

Designing & Delivery of the Alde & Ore Whole Estuary Plan



Water
Management
Alliance

Giles Bloomfield,
Project Development Manager

Introduction

- Partnership Approach
- Flood Modelling Results
- What's at Risk Whole Estuary?
 - Phase 1-Upper Estuary
 - Phase 2-Lower Estuary
- Preferred Solution
- Estuary Partnership Funding
- Timeline
- Community Engagement
- Questions



Alde & Ore Estuary Partnership



A partnership set up by the community for the community to protect homes, businesses and our environment from flooding

The Partnership Approach

- The AOCP managed the co-creation of the Community Lead, Alde & Ore Estuary Plan.
- AOET, A charity are leading on fundraising, working with East Suffolk Council funding team
- Donations to AOET Enabled East Suffolk Water Management Board to undertake Business Case to secure government match funding to deliver Phase 1 works arising from the Plan
- ESWMB is a Flood Risk Management Authority with statutory powers to undertake works with technical support from the Water Management Alliance
- We are working with EA to access all eligible government funds on behalf of the community



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Environment
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EASTSUFFOLK
COUNCIL



East Suffolk
Water Management Board

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Flood Modelling Results

- HR Wallingford produced a flood risk report in 2018
- Confirms whole Estuary hydraulically linked and therefore the plan is sound, and can be implemented, however
- Flagged some temporary increased flood risk affecting a small number of properties in Iken, Sudbourne, Butley if scheme is built out one FC compartment at a time
- We require Flood Risk Activities Permit from the EA to take forward the project which requires no increased flood risk
- Through innovation in build programme, the risks can be remedied- eliminates any temporary increased risks.

