

Case Study



ELDWICK RESERVOIR, BINGLEY

Client: Yorkshire Water

Main Contractor: J N Bentley

Consultant: [Mott MacDonald Bentley](#)

PROJECT SPECIFICATION

Built in 1894, Eldwick IRE is a compensation reservoir feeding the River Aire. Following its inspection in 2004 a deficiency was found in the available dam freeboard. Yorkshire Water employed MMB to investigate the problem and agreed on a solution for a new weir slab over the dam crest with tied and anchored revetment blocks on the 1:2 dam face to give an additional discharge capacity of 13cumecs in flood conditions. Strategic issues, and landownership precluded the construction of a more traditional tumblebay and spillway arrangement.

SOLUTION

The concrete block revetment system was laid onto a thin screed to form a new uniform and durable surface. Then, in order to prevent movement and uplift in the event of water overspill from the reservoir, anchors were driven in on a pre-measured grid pattern. Each anchor was installed quickly using simple hand held power tools and locked down into the blocks using a profiled load plate and recessed wedge grip.

Anchor System: S06EB aluminium bronze anchor c/w 2m of 6mm Ø stainless steel wire tendon, 100mm x 100mm stainless steel load plate & a stainless steel recessed wedge grip.

Quantity: 680

Anchor Design Life: 120yrs

Soil Type: Made ground

