

# Reducing flood risk in the Swaton Eau Catchment

## Project Update to Farmers February 2021

### Introduction

Firstly, the Project Team at Environment Agency would like to thank you, for helping us to deliver the Swaton Eau Catchment Natural Flood Management (NFM) Scheme. It has been a long road, with many delays and hurdles to overcome. Thank you for your patience, and continued interest and involvement in the project. What seems like a straightforward proposal, to store flood water on small less productive areas of your farms, has thrown up a number of challenges from planning requirements to protected species.

### Progress

#### Works on the ground

We are currently working with 3 farms in the catchment to deliver the project. One farm is located upstream of Threekingham and the other two upstream of Swaton. The first NFM features being installed are the water storage swales located in field margins. The first swales went in at the end of the summer 2020, and we look forward to more being installed before March, once legal agreements are signed off.

I am really pleased to report that this week (w/c 1/2/21) we have received full planning permission for three attenuation ponds, located on two of the farms. These will now be constructed, before the end of March also, weather conditions permitting. Work is being undertaken by either yourselves or Black Sluice Internal Drainage Board, who are also supervising all the work on the ground along with Roger Wardle, the project's farm engagement adviser.



Figure 1: Work starts on the first field swales in July 2020.

## Flood risk benefits of your NFM features

In total more than 44,000m<sup>3</sup> of storage has so far been agreed with yourselves. Rainfall will be able to be stored and slowly infiltrate in the natural flood management attenuation features, both reducing the frequency of flooding to the villages in the catchment and the severity of flooding when it does happen. Previous assessments have indicated that storage of this magnitude would reduce flood risk to 53 properties in the catchment, with 24 of these moving to a lower than 1 in 100 probability of flooding. It would also mean that floods with a probability of 1 in 5, should stay within channel and not cause as much disruption as they currently do.

We have been able to secure some additional funding, to top up the project budget to allow us to plan and agree even more storage (estimated to be around another 25,000m<sup>3</sup>) with the third farm involved in the project. This will allow construction of some of this additional storage to take place after the harvest this year, when the original funding pot was due to have stopped. If we are successful in securing agreements to proceed with this additional storage, we estimate a total reduction in flows within the Swaton Eau, of around 20% and further reductions in flood risk to homes and businesses.

### Project Team

Barbara Rumble continues to manage the Swaton project working closely with Katharine Samms as the local area contact. Roger Wardle, farm engagement adviser, continues to support the project and provide advice to the catchment's farmers. Consultants, Arup, are designing the attenuation features and swales and making sure that all planning, health and safety and environmental legislation is complied with.

### Project monitoring and research

As this is a pilot project, which is aiming to gather data on the effectiveness of the natural flood management approach, we have agreed to work in partnership with Heriot Watt University. Dr Ian Pattison and his PhD student will set up a network of sensors across the catchment. Data will be collected over the course of the next 3 years to test everything from how well the features are storing water during heavy rainfall and reducing flood risk, to the increase in soil infiltration created by the attenuation features. We will be in touch to arrange the installation of the monitoring sensors.

We also have a student currently working on her degree in Human Geography and Environment from the University of York called Ellie Cook. She is doing a project on natural flood management and the barriers/risks to land managers taking up these schemes. She would like to invite you to be part of her research, and I have included her full introduction to herself below. Ellie's research is not part of our project so your involvement is purely voluntary, but she will be sharing her findings with us to further improve the evidence for this type of approach.

## Introduction from Ellie Cook:

*Hello, my name is Ellie Cook and I am a final year BA Human Geography and Environment student from the University of York. As part of my degree I am doing a project about Natural Flood Management (NFM) and the barriers/risks to land managers taking up these schemes and what can enable these barriers to be overcome. My dissertation is focussed on a number of river catchments across Lincolnshire (including the Swaton catchment) and I am aiming to capture experiences from land managers at different stages of the NFM process. I have a farming background as my dad is a farm manager at Wainfleet and I live locally to the river Steeping which was the inspiration for this project.*

*I am inviting you to be a part of my research. I would like to conduct telephone interviews with land managers about their experiences of catchment flooding and the NFM process (positive and negative). The findings from the interviews will all be anonymised and stored securely. My aim is to put forward some recommendations for how to improve the NFM process for future schemes.*

*I am aiming to conduct my interviews between December 2020 and February 2021. The interview will last about half an hour. Telephone interviews or zoom calls would be the preferred option due to covid-19. If you are willing to talk with me about your NFM scheme you can contact me at [erc539@york.ac.uk](mailto:erc539@york.ac.uk) (preferred) or 07826050003. I would like to arrange a convenient day and time with you, I have a very flexible timetable and am available on evenings or weekends, whenever is best for you, so please contact me with your availability. I will email you a copy of the questions along with a consent form before the interview. If you have any questions please feel free to contact me.*

## Key Contacts:

If you have any further questions about the project here are the key contacts for you.

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Plan showing agreed and potential future NFM storage within the Swaton Eau Catchment:

