



Strategic Environmental Assessment Non-Technical Summary



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Glossary

Adaptation Pathway - A decision-making approach, which allows decision-makers to take actions under uncertainty. It enables you to identify what actions can be taken now and in the future.

Coastal Squeeze - The loss of natural habitats occurring when man-made structures or high ground prevent habitats from migrating inland in response to rising sea levels.

Compensatory Habitat - Habitat delivery required to compensate for habitat losses identified in the Habitat Regulations Assessment. The habitat needs to be replaced and established before the harm occurs.

Designated Habitat - Habitat given special distinction under UK Law.

Do Nothing - Hypothetical scenario where all management across the coastline stops.

Flood Defence - A linear natural or artificial structure put in place to reduce the risk and impacts of flooding.

Flood Risk - The likelihood of flooding occurring combined with the likely impact it would cause.

Hold the Form (HtF) - Continued maintenance of the existing form of Hurst Spit through beach recycling and recharge as required.

Hold the Line (HtL) - Defences remaining in their current position by either maintaining or increasing the height over time.

Maintain - Work carried out to the existing flood defences to keep them in good condition and prevent failure.

Managed Realignment - Planned removal or breaching of a defence to allow the coastline to move naturally landward, restoring intertidal habitat. New defences are constructed inland to manage flood risk.

Management Unit - An area identified with similar characteristics to focus on specific challenges and actions.

Overtopping - Water carried over the top of a coastal defence due to waves exceeding the crest height.

Overwashing - The flow of water over the top of Hurst Spit, typically during severe storm or high tides.

Preferred Pathways - The recommended flexible sequence of flood risk management measures designed to meet the Strategy objectives. There is a high confidence at a strategic level that these are feasible.

Rollback - Allowing Hurst Spit to move north-eastwards and become lower and wider.

Residual Life - The estimated time left before an asset can no longer perform its required function or fails.

Standard of Protection (SoP) - The level of flood risk that a particular area is designed to withstand.

Sustain - Similar to the 'Maintain' approach, but new flood defences would be built allowing periodic raising over time to accommodate the forecasted increase in sea levels and storminess.

Introduction

The Hurst Spit to Lymington Flood and Coastal Erosion Risk Management Strategy has been developed by the Environment Agency in partnership with Hampshire County Council (HCC), New Forest District Council (NFDC) and Natural England, supported by JBA Consulting. The area includes the settlements of Keyhaven, Pennington and Lymington, as well as extensive stretches of internationally important coastal habitats.

The Strategy sets out a clear, long-term approach to managing flood and coastal erosion risks across the Hurst Spit to Lymington area, providing a sustainable vision for the next 100 years.

This **non-technical summary** sets out how the Strategic Environmental Assessment (SEA) was conducted. It explains the process for **identifying, reporting, mitigating and monitoring the environmental effects** of the Strategy.

The Strategy coastline faces growing challenges from climate change and sea level rise. Current flood defences along this 15 km stretch of coastline are reaching the end of their serviceable life. Without investment to replace or upgrade them, flood risk to homes, businesses, coastal landfill sites and critical services will



Saltgrass Lane, Keyhaven
Source: Environment Agency

increase. At the same time, internationally important wildlife habitats such as saltmarsh and mudflats are being lost to coastal squeeze in front of the defences. An extensive area of coastal grazing marsh behind the defences is at risk of flooding from ageing defences failing.

The Strategy proposes a way forward that manages flood risk to communities while working with natural coastal processes. An 'Adaptation Pathway' approach has been adopted for the Strategy. This sets the strategic direction, whilst maintaining flexibility in decision making to take account of future uncertainty. This means if circumstances change, for example, if understanding on climate change evolves, a sea wall deteriorates quicker or if funding availability increases, plans can adjust accordingly.

Members of the public and organisations are invited to comment on both the Draft Strategy and the Full Environment Report. Details of how to give comments are provided in Section 6 of this Non-Technical Summary.



Lymington Marina Source: Environment Agency

What is the Strategic Environmental Assessment?

The Strategy has been assessed through a Strategic Environmental Assessment (SEA) to identify and address potential environmental effects. An SEA is a systematic process used to evaluate environmental effects of proposed public plans, programmes and strategies. SEA is undertaken for Flood and Coastal Erosion Risk Management (FCERM) strategies on a non-statutory basis following the Department for Environment, Food and Rural Affairs (Defra) policy guidance. In effect, it is undertaken as good practice. It ensures that environmental considerations are integrated into decision-making from the early stages, to promote sustainable development, mitigate risks and encourage public participation.

The SEA followed a structured five-stage process alongside the development of the Strategy:



Winter sun at Normandy Lagoon Source: Environment Agency

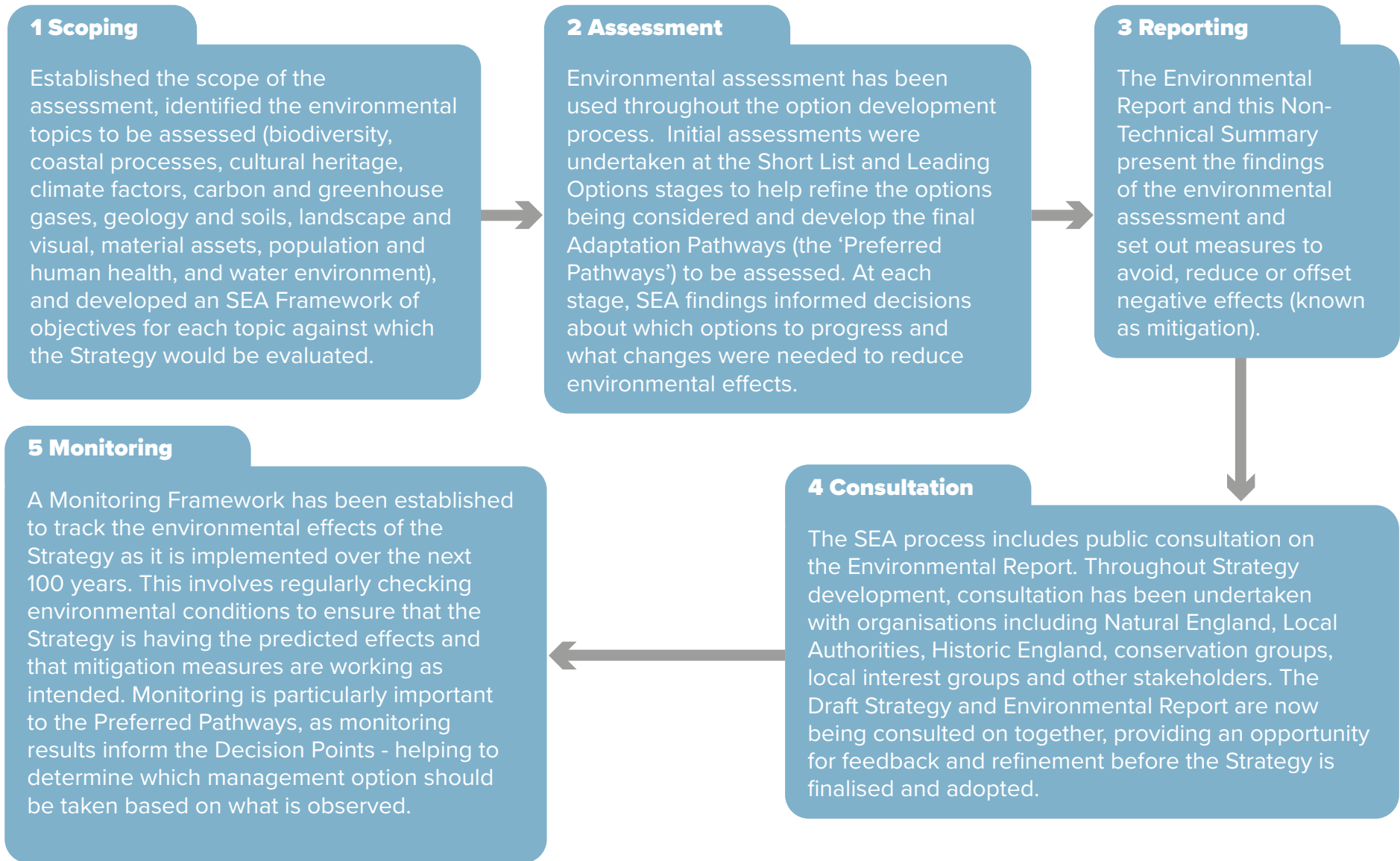


Figure 1. Strategic Environmental Assessment 5 stage process

The SEA was undertaken alongside other important environmental assessments:

Habitats Regulations Assessment (HRA) is a legal process used to assess whether a plan or project could have an adverse effect on protected European wildlife sites, such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites.

