

COASTAL CHANGE YARMOUTH

Issue 2, Spring 2014. Final Newsletter



What is the Coastal Change Yarmouth Project?

We are helping the community of Yarmouth prepare for coastal change, in particular sea level rise. The project is being run by Hampshire County Council and delivered by the Solent Forum with the aid of a European Union grant. The aim is to work with the community of Yarmouth to raise awareness of the current risks. Coastal Change Yarmouth has provided educational and interpretational opportunities focused on coastal change. We have been working with a Local Engagement Group who have helped guide the project.

The project has now come to an end and an Adaptation Plan has been created which sets out the vision for the community and an action plan. The Yarmouth Coastal Defence Working Group will take the lead on coordination of the proposed solutions in the Adaptation Plan.

Community Events held During the Project

We first contacted the community in June 2013 by distributing a leaflet and letter to 65 properties in Yarmouth that are within the tidal flood plain. At the same time we placed an advert in the Isle of Wight Beacon to explain the project. A number of interviews were also held with community members and businesses in the floodplain. We had a number of responses and subsequently these respondents were invited to a public drop in event at Yarmouth Town hall on 19th June 2013.

This drop-in day, attended by over 80 people, was used to introduce the project; present the work of the Yarmouth Primary School; show the work of other local initiatives such as the Yarmouth Coastal Defence Working group and the Yarmouth Community Flood Plan; demonstrate property level flood protection measures from the National Flood Forum in their mobile van; and show a flood visualisation model, projecting a flythrough of three flood scenarios on a continuous loop. An evaluation of the day showed a great deal of interest, and especially in the flood visualisation model.

A final event is planned for March 2014 at the Harbour Office, to showcase the Adaptation Plan and unveil a flood marker in the town, details of which are set out below.

What has Happened During the Project?

The Flood Visualisation Model

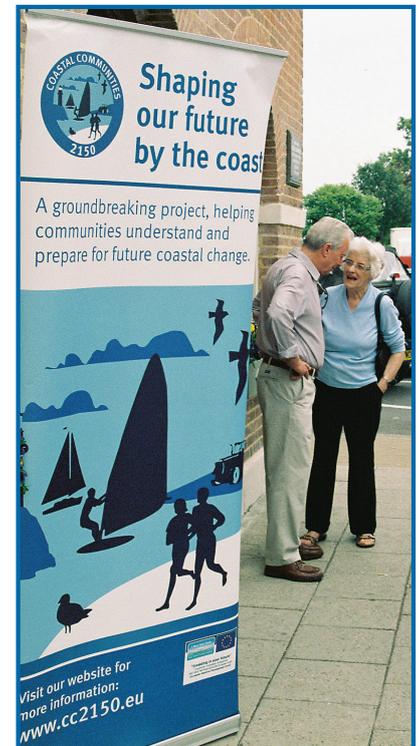
The flood visualisation model was commissioned by the project and built by Channel Coastal Observatory. The model uses 2013 Environment Agency data including surveyed heights of defences, showing probabilities of flooding using high resolution Lidar data to represent the land surface for the flood simulations and flythroughs.

The flythroughs visualise three water level scenarios as specified by the Yarmouth Coastal Defence Working Group. Scenario 1 provides Mean High Water Springs, and scenarios 2a and 2b replicate a similar level of flooding to that observed during the 10 March 2008. Scenario 3 provides a model of what scenario 2 may look like if sea levels rise 27cm by the mid century. The flythrough film can be accessed via the project webpage.

Yarmouth Primary School Learning all about Flooding

The Project team contacted the Yarmouth Primary School in November 2012 and after two meetings planned an educational programme with two classes of children. The older 7-9 years olds had a detailed educational programme on flood risk and the younger under sevens an art programme based on the effects of sea squeeze. The programme with the 7-9 year olds involved an intensive 6 week programme of lessons for two hours per day between May and June of this year. The programme was designed to help the children understand what flood risks there are in Yarmouth and how we can respond to them.

An evaluation of the school project is available for download from the project pages. The children enjoyed working on different activities. Asked about what they had learned, responses ranged from 'I have learnt about how flooding happens' to, 'I have learnt what to do if your house ever gets flooded' and 'I learned lots of new words like fluvial and pluvial also I learned about the flood in 2008 and what happened to people's houses'.



Parents and carers learned a great deal too. 'I've learned a lot reading all the materials she brought home', said one mum and a grandparent said, 'It's what I know already, however very good it's coming from a younger generation'.

The school children and teacher presented the work of the school at the June drop-in day to their parents and the public, with the press present.

The work of the school has been highly valued at a European level and it has won a CC2150 Best Practice Award for its innovation and effectiveness.

Yarmouth Primary School Art Work in the Sea Squeeze Project

Natural Enterprise was commissioned by Hampshire County Council to work with 23 children (under 7 year olds) at Yarmouth Primary School and their teacher on an art project which would encourage the children to think more about climate change and sea level rise. Natural Enterprise commissioned Isle of Wight artist Ecclestone George to do the work. Ecclestone George worked with the school between 11th June and 18th July 2013 over seven sessions.

