

Post Tensioning, Waste Water Filter Beds- Flint



Above: Waste Water Filter Beds. Balvac designed, supplied and installed a Post Tensioning System to strengthen the structures.

Innovative Post Tensioning Solutions...

Balvac was awarded the contract to design, supply and install a post tensioning system to stabilise 4 waste water filter beds for client United Utilities. The 2m high and 35m in diameter filters, had suffered varying amounts of corrosion of the rebar.

The structures reinforced concrete walls were affected by corrosion to the rebar at the joints. Corrosion can result in movement of the wall at the joint and, eventually lead to failure of the wall.

The method adopted required post-tensioned tendons to be stressed around the wall circumference in a similar process to the staves of a barrel. The force in the tendons provides resistance against further movement of the wall.

The tendons were placed around the wall on temporary supports and then stressed. The tendons used were 15.7 mm plastic coated strands, anchored

Client	United Utilities
Designer	Balvac Consultancy
Programme	2 Weeks
Completion	September 2006
Value	£70,000

in MK4 MUT anchorages, each tendon passing around the full circumference to be placed in the same anchorage. Stressing was carried out using MK4 stressing jacks to the forces required by our designers. Balvac Consultancy at Croydon carried out the design calculations and completed the drawings.

Completion of the stressing was witnessed by the client, who later confirmed his satisfaction with our work. This project further enhances our existing portfolio of specialist works available to the Water Industry.

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