

LOCAL SEA DEFENCES

WOLFERTON CREEK TO SOUTH HUNSTANTON

AUTUMN 2024 UPDATE

SOUTH HUNSTANTON TO WOLFERTON CREEK (UNIT C) UPDATE

2023-24 BEACH RECYCLING:

Annual beach recycling of the shingle ridge was completed between February and March 2024. This involved:

- 495 loads of beach material being moved from Snettisham Scalp onto the shingle ridge.
- 6930 cubic meters of sand and shingle being moved onto the ridge.
- Re-profiling of the beach.

The total cost of the 2023-24 beach recycling was £100,000. Financial contributions from the Wash East Coastal Management Strategy (WECMS) Funding Group were:

Funding Source	Contribution
Anglian Water	£20,000
Borough Council of King's Lynn and West Norfolk	£5,000
Beach Huts	£1,020.60
Voluntary Donations	£100
East Wash Coastal Management Community Interest Company (CIC)	£15,411.94
Surplus partnership funding from previous years works	£17,818
Environment Agency – Flood and Coastal Erosion Risk Management Grant in Aid (FCERM GiA)	£40,649.46



The WECMS Funding Group continue to meet on a regular basis and the 2024-25 annual beach recycling campaign will be undertaken between February and March 2025.

If you would like to find out more about the WECMS Funding Group, you can do so on the Borough Council website: www.west-norfolk.gov.uk/info/385/coastal/1142/wash_east_coastal_management_strategy_funding_group



SHINGLE RIDGE INITIAL ASSESSMENT REPORT:

Last year the Environment Agency commissioned an independent consultant to undertake an initial assessment of the shingle ridge flood defences between South Hunstanton and Snettisham. The purpose of this was to determine whether a review of the current flood risk management activities was required. This was done by assessing whether pre-defined triggers for a full review of management measures identified in the WECMS (2015) had been reached.

This initial assessment was commissioned following the Environment Agency identifying two discrete issues with the current management approach of the shingle ridge:

1. Movement of the shingle ridge

Monitoring data of the shingle ridge since 1992 identified the shingle ridge has moved inland and grown in height. In some locations, the crest (top) of the shingle ridge is now approximately 8-10 meters further back and 1.5 meters higher than it was in 1992.

Possibly in response to this, some property owners have excavated into the sides and top of the ridge, which reduces the integrity of the ridge and the level of flood protection it provides. Therefore, these property owners are placing themselves and their neighbours at increased flood risk.

2. Beach recharge

A small beach recharge was scheduled to take place in the coming years, and given the time needed to plan for such a project, initial planning had commenced. This initial planning phase highlighted significant challenges in delivering a beach recharge because of the shallow nature of The Wash which significantly restricts the ability of a vessel to deliver the works from the sea and the cost of delivery proving to be prohibitively expensive. This has resulted in the mini-beach recharge being removed from the programme.

Outcomes of the initial assessment report:

The initial assessment concluded that the economic trigger of the WECMS has been met due to the predicted costs a beach recharge exceeding the amount of funding which is currently available to deliver the work. This means a full review of the WECMS will be required to determine what the future management approach will be here.

Positively, the initial assessment also confirmed that the current state of the shingle ridge is healthy, and that a beach recharge is not required at present and annual beach recycling will continue while the review of the WECMS is being undertaken.

Next Steps:

Following completion of the initial assessment, the Environment Agency have begun works to prepare for a full review of the WECMS. This includes:

- Applying for FCERM GiA funding
- Writing the business case for the WECMS review
- Updating coastal modelling for the area

Commencement of the WECMS review will be dependent on securing FCERM GiA funding. We will not know if this funding bid has been successful until the end of the 2024-25 financial year. Undertaking a full review of the WECMS will be a time-consuming process due to the wide range of factors which will need to be considered in detail. This includes:

- The standard of protection provided by the defences
- Coastal processes
- Computational modelling
- Consideration of a wide range of options and their potential technical feasibility
- Stakeholder engagement
- Environmental impact assessments
- Funding calculations
- Climate change allowances

It is therefore anticipated that once a review of the WECMS commences, it will take between 12 to 18 months to complete. In the meantime, ongoing maintenance of the shingle ridge via annual beach recycling and monitoring will be continuing.