The HRA considers whether the plan or project could damage designated habitats or species. If harmful effects cannot be avoided and are considered imperative, new habitats must be created to compensate for any losses. These compensatory habitats must be in place before any damage occurs.

Water Environment Regulations (WER) Assessment is a legal requirement focusing on enhancing, protecting and preventing deterioration of surface water (including estuaries and coastal waterbodies), groundwater and associated ecosystems, aiming to maintain or achieve 'good status' for all waterbodies.

The SEA also draws on topic specific studies, which provide a strong evidence base to inform the assessment, including:



Little Tern
Source: Adam Cave

- **Bird Usage Assessment** - The purpose of the bird usage assessment was to understand how the birds use the different habitats at various times of the year.
- **Landscape Visioning Strategy (LVS)** - Assessed how the landscape and visual character of the coastline is expected to change over the Strategy period through the recommendations of the Preferred Pathways, helping to identify opportunities for landscape mitigation and enhancement.
- **Salterns Assessment** - Assessed the historic salt industry landscape including salt pans, boiler houses and wind pumps, enhancing our knowledge of this once thriving industry. The assessment highlighted the potential impacts that could arise from the Strategy.

Current Policy

The Hurst Spit to Lymington coastline is currently managed under the North Solent Shoreline Management Plan (SMP) December 2010⁽¹⁾. SMPs are high-level policy documents that set the strategic approach for managing coastal flood and erosion risk over 100-year timescales. The SMP identified a 'Hold the Line' (HtL) policy for this coastline, meaning flood defences are planned to be maintained in their current position, although the SMP does not guarantee funding to deliver this policy.

As part of the Strategy development, the feasibility of continuing a HtL approach across the entire Strategy coastline was assessed. Options were assessed against the Strategy objectives, considering factors including infrastructure condition, costs, deliverability, and environmental constraints and opportunities. The assessment identified that continuing HtL across the entire Strategy area would not provide the best outcomes for people and wildlife. This is due to many reasons:

- **Infrastructure condition and sea level rise**

Existing flood defences are approaching the end of their residual life (the remaining period they can effectively function) and are becoming increasingly costly to maintain. Over the next 100

years, sea level could rise by over 1 m, meaning defences left at their current height would leave communities at an increasing flood risk.

Consideration was given to whether defences could be raised and strengthened to keep pace with sea level rise. However, significant challenges were identified:

- **Structural requirements:** Flood defences cannot simply be raised repeatedly in their current positions. Higher defences require wider structural footprints (a wider base) to remain stable, requiring more land.
- **Cost:** Raising and strengthening defences to accommodate 1 m of sea level rise across the entire 15 km coastline would require substantial investment that far exceeds available funding, particularly challenging in a rural area with few properties at risk.
- **Ongoing maintenance burden:** Wider and higher defences would require more investment for maintenance over the 100-year Strategy period compared with new realigned defences (Managed Realignment, see 'key option definitions').

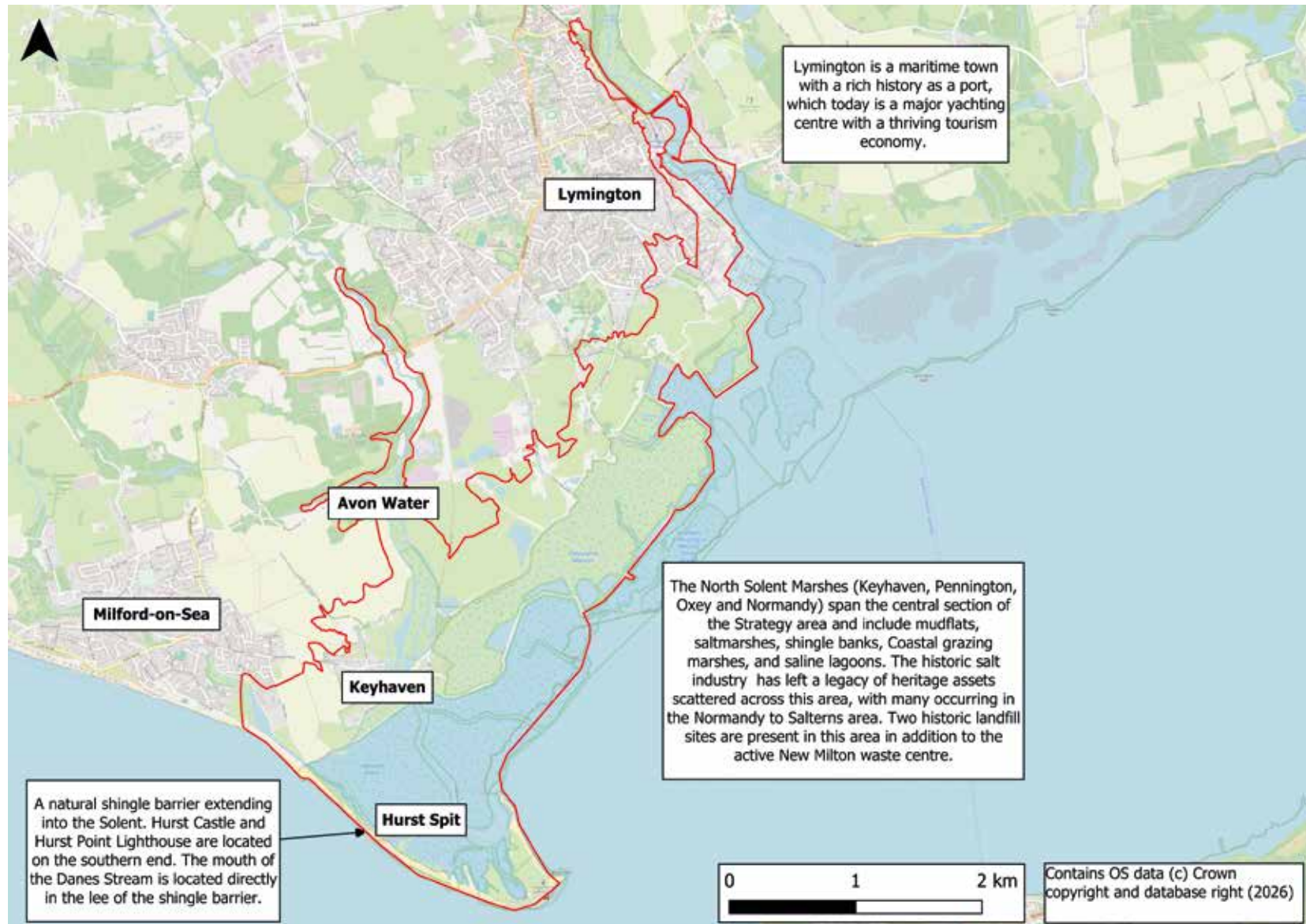
- **Legal and environmental constraints**

As sea levels rise, internationally important coastal habitats will be lost. This does not only threaten coastal biodiversity, but it also reduces natural flood protection as saltmarsh reduces wave energy.

Under UK law (the Conservation of Habitats and Species Regulations 2017 (as amended)), loss of designated habitats because of Flood and Coastal Erosion Risk Management actions, such as building bigger defences or moving defences inland causing damage to the existing habitats, requires the creation of replacement habitats elsewhere before the existing habitats are lost.

A 2008 Solent Dynamic Coast Report documented significant ongoing losses across the area, with saltmarsh at Hurst Spit, Keyhaven, and Lymington shrinking by between a **40 and 50% reduction since the latter half of the twentieth century**⁽²⁾. Modelling also shows that continued HtL across the Strategy area **could result in complete saltmarsh loss by the 2070s**. The amount of replacement habitat required to compensate for HtL losses would be difficult to deliver and have a very high cost.

