

# Suffolk Holistic Water Management Project

[www.greensuffolk.org/hwmp](http://www.greensuffolk.org/hwmp)

## Project Update June 2018

The aim of this pilot project is to consider water holistically, looking to manage this valuable resource to maximise its economic and environmental benefits and minimise flood risk.

As you have not had an update from us for over a year, you can be forgiven for thinking the project is no longer active. Far from it! The working groups have been busy taking forward various aspects of the Holistic Water Management Project (HWMP) and much progress has been made – we just haven't had a lot of spare resource for communicating our successes!

The sub groups and their key contacts are listed at the end of the relevant section and more information is available on the website [www.greensuffolk.org/hwmp](http://www.greensuffolk.org/hwmp), which has recently been brought right up to date. A brief outline of the progress of each group over the last year is summarised below. Please feel free to contact the group leaders for more information.

### **1. Felixstowe Peninsula Project:**

This project focuses on using Internal Drainage Board (IDB) drainage water, which is currently pumped out into the Deben Estuary, for irrigating crops and/or public water supply.

The original proposal of holding the water in a large balancing reservoir and then piping it inland to smaller farm irrigation reservoirs or for public water supply was discounted due to costs and environmental considerations. Instead, the water will be held temporarily in the Delph (area behind the King's Fleet pumping station) and pumped directly onto farms through a new pipeline.

Early indications of demand, from members of the East Suffolk Water Abstractors Group (ESWAG), resulted in eleven farmers showing interest in this new source of water, but due to costs and water quality issues, the project has been scaled back. The original 18 km pipeline will now be circa 8 km long and serve five farmers who are now willing to invest in the project. There is at least 600ML of water available in a year - enough to grow crops worth over £2.4 million. More water maybe available during wetter years and we are working with the Environment Agency to ensure the abstraction licence allows access to this. Discussions with Anglian Water are ongoing as it has storage capacity to hold any excess water if the farmers' reservoirs are full. Excess water could be for public use or returned to the area for irrigation or environmental benefit.



There have been several issues that have challenged us during the development of this project and these have resulted in a delay to the original timetable. The aim is now to have the project in place within the next two to three years. Some of the issues we have had to surmount are: -

- confirming water availability

- water quality (water that is too saline cannot be used on certain crops)
- environmental requirements for fresh water flows into the Deben Estuary (for wading birds and eels)
- the abstraction licence (which needs to be 20 years minimum to make the investment worthwhile and charge a single rate for taking water at high flows, regardless of time of year)
- planning and archaeology (both costs of and time needed which resulted in missing a key grant deadline)
- capital investment needed +/- grants
- project governance

For details of how we have overcome these various challenges please see the website [www.greensuffolk.org/hwmp/felixstowe](http://www.greensuffolk.org/hwmp/felixstowe)

The East Suffolk IDB has applied for the abstraction licence (for minimum of 600 MI) and the farmers involved are forming a limited company to manage and invest in the project. They have appointed John Patrick as Project Manager ([john@swsllp.co.uk](mailto:john@swsllp.co.uk)).



As well as providing economic benefit by supplying water this project aims to improve the environment – not least the saltmarsh which is being eroded by the failure of the King’s Fleet pumping outfall (*picture left*) and the pumping itself. Once the water project is operational, the volume of water flowing out will be drastically reduced, with only a residual flow to satisfy environmental demands. At this stage investment will be made into measures to enhance the surrounding saltmarsh. As an interim measure, funding is being sought from the Water Environment Grant to undertake

works to improve the current situation. We will know whether we have been successful with this bid in the next few months. For details contact [jane.burch@suffolk.gov.uk](mailto:jane.burch@suffolk.gov.uk) .

#### FELIXSTOWE PENINSULA SUB GROUP CONTACTS:

Tim Darby, ESWAG, (Landowner group lead)  
Giles Bloomfield, East Suffolk IDB

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[giles@wlma.org.uk](mailto:giles@wlma.org.uk)

## 2. Reservoir Planning & Consents Streamlining Project:

The aim of this group is to make the process of creating storage reservoirs more streamlined for both regulators and applicants. Some progress has been made, particularly with obtaining advice on the risk of finding significant archaeology, prior to further investigations into reservoir siting.

