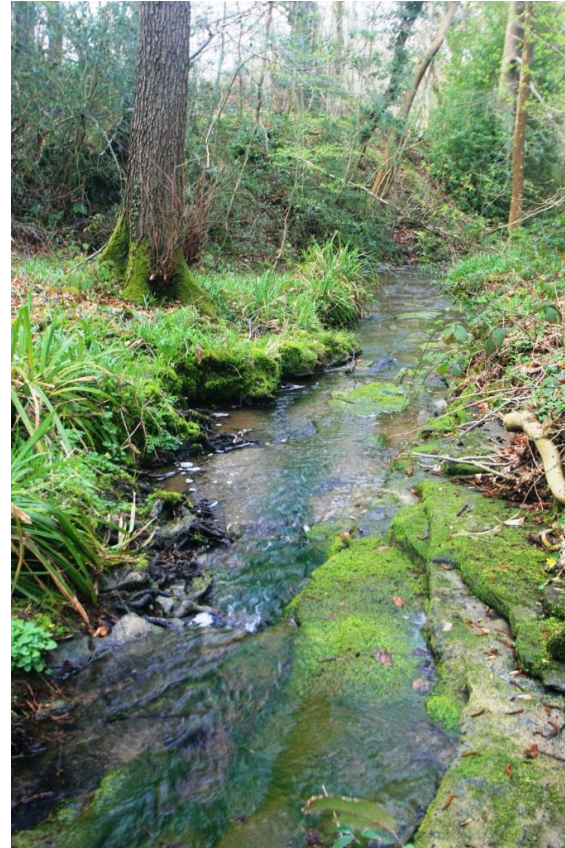


# Natural Flood Management: Medway

## Medway NFM



For more information or updates:  
**Tom Cook – Biodiversity Technical Specialist**  
Kent, South London & East Sussex Area





# Presentation contents

- ⇒ Defra Catchment Scale NFM Pilot Projects
- ⇒ Our Partnership
- ⇒ Demonstration sites
- ⇒ School Stream, upstream of Headcorn
- ⇒ Alder Stream, upstream of Five Oak Green
- ⇒ Outputs
- ⇒ Legacy

## Medway NFM



Leaky wood structure Alder Stream



# Defra Catchment Scale NFM Pilots

## Medway NFM

- ⇒ November 2016 – Secretary of State for Defra announces that £15 Million will be made available to deliver and test Natural Flood Management measures
- ⇒ Medway NFM offered £300K
- ⇒ Strong emphasis on contributing to the evidence base, reducing flood risk to properties, drawing in other funding, community engagement and the delivery of multiple benefits – all to help inform future spending.



## Our Partnership

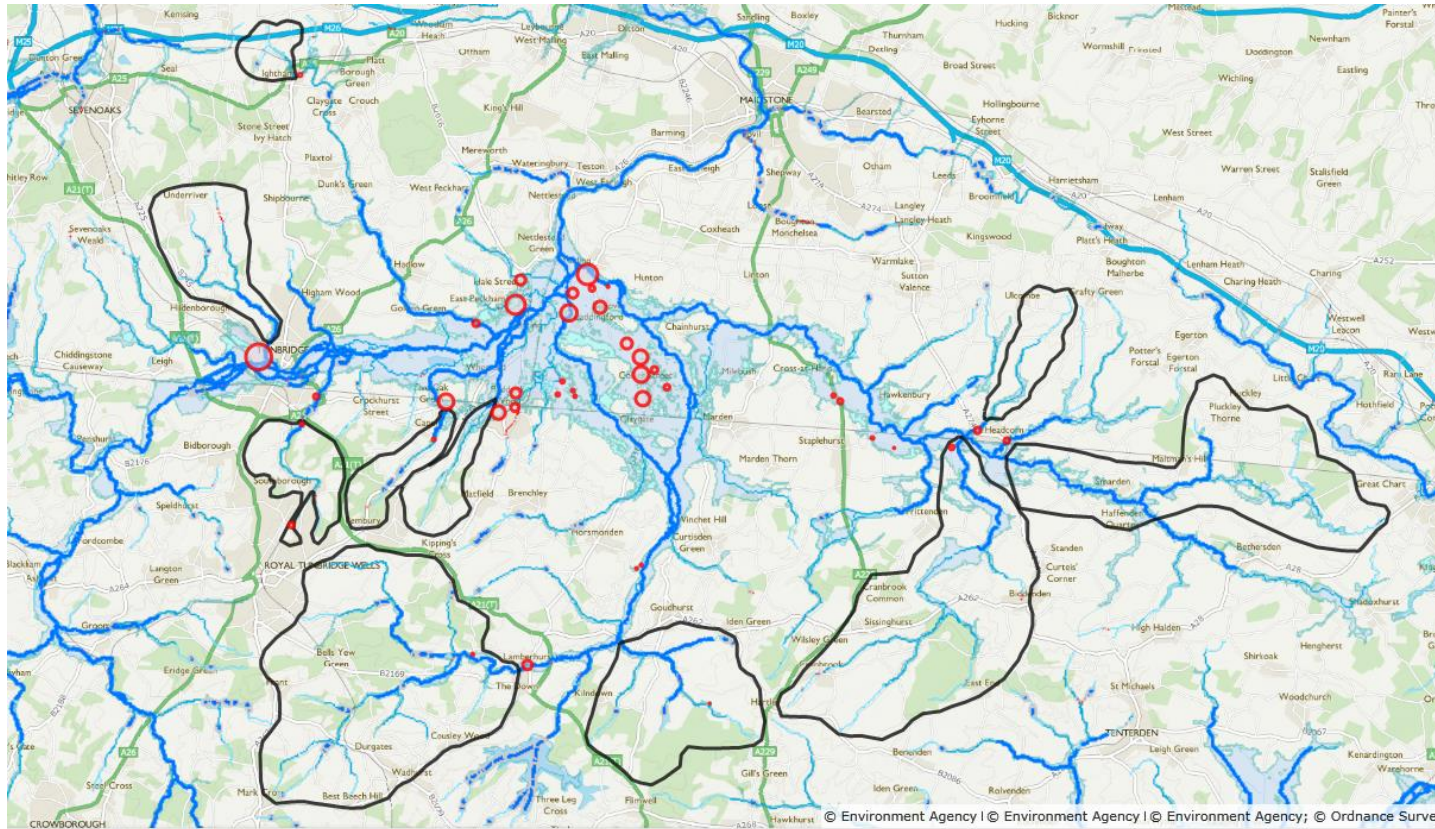
- ⇒ Part of the Medway Flood Partnership
- ⇒ South East Rivers Trust
  - Leading & Co-ordinating delivery of NFM
- ⇒ Match funding from FRAMES (EU funding)
  - & additional funding from Maidstone Borough Council
  - & In-Kind support from other partners
- ⇒ EA providing most of the funding and will report on:
  - Property benefits, biodiversity and landscape character improvements,
  - Monitoring and evidence data, Capture the learning for future NFM



