

Lewisham Gateway void filling



Background

As part of a 700 unit residential development in south-east London, Geobear was commissioned to fill a series of water pipes and sewers that were being made redundant.

Working for VolkerFitzpatrick, we were required to fill a total of 15 pipes beneath the Lewisham Gateway development site.

Solution

The Geobear process involved using one of our expanding geo-polymer fill materials. The material is pumped directly into the void from a mobile work unit, where on release into the void it expands to fill the area.

Filling the voids under this site was a more complicated operation due to the varying lengths and diameters of each of the pipes and sewers; they varied between 100 - 1800mm diameter with lengths between 9 and 56 metres.

For this project the Geobear material was delivered directly to the fill areas through a multitude of individual tubes. The tubes vary in length to enable the material to fill equally and completely throughout the voids. For example, for the 56 metre pipe required 8 individual

tubes, at different lengths 6 metres apart (lengths of 50m, 44, 38, 32, 26, 20, 14, 8), the 50m tube would be used first to fill the furthest part of the void, then the process would repeat as we recede through the length of the void.

As each of the voids was a different dimension, we calculated the precise amount of material that was required to be pumped through each of our tubes for each pipe and sewer. The calculations are based on the size of the void and the expansive volume of the material as pumped.

We used additional mobile CCTV monitoring which retracted through the pipes to ensure the material quantity was correct and the voids were fully filled as calculated.

The project concluded after six days as specified and the pipes and sewers were completely filled.

The images are taken from the CCTV camera and show (above) the 50m tube, (below) fill material expanding towards camera.