Alde-Ore Estuary Modelling Report



Evaluating the Baseline -Whole Estuary model

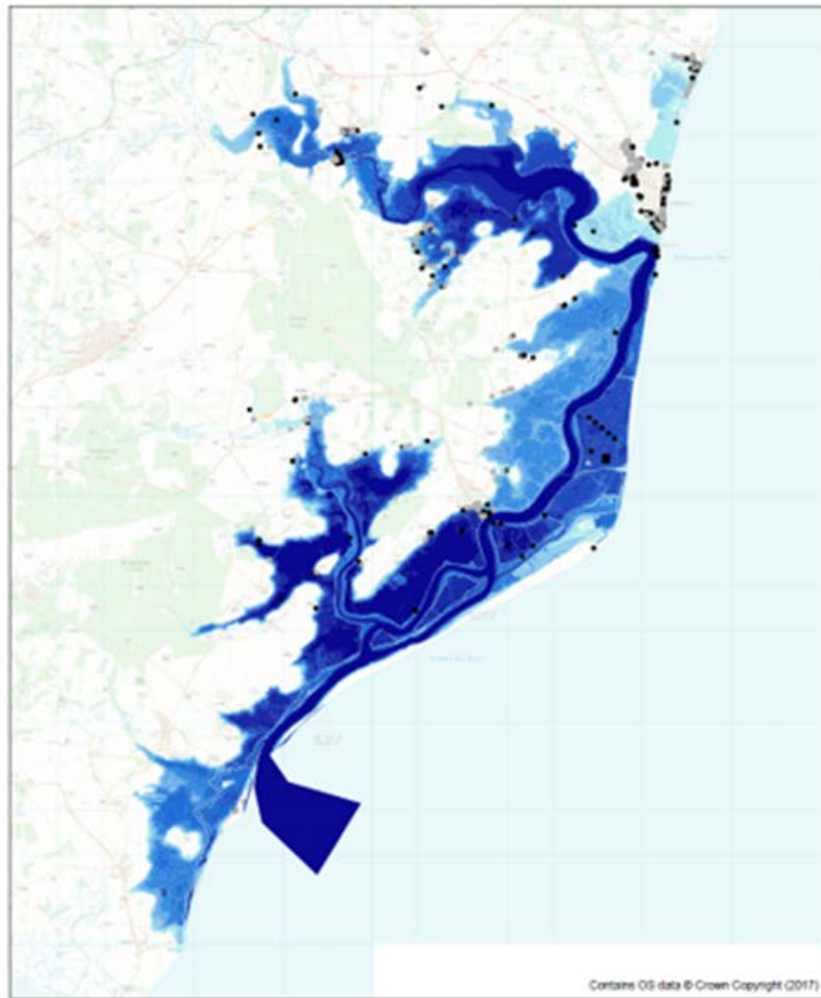
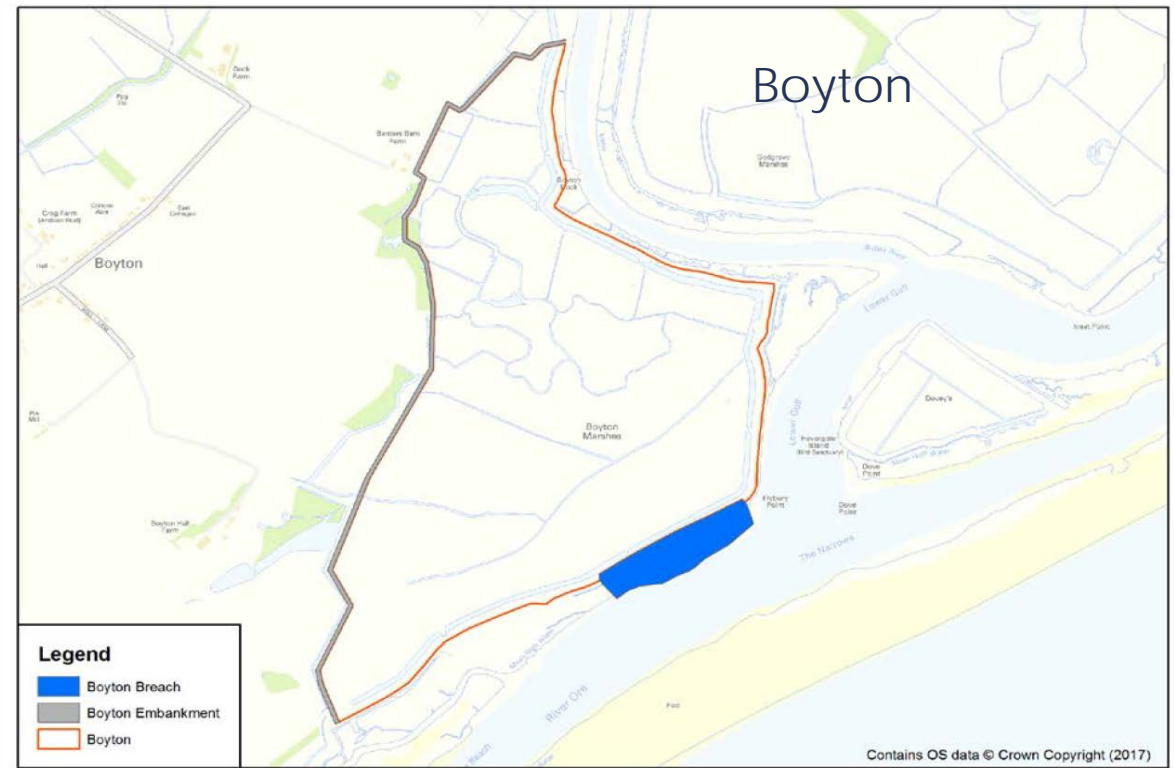