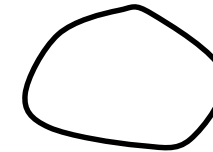


# Prioritising Delivery

## Medway NFM



Priority waterbodies  
to investigate



Property clusters at risk



Location of priority areas chosen to initially investigate NFM opportunities

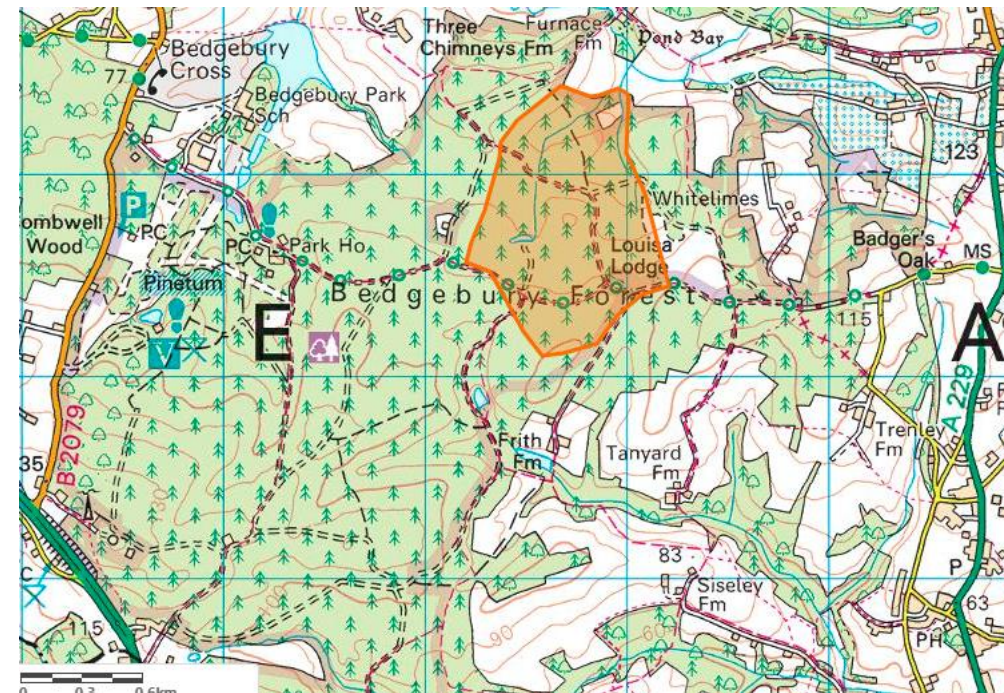
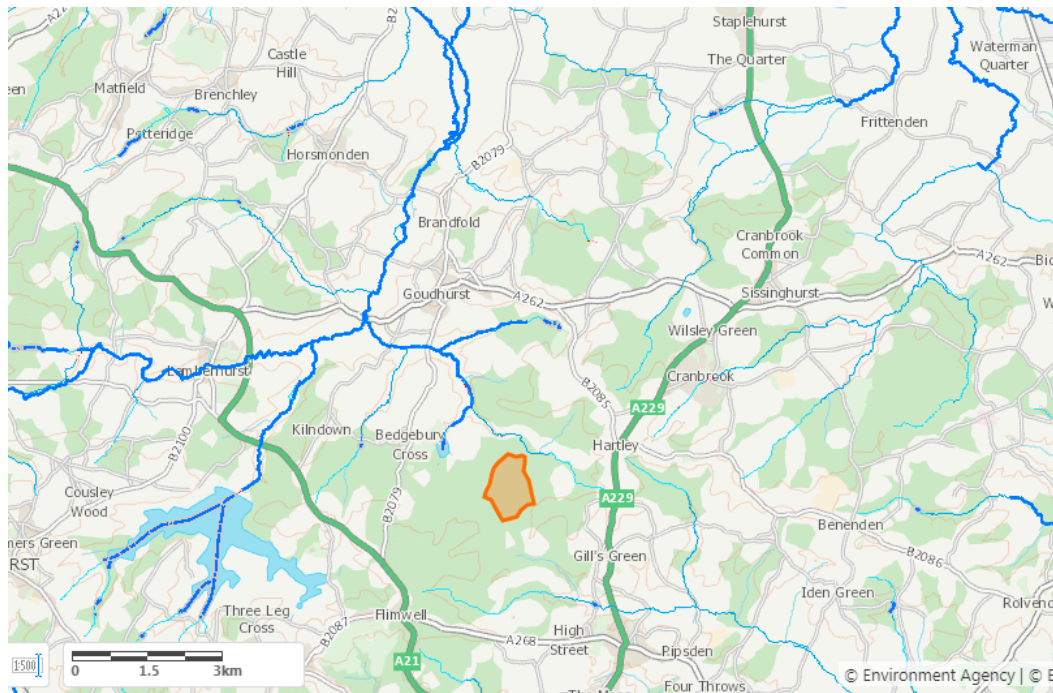




