# HURST SPIT TO LYMINGTON PROJECT

*ADAPTING TO FUTURE CHALLENGES IN A SUSTAINABLE WAY*

The Environment Agency in partnership with New Forest District Council, Hampshire County Council and Natural England with expert support from JBA Consulting are exploring a sustainable future for the coastal frontage between Hurst Spit and Lymington in relation to flood and coastal erosion risk management.

This project aims to investigate if and how to respond to the significant challenges facing this area of coastline now and into the future, and how to fund any potential works.

This coastal frontage is located within the New Forest and extends from Milford-on-Sea in the west, encompasses Keyhaven and Pennington Marshes extending up the Lymington River to the east.

The Hurst Spit to Lymington coastline is characterised by large areas of low-lying coastal habitats, including mudflats, saltmarsh and vegetated shingle. The existing defences, as well as protecting local communities, protects large areas of coastal grazing marsh and coastal lagoons. The habitats and the species which can be found along this section of coast are of international importance. The rich biodiversity creates the stunning landscape, which is accompanied by cultural and historical heritage of significant status. For these reasons the area attracts substantial visitor numbers and is enjoyed by a range of recreational users, for activities such as walking, sailing and fishing. These factors along with natural coastal processes will need to be carefully considered as the project develops.

*The habitats and the species which can be found along this section of coast are of international importance. The rich biodiversity creates the stunning landscape, which is accompanied by cultural and historical heritage of significant status.*

The predominant flood risk is from the sea; however risk of river flooding is also present, as well as surface water flood risk in the more built up areas.

**Challenges facing this coastal frontage: What is the problem?**

With the climate crisis hitting the news and as sea levels are expected to rise over 1m along the south coast in the next 100 years, being able to respond to these challenges will be key for safeguarding our coastal communities and environments for the future.

This coastline is a highly dynamic environment and change is a common occurrence. However, climate change is predicted to lead to impacts that are detrimental to both local communities and the environment.

As sea levels rise, not only will flood risk increase to properties, infrastructure and low-lying land, but it will also increase the impact on the designated habitats and the species they support.

*View of Hurst Spit looking back towards the mainland.*

Presently both Hurst Spit and the flood embankments are managed as coastal defences by New Forest District Council and the Environment Agency respectively.

By dissipating wave energy, Hurst Spit shingle bank currently offers protection to both the flood embankments and the low-lying designated habitats behind it. Hurst Spit however is becoming increasingly vulnerable to damage due to the net loss of shingle. On occasions, emergency repair works have been required, such as following the Valentine's Day Storm in 2014. The vulnerability of the spit puts the flood embankments and the habitats and species which it protects at risk.

The situation is further complicated by the fact that the flood embankments combined with sea level rise are causing a process called coastal squeeze. The presence of the hard defence, prevents costal habitats moving inland as sea levels rise. Where this natural retreat of habitats is prevented, this results in the loss of coastal habitats, in this instance saltmarsh. The loss of large areas of this important habitat will have significant consequences for wildlife and local communities. Saltmarsh is known to act as a natural flood defence through stabilising the coastline and dissipating wave energy. The decline of these valuable habitats has already begun and will only continue if opportunities cannot be identified.

In time (and without further recharge), the protection offered by Hurst Spit is likely to change, potentially exposing the intertidal habitats and flood embankments to higher wave energy. In relation to the embankments this could lead to a decline in their condition making them more susceptible from the sea. Although maintained regularly and functioning effectively at present, some long-term deterioration is beginning to show.

With the change in climate, more intense rainfall events are expected which will affect the rivers that drain out along this coast, increasing the risk of larger and more frequent flood events. Surface water flooding is also likely to occur on a greater scale than currently experienced.

**What if we just continue as we are?**

If the current status quo were to continue, it will get harder to maintain the existing Hurst Spit and embankments. Hurst Spit will need external sources of shingle in order to maintain its current profile. This can be both expensive and time consuming to source, especially during emergency works. At present there are 54 properties at risk from flooding along this frontage. This number is low in relation to the length of coastline and therefore does not justify significant funding from central government under current funding rules.


*Intense rainfall events are expected which will affect the rivers that drain out along this coast, increasing the risk of larger and more frequent flood events*

If the embankment and sea wall were maintained in their current alignment, this will cause further loss of saltmarsh due to coastal squeeze. As the condition of the embankments deteriorate, the coastal grazing marsh, lagoons and inland habitats are at ever increasing risk. The Habitats Directive places obligations on the UK Government to protect the network of protected sites and therefore the project partners will need to explore potential options to do so.

The project is in its very early stages and it will take several years of working with local residents, users and stakeholders to develop ideas and options through to consultation before any final scheme is proposed.

However this is the start of what should be a very forward-looking project that we hope will provide opportunities to protect, strengthen and enhance the environment in this area for future generations.

*Aerial view of Hurst Spit and Lymington - Keyhaven Marshes Nature Reserve. Photo © Andrew Colenutt*

For further information please contact: HurstSpit2Lymington@environment-agency.gov.uk

Rhian Edwards, Flood and Coastal Risk Management Advisor, Environment Agency