

Structural Drainage

Loading Platform, Pozidrain, Nauerna, The Netherlands



Project Description

Afvalzorg is one of The Netherlands' most important waste processing companies, providing storage, sorting and safe permanent disposal of waste in line with high European standards of containment. The Nauerna site includes a state-of-the-art sorting and recycling facility spread over 15 ha focusing on activities in line with the creation of a circular economy. To increase the capacity of the recycling facility and to ease pressure on the surrounding road network, Afvalzorg commissioned the construction of a new loading quay in the North Sea Canal.

The Challenge

The project involved the construction of a new loading quay for transshipment and temporary storage of waste. Additional works included the moving of flood defences and the building of a viaduct over the S150 Nauernaseweg used to transport waste from the quay to the sorting facility. The loading platform would be required to support large waterside cranes and the regular movement of heavy goods vehicles, whilst isolating the adjacent canal from contamination caused by spillage. The proposed construction comprised a 70 mm layer of Trisoplast polymer-enhanced bentonite to isolate the area, a separation geotextile, 320 mm to 440 mm cement-treated base (CTB) and a mixed surface finish of concrete and concrete pavers. Trisoplast identified the lack of adequate drainage to address seepage through the surface layers which posed an unacceptable risk of contamination to the adjacent watercourse.

Project Information

Client Afvalzorg Deponie

Contractor Mobilis and Van den Biggelaar

Distributor Trisoplast Mineral Liners

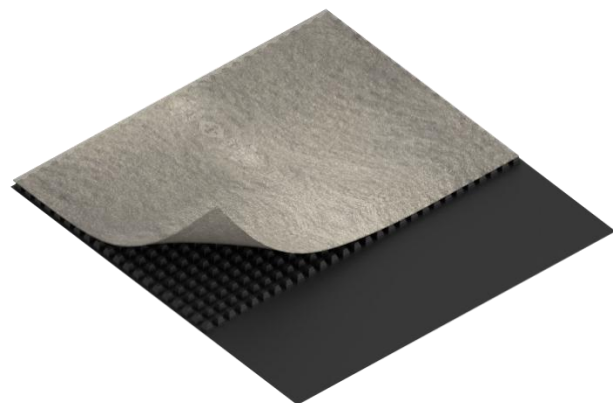
Consultant Fugro

Products Pozidrain 6SK500/NW8 [L]

Quantity 4,752 m²

Benefits

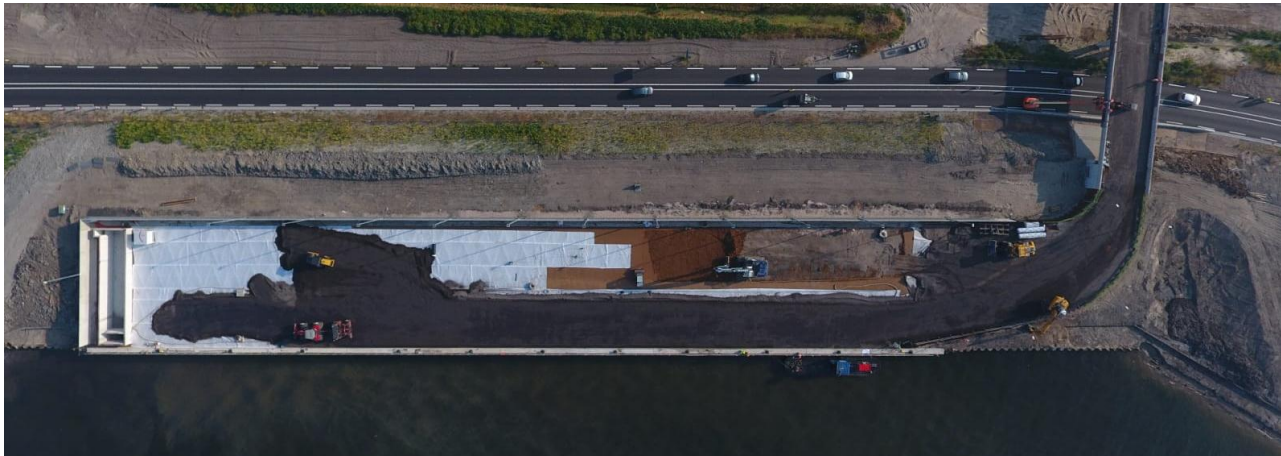
- Integrated drainage and additional barrier to contaminated water
- Exceptional chemical resistance
- Proven long-term compressive strength



Pozidrain SKL

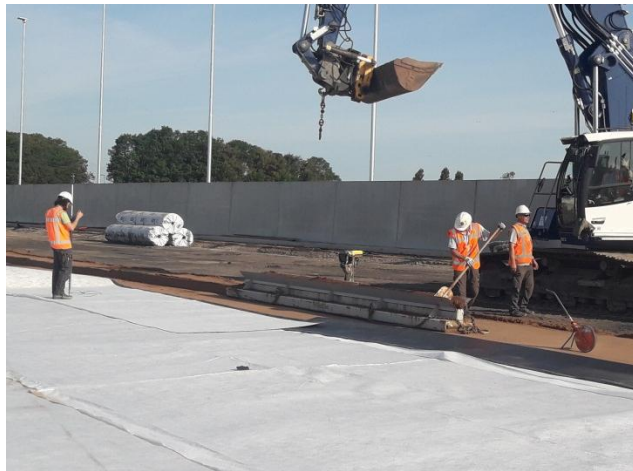
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The Solution

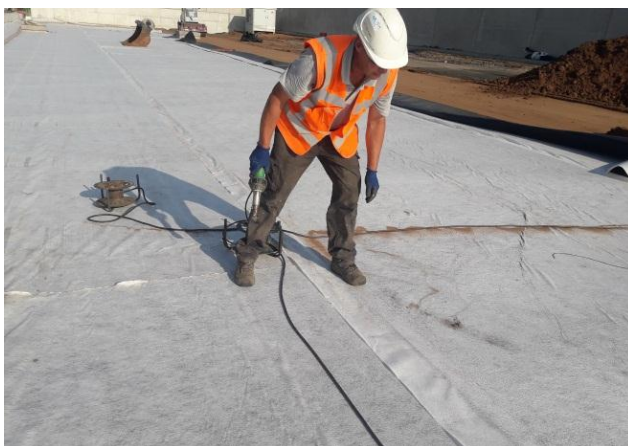
Trisoplast approached **ABG** to advise on a suitable drainage geocomposite for use by the contractor. **ABG** calculated the rate of infiltration through the surface layers and determined the required in-plane flow of the geocomposite. After consideration of the loading platform geometry **ABG** added an appropriate factor of safety and selected **Pozidrain 6SK500/NW8 [L]** with a welded drainage core and integral selvages as suitable. The unique HDPE core is chemically inert and created an open drainage void above the Trisoplast. Compressive creep testing using the stepped isothermal method (SIM) determined a creep strain of less than 10% after 100 years considering a long-term pressure of 500 kPa. This evidenced the suitability of **Pozidrain 6SK500/NW8 [L]** when exposed to the demanding loading requirements of the platform.



Pozidrain was proven by SIM compressive creep testing to resist the high long-term loads which would be experienced on the finished loading platform

The ABG Service

ABG provided subsurface drainage calculations and SIM creep tests to establish the suitability of the geocomposite.



Geotextile overlaps were lightly tack-welded



Installation was simple and required no specialist plant

Contact ABG today to discuss your project specific requirements and discover how ABG past experience and innovative products can help on your project.