

Water Friendly Farming

A joint programme to provide a reality check on the likely effectiveness of sustainable catchment management run by the Game & Wildlife Conservation Trust, Freshwater Habitats Trust, Syngenta Ltd and other partners.

Freshwaters are among our most threatened habitats. In large parts of England clean water has almost vanished, and 75% of rivers and 80% of ponds - which support a critical proportion of freshwater biodiversity in most landscapes - are degraded. Populations of creatures such as salmon, and pollution sensitive water plants - critical for healthy freshwater habitats - have reached all-time lows. Biologically our rivers are showing little recent improvement, and the quality of countryside ponds fell between 1996 and 2007. At the same time we tolerate ever fewer pollutants in our drinking water sources and need to hold back water in catchments to reduce the risk of flooding, and supply water for businesses and people.

A large part of the problem is down to diffuse pollution, the brown water running off from roads, urban areas and farmland. All-pervasive in its effects, we spend millions of pounds each year trying to reduce it, but so far to little effect. A key problem is moving from mitigation that researchers have shown worked in small scale to real, larger, catchment, scale projects. We now urgently need better evidence to show the extent to which the best management practices work in real agricultural catchments.

To tackle this issue the Game & Wildlife Conservation Trust and Freshwater Habitats Trust have teamed up with agrochemical company Syngenta, regulators and water companies to launch a major new research and demonstration initiative – Water Friendly Farming – to find and demonstrate the measures that will make a difference in protecting the water environment from diffuse pollution.

Combining ground-breaking research with a practical hands-on approach, involving catchment farmers from the start, the project is working intensively across 30 km² of typical English countryside, installing a wide range of measures to improve water quality and put back *clean, high quality, freshwater habitats*. Critically, the project is establishing a 2-3 year pre-works baseline first, against which success can be measured, something never done before but crucial to understanding what can be achieved.

What's new about the project that has never been tried before?

- The largest lowland area so far tested experimentally: 3 x 10 km² catchments
- It considers all waterbodies in the landscape: streams, ponds and ditches
- Monitors aquatic diversity (plants, invertebrates, amphibians) and water quality (nutrients, sediment and pesticides).
- Will incorporate the latest catchment mapping and modelling.

The findings of the project will be of relevance to all stakeholders involved in protecting and managing our freshwater environment.

syngenta



anglianwater



Looking across the upper Eye Brook catchment, a typical farming landscape of England.



