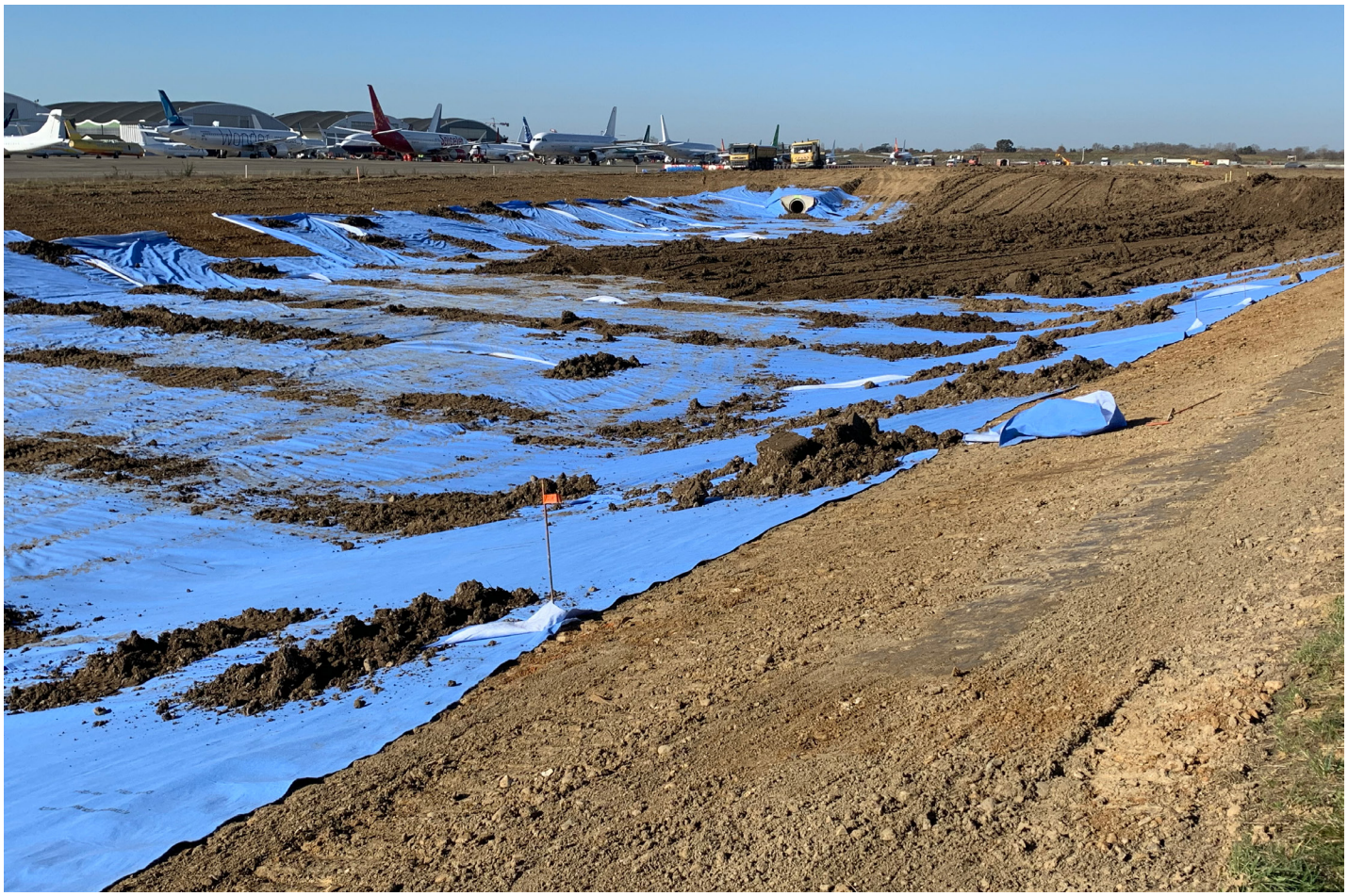
CASE STUDY

SOLMAX

TOULOUSE FRANCAZAL AIRPORT, FRANCE

Managing contaminated stormwater runoff with aquatextiles



Industry:	Site development
Sub-industry:	Stormwater management
Location:	Toulouse, France
Product:	OSMORIA™ Geoclean®

Overview

The vegetated infiltration basin project at Toulouse Francazal Airport in France, completed in February 2022, utilized OSMORIA Geoclean Origin active oil-biodegrading aquatextile for water pollution control. The project was managed by SETFA (Toulouse Francazal Airport operating company), with Sogeti Airport as the project manager and Malet TP as the public works company. This initiative aimed to manage stormwater effectively as part of the extension of the north apron at the airport.

Challenge

The project's catchment area comprised an impermeable surface of 90,927 m², including roads and an aircraft parking area with light traffic from construction machinery. Additionally, there was a grassed area of 7,333 m² that did not contribute to run-off. The primary challenge was to handle the stormwater in a plot where the natural floor had a permeability of 10^{-5} m/s.

Active oil-biodegrading aquatextiles capture hydrocarbons, including PAHs, and systematically enhance their biodegradation.

The goal was to manage the stormwater run-off generated by the apron extension, which was polluted by oils, including polycyclic aromatic hydrocarbons (PAHs).

Solution

To address the challenge, the project rehabilitated an existing open-air basin to store and infiltrate the increased run-off volumes. The run-off water, contaminated with oils and PAHs, was collected in a 5,400 m² infiltration basin. During infiltration, the water is now treated using the OSMORIA Geoclean active oleo-depolluting aquatextile, which was applied to the bottom and slopes of the basin and covered with a permeable topsoil layer. This aquatextile captures hydrocarbons, including PAHs, and systematically enhance their biodegradation.

A stormwater isolation valve was installed upstream of the basin to manage accidental pollution. The natural growth activator on the continuous filaments of the aquatextile allowed microorganisms in the soil and water to colonize its porous structure quickly, degrading attached hydrocarbons systematically and maintaining the retention capacity of the aquatextile in the long term. OSMORIA Geoclean proved to be a maintenance-free solution for this project.

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