OPEN STORM WATER COLLECTION CHANNEL

NATURE OF INTERVENTION

Open channels are used to intercept, collect and convey clean storm water volumes from adjacent industrial installations. The water volumes can be significant, as can be the flow velocities, particularly when contributed to by large, expansive collection areas.

Due to these high flow volumes and velocities, the channels are required to be lined to avoid erosive actions. In turn these liners need to be durable and easy to install. Concrete or a binded aggregate is often the material of choice.

Whilst the liner layer need not be reinforced, it does require a stability mechanism to prevent uplift during operation and long-term sustainability to continue providing for the intended purpose.

Furthermore, the installation methodology often calls for fast placement as the channels often run for kilometers on end. Such an approach also needs to balance quality with the relevant cost considerations.

Location:
Mpumalanga, South Africa

Products:
• *TeMa-CELL 100 B*

Quantity:
• *TeMa-CELL 100B: 18 000sqm*

Application:
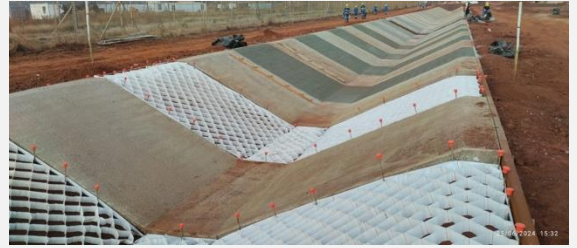Protection, Veneer Stability, Erosion Control

Date:
August, 2024

SOLUTION

TeMa-CELL 100B is a 100mm high, Polyethylene (PE) coated, Polypropylene wove tape geocell system. Each panel is customed made to dimensions that correspond exactly to the width of the channel. The TeMa-CELL provided lateral restraint for the mass concrete infill during installation, especially on the steep side slopes of the channel, and allowed speedy installation while optimizing the associated costs.

The mass concrete, when cured, provides a series of interlocking blocks which contribute to the overall stability of the liner layer against uplift during operation.