



Connecting the Culm

Connecting communities to tackle flood risk, water quality, wildlife protection and landscape enhancement

Connecting the Culm

Connecting the Culm is a 3-year partnership project being developed to tackle some significant challenges posed by the River Culm and its catchment:

- **650 properties** along the length of the Culm are at risk from flooding and the river also magnifies the flood peak of the Exe in Exeter, putting a further 5000 properties at risk
- The **main railway line** to Devon and Cornwall is affected by flooding on the Culm
- The whole length of the Culm and its tributaries are **failing Water Framework Directive** targets because of diffuse and point pollution and high sediment loads.
- The Culm runs through major **planned development areas**, primarily the proposed 5,000-home Culm Garden Village
- The river is currently **excluded from other initiatives** to work with landowners and communities to secure improvements to the river and the riparian land (eg Catchment Sensitive Farming; Upstream Thinking)
- The river flows directly into and affects **internationally important wildlife habitats** in the Exe Estuary
- The headwaters of the catchment support important **priority wetland mosaic habitats** which could act as natural sponges to reduce flood peaks and ameliorate drought conditions, but these have been degraded
- The headwaters also support **endangered populations** of protected and priority species, including the white-clawed crayfish, which are threatened by poor water quality and the invasive American signal crayfish.
- The river is rich in **heritage value**, notably a chain of historic water mills with their associated leats, but these are under threat and little understood

Our aims

Under the umbrella of the East Devon Catchment Partnership, we have formed a partnership of organisations, each with relevant expertise, to take a coordinated approach to these problems. Our aims are to:

- Make the Culm river and its floodplain more resilient to flood and drought using nature-based systems and approaches
- Improve water quality and biodiversity on the Culm and consequently in the Exe and its estuary
- Establish an engaged and committed community of knowledgeable and empowered citizens that supports the use of nature-based solutions to mitigate and adapt to the effects of climate change

To do this, we will:

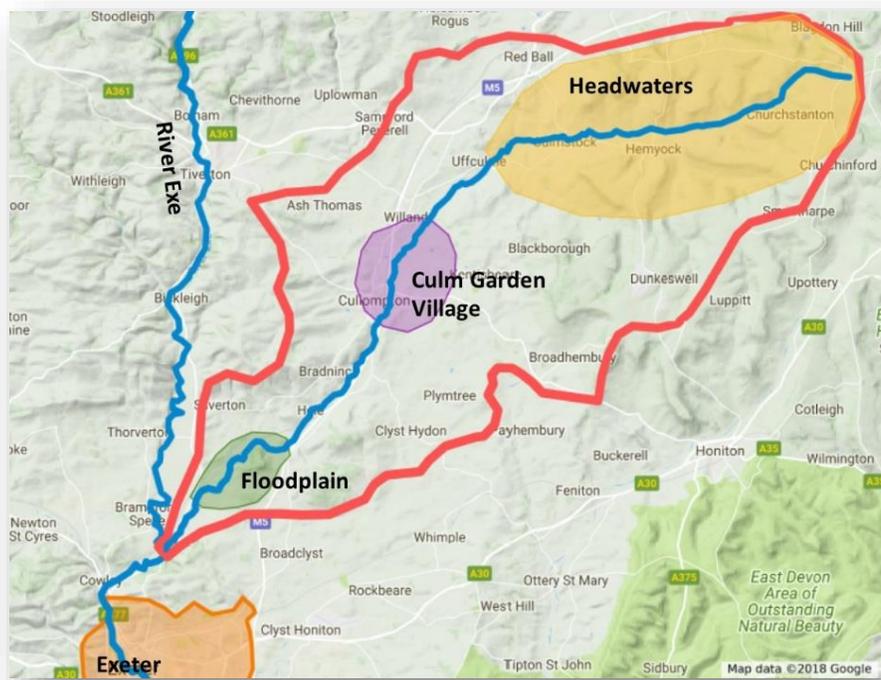
- Improve local people's **understanding of water management** techniques and the function of the river ecosystem as an integrated whole
- Create new opportunities for people to **collaborate in addressing water management**, leading to communities (including land managers) cooperating more effectively to address the challenges created by climate change
- Install tangible demonstrations of appropriate **nature-based solutions** to build confidence, encourage cooperation and raise aspirations
- Develop a **Blueprint for the Culm** that will be the masterplan for the whole catchment for the next 25 years, co-created by the people that live and work within the catchment and the organisations that have a role in the area.

