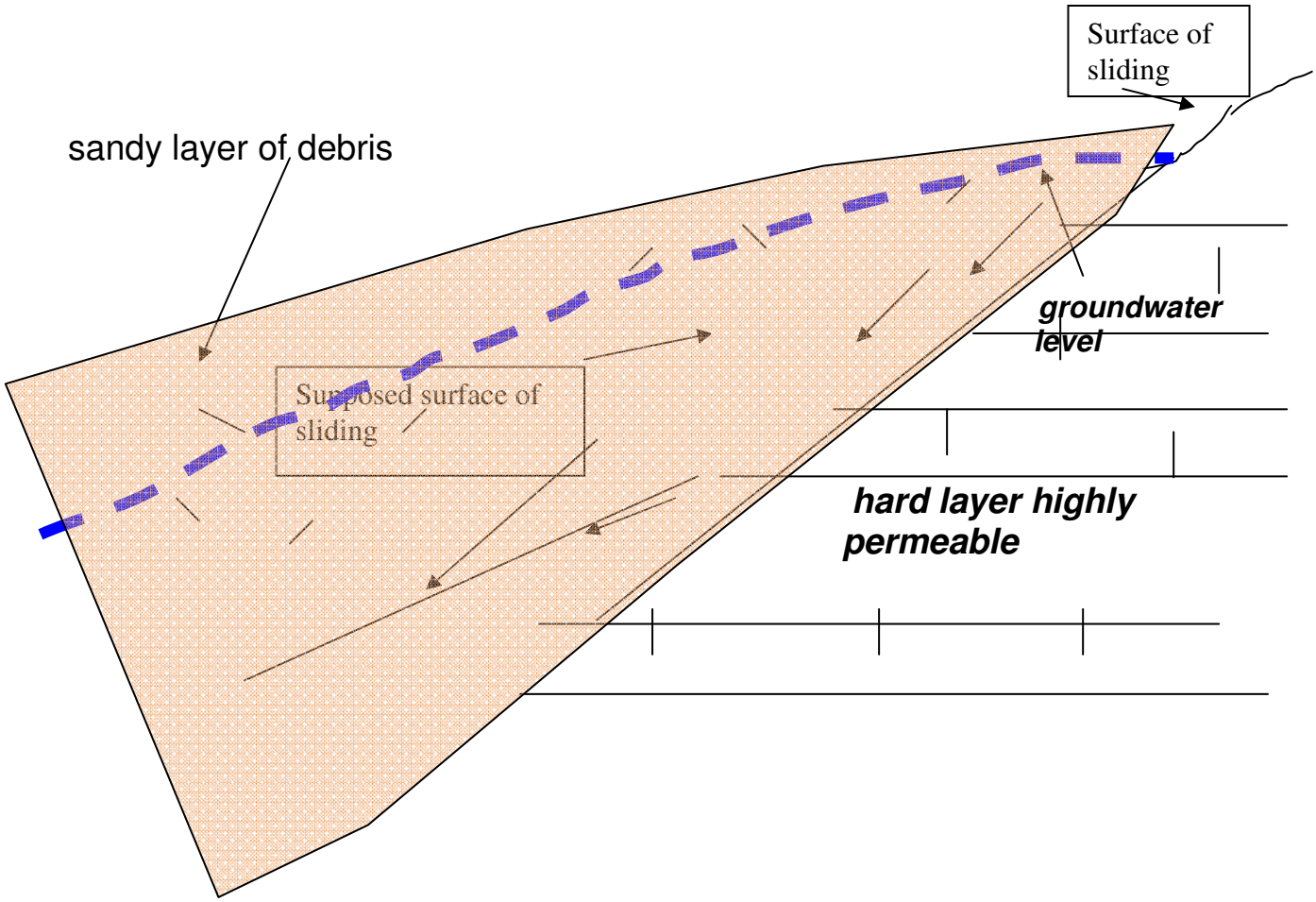
An example of landslide's reclamation

with DRAINING PANEL 1.000

THE PROBLEM

The site is in constant movement due to the rising of deep groundwater level, the reservoir is probably constituted by a deep calcarenite-mudstone layer highly stressed and permeable. The rising of groundwater causes the movement of the surficial sandy layer of debris.



TECHNICAL SOLUTIONS

Keeping low groundwater level helps the slope stabilization; usually it is used the tipical “french trench” with natural gravel, a cover of nonwoven geotextile, and a pipe at the bottom for discharging water.

