



# Enviro-Wall®

*Concrete retaining blocks installation guidelines*



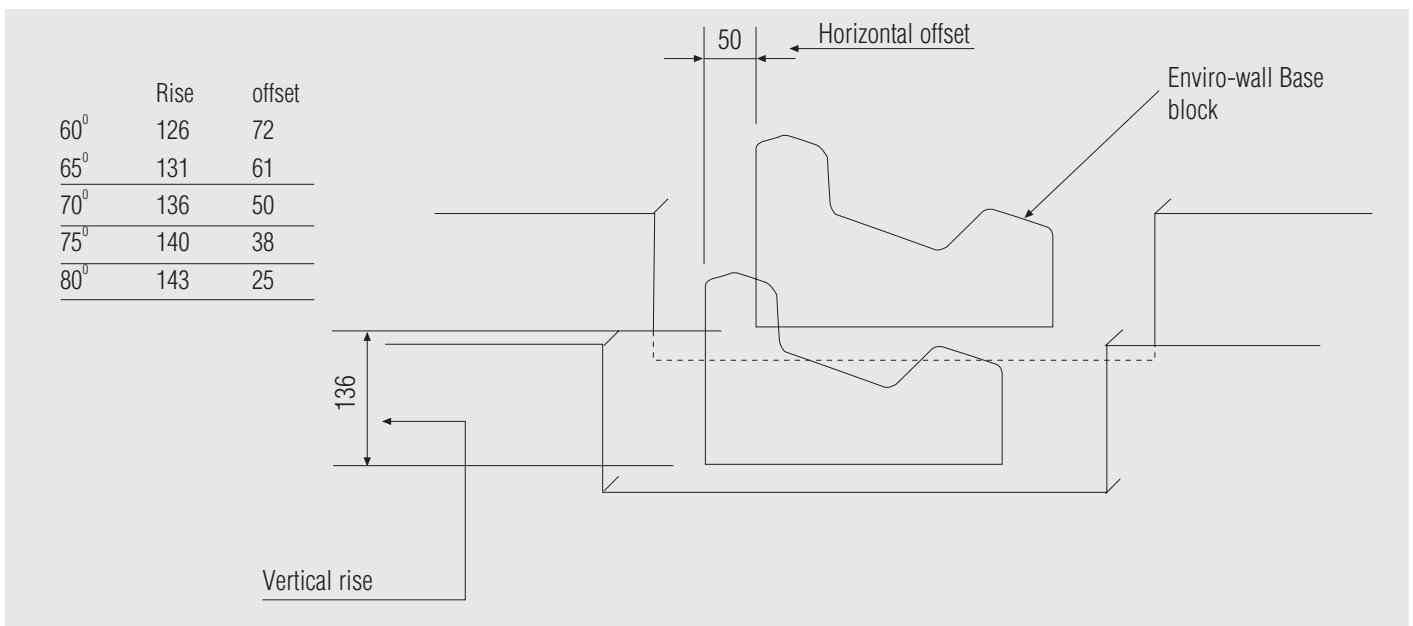
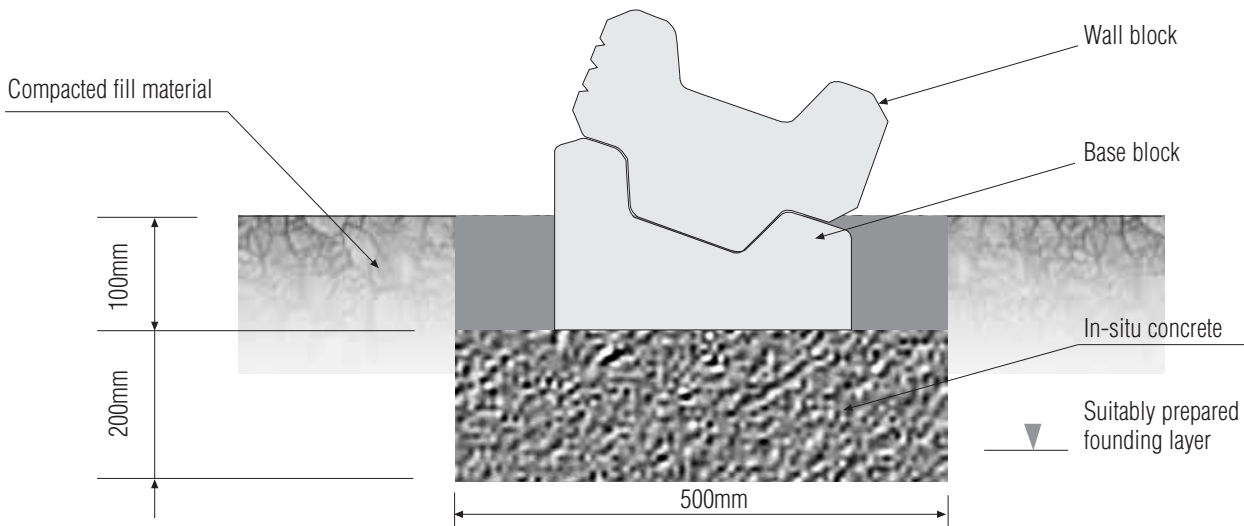
**Enviro-Wall of a height greater than 1,5m must be designed by a competent Engineer.**