# Bedgebury Forest

Forestry Commission

# Medway NFM



Bedgebury Forest Project location



Part of the  
Medway Flood Partnership





# Bedgebury Forest

Forestry Commission

Medway  
NFM



Leaky dam in action



Flooded woodland clearing



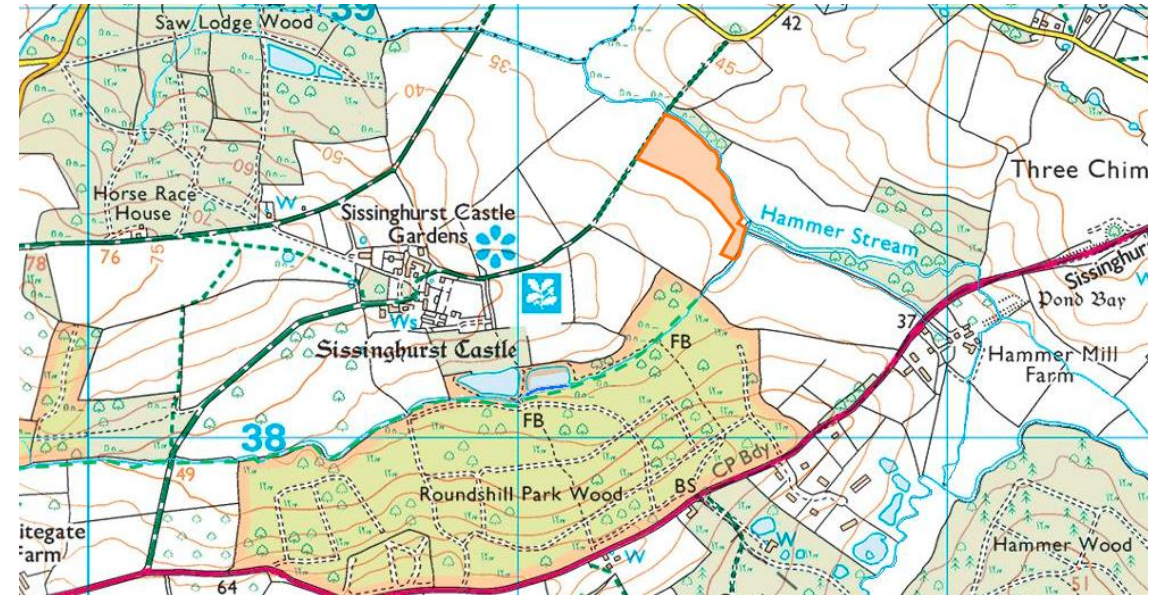
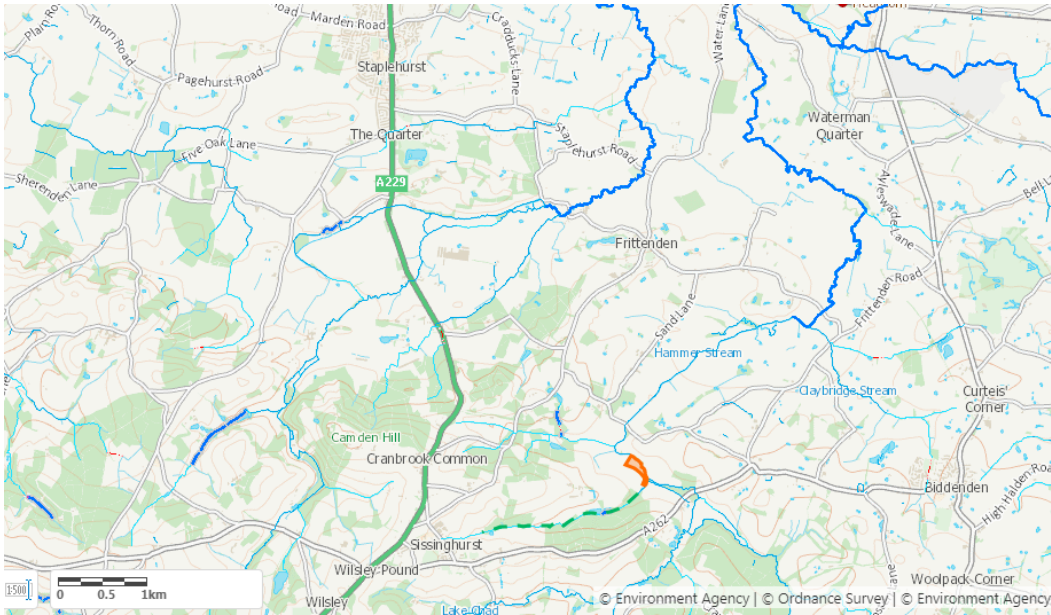
Part of the  
Medway Flood Partnership





