LOCAL SEA DEFENCES

WOLFERTON CREEK TO SOUTH HUNSTANTON

ANNUAL UPDATE 2022/2023

BEACH RECYCLING

Between Heacham and Snettisham, a shingle ridge forms part of the coastal defence which provides protection to people and property from coastal flooding. Throughout the year, wave action removes shingle from the ridge, reducing its height. To maintain the ridge and the protection it provides, each year the Environment Agency undertakes work to move shingle from Snettisham Scalp and the beach back onto the ridge, repairing any damaged areas. This process is called beach recycling.

FUNDING FOR 2022/23 BEACH RECYCLING

Annual beach recycling of the shingle ridge and beach between Snettisham and Heacham commenced on the 13th of February 2023. This involved:

- 455 loads of beach material being moved (excluding material that was moved up from the lower beach using dozers)
- 6370 cubic meters of sand and shingle being moved

The total cost of the 2022/23 beach recycling was £117,644. Financial contributions from the Funding Group were as follows:

Source	Amount
FCERM Grant in Aid (GiA)	£56,280.37
Anglian Water	£20,000
East Wash Coastal Management CIC	£31,732.34
Borough Council of King's Lynn & West Norfolk	£5,000
Beach hut charge	£1,110
Surplus Funds	£3,521.29
Total provisional cost	**£117,644.00**

This year's work includes additional costs for environmental monitoring which has to be completed every 5-years to obtain consent from Natural England to complete beach recycling. Following this, Natural England has provided approval for the annual beach recycling works to encompass the following 5 years.

MINI-BEACH RECHARGE

The WECMS (Wash East Coastal Management Strategy) strategy identified that beach recharge may be required when there is no longer enough material available locally to complete annual recycling. Recharge involves importing similar shingle material from another location and placing it on the beach and shingle ridge. This was previously undertaken in 1990-91 and 2005-06.

When the 15-year programme of works was established in 2015, it was originally anticipated a 'mini-beach recharge' would be required this financial year. Monitoring undertaken by the Environment Agency has confirmed the amount of sediment available for beach recycling in the area remains stable and sufficient for annual beach recycling to take place, therefore the 'mini-beach recharge' has been delayed.

The Environment Agency continue to monitor sediment availability for beach recycling and will use this to inform future beach management decisions. Further work will also be required to demonstrate the economic, environmental and social feasibility of undertaking a 'mini-beach recharge'.

HOW ARE FUNDS RAISED?

Prior to 2015, beach recycling was fully funded by Flood and Coastal Erosion Risk Management 'Grant in Aid' (FCERM GiA). Changes to funding criteria now mean GiA only funds 41% of annual recycling, leaving the remaining 59% to be raised by the local community.

In response, a Funding Group was established to raise the remaining 59% of funds from the local community. Members of the Funding Group are:

- Anglian Water
- Borough Council of King's Lynn and West Norfolk (inc. beach huts)
- East Wash Coastal Management Community Interest Company (CIC)
- Environment Agency

The Funding Group is now in year 7 of its 15-year programme of work. Over this time, the partnership continues to work well to raise funds on an annual basis.

HOW MUCH FUNDING HAS BEEN RAISED?

The CIC is a registered company with directors from local businesses and landowners who would potentially be impacted by changes to flood defences between Snettisham and Heacham. These businesses make annual voluntary contributions to the CIC which contributes to annual beach recycling and eventual beach recharge.

In 2022 the CIC contributed £34,732.34 towards annual beach recycling. In addition, the CIC holds a surplus balance of approximately £1.2 million (May 2023) which can be used to contribute towards future beach recycling and future projects.

Between 2015-2020, Anglian Water contributed £100,000 towards beach recycling and have committed to contributing a further £100,000 over the next 5-years.

The Borough Council (inc. beach huts) also makes an annual contribution towards beach recycling.

FUTURE FUNDING REQUIREMENTS

Currently funds raised ensure annual beach recycling can take place. We also need to plan how a future 'mini-beach recharge' could be funded.

The Environment Agency would lead an application for FCERM GiA (Flood, Coastal Erosion Risk Management Grant in Aid) for a 'mini-beach recharge'. A thorough assessment into the environmental, technical and economic feasibility of any future potential works will need to be undertaken.

DONATIONS TOWARDS FLOOD RESILIENCE WORK

You can make a voluntary donation towards annual beach recycling and future mini-beach recharge via cheque or on our website here west-norfolk.gov.uk/info/20098/water_management_and_flooding/175/local_sea_defences_funding

Please post your cheque to 'BCKLWN, King's Court, Chapel Street, King's Lynn, Norfolk, PE30 1EX' made payable to BCKLWN. Write on the back "local sea defence fund" with your name and address. We may use your name to acknowledge the funds being received.

DAMAGING THE SHINGLE RIDGE

A reminder that any activity within 16 metres of a sea defence structure requires a flood risk activity permit and cannot cause damage to any sea defence structure. It is a legal offence to carry out works on any flood defence without permission. This includes removal of material, installation of fencing, or construction of temporary structures. Any damage to the sea defence can potentially increase the risk of flooding to the whole community at risk. For more information on how to apply for a Flood Risk Activity please check; gov.uk/guidance/flood-risk-activities-environmental-permits

SHORELINE MANAGEMENT PLANS (SMPS)

SMPs outline how risks associated with coastal flooding and erosion will be managed over the next 100-years. We use these Plans to inform management decisions we make at the coast.

