

Braid Burn Flood Storage Reservoirs

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SYNOPSIS The recently completed Braid Burn Flood Prevention Scheme (£43m) incorporates two inner city emergency flood storage reservoirs, constructed to protect the eastern parts of the city from flood waters in the Braid Burn which runs from the Pentland Hills to discharge into the Firth of Forth.

The paper briefly describes the two flood storage reservoirs built as a major part of the project. The sites of the two flood storage reservoirs at Inch Park and Peffermill Playing Fields are important inner city recreational parks and University playing fields. When full the reservoirs are up to 3.5m deep. The reservoirs constructed within the city are bounded by nursing homes, a biscuit factory, sports pavilions and private houses, some within 5m of the reservoir walls. The paper describes the development of design which reviewed the extreme wind conditions over the two ponds, the extreme wave conditions and the wave induced forces on the buildings. Advice was obtained from HR Wallingford who provided a report on the problems of extreme wind speeds occurring simultaneously with the rare periods of high flooding.