



MOISTURE MANAGEMENT & DRAINAGE LAYER FOR AN EQUESTRIAN ARENA

NATURE OF INTERVENTION

Equestrian arenas are often located outside and exposed to a wide range of varying climatic elements and seasonal weather conditions. As such they often require large scale maintenance and in many instances are periodically reconstructed or rehabilitated to new and updated standards.

Designs need to incorporate a complex combination of moisture management and drainage while simultaneously providing the necessary specialist bearing capacity and footing conditions conducive to a number of different animals and activities.

Historically, these facilities have used traditional underlying stone aggregate-based drainage layers to remove excessive water volumes arising from rainfall and groundwater accumulation. Drainage is often slow and ineffective rendering the facilities unusable for extended periods of time.

Through the advent and incorporation of various Geosynetics products, efficiencies have been greatly improved with respect to the construction, durability, cost and performance of these and other equestrian facilities.

Location:

Kyalami, Johannesburg, South Africa

Products:

- *TeMa-TEX* nonwoven geotextile;
- *TeMa-PIPE* perforated drainage pipe;
- *HDD* and *MD* cusped sheets with bonded geotextiles.

Quantity:

3 000 sqm footprint

Application:

New moisture management and drainage system for a rehabilitated equestrian arena.

Date:

November, 2019

SOLUTION

TeMa-TEX NW2 was used as a separation layer in conjunction with *TeMa-PIPE (Slotted) 160L* and new 19mm stone aggregate to replace the existing network of subsoil drains within the arena footprint.

The new drains were laid to appropriate falls at 5m intervals across the width of the area. In between each drain, the *HDD-1040* and *MD-4-50-12F* cusped sheets with single bonded geotextiles were placed on alternating sections, to replace the previous aggregate based moisture management and drainage layer beneath the final specialist silica-sand surface layer.

The use of the TeMa Geo products, not only reduced the cost and construction times of the rehabilitated facility, but significantly improved the moisture management and drainage performance.



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