# Sissinghurst Castle National Trust

# Medway NFM



Sissinghurst Castle Project location



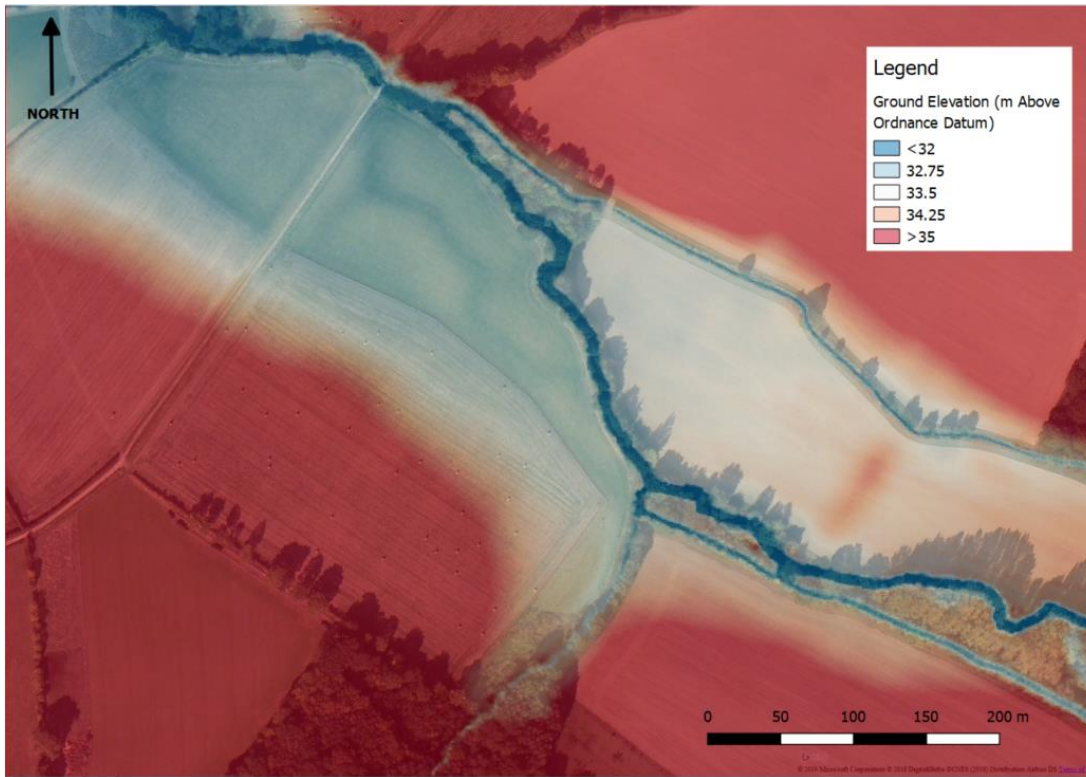
Part of the  
Medway Flood Partnership





# Sissinghurst Castle National Trust

# Medway NFM



Lidar pre-project delivery

Hammer Stream – approx. 3m below floodplain



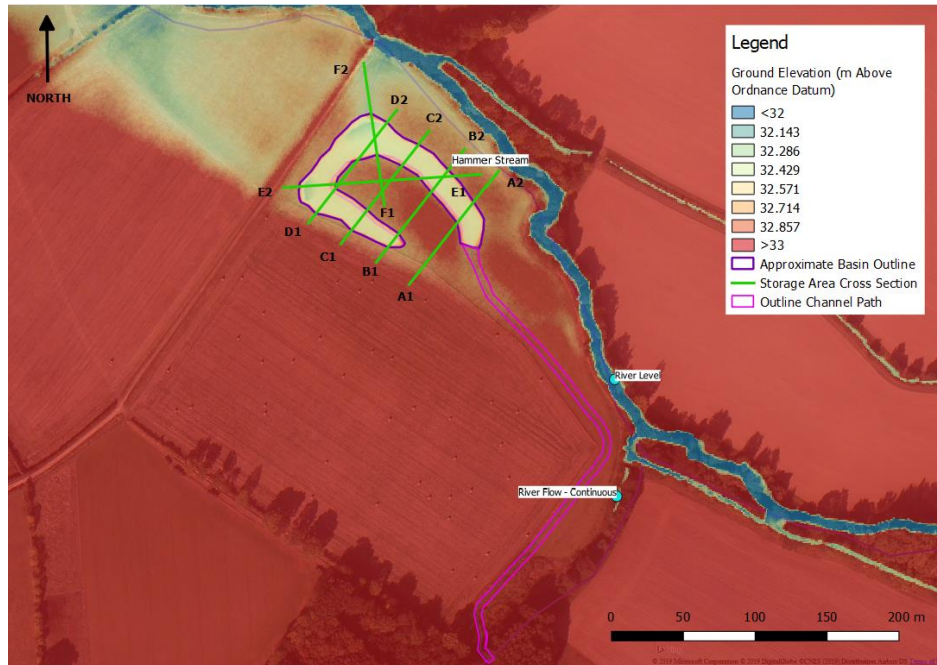
Part of the  
Medway Flood Partnership



# Sissinghurst Castle

National Trust

# Medway NFM



Outline project design

Storage at Sissinghurst



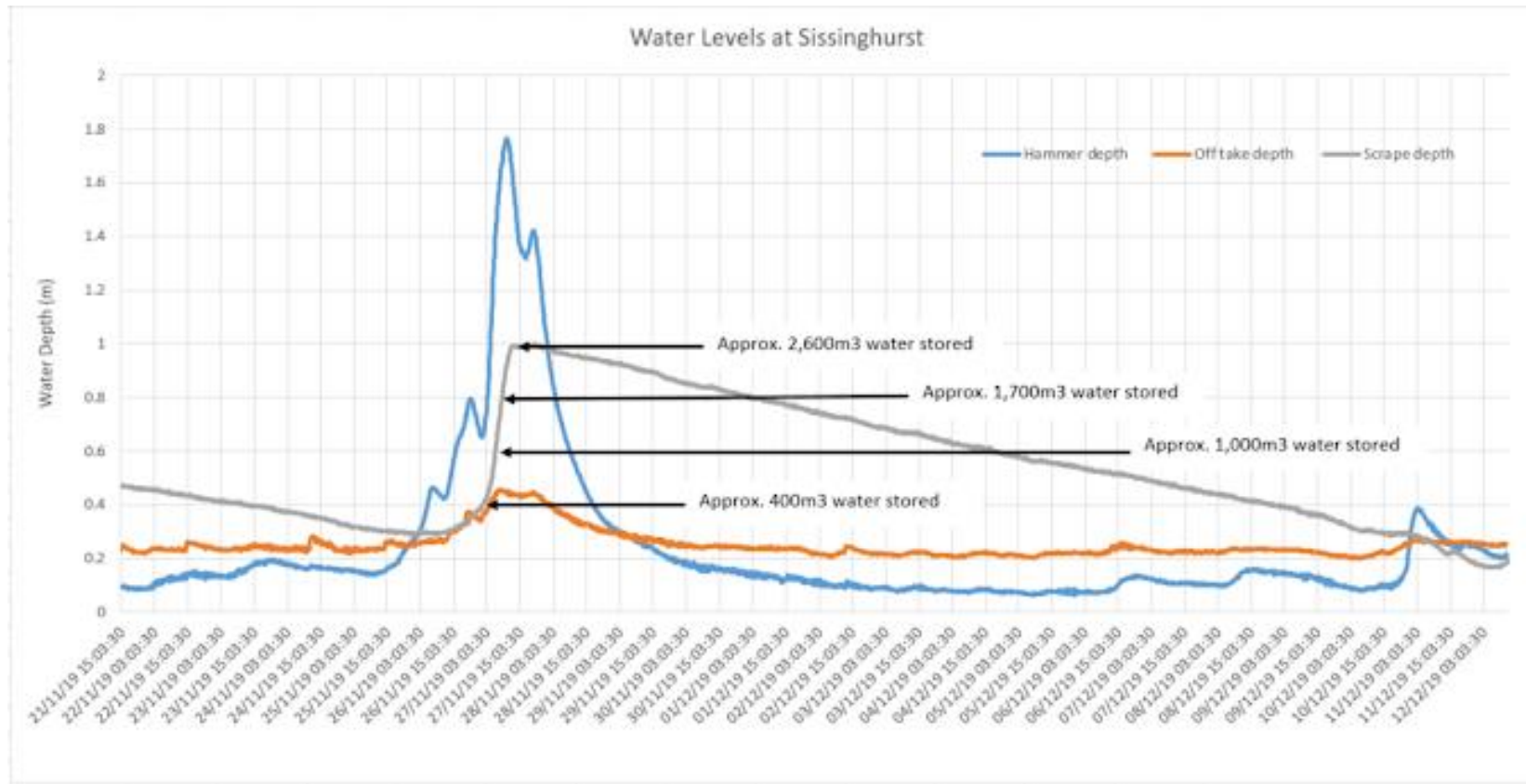
