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HOUSING DEVELOPMENT AGENCY
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RIVIERA

Dear Hlalelo

UNDERTAKING OF PHASE 1 GEO – TECHNICAL INVESTIGATIONS AND BASIC ENVIRONMENTAL ASSESSMENT ON THE PROPERTIES LOCATED IN FREE STATE PROVINCE
RFQ/FS/005/2013

The report submitted was intended to be used as a Preliminary report (as per the TOR deliverables) and not for Site Classification for Foundation Design purposes. As per the recommendations on the report, a further geotechnical investigation is required for foundation design purposes (NHBRC requirement). However, based on the information gathered so far and the limited tests conducted (Preliminary report), the Zones identified in the report will probably fall into the following site class designations (as per the NHBRC home building manuals), which can only be verified through further geotechnical testing (additional tests).

Area	Site Class
Zone 1	H3
Zone 2	H3
Zone 3	H2
Zone 4	R

The recommended foundation design, building procedures and precautionary measures for single storey residential structures are as follows:

Site Class H2 & H3: Soil raft foundation:

- Remove all or necessary parts (usually around 1m depth) of the expansive horizon to 1 metre beyond the perimeter of the building and replace with inert backfill (usually G5 material or better) compacted to 93% Mod Aashto density at -1% to +2% of optimum moisture content
- Normal construction with lightly reinforced strip footings and light reinforcement in masonry if residual movements are less than 7.5 mm, or construction type appropriate to residual movements
- Site drainage and plumbing/service precautions

Site Class R: Strip footing

Strip footing founded on engineering fill to compensate for the steep gradients. This will be subject to the stability analysis of the steep slopes as part of further geotechnical investigations and/or testing.

***N.B.** The above are merely estimates and guidelines and as such cannot be used for Design and Construction purposes. Further geotechnical testing and/or a full Phase 1 & 2 (NHBRC requirement for enrolment purposes) report will be required and a Competent Person (Professional Engineer) shall be appointed to do foundation design and construction monitoring.*

We trust that you will find the attached information of value to you. Please contact William Sibanyoni (011 920 3172 / 083 647 8462) for any further queries regarding our submission.



Yours faithfully
W Sibanyoni
Managing Member
Kgalawu consulting cc