## General

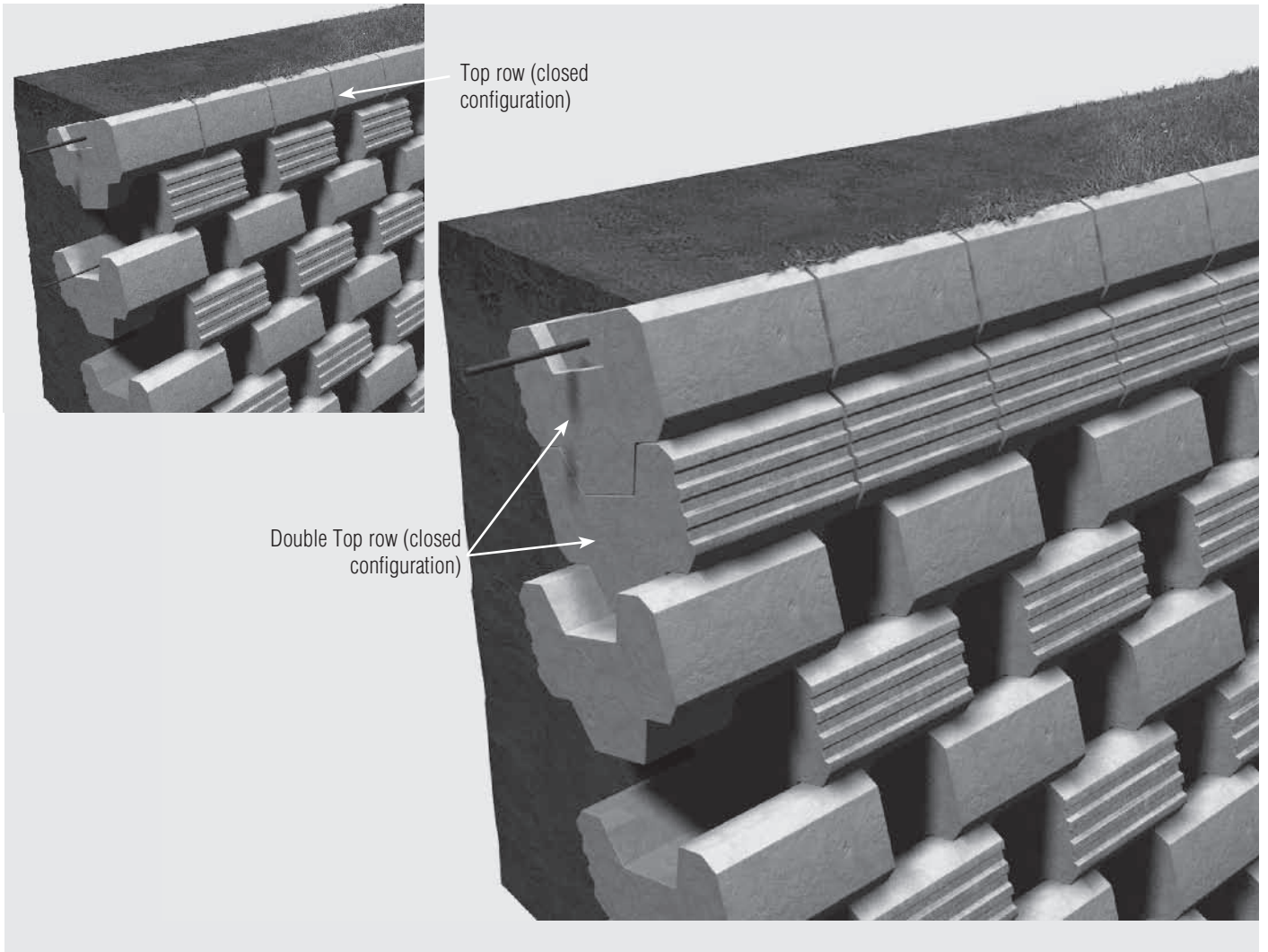
Approved backfill material should be well drained and compacted in layers not exceeding one block height at optimum moisture content. Where geofabrics are used behind the Enviro-wall the fabrics must be installed to the Engineer's details.

