities so that we can deliver more together.

Working groups have been established that will help us build and refine the programme of work and the integrated plan. As the plans firm up, we can clarify resourcing needs and determine how to fund certain elements of the plan. We will share our progress with you.

We will review this strategy in 2028 and every 5 years in line with our sister programmes and the governments Environment Improvement Plan.

For more information on the Three Harbours see our [webpage](#) or contact fay.pisani@rspb.org.uk.



References

NATURAL CAPITAL BASELINE ASSESSMENT for Southern Water and the Langstone, Chichester and Pagham Harbours

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