Website Resource and Historical Flood Marker

The project would like to leave a lasting legacy. A project website has been established which shows all of the work undertaken, including the flood visualisation model. See www.solentforum.org/current/CCATCH/Yarmouth/.



In March 2014 a flood marker will be installed to show where flooding has occurred in Yarmouth in the past, as well as the flood risk to the town.

What Coastal Changes may Happen in Yarmouth?

Yarmouth is suffering from coastal change as flooding is set to become more frequent and deeper as sea levels rise. On March 10th 2008, flooding affected properties and amenities in the town, as a high tide of 3m combined with a 1.1 metre tidal surge. The water rose above the harbour wall, covered the bus and coach hard standing and the ferry marshalling areas, and reached the square.

A report by the Yarmouth Coastal Defence Working Group in December 2010, entitled Adapting to Coastal Flooding in the Yarmouth Area in 21st Century, provided estimates of Sea Level Rise in Yarmouth over the next 50 years based upon Defra guidance in 2006. This figure amounts to 0.27 metres between 2010 and 2050. These figures have been used for the engagement and in the flood model.

Planning for Future Change

This Coastal Adaptation Plan outlines some proposed solutions to achieve the long term vision of the community. These could help the community adapt to future change, thereby reducing the negative consequences and enhancing the beneficial consequences of coastal change.

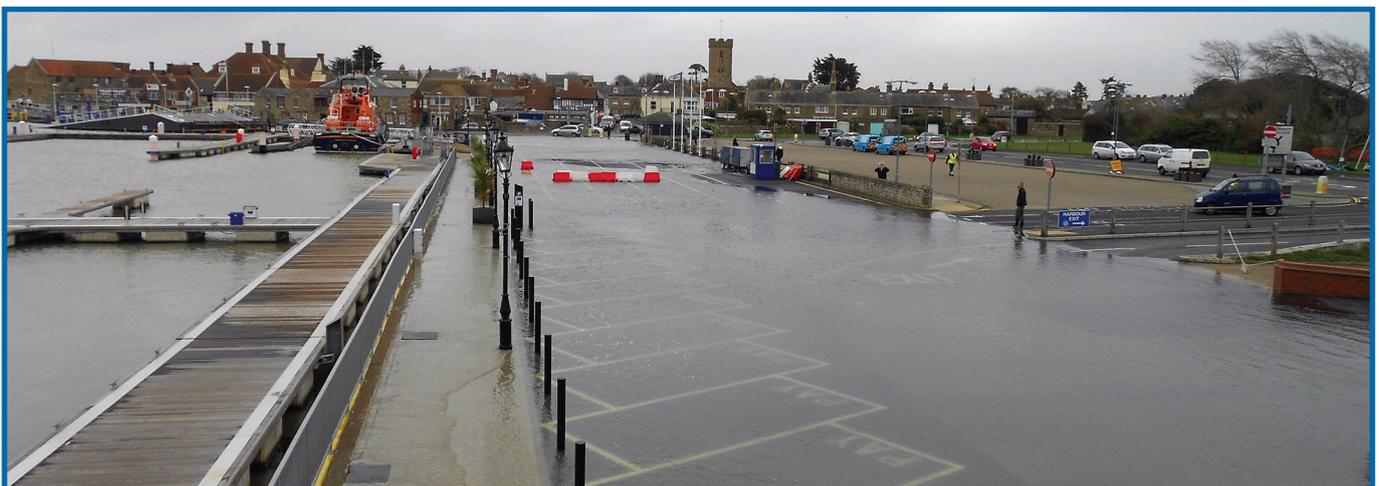


Photo courtesy of Yarmouth Harbour Commissioners

The Vision for Yarmouth

A vision for Yarmouth has been developed using material from the project and guided by the Local Engagement Group.

'To help ensure the community of Yarmouth is able to adapt to tidal flooding now and in the future, so as to protect themselves from the effects of tidal flooding, whilst maintaining the character of the town. In particular to create wider awareness of the risks and options for protection including coastal defences and property level protection.'

Adaptation Plan for Yarmouth

The Adaptation plan has at its core the proposed solutions put forward by the Yarmouth Coastal Defence Working Group. These proposals from their report entitled "Adapting to Coastal Flooding in the Yarmouth Area in the 21st Century, December 2010" have been updated by the Group.

By 2020

Awareness and Planning

- Community flood plan - includes resistance and resilience advice for property owners, such as flood boards for business/house doors. Launched October 2013. Plan will be extended in line with sea level rise and coastal erosion. Over 80 properties invited to register at this stage.
- Monitoring the Flood Visualisation model.
- Monitoring the town Flood Marker.
- To encourage Yarmouth Primary School to continue raising pupil awareness of coastal change.
- Work with the National Flood Forum in the future to demonstrate property level protection ideas and obtain help on community flood planning.

Proposed Solutions

- Gates 0.5 metres high in lanes which lead from High Street to the shore (six). Height based on individual land levels.
- Gate at Pier entrance.
- Gates on harbour slipways (four).
- Flood boards for house doors.
- Supply of flood prevention equipment at key areas such as the Bridge Road and Quay Street entrances to the town centre.
- Raise wavebreak on Norton Spit by one or two planks.
- Reinforce sea wall at western end of the Common.

