

Naturalising Norfolk's chalk rivers



Chalk river by Jonah Tosney

Salix has helped the Norfolk Rivers Trust to improve wildlife habitats on the chalk River Babingley at Hillington near Fitcham, and Nar at Pentney, near Kings Lynn.

Jonah Tosney, Norfolk Rivers Trust's Nine Chalk Rivers Project Manager, explains:

"There are now only around 200 true chalk streams left in the world, of which 15% are in Norfolk.

Rainwater soaks through chalk ground and, cooled and filtered by its journey through the chalk, emerges at a constant temperature and with a clear and alkaline quality, providing a perfect, gentle habitat in which everything grows abundantly."

Products Used

- Brushwood faggots
- Locally sourced Large Woody Deflectors
- Locally sourced gravels

“Sadly the World Wildlife Fund’s recent ‘State of England’s Chalk Streams’ report says that 77% of our chalk streams are failing to meet the Good status required by the EU’s Water Framework Directive.

We are working with the Environment Agency, Natural England and WWF to deliver a programme of river restoration measures to improve nine of our chalk stream habitats in Norfolk.”

River restoration work on the Babingley, Hillington

Despite centuries of modification, the upper Babingley remains one of the finest, clearest and cleanest stretches of chalk river in Norfolk, providing habitat for eels and migratory freshwater fish, including bullhead and brook lamprey, as well as water plants, crayfish and waterway mammals, like water voles and otters.

It’s also important for birds like buzzards, barn owls and kingfishers, and invertebrates like damselflies and dragonflies.

The river has been straightened and controlled in places using steep man-made banks and weirs, and it suffers from silt build-up from local roads and farms. A more uniform habitat has been created which can be exploited very well by a small number of species, but exclude many others associated with chalk rivers.



Barriers created by old structures



River being reprofiled





Following surveys by cbec eco-engineering, Salix started river restoration work on the River Babingley in February, undertaking a series of measures to improve the river's flow and biodiversity through this reach, making it more natural again.

Salix removed the wing wall and lowered a sill at a brick weir to improve river continuity and make it easier for fish to pass through. We also used local timber and gravel to reshape a 250 metre stretch of the river's profile, creating a more diverse range of passages and variations in water movement.

The wood and the gravel also provide places for fish to hide from predators and seek shade from the sun, and offer another habitat layer for invertebrates.



Woody deflectors in place



Brushwood faggots and Large Woody Deflectors (LWD) installed on the Nar

Improving hydraulic variability on the River Nar

Salix has also worked with the Norfolk Rivers Trust and cbec to deliver habitat improvements on the SSSI River Nar.

A 440-metre section of the river's channel was re-graded using gravel, several pools were excavated, the banks were re-profiled and large wood features were introduced to create more variance in the river's profile.

Emily Long, of the Norfolk Rivers Trust, says: "Chalk streams are globally rare river systems and the River Nar is arguably Norfolk's most unspoilt and beautiful chalk river.

"These works are part of a plan designed to help us preserve and enhance its rich and diverse ecology, to achieve what is termed 'Good Ecological Status or Potential' under the European Water Framework Directive."



Reprofiling of river bank



Aerial shot of the River Nar