Hillfield Park Wetland Enhancements

The Small Habitats Grant (SHG) programme of environmental enhancement works is continuing this autumn with **Wetland Management (Pond and Brook Enhancements)** and **Restoration of an abandoned watercourse and associated riparian habitat** at Hillfield Park. The SHG programme supports a wide range of habitat and nature improvements across the borough and beyond, and is being delivered as part of the European Regional Development Fund (ERDF) Wildlife Ways.

Wetland Management (Pond and Brook Enhancements)

Initially an hydrological consultant was contracted to undertake a feasibility study to develop design options. This will include the necessary surveys including water quality testing, silt analysis and topographic surveys. The consultants developed a range of options which will be considered in consultation with SMBC's Public Realm, Forestry and Drainage Teams. Following consultation and detailed design development, SMBC's Conservation of the Historic Environment, Landscape Architecture, Urban Design and Ecology Team developed the tender for the works.

Silt removal: The silt will be retained within the footprint of the waterbody behind a revetment constructed of materials such as brushwood faggots with a double-weave revetment fabric liner (nicospan). To achieve this the silt will be relocated within the pond using long-reach excavators, amphibious machines with clamshell buckets and silt pushers. This option delivers a sustainable siltation solution to reduce the need for future de-siltation works.

Watercourse re-naturalisation: The focus of this element is to deliver improved habitat to the Cran Brook (ordinary watercourse) and riparian area to enhance its wildlife potential. This will be approached in three ways:

1. Concrete removal and naturalisation of the channel

Prior to re-profiling the brook, two concrete weirs, slabs along the stream banks and the poured concrete bed are to be removed from a 80-metre section of channel upstream of the pond using an appropriately sized tracked excavator. Sections of concrete slabbing and concrete base are to be retained within the vicinity of the existing land drainage inlets. The removed concrete will then be transported by dumper trucks out of the floodplain and disposed of using an authorised waste carrier.

2. Management of bankside trees and shrubs

Both the brook and pond are surrounded by trees and shrubs and are heavily shaded and inaccessible along much of the length of the project area. Many of these trees and shrubs are non-native species including large areas of invasive cherry laurel (*Prunus laurocerasus*), Himalayan balsam (*Impatiens glandulifera*) and box-leaved honeysuckle (*Lonicera ligustrina var. pileata*). Invasive species are potentially of concern along the stream corridor where an area of semi-natural wet woodland occurs and although not designated as an ancient woodland site, the stream edge woodland has significant variation and biodiversity interest thus if invasive species are left unchecked they have the potential to become more widely established in the shrub-layer. The project will undertake tree and shrub management (including alder thinning and dogwood coppicing) removing the non-native species and replacing with native trees and shrubs where appropriate. This will provide increased light levels to encourage the greater establishment of marginal, emergent and submerged vegetation. It will also allow deliver improved access to the brook.

3. Planting of native species

A range of native submerged, emergent and marginal plants will be planted in and around the pond and brook course to generate increased botanical diversity. Opportunities to introduce a reed bed to deliver natural filtration benefits will be considered. Native trees and shrubs will be planted to replace non-native species.

This element will deliver 1.38 hectares of enhanced wetland habitat to the brook, pond, and associated bankside vegetation.

A diagrammatic overview of the proposed pond and brook enhancement works can be viewed here (PDF).

Restoration of an abandoned watercourse and associated riparian habitat

Part of the project involves the restoration of a small watercourse running through Hillfield Park LNR. which was abandoned in the 1980s and the original channel in-filled predominantly with bramble. As a result, many of the natural features of the watercourse have been lost, with detrimental effects on biodiversity.

The watercourse has been heavily modified as it approaches the park due to urban development and as a result has been straightened and culverted in some sections. The watercourse is currently culverted through the middle of Hillfield Park LNR, except for a short stretch through a small woodland copse adjacent to Spilsbury Croft in the eastern corner of the park. Flow in this section of the brook is predominantly uniform lacking meanders and localised riffles and pools – overall it has limited geomorphological and biological diversity. To the north of the park the brook is culverted underneath Blossomfield Club (cricket pitch). To the south, the brook becomes culverted again and connects to a storm water drain running in a south westerly direction through the park.

The focus of the project is to reinstate the watercourse, deliver improved habitat and water quality within the riparian habitat which will enhance its wildlife potential.

The watercourse channel will be excavated and reprofiled to maximise the potential for marginal aquatic habitat to establish. A series of online ponds and scrapes (shallow ponds that may dry out during the summer) will also be excavated for the same reason. These actions have been designed to encourage the brook to develop natural processes including erosion and deposition which will lead to the diversification of physical features within the channel and reduce flood risk to adjacent properties and downstream.

Digging out the channel will result in the creation of an excess of spoil. Rather than take this off site, this will be retained locally and sown with wildflower seed. River-washed gravels will be introduced where there was a paucity of naturally occurring gravels to aid the creation of riffles. The introduced substrate will provide much improved conditions for fish spawning and other macroinvertebrates.

This part of the project provides a key opportunity to restore a watercourse and wetland habitat in an urban context for public enjoyment, whilst contributing to reduction of flood risk.

This element will deliver 0.23 hectares of restored wetland habitat through the creation of wet woodland, river channel and pond habitats.

The collaborative project, funded by the Environment Agency and ERDF, and delivered by Solihull Council, helps to deliver biodiversity benefits for local users, visitors and wildlife.

If you would like to find out more, please contact us at ✉ landscape@solihull.gov.uk .