

Waste water treatment works – void filling

Background

Owned and operated by Yorkshire Water Services Limited, Dowley Gap Waste Water Treatment Works treats effluent from residential and commercial properties in the surrounding area. Back in 2015 the site suffered from significant flood damage, which adversely affected the performance of the waste water works. More significantly, the flood damage also had the potential to impact directly on pollution compliance, with the risk of waste water leaking into the surrounding environment.

Specifically, the 2015 flood water had washed away large volumes of soil beneath the treatment work's humus tanks (four in total) leaving a considerable void that required filling.



Customer Alternatives

There were alternative options available to the company; they could have back-filled the area with loose pebbles / material, however, whilst effective it would have only afforded a temporary solution, with the potential still existing for these 'new' materials to be washed away should the area again be subject to flooding. More complex permanent construction methods were available, such as piling or mass concrete fill and whilst these would have been effective they would have been lengthy processes and more importantly, would have added to the weight of the tanks, which was not an option.

J N Bentley, working with Yorkshire Water Services Limited, and familiar with the benefits of geopolymer solutions, engaged Geobear to undertake the void filling works.

Why Geobear?

Geobear was selected to complete the work due to the know ability of its geopolymer to solve the void filling issues effectively without significant disruption. In addition, Geobear's geopolymer solution was an obvious choice over more complex and costly alternative methods.

Geobear Solution

Geobear's work took 5-days to complete on two of the tanks, injecting its specialist void filling geopolymer solution into the void below each tank. Its solution successfully treated the area, filling the void and to deliver a permanent solution.

Such was the success of the solution, Geobear was invited back to undertake similar void filling works on the treatment site's other two humus tanks.