

CASE STUDY

SANPAC AFRICA LTD KENTAINER FACILITIES – NAIROBI GATE INDUSTRIAL PARK

<u>PROJECT:</u>	KENTAINER FACILITIES AT NAIROBI GATE INDUSTRIAL PARK (NGIP) ON LR NO. 10902/19, RUIRU, KIAMBU
<u>CLIENT:</u>	IMPACT NOTH (KE)
<u>PROJECT MANAGMENT:</u>	MML TURNER & TOWNSEND LTD
<u>CONSULTANT:</u>	METRIX INTEGRATED CONSULTANCY
<u>CONTRACTOR:</u>	LAXMANBHAI CONSTRUCTION LTD
<u>DATE:</u>	FEBRUARY 2021
<u>PRODUCTS:</u>	M150R Kaypipe® Geopipe Wickdrains® - 80 strips each measuring 200mm (w) x 5m (l)

Laxmanbhai Construction Ltd. approached SANPAC Africa Limited for an alternate product to the Cartonal Prodrain product for filtration purpose and to protect a basement wall from ingress of sub soil water.

2 product options were shared with the contractor, for approval by the project engineer – a FloDrain system and a prefabricated vertical drainage system known as Wickdrains®.

The engineer opted for the Wickdrain® system to be used.

Wickdrains® comprises of strips of SANPAC Flownet wrapped in Bidim® A2 geotextile.

Installation methodology –

1. APP membrane was installed on the basement wall and coated with waterproofing admixture.
2. A 200mm layer of ballast was placed at the base of the trench where the French drain system was to be laid.
3. Wickdrains[®] were installed at angles of 45° and at a distance of 2m centre to centre. The Wickdrains[®] were placed in such manner that they terminated at the 200mm layer of ballast placed at the base of the trench.
4. A French drain system comprising of a filter fabric, aggregate and the M150R Kaypipe[®] geopipe was placed. The French drain system was placed such that one side was in direct contact with the Wickdrains[®].
5. A 300mm layer of ballast was placed over the French drain system followed by a 600mm layer of hard stone.
6. A final backfill layer of murram - 150mm - was placed on the hard stone and compacted to achieve required levels.

This installation was done during the rainy season. In areas where the combined system of the French drain and Wickdrains[®] was used, the rainwater flowing out of the system was clean showing the contractor that the system was working.



*Wickdrains[®] installed at 45° angle
And 2m center to centre.*



*Filter fabric and M150R Kaypipe[®]
Geopipe being laid on top of the 200mm
Layer of ballast.*



*Clean aggregate being placed inside
The filter fabric.*



*300mm layer of ballast was placed
Over the French drain system, followed
By 600mm layer of hard stone.*



*150mm layer of murrum compacted to engineer's specification
on backfilling to achieve required level*

150mm layer of murrum compacted to engineer's specification