Refurbishment of Woodburn Reservoirs Eduction Towers and Scour Pipework

G BRIGGS, URS Infrastructure and Environment UK Ltd
G A COOPER, URS Infrastructure and Environment UK Ltd
D BELL, URS Infrastructure and Environment UK Ltd

SYNOPSIS The Woodburn Reservoir system in the hills above Carrickfergus, Northern Ireland, comprises seven impounding reservoirs in two cascades. These water supply reservoirs are managed by Northern Ireland Water (NIW) and they supply a wide area of North Belfast and South Antrim. The structures date from 1868 and include designs by both Macassey and Bateman.

The most recent Section 10 Inspection Reports recommended investigations into the operation and condition of the reservoir scour pipework and highlighted concerns regarding the access arrangements within the associated towers.

This paper outlines the findings of the resulting investigation works and the subsequent refurbishment works at the first two sites with particular reference to the lessons learned in the refurbishment of historic structures and pipework. It will also comment on the programming challenges associated with temporarily removing reservoirs from service and the environmental issues associated with emptying reservoirs to provide safe access for repairs.