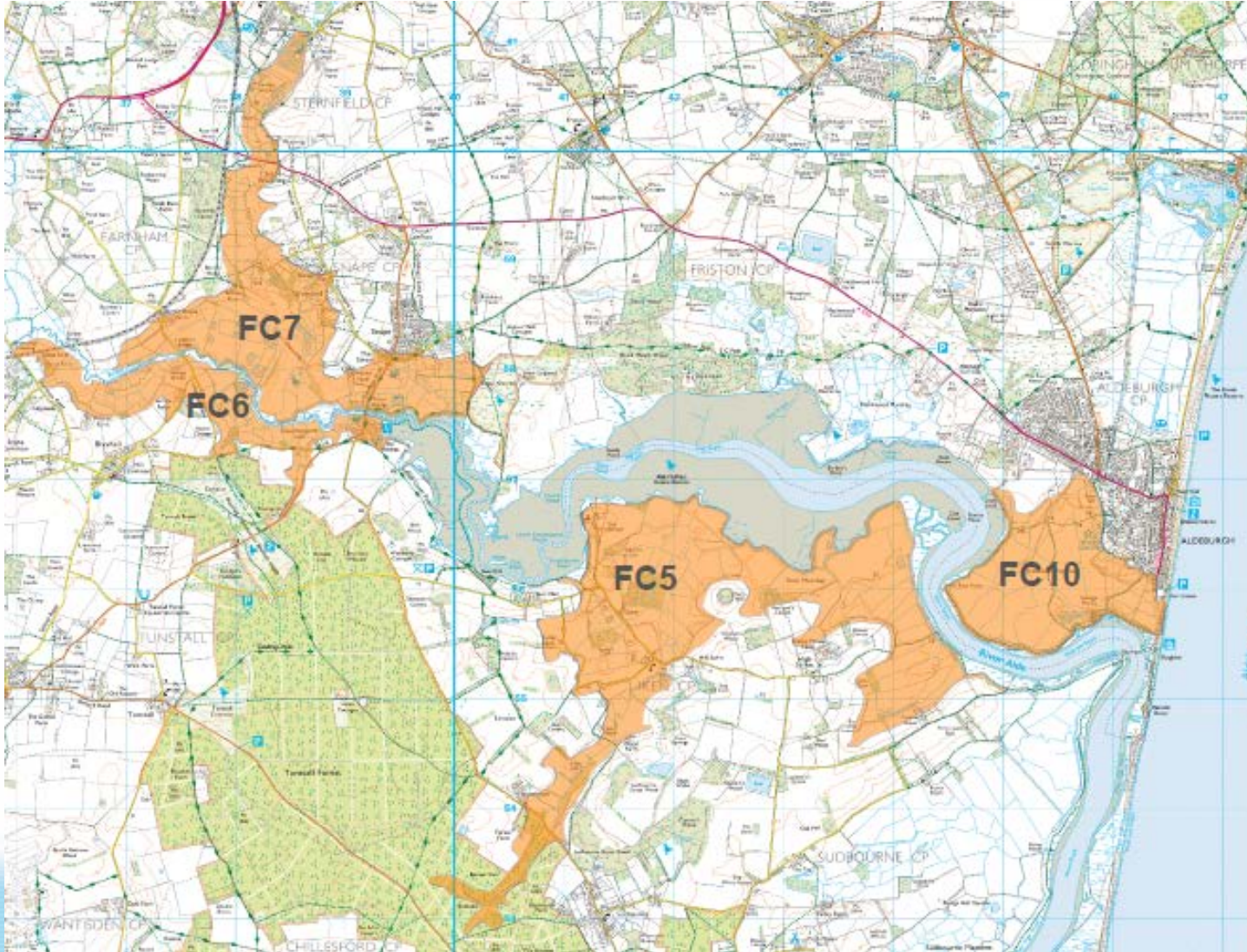
Figure B5
Baseline 2017
1 in 200 year tide
in 2055 with wave
overtopping



- Managed Realignment sites **increases** the number of properties at flood risk against the Baseline
- **Overall flood water heights increase**, higher within Upper Estuary
- Velocities increase short term whilst channel morphology adjusts (widens and modest deepening)
- Impact on important high tide bird resting & Breeding zones
- Loss of significant fresh water resource/storage – Risks Food Supply and fresh water species
- Creation of new intertidal habitats
- *Increased Carbon sequestering potential* – Eco system services Carbon Credit Markets (£)

