



**Polybutene**  
Piping Systems Association

## Case Study

Operation Earth Repair – Anderlecht, BE



Thermafex | Flexalen



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### Thermal Soil Remediation

Industrial pollution can take on many faces. Soil contamination is one of them, and poses serious risks on human health.

The Brussels region, is characterized by its historically large industrial area. It is also one of the most gravely contaminated sites in the region, where almost 10% of the total surface is contaminated.



When planning for the deployment of new logistics facilities, the land review confirmed contamination and showed that it would be quite a challenge on such infected soil. Yet a remarkable solution was found.

To build a new warehouse, the operator needed a solution to remediate the soil to the extent that the building could be established on safe, solid ground. How? With the help of an unusual ally – bacteria!

This innovative remediation technology uses microorganisms to degrade organic contaminants and bind pollutants such as heavy metals in more inert and thus less harmful forms. Ideal conditions in

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the soil can conceive a perfect habitat for bacterial growth. For that, the right ‘working temperature’ had to be formed. The operator of the warehouse set out to use a fully renewable heat source to draw the right bacteria for the big clean-up. A thermal solar installation on the roof would generate the heat for the heat exchangers in the ground. The need to do this quickly, efficiently, and with minimal hassle brought the engineering company, HVMT, to Thermaflex.

#### Details

A network was co-designed, using both Flexalen 600 and Flexalen HT to keep those bacteria perfectly on track for some much needed earth repair.

#### Goals

When introducing this extraordinary project, the primary goal was to secure a quick and easy installation while minimizing the impact on the grounds that had to be remediated. That way, the serviceable surface area for the bacteria to do their job could be maximized. That required a highly flexible material on top of a high-speed delivery and network implementation.

“The short delivery times, also for the big pipe sizes, is absolutely worth mentioning”  
– Project Manager

Lastly, to maintain the necessary balance of the soil, environmentally friendly materials were crucial for this network.

#### Results

A referential distribution network was engineered and quickly rolled out, allowed by its pre-fabrication. It proved both reliable, and efficient in maintaining an ideal temperature for the bacteria. Due to the flexibility of our systems, soil division during installation could be kept to a minimum, maximizing the share of remediated surface. After 5 years the ground is estimated to be fully cleaned. After that, the whole system will be given a second life and used to heat the new office spaces

#### Statistics

- 600 m<sup>2</sup> of solar collectors to transform sunlight into energy
- Over 1,000 meters of distribution network that spans..
- 67 heat exchangers in the ground

#### Duration

September/ October 2015

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