

Minutes of a special Parish meeting to discuss The Alde & Ore Estuary Plan held on Friday 13th April 2018 at Hardy's Barn commencing at 5pm

PRESENT

Iken Parish Council: Loulou Cooke (Chair), Norman Johnson (Vice Chair), Councillors, Richard Mann, Hugh Waterer, Sir Tom Hughes-Hallett, John Hailes, Clerk Lorraine Lloyd

East Suffolk IDB: Karen Thomas, Partnership and Strategy Manager
Giles Bloomfield, Chief Engineer
Jane Marson, Works Committee Chair

Alde & Ore Estuary Partnership: Sir Edward Greenwell, Chairman
Amanda Bettinson

Environmental Agency: David Kemp

Iken residents: Christine and Graham Ridsdale, Lynette Morton, David and Sue Spindler, Gill Cadzow, Tony and Lizzie Pick, Robin Crowther, Hannah Purkis, Nicolas Turner, Paul Shipman, Audrey Rutherford, John and Katherine Gieve

APOLOGIES Colin Chamberlain, Gill Turner, Mike Russell-Hills

Loulou Cooke welcomed everyone to the meeting, explained why Iken Parish Council had decided to call the meeting and then introduced the speakers.

Sir Edward Greenwell took the floor and gave an overview of the Ade and Ore Estuary plan and background. He explained that the flood defences can be raised to the level of the rest of the estuary; there will be something designed and installed to those few houses at most severe risk; key message is that no house will be put in any more danger than it is currently; per meter Iken will be the most expensive wall in the estuary.

Karen Thomas took the floor and gave a well prepared and informative presentation explaining each statement as she went along. She reiterated that this is the first of many meetings and no one will be put at any further risk than they are now.

Overview

- Who are the IDB?
- Flood modelling
- 2013 tidal surge
- Outcomes for Iken
- Next Steps
- Discussion session

Roles and Responsibilities of IDBs

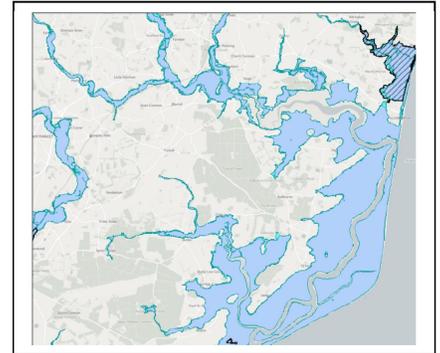
- 900 years of drainage history in UK (Henry III- Romney Marsh)
- 150 IDBs covering 10% of England and Wales:
- Providing front line flood risk and water level management services in areas of 'special drainage needs'
- Providing services to other operating authorities, particularly flood risk management organisations and more recently estuary partnerships

Alde and Ore Estuary Plan - Getting the evidence

Karen explained that the IDB had been asked to get involved in the estuary plan by their IDB ratepayers because their drainage districts are at risk of tidal flooding. In addition the Government funding for rural flood defences is challenging as EA's funds are targeted at people and property at flood risk. Much of the 300 properties in the Alde and Ore at flood risk are at the margins of the floodplains. Central Government funding to improve all the walls is not available, but some funds will be and therefore the AOEP and IDB plan to combine the available government funds with local contributions to achieve the AOEP estuary plan. The plan aims to improve all the defences to a good standard that is resilient to over-topping in a very significant (1 in 200yr) flood event. The IDB are similar to the Environment Agency in that they can undertake flood defence works to reduce flood risk and enhance drainage locally.

What's at Risk?

- The estuary has almost 80 km of tidal flood defence frontage
- 8950 ha of farmland
- Just over 300 homes at flood risk
- Freshwater aquifers servicing a further 7800ha high value crops
- Leisure, tourism and arts generating over £100m p/a
- Internationally designated habitats
- 101km of public and permissive paths



One of the most significant things was freshwater aquifers - IDB have to look at the upland areas beyond the flood plains where farmers have significant agricultural businesses which rely on freshwater aquifers pumping water from the tidal floodplain area. ESIDB have already committed to £3M contribution through a public works loan which all the local landowners are contributing towards through their drainage rates and can access circa £1.5M of government funds (Flood Defence Grant in Aid) on behalf of AOEP. The rest will need to be raised locally. To complete all the estuary wall improvements is circa £10-12M.

