CASE STUDY: **BISHOPS GREEN**

Falco were engaged by Thames Water under their Runway 0 Framework to design and build a solution to increase the output at Bishops Green Water Treatment Works (WTW) from 10 milligrams per litre (mg/L) to 18 mg/L.

The increased demand was necessitated by several large developments in the Newbury Thatcham area which posed concerns over future availability during times of low rainfall and high demand.

The existing borehole arrangement at Bishops Green had issues with turbidity (cloudiness) in the water caused by high calcium levels at maximum abstraction. The works therefore included the installation of an Amazon Package Filtration system to remove its turbidity.

This was a fast-track scheme and Falco were invited to attend a site meeting with Thames Water to discuss the options and outline plan as works had to be completed to meet regulatory milestones.

A design development order was given to Falco which enabled the commissioning of Topographical and Ground Penetration Surveys for optioneering.

It was decided that the filter plant would be positioned in the middle of the site and be housed in a bespoke GRP building on a reinforced concrete slab.

The construction involved cutting two T Junctions into the existing 450mm diameter main from boreholes one and two.

This work had to be carried out during a one-day shut of the main. Contingency planning was vital to ensure no loss of supply due to the holding reservoir running dry.

Falco's design and construction team worked closely with Thames Water and their framework suppliers, Amazon Filters (manufacturers of the filtration equipment) and Tecnocover (manufacturers of the kiosk) in order to design a robust solution.

- Sector: Water
- Client: Thames Water
- Principal Contractor: Falco
- Permanent Works Designer: Falco
- Duration: 6 months
- Completed: Sep 2024
- Value: £400k
- Location: Newbury, Berkshire

Once the initial pipework was installed Falco formed a concrete slab before installing the Amazon filters and connecting with valves and pipework. A run-to-waste chamber was designed together with a specially fabricated section of pipework to connect the incoming and outgoing flows from the plant.

Finally, an access platform was designed and built giving Thames Water operatives' safe access to the top of the filter units for maintenance purposes.

This platform proved to be a design improvement where all the filters were encapsulated by a safety handrail negating the used of safety chains used on previous installations.

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