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Your reference

Our reference  
IR1121 L Seepage

Date  
6 JULY 2012

## DIEPSLOOT EXTENSION 8: MID-SLOPE SEEPAGE ZONE

We investigated the seepage zone designated as Zone 2/3W and centered on Test Pits B64, B66, B67, TP40 and TP41 (Drawing IR1121 attached), located in the central area of Diepsloot Extension 8, during our geotechnical investigations of the site. We comment as follows:

- The seepage zone is located mid-slope.
- The subsurface profile typically consists of a thin horizon of hillwash, overlying hardpan ferricrete grading into soft and hard rock granite.
- During the rainy season ground water accumulation and lateral seepage occurs within the soils horizons, on the soil-ferricrete/granite interface. This water gathers upslope of the seepage zone and migrates downslope until it is forced to "daylight" by the outcropping or dramatic shallowing of the granite or ferricrete.
- Such seepage zones are common on the Halfway House Granite that occurs in large parts of northern Johannesburg and Midrand.
- Our opinion is that the area may be developed from a geotechnical perspective provided certain precautionary measures are implemented, including:
  - Use of cutoff drains topographically immediately above the delineated area.
  - Subsurface drains are located strategically to capture the groundwater seepage e.g. below the sewer pipeline in sewer trenches. These drains will remove the water and discharge it downslope.
  - Placing roads on improved foundation materials and making use of the road network to facilitate drainage of the area.
  - All structures and walls are to have adequate freeboard and appropriate damp proofing, to preclude rising damp.
- Alternatively parts of the delineated area can be considered for use as school sites, with the sports fields and part of the open space located in the seepage area.

We trust that this information meets your immediate needs in this matter.

Yours faithfully

  
Dr D.B. Buttrick  
For Intraconsult cc

IR1121L Diepsloot seepage zone