Part of the  
Medway Flood Partnership





# Sissinghurst Castle National Trust

# Medway NFM

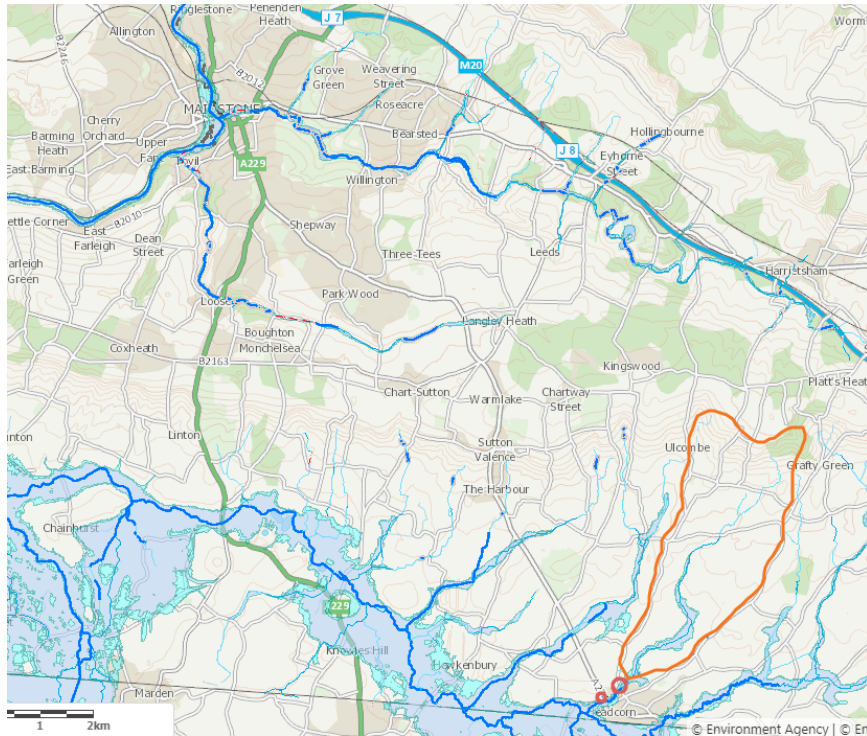


Hydrograph showing storage and emptying of the scheme (grey) as part of the testing on performance versus peak flows on the Hammer Stream (blue)



# School Stream, Headcorn

## Medway NFM



School Stream Project Area



Part of the  
Medway Flood Partnership





# School Stream, Headcorn

Medway  
NFM



April 2019



Typical School Stream appearance



Existing NFM!

