1.1 INTRODUCTION

These Design Guidelines & Regulations are intended to provide minimum geotechnical design requirements for RC buildings foundations and substructures to safeguard life or limb, environment, property and public welfares.

Submission for no objection certificates for different types of applications by consultants to be as per this guidelines to avoid any delay for the project or abortive work to the CED part. Incomplete submissions will be returned without review and as such CED shall not be responsible for any delays to the project accordingly. CED reserves the right to levy additional appraisal fees for checking the incomplete and unchecked submissions noting that this fee shall be paid by the consultant and not to be passed on to the client.

The Guidelines are aimed to give the designers, geotechnical engineers, specialist contractors and inspectors a general idea of the basic requirements for review and checking the structures schemes until approval from the CED according to principles and standards in order to facilitate and speed the completion of the work efficiently. It is anticipated that the use of these guidelines will result in a uniform design and construction of buildings throughout DW projects. Any requests for revisions must be fully documented and presented to the Civil Engineering Department for review and acceptance prior to any work commencement. These guidelines are provided as a reference and may not be taken as authority to construct without prior review. These guidelines supersede all previous geotechnical guidelines and are subject to revision without notice.

These Guidelines contain Soil Investigation and Enabling Works requirements and any items not covered specifically here in shall be in accordance with the latest editions of British Standards. The Consultant shall ensure that the selected design standards are the latest editions and fully compatible with Trakhees Building Regulations and Design Guidelines-Structural.

1.2 BASIC GUIDELINES FOR SOIL INVESTIGATION REPORT

The purposes of site investigation is assessing its suitability for the construction of civil engineering and building works and of acquiring knowledge of the characteristics of a site that affect the design and construction of such work and the security of neighboring land and property. For new works, the objectives of ground investigations are to obtain reliable information to produce an economic and safe design, to assess any hazards (physical or chemical) associated with the ground, and to meet the construction requirements. The investigation should be designed to verify and expand information previously collected.

1.2.1 Soil investigation report for any structure shall be mainly based upon its

location with specified coordinates as per affection plan and geographical maps from the concerned authorities and also with relevant to the information about magnitude of superimposed loads, number of floors, shape of structure, past land use, surface topography, geological features and surface drainage.

1.2.2 To specify the number of boreholes (one borehole for each 750 m² for structures small in plane area, exploration should be made at a minimum of three points). For structures of moderate size, it is customary and satisfactory to anticipate making five boreholes, one at each corner and one deeper at the centre or under the core area. In case of structures covering a large area, the exploration points may be placed in a grid. The mutual distance between the boreholes points that considered an ap-

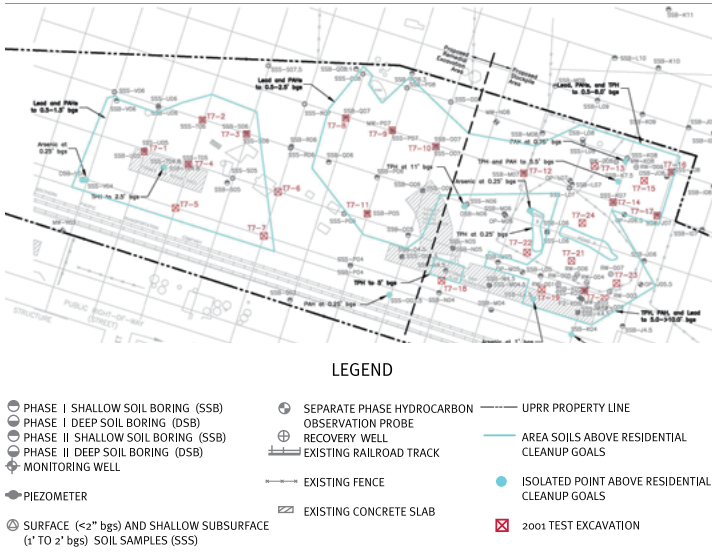

Fig. (1.1) Boreholes Distribution

propriate for structures should normally be 20 – 40 m. Where a certain project consists of a number of adjacent units, one exploration point per unit may suffice if the data of the boreholes have shown a uniform soil formation. In uniform soil conditions, the borings or excavation pits may be partially replaced by penetration tests or geophysical soundings. (B.S. 5930-1999). Fig. (1.1).5930-1999). Fig. (1.1).