## Foundation

It is recommended that, unless otherwise specified by the engineer, a 200mm thick concrete foundation be used on a suitably prepared founding layer. The base blocks are then laid out to obtain the necessary alignment and the remainder of the foundation on each face of the base block filled and compacted before commencing packing of the wall blocks. (see also "guide to the installation of Enviro-wall baseblocks")



*If the foundation is to be stepped, the rise should be multiples of  $145\text{mm} \cdot \sin 70^\circ$  i.e. vertical rise would be 136mm Similarly the foundation must be stepped back by a similar multiple of  $145\text{mm} \cdot \cos 70^\circ$  i.e. the lateral back step would be 50mm*

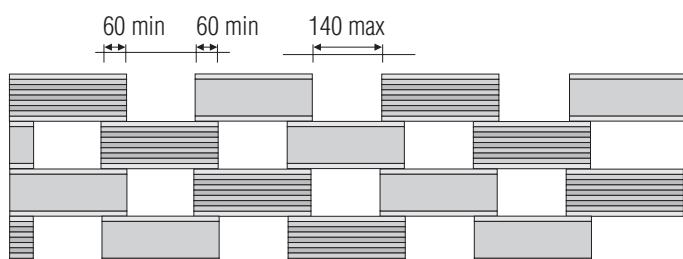


Base blocks Standard base blocks have a length of 1 000mm, but shorter base blocks of 300mm are also available for forming curves. The minimum Enviro-wall radius is approximately 2 meters. Note that for external corners, the minimum radius occurs at the top of the wall and for internal corners, the minimum radius occurs at the bottom of the wall. Base blocks are manufactured with a fixed slope of 70 degrees, but any angle may be obtainable by building the base blocks into the foundation at the required angle.

*(See guide to the installation of base blocks)*

### Wall blocks

Each wall block has a smooth face and a horizontally fluted face. Different laying patterns are therefore obtainable by alternating smooth and fluted sides. Unless otherwise specified by the engineer, a gap of 140mm between adjoining wall blocks is ideal for open wall configuration. The gap may reduce or enlarge in curves depending on whether the wall curves inwardly or outwardly - it is important to visually line up the openings vertically for a neat finish. Closed walls are built with no openings. Advised is an opening

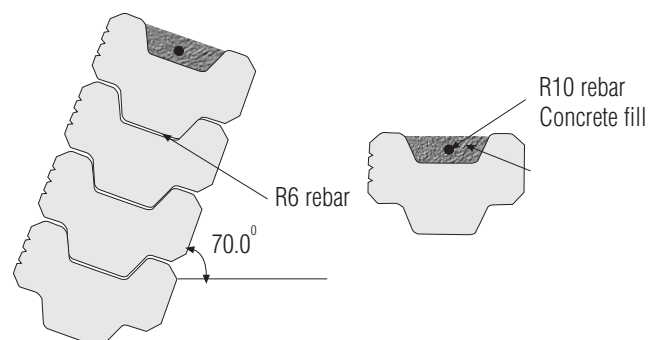


of 10mm. Plants may be planted in the opening for vegetated walls. Topsoil should be placed in the openings prior to planting and watering is essential.