Table 1.2: Baseline 2017 number of properties flooded (NRD data)

Location	Number of properties flooded							
	1 in 20 year tide		1 in 75 year tide		1 in 200 year tide		1 in 200 year tide in 2055	
	Residential	Non-residential	Residential	Non-residential	Residential	Non-residential	Residential	Non-residential
FC1	0	0	0	4	2	5	5	7
FC2	0	0	0	0	0	0	2	2
FC3	0	0	0	0	0	0	2	1
FC4	1	13	8	17	54	35	59	41
FC5	0	3	4	6	11	7	24	12
FC6	0	4	7	10	8	12	8	17
FC7	5	0	20	6	23	7	23	8
FC8	0	0	0	1	0	1	0	1
FC9	1	0	1	0	1	0	1	0
FC10	116	29	128	36	173	58	173	58
FC11	0	12	0	18	0	18	0	18
Outside	0	8	0	10	0	10	8	12
Total	123	69	168	108	272	153	305	177

At Iken (FC5) there are currently 24 residential properties and 12 non-residential properties in the 1 in 200+cc flood plain. The estuary plan sets out an 'iterative' approach to raising defences as funds are not available to raise all the walls everywhere at once. The AOEP plan sets out that defences in Aldeburgh, then Snape, are first then Iken and so on around the estuary. Estuary modelling to understand flood risk has been undertaken to ensure the sequence of wall improvements is viable and does not increase flood risk in adjacent areas.

What does the plan say about flood defences?

- The plan sets out a flood risk approach for the whole estuary
- The plan has balanced flood risk with the environment and economy
- The aim is to create resilient over-toppable walls that are less likely to breach or fail
- The plan has been formally agreed by local people and relevant statutory bodies
- The project will cost about £10-12M

The preferred flood risk management solution

- Resilient over-toppable walls
- Walls will be strengthened through widening and in some cases raising the defence crest and back of the wall.
- Walls will over-top equally by about 300mm on a 1:200 event in 2060
- Walls will over-top for a 2-4 hour period at the height if a surge
- This design aims to share flood risk equitably and reduce the likelihood of a breach

Taking an Iterative Approach

- Following the 2013 surge the estuary had changed
- Can't raise all the walls at once- so need an iterative approach
- Plan has been modelled by HR Wallingford
- Considers a range of different flood events from 1 in 20- 1 in 200+ Climate Change in 2050
- Interconnected nature of flood risk between flood cells



What the original modelling shows

- Compared to the estuary today -
- 1 in 75 year tide - 16 less properties at risk
- 1 in 200 year tide 64 less properties at risk
- 1 in 200 year tide in 2055 73 less properties at risk
- Overall the plan is showing a reduction in flood risk as a result of wall improvements
- These figures increase further when we add the additional 24 homes which will be at reduced flood risk in Iken

Upon completion of the estuary plan - Everybody's flood risk is reduced.

The 2013 Tidal Surge

- The surge flooded hundreds of hectares of farmland
- There were breaches in defences at Iken and Shingle Street and serious overtopping and flooding at Snape
- Snape village 26 homes and two businesses flooded
- Snape Maltings was millimetres away from flooding

What options have we modelled at Iken?

- Eden Vale Young Model in 2016/17
- Showed inter-relationships between flood cells particularly in upper estuary
- Iken was seen as an important flood risk ‘valve’
- Considered a spillway option to allow overtopping into the Iken area with the properties protected through new defences nearer the village.
- This option allowed farmland in Iken to temporarily flood and act as a flood storage area- reducing flood risk at Snape.
- In discussion with EA decision was taken to re-valuate flood risk to mimic the ‘iterative’ delivery of the estuary plan- ie. Model what happens as each wall is improved.
- RFCC funding- IDB commissioned HR Wallingford to model estuary plan- but with Iken spillway option as preferred policy
- Modelling April- December 2017

September 25, 2013

AOEP Flood Cell 05 defence upgrade design.
Survey carried out 16th September 2013.



Options – spoke of temporary and permanent “flood storage areas”.

- The spillway option had positive effects on the upper estuary flood risk issues
- However only if whole of the flood cell was utilised
- Iken pump was affected in flood events as well as highland agriculture from saline intrusion
- Landowners considered their options including managed realignment and holding the line

Further modelling studies Jan-March 2018

Location	Maximum water level (m AOD)				
	1 in 2 year	1 in 20 year	1 in 75 year	1 in 200 year	1 in 200 year in 2055
Snape	2.59	3.03	3.06	3.08	3.14
Iken Marsh	2.56	3.05	3.09	3.12	3.21
Aldeburgh	2.54	3.05	3.10	3.13	3.25
Orford	2.52	3.06	3.15	3.21	3.41
Butley	2.58	3.05	3.11	3.14	3.37
Boyton	2.58	3.12	3.26	3.36	3.60