Hurst Spit to Lymington Strategy Area



Challenges the Strategy area faces



Hurst Spit following a storm in January 2025
Source: New Forest District Council

The Strategy area extends along the New Forest coastline from Hurst Spit in the west to the town of Lymington in the east. It includes the village of Keyhaven, the various rivers and the extensive internationally important coastal marshes, lagoons, and mudflats. The area is subject to a combination of increasing flood risk to communities and infrastructure, and the ongoing loss of internationally important wildlife habitats. The nature and severity of these challenges vary along the length of the coastline.

Hurst Spit

Hurst Spit is a 2.1 km natural shingle barrier beach, providing protection to the saltmarsh and mudflats behind it. There is a popular walking route along the Spit, offering expansive views across the Solent and Christchurch Bay. It also offers access to Hurst Castle, a Scheduled Monument, and the Grade II listed Hurst Point Lighthouse, at its southern end.

Hurst Spit is recognised as one of the most important shingle features in the Solent, supporting a rich and diverse plant community. The coastal vegetated shingle found along the Spit is a highly dynamic habitat that supports specialised plants, ranging from pioneering strandline

communities to more established and stable vegetated areas. This is a rare habitat of international importance, largely restricted to northwest Europe, with all major examples in England designated as Sites of Special Scientific Interest (SSSIs).

This fragile ecosystem is threatened by climate change and human activity, including coastal management. Foot and vehicle traffic can also damage the slow growing vegetation communities and prevent coastal birds from nesting.

Maintenance of Hurst Spit has been undertaken in previous years by New Forest District Council through their powers as a Coastal Protection Authority. Periodically shingle is redistributed to maintain the current shape of the barrier. In 1996/1997 a larger beach recharge was undertaken to stabilise the spit following multiple storms throughout the 1980s and early 1990s. However, climate change is making this increasingly challenging. Storms are already becoming more frequent and severe, with the winter of 2013/14 seeing several significant storms that lowered the height of the Spit considerably. In the future, rising sea levels will make maintaining the Spit in its current shape and location far

less sustainable. Overwashing events are expected to become increasingly frequent, making access to the castle and lighthouse along the Spit more and more unreliable.

The Spit is naturally rolling back northeastwards. In the future, unmanaged rollback could increase the risk of the Danes Stream—which flows into the sea behind the Spit—becoming blocked by shingle. If this happened, it would result in an increase in flood risk to Keyhaven and Milford on Sea.

Keyhaven to Lymington

Coastal defences extend from Keyhaven to Lymington, reducing the risk of coastal flooding to the communities, infrastructure and habitats behind them. The condition of these defences varies and, over the 100-year Strategy period, are expected to become less effective as sea levels rise, their condition deteriorates and defences eventually fail. This is also impacted by the loss of intertidal mudflat and saltmarsh habitat in front of the defences as sea level continues to rise. This loss is due to the prevention of a natural process where habitats adapt to rising sea levels by moving landward, a process that is constrained by the presence of hard



Saltmarsh in the Strategy area. Source: JBA Consulting

coastal defences. This response is known as coastal squeeze. Visual depiction reference figure 2 (page 16).

Keyhaven is a small village and popular sailing harbour sitting at the western end of the frontage, between Hurst Spit and the Avon Water River. The village and its harbour are valued by the local community and visitors alike, attracting boaters, sailors, walkers and wildlife watchers throughout the year. There is a well-used ferry service from the quay to Hurst Castle. However, without intervention, coastal and river flood risk to Keyhaven is expected to increase significantly over the Strategy period.

Stretching from Keyhaven to the mouth of the Lymington River, coastal habitats



Black-tailed Godwit. Source: Tony Moss Wildlife

span the central section of the Strategy area. This area has been shaped by more than two thousand years of human activity, including a once thriving salt making industry.

The extensive stretch of saltmarsh, mudflats, shingle banks, coastal lagoons and grazing marsh forms one of the most ecologically important coastlines in Southern England. These habitats form part of the Solent and Southampton Water Special Protection Area (SPA) and Ramsar site, designated for important



wetland habitat and internationally significant populations of breeding and over-wintering birds. The Strategy area alone supports over a quarter of the SPA population of Teal and more than half of its wintering Blacktailed godwit population, as well as nationally important numbers of Darkbellied brent geese and Ringed plover.

The loss of mudflat, saltmarsh and Chenier banks (narrow sandy or shelly beaches) across the Strategy area is placing pressure on a range of species, including birds, contributing to the regional loss of valuable feeding, nesting, and high tide roosting locations.

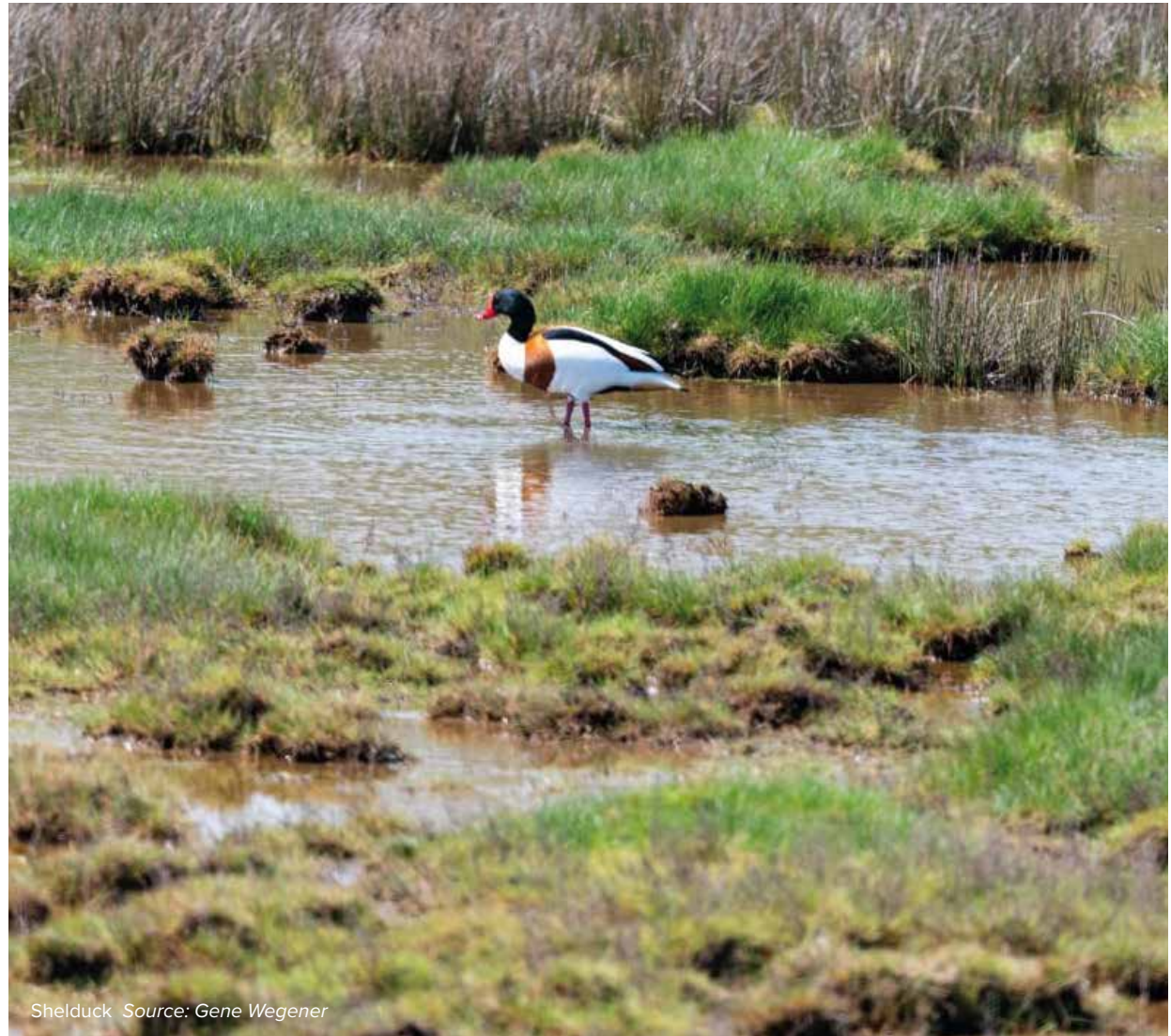
A number of other nature conservation designations span the Strategy area, including:

- Solent and Dorset Coast SPA
- Solent and Isle of Wight Lagoons Special Area of Conservation (SAC)
- Solent Maritime SAC
- The New Forest SAC & SPA
- The New Forest Ramsar site
- Hurst Spit to Lymington River SSSI
- Local Nature Reserve (LNR)
- Site of Importance for Nature Conservation (SINC)

The Strategy area includes several historic and closed coastal landfill sites at Pennington, Efford, and Bath Road (Lymington). The contents of the oldest site at Pennington, in particular, is not fully known, and the level of environmental risk it poses remains uncertain. However, this risk could be significant.