### Finishing top row of open wall

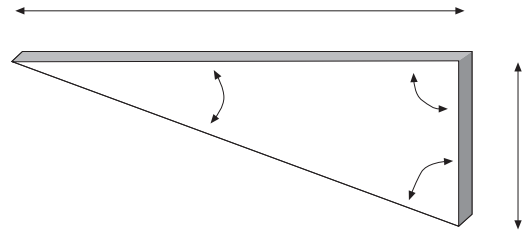
It is recommended that the last layer be laid closed with no gaps. Where a step occurs in the upper layer, it is recommended to continue the solid line under the step by approximately 2-3 wall blocks lengths, thereby maintaining an overall appearance of a solid upper layer. The top layer of blocks may be secured with a single length of 10mm mild steel reinforcing bar, concreted in the depression on the topside of the wall blocks. Steps can be managed by bending the bar and filling the step with a 45° concrete fillet.

*Top row support between openings can be achieved by using a 6mm bar placed where blocks abut in the center of an opening. This will prevent sagging of individual blocks on the top row.*

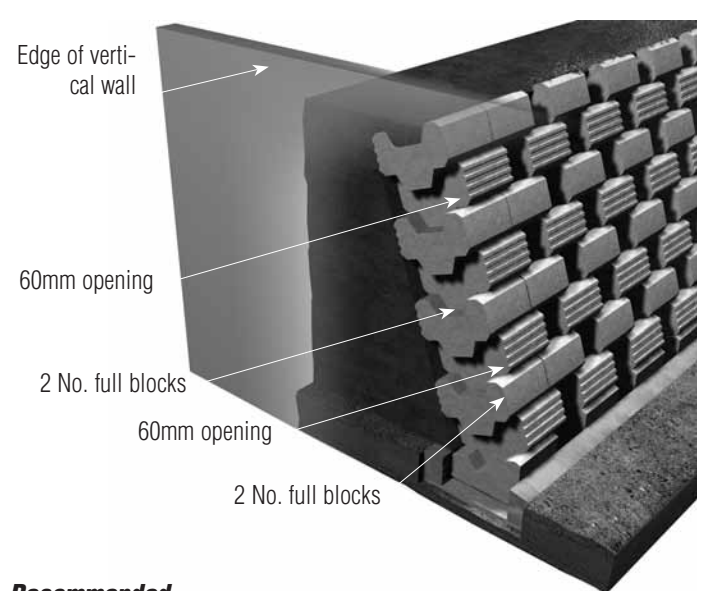
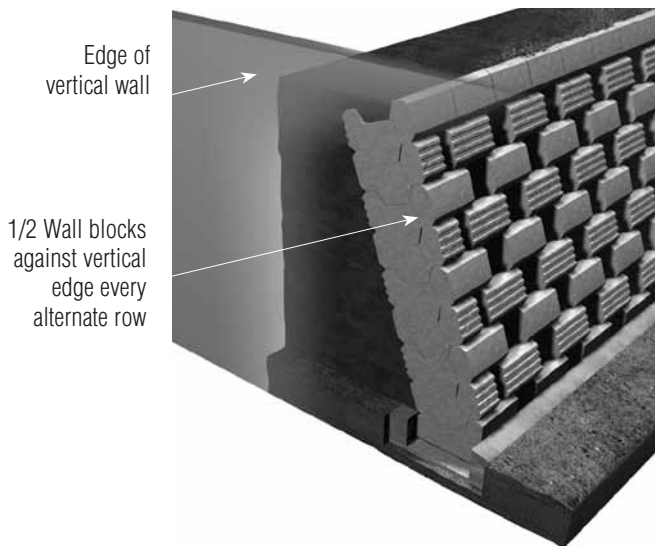
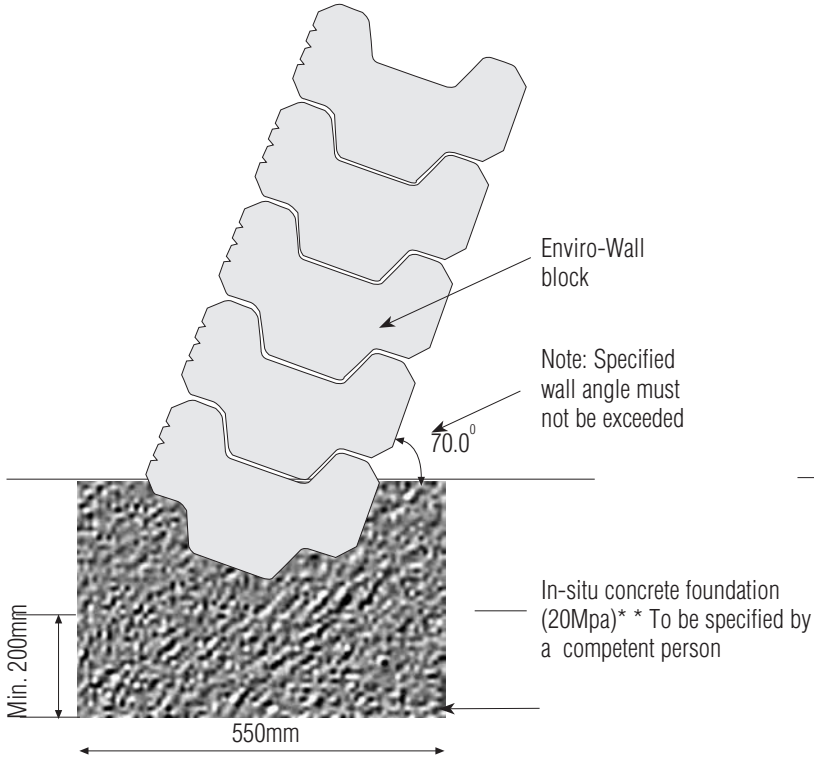
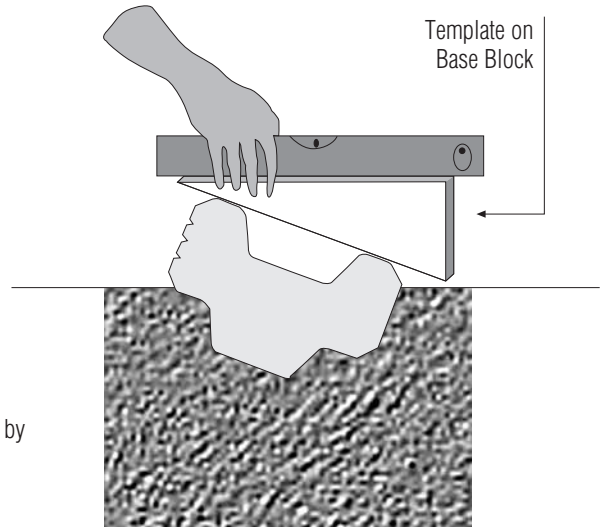