What's at Risk? - Benefits Assessment

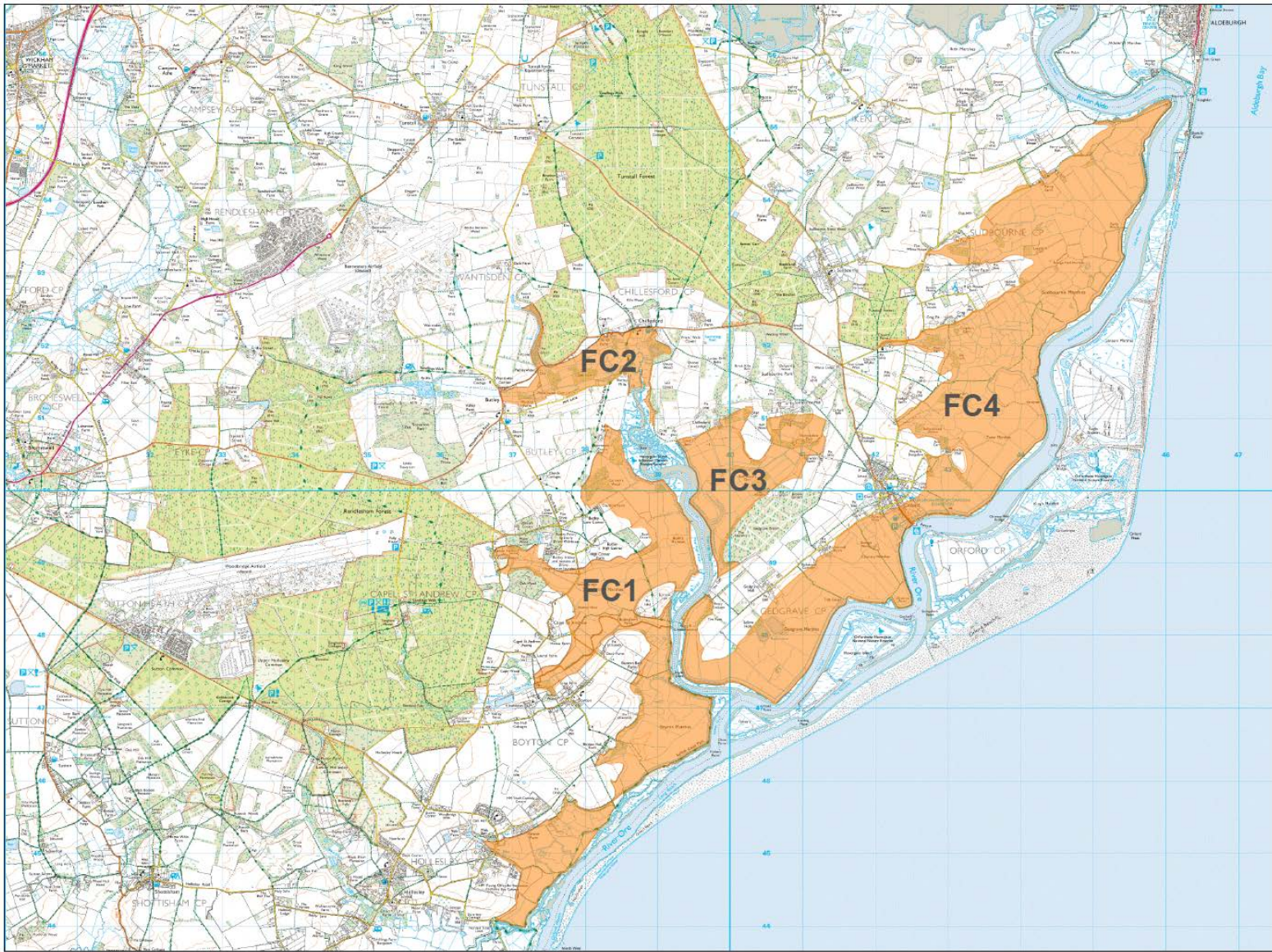
Phase 1 Upper Alde Ore Estuary Tidal Embankments



Headline figures

- 562 Residential Properties better protected
- 196 Non Residential Prop. Better Protected
- 11km defence improvements
- 24 Freshwater Abstraction points
- Cost £12m(Autumn 2022 prices)
- Damages avoided £127m
- C:B ratio 1:10.8

Phase 2 Lower Alde Ore Estuary Tidal Embankments



Headline figures

- 205 Residential Properties better protected
- 98 Non Residential Prop. Better Protected
- 33km defence improvements
- 35 Freshwater Abstraction points
- **Cost £33m**(Autumn 2022 prices)
- **Damages avoided £67m**
- **C:B ratio 1:2.5**

