

EXECUTIVE SUMMARY

Based on geotechnical considerations the area is suitable for urban development. Based on geotechnical conditions the development potential property varies from favourable to poor. The following must be taken into account :

- **Geology** : *The area is located on Silverton shale of the Pretoria Group, Transvaal Supergroup. The shale is intruded by a major post-Transvaal diabase sill.*
- **Pedology** : *The pedology in on the property consists of a surface horizon of various transported clayey sands and sandy clays overlying residual diabase and shale. Some fill is present in the eastern parts of the property.*
- **Groundwater** : *Perched water may be present close to the water courses. The presence of the watercourses influences the land utilization.*
- **Founding Conditions** : *Founding conditions on the property vary from C, H2, C1-H2, H3, C1-H3 to P(Fill). Maximum free heave is limited to 90mm. The provision of foundation precautionary measures is thus required over the larger part of the property.*
- **Excavation Potential** : *All soils will be easy to excavate to a depth of approximately 1500mm. The clay will become tackey at conditions of high soil moisture. Some excavation penetration into bedrock will be possible with a TLB. Conditions of sidewall collapse may take in the fill and in very moist argillaceous soil.*
- **Soil Corrosivity** : *Soil corrosivity is a factor to consider in the area.*
- **Historic Monuments** : *There are no historic monuments on the site.*
- **Cemetery Sites** : *There are no cemeteries or graves on the site. The site is not suitable to be developed as a cemetery site.*
- **Dolomite Stability** : *The site is not subject to instabilities due to the presence of dolomite.*
- **Undermining** : *The area is not subject to undermining, neither has material been removed for road building purposes.*

- **Seismicity** : *The annual probability for an earthquake with intensity of 4,2 on the Modified Mercalli Scale to occur in the area is less than 10^0 ; and with an intensity of 7,1 to occur the probability is less than 10^{-3} . A 10% probability exists that an earthquake with Peak Ground Acceleration of 0,12g to 0,16g may take place once in 50 years.*