

Case History

Drainage and reinforcement on soft soil CONDE-POMMEROEL CANAL (Belgium)

Date

2017-2019

Quantity

110 000 m² for SOMTUBE FTF
35 500 m² for NOTEX GX

Products

SOMTUBE FTF
NOTEX GX 400-50

Contractor

GUINTOLI (NGE)
ECOTERRES

Project designer

VALETUDES

Project Owner

VNF

Problematic

Created in 1970, the Conde-Pommeroeel canal was totally silted up in 2015 and unfit to receive high weight boats.

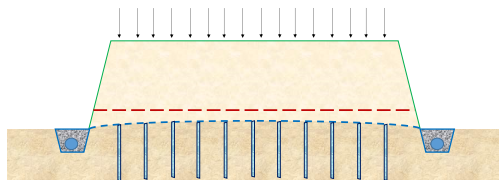
The enhancement of the Conde-Pommeroeel canal's performances implicated the construction of 4 deposits for the storage of non-aggressive sediments. These deposits had to be created close to the place of work, and so on poor quality soil.

The problematic of these soils were:

- Saturation in water.
- Differential settlements compromising the integrity of the structure.

Solution(s)

The solution designed by AFITEXINOV services was a combination of drainage and reinforcement according to the schematic design here below:



- SOMTUBE FTF (in blue) was set under the embankment to drain the phreatic variations in the support soil and the consolidation water. Different kind of SOMTUBE FTF were designed and installed according to the deposits and their location influencing the amount of water to drain.
- NOTEX GX 400-50 (in red) was placed in the embankment, with a thickness of 30cm of embankment from the SOMTUBE FTF to keep an optimal friction soil/geogrid. Its purpose was to maintain the internal stability of the embankment.



SOMTUBE FTF installation on support soil



Filling on SOMTUBE FTF

Storage

The SOMTUBE FTF is delivered in rolls of 3,90m wide for 50 to 70m long inside a plastic package UV-Resistant. NOTEX GX 400-50 is delivered in rolls of 5,30m wide for 100m long.



Storage of SOMTUBE FTF on site

Site evolution



Installation of rolls, manutention and layout



Aerial view of SOMTUBE FTF installation



NOTEX GX 400-50 in the embankment

Benefits of the solution:

This solution allowed:

- To create the embankments on the existing soil without purge or piles,
- Manage the consolidation water of the soft soil,
- Preserve the integrity of the embankment during the consolidation.
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This solution was calculated designed by AFITEXINOV and validated by the independent geotechnical office GEOROUTE.

