



A clear solution for farmers

CATCHMENT SENSITIVE FARMING

Dorset Stour Catchment Overview

The Dorset Stour catchment is located in the South West of England. It extends from the headwaters of the River Stour at Stourhead flowing South East through Gillingham and Blandford Forum to Christchurch Harbour, where it enters the English Channel. The overall catchment area is about 1,240 square kilometres, with circa 1500 farms. The landscape of the Dorset Stour Catchment varies considerably with the varying geology along the Stour's course. This influences both the river's characteristics and the causes of flood risk across the catchment. The farming interest across the catchment varies in conjunction with the changing soils and topography. Farming ranges from small mixed farms through to intensive dairy units (both large and small) and onto considerable sized arable enterprises.

What is the Problem with Pollution in the Dorset Stour Catchment?

Catchment Sensitive Farming (CSF) aims to tackle Diffuse Pollution from Agriculture (DWPA) in order to meet the objectives of the Water Framework Directive (WFD). It aims to improve water quality and aquatic habitats in order to reach good ecological status of inland and coastal waters.

CSF is a voluntary initiative seeking to reduce the impact of agriculture on watercourses by working with farmers to identify potential pollution risks and practical solutions to minimise these risks.

CSF provides training and advice on practical solutions which fit your farming business. By making voluntarily changes in some farm practices, most of which having no negative effect on overall profitability, diffuse pollution levels could be reduced and the necessity for further regulatory controls or the degree of legislative measures be decreased.

Water quality and diffuse pollution issues in the Dorset Stour Catchment

Water quality in the catchment is impacted by agricultural diffuse and point source water pollution from nitrate, phosphate and sediment which is resulting in poor water quality within the rivers and groundwater.

Catchment Sensitive Farming (CSF) is delivered in partnership by Natural England, the Environment Agency and Defra.



Department
for Environment
Food & Rural Affairs



Environment
Agency



Funding is from the
European Agricultural
Fund for Rural
Development: Europe
Investing in rural areas.



A clear solution for farmers

CATCHMENT SENSITIVE FARMING

Pesticides also have an impact on water quality and are therefore a significant risk if they are able to find a way into our rivers or groundwater. This has an adverse effect on the ecology, habitats and drinking water quality standards.

The main issues arising from agriculture are linked to nutrient management, slurry storage, farm infrastructure and land use. In the Upper Stour catchment the soil type is predominantly heavy clay and prone to water logging and heavy poaching leading to significant run off risk causing sediment, phosphate and nutrient increases in the watercourse.

The Middle Stour catchment has a large area of chalk hills either side of the main Stour valley and the farming interest becomes more predominantly arable orientated and this is similar in the Lower Stour also. Nitrate leaching and also soil erosion are often the main risks in this part of the catchment. The chalk stream river tributaries in this area are of significant importance and will also be vulnerable to the impact of agricultural practices.

The main agricultural linked issues for the Dorset Stour catchment waterbodies are:

- Phosphate, Nitrate, Sediment, Ammonia, Dissolved Oxygen and Pesticides.

In the catchment, we are focusing on reducing sediment, phosphate, nitrate run-off and the impact of pesticides to water quality. The advice programme and capital water grant aim to:

- Improve farm infrastructure, including roofing manure areas, installation of guttering, creating tracks, to reduce run-off and help to separate the clean areas of the farm from contamination by the dirtier areas
- Increase awareness and understanding of the impact of pesticides, especially Metaldehyde, and encourage best practice regards use, storage and application
- Encourage good land management practices, such as reducing soil compaction on grassland, and appropriate treatment of land following maize
- Improve the efficiency of manure and dirty water storage and management to reduce the potential of yard run-off and nutrient loss from risky manure and slurry spreading;
- Reduce potential soil damage and compaction from machinery and livestock access to land during wet soil conditions and reduce nutrient and sediment run-off from grassland and arable land, particularly maize
- Limit the pathways for soil wash entering the river





A clear solution for farmers

CATCHMENT SENSITIVE FARMING

- Reduce poaching of soil by stock gathering at gateways, feeders, and troughs and adjacent to streams.
- Exclude livestock from watercourses

Loss of Nitrate and Phosphate from agriculture to watercourses can result in algal blooms which can adversely affect the water ecology, including fish populations and aquatic plants.