Find out more:

If you would like to find out more about the shingle ridge initial assessment, you can view the initial report on the Borough Council website here: www.west-norfolk.gov.uk/info/385/coastal/176/wash_east_coastal_management_strategy

HUNSTANTON TOWN (UNIT B) UPDATE

Completed works:

So far this financial year, the Borough Council have completed a range of routine repair works to the Hunstanton Town sea defences including:

- Routine concrete repairs to the promenade, seawall and slipways.
- Replacement of joint sealant on the wave-return wall.
- Extensions of a handrail on a slipway.
- Replacement of a handrail on the promenade.
- Health and safety work to the timber groynes and concrete groynes.

Total cost of 2024-25 financial year repair works as of October-2024 is £135,620.05.



Upcoming Works – Geotechnical Investigations:

Commencing on Monday 21st October 2024, the Borough Council will be undertaking a series of geotechnical investigations to the Hunstanton Town sea defences.

Geotechnical investigations inspect the condition of parts of a structure which are located below the ground surface and therefore cannot be visually inspected. Outcomes of these investigations will be used to assess the current structural condition of the Hunstanton Town sea defences and to inform future work requirements to maintain the standard of protection the defences provide.

Three types of geotechnical investigations will be undertaken:

1. Trial Pits

Trial pits involve excavating ground material, such as sand, to inspect the condition of a structure which are normally buried beneath the surface.

25 trial pits will be dug into beach material along the base of the Hunstanton seawall via excavator, from the Sea Life Centre to where the defences meet the Hunstanton Cliffs. This will allow a coastal engineer to inspect the condition of the seawall foundations which are normally buried beneath beach material. Once the inspection is complete, the trial pit will be backfilled.

2. Ground Penetrating Radar (GPR) Survey

GPR involves sending non-destructive radio waves down into a structure which then 'bounce back' when they encounter different material types, such as concrete and metals. This process creates a digital image which helps to determine the internal condition of a structure which otherwise cannot be visually inspected. This is done by hand pushing a sledge along a surface.

All 1.5km of the Hunstanton promenade, from the Power Boat Ramp to where the defences end at the Hunstanton Cliffs, will be surveyed using GPR to confirm the promenades internal structural condition.

3. Falling Weight Deflectometer (FWD) Survey

FWD involves simulating loads which are applied to the surface of a structure, such as vehicle movements, to determine its structural condition and weight bearing capacity. This is done by driving a small van and sledge along the length of a surface.

All 1.5km of the Hunstanton promenade, from the Power Boat Ramp to where the defences end at the Hunstanton Cliffs, will be surveyed using FWD to confirm the promenades current weight bearing capacity to occasional vehicle traffic.

Concept Engineering Ltd will be undertaking these investigations on behalf of the Borough Council. Works are anticipated to take 26 working days to complete and will be finished no later than the 30th of November 2024.

Find out more:

You can find out more about completed and upcoming geotechnical investigation works to the Hunstanton Town sea defences on the Borough Council website: www.west-norfolk.gov.uk/currentcoastalworks

HUNSTANTON CLIFFS (UNIT A) UPDATE

2023 Annual Cliff Monitoring:

In 2020, the Borough Council commenced annual high accuracy monitoring of erosion rates from the Hunstanton Cliffs using terrestrial LiDAR (Light Detection and Ranging). The purpose of this monitoring is to observe annual rates of erosion which is then used to assess when assets on the cliff top could become at risk from erosion in the future.

The third annual survey of the Hunstanton Cliffs was completed in April 2023 and the main outputs from this were:

- The mean rate of erosion is 12.5cm per year.
- The most active area of cliff erosion is the northern cliff section.

- Overall, rates of erosion remain in line with previous annual surveys.
- Beach levels in front of the cliffs have fallen by approximately 2.5 meters across the whole cliff frontage between 2010-2023.
- Cliff erosion rates remain in line with predictions from the Hunstanton Coastal Management Plan.

You can view the full 2023 annual survey report on the Borough Council website: www.west-norfolk.gov.uk/info/385/coastal/851/hunstanton_cliffs_monitoring

2024 Annual Cliff Monitoring:

The fourth annual survey of the Hunstanton Cliffs was completed in April 2024. A report of outcomes is now being produced and will be published on the Borough Council website later in the year once completed.