For this reason, improving the resilience of these sites to rising sea levels, coastal flooding and erosion is an important consideration for the Strategy. Further work will be needed in the future to better understand the risks involved.

At the eastern end of the Strategy area lies Lymington, the largest settlement within the Strategy area. The town has a thriving waterfront and maritime economy, with marinas, a ferry terminal connecting to the Isle of Wight, and a range of businesses and services along the riverfront. Like Keyhaven, Lymington faces growing coastal and river flood risk over the Strategy period, with its waterfront infrastructure and businesses, community amenities and surrounding residential areas at increased risk due to rising sea levels and the likelihood of increased frequency of severe storm events.



Shelduck Source: Gene Wegener

Coastal Squeeze

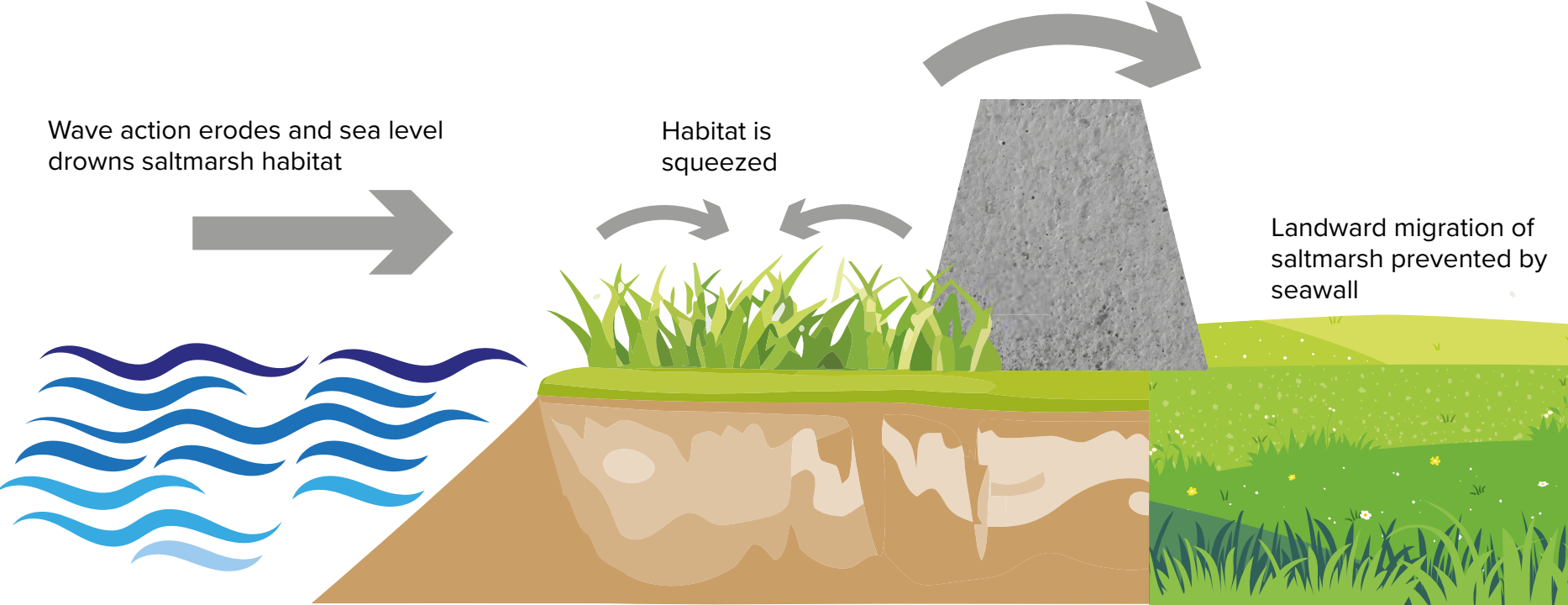


Figure 2. Illustration of coastal squeeze

The Strategy and Adaptation Pathway Approach

The Strategy sets out how the coastline from Hurst Spit to Lymington will be managed over the next 100 years to address the challenges identified above. It provides an overarching framework from which detailed projects will later be designed, funded and constructed.

At the outset of the Strategy, five objectives were established to guide the development and assessment of options, reflecting the need to balance flood risk management with environmental, social and economic considerations.

The development of the Strategy involved a structured process of option development and appraisal, moving through four key stages:

To support the appraisal process, the Strategy area was divided into nine Management Units (Figure 3) - sections of the coastline with broadly similar characteristics and challenges that allowed targeted management approaches to be developed for each area.

A wide range of possible options (the Long List) was identified for each Management Unit and refined through appraisal to narrow the options first to a Short List and then to the most suitable Leading Options for each. These Leading Options were then arranged into the Adaptation Pathways.

An Adaptation Pathway is an approach to managing the coastline over the long term that provides flexibility to respond to the changing conditions. Through a series of pathways, it sets out the various options for each Management Unit. The final pathways being presented as part of this Draft Strategy are referred to as the 'Preferred Pathways'.

Decision Points are used to determine the change to a new pathway. The Decision Points themselves are informed by ongoing monitoring of different factors. Each factor has a threshold which triggers a need to review the pathways.



Strategy Objectives

- 1** Provide greater resilience to communities, property and infrastructure by managing the risk of flooding and erosion, while providing adaptability to climate change.
- 2** Protect and enhance the natural environment and wildlife and support natural processes.
- 3** Promote flood and coastal erosion risk management solutions in ways that contribute to carbon reduction including solutions with potential to capture and store carbon through habitat creation.
- 4** Promote solutions that align with partner authority plans in terms of their social, recreational, commercial and cultural benefits.
- 5** Develop a plan to implement the Strategy that includes a programme of works over the short/ medium-term that is achievable and affordable.