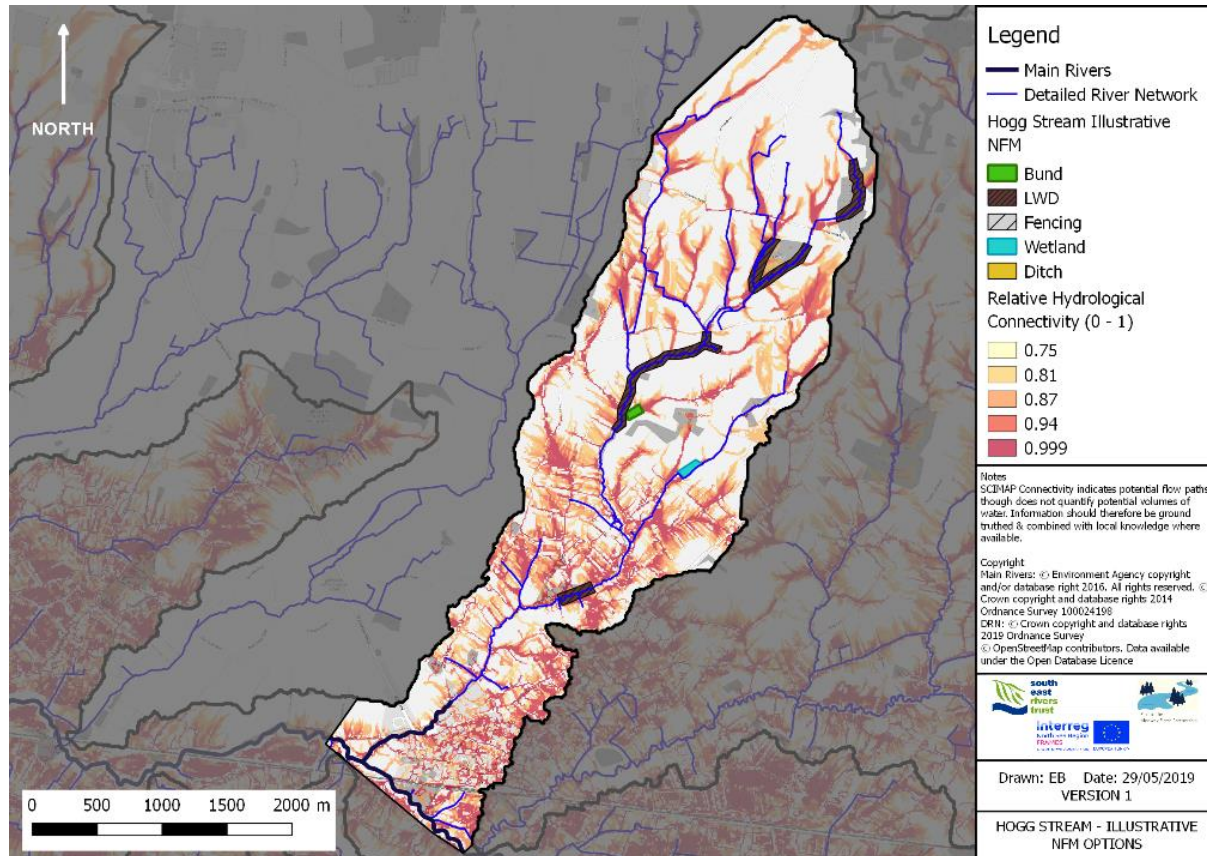


Part of the  
Medway Flood Partnership



# School Stream, Headcorn

## Medway NFM



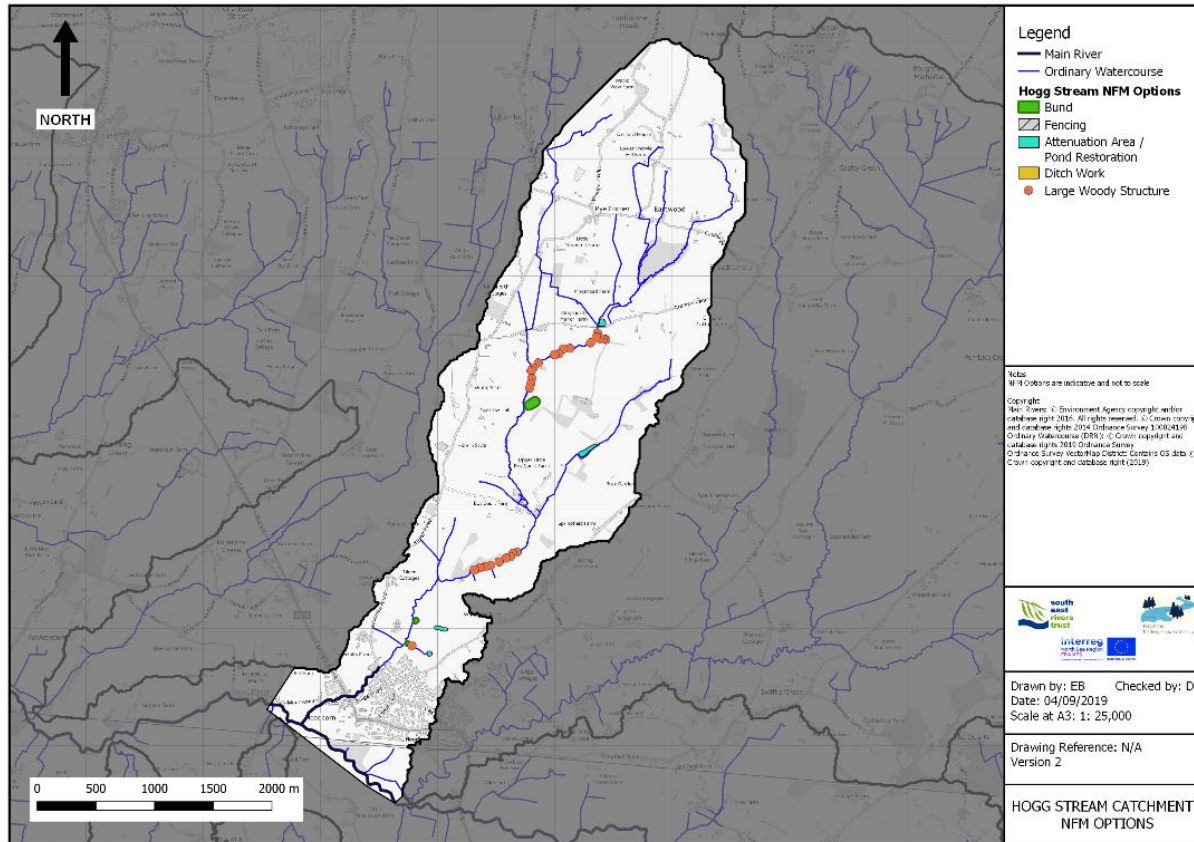
Scimapping – flow paths on the stream catchment as defined by mapping tools





# School Stream, Headcorn

## Medway NFM



Proposals currently under construction demonstrating that there is a lot more that could be carried out in this catchment with future funding and successful engagement/ Environmental Land Management scheme.



# School Stream, Headcorn

## Medway NFM



**Kingsnoad Farm** offline  
pond storage:

Old Pond area before  
construction- former  
pond had virtually gone.





# School Stream, Headcorn

## Medway NFM



Kingsnoad Farm offline pond storage:

Pond area after construction filling up during Storm Dennis.