Unlocking Economic Growth Potential

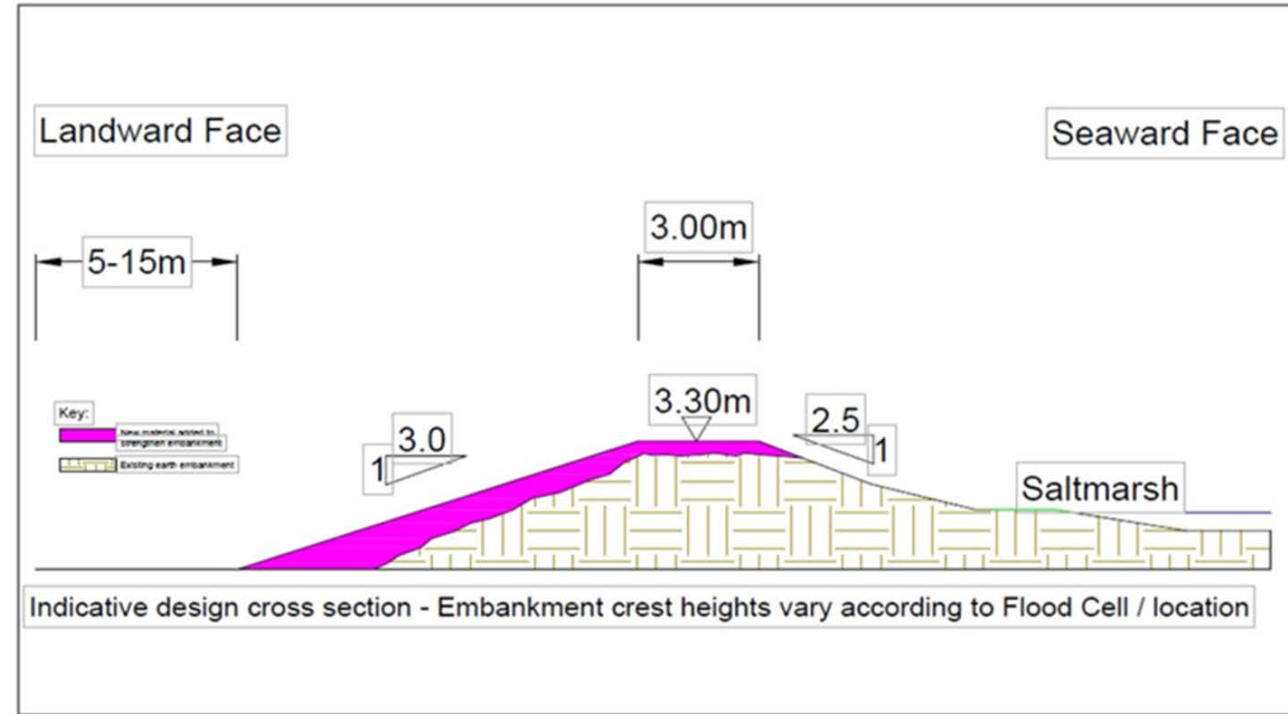


- 44 km of tidal flood defence frontage
- Leisure, tourism and arts generating over £100m p/a
- 3335 hectares of farmland – Food security
- Freshwater aquifers servicing a further 2631 hectares high value crops outside floodplain
- Sustains integrity of Internationally important designated habitats and species
- 101km of public and permissive paths
- **UNESCO Bid**

Snape Maltings – Industrial Heritage

Preferred Management Solution

- Alde and Ore plan design requires resilient over-toppable defence option
- Resilient in 1 in 200 event plus climate change
- Adaptable, taking account of climate uncertainty
- Allowed for significant freshwater habitat enhancement (Bio-Diversity Net Gain)
- A programme that fits within the Estuary Model iterative approach
- Construction Design compliant with Government Funding Rules
- Simultaneous working to reduce 'increased temporary flood risk' required to gain consent to work
- Development of two Business Cases to the EA, -Upper and Lower Estuary. Maximise any Flood Defence Grant in Aid (FDGIA) available (government funding)
- Delivery over c.7-8 years



Aldeburgh Town Marsh

- Environmental Mitigation
 - Topsoil piles
 - Temporary crossing point
 - Material placed on the wall to dry
- ## Education
- Engineering & Environment
 - Site Safety



Saturday, September 10, 2016 | EAST ANGLIAN DAILY TIMES

Flood defences 'critical to town and its school'

Richard Cornwell
richard.cornwell@eastcoast.co.uk

Youngsters visited the site of a £1.98million sea defence project to learn how the work would protect their school and town.

Teachers and 26 children from Aldeburgh Primary – the lowest lying school in Suffolk – were invited to see the contractors at work and get close-up to the machinery.

The Water Management Alliance (WMA) and East Suffolk Internal Drainage Board (IDB) are currently undertaking the works to the Aldeburgh Town Marsh flood defence.

The project started in June and the first phase will be completed in November.

The work is being funded by the Environment Agency and the Alde and Ore Estuary Partnership (AOEP) and is the first phase of a three-year scheme to improve almost 4km of wall from Slaughden to Brick Dock.

The project is the first to begin following the adoption of the Alde and Ore Estuary Plan this summer.

