

## PROJECT CASE

### Drainage on Landscape Area Concrete Slab Lebanese National Library – Beirut (Lebanon)

**Date**

February 2014

**Surface Area**

3,120 m<sup>2</sup>

**Products(s)**

COVERDRAIN 450 FT2 D25

**Company**

HOURLIE

**Project Owner**

CDR

**Project Management**

ERGA Group

#### Issue(s)

Initially, the water drainage on the site of the Lebanese National Library was designed according to the traditional solution with 50 cm of gravel, and the drained water was collected at the perimeter by manholes.

However, the construction of these manholes was confronted against a constraint of space restriction.

The COVERDRAIN FT drainage solution was then recommended to replace the 50 cm of gravel and to collect water with collector drains, which are much less bulky.



*View of the site before the installation of COVERDRAIN FT*

#### Solution(s)

To allow the drainage of rainwater under the concrete slab and thus avoid infiltration and accumulation of water, the COVERDRAIN FT solution was installed on the forecourt of the Lebanese National Library.

The use of this drainage geocomposite will help regulate the soil permeability, limit water accumulation and prevent degradation of the concrete slab under the effect of the freeze / thaw phenomenon.



*Roll up of COVERDRAIN FT*

## Description and purpose of the product

The COVERDRAIN FT drainage geocomposite is made up of :

- non-woven needled filter mat (1)
- non-woven needled drainage layer (2)
- Corrugated and perforated polypropylene mini-drains - diameter 25 mm with regular perforations along 2 alternating axes at 90deg to each other. (3)

The COVERDRAIN FT ensures the filtration of rainwater, the mechanical protection of the waterproofing coating and drainage

## Overlaps

The installation of one roll length over the adjacent roll length is done with an overlap of at least 5 cm and with a heating point at every two meters spacing to avoid any displacement due to the wind or backfilling.

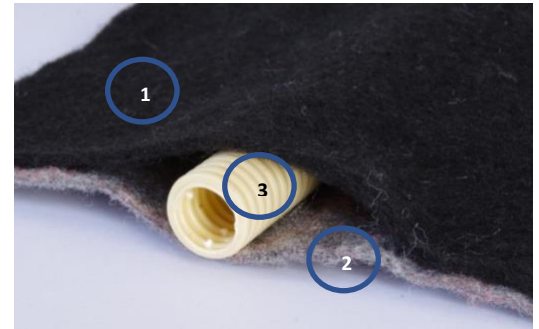
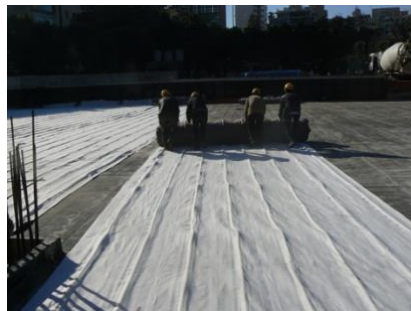
## Connection to collector drains

The COVERDRAIN FT is connected to the main collector in several steps:

- To pass the drainage layer mat under the collector pipes
- Each end of mini pipe drain is mechanically connected to the main collector pipes
- Folding the filter layer on the collector pipes

It was requested that the collector pipes be placed with the collector slots facing the mini drains.

## Work progress



*Overlap of roll lengths*



*Connection to collector drains*

## Avantages of the proposed solution

This solution allows:

- Replace the installation of a traditional drainage material solution using gravel or honeycomb polystyrene plates
- Reduce the load on the slab
- Significantly improving work performance and cost saving
- To set up favored sustainable vegetation
- Product approved by landscapers

## CONTACT

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