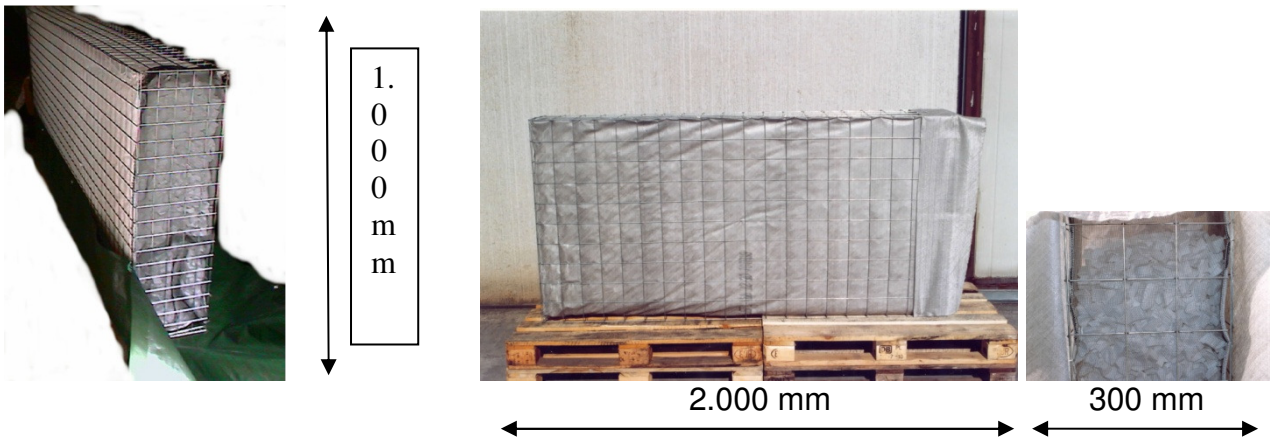
In this case this solution it is not possible due to the following reasons:
Need of ***fast installation*** of the the draining core (soil with bad geotechnical parameters, unsteady trench)

- Respect of workers safety during installation ***(absolutely avoiding to let them going down into the excavated trench for laying geotextile/pipes)***

- Check of the ***real thickness*** of the draining core designed for the project (very difficult to do with natural gravel)

- Very difficult transport of natural gravel to the site of installation

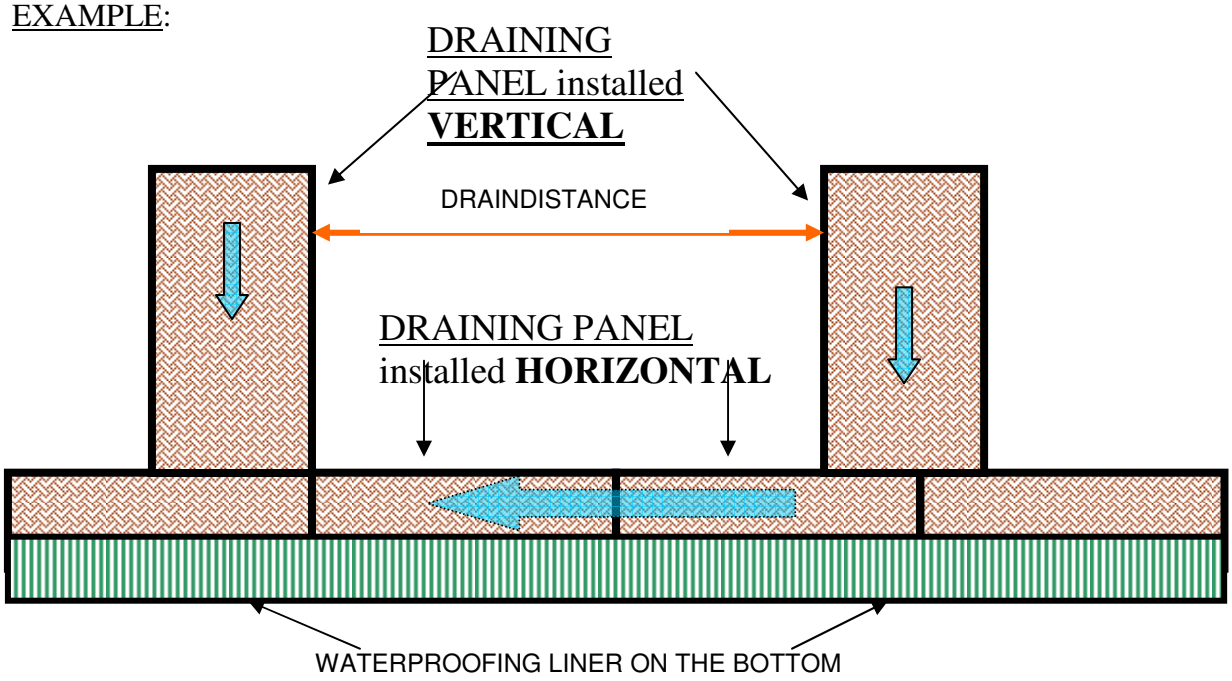
That’s why the designers have choosen the **DRAINING PANEL SYSTEM**
(the big type 2.000 x 1.000 x 300 mm) installed in trenches deep up to 7 m.



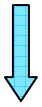
DRAINING VERTICAL WELLS

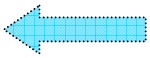
The DRAINING PANELS  are modules that can be assembled in many ways, both horizontally both vertically, to make drainage systems of groundwater.

