

Greening up with Terraforce

A brand new shopping complex on the R44 between thriving Stellenbosch and Somerset West in the Western Cape required some innovative earth retaining solutions, both cost effective and compatible with aesthetic/environmental demands, within the constraints dictated by site and viability considerations. The cut and fill scenario on the site required two major walls. At the back or delivery side of the building a 6,7m high by 215m long wall at a steep 75 degree angle was required to provide sufficient space for delivery vehicles to operate effectively.

The available space of approx 2m between the boundary and the kerb-line demanded a gravity wall partially strengthened with reinforced concrete infill. Built on an 800 x 350mm concrete foundation with a Y12 rebar encased in 20mpa concrete, extending to a height of 2.5m in every 2nd L11 Terraforce block. Behind the bottom blocks a sub surface drainage system was installed in combination with cement-stabilized sand backfill.

Above that level, a coarse sand drainage layer was specified with a clay cut-off plug and an open drainage channel. iCOS, the engineering company responsible for the walls specified a wall along similar lines for the front or parking side of the centre. This wall is 120m long and 3,8m high and thus the foundation size could be reduced to 500 x 350mm.

A total of 13 000 L11 smooth face blocks were delivered to the site. Infill above the reinforced level was specified to be 80% topsoil mixed with 20% 19mm crushed rock for added friction between rows of blocks. Sub-contractor Dassenberg Retaining Systems finished this R1, 2 million contract within 3 months, experiencing minimal delays due to waiting for services being installed ahead of them.

Landscaping contractor Langverwacht (Pty) Ltd has recently completed the installation of an irrigation system and planting of mostly water wise indigenous vegetation. Some of the species used with good effect are Plectranthus, Pelargonium Peltatum, Plumbago Articulata, Agapanthus Africanus and a few others.

Retaining Prime Property – Stellenbosch Square.
Developer: Marriot Properties
Main Contractor: Grinaker/LTA
Consulting Engineers: Liebenberg & Stander
Sub Contractor: Dassenberg Concrete Products (Pty) Ltd
Consulting Engineer: iCOS Engineers cc
Landscaping: Langverwacht (Pty) Ltd

See www.terraforce.com for more information or email us at holger@terraforce.com