Views of the Solent Source: Environment Agency

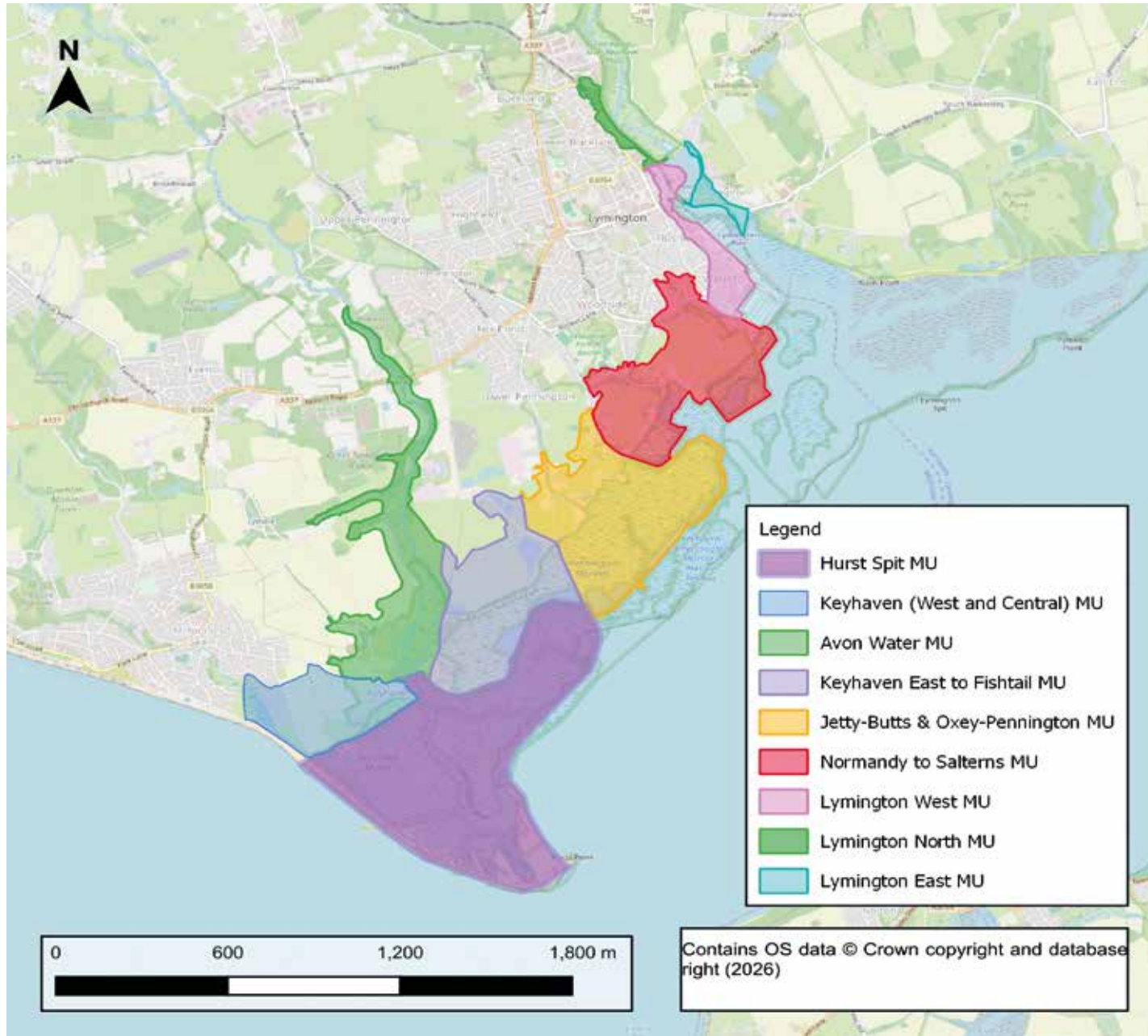


Figure 3. Management Unit map

Key Options Definitions

This process led to the most appropriate options, which met the Strategy and SEA objectives, being carried through to the final stages, while options that did not meet these criteria were not progressed.

The options that make up the Preferred Pathways are defined below. As presented, Hurst Spit is a natural shingle barrier and therefore management options were developed separately from the wider coastline where man-made defences exist.

Hurst Spit

Hold the Form - Maintain:

Bringing in or redistributing shingle to Hurst Spit to maintain the current shape and profile.

Rollback - Reactive Management:

Reduced level of management of the Spit, allowing coastal processes to redistribute material. Some smaller ad-hoc shingle recharge operations may be undertaken, in response to extreme storm events, to maintain a continuous barrier. The barrier will become wider and lower.

Rollback - Minimum Intervention:

Full withdrawal of management of Hurst Spit, allowing coastal processes to redistribute material with no further maintenance.

Defended coastline

Existing Maintenance:

The condition of the defences will be monitored, with maintenance works completed when required, dependent on funding availability.

Managed Realignment with Saltmarsh Creation:

Build new flood defences further inland. This allows controlled flooding of low lying land behind the existing defences. This will create new intertidal habitats, such as saltmarsh, whilst continuing to protect people and property from flooding. In some areas, sediment will be imported to raise ground levels so saltmarsh can establish.

Hold the Line - Maintain:

Strengthening the existing flood defences to extend the residual life of the defences.

Hold the Line - Sustain:

Strengthening, raising or replacing the existing flood defences over time to keep pace with sea level rise.

New Flood Defences - Upgrade:

Build new defences. Applies only to Avon Water Management Unit.

The Preferred Pathways

The Strategy proposes a Preferred Pathway for each Management Unit that combines different management approaches across the coastline, changing over time in response to evolving conditions.

Short-term (0-20 years)

At Hurst Spit, Hold the Form - Maintain is proposed, allowing time to deliver flood defences in Keyhaven West and Central. This is known as an enabling project and must be completed before rollback of the Spit can occur. This also gives English Heritage, who manage Hurst Castle, time to plan and adapt for the future.

At Keyhaven West, Managed Realignment with habitat creation will be delivered. The new flood defences will be built further inland allowing the existing defences to be breached in a controlled way. This will create a large area of intertidal habitat, including saltmarsh, over the next 20 years.

In Keyhaven Central, the line of defence will remain in place, be raised and strengthened overtime (Hold the Line - Sustain). For the rest of the frontage, existing maintenance will continue in the short-term, leaving the line of defence in place, with monitoring of the defence condition occurring at regular intervals.

Likely impacts on reedbed habitats in the Avon Water Management Unit, identified in the HRA, will be addressed through the delivery of compensatory habitat creation in the short-term.

Medium-term (20-50 years)

Once the Keyhaven West compensatory habitat creation and rerouting of the Danes Stream are complete, Hurst Spit will be managed through Rollback - Reactive Management. The option to return to Hold the Form - Maintain remains available if negative impacts are identified through ongoing monitoring.

New Flood Defences - Upgrade at Avon Water is proposed within this time period. This includes the removal of the sluice gate under Lower Pennington Lane, enabling restoration to natural estuary environment and the construction of new flood defences on the left and right bank of the Avon Water.

Between Keyhaven East and Oxe Pennington Management Units, Managed Realignment with Saltmarsh Creation is proposed. Again, this is dependent on the delivery of required compensatory habitat in the short-term. Hold the Line - Sustain remains available if habitat has not yet been delivered. Normandy to Salterns (not including Normandy Lobe) will follow Hold the Line - Sustain and Lymington will follow Hold the Line - Maintain extending the residual life of the defences to 2070.

Long-term (50-100 years)

Hurst Spit will continue to be monitored. If Hurst Spit continues to evolve and changes remain acceptable under reduced management, management will be fully withdrawn. Rollback - Minimal Intervention, allowing natural coastal processes to be restored over time.

At Lymington, the current Hold the Line - Maintain approach would transition to Hold the Line - Sustain, with works undertaken to replace and raise defences to reduce flood risk to people and property for the remaining duration of the Strategy period.

Across the remainder of the Strategy frontage, the options implemented during the medium-term would continue. This would be supported by ongoing monitoring of defence condition and habitat establishment, with maintenance undertaken as required and subject to the availability of funding.

To find out more on this please see the Strategy Non-Technical Summary

SEA Objectives and Assessment

At the scoping stage, a set of environmental objectives for each of the nine topics identified were established, these are separate from the overall Strategy objectives. The SEA Objectives are listed in the table below.

