TENCATE
GeoClean®
ACTIVE OIL-BIODEGRADING AQUATEXTILE

Reference project

OPEN-AIR INFILTRATION BASIN FOR ROADS

Sustainable water pollution control solution: TenCate GeoClean® Azur active oil-biodegrading aquatextile.

Function: Fixation of hydrocarbons and PAHs, then activation and amplification of their natural biodegradation in the long term.

Context: Development work on 4 lots in Caves (France, Occitania,11) business park, and taking into account a possible future redevelopment .

Challenge: At present, the current road width is half of the final roadway, i.e. 2.5 ml, and has no sidewalks. The soil is favourable to infiltration with hydraulic conductivities between 10^{-4} and 10^{-5} m/s, which allows stormwater management at the plot level. Two open-air infiltration basins have been designed to collect the volume of run-off water from the entire future 10-metre wide roadway. Currently, the surfaces drained to the basins are limited to half the width of the road, i.e. 2.5 metres.

Date: January 2021

Location: Caves (11) - France

Application: Open-air infiltration basin for roads

Contractor: Communauté d'agglomération du Grand Narbonne

Project Manager : Communauté d'agglomération du Grand Narbonne

Public works company: Colas

Technical solution chosen:

The TenCate GeoClean® Azur aquatextile has made it possible to design a simplified solution that is quicker to implement and, above all, perfectly respectful of the environment.

The run-off water from the road, polluted by hydrocarbons, is now collected in two open-air infiltration basins, the bottom and slopes of which are covered with the active oil biodegrading aquatextile TenCate GeoClean®. It acts as a barrier to the infiltration of hydrocarbons, while stimulating their biodegradation, and allows the infiltration of depolluted water.

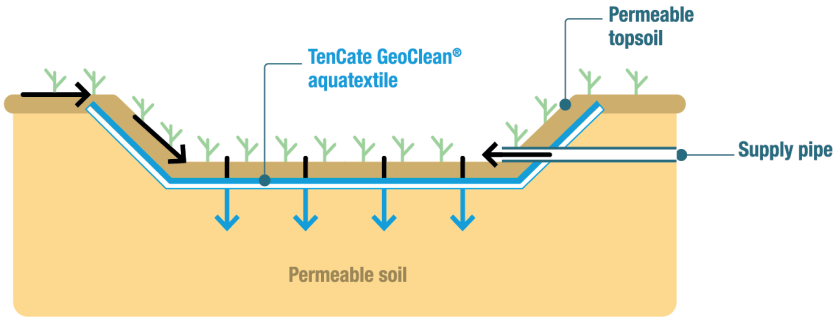
The open-air infiltration basins have been designed to collect the volume of rainwater corresponding to a 100-year rainfall.

☐ The infiltration basin on the land plot (U1467) located to the north of the site is L 65m x W 2.6m x D 0.4m and offers a total infiltration area of 210m². The working volume of the structure is 65 m³, thus able to store a 100-year return period rainfall without overflow.

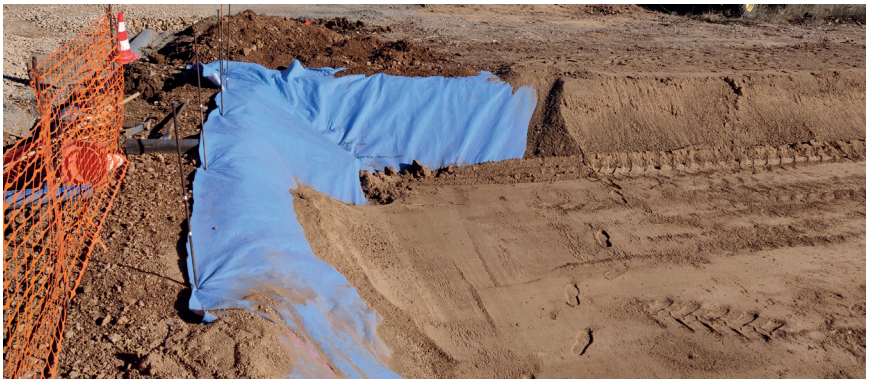
☐ The infiltration basin on the land plot (U1410) located to the south-east of the site is L 65m x W 5.50m x D 0.5m and offers a total infiltration area of 430m². The working volume of the basin is 190 m³ to store a 100-year return period rainfall without overflow.

The aquatextile is covered with a 20 cm layer of permeable soil, allowing a green cover at the surface of the basins.

Schematic cross-section of a dry infiltration basin with 1 treatment level on permeable soil:



With the natural growth activator available on the aquatextile's blue continuous filaments, the microorganisms present in the soil and in the water will rapidly colonise its porous structure to degrade the fixed hydrocarbons and maintain the aquatextile's retention capacity on the long-term.



For more information on projects, installation of the aquatextile, the added value of the solution and project savings, please contact us:

MADE IN Europe

ACTIVE OIL - BIODEGRADING AQUATEXTILE

Fixes hydrocarbons including PAHs and boosts systematically their biodegradation in the long term

More info here !

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