

Day Brook Water Meadow Project

Technique: Small-scale urban river restoration – re-meandering

Project location: Nottingham

River: Day Brook

County: Nottinghamshire

Project start date: July 2007

Project end date: March 2008

Length: 250m

Cost: £65,817

Upstream grid reference: SK578443

Site background

Located to the north of Nottingham city centre, the Day Brook is surrounded by housing, industrial and recreational sites along its entire length. Owing to the nature of the Day Brook catchment, flows in the channel are very flashy. The Brook has been subject to several flood improvement schemes, which have seen it straightened, deepened and intensively managed. As part of this work, a number of artificial flood storage areas were also constructed, one of which provided a suitable location and space for a restoration project. The flood storage area wasn't being utilised as often as it could and properties downstream were frequently flooding. Prior to restoration, the Day Brook ran along the northern boundary of the storage area. The channel was a man-made, trapezoidal, over-deep and straight channel devoid of natural features and with little or no interaction with its natural floodplain. It was barely noticeable from the surrounding footpaths and supported very little floral or faunal interest.



The trapezoidal channel of the Day Brook and adjacent flood storage area prior to restoration

Objectives

The project aimed to improve the conservation value of the Day Brook without adversely affecting the flood defence function of the storage area. A key part of the project was also to enhance an urban green space for the local community as well as improving the biodiversity value.

Design

A partnership between the Environment Agency and Nottingham City Council (landowner) delivered the restoration scheme in Summer 2007. Working within the confines of the existing infrastructure, the channel was re-meandered through the adjacent flood storage area, increasing the channel length from approximately 250m to 320m. The channel design incorporated natural features such as pools and riffles, shallow berms and an online reedbed. Permanently wet and ephemeral scrapes were created alongside the new channel and a low-lying area was seeded with an appropriate seed mix with the aim of establishing wet grassland over time.

Subsequent performance – RRC's views (2009)

Nearly two years on, the site is fully vegetated and functioning well as a newly created urban habitat, flood storage area and recreational facility for local people. Before restoration, the site was visited primarily by dog walkers who valued the site for its open space and not the presence of the Brook itself. The Brook was neglected and considered to be an 'eyesore'. Restoring the Day Brook and its floodplain has not only increased the biodiversity value of the area, but has also provided an improved recreational facility for local people. As more local people use the site, they begin to take ownership of it. The Brook is now an integral part of the site and consequently the visitor experience. Although not primarily designed as a flood risk management/flood alleviation project, reconnection of the Day Brook to its natural flood plain has greatly reduced localised flooding frequencies by increasing water attenuation upstream of susceptible structures and properties.



the River Restoration Centre Case Study Series

This site was last visited by RRC staff on 2nd April 2009

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