Werrington Brook Improvement Scheme
Werrington, Peterborough, Cambridgeshire
Environment Agency, Peterborough City Council, Peterborough Environment City Trust & RiverCare

BIG Biodiversity Challenge Award category: Community Engagement Award

Project overview

Our project's objectives were to improve the water environment of a watercourse that runs through industrial and residential areas of Peterborough, before flowing into a man-made lake at Cuckoo's Hollow in Werrington. The brook currently lacks energy, natural features and resilience. Improvements have included the introduction of berms, pools and riffles resulting in increased flows, meandering watercourse, reducing sedimentation and increasing biodiversity.

Working with our partners Peterborough City Council, Peterborough Environment City Trust (PECT) and River Care, community engagement is a key to creating long term naturally sustainable benefits for both the community and wildlife.

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

The original water course had steep banks, straight and over-widened. It was uniform in size, and shape with steep banks. There was little flow, low oxygen levels and limited plant life on the banks. Maintenance regimes resulted in low banks biodiversity with a low abundance of pollinating insects.

Were there any specific reasons that led to this project?

The Water Framework Directive requires rivers to reach certain standards. This heavily modified, urban water has a moderate status and sediment issues resulting in high maintenance requirements. The course of the brook runs through numerous public amenities. A key partner objective was to create a long term legacy of community involvement, a reduced
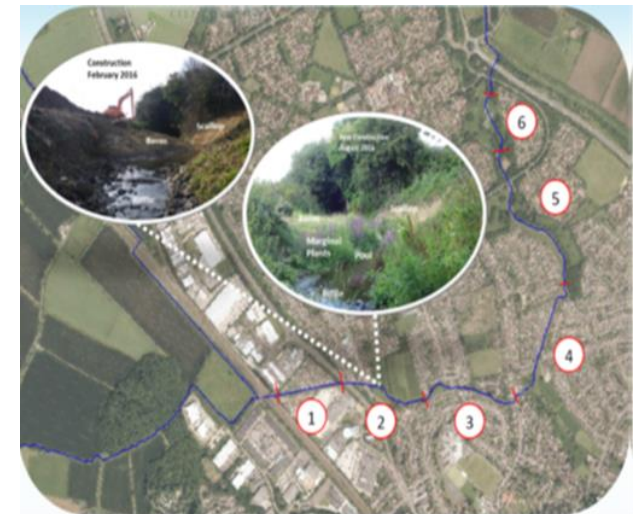
Werrington Brook improvements Location map and before / after pictures. (Google Maps, Satellite Image)

need for maintenance and an increased resilience within the watercourse to climate change and pollution incidents.

What were the biodiversity measures taken?

The work was carried out in partnership with the EA operations team, who have the long term ownership of the brook. Their input at an early stage enabled the design to include access strips for maintenance where land permitted. This involved reducing the bank height and gradient generating surplus material for use in the berms further down the reach. This also helped bring light into the area and enable a lower level strip of ground which has been planted to encourage flora and flora this also provides public access closer to the water's edge.

The new features in the brook are positioned to best enable the brook to cope with incoming outfalls or where there is an opportunity to encourage people to interact with the brook, this includes placing riffles where informal crossing points are evident.

The in-brook improvements helps trap sediment in the pools which can then be targeted as areas for maintenance in the long term, along with being valuable habitat and refuge for fish when water levels are low. The riffles increase oxygenation and bind target pollutants, specifically orthophosphate.

The in river improvements and bank works simulate naturally occurring features to transform a uniform modified water course into a meandering stream of variable depth and width.

The watercourse plays a key part in the city's wider approach to biodiversity and the creation of green corridors through other projects such as the Forest for Peterborough. Project surveys have shown strong public association with green space, blue corridors and personal health.
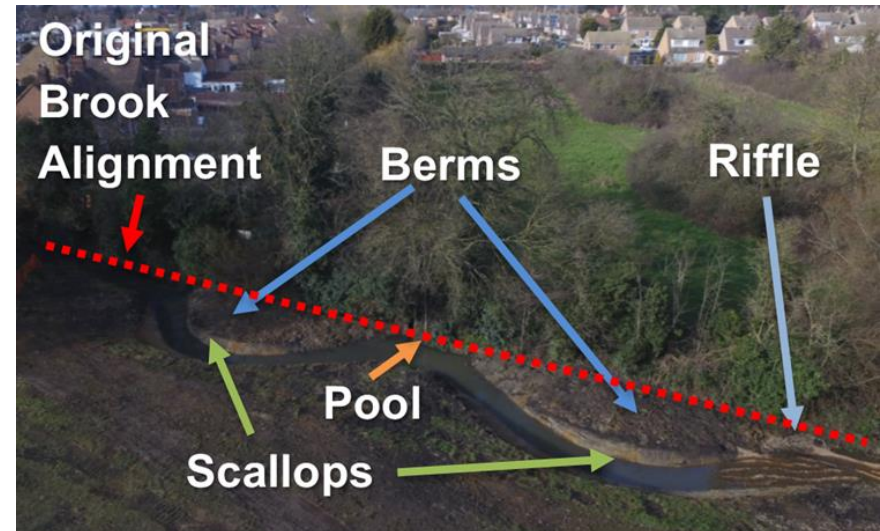
Design Features To Improve the Watercourse (Hastings Road Reach)

Through PECT's promotion and the actions of River Care community groups are now regularly involved in maintaining and monitoring the brook and it's immediate environment.

Our workforce have also grown in their understanding of the requirement for the work and what the changes can achieve. Increased engagement within the team means they are all happy to spend time chatting about the project when approached by curious members of the public.

How would you best describe the project?

Enhancement

Further information

The project team have been able to develop a solution that allowed for increased access to the waters edge by reducing the incline on the banks where space allowed and providing not only an access strip for safer maintenance but also for the local community to access the waters edge and enjoy the amenity. This access strip also provided the material for the construction of the new berm features along the reach. Other than the stone material for the riffles no other material was imported.

The access strip was constructed with a long reach excavator and where space was limited a smaller excavator was used to create the new features (as pictured). Small dumpers were used to transport material along the reach and consideration was taken to limit the impact on the local residents in terms of working hours and notification of when the work was taking place.

Top Row – Ullswater Avenue Before / During / After. Bottom left - Team Photo, followed by River Care Day

Post construction grass cutting and maintenance has been reduced to allow a more natural habitat to grow. A lesson learnt that has been used on all reaches is where natural growth has been left for habitat, we cut a 1m wide access to the water's edge at suitable intervals, this balances the need for habitat, bank protection and gives access to the water. Similarly where there has been evidence of an informal crossing point we have added a riffle.

As works have progressed we have seen increased wildlife, improved water quality and from survey results and engagement an increased use by local residents.

What was your personal motivation for carrying out the enhancement?

The project has given me a great opportunity to not only demonstrate how an urban scheme can best be run, but also provide a legacy in Werrington that I am proud to show to my family, as I am a Peterborough resident. (reference: Sam Hooley)