

Landfill Capping

Drainage layer, Pozidrain 6S250D/NW8, Punkaharju, Finland



CASE STUDY



Project Description

Punkaharju is located in Eastern Finland and is a part of the Southern Savonia region. Punkaharju ridge is a famous national reserve and the Finnish Forest Museum Lusto and Forest Research Institute are located there. The reserve is also home to some of the tallest trees in the whole of Finland, including pines of up to 40 metres tall.

Punkaharju landfill is a historic waste disposal site that was officially closed in the 1980s. The environmental capping of the landfill was only recently planned, designed and completed during 2022 however.

The Challenge

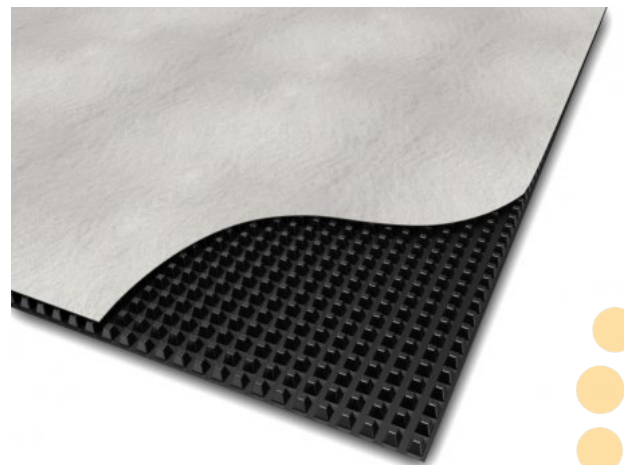
The consultant approached ABG as part of the consultation process to determine a suitable geocomposite drainage layer for the project. The fill comprises of general municipal and industrial waste, and although there were no specific or unusual design challenges to overcome, the short summer period in which the install could take place required the cooperation of all parties if a timely completion were to be achieved. The proposed design therefore needed to facilitate a quick installation and meet the relatively short delivery lead time.

The Solution

The long slope lengths and gradients involved at the site were best suited to the high in plane flow capacity provided by the Pozidrain 6S250D/NW8 option. The geocomposite drainage layer is installed between the soil cover and GCL.

Project Information

Client	Fortum Waste Solutions AB
Contractor	Peab Industry OY
Products	Pozidrain 6S250D/NW8
Quantity	34,500 m ²
Benefits	<ul style="list-style-type: none">• Rapid installation• Cost & carbon saving drainage alternative, replacing the need for a thick granular layer beneath the soil capping layer• Multi directional water flow



Pozidrain 6S250D/NW8

ABG LTD

E7 Meltham Mills Road, Meltham, Holmfirth, HD9 4DS • +44 (0)1484 852096 • www.abgltd.com

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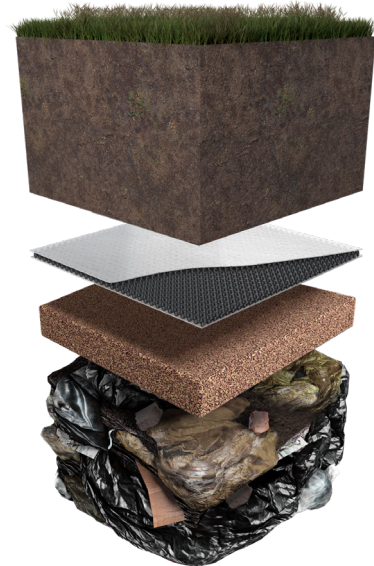
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to quickly and efficiently drain rainfall landing onto the landfill and to prevent water infiltrating through to the former landfill cells. The 6mm thick **Pozidrain 6S250D/NW8** and wide width rolls provide optimal drainage flow in a light weight and quick to install format. The delivery of geocomposites to the Punkaharju site also required far fewer vehicle movements compared to the alternative option of a traditional filter stone drainage layer. This in turn provides a significant carbon saving and proved an important consideration given the national reserve surroundings.

The ABG Service

ABG provided their customary technical design support service and liaised closely with the contractors in order to meet the short lead times. The 4.4m wide x 90m long rolls were delivered on schedule to allow installation during the summer weather window.



Pozidrain landfill capping application



Deckdrain geocomposite on waterproofing membrane



Small Deckdrain rolls for easy installation

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