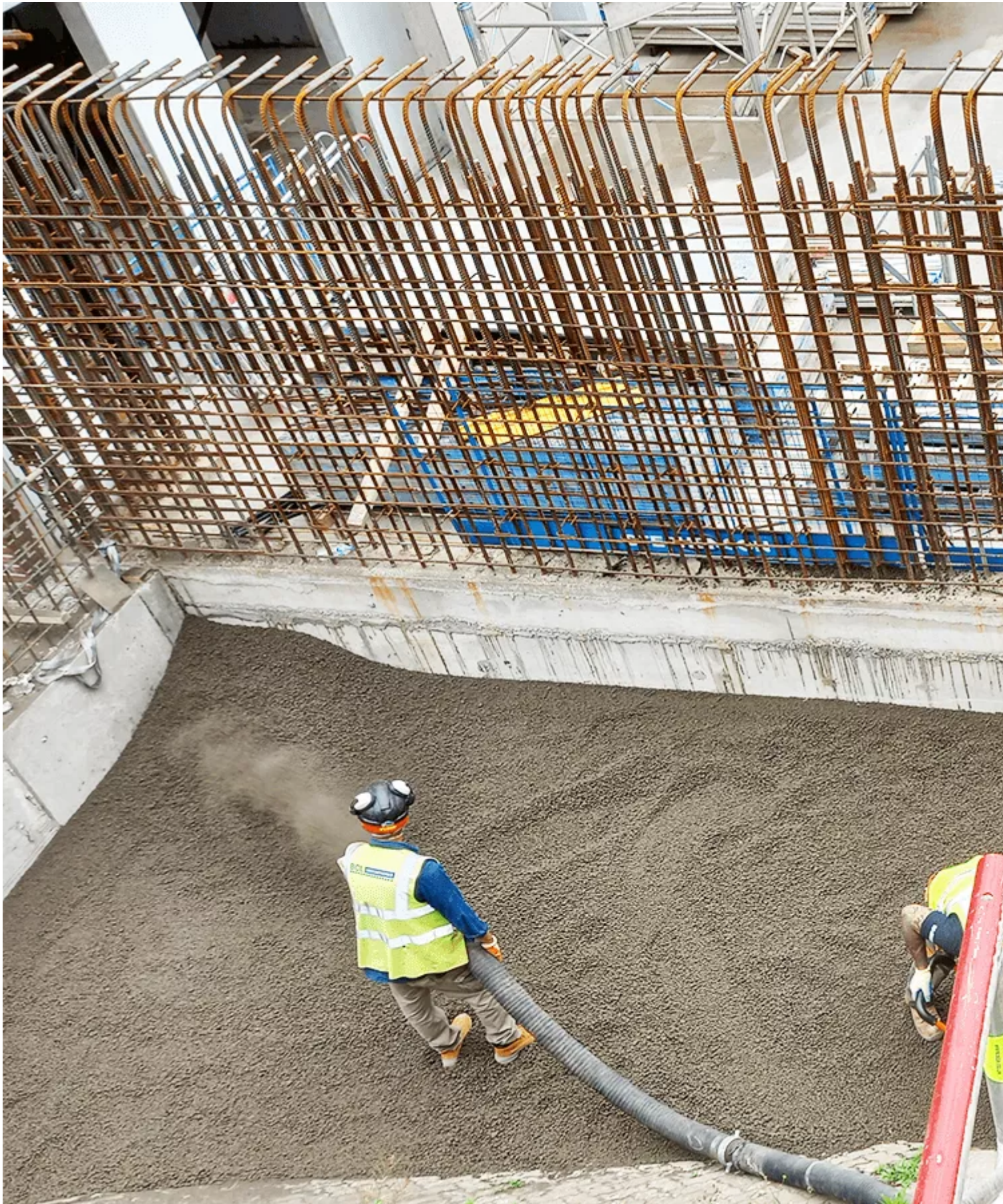




LECA LIGHTWEIGHT FILL SPECIFIED FOR A RETAINING WALL OVER DELICATE GROUNDWORK CONDITIONS IN BRISTOL



LECA LWA was recently specified for a retaining wall development on Bath Road, Bristol. This project was a new development on the site of a former petrol station. Due to the fragile and poor groundworks on the site,

a lightweight fill material was required as a backfill against a retaining wall. Over 280m³ of LECA lightweight fill was used in the new retaining wall which contained delicate piping and cable bedding, so this required a suitable material which was both fire proof, lightweight and robust to provide additional long term protection.

In an engineering development, when using LECA Lightweight Fill against retaining walls, this helped the developers to reduce the weight acting on the rear of the structure by around 75%, in comparison to traditional fill materials. This reduction in weight ensured that the retaining wall development avoided potential sliding, overturning, slip and tilting and bearing failures. The bulk weight of the wall was also significantly reduced.

Furthermore, access to the site offered the contractors a difficult situation, where alternative fill material such as traditional rock fill did not offer a feasible solution. This difficulty included a steep embankment with no direct access for walking floors or tipping trucks and moreover, there was no space on site to be able to create stockpiles of fill material.

FACTS

Amount of material: 280m³ of [LECA® LWA \(10-20mm\)](#)

Interesting Fact: Access to the site offered the contractors a difficult situation, where alternative fill material such as traditional rock fill did not offer a feasible solution.

Delivery Method: Pneumatic Delivery

Main Contractor: BCL Groundworks

Suitability of LECA Lightweight Fill

The unique engineering ability to pneumatically deliver LECA Lightweight Fill at an accelerated rapid rate of 1m³ per minute and over a distance up to 50m ensured that BCL Groundworks could effectively provide a suitable backfill for the proposed retaining wall. This was delivered over 3 phases.





The self-compaction properties of LECA Lightweight Fill also provided support for the project as the material could be quickly compacted with a simple wacker plate, which was in operation during the delivery phase. This reduced the man power required – supporting the on-site social distancing restrictions - and accelerated the completion of the project.