

Doing more of the same both upstream of Debenham and elsewhere

Whilst NFM is not a new concept, it is not widely used in lowland catchments such as the Deben and we are undertaking extensive monitoring of all the features to collate evidence of their effectiveness – not only in managing flood risk, but also in trapping sediments, improving water quality and enhancing biodiversity.

To succeed in our aim to further reduce the flood risk to Debenham, we are seeking further sites (on all the tributaries of the river) upstream of the village to install similar features. We currently have £50k available for works in the next year or two.

Whilst there isn't a defined pot of money to deliver more work, it's clearly supported by the Government's recent 25-year Environment Plan and there is a strong expectation that future agricultural schemes will support the use of private land to deliver public goods, such as flood risk and national flood risk funds will be available for this type of approach. The Countryside Stewardship Scheme has a range of grants for farmers and land managers who wish to adopt NFM and river restoration techniques.

If anyone is interested in this approach and would like to discuss possible options on their land, please contact:

will.akast@environment-agency.gov.uk

or speak to any of the Holistic Water Management Project team.

Sources of further information:

www.greensuffolk.org/hwmp

www.gov.uk/government/publications/working-with-natural-processes-to-reduce-flood-risk

www.newground.co.uk/flood



Natural Flood Management

What is Natural Flood Management?

Natural Flood Management (NFM) is a way of working with natural processes to help manage the risk of flooding. It can help slow the flow through a catchment, by reducing run off and increasing the ability of catchments to hold water. This can help to reduce river peak flows and this reduce the risk of flooding downstream. It is only expected to have an impact during the more regular flooding events, with the types of features being trialled unlikely to have an impact during very severe rainfall events. However, the more of these features that are constructed in the catchment, the more of an impact they will collectively have in reducing flood risk.

What are the benefits of this approach?

As well as managing flood risk, the NFM approach has other benefits:

Habitat Creation: Creating habitats such as wetlands improving biodiversity and the environment we live in. They are efficient at storing carbon.

Water Quality: NFM features such as run off pathway management and offline storage areas can help with sediment capture, preventing soil erosion and loss of sediments and fertilisers into the watercourse. Water quality in our rivers and streams is improving but more needs to be done. Such measures also improve the rate of infiltration of water into the underground aquifers, thus helping keep our rivers flowing in dry periods.

What have we done/are we doing upstream of Debenham?

The NFM approach is being trialled to help protect Debenham from the risk of flooding. The more traditional forms of flood risk management could not be delivered here as the costs vastly outweighed the benefits, mainly due to flooding coming from three different tributaries that converge into the River Deben in Debenham. The aim of the NFM approach is to hold water upstream, using various storage features on each of the tributaries, thus reducing peak river flows.



The Debenham Natural Flood Management Features

To date three NFM measures have been installed (1, 2, & 3). A fourth feature (4. Mill Green Farm) will be constructed this autumn.

Collectively these NFM measures help to reduce flood risk to Debenham and by adding further features of the other tributaries we can reduce the risk still further. They also help to improve the water quality in the River Deben by removing sediment and pollutants, such as nitrates and phosphates. The two larger storage features (3 & 4) provide significant new wetland habitats as they are designed to permanently hold some water but have the capacity to take a lot more during heavy rainfall.

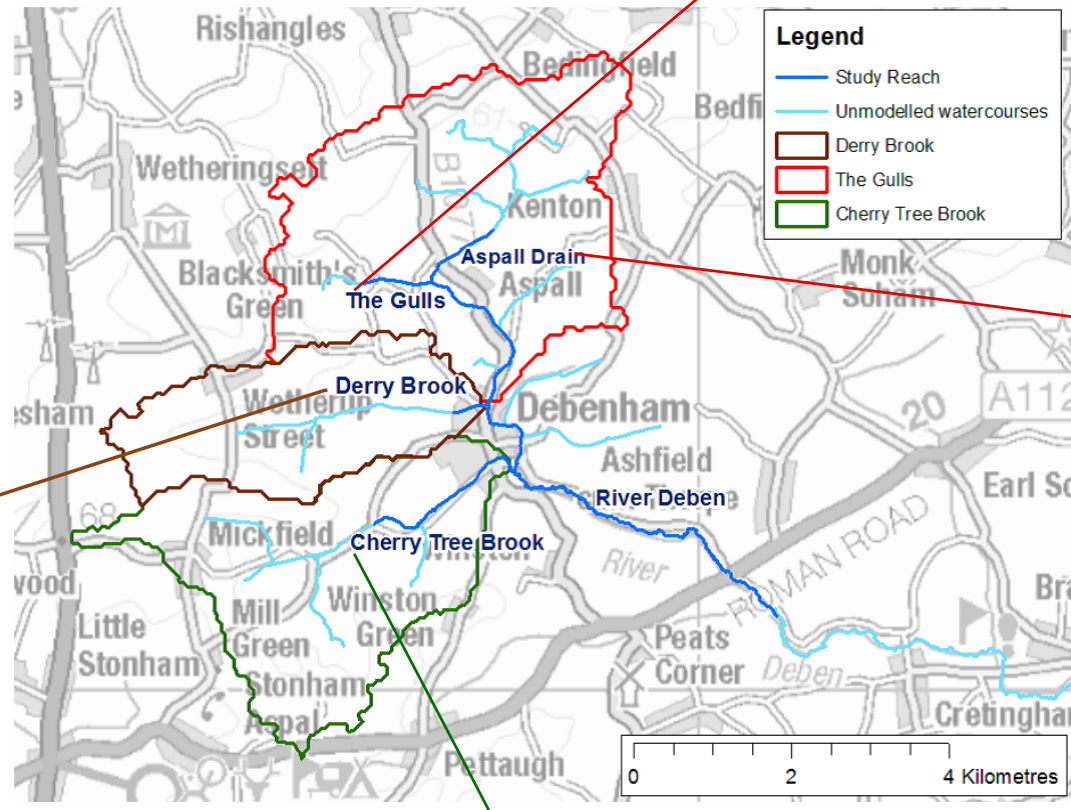
1. Debenham Hall Farm

The pond is designed to hold flood water and release it slowly. This will also allow sediment to settle out and provides a useful habitat particularly for amphibians. The pond can also act as a potential pollution trap for the farmyard to contain any potential spills before they reach the watercourse.



2. Aspell Hall

Low earth bund providing a temporary flood storage of circa 350 m³. The borrow pit for the bund provides a small area of semi-permanent water and the existing (dry) ditch was widened to provide spoil for the bund and additional flood storage. Water enters the storage area (photo shows area in flood conditions) via a 300mm pipe from the nearby ditch which is partially impounded with a leaky dam constructed of natural materials. Flood water will be discharged slowly providing flood attenuation and allowing sediment to settle. The semi-permanent water feature and wet grassland provide a useful off-stream habitat particularly for amphibians.



4. Mill Green Farm

This storage pond, due to be constructed in Autumn 2018 will be of similar capacity to that at Hill House Farm, although different in shape. It too will create new wetland habitat and is expected to become a popular amenity feature within a farm trail.

3. Hill House Farm

An offline storage area covering approx. 0.5 Ha with the capacity to store 6700 m³ flood water. The picture, taken in June 2018, shows the feature which retains some water even in dry years. Installation was completed in December 2017 and already nature has started to colonise the margins and it has become an attraction to birds and insect life.

