Notes from Needham Market Floodmeeting held on 28 April 2014

Attendees

Cllr Julia Truelove	Suffolk County Council (SCC)	JT
Jane Burch	Flood & Coastal Policy Manager, SCC	JB
Jeff Horner	Flood & Water Manager, SCC	JH
David Fawcett	SCC Highways	DF
Will Todd	Environment Agency	WT
Alan Points	Joint Emergency Planning Unit	AP
Alamgir Kabir	Halcrow, Consultants	Kabir
Cllrs Barker, Marchant and Norris MSDC		
NM Town Council; Creeting St Mary PC		
+ about 35 members of the public		

These notes record the key discussion points and any follow up actions, plus additional information that was requested at the meeting and has subsequently been made available.
The presentation and additional data files are available on www.greensuffolk.org/about/SFRMP or via the links in these notes

1. Welcome and Introductions

Councillor Julia Truelove chaired the meeting and introduced the key personnel involved in the meeting (listed above – contact details at end of these notes).

The agreed aims of this meeting were:-

- To explain the results of investigations and modelling and ensure a common agreement of the facts.
- Discuss options for reducing the flood risk in the town and how this might be funded.
- Agree next steps.

2. Review modelling and possible flood alleviation options

2.1 Creating and calibrating the model

JH reminded the meeting that the project is being jointly led by the EA, who has responsibility for the fluvial flood risk, and SCC, who is responsible for the surface water element. Halcrow was commissioned to undertake the creation of a computer model that would replicate, as far as possible, both the fluvial and surface water flooding experienced in 2012 and again in February this year. Using the model we are able to test how best to alleviate the flooding problems. At all times we need to bear in mind the impact of future changes in weather patterns and the costs and benefits of any measures we might take.

Kabir from Halcrow, explained the extent of the modelled area, how the modelling was undertaken, the assumptions used and the availability of local information to create the model and calibrate it so it replicated the actual flooding seen. His detailed presentation can be seen **here** showing the

maps created for the range of rainfall scenarios tested. The extent of flooding is only marginally greater in extreme storms (slides 15-17) but flood depths will vary.

Further information on flood depths was requested – whilst the extent of the flood waters does not vary much between different storm events, the depth of water will be significantly deeper in a more extreme storm, thus causing greater problems. This information was not available at the meeting but is now available **here**

NB. Throughout the presentation/discussion the rainfall events were quoted as e.g. 1 in 5 years – but this should be thought of as the probability of that level of rainfall falling as 1 in 5 or 20% in any one year. On average it is likely that the level of rainfall and thus the associated flooding will be seen once every 5 years – but averages belie a range of values so there is no reason why a 1 in 100 year event will not happen two years running or even twice in one year!

In addition to this model, the EA has a basic model of fluvial flood risk across the whole of the River Gipping catchment – this is used to produce the standard flood zone maps and is updated when new rainfall/flooding data becomes available.

The modelled areas for surface water can be seen in slide 7 of presentation. There is greater uncertainty around the surface water element of the flooding, due to lack of information about underground drainage systems and their impact in storm conditions. Water falling on green fields will penetrate to some extent (assuming the land is not saturated) but where it falls on urban areas there is an interaction with underground drainage systems. Many observed that surface water drains fail to discharge into the river when river levels are high and there are occasions when water appears to come back up the surface water system.

Overall there was general agreement that the model was a reasonable representation of the extent of actual flooding seen in recent years and provided a good baseline from which to test various options.

The range of figures for depths, given in slide 12 are as a result of the different land levels along the road. For a given timing during the storm, at a specific point, the model and the observed flood levels should be comparable.

Questions were raised about whether the impact of recent upstream development in Stowmarket and the proposed developments in Needham Market had been included in the modelling. **K/JH to provide more info on this.**

However, it is worth noting that all new developments are now required to ensure that surface water run off rates do not exceed that which would come off the site as a green field. The responsibility for decisions on drainage from new developments currently lies with the local planning authority (MSDC) but may move to the County Council when Schedule 3 of the Flood and Water Management Act 2010 is enacted fully.

NB. The modelling showed the extent and depth of flooding – the presentation only showed the extent. A map summarising the baseline depth data and more detailed depth data is available on the website.

2.2 Model outcomes for various options

Having created a model that represents the observed flooding, it was used to test a number of options, to see what effect they might have on the extent and depth of flooding in the modelled area. The model can be used for testing further scenarios.

- **Option 1: Remove Hawks Mill lock sill:** this has little effect on the areas flooded , but there is a need to consider its impact on flood depths.