“This scheme will also help to generate new freshwater habitats within the marsh

Peter Roberts

Works to be carried out in 2017 and 2018 will be subject to the availability of government funds, which will total £960,000, while the AOEP is raising a further £1m for this project alone.

Peter Roberts, operations engineer for East Suffolk IDB, said: “Clay to repair and improve the flood defence and this scheme will also help to generate new freshwater habitats within the marsh particularly for wintering birds.

“The WMA are pleased to be delivering this scheme on behalf of the partners, people and businesses of Aldeburgh.”

The children were able to see a LiuGong 915D 14-tonne excavator



■ Schoolchildren from Aldeburgh Primary – the lowest lying school in Suffolk – got to visit a major sea defence project.

Photo: SARAH LUCY BROWN

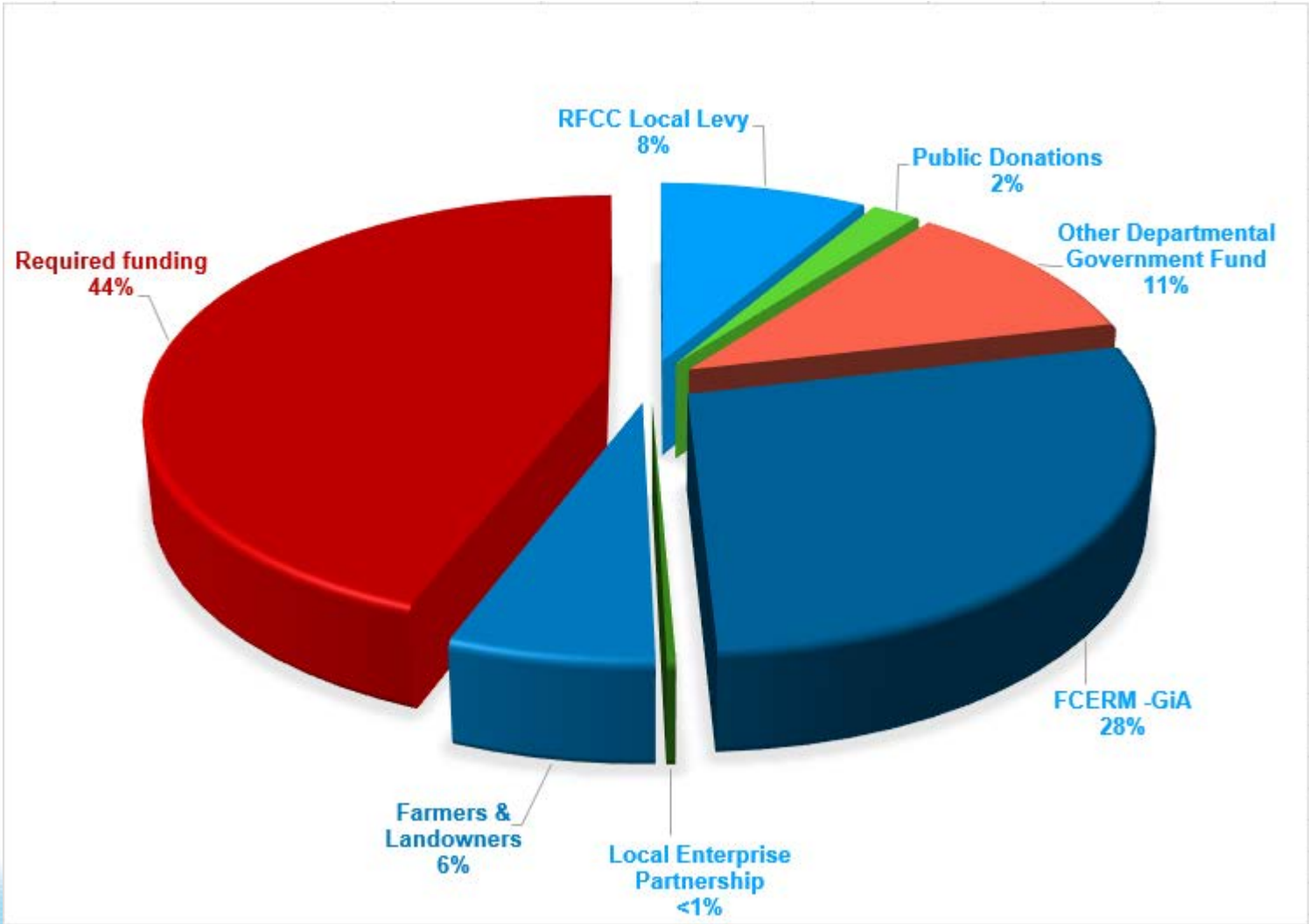
which has been working on the sea defences.

