

Fennells Wood
High Wycombe, Buckinghamshire
Optimise Water LLP (working on behalf of Thames Water)

BIG Biodiversity Challenge Award category: Small Scale Permanent Award

Project overview

This project resulted from a burst of an existing clean water pipeline located in Fennells Wood, a semi-natural ancient woodland site located in the Loudwater area of High Wycombe.

The burst occurred in an uphill part of the woodland and water flowed downhill, collecting topsoil and silt, causing significant damage to both the ancient woodland and flooding to residential properties at the bottom of the hill.

The water flowing downhill had carved a gully in the ancient woodland, which exposed tree roots and displaced valuable topsoil from the ancient woodland.

Optimise opted to reinstate this gully with 'ancient woodland friendly' top soil and sub soil sourced, after some research, from a nearby quarry known to have very similar soil conditions matching the geochemistry and organic content of a typical Chilterns ancient woodland.

What were the biodiversity conditions on site, prior to the enhancement?

Fennells Wood is a designated semi-natural ancient woodland, dominated by beech and comprising a varied understorey and ground flora assemblage, which is valued by locals as a public footpath passes through it.

Were there any specific conditions that led to you carrying out this work?

There were no town planning or other environmental duties to undertake the reinstatement work, other than meeting the expectation of the landowner. This mitigation work was carried out in part due to Thames Water's asset standard, which states that impacts to ancient woodland should be minimised, but also a voluntary commitment from Optimise that the environmental damage should be mitigated.



The water pouring from the pipeline burst in Fennells Wood gouged a gully in the ancient woodland, as pictured above.

What were the biodiversity measures taken?

Optimise could have taken an 'easy route' and used ordinary topsoil to reinstate the ancient woodland, which would have been at a much smaller cost. However, it was recognised that the topsoil in an ancient woodland is its most valuable asset and that it was our responsibility to restore the woodland to its former state.

During the course of the project, the Optimise environmental consultants engaged with the project team to ensure that the benefits of this action were understood.

As part of these works, a veteran tree had to be cut down as the leak underneath had caused potential stability issues. To compensate for this habitat loss, the wood from this tree was cut into small logs and piled to create refugia for reptiles and beetles.

A specialist landscape contractor was then engaged to identify appropriate sources of top soil and sub soil and to apply this to the trench.

Local residents had reported issues with the footpath being excessively muddy and slippery during wet weather. A hard-standing aggregate footpath was favoured by the Council, however, Optimise successfully persuaded the Council that bark chippings, paid for by Optimise, would be the more sustainable solution.



Photograph taken immediately after the reinstatement of the gully in the ancient woodland.

How would you best describe the project?

Mitigation

Further information

This scheme requires no on-going maintenance.

The long term benefits are the continued function of the woodland as a high quality ancient woodland; enhanced community enjoyment of the ancient woodland through Optimise's provision of a more suitable and sustainable bark chipping footpath; and the potential for enhanced reptile populations on-site.

A tip for similar schemes would be early engagement with all stakeholders to ensure that a common vision for the woodland is held. Ensure that stakeholders are kept up to date with the mitigation works. And to keep the weather in mind when carrying out the mitigation as it can get muddy!



Photograph of reinstated area of woodland taken six months after reinstatement

What was your personal motivation for carrying out the enhancement?

My personal motivation for the scheme was to make sure that the damage that had been caused by our piece of infrastructure was fixed in the responsible and right way, not the quickest and cheapest way.