# Braid Burn at Inch Park, Edinburgh, Scotland

## Techniques: Creation of meanders and wetland areas, bank re-profiling and an engineered two-stage flood defence to create flood storage/alleviation space

**Project location:** Inch Park
**River:** Braid Burn
**County:** Central Region (Scotland)
**Project start date:** 2009/2010
**Project end date:** 2010
**Length:** 320m
**Cost:** £32 million (wider project)
**U/S grid reference:** NT279710

Braid Burn before the Flood Prevention Scheme

Braid Burn Summer 2010

### Site background

The Braid Burn rises in the Pentland Hills to the south-west of Edinburgh, and flows in a generally north-easterly direction through the city before discharging into the Firth of Forth at Portobello, east of the City Centre. The catchment is 30.5km² and Inch Park is one of the sections of the project where environmental improvement to the burn corridor was carried out in conjunction with reducing the risk of flooding. The artificial burn corridor had little character and habitat was very poor with low diversity in species, and extensive stands of Himalayan Balsam.

### Objectives

To provide flood protection to the residents and businesses of Edinburgh against flooding from the Braid Burn and Figgate Burn watercourses for a 0.5% AEP (1 in 200 year) event, and improve the biodiversity value of the reach.

### Design - (see page 2)

The works comprise a two stage flood defence scheme with the first stage being a low bund to retain up to 20% AEP (1 in 5 year) event. The second stage works involved the construction of clay embankments and sheet pile and concrete walls clad in stone recovered from the park's boundary wall creating 190,000m³ of flood reservoir storage. Environmental improvements included lowering artificially raised banks and the concrete channel was replaced with sinuous meanders to restore the watercourse. Wetland areas were created to provide habitat variety.

### Subsequent performance – RRC's view (2010)

The biodiversity value of the Park has been significantly increased with more variety in plant species and habitat than existed previously. Otters have returned to the reach and dippers, grey wagtails and other bird species have been observed feeding and gathering nesting materials immediately following the project. The flood defences were tested in March 2010 and despite heavy rain over an extended time period, flooding was limited to areas designated for frequent flooding, preventing flood damage to properties which would have been otherwise at risk.

Braid Burn Flooding, Inch Park, March 2010

*the* **River Restoration Centre Case Study Series**
This site was last visited by RRC staff on 23rd August 2010

Tel/fax: 01234 752979 Email: rrc@therrc.co.uk http://www.therrc.co.uk