- **Option 2: Remove boards in by-pass channel:** similar to above

- **Option 3: Lock gate in high (closed) position:** results in more water upstream and slightly less downstream

- **Option 4: Mill gate (sluice) open at all times:**

- **Option 5: Channel clearance and de-silt:** this involves clearing the whole of the river extent and removing silt between Hawk's Mill and Crown Street. This resulted in increased conveyance of water which gets constricted at the Mill area leading to greater flooding to the east of the railway line.
  Many comments were made that it makes no sense to clear upstream – if anything flows need to be slowed upstream of the Mill - but clearance and de-silting downstream is likely to produce better results.
  This option to be modelled.

- **Option 6: New design of St Mary's Bridge:** to increase channel capacity. This would be as part of highway work needed on the bridge. This appeared to have little impact on the flood extent, but may affect depths.

The impacts on both extent and depth of flooding from modelling these options are summarised in Slide 33 of the presentation.

- **Property Level Protection (PLP):** Where measures to reduce flood risk are not technically feasible, or where the cost outweighs the benefits, the best option may be for individual properties to utilise PLP or wider flood resilience measures. This could be part funded by flood grant in aid for a whole street or vulnerable area. Details of what sort of measures may be available can be viewed on http://nationalfloodforum.org.uk/property-level-protection-community-tool/

  This approach is best utilised in conjunction with a wider community flood plan – which is being taken forward in Needham Market by Sue Herne of the Suffolk Joint Emergency Planning Unit.

General comments/observations:

What is definition of channel clearance?
- Removing significant vegetation to allow better conveyance of water.

Actions within the Needham Market area to relieve flooding are unlikely to have any major effect downstream.

General maintenance is vital but there are some areas that may be very difficult to clear – such as around Hawk's Mill.

Where past watercourse clearance has taken place, the banks have been built up of the dredged material, thus reducing the chance of the water getting onto the flood plain. This is particularly noticeable in the Alder Carr and Ravens Farm areas.

Observation of water levels at Blackwater Hall shows water levels to rise and fall very quickly. Could this be related to the operation of downstream structures such as at Bosmere Weir? There was also reports of the watercourse being badly obstructed by vegetation downstream of Baylham.
EA to investigate.

Concern was raised that the flood storage at Stowmarket may have overflowed and or upstream gates opened to let more water into Needham Market. Options to increase the capacity of this storage, or create additional storage upstream could be considered.
EA to confirm capacity at Stowmarket and the rainfall that would be likely to cause it to overflow.

Questions were raised about the fact that sandbags were not supplied during the flooding events – in spite of national publicity about the value of sandbags. All Councils have signed up to a Suffolk-wide policy to only use sandbags in a strategic manner and not supply them to individuals. However, in the light of recent events this policy is being reviewed. The alternative would be for the community to make provisions to provide them as part of the emergency plan.

The availability of flood warnings – especially during the night and in sufficient time to prepare for flooding – was questioned. Whilst warnings have improved since the 2012 event, the flashy nature of the catchment means warnings have a short lead in time.

There is a clear need to consider the management of the whole catchment – particularly in the light of new development pressures. One option must be to try to slow the rate of water getting into the river. Another is to store water upstream of NM, controlling the outflow similar to the features upstream of Stowmarket. Alternatively, improve the conveyance of water through NM and consider the impact downstream. **EA/SCC to look at wider catchment approach**

The volume of water coming off the A14 toward Needham Market was thought to add to the problems. If so, is there a way of holding back this water?
SCC to contact the Highways Agency to assess whether this is likely to be significant.

There was considerable concern about new development adding to the existing flood risk, throughout the catchment. Currently, the responsibility for ensuring that new development does not add to flood risk lies with the local planning authority (Mid Suffolk DC) who take advice from the EA and SCC. Once Schedule 3 of the Flood & Water Management Act 2010 is implemented, there will be a stronger role for the County Council in approving surface water drainage on new development as well as maintaining sustainable drainage systems (SuDS).

3. Funding

JB confirmed that national flood funding has been made available to undertake the initial modelling and development work. Subject to confirmation of the numbers of properties affected, it is likely that up to £150,000 will be available to put measures in place. Costs above this level will need to be raised locally.

4. Agreed Next Steps

Notes of this meeting along with the presentation and relevant additional information will be made available via the website www.greensuffolk.org/about/SFRMP

Modelling of other options as suggested will take place and results will be communicated to those present.

SCC/EA will look at the catchment as a whole to consider if other options are possible.

SCC/EA will progress discussions on property level protection with relevant homeowners.

SCC/EA to inform those responsible for maintaining water bodies are aware of their responsibilities and do maintain.

The community will continue to progress its Emergency Plan.

A further meeting will be held at a relevant time to update the group.

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