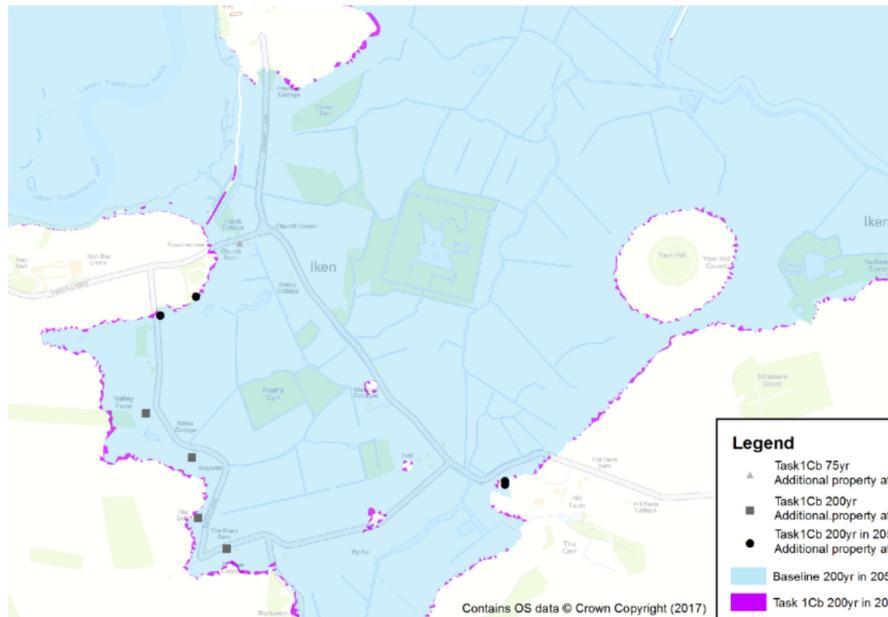
- Iken walls are currently between 2.5m and 3.1m high at the crest
- AOEP took decision to undertake further modelling of Iken with a range of Hold the Line options
- The optimum flood risk management outcome for Iken from this modelling is to reinstate the whole wall to a 3.3m high crest to withstand the most extreme tides with minimal overtopping.

What the modelling shows - Upper estuary

- Improvements to Snape Village and Aldeburgh temporarily affect some properties in Iken, Sudbourne and Gedgrave on extreme events.
- Snape Maltings scheme does not affect any other frontages.
- We cannot increase anyone's flood risk- even temporarily.
- We need to find a solution for Iken to deal with the temporary issue to unlock the estuary plan delivery for everyone.

Who is at risk in Iken?

- 24 homes are already at flood risk today
- The AOEP plan for the wall improvement will reduce everyone's flood risk in all events up to 1 in 200 plus CC
- This is equivalent to the 1 in 600 event today
- 2013 was a 1 in 18-20 year event

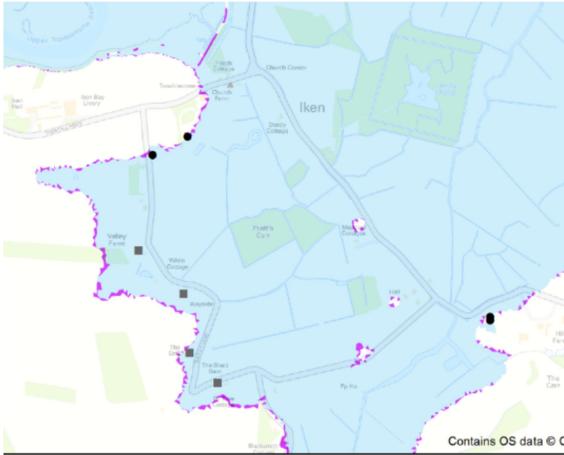


Everybody will be lifted out of the flood risk. However, once Snape and Aldeburgh are completed there will be 6 or 7 properties at temporary flood risk- as water that would have gone into Snape and Aldeburgh floodplains would not on large surge events- as such the temporary increased risk is only after both walls are completed and would be a temporary risk until the Iken wall was completed. In order to move the Snape and Aldeburgh schemes forward we need to find a local solution that remedies this temporary increase in risk. The AOEP will do a lot more detailed work - closely with individual properties – bungalows, houses etc

What is the temporary increased risk and who does it affect?

- 1 property would be affected in a 1 in 75 year event
- 3 properties would flood in the 1 in 200 event
- 3 properties would flood in the 1 in 200 plus (1 in 600)

All other properties would flood in the same circumstances as they do today.