A multi-agency team will work across the catchment to deliver the project, comprising specialists in natural flood management, community engagement and biodiversity.

Our approach will be to work throughout the catchment, engaging with people affected by, or playing a role in, the river and its tributaries. We will hold workshops and training sessions, taking audiences through a phased process of increased understanding, greater empowerment and a desire to bring about change by engaging with the opportunities offered:

- Firstly, using **scenario-forecasting** to explore the potential impacts of climate change on the catchment;
- Secondly, **demonstrating** innovative nature-based techniques that are being developed to mitigate impacts and adapt to the new circumstances;
- Thirdly, **linking** people in to take part in shaping a new governance solution for the catchment –the Blueprint for the Culm

We will create three **Demonstration Zones** where the new techniques will be tested and demonstrated:



- the **Headwaters Zone** – restoring the mires where the river and its tributaries arise whilst conserving the remnant population of white clawed crayfish
- the **Culm Garden Village Zone** – where the first steps in developing a new town will be to construct flood management infrastructure on surrounding land, shaped by a catchment-wide hydrological study
- the **Floodplain Zone** – rewilding the floodplain, working alongside land managers and creating new trails and ecotourism facilities

Each zone will test a range of nature-based interventions, shaped by its landscape and history, its communities and their aspirations. Examples include:

- Adapting old drainage systems to re-hydrate spring-line mires
- Creating leaky dams on streams and drainage channels using natural woody debris to create ponds and silt traps
- Coppicing and laying bank-side trees to imitate beaver activity (that occurs in the neighbouring catchment), improve water oxygen levels and reduce livestock disturbance of the river bed
- Reconnect the river to its floodplain and restore more natural floodplain function on intensively managed agricultural land to create new wetland habitat
- Restoring historic leat systems and ponds that hold flood-peak waters and generating renewable electricity at their outlets

Next Steps

Connecting the Culm is part of an international partnership, with allied projects being developed by teams from Somerset, the Netherlands, Belgium and France. This wider partnership is developing a coordinated €5m bid to the **Interreg 2 Seas Programme**, part of the European Regional Development Fund, to demonstrate how communities can come together to implement nature-based solutions to climate-change related issues.

Connecting the Culm is expected to commence in Spring 2019 and run for 3 years. The cost will be in the region of €930,000, funded partly by a 60% contribution from Interreg and the remainder by partners.

The partnership currently consists of the following organisations and we are actively seeking participation by other key stakeholders, who share our goals.

Blackdown Hills AONB

- lead for communities, wildlife, landscape and heritage in the AONB

Devon County Council

- Lead Local Flood Authority for Devon, managing local flood risk in Devon from surface water and groundwater

Devon Wildlife Trust

- technical advisors on natural flood management, working with beavers, biodiversity and community engagement with nature
- biodiversity and habitat mapping, ecological networks

The Environment Agency

- statutory agency focusing on water quality, flooding and river management

Mid-Devon District Council

- lead authority on the development of the Culm Garden Village
- interest in hydro-power on the Culm

The National Trust

- major property owner and visitor attraction manager with a focus on recreation, floodplain rewilding and sustainability

The University of Exeter

- College of Life and Environmental Sciences, providing technical environmental monitoring expertise

Westcountry Rivers Trust

- specialists in river management and advising land managers in improving water quality and quantity
- extensive experience in community engagement through GIS mapping, voting software and participation workshops

To find out more and how to get involved, please contact

Tim Youngs at the Blackdown Hills AONB Partnership.

Tel: 01823 680682 or email tim.youngs@devon.gov.uk

