

CASE STUDY

SANPAC AFRICA LTD

SARIT CENTRE EXPANSION PROJECT SUBSOIL AND STORM WATER DRAINAGE FOR PHASE 3

<u>PROJECT:</u>	SARIT CENTRE PHASE 3 EXPANSION PROJECT – SUBSOIL AND STORMWATER DRAINAGE.
<u>CLIENT:</u>	SOMA PROPERTIES LTD.
<u>CONSULTANT:</u>	SUTHERLAND ENGINEERS & ENGPLAN.
<u>CONTRACTOR:</u>	LAXMANBHAI CONSTRUCTION LTD.
<u>DATE:</u>	2017.
<u>PRODUCTS:</u>	GEOPIPES[®] M100 & M150; BIDIM[®] A3 GEOTEXTILE
<u>QUANTITY:</u>	GEOPIPES[®] M100 – 741 M
	GEOPIPES[®] M150 – 855 M
	BIDIM[®] A3 – 26,487 M²

Sarit Centre, which is one of the major shopping malls in Nairobi, was expanding to incorporate a new block behind the existing mall structure.

The work comprises of the construction of a multi storey parking silo and new retail mall consisting of retail space, common area, back of house areas, expo centre (shell construction), loading area / bay, including external works and parking coordination works.

Total built up area is approximately 8,700 m², over 5 levels.

Sanpac Africa Ltd., was contracted to supply the Geopipes[®] M100 & M150 and Bidim[®] A3 Geotextile for the subsoil and storm water drainage.

INSTALLATION METHOD.

Trenches were cut along the basement and Bidim[®] Geotextile was laid inside, with sufficient material kept on either side to cover the trench once the Geopipes[®] were laid, with an allowance of 300mm overlap.



Coarse aggregate was filled at the base and the Geopipes[®] were laid.



The Geopipes[®] were then covered with another layer of coarse aggregate and the whole was then wrapped by the Bidim[®] material with a 300mm overlap on top.



Traditionally, heavy duty UPVC pipes with slottings were used for subsoil drainage.

The process involved purchasing UPVC pipes, taking them to the contractor's workshop to make the perforations and then taking the perforated pipes back to site. This process not only weakens the structure of the perforated pipes but also increases the carbon footprint.

The unique design of the Geopipes[®] gives it a 70% open area, which is not possible to achieve through perforation on UPVC pipes, allowing for a significant increase in the infiltration rate of water into the pipe.

The Geopipes[®] are light, flexible and resistant to chemical attack.

The Bidim[®] Geotextile was used as a filtration/ soil separation media.