Dredging or desilting?

What is dredging and desilting?

Dredging and desilting are ways of clearing rivers to help water flow more easily. Over time, fine gravel, soil, and other materials wash into rivers from surrounding land and settle on the riverbed. This build-up of silt can slow the flow of water.

Dredging is a big task. It involves removing a wide range of materials and sometimes makes the river channel deeper or wider. Because it's more complex, dredging happens less often.

Desilting is a smaller, more frequent job. It removes recent deposits of silt to bring the river back to its normal bed level.

Historically in the England, dredging and desilting were done for many reasons such as draining land, powering mills, extracting sand and gravel, improving navigation, and reducing flooding. However, these activities sometimes caused unintended problems, like increasing flood risk downstream.

Does dredging and desilting prevent flooding?

On their own, dredging and desilting are rarely the most effective or sustainable ways to reduce flood risk. In fact, they can sometimes make flooding worse for communities downstream by speeding up the flow of a river shortening the time it takes for water to travel downstream. As a result, floodwaters reach communities more quickly and in larger quantities.

Rivers naturally collect silt again very quickly, sometimes just weeks after dredging. This is especially true for tidal rivers, where every tide brings in more silt. Any extra capacity created by dredging is usually short-lived.

Historic evidence and modelling show dredging can also cause problems like increasing erosion, weakening flood defences and bridges, and harming wildlife habitats.

During major floods, dredging offers very little benefit. The extra depth or width it creates is too small to hold the huge volumes of water, so flooding still occurs. While dredging can lower water levels during normal flows, the effect is minimal during high flows when rivers are already full.

Why doesn't the Environment Agency do more dredging?

We do dredge and desilt where it makes a real difference. In 2023/24, nationally we spent about £7 million on these activities, alongside £38 million on other river maintenance like clearing weeds and blockages.

Before we dredge, we carefully assess will it reduce flood risk, is it sustainable and cost-effective, and what's the environmental impact?

If dredging meets these, we do it. If not, we focus on other measures that work better and cause less harm to the environment.

What's the impact on the environment?

Dredging and desilting can seriously harm river habitats. For example, it can destroy fish spawning grounds, make riverbanks unstable, and it can stir up silt leading to a reduction in oxygen in the water and release harmful chemicals. Additionally, removed silt can be hard to dispose of, especially if it's contaminated.

We always check for environmental risks before starting work and aim to improve habitats or minimise harm wherever possible.

How else do we reduce flood risk?

Managing flood risk across the whole river catchment is far more effective than relying on dredging alone. Here's what we do:

- Flood defences: Walls, embankments, and temporary barriers keep water in the river channel.
- Flood storage: We create areas to hold excess water upstream, like parkland, so it doesn't rush downstream.
- Natural flood management: Planting trees, restoring peatlands, and building leaky dams slow water flow.
- Urban solutions: Working with councils to add ponds and green spaces that soak up rainwater.

What can you do?

Across the country, we work closely with other Risk Management Authorities such as local authorities and Internal Drainage Boards to manage flood risk. However, flooding can't always be prevented, so it's important to be prepared.

That's why we need people to know their risk. We encourage everyone to check online if they are at risk of flooding, sign up for flood warnings, and if they are at risk, know what to do when flooding hits. You can find this information here: https://www.gov.uk/flood

Householders and business owners can also take other action to protect their property, such as installing Property Flood Resilience (PFR) measures found here: https://www.ciria.org/resources/free_publications/cop_for_pfr_resource.aspx

These can include flood doors, airbrick covers, and flood-resistant coatings on walls. These help to either keep water out of properties or allow a quicker return to normality after flooding.

Who can I contact for more information?

If you would like further information on riparian ownership, please use the contact details below:

Post - National Customer Contact Centre PO Box 544 Rotherham S60 1BY United Kingdom

Email - LNenquiries@environment-agency.gov.uk

Telephone - 03708 506 506 (Monday to Friday, 8am-6pm)

Incident Hotline - 0800 80 70 60 - to report flooding, blockages, pollution, unusual changes in flow of water, collapsed or badly damaged defences (24-hour service).