Spreading of slurry and manure to land during adverse soil and weather conditions can lead to increased run-off of nutrients and damage to soil that can lead to enhanced run-off of sediment.

Loss of sediment to watercourses leads to siltation of important salmon and trout spawning gravels and low survival rates and release of phosphate attached to fine soil particles.

Pesticides in water can have environmental and ecological impacts as well as affecting drinking water resources. It is extremely difficult to remove them in the water treatment process which can mean volumes exceed the legislated standard. This situation could put the future use of some pesticides at risk.

Metaldehyde levels in the Stour have exceeded the maximum 0.1 parts per billion (ppb) standards for drinking water, which is the threshold for the majority of individual pesticides. It also demonstrates frequent traces of metaldehyde found in the water. CSF is working in partnership with Bournemouth Water to raise the awareness of the issue and associated risks to water quality.

Catchment Sensitive Farming (CSF) is delivered in partnership by Natural England, the Environment Agency and Defra.



Department
for Environment
Food & Rural Affairs



Environment
Agency



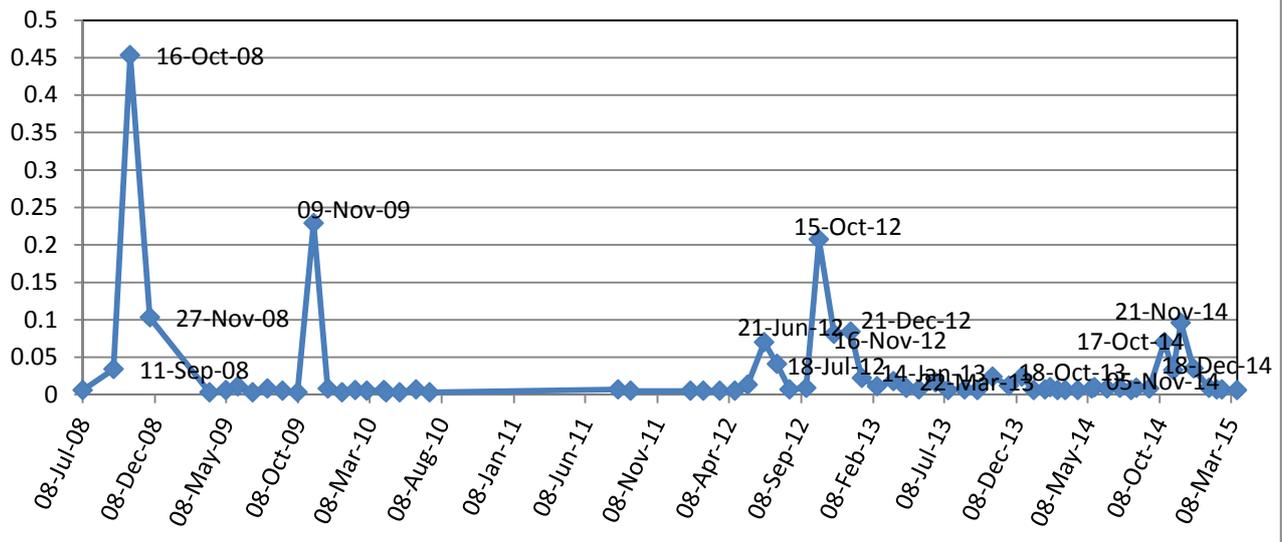
Funding is from the
European Agricultural
Fund for Rural
Development: Europe
Investing in rural areas



A clear solution for farmers

CATCHMENT SENSITIVE FARMING

River Stour Metaldehyde ($\mu\text{g/l}$)



Catchment Sensitive Farming (CSF) is delivered in partnership by Natural England, the Environment Agency and Defra.



Department
for Environment
Food & Rural Affairs



Environment
Agency



Funding is from the
European Agricultural
Fund for Rural
Development. Europe
Investing in rural areas.