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Masters Research Report

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Title: Geotechnical conditions, community based practices and developments in Slovo Park informal settlement, Johannesburg.

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Abstract

In recent years, authorities, experts and environmental agencies have had to deal with the challenge of considering dolomitic zones for the *in situ* upgrading of urban informal communities. South Africa appears to lead many regions globally in the management of developing construction methods on dolomitic terrains. The benefits of such expertise are, however, not yet visible in informal settlements. Intervention envisaged by the Constitution, various laws and regulations seem to have little effect. The challenge remains: the need to significantly improve the economic prospects and livelihoods of residents of informal settlements. Lack of such interventions is driving dangerous practices that exacerbate the development of dolomitic hazards, such as sinkholes.

The informal settlement of Slovo Park was selected for the study because it is built on dolomite and at present there are major on-going debates between the City of Johannesburg (CoJ) and the community around issues of residential upgrading in relation to possible geotechnical hazards materialising in this area. The aim of the study was to investigate and define human actions that can exacerbate the formation of sinkholes within this type of setting. This research also strives to illustrate the gap that exists between conventional geotechnical interventions, and the important key roles that informal communities could play in preparing for and mitigating dolomitic risks.

The study recommends the adoption of a Dolomite Risk Management protocol, as well as social awareness programmes, to inform residents of the negative impacts that socio-cultural and household practices and decisions can have on sinkholes creation.