Details of the water levels per home

- One property is more vulnerable to the change in temporary flood risk as it is not at flood risk until 1 in 200 on current day levels.
- After Snape and Aldeburgh raised this property is at 'increased flood risk' on a 1 in 75.
- This is only to a very small level – 3 cm but we will need to check threshold levels to establish if this would actually flood.
- The annual risk of a 1 in 75 is 1.5% chance per annum
- **At this stage we cannot say what this equates to inside a property as doorstep levels vary.**
- Three properties are **not currently at risk of 1 in 200** but would be exposed to this flood level on a temporary basis – potentially between 17-38cm flood depth.
- We will need to check threshold levels to establish levels.
- The annual risk of a 1 in 200 event is 0.50% pa
- Three further properties are exposed to the 1 in 200 plus CC- and were not at any flood risk before
- With Snape and Aldeburgh wall raising they would be at 17-35 cm flood depth
- We will need to check threshold levels to establish levels.
- NB: We were asked why a semi-detached property is not at 'increased flood risk when it is attached to one that is.
- We believe that there are differences in doorstep levels.
- This home is shown to already flood in the baseline for the 1 in 200 year plus CC event
- The annual risk of a 1 in 200plusCC cannot happen until climate change effects have occurred- this is therefore equivalent to 1 in 600- 0.0017% risk p/a

What does this mean for Iken and the estuary plan?

- The model has shown some homes at increased flood risk-mainly on extreme events after Snape and Aldeburgh are raised
- The estuary plan cannot gain permission for these works if anyone is at increased flood risk no matter how temporary
- Residents are therefore not going to be exposed to ANY INCREASED RISK
- Instead we will need to work with residents to establish a temporary solution in order for the plan to progress
- This in turn will lead to a permanent solution for Iken in terms of an improved defence
- Work at Snape and Aldeburgh, if consented, will be done over a few years (2019-2021)and the effect of 'increased risk' is only reached when the walls are fully complete
- Iken wall would be the next wall to be improved and this could happen as the other walls were completing or earlier if funds are available.
- A detailed programme is being developed to share with everyone this summer pending funds from the AOEP Trust.

Some preliminary work could start in Iken as the other work is going on – as it already has with clay being delivered ahead of construction.

Next Steps

- This is the beginning of the discussion
- We need to understand people's views about risk
- The AOEP would like to explore potential solutions to mitigate for any temporary risk with the property owners.
- We welcome community involvement- especially with home owners.

Temporary flood risk is a risk for a few years with a view to solution for ever.
Different individual solutions can be explored.

Some of the questions raised;

Shingle ridge breach had been noted and photographed – David Kemp responded to this query and advised that they are getting things lined up to deal with this if economically viable and looking at short hand management plan for that area.

Are we in danger? – No. Any breach that would come through there has to cut through the mud etc and would take 15 years for the worst episode. Technicalities were explained as extensive studies had been carried out.

Risk increasing for a short period, can you define? – It takes about 2-3 years to construct the wall at Iken then 6 years for the Iken wall to be completed so there is a three year risk until Aldeburgh and Snape is completed. The biggest challenge is to reassure people that funding for Iken is in the bag. Spoke of funding and how that affects work. Iken people have to decide whether to put anything in place now or be at risk of temporary flooding while other work is going on.

Is it only money is stopping Iken being run in parallel? There are things that can be done in the dry. There are foundations who would loan the money. There is potential to borrow if there could be a certainty of being able to pay it back. Spoke of whether if we could raise money to allow Iken to start now. Iken can't be the first in the model.

What about any money raised if it is specifically for Iken? Still the work can only be number three on the list but any donation can be specifically for Iken. Clay continues to be delivered.

What is the increased flood risk for the properties in Iken when Aldeburgh and Snape walls are being done – one in 200 event.

Which houses will flood that didn't flood before? We have the details of seven homes and need to discuss further with those property owners their individual circumstances. In the main channel the water will be higher. Something will be done to ensure that properties at flood risk don't flood.

Robin Crowther spoke – he deals with risk events. Went back to the further modelling studies to explain what happens and what can be done. Properties must be individually assessed. Myths were spoken about. There is no risk free option. Straight raising of walls is what has been decided although other options had been considered. There have been confusions from some people who don't know whether they have been flooded in the past. The Trust will have to pay for any mitigations from properties who have an increased risk of flooding. Spoke of grants that have been available in the past after flood events but none available at the moment for individual home owners (hence why Trust would need to pay for those at temporary increased flood risk). Individual mitigation is an option –The full 24 houses would all have a doorstep level survey. Might look at maybe two or three properties together to look at short term options as maybe more cost effective to have a single solution to protect several homes rather than individual property protection.

Asked for feedback forms so that IDB can look at addresses to see whether they need to be approached as a priority.

How does 2013 tidal level affect Iken when Snape work has been done? You would need a 1 in 75 event before anything happens based on current wall levels. People at the meeting could approach the IDB to see if they are one of the seven properties on their list. (Those present did so after the meeting). Spoke of

the meeting the next day. Not everyone in the 24 or 7 properties were at the meeting and it was discussed how they were going to be informed. **Everyone was encouraged to check their flood risk by entering their post code at the Environment Agency website.**

<https://flood-warning-information.service.gov.uk/long-term-flood-risk/map>

FINISH TIME

The meeting was officially closed at 6.36pm with further individual conversations taking place and completed forms being handed in.