Topic	Objective	Sub-objective(s)
Biodiversity	Increase biodiversity and support wildlife	<p>Maintain and enhance designated and non-designated wildlife and geological sites and protected and priority species and priority habitats and contribute to achieving favourable conservation status.</p> <p>Increase biodiversity by enhancing, expanding and connecting existing natural areas and wildlife refuges, in line with nature recovery aims, nature-based solutions and biodiversity net gain requirements.</p> <p>Increase biodiversity resilience to climate change.</p>
Coastal Processes	Restore key natural coastal processes	<p>Restore and increase the functioning of natural coastal processes within the natural environment.</p> <p>Work with natural coastal processes to manage local and regional flood risk and mitigate against the impacts of climate change.</p>
Cultural Heritage	Optimise the conservation and enhancement of the significance of the cultural heritage and historic environment	<p>Enhance the integrity (including, where appropriate, preservation) and quality of historic landscapes, including components such as built heritage and buried archaeological features.</p> <p>Improve and broaden access to the historic environment, including understanding and interpretation.</p> <p>Optimise contribution of heritage to the economy and the visitor experience.</p> <p>Minimise uncertainty for English Heritage and Historic England to make decisions about the future of Hurst Castle.</p> <p>Increase local and national resilience to climate change of cultural heritage and the historic environment.</p>

Climate Factors	Increase local and national resilience to climate change, through climate change mitigation measures	Sub-objectives for climate are included under other topics, since it is considered holistically throughout the assessment
Carbon and Greenhouse Gases	To offset greenhouse gas emissions	Minimise short-term carbon emissions and reduce long-term emissions by preferencing low carbon solutions. Preserve and enhance existing carbon sinks within the natural environment.
Geology and Soils	Reduce risk of contamination of areas above and below ground and improve soil quality and quantity	Reduce the risk of contamination from local and regional contamination sources above and below ground. Improve soil quality and quantity.
Landscape and Visual	Conserve and enhance the landscape character and visual amenity	Ensure the particular qualities of the landscape character and visual amenity are understood, conserved and enhanced through measures which increase capacity for recreation and resilience to change.
Material Assets	Support the operation and maintenance of existing and proposed material assets	To protect existing critical infrastructure, whilst de-commissioning assets which are no longer required. Support the development of new critical infrastructure through resilience to flood risk and climate change.
Population and Human Health	Improve health and wellbeing, supporting opportunities for local populations	Conserve and enhance open (including urban amenity areas) and natural green spaces including public rights of way. Improve access and recreation to the environment for all. Improve opportunities for communities to thrive and improve health and wellbeing through active lifestyles. Reduce flood risk and erosion of communities, property and infrastructure and increase resilience to climate change.

Water Environment	Enhance our rivers, lakes, groundwater, and transitional (estuarine) and coastal systems	Prevent the deterioration of, and enhance the water quality of our rivers, lakes, groundwater, and transitional (estuarine) and coastal systems. Prevent the deterioration of, and enhance the biology of our rivers, lakes, groundwater, and transitional (estuarine) and coastal systems. Prevent the deterioration of, and enhance the natural processes of our rivers, lakes, groundwater, and transitional (estuarine) and coastal systems and increasing resilience to climate change.
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The performance of options against the objectives was assessed by experts relevant to each topic, and a standardised scoring system was applied as follows:

Score	Description
0	Neutral Impacts considered to evolve similarly to or as per the baseline scenario.
-	Minor Negative The proposed actions detract from the achievement of the SEA Objective, but not significantly. This would likely be presented as some measurable change in attributes, quality or vulnerability; minor loss of, or alteration of resources / assets that are of local / low value. Effects tend to be reversible and temporary.
--	Major Negative The proposed actions detract significantly from the achievement of the SEA Objective. Effects are generally, but not exclusively, likely to be associated with sites or features of international, national or regional importance (high value receptors) that are likely to suffer a most damaging impact and loss of resource integrity that is likely to be irreversible and permanent. Mitigation is therefore highly likely to be required.
+	Minor Positive The proposed actions contribute to the achievement of the SEA Objective, but not significantly. This is likely to be presented as some beneficial impact, or addition of key characteristics, features or elements; on attribute/ asset/ receptor or a reduced risk of negative impact occurring.
++	Major Positive The proposed actions contribute significantly to the achievement of the SEA Objective. This is likely to be presented as large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality of site/ features with international, national or regional importance.
+/-	Mixed Positive and Negative The proposed actions are likely to have both positive and negative effects.

Assessment Findings

The SEA identified a range of effects that are likely to result from implementation of the Preferred Pathways across the Strategy area as a whole (rather than by individual Management Unit). Some of these effects are positive, for example, communities will be better protected from flooding than they are at present, and significant new wildlife habitats will be created. Other effects are negative - for instance, the construction of new flood defences in the short-term will generate carbon emissions. The key findings are summarised below and in Table 1: Summary SEA Scoring.

Flood and coastal erosion defences will be maintained and enhanced. Flood defences will continue to manage coastal flood risk for communities throughout the 100-year period.

Assessments examined whether changes at Hurst Spit could increase flood risk. While wave heights immediately behind the barrier may be increased, depending on how Hurst Spit changes, it concluded that upgraded defences at Keyhaven will provide ongoing protection against flooding.

Where defences are moved back inland through Managed Realignment, new coastal defences will manage flood risk for the same communities that are currently protected.

In Lymington, residents, businesses and visitors will face increasing flood risk in the short to medium-term as sea levels rise. As the defences are replaced and raised, flood risk would be more effectively managed for residential, commercial and critical infrastructure including the hospital, emergency services, transport links, and harbour facilities.

Beyond managing physical flood risk, the assessment identified important wellbeing benefits. Knowing flood defences are in place reduces anxiety and stress, allows people to invest confidently in their properties, and maintains community cohesion. These psychological benefits matter for quality of life in coastal communities facing climate change.



Footpath in Salterns Source: JBA Consulting

Significant areas of new habitat will be created, and the coastline will be managed more naturally

The assessment found that the Preferred Pathways will create a large amount of new habitat while accepting some unavoidable losses.

At Hurst Spit, reducing beach management will see the barrier evolve more naturally. Hurst Spit is part of internationally designated sites (Solent Maritime Special Area of Conservation, Solent & Southampton Water Special Protection Area, and Hurst Castle and Lymington River Estuary Site of Special Scientific Interest) but the natural shape and form of the Spit has been influenced by several decades of coastal management.

The Strategy's approach will provide the conditions for shingle and saltmarsh habitats to expand and improve, supporting rare plants such as Golden Samphire and breeding birds including Ringed Plover, Redshank and Oystercatcher that depend on naturally functioning shingle systems. As the Spit rolls back naturally, the saltmarsh may be lost. This is considered natural change. The restoration of natural coastal



Walking and footpath routes Source Environment Agency

processes will improve the condition of the designated nature sites, which are currently failing to meet their set conservation objectives.

Between Keyhaven and Pennington, moving defences back inland will create new saltmarsh and mudflats with saline lagoons created behind the new flood defences. These new areas will take time to establish, with short-term habitat losses before the long-term benefits emerge.

By working with natural processes rather than against them, this approach meets legal obligations to protect internationally designated wildlife sites in the face of rising sea levels.

The coast will look and feel different in some places

The assessment found that the coastline will change significantly in some areas, whilst seeing little change in others.

At Hurst Spit, the gradual transition back to a natural system will fundamentally change how this landscape looks and how people experience it. The Spit will become lower and wider as a result of natural coastal processes and rising sea levels. Overwashing will become more frequent and potentially limit access.

Between Keyhaven and Pennington, moving defences back will create new



Wightlink Ferry Source: HCC

coastal wetlands where fields and marshes exist now, changing the view and character of these areas over time. The earliest changes are expected to occur in Keyhaven West, behind Saltgrass Lane.

In Lymington town, the familiar waterfront will be retained, through defence upgrades (Hold the Line - Sustain) from the 2070s onwards and will create higher defences that could change or limit views to the harbour.

The assessment recognised that these landscape changes would result in the loss of some valued landscape characteristics. In particular, the immersive landscape experience at Hurst Spit

and the existing coastal grazing marsh character within realignment areas.

However, new landscapes will develop their own distinct character over time, with saltmarsh and mudflat replacing grassland character. As these coastal environments evolve, people are likely to find new ways to experience and connect with them.

Walking routes and access will change

The assessment found that while people will continue to enjoy walking, wildlife watching and coastal recreation, how and where they do these activities will change in some areas.

The most significant change is at Hurst Spit. In the short term, the physical form of the Spit will be maintained, though access arrangements during this period are subject to ongoing management decisions. Beyond this, as the barrier over washes and rolls-back, the traditional walk to Hurst Castle will become increasingly unreliable, with the route periodically impassable, especially during and after storm events. In the longer term, the frequency of these disruptions is likely to increase, though the timescale and extent of any changes to access remains uncertain. The assessment found that these changes would also occur under a Do-Nothing scenario.

