

Subtle but durable: new access tracks for Geelkrans Nature Reserve

The client, Cape Nature was looking for a permanent, yet flexible solution for jeep tracks on deep sandy substrates at Geelkrans Nature Reserve, Stillbaai, without the associated footprint impacts of commonly used hard structures such as asphalt or paving.

Mobicast, Terraforce licensee in the Garden Route area, suggested the Terracrete paving block, a permeable and interlocking eco-surface paver that can be laid in different patterns and may be used with or without ground anchors for the lining of riverbanks, roads and other areas subjects to soil erosion.

Finding a versatile solution

The blocks where installed to form a two-wheel jeep track as an erosion control and maintenance measure for existing sand tracks. Says Jean du Plessis, Conservation Manager, Geelkrans Cluster & Stilbaai Marine Protected Area (MPA):

“We have a network of maintenance jeep tracks that give us access to the different sections of the reserve. The substrate is mostly deep dune sand, making it inadequate to surface with normal paving. Putting down a road base foundation and or compacting have been proven to be very costly due to the nature of the substrate.

“Investigating alternative solutions produced the principle of putting down a “hard” surface that is permeable for water and vegetation. The idea is also that the surfacing material should then be able to move with the substrate while keeping its shape and integrity. We decided to use the Terracrete blocks because of their permeable nature, minimal impact on the environment and cost-effectiveness. “

A brief description of the installation process

(Use as text Box?)

1. Blocks are transported to the target area.
2. The substrate is prepared by removing 10-15cm and then levelled.
3. The Blocks are packed in the desired pattern.
4. Binding wire threaded through holes in the blocks to increase overall stability.
5. After correct placement and threading, substrate material is used to fill any gaps.

Low impact, low cost

The blocks are relatively easy to work with, compared to other methods that involve more sophisticated machinery and labour. Says Du Plessis: “We do get breaking of about 2% of the blocks during handling as the transport of the blocks to the target areas does require a minimum of two loading/offloading processes due to the nature of the terrain, but on the whole the process is straightforward and causes very little disturbance in the reserve, which is what we were looking for. Another benefit is that the blocks, if they do break, are easy to replace, making maintenance of the tracks quick and easy”

Construction commenced in March 2013 and is still ongoing. The tracks are installed in stages of 250m each, with 7000 blocks already laid down. To rehabilitate any destabilization that did occur during construction *Carpobrotus edulis* (Sour Fig) were planted on the verges of the jeep track.