

PROJECT CASE

Earth retention for landfill cappings SALAZIE (REUNION ISLAND)

Date
September 2017

Surface area
30,000 m²

Product(s)
AFITER 3D 300

Company
GTOI

Project owner
CIREST

Project management
GEODE Ingénierie

Issue(s)

Earth retention on waterproofing layers is a real challenge in landfills, due to the revegetation obligation on dome slopes. As the stability of a thin layer on a waterproofing membrane is regulated and controlled, the SALAZIE project involved specialised products and companies to ensure long-term project stability.

Solution(s)

To enable earth retention to a depth of 30 cm, the AFITER 3D solution was selected and implemented on the slopes of the capping dome. Stability calculations and validations were performed by AFITEXINOV in accordance with standard NF G 38-067, and validated by the project manager before the implementation phase. The AFITER 3D solution helps:

- Retain earth on waterproof layers up to a gradient of 3:2;
- Ensure high performance thanks to packaging in the form of geosynthetic rolls;
- Guarantee a manufactured solution with controlled quality;

A study on the anchoring of the geosynthetic was also carried out by AFITEXINOV and validated by an external consulting firm.



Start of AFITER 3D installation and weighting



View from the crest of the slope

Description and purpose of the product

The AFITER 3D earth retention geocomposite consists of a polyethylene geogrid with a 20 mm x 40 mm rectangular mesh reinforced with high-tenacity polyester cables, combined with polypropylene strips to increase the angle of friction at the interface.

Packaging

AFITER 3D comes in the form of rolls 3 m wide and 100 m long, i.e. 300 m² per roll. These rolls are handled using traditional construction machinery.



Packaging of AFITER 3D

Work progress



Deployment on slopes



Backfilling on soil retention netting

Advantages of the proposed solution

This solution helps:

- Retain earth and vegetate slopes with a gradient of up to 3:2
- Receive an earth retention solution on site with optimised packaging and delivery