By 2050

Proposed Solutions

- Gates on Bridge Street and Quay Street entrances into the town centre.
- Sluices on overflow pipes to prevent ingress of water through drains.
- Raise wavebreak on Norton Spit by half a metre.
- New breakwater one metre higher than existing breakwater.
- Raise pier by one metre.
- Raise Gossips cafe by one metre.
- Raise ferry pier, linkspan etc. by one metre.
- Raise river bank around the Green by one metre.
- Raise gate to Thorley Brook.
- Reinforce Causeway at Freshwater, allow use as a ford.



Photo courtesy of Yarmouth Harbour Commissioners

By 2100

Proposed Solutions

- Raise A3054 road by one metre, including the swing bridge.
- Reinforce revetments on road.
- Raise utilities under road.
- Norton Spit – no further expenditure.
- Raise quay wall by one metre.
- Raise sea wall by one metre on north side of the Common to protect the main road to Newport.
- Install gates to one metre at harbour slipways and lanes.
- Raise old railway footpath by one metre and reinforce to act as a riverbank.
- Install a raised bank on the south side of Yarmouth close to Thorley Brook to protect properties.
- Allow ingress of water to land on both sides of the river over this fifty year period as sea level rises.
- Replace the Causeway at Freshwater.

Legacy of Ongoing Communication

The Yarmouth Coastal Defence Working Group will lead on these proposed solutions. They meet regularly to discuss flood defence options and funding.

Please contact the Yarmouth Harbour Master, at the Harbour Office, to obtain information about the group.

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Tel: +44 (0)1983 760321 Fax: +44 (0)1983 761192.
Email: info@yarmouth-harbour.co.uk.

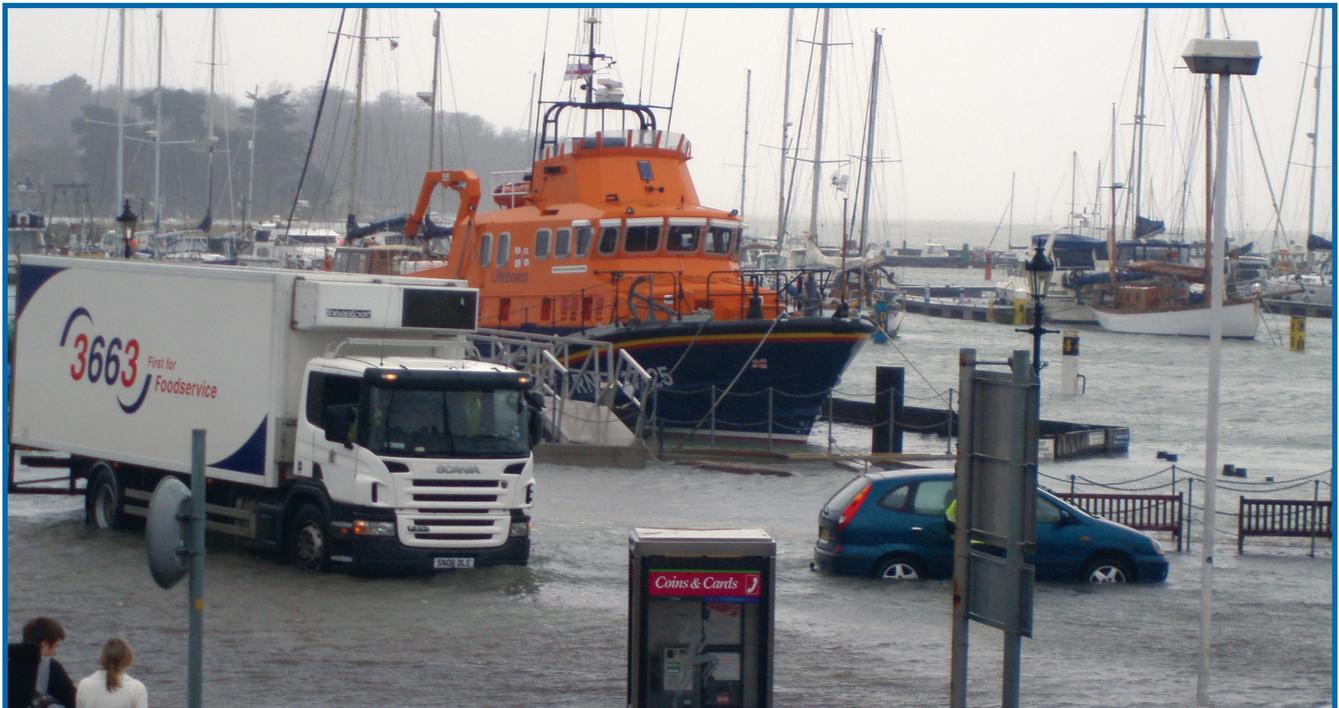


Photo courtesy of Yarmouth Harbour Commissioners

www.solentforum.org/current/CCATCH/Yarmouth/



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