Between Keyhaven and Pennington, new coastal paths are likely to be located on top of new flood defences positioned further inland. This will create more sustainable long-term access routes, allowing for future sea level rise. The walking experience will be different over time, with elevated views across developing intertidal habitats. As saltmarsh establishes, these views will continue to evolve, potentially offering enhanced opportunities for wildlife observation and nature-based recreation that develop alongside the habitats. The character of these walks will change - with

views over intertidal habitats rather than the elevated panoramic views across the existing grazing marsh. The Preferred Pathways will keep some of the existing grass landscapes while creating new areas, and lagoon habitat, maintaining elements of the current landscape character and visitor experience. Recreational routes will be maintained throughout wherever possible, with opportunities through detailed design to enhance accessibility and incorporate viewing areas and interpretation facilities. In Lymington, familiar waterfront walks and harbour access will continue as defences are upgraded. Opportunities will be explored through project design to combine the new higher defences with people's connection to the water. The assessment recognised that even where alternative access is provided, changes to locally important walking routes represent losses for regular users who value specific experiences and views. However, the new routes will offer their own benefits - elevated paths will provide panoramic views of newly created wetlands, opportunities to watch wading birds feeding on mudflats, and connections to a dynamic, naturally functioning coastline.



Hurst Point Lighthouse Source: Gene Wegener

The approach will help adapt to climate change

The assessment found that the approach will support communities and the environment in adapting to climate change over the coming century. Allowing Hurst Spit to evolve naturally works with coastal processes rather than against them, avoiding the long-term carbon cost of continued intensive management. Construction work to build new or upgraded flood defences and create new habitats will generate carbon emissions. However, the new saltmarsh and mudflats created through Managed Realignment will store increasing amounts of carbon as vegetation establishes and sediment builds up - acting as natural carbon sinks that help offset emissions. By mid-century and beyond, these habitats will be storing more carbon than is emitted by maintaining them, delivering a net climate benefit.

The approach also improves climate resilience in other ways; Managed Realignment between Keyhaven and Pennington creates habitats that can adapt naturally as conditions change; and upgraded flood defences in Lymington will be designed to accommodate future sea level rise rather than just current conditions.

Contamination will be prevented and water quality protected

The assessment found that the approach will reduce the risk of coastal flooding to historic landfill sites. Between Keyhaven and Pennington, several old landfill sites sit behind ageing defences. Under a Do-Nothing scenario, they would progressively fail, potentially allowing release of contamination into the water environment. The new flood defences will be designed to reduce coastal flood risk, compared to a Do-Nothing scenario, throughout the 100-year period, including associated risks to water quality and human health.

Water quality will also improve as new saltmarsh habitats establish and mature. These habitats provide natural water quality enhancement through trapping sediment, nutrient and contaminant adsorption - benefits that develop progressively as vegetation establishes. At Avon Water, removing the sluice structure will potentially improve dissolved oxygen levels, enhance nutrient processing, and restore more natural flushing and mixing in the estuary.

Heritage

Hurst Castle and Hurst Point Lighthouse face significant climate change challenges in the long-term regardless of the approach taken; sea level rise and increased storminess associated with climate change will expose these assets to increased erosion and potential damage regardless of the approach taken for this Strategy. However, the Preferred Pathways provides a window for conservation under Hold the Form - Maintain in the short-term. Vehicular access to these features via Hurst Spit is likely to be limited or lost in the medium to long-term, with potential implications on English Heritage's maintenance activities. Access via boat could provide alternative pedestrian access to the castle, however alternative access strategies are needed to be developed by English Heritage over time as vehicular access along the Spit becomes less reliable.

In the short term, the Preferred Pathways perform similarly to a Do-Nothing scenario, as existing defences continue to function and Managed Realignment has not yet taken place. In the medium-term, Managed Realignment will take place in specific locations between Keyhaven West and Normandy to Salterns. Some heritage



Drone footage of salt evaporation ponds Source: Environment Agency

assets (particularly remains of the historic salt industry) will be left on the seaward side of the new defences, with above ground elements gradually becoming buried or submerged. These changes will impact how the assets can be accessed and understood. However, the burial of these assets can be seen as a positive, as it can slow deterioration as already seen with some of the existing archaeology, compared to unmanaged erosion under a Do-Nothing scenario.

In the long-term, flood defences at Keyhaven and Lymington will protect listed buildings and conservation areas from coastal flooding that would cause severe or irreversible damage under a Do-Nothing scenario.

Changes to agricultural land

The creation of new coastal habitats at Keyhaven West will result in the loss of some agricultural land. These soils are highly productive and suitable for supporting a wide range of agricultural crops.

Under a Do-Nothing scenario, existing coastal defences would eventually fail, resulting in similar losses of agricultural land to the Preferred Pathways. The impact is largely confined to this specific location and is restricted to land parcels that have already been acquired by the Environment Agency.



Drone footage of salt marsh Source: Environment Agency

Table 1: Summary SEA Scoring. Comparing the impact of the Strategy compared with a Do Nothing scenario, across the short-term (0-20 years), medium-term (20-50 years), and long-term (50-100 years).

Score

0 Neutral

-- Major Negative

++ Major Positive

- Minor Negative

+ Minor Positive

+/- Mixed Positive and Negative

ST short-term

MT medium-term

LT long-term

Topic	SEA Objective and sub-objective	ST	MT	LT
Biodiversity	Increase biodiversity and support wildlife	+/-	+	+
	Maintain and enhance designated and non-designated wildlife and geological sites and protected and priority species and priority habitats, and contribute to achieving favourable conservation status	+	+	++
	Increase biodiversity by enhancing, expanding and connecting existing natural areas and wildlife refuges, in line with nature recovery aims, nature-based solutions and biodiversity net gain requirements	+	+	++
	Increase biodiversity resilience to climate change	+/-	+	+
Climate Factors	Increase local and national resilience to climate change, through climate change mitigation measures	+/-	+	++
Carbon and GHG	To offset GHG emissions	-	+	+
	Minimise short-term carbon emissions and reduce long-term emissions by preferring low carbon solutions	-	+/-	+/-
	Preserve and enhance existing carbon sinks within the natural environment	+/-	+	+

Topic	SEA Objective and sub-objective	ST	MT	LT
Coastal Processes	Restore key natural coastal processes	+	+	++
	Restore and increase the functioning of natural coastal processes within the natural environment	+/-	+/-	+/-
	Work with natural coastal processes to manage local and regional flood risk and mitigate against the impacts of climate change	+	+	++
Geology and Soils	Reduce risk of contamination of areas above and below ground, and improve soil quality and quantity	0	+	+
	Reduce the risk of contamination from local and regional contamination sources above and below ground	+	+	+
	Improve soil quality and quantity	0	+	+

Topic	SEA Objective and sub-objective	ST	MT	LT
Heritage	Optimise the conservation and enhancement of the significance of the cultural heritage and historic environment	0	0	+
	Enhance the integrity (including, where appropriate, preservation) and quality of historic landscapes, including components such as built heritage and buried archaeological features	0	0	+/-
	Improve and broaden access to the historic environment, including understanding and interpretation	+/-	0	+
	Optimise contribution of heritage to the economy and the visitor experience	0	0	+/-
	Minimise uncertainty for English Heritage and Historic England to make decisions about the future of Hurst Castle	0	0	0
	Increase local and national resilience to climate change of cultural heritage and the historic environment	0	0	+
Landscape	Conserve and enhance the landscape character and visual amenity	+/-	++	+
	Ensure the particular qualities of the landscape character and visual amenity are understood, conserved and enhanced through measures which increase capacity for recreation and resilience to change	+/-	+	+

Topic	SEA Objective and sub-objective	ST	MT	LT
Material Assets	Support the operation and maintenance of existing and proposed material assets	+	+	+
	To protect existing critical infrastructure, whilst de-commissioning assets which are no longer required	+	+	+
	Support the development of new critical infrastructure through resilience to flood risk and climate change	+	+	+
Population and Human Health	Improve health and wellbeing, supporting and opportunities for local populations	0	+	+
	Conserve and enhance open (including urban amenity areas) and natural green spaces including public rights of way	+/-	+/-	+/-
	Improve access and recreation to the environment for all	+/-	0	+/-
	Improve opportunities for communities to thrive and improve health and wellbeing through active lifestyles	+	+	+
	Reduce flood risk and erosion of communities, property and infrastructure and increase resilience to climate change	++	++	++