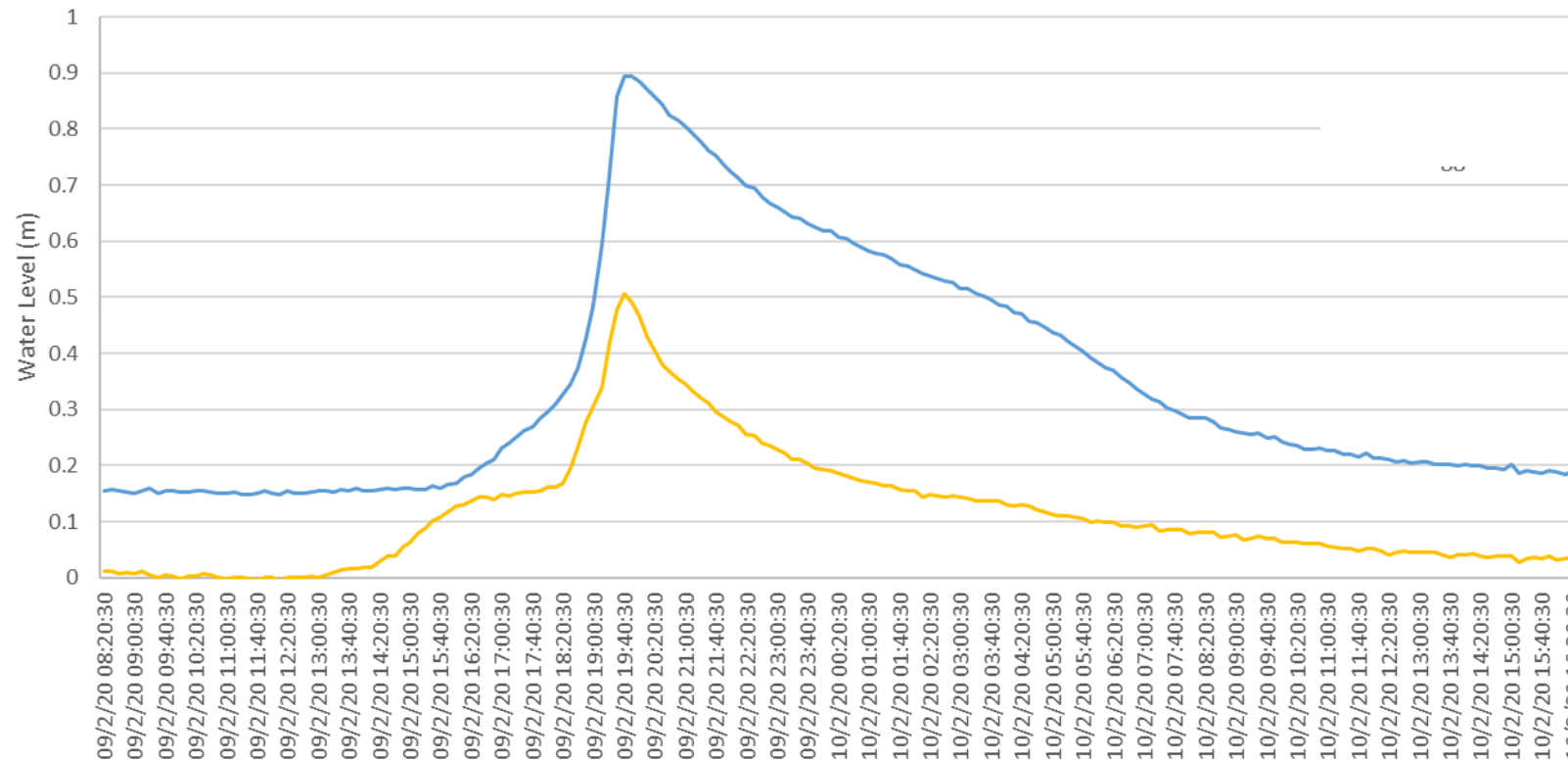
Showing the outfall pipe that drains the feature.



# School Stream, Headcorn

## Medway NFM

Water Levels at Kingsnoad - February 9th/10th Storm



Kingsnoad Farm offline pond storage:

Level loggers demonstrating rise and fall in the stream and the pond.

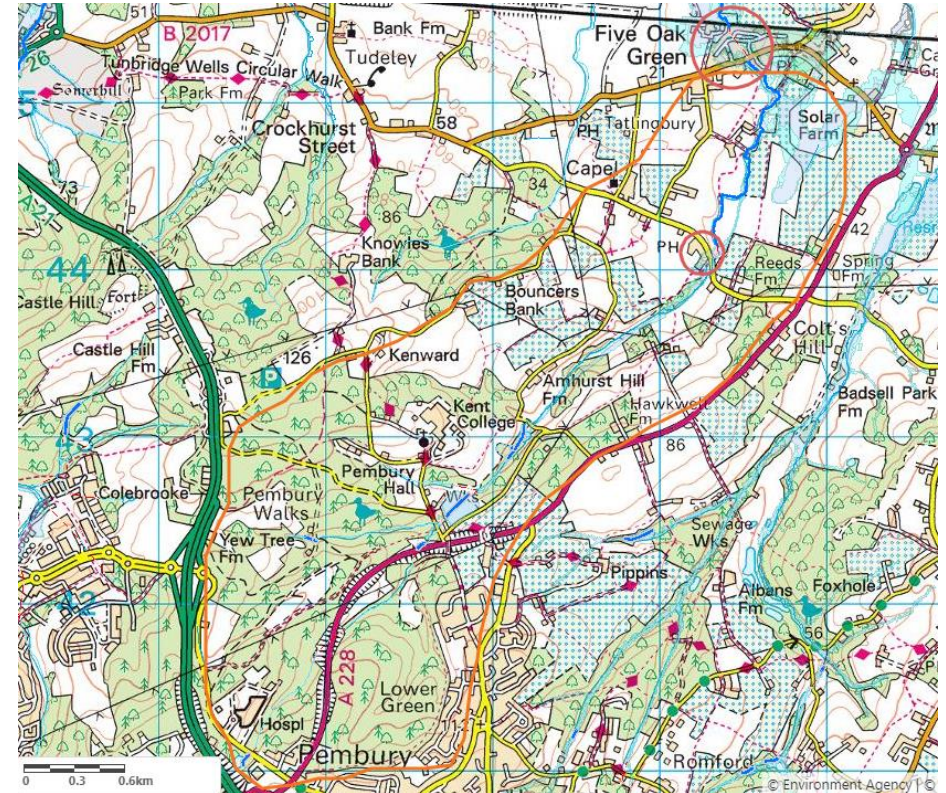
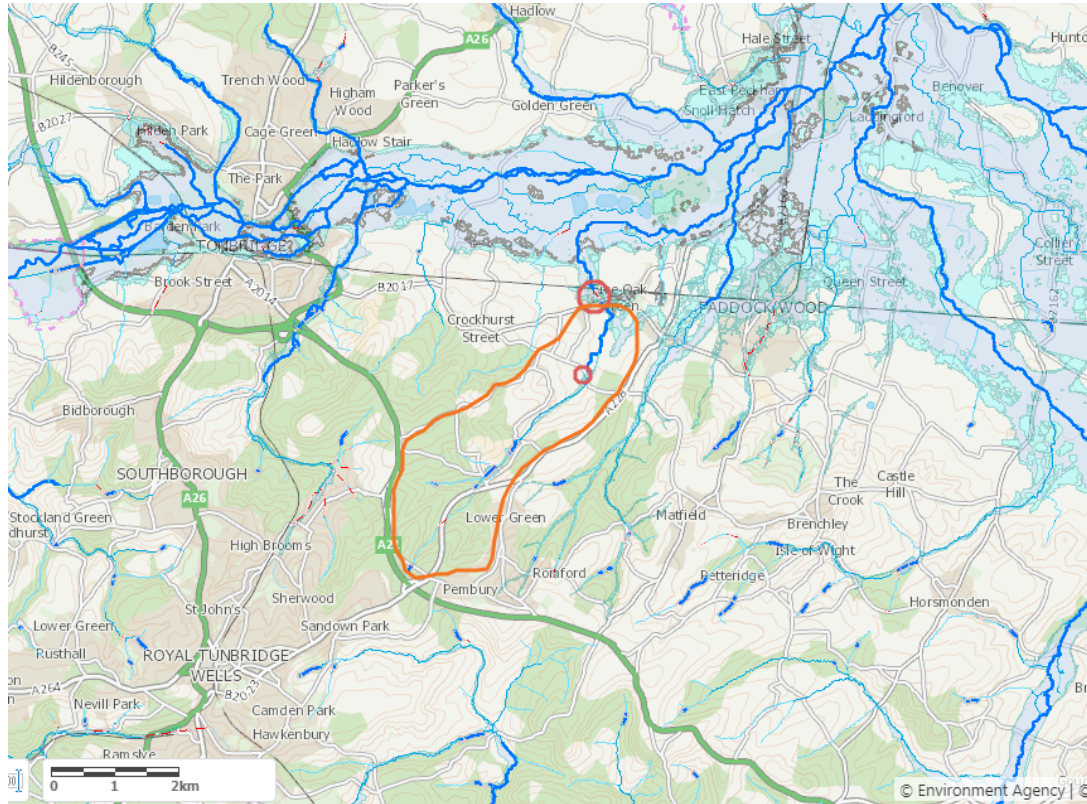
Blue: pond filling  
Orange: levels in the stream





