

Montacute's new home for nature

A major project in Montacute's parkland, funded by Somerset Rivers Authority, will provide a new home for nature as well as mitigating flood risk to the village and communities further downstream of Welhams Brook. Mark Musgrave, Lead Ranger, takes an in-depth look at the scheme.

Background

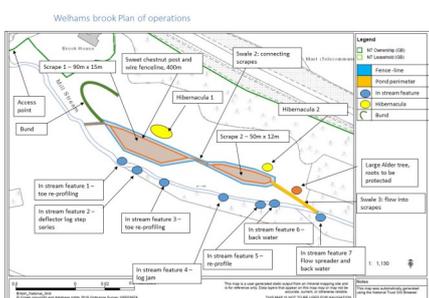
In 2017 Gordon Swindells, Martock Flood Prevention Officer, approached the National Trust in order to propose a Slow The Flow scheme on Welhams Brook. It would form part of wider measures to hold water back and help to reduce flooding in built-up areas.

Welhams Brook has its source in Lufton and becomes part of the Parrot River catchment, with its mouth in the Bristol Channel. The scheme at Montacute aims to help alleviate flooding in Martock, Mulchelney and Langport.

It began two years ago with a series of woody (or leaky) dams on Welhams Brook in Mill Copse. But this autumn's works were much bigger.

How the scheme works

The map below shows how the project was planned,



utilising as much floodplain as possible. At the eastern edge of the field, just inside Mill Copse, a 'slow spreader' was installed using alder trees felled in the woodland. This



was laid across the river 3ft above the base flow rate, meaning that when the water rises it will be deflected into a swale (or ditch), and then into the first of two ponds.

The ponds are connected by another swale and designed to fill one after the other. The maximum depth is 1.2m and both are shelved and graded. The soil is heavy clay, so will retain water well.



The swales and top edges of the ponds were lined with hemp matting to stabilise the

soil before vegetation grows up, and a wetland wildflower mix spread along the upper shelves to aid this process.

The ponds will hopefully benefit reptiles such as grass snakes and amphibians including newts and frogs.

There isn't an single exit for the water. Instead, it will disperse slowly along the grass and find multiple routes back into the river.

The ponds are fenced to allow grazing in the rest of the field when the grass has recovered



in 2021. At the end of the field a bund was created, a last line of defence for very high water flows.

What about the wildlife?

Tree felling along the banks of the stream will allow more light, helping riparian plants and invertebrates such as dragonflies.

The logs and brash from the trees, as well as the spoil from the ponds, have been used to

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create two hibernaculars – basically, huge bug hotels. These are used by overwintering animals such as reptiles and amphibians, as well as birds, bees, small animals and insects; so less like a bug hotel and more like a Noah’s Ark hotel!



I have approached the Somerset Reptile and Amphibian group to survey what emerges next spring. And I can survey the ponds and river myself in years to come for all manner of species including otter, water vole and kingfisher.

In-channel features

There are also in-channel features to diversify the river, store water in the channel itself and benefit wildlife.

In three different places the banks were reprofiled to allow more marginal habitat.



A back water was created to provide a refuge for fish at times of fast river flows, as well as a place for spawning frogs. This photo (above right) shows it already in



action after the recent heavy rains.

A leaky debris dam was installed to slow water during



high water flows only and enable water to be retained in the back water and reprofiling just up stream of it, while



these log deflectors (below) are designed to slow and diversify the current when the water is high, and act as perches for dragonflies and kingfishers when levels drop. The logs may also be used by otters to mark territory.

Follow up work

We will be visiting the river in full spate to see the flow spreader in action, and plan any tweaks and adaptations that will make it work better.

There will be lots of wildlife surveying. As the land recovers from the heavy machinery it will revegetate, and through a combination of grazing and mechanical intervention the Ranger team will keep scrub and trees at an ideal level to benefit the aquatic habitat.

We plan more coppicing in Mill Copse to allow more light to the river, and will use the debris to create more leaky dams, with logs left on the ground to make the woodland as ‘rough’ as possible. This not only slows run off into the river, but also provides more habitat for wildlife.

There is no public access to the field in order to allow the wildlife to thrive, but you can see the work from the other side of Welhams Brook if you take a walk in the parkland.

