

The Role of Geotechnical Site Investigations on the Lekki Toll Road Infrastructure Project in Lagos, Nigeria

Christian Azuka Olele

EdgeGold Concept Services Limited, Lagos, Nigeria

E-mail: oleles@geologist.com

Abstract: A spell of increased prosperous economic activities and increase in population within the Eti-Osa - Ibeju-Lekki Environs will result in increased traffic volumes which will in-turn stress the existing trunk highway leading to the government's decision to upgrade the existing Lekki – Epe highway Infrastructure. With its natural history, infrastructure construction in urban context, particularly the construction of the Lekki Toll Road which entails widening of an existing highway, can require significant phasing and sequencing of temporary works in order to deliver the permanent solution with the constrained environment.

The first 20km of the expressway up to Ajah Community is characterised by very heavy traffic with significant encroachment of the RoW by numerous small businesses. Most, if not all of these businesses, may be occupying the Row without legal ownership of the land. However, upgrade of the existing Lekki – Epe expressway infrastructure involves the provision of additional traffic lanes to facilitate increase traffic flow and relieve congestion. Invariably, the highway cuts across significant development where acquisition of additional land would require major public consultation. These spatial constrain generally resulted in the requirement for new traffic lanes, pedestrian bridges and traffic circles to be constructed within the government gazetted and published right of way (Row).

In a typical fast developing environment, the implementation of the life cycle of a project of this nature entails collaboration efforts between Lagos State Government (LASG), Lekki Concession Company Ltd (LCC), and Hitech Construction Company Ltd (Hitech). For the implementation of the associated works for the project, pedestrian bridges, roads, traffic cycles and toll plazas would be constructed and the

need for geotechnical investigation works is necessary prior to the commencement of construction.

Key Words: Geotechnical Investigations, Lekki Toll Road, CPT, SPT, Lagoonal Sand Deposits

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