Simon Tobin, LiuGong area sales manager, said the works were critical to both the school and the south of

Aldeburgh and he was delighted the school was able to visit and view the project and the excellent equipment being used. Each of the children was given a LiuGong cap.



Estuary Partnership Funding



- Total Cost- £44.5m* (Inc. £13.7m risk & inflation) for delivery over 8 years

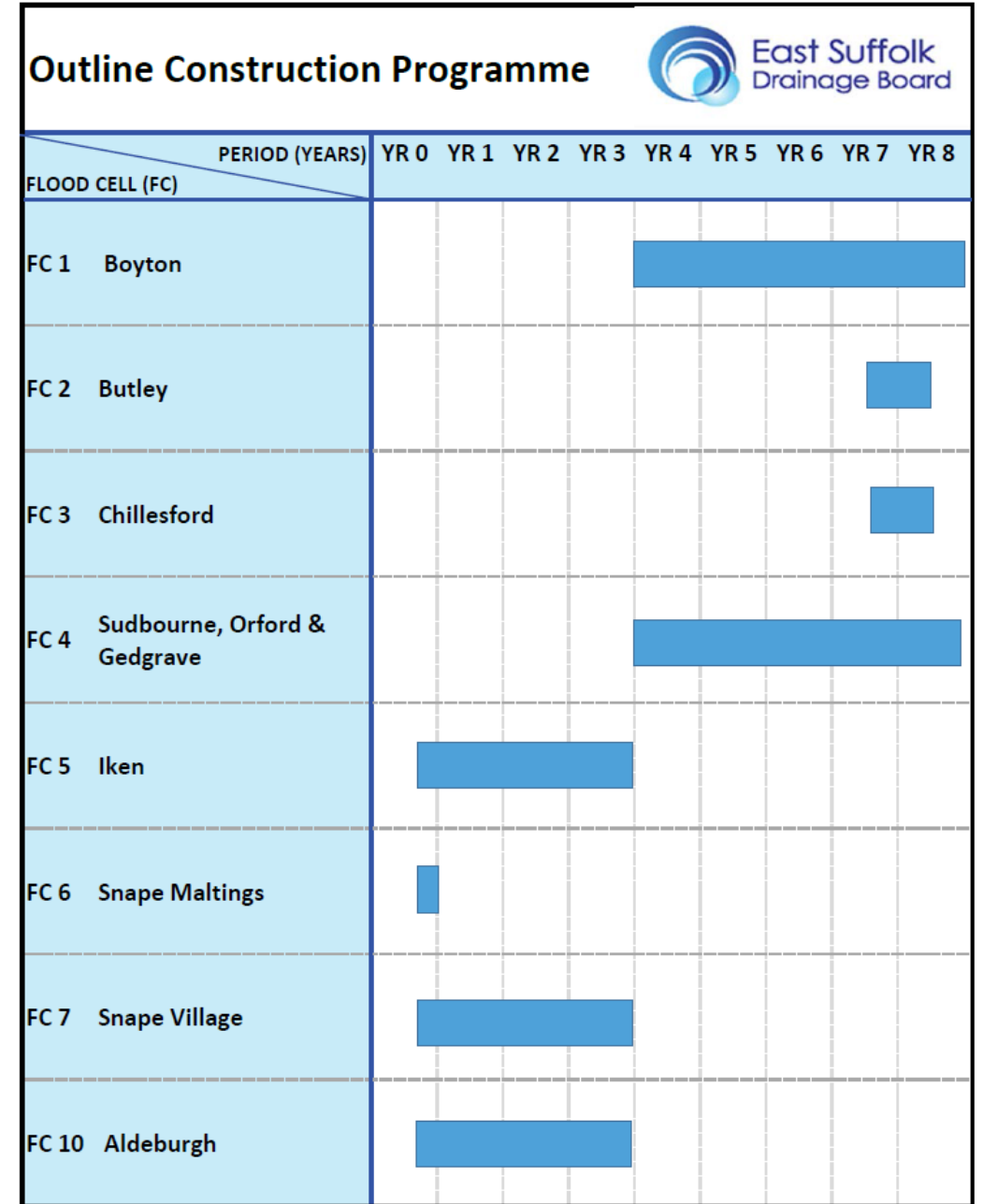
- Total to fundraise circa £20m

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<https://www.aoetrust.org>

*(June 2022 Prices)

Timeline

- Detailed Designs Phase 1 underway
- Ground investigations Summer 2023
- Remaining consents Autumn 2023
- Works mitigation in Winter/Spring 2023/24.
- Construction Works Spring 2024-27
- The Phase 2 LE Business Case Underway Summer 2023
- EA & NE will take around 6 months to review
- **Full Assurance** will be subject to Funding Gap being closed.



