

Broadland Flood Alleviation Project

Protecting



Broadland

MAINTENANCE WORKS

Purpose of maintenance projects

The maintenance aspect of the *Broadland Flood Alleviation Project* aims to maintain both the inherited and improved service level.

The maintenance schemes may be constructed before or after SE8 works have been completed or for emergency works, where serious erosion or overtopping has occurred after a flood event.

All maintenance schemes are designed and implemented to compliment the long-term strategic approach to flood defences in Broadland.



Lost or damaged topboards
Examples of areas requiring maintenance.



Washout under crest piling



Scour pockets and narrowing road

Innovation

SE1 works are small scale schemes which offer *BESL* the opportunity to trial new, innovative solutions to problems. From this the success of new methods can be observed before using the systems on larger SE8 schemes.

Examples include:

- Rock rolls - These are tubular mesh baskets filled with stone and/or rock. They especially effective as an erosion protection system in shallow water depths.
- Willow hurdles - Natural erosion protection technique comprising willow hurdles weaved together to form discrete panels.
- Coir and reed rolls - Lightweight and biodegradable erosion protection system. Coir is a naturally occurring waste product from the coconut industry.
- Recycled plastic piling - lightweight with a long design life and made totally from recycled PVC material.
- Coir pallets planted with semi-mature Norfolk

Condition Survey

Every year a condition survey of the floodbanks and erosion protection ie:Piling is carried out by *BESL* staff. This is used to highlight any areas that need immediate attention and to update records of existing flood defences. The survey also contributes to the assessment of the effectiveness of completed SE1 work.



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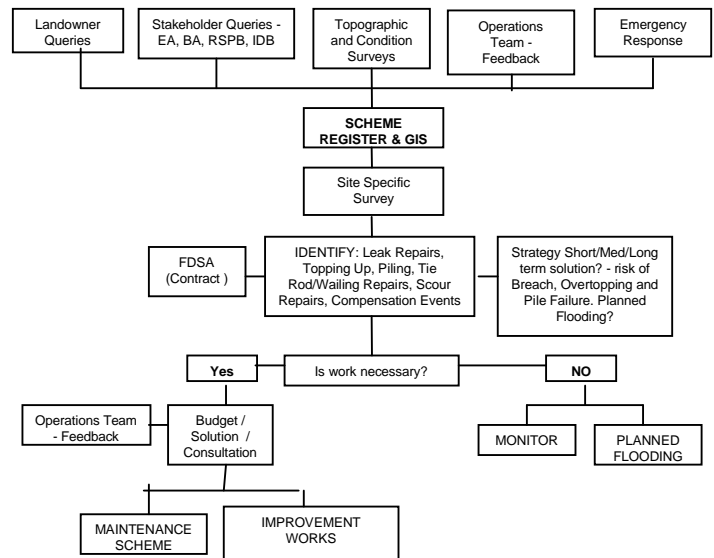


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Maintenance Schemes

- Crest raising - The adding of soil to a floodbank in order to raise the crest of the bank thus improving its defence level.
- Crest piling - The raising of floodbank level through the use of piling. This may be done using steel piles or a timber system.
- Leak repairs - The plugging of holes in floodbanks in order to remove leaks in the floodbank.
- Topboard / rubbing-board repairs - The replacement of damaged timber sections on the top of piles which protect the piles from boat damage.
- Erosion protection systems
 - Gabions
 - Piling - steel, plastic and Alder pole
 - Asphalt / bitumen / Coir matting
 - Rip-rap
 - Rock rolls

Scheme Assessment



Asphalt matting with reed rhizomes installed underneath to help reed re-growth.



Six months after installation



Erosion pocket before construction



Gabions topped with reed rolls and backfilled with clay, covered with a Coir blanket.