As part of the Felixstowe water project we have been in discussion with the planners at Suffolk Coastal District Council and Suffolk’s Archaeology service to simplify and speed up the process of obtaining consent to install the pipeline. These discussions are ongoing.

**SUB GROUP CONTACT:** Jane Burch, SCC

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### 3. Debenham Flood Risk Management Project:

The management of flood risk to Debenham is complex due to the three tributaries of the river Deben meeting in the village and the costs of many traditional flood management measures are prohibitive. For this reason, we are working to slow the rate of flow down the catchment into the river through a series of 'natural flood management' (NFM) features. Modelling was undertaken that showed that installing NFM features on all three tributaries could significantly reduce flood risk in Debenham, at an affordable cost. These features also improve water quality by filtering out sediments and pollutants and creating new habitats.

To date, three features have been constructed at Debenham Hall Farm, Aspall Hall and Hill House Farm. The work was undertaken by the East Suffolk IDB, funded by Suffolk County Council, the Essex and Suffolk Rivers' Trust and Regional Flood & Coastal Committee levy. Two of the smaller features were installed for under £10,000 in total, with the larger feature at Hill House Farm costing circa £80,000.



*Small pond feature at Debenham Hall Farm. Whilst it makes a small contribution to flood risk management, the main benefit of this feature is to capture run off from the farmyard thus preventing sediment and pollution entering the river.*

*NFM flood storage feature at Hill House Farm.*

*The total area is circa 0.5 Ha with the capacity to store a further 6700 m<sup>3</sup> of flood water.*

*The picture, taken in June 2018, shows the feature which permanently retains some water. Further planting of wild flowers around the edge will maximise its biodiversity value.*



Another feature, located on the Cherry Tree Brook, similar in scale to that at Hill House Farm, is now under development at Mill Green Farm. This will provide some 6500 m<sup>3</sup> flood storage and new habitat.

We are now working with other landowners and developers to persuade them to install similar natural flood management features on their land, using those features already in place as exemplars. The more of these 'slow the flow' features we can install, the better the flood protection for the village – and the greater the environmental benefit. We currently have an offer of £50,000 from RFCC levy towards this additional work and would be pleased to hear from anyone interested in getting involved.

An important element of this innovative approach is to monitor the effectiveness of the features, in terms of holding flood water, improving water quality and enhancing biodiversity. A comprehensive suite of

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monitoring will be taking place, providing evidence of the multiple benefits provided to persuade future funders to invest in this way of working with nature.

**DEBENHAM SUB GROUP CONTACTS:**

Gill Dinwiddie, EA [gillian.dinwiddie@environment-agency.gov.uk](mailto:gillian.dinwiddie@environment-agency.gov.uk)  
Jane Burch, SCC [jane.burch@suffolk.gov.uk](mailto:jane.burch@suffolk.gov.uk)  
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**WANT TO LEARN MORE ABOUT THIS NATURAL FLOOD MANAGEMENT APPROACH?**

THEN JOIN US ON  
**20<sup>TH</sup> SEPTEMBER 2018 AT 4.00PM**  
**AT HILL HOUSE FARM , DEBENHAM**

FOR MORE INFORMATION CONTACT [JANE.BURCH@SUFFOLK.GOV.UK](mailto:JANE.BURCH@SUFFOLK.GOV.UK)

**4. Water Framework Directive (WFD) and Channel Improvement Project:**

WFD investigations show that the middle sections of the River Deben suffer from poor morphology, water quality problems and reduced fish populations. The river is also disconnected from its floodplain.

Working with the Essex and Suffolk Rivers Trust (ESRT) and sympathetic landowners, we have restored almost 1 km of back channels at Easton, along with a silt trap to intercept road runoff. We have also installed 'large woody debris' structures within the river channel and level control structures in the back channels. Together, these works will provide refuges and nursery areas for juvenile fish, improve water quality and enhance summer water retention within the floodplain.

**Marsh Farm, Blaxhall:**

This project took place on a floodplain grazing marsh along the banks of the River Alde. It is included here as an excellent example of the type of projects we'd like to continue doing on all our rivers and fits well with the holistic approach to water management.