Community Engagement

- Continue to work with parish and town council leads to develop the plans to ensure community involvement.
- Targeted stakeholder events to help shape business case investment and helping to identify potential funding partners.
- Launch Event to showcase project to wider Public.
- Virtual Room – living commentary
- Construction Phase (1) community specific engagement plans are being drafted for each flood cell area.
- Project Updates 2 Monthly

Upper Alde & Ore Estuary Embankment Improvements

March 2023

What are we telling you about?

The Upper Alde and Ore Estuary Embankment Improvement Project, Phase 1 of implementing the Alde and Ore Estuary Plan. This is a project delivery update on the first two months of work.

2023 sees the preparatory work to enable construction in the following three years: this includes planning details of when and where construction will take place, taking account of local needs and environmental considerations, and securing of permissions / licences.

To aid this East Suffolk IDB have contracted an external design consultant who has commenced work on the four Upper Estuary Flood Cell detailed design packages. Preliminary work on this commenced in early March 2023.

A whole breadth of project delivery specialist appointments have been made by East Suffolk IDB. We have an external environmental consultant now engaged with managing early field survey work to underpin future licence applications. The focus has been on overwintering bird survey counts across the Flood Cells and will soon move to breeding bird surveys. Other environmental survey work has been resourced and awaiting the specific time of year window for field work.

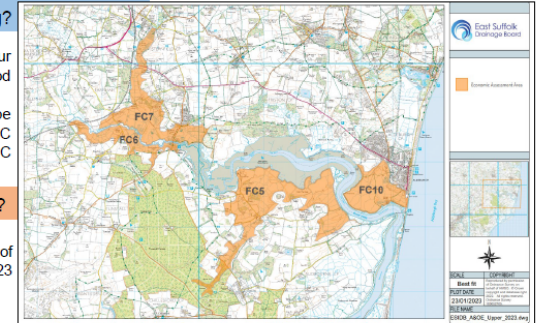
Work is in progress to secure the next large package of survey work to be undertaken this summer for Water Voles.

A large proportion of landowners affected by the planned works have already been contacted and met with our Project Engineering Delivery Manager to discuss plans for this year and beyond.

Where is this work happening?

This phase of works covers the four Upper Alde and Ore Estuary Flood Cells (FC).

These include Iken (FC 5), Snape Maltings (FC 6), Snape Village (FC 7) and Aldeburgh Town Marsh (FC 10).



When is this work happening?

Phase 1 is a 4 year programme of works commencing January 2023 through to the end of 2027.

What will we be doing?

Work in 2023 will be varied and an essential part of preparing for large scale construction in subsequent years.

The next two months will focus upon continuing environmental surveys and starting new ones to gather underpinning data for statutory licences and permissions which will need to be applied for later this year.

The design consultants will be progressing preliminary design work. They will be producing a ground investigation specification to allow the Project Engineering Delivery Manager to tender the survey works package. Swift appointment of a suitable sub-contractor will allow commencement with the important field data gathering. This will likely take place during late spring / early summer.

We will continue to communicate and involve landowners and community members through all stages of the project.

Consultation and meetings, involving the local communities likely to be affected by the construction works, will follow as the design process gathers pace. At these meetings our team will present their initial findings and plans. These designs will be the foundation for construction work from 2024 and beyond.



Thank You Questions?



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East Suffolk
Water Management Board

Slaughden Shingle Ridge

- Clay subbase /Foundation
- Complex & mobile Natural Shingle Ridge
- Legacy Artificial Haul Road
- Wide Rearward Clay marsh foundation
- Natural Processes will improve structure properties
- Lower but much wider
- Greater zone of vegetation
- EA have robust coastal Monitoring in place
- Future Management interventions based on scientific fact