EXAMPLE:

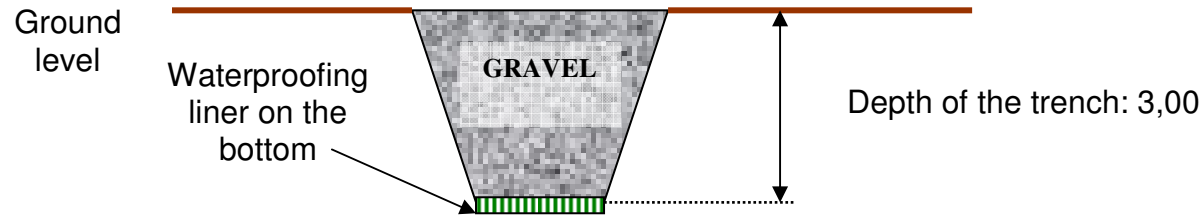


Example show how use the DRAINING PANEL as DRAINING WELLS,
In alternative to large quantities of natural gravel.

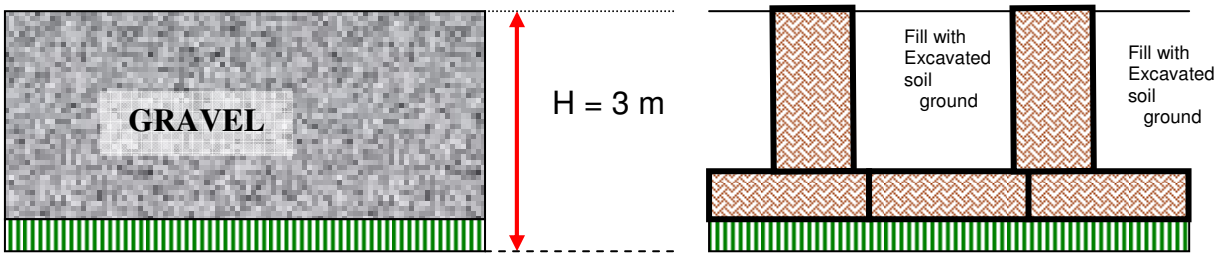
 Vertical flow of water through the VERTICAL panels

 Horizontal flow of water through the HORIZONTAL panels

SECTION NORMAL TO THE TRENCH:



SECTION ALONG THE TRENCH:

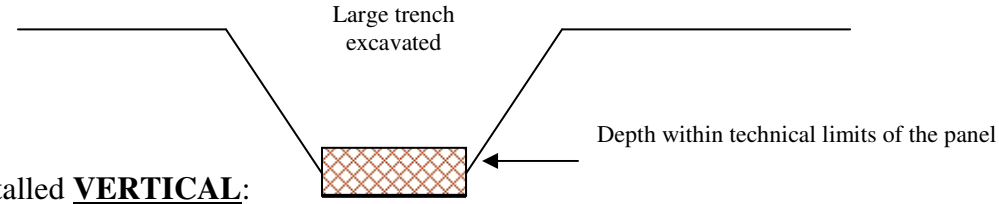


TRADITIONAL DRAINING TRENCH MADE WITH STONES

DRAINING TRENCH WITH DRAINING PANEL (AS DRAINING WELLS)

SUGGESTIONS FOR EXCAVATION AND INSTALLATION OF THE DRAINING PANEL

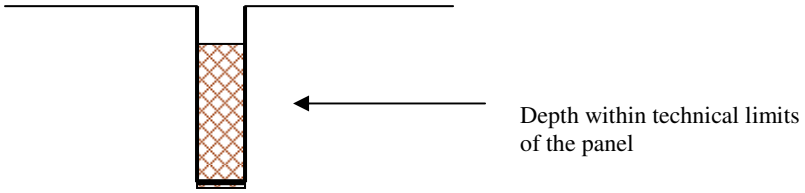
1) installed **HORIZONTAL**:



2) installed **VERTICAL**:

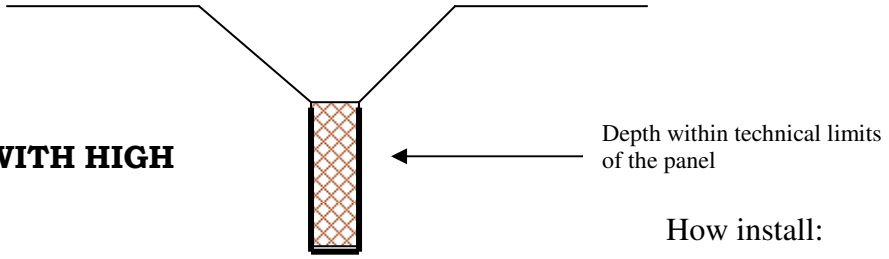
a) Narrow trench (0,4 – 0,5 m width):

SOILS WITH LOW PUSH



b) Trench wide in the upper part, then narrow at the bottom:

3) **SOILS WITH HIGH PUSH**



How install:

1) Add soils at the sides of the panel (for the whole height of the panel);
2) Compact with crane the soil at the side of the panel
3) Then cover the panel with excavated soil

DO NOT SURCHARGE THE PANEL IN THIS CASE