In 2019, all SMPs underwent a 'refresh' to ensure they remain accurate and take into account any changes since they were published in 2010. This was not a re-write of the SMPs, instead it led to supplementary guidance and recommendations being made for all SMPs.

A new website is being developed by the Environment Agency which will host all SMP documents and outcomes of the 'refresh'. This is expected to go live in early 2024. We are reviewing and updating our actions plans as part of this, and work is being undertaken to update our coastal management plans.

WASH EAST COASTAL MANAGEMENT STRATEGY (WECMS)

The WECMS (2015) was produced by the Environment Agency and Borough Council for the West Norfolk coastline between Wolferton creek and the Hunstanton Cliffs. It outlines how we will implement the recommendations of The Wash SMP which covers our coastline.

You can find out more about how the WECMS is being implemented on our website. west-norfolk.gov.uk/info/20098/water_management_and_flooding/176/wash_east_coastal_management_strategy

HUNSTANTON COASTAL MANAGEMENT PLAN (HCMP)

The HCMP was produced by the Borough Council for the coastline between Hunstanton Cliffs and Hunstanton Town. The plan outlines how we will manage coastal flood and erosion risk here over the next 100-years.

You can find out more about how the HCMP is being implemented on our website. west-norfolk.gov.uk/info/20098/water_management_and_flooding/631/hunstanton_coastal_management_plan

COASTAL TREND REPORTS

The Borough Council and Environment Agency have been working together to produce 3 technical reports investigating coastal processes which act along our coastline and how they influence conditions and coastal management measures (such as groynes) used.

For the Borough Council maintained frontage at Hunstanton, these reports found:

- A large sandbank offshore from Holme and Old Hunstanton developing and blocking a fresh supply of beach material via longshore drift from reaching Hunstanton.
- Cross-shore processes, where material is moved up and down the beach by tides, is now dominant
- Material removed from the beach by cross-shore processes is not returning as it is pulled into tidal channels which then deposit this material on offshore sandbanks.

These changes in coastal processes means erosion of beach material is now dominant at Hunstanton, meaning beach levels are falling. These changes have had a particular impact on groyne effectiveness

Groynes are designed to trap beach sediment moved by longshore drift. As this is no longer occurring at Hunstanton, the groynes cannot trap sediment to retain beach levels. The reports concluded there is limited benefit in further maintenance or repair of the groynes, other than for health and safety purposes, as further investment will not improve their effectiveness or ability to trap beach material.

These cross-shore processes continue to dominate along the Southern stretches of the frontage, between South Hunstanton and Snettisham which are maintained by the Environment Agency. Whilst volumes remain relatively stable with a very minor accretion of 5,124 m3 measured, mainly focussed at the Northern end of the beach, this material does not appear to be moving alongshore, creating inconsistency between accretion and erosion along the beach. Areas where there is minor erosion are targeted in the annual recycling works.

You can find out more about these coastal trend report and their findings on our website. west-norfolk.gov.uk/info/20098/water_management_and_flooding/988/coastal_trend_reports

BOROUGH COUNCIL UPDATES – HUNSTANTON TOWN

Routine repairs and maintenance of the coastal defences continues to take place. Over the 2022-23 financial year this included:

- Concrete repairs to the promenade, seawall and slipways
- Mortar repairs to the seawall
- Routine maintenance of floodgates, navigation markers and outfalls
- Health and safety works
- Visual asset inspection survey of all coastal defences

This financial year we have already commissioned Southbay Civil Engineering to undertake a series of routine repairs to the coastal defences. These works were completed between June and July 2023 and included:

- Concrete and mortar repairs to the promenade, blockwork seawall and slipways
- Concrete repairs to beach access steps
- Health and safety works to both timber and concrete groynes

We will continue to inspect the coastal defences on a regular basis, commissioning routine and emergency works as required.

BOROUGH COUNCIL UPDATES – HUNSTANTON CLIFFS

In 2020 we commenced annual high accuracy monitoring of rates of erosion of the Hunstanton Cliffs. This monitoring uses terrestrial 'Light Detection and Ranging' (terrestrial LiDAR) and will help to further inform when cliff top assets may be at risk from erosion. Outcomes will feed back into the HCMP timelines for when rock armour may be needed to reduce the rate of erosion (likely 50-60 years time).

In 2021-22 we completed the second annual survey which found:

- There has been a small increase in the mean rate of erosion from 10cm per year (2020-21) to 11cm per year (2021-22).
- The northern section of cliffs is now the most active area of cliff erosion
- Overall rates of erosion remain in line with HCMP projections, meaning no changes are currently required to the plan.

You can find out more about monitoring of the Hunstanton Cliffs on our website here. west-norfolk.gov.uk/info/20098/water_management_and_flooding/851/hunstanton_cliffs_monitoring