

# Hydromorphological Harm

Information for our professional partners

August 2015

## What is Hydromorphological Harm?

*Hydromorphology* refers to the physical characteristics of a waterbody; namely the shape, sinuosity and form of a river as made up by the banks and bed.

*Harm* (as defined by the Water Resources Act) is any adverse impact that could affect the Water Framework Directive (WFD) status of a waterbody except those caused by pollution.

In Essex, Norfolk and Suffolk harm is normally caused by dredging the bed and banks with the intention of aiding land drainage. This is different from the sustainable management of rivers involving well planned and carefully executed de-silting and weed-cutting work.

## How do I recognise it?

- Fresh bed or bank material (e.g. gravel) deposited on the banks of the river
- Dead fish or other aquatic organisms on the banks (e.g. freshwater mussels)
- Loose vegetation deposited on the banks or a channel clearly stripped of in-stream vegetation
- Large woody debris (e.g. fallen trees and branches) that looks like it has come out of the river deposited on the banks
- Bare, steep earth banks containing digger-bucket marks or signs of recent machine activity (e.g. caterpillar tracks)



These photos show a couple of examples of hydromorphological harm in East Anglia where bank and bed material has been removed from the river – the sort of damage we are keen to avoid.

customer service line  
03708 506 506

incident hotline  
0800 80 70 60

floodline  
0345 988 1188

[www.gov.uk/environment-agency](http://www.gov.uk/environment-agency)

## What problems is hydromorphological harm causing?

- Destruction of protected species and their habitats
- Contravenes a suite of legislation including Wildlife & Countryside Act 1981, Water Resources Act 1991, Water Environment (Water Framework Directive) Regulations 2003 and the Conservation of Habitats and Species Regulations 2010
- Long-lasting environmental damage – the gravels in many of our rivers are crucial to spawning fish. They are a remnant from the last glaciation and in our lowland rivers the natural processes that will lead to their replenishment could take thousands of years
- It may lead to deterioration in the Water Framework Directive (WFD) status of a water body
- Potentially increases flood risk to land and property

## What will we do about reports of hydromorphological harm?

We will treat all cases as environmental incidents and investigate accordingly. We will visit the site and gather evidence, before considering enforcement options.

River maintenance and dredging is an emotive subject with landowners, and in the past river management has often worked against natural processes. However, in recent years a growing body of scientific evidence has demonstrated that a more naturally functioning river system will often afford greater flood protection to people and property and provide significant benefits to wildlife, water quality and landscape value as well as reducing the cost to the public purse of managing our rivers.

We review our maintenance programme based on the level of flood risk to people and properties in the catchment and where possible undertake minimal vegetation clearance both in the river channel and on the banks. This helps to maximise the amount of wildlife habitat that can remain whilst maintaining effective conveyance of water and land drainage.

This has meant that in recent years we have not done as much routine maintenance work as we used to do in various places across the country. Some landowners had come to expect this work and are not aware of the reasons behind our change in approach. In some instances this has led to landowners feeling the need to dredge rivers which in a few cases has caused hydromorphological harm; something we are very keen to work with them to avoid.

For further information on this topic please speak to Andrew Raine 01473 706597. However, please report any incidents of hydromorphological harm to our incident hotline on **0800 80 70 60** (this number is available 24/7).

