

Vegetation management for flood risk on the north Norfolk coastal embankments 2024



Starting in March 2024 you will see our Environment Agency teams (and contractors on our behalf) out and about cutting the vegetation across our North Norfolk embankments. Whilst a part of the natural environment, these man-made embankments are important flood defences that help reduce the risk of flooding to people, property and the environment.

Why do we cut the vegetation on the embankments?

Embankments need regular maintenance. Research has shown that the regular management of vegetation improves the strength of the root network which helps to protect the embankment from external erosion caused by rainfall, wind, currents, wave action and pedestrian footfall.

Regular cutting also prevents broad-leafed plants and woody vegetation from establishing. Growth of this type of vegetation can damage the embankment through root penetration and providing cover for burrowing animals. If left to establish, it will shade out species such as low growing grasses and wildflowers, which are needed to stabilise the bank surface and are important in terms of local biodiversity. This includes *Suaeda vera* - which is considered 'Nationally Scarce' in the UK - as it is important that we also cut this vegetation to prevent it from shading out other species and it allows us to monitor and inspect the integrity of our flood defences, which we do regularly to identify any signs of damage.



When do we cut the vegetation?

We cut the vegetation across the embankments once between March and April and once again between September and October.

What about the local wildlife? How have we adapted our work to support biodiversity?

We work closely with our team of biodiversity experts, Natural England and local landowners to ensure our maintenance work supports biodiversity and limits the impact on the environment. Natural England sets out how we work in this sensitive area. For example, we have agreed times in the year when we can carry out this essential maintenance.

We work in a down-slope direction when cutting the banks to disperse small mammals and reptiles that may be present into the surrounding habitat.

We also set the height of the mowers specifically to ensure that any small creatures present are not harmed during the process of cutting and that low growing wildflower and grass species are able to flourish.

What checks do we put in place for nesting birds?

Some of our maintenance needs to be carried out during nesting bird season. Nesting birds are legally protected, so we apply environmental checks before any work is carried out. The machine operator walks over the site to try and identify any nests. Our staff are diligent and should they see a nest or nesting bird, they will stop any works and seek further advice.

How do we cut the vegetation?

We use a variety of methods to cut the vegetation which range from remote controlled grass cutting machines to hand tools and occasionally ride on machinery with cutting attachments. All methods have been reviewed and approved by our biodiversity experts and Natural England.

Invasive Species Management Project



Between April and September this year, you will also see our contractors carrying out targeted vegetation cuts. These targeted cuts are separate from our routine vegetation management programme.

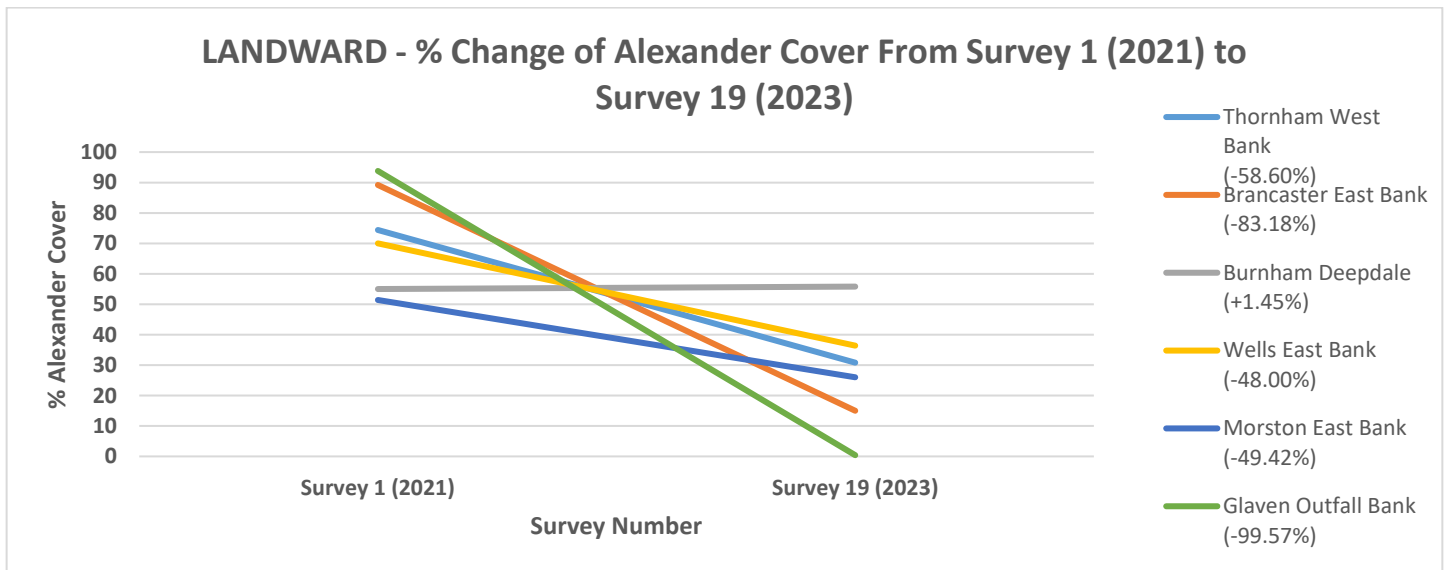
Why are invasive species an issue on the embankment?

Targeted cuts are a part of a specific project to reduce the impact of the invasive plant species Alexanders (*Smyrniolum olusatrum*) and Sea Beet (*Beta vulgaris*). Alexanders and Sea Beet grow vigorously early in the growing season and prevent other species from establishing. If left uncut, they will set seed and then die back in late summer, leaving extensive areas of bare soil on the flood banks. The banks need vegetation cover to be able to withstand winter storms and high tides.

Our plan is to target cut these plants every 6 weeks between 8th April 2024 and 20th September 2024 and reseed with a grass and wildflower seed mix to encourage pollinators and increase the local biodiversity.

What are the results so far?

The Invasive Species Management Project is a 5-year trial and early monitoring results are promising, as shown by the graph below. This shows a significant reduction in Alexander Cover between 2021 and 2023 on North Norfolk embankments. Our monitoring throughout 2022 and 2023 found that as the summer progressed and other vegetation became established, the dominance of Alexanders and Sea Beet gradually reduced.



How does targeted cutting help?

Repeatedly cutting these species weakens the plant and prevents it from producing seed. Other species of wildflowers and grasses can then germinate and establish.



Who can I contact for more information on maintenance?

Email – apnorfolk@environment-agency.gov.uk

Telephone - 03708 506 506 (Monday to Friday, 8am-6pm)

Incident Hotline - 0800 80 70 60 - to report flooding, blockages, pollution, unusual changes in flow of water, collapsed or badly damaged defences (24-hour service).