



Drainage Septic Tank Soakaway Gowrie Farm, KZN Midlands

Case Study

Project:	Gowrie Farm, Nottingham Road, KZN Midlands	Date:	June 2011
Client:	Mooi River Cattle Company	Product:	Infiltrator™ Chambers
Consultant:	Drennan Maud & Partners	Quantity:	200
Contractor:	Abbydale Building & Civils (Pty) Ltd	Rep:	Sham Luchai

Problem

Gowrie Farm is a residential and golf estate on Nottingham Road situated in the KZN Midlands. This establishment did not have a waterborne system on the farm and therefore required installation of a septic tank soakaway. Drennan, Maud & Partners was appointed to carry out a feasibility study of the on-site waste water disposal.

Solution

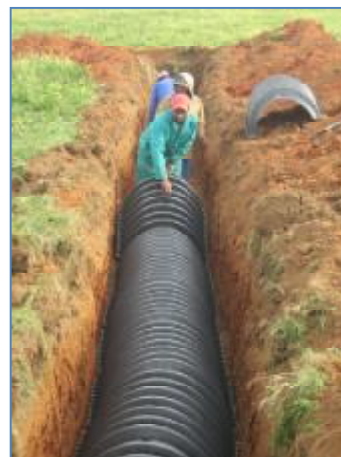
The proposal suggested that a percolation test be carried out for each of the 3 houses on the property. Typically, a 4 bedroom house on this estate produced effluent of 1100 litres and needed an effective evaporation area of 470 m². The outflow from the septic tank was to be discharged into a conventional soakaway system with a minimum length of 31 metres. On-site conditions restricted the depth of excavation for installation of the drains where deeper excavations may have resulted in the drains being placed on less permeable or bedrock material.

Kaytech provided an alternative solution to the traditional stone filled drains using the **Infiltrator™ Chamber System**. The **Infiltrator™** chambers provided a maximum exposed infiltrative area and since they only require an excavated depth of 700 mm to be installed, they made for the most viable option.

A total of 200 **Infiltrator™** chambers were manually installed to accommodate the effluent from the 3 properties on the estate.



Attenuation area behind farm house



Infiltrator™ Chambers laid in trench



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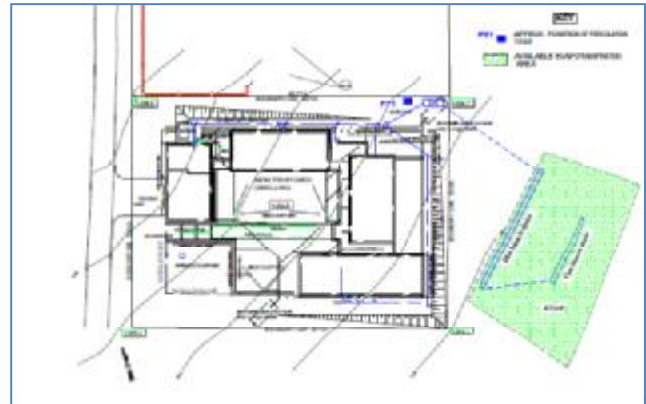
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Benefits

Compared to a conventional stone & pipe French drain system, this method halved the installation time and resulted in a 43% cost-saving of approximately R7500. On returning to the site after 9 months, the soakaway system is working effectively.



CAD showing attenuation area