

Breaking barriers and connecting catchments for resilient rivers

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Outline of the presentation



- What are Heavily Modified Water Bodies and why mitigate?
- Reasons for modifications in the New Forest
- Breaking Barriers - Delivering mitigation in the Beaulieu Abbey (Hartford) Stream
- Resilient Rivers and Connected Catchments - Looking ahead to future opportunities

Some definitions.....

Hydromorphology

“Describes the hydrological and geomorphological processes and attributes of surface water bodies. For example for rivers, hydromorphology describes the form and function of the channel as well as its connectivity (up and downstream and with groundwater) and flow regime, which defines its ability to allow migration of aquatic organisms and maintain natural continuity of sediment transport through the fluvial system” – Environment Agency Easinet

HMWB = heavily modified water body

(Target GEP = Good Ecological Potential)

- A water body substantially changed as a result of physical alterations to the hydromorphology by human activity (e.g. managing flood risk),
- **cannot meet Good Ecological Status (GES)**, and restoration measures required to achieve GES have a significant adverse effect on the human activity (e.g. to get to GES would need to remove flood defence = flooding)
- there are no other means of undertaking the activity (e.g. have to defend people and property from flooding using flood defences)
- changes to the hydromorphology are long-term and a substantial change in the character of a water body (e.g. flood defence need long term)

Reasons for modifications in the New Forest

- Flood Protection



- Land Drainage



- Recreation



- Urbanisation



- Water Regulation



“Breaking” Barriers - Beaulieu Abbey Stream



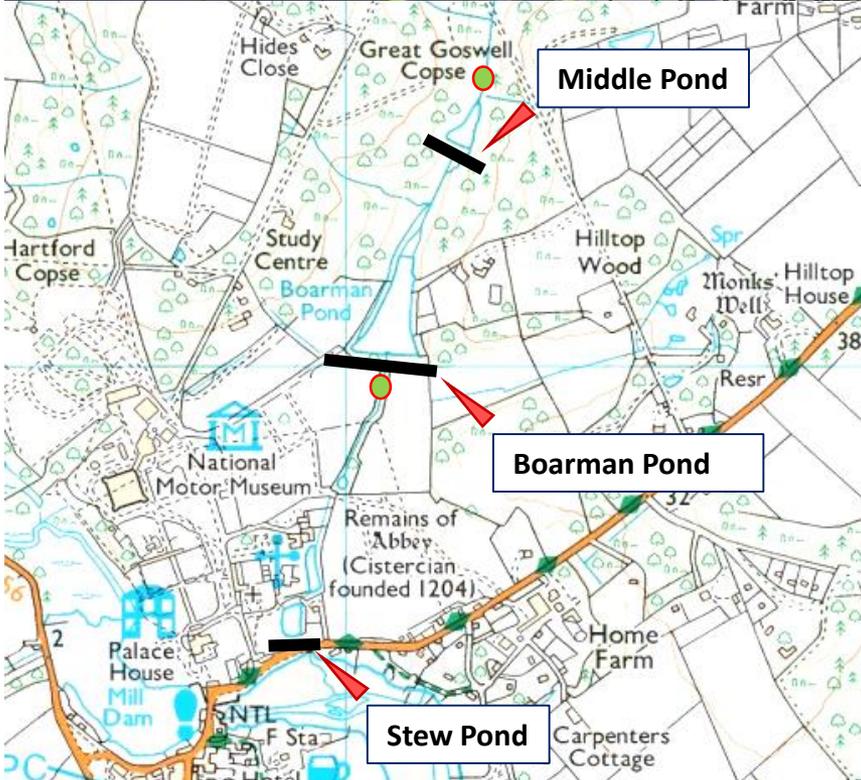
Dammed ponds along course of Hartford
(Beaulieu Abbey) Stream.

Thought to be created by monks of Beaulieu
Abbey as fishing ponds

Create wetland habitat, but present barrier to
fish species and common eel

Three areas were prioritised; the outlets to the
Stew Pond, Boarman Pond and Middle Pond.

Collaborative project delivered through “Living
Waters” as part of Our Past Our Future



Map of the Hartford Stream, showing barriers identified

Barriers to eel passage

Delivering Mitigation Measures



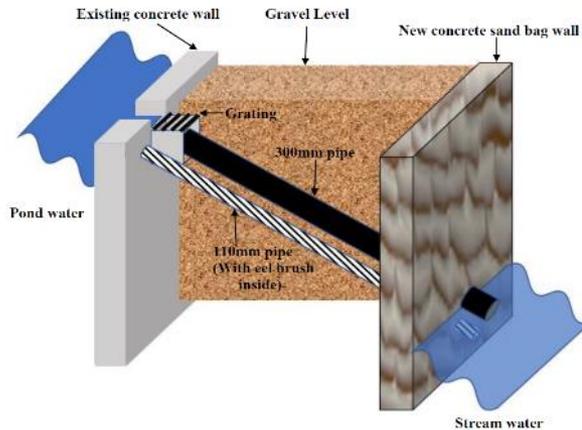
Improving eel passage (while maintaining access for otters and people)

Improving fish passage by removing obsolete structures

Removing non-native invasive species

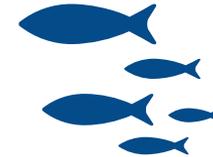
Creating habitat for priority species

Raising public awareness



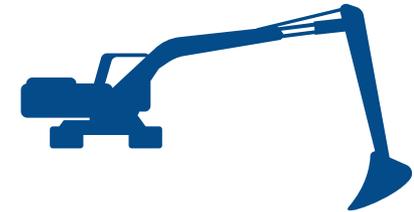
Looking ahead to Resilient Rivers and Connected Catchments

New Forest Fish Passage project



- Langdown Stream, Ocknell Arch, Hatchet Stream, Fletchwood Trib (?)

Sowley Pond and Stream



- Potential for fish easement and sediment management

New Forest Freshwater and Wetland Restoration Strategy



- Developing and delivering the strategy to ensure freshwaters and wetlands are more resilient to climate change and that water dependent Protected Areas meet their target conditions



Challenges & Choices Consultation

On the 24th October 2019 the Environment Agency launched a **consultation** seeking views on the challenges our waters face and the choices we all need to make to improve and protect this precious resource.

The responses to this consultation will help shape the future approach to the management of the water environment and be used to update the existing **river basin management plans** in 2021.

The Challenges and Choices consultation seeks views on:

- ➔ the challenges that threaten the water environment
- ➔ how we can work together to manage our waters
- ➔ who should pay



The consultation...

Opened 24th October 2019 and closes 24th April 2020

- designed for everyone to get involved
- addresses the biggest current & future challenges facing the water environment
- focuses on what can be done about these and the choices we have
- provides the most up-to-date technical position on key areas of work
- asks a range of questions – from those designed to give the public a voice, to detailed questions on specific policy issues
- takes a layered approach to allow everyone to access the level of detail appropriate for them

<https://consult.environment-agency.gov.uk/environment-and-business/challenges-and-choices>