# Alder Stream

# Medway NFM



Alder Stream Project Area



Part of the  
Medway Flood Partnership

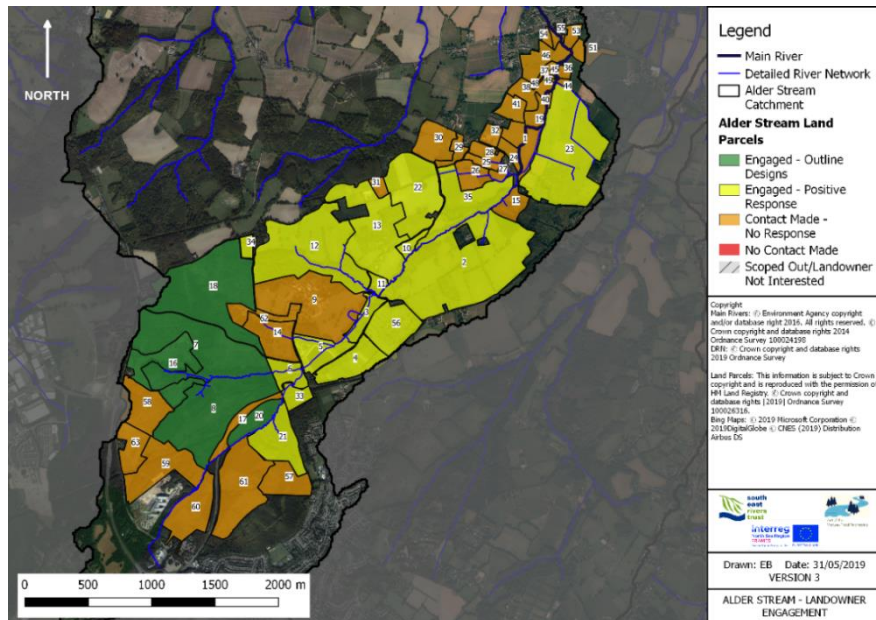




# Alder Stream

# Medway NFM

➔ All landowners engaged with including Hadlow Estate & South East Water



Engagement mapping

Green Hadlow Estates,  
Project mostly complete.

Positive engagement and  
project soon to be delivered  
in Yellow areas

Assessing the Risk



Assessing the Potential Hazards of using Leaky Woody Structures for Natural Flood Management



Part of the  
Medway Flood Partnership





# Alder Stream

Medway  
NFM

⇒ Tudeley Woods RSPB reserve/Hadlow Estate





# Alder Stream

Medway  
NFM

⇒ Tudeley Woods RSPB reserve/Hadlow Estate





# Alder Stream

➔ South East Water land

Medway  
NFM





# Alder Stream

## Medway NFM



### Reeds Farm

Left  
spring/run off flow path where  
measures will be installed to slow  
water & restore the understorey.

Right  
Alder Stream showing where the  
ancient woodland has been cattle  
grazed, denuding vegetation and  
poaching the ground.





## Outputs

- ⇒ Broad range of land managers interacted with and two key demonstration sites that are easily accessible for education/engagement.
- ⇒ SERT will promote the project further this summer as construction finishes, via workshops and other communication tools.
- ⇒ Data will include all flow/level data gathered and locations of all structure, watercourse length altered, and habitat areas improved to determine all the multiple benefits of the project.
- ⇒ End of July draft report will be complete; formal monitoring ends March 2021.



# Legacy

## Medway NFM

- ⇒ Working with range of partners including Natural England, Forestry Commission, National Trust and RSPB is successfully influencing land management beyond the current geographic area, and will do after 2021.
- ⇒ The learning from the Defra pilot projects, and local knowledge must be used to help inform targeting for future land management grants.
- ⇒ There is a large opportunity for authorities to strengthen working together on water management to deliver multiple benefits close to our communities including, more drought & flood resilient farming, carbon offsetting/ Biodiversity Net Gain through habitat creation, landscape and recreational benefits.





# Any questions?

## Medway NFM



Frogmead meadow  
Sissinghurst

*An artist's impression*



Part of the  
Medway Flood Partnership



**Environment  
Agency**