# GUIDE TO THE INSTALLATION OF BASE BLOCKS

## Profile template for a 70° angle of erection



## Use of template during construction



### Finishing against a vertical wall

Where a retaining wall butts against a vertical wall (e.g. a house wall), 1/2 blocks should be cut and placed in order to achieve the required support and spacing.

### Internal corners

Internal corners should be constructed using the minimum radius of 2.0m at the base of the wall; start the first layer in closed a configuration. Sharp angled corners can be constructed as shown in the detail below. Where the

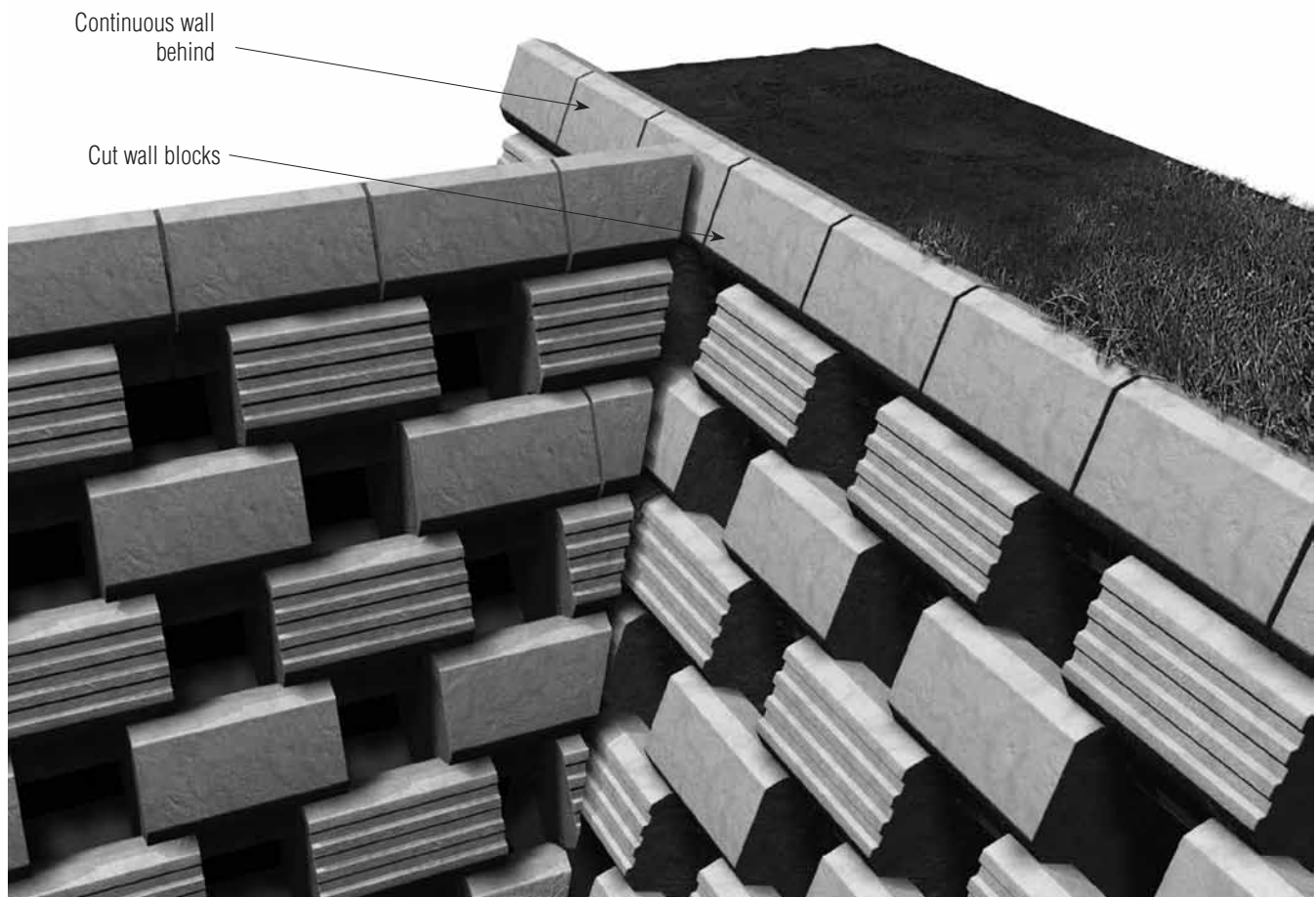
### Recommended

*Alternatively: when no block cutting is required or desired.*

wall blocks about the adjacent wall, blocks must be cut to the correct angle to produce a neat finish. External corners External corners should be constructed with a minimum 2m radius at the top edge (It is not recommended to construct sharp edge external corners). Start the first layers with a block spacing using the maximum gap permissible. It should be noted that external corners in closed walls would result having small gaps between blocks within the corners. The guidelines are to assist in the construction of Enviro-wall and in no way guarantee the stability of the wall.

All applications of Enviro-wall must be assessed by a competent Engineer.

Enviro-Wall® -Environmentall engineered performance.



Continuous wall  
behind

Cut wall blocks



**TECHNICRETE**  
quality support

**Technicrete House**

Cnr. Main Reef Road & Houtkapper Street, Roodepoort, 1725

Tel: 011 674 6900 – Fax: 011 672 1425

Email: [info@technicrete.co.za](mailto:info@technicrete.co.za)

[www.technicrete.co.za](http://www.technicrete.co.za)

0861 266267