While carrying out an assessment of the area for the owner, Langmead Farms, Suffolk Wildlife Trust put together a plan to improve the marsh for wintering waders and wildfowl, as well as improving its general biodiversity.





The plan from Suffolk Wildlife Trust (see above) suggested creating scrapes and gutters and improving the existing ditch network. This would enable water to be held on the land for longer periods and create better connectivity between the floodplain and the River Alde.

Essex and Suffolk Rivers Trust were able to secure £7,500 from the Environment Agency to fund the improvements and the work was due to be completed during winter 2017.

Unfortunately, the wet winter and spring delayed works till May 2018 but now all the scrapes, gutters and ditch improvements have been completed. As you will see from the photos the site currently looks very 'raw', but the features will soon blend in with the surrounding area as plants begin to colonise the bare earth and the site will be providing a great habitat for birds this winter and improve water infiltration into the aquifers.



Langmead Farms have been very supportive of this project and we are very pleased to see it completed and increasing the diversity of the East Suffolk Catchment area. We'd love to hear from other landowners looking to enhance the wildlife value of their watercourses. Please contact Will Akast (Environment Agency) or Chris McArthur (Essex and Suffolk Rivers Trust) if this is something you are interested in.

**SUB GROUP CONTACTS:**

Will Akast, EA

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Chris McArthur, ESRT

[chris@cimcarthur.co.uk](mailto:chris@cimcarthur.co.uk)

## 5. Abstraction Reform Project:

As part of the Government's 25-year Environment Plan, the Minister has announced in May that the East Suffolk Catchment will be one of the four initial priority catchments for testing innovative and collaborative approaches to reforming water abstraction. This not only recognises the importance of our precious water resources for public consumption, our economy, farming and the environment, but also gives a national profile for the well-established Holistic Water Management Project and the work we have been doing associated with the Felixstowe Peninsula project.

<https://www.gov.uk/government/publications/water-abstraction-plan-2017/water-abstraction-plan-catchment-focus>.

**SUB GROUP CONTACT:**

Jonathan Thompson, EA

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## 6. Project Topsoil



A key element of this EU funded project is to test the viability of using Managed Aquifer Recharge (MAR) as a way of storing, and later reclaiming, excess water.



*Cranfield University assessing the MAR trial site.*

The aim was to carry out a trial last winter, applying water via a spray irrigator to vegetated land and monitoring the quality and water levels in nearby local ground water sources. It was not possible to do this last winter due to lack of water in the source being used for the trial. It is hope that the trial can go ahead next January/February.

MAR was one the ideas put forward at the inception of the Holistic Water Management Project but has not been able to progress to date for various reasons. If successful, this work by Project Topsoil may provide an alternative to reservoirs to store water, as well as enhance ground water supplies. It is not a new approach, being utilised in several parts of the world, but is not widely accepted in the UK.

A second part of this EU project is looking at water quality in the Sandlings aquifers and the correlation with the various farming activities in that vicinity. We will shortly have completed a year's worth of groundwater chemistry monitoring and that has given us indications for the parishes that have the most elevated nitrate levels in the groundwater. We are now moving on to another phase of this study, as a partnership working with FWAG, landowners and Catchment Sensitive Farming officers to understand field scale relationships between cropping and groundwater chemistry impacts. Some simple adjustments to cropping patterns could then be trialled to assess potential environmental improvements, building on current science already established by Rothampsted Research . The impact of outdoor pig units in this area have previously been shown to result in high nitrate levels and impacts on soil structures. This work is entirely on a voluntary involvement basis, but the aim of our EU linked project is to fill knowledge gaps in this very important high value farming area, that is adjacent to areas of great environmental sensitivity.

### **SUB GROUP CONTACTS:**

Jane Herbert, ESRT

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**The Holistic Water Management Project, co-ordinated by Suffolk County Council, is a collaboration between a wide range of partners.**

To learn more about it and see who's involved, please go to [www.greensuffolk.org/hwmp](http://www.greensuffolk.org/hwmp) or contact the people named in this newsletter.