



# Natural Flood Management (NFM) on the Alder Stream

Working with natural processes to slow the flow and store water to reduce flood risk across the Medway catchment.

## The Alder Stream

The Alder Stream is a tributary of the River Medway in Kent. The stream's clay geology and steep valleys leave it highly susceptible to flashy floods, impacting the downstream village of Five Oak Green.

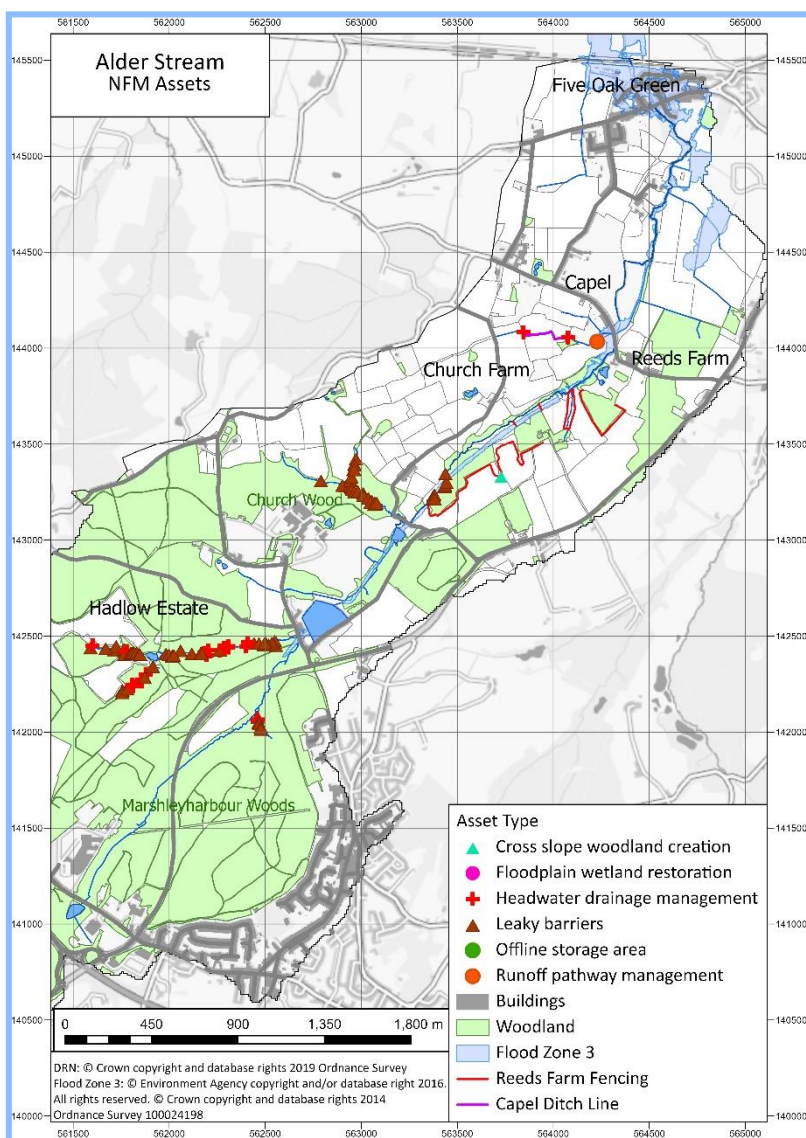
## Natural Flood Management

NFM uses natural materials to slow the flow of water, reducing the chance of flash flooding, as well as increasing water storage throughout the landscape.

Using a combination of topography modelling, site visits and local consultation, SERT identified parts of the catchment where NFM could work best and designed a range of practical and effective measures.

## Aim

To work with local landowners and apply Natural Flood Management (NFM) on a sub-catchment scale to alleviate flood risk at Five Oak Green.



## Funders & Supporters

# Natural Flood Management Measures

## 1. Leaky Woody Structures (LWS)

SERT installed over 90 Leaky Woody Structures (LWS) in the Alder Stream catchment. The stream flows through a steep valley of wet woodland, with the boggy terrain largely inaccessible to heavy machinery. LWS were constructed by hand by SERT staff and skilled forestry contractors using timber available on-site, chainsaws and winches.

These LWS hold back water in the upper catchment, slowing the flow of flood water and reducing the flood risk at Five Oak Green.

The structures have **multiple benefits**. Holding and retaining water in the wet woodland increases this threatened habitat's **resilience to climate change**. The structures also collect large volumes of silt and debris from the stream, **improving water quality**.



LWS in wet woodland

## 2. Fencing

A large area of ancient woodland surrounding the stream had been heavily grazed. SERT installed fencing around the wood including adjacent compacted flow paths, to allow the woodland to naturally recover and expand, creating a healthier ecosystem over time. More plants and trees will help intercept and absorb rainfall, storing more water and reducing flood risk downstream.

## 3. Alders Road Cottages

Upstream of Five Oak Green are approximately 30 properties, known as the Alders Road cottages. The northernmost cottages were at risk of flooding from a ditch which was regularly overwhelmed in rainfall events.

By mapping land levels and flow pathways, SERT identified an opportunity to reduce this flood risk. A bund was installed to divert water from reaching the ditch, sending water to an alternative ditch network away from the properties. A scrape was also created to store excess flood water being diverted to this alternative ditch.



The ancient woodland on the right has now been fenced off to allow its ground flora and trees to recover