**OXFORD
BROOKES
UNIVERSITY**



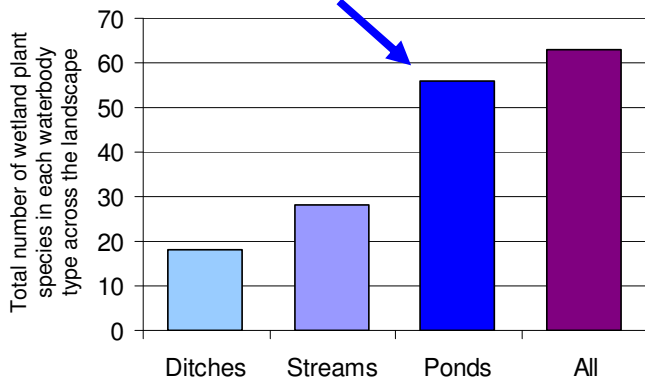
**Chemicals
Regulation
Directorate**



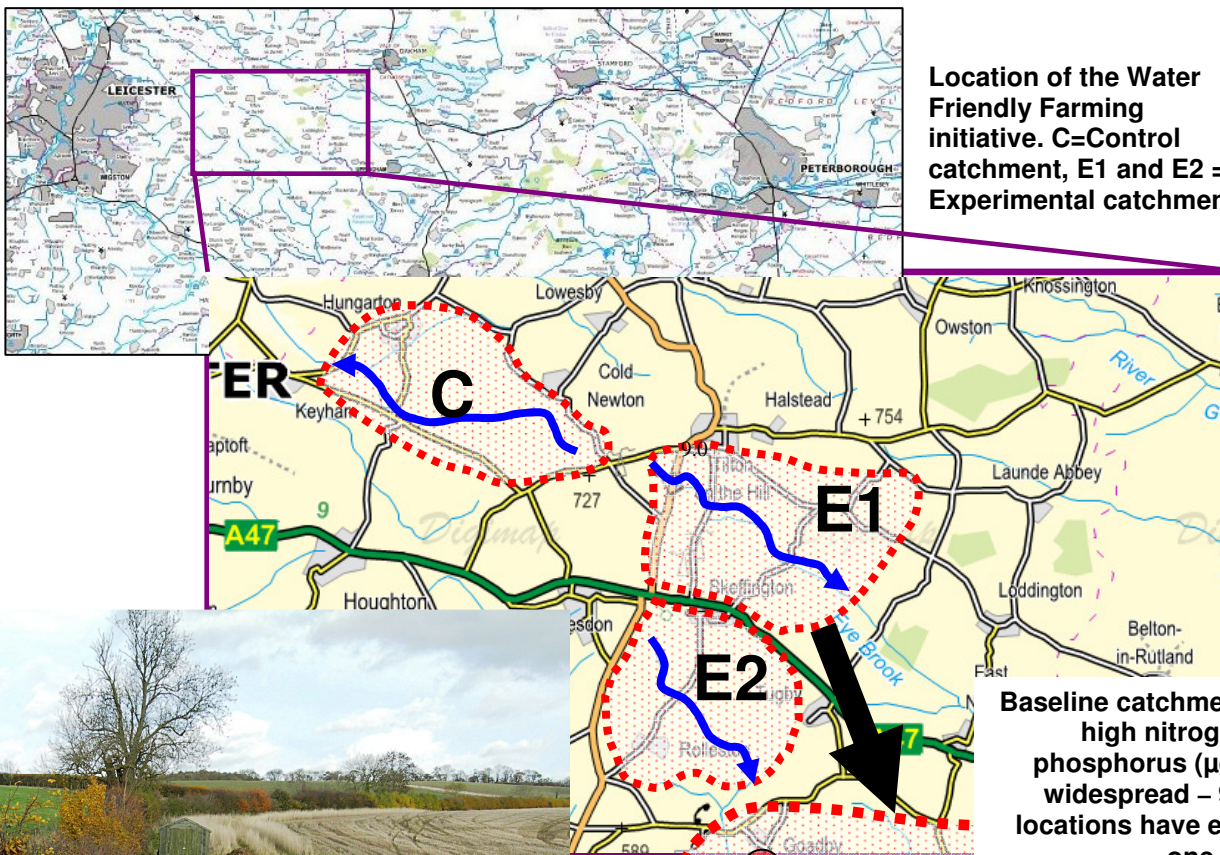
THE UNIVERSITY of York

Project facts and figures

Aquatic biodiversity in the study catchments – measured in terms of variety of wetland plants – is mainly concentrated in ponds



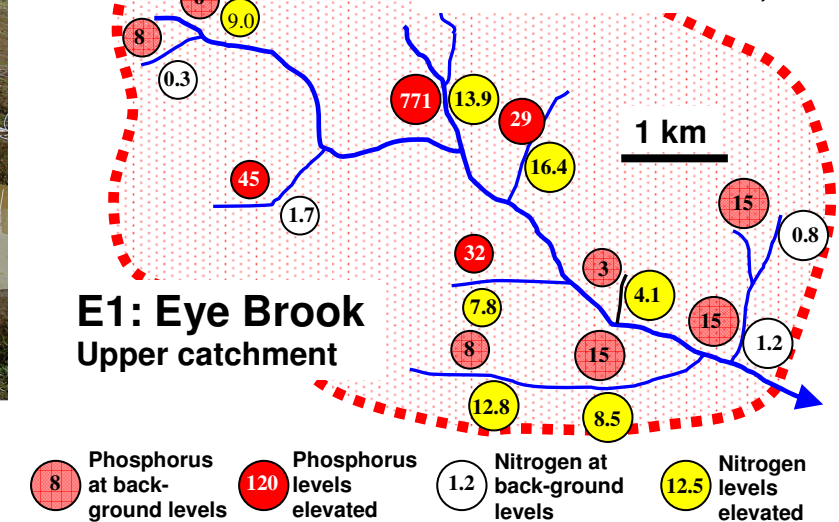
Rural 'brown water': the Eye Brook in flood



Location of the Water Friendly Farming initiative. C=Control catchment, E1 and E2 = Experimental catchments



Phosphorus and sediment trapping ponds at Loddington. These ponds are part of the Defra funded MOPS project



Baseline catchment water quality: high nitrogen (mg/l TN) and phosphorus (µg/l TP) levels are widespread – 95% of sampling locations have elevated levels of one or other, or both