Topic	SEA Objective and sub-objective	ST	MT	LT
Water Environment	Enhance our rivers, lakes, groundwater, and transitional (estuarine) and coastal systems	+/-	+/-	+
	Prevent the deterioration of, and enhance the water quality of our rivers, lakes, groundwater, and transitional (estuarine) and coastal systems	+/-	+/-	+
	Prevent the deterioration of, and enhance the biology of our rivers, lakes, groundwater, and transitional (estuarine) and coastal systems	+/-	+/-	+/-
	Prevent the deterioration of, and enhance the hydromorphology, geodiversity and natural processes of our rivers, lakes, groundwater, and transitional (estuarine) and coastal systems and increasing resilience to climate change	0	+/-	+/-

Managing the Environmental Effects of the Strategy

Following on from the assessment, the SEA has also identified various measures to reduce or offset the negative impacts, and to further enhance positive effects. These are summarised below:

Mitigation measures to prevent or reduce negative effects:

Construction controls - timing works to avoid sensitive breeding and nesting seasons, implementing sediment controls, recording archaeology and protecting water quality during construction. Construction Environmental Management Plans (CEMPs) will be developed at the project stage to set out detailed controls for managing construction impacts.

Design optimisation - minimising material quantities to reduce carbon emissions, delaying interventions until required to maximise opportunities for emerging low-carbon alternatives, and designing defences sensitively in Conservation Areas.

Maintaining access - providing replacement coastal paths where existing routes will be lost to Managed Realignment, maintaining walking access along most of the defended frontage. Vehicle access at Saltgrass Lane will



Common Whitethroat
Source: Gene Wegener

be lost, an alternative route is already available; however, further assessment will be required during the development of the project.

Understanding, managing and promoting heritage - actions to support public understanding and engagement with the area's natural and industrial past such as its buried coastal ecology, its heritage salt making and historic defence lines.

Biosecurity measures - implementing controls to prevent the spread of invasive species and disease during construction and habitat creation works.

Community engagement - ensuring local communities are informed and involved as the Strategy is implemented, particularly where changes to landscape or access will occur.

Compensation to offset unavoidable losses:

The HRA identified that the Preferred Pathways will result in losses to internationally designated habitats. Under the Conservation of Habitats and Species Regulations 2017 (as amended), these must be offset through the creation of new compensatory habitats before the harm occurs. The Preferred Pathways

include the delivery of new saltmarsh, mudflat, saline lagoons, coastal grazing marsh and reedbeds to compensate for these unavoidable losses and maintain ecological functioning throughout the Strategy period.

Protecting and enhancing the environment:

Biodiversity features - new and upgraded coastal defences will incorporate a range of beneficial design features, such as living seawalls that provide habitat for invertebrates and fish. New shingle islands can be created from the old sea wall that offer nesting opportunities for coastal birds, including terns and gulls. Extensive areas of newly created grassland habitat will provide important feeding areas and safe high-tide roosting sites for waders and geese, as well as supporting farmland birds and wider biodiversity.

Landscape and access features - designing replacement coastal paths to create varied and interesting walking experiences, with routes positioned to maximise views toward coastal habitats, heritage assets and the Solent. New paths within the existing networks will enhance connectivity and access to the wider landscape, potentially creating circular

routes of varied difficulty levels that connect to settlements, reestablish historic routes (e.g., heritage trails) and car parks, helping to disperse visitor pressure and create diverse landscape experiences. New woodland and hedgerows will help integrate existing and new defences into the landscape.

Heritage interpretation - enhancing public understanding and appreciation of the area's heritage through interpretation e.g. information boards, viewing points and educational materials.

Detailed measures are specified in Chapter 6 of the Environmental Report, with responsibility and timing identified for implementation.

Monitoring

The SEA process includes setting out how monitoring will be undertaken as the Preferred Pathways are implemented. This is referred to as a Monitoring Framework and includes consideration of the intervals at which the monitoring will be undertaken and by who.

Monitoring is used to check whether predicted environmental effects are occurring as expected and that mitigation measures are working effectively. It also provides the information needed to make informed decisions at Decision Points throughout the 100-year Strategy period. The Monitoring Framework developed includes both high-level monitoring to be implemented at a Strategy level and monitoring which will need to be developed further under individual projects.

What will be monitored?

Habitat establishment and condition - checking that new compensatory habitats are establishing successfully and meeting their targets for area and quality, with annual monitoring for at least the first five years after creation.

Ecologically designated site condition - monitoring the condition of habitats and species in internationally designated

sites to ensure the Strategy is supporting conservation objectives.

Hurst Spit response - tracking how the shingle barrier and coastal vegetated shingle habitat respond to reduced management, including beach profiles, habitat extent and species diversity.

Climate change indicators - the Preferred Pathways have been developed using the UK Climate Projections 2018 (UKCP18). If these projections are updated and show that sea levels are expected to rise significantly faster or slower than currently anticipated, the timing and design of planned works will need to be reconsidered accordingly.

Water quality - checking water quality during construction and in the long-term to ensure no deterioration in rivers, groundwater and coastal waters.

Coastal landfill sites - monitoring contamination risks from historic landfill sites to ensure they pose no risk to the environment.

Heritage assets - monitoring how changes to the coastline affect heritage, including buried archaeology and remains of the historic salt industry. Monitoring will be carried out in coordination with relevant

heritage bodies, landowners, and partners to agree coordinated heritage management plans and respond to any changes in access or maintenance.

Landscape character - review changes to landscape character and key views as the Preferred Pathways are implemented, to confirm that expected landscape benefits are being realised and to identify where management adjustments may be needed.

Flood defence condition - Based on up-to-date surveys of flood defences, check their condition and identify any actions needed

Who will carry out monitoring?

Monitoring responsibilities are shared between the Environment Agency, New Forest District Council, Natural England, and other partners depending on the specific aspect being monitored. Much of the monitoring builds on existing programmes, such as Natural England's designated site monitoring and the Regional Coastal Monitoring Programme.

Monitoring Plans

Detailed monitoring plans will be developed for each project as the Preferred Pathways are implemented.

Have Your Say

The Environmental Report and Non-Technical Summary are published for consultation alongside the Strategy. This assessment process exists to ensure that environmental effects - including protection of homes and businesses, impacts on wildlife, and changes to heritage and landscape - are fully understood and considered in decision-making. Your views on these findings are important.

If you would like more detail on any of the topics covered before responding, the full Environmental Report is available on the Strategy website.

Please consider the following questions when submitting your comments:

- Are there any environmental topics or locations where you feel the assessment could provide greater clarity? If so, please refer to the relevant section of the Environmental Report where possible.
- Do you have any comments on the environmental effects identified in this assessment?
- Is there any local knowledge or information about the environment in this area that you think should be taken into account?
- Do you feel the existing environmental conditions in the Strategy area have been accurately described?
- Is the need for the Strategy clearly explained?

How to Comment

To find out how to submit your comments, please visit:
www.hurstspit2lymington.co.uk

Comments should be submitted by **Friday 25 September 2026**

The website also provides a range of supporting resources for those who wish to learn more about the environmental and technical assessments undertaken. These can be accessed at:
www.hurstspit2lymington.co.uk/resources

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What Happens Next

After the Strategy is adopted, a statement will be published explaining how environmental considerations and your consultation responses have been considered in addition to confirming the monitoring arrangements.

References

1. **NFDC**. North Solent Shoreline Management Plan. Gov UK. [Online] 2010. <https://www.northsolentsmp.co.uk/>.
2. **Channel Coastal Observatory**. Solent Dynamic Coast Project. North Solent SMP. [Online] 2008. https://www.northsolentsmp.co.uk/media/1968/TR011-2008-SDCP-Main-1/pdf/TR011_2008_SDCP_Main_1.pdf?m=1616409152670



Sunset at the crabbing bridge Source: Graham Wiffen



Strategic Environmental Assessment Non-Technical Summary

