



As you are no doubt aware, the era of Eurocode 7 has dawned upon us, what does this mean? What are the implications? Does it affect you? Do I have to use it?

The Eurocodes provide a pan European design approach (and is being looked at worldwide). It provides a rigorous, structured approach to design that integrates well with structural Engineers that use similar concepts and terminology.

Soils Limited has invested heavily in training and software, allowing us to fully understanding of the requirements and design to Eurocode7.

Do you have to design to Eurocode7?

Currently there is no requirement to design to the Eurocode although several of the old British Standards that we all relied upon have now been withdrawn, which reduces the scope for design.

With time Eurocode7 design adherence is likely to become a pre-requisite by underwriters – although nothing has been formally expressed, and this may be years away.

So what must you do to comply with the Eurocode 7?

The investigation must be planned with the knowledge of the final site use and likely foundation type and loads. The Structural Engineers must provide the loads acting on the foundation (or earth retaining structure). The loads are called actions in the code, and these are the characteristic actions, the representative actions or the design actions, depending on what factors have been applied to the loadings.

Does the Eurocode 7 cover all structures?

Well yes and no, it depends on the Geotechnical Category (GC) of the structures, no example is given for a "small and relatively simple structure with negligible risk".

Tech Talk:

Rather than the former approach to geotechnical design; adopting a large global factor of safety, Eurocodes use a statistical basis for design and adopts partial factors applied to the various loads that are appropriate. The loads are factored based on their likely occurrence (i.e. permanent, variable and accidental loads).

For a design to be undertaken in the UK it must comply with the code(s) and their UK Annexes. There are minimum stipulations for the scope for site investigations, this includes; the minimum number, centre's and configuration of test locations (EN 1997-2 Annex B.3) and the depth of testing relative to the proposed works.

If designing to Eurocode 7 the final design must be accompanied by a Geotechnical Design Report (GDR) (Requirements given in EN 1997-1), which can only be written by a geotechnical specialist who understands the interpretation of the input data and the geotechnical design procedures.

The majority of the investigatory works are reported in the Ground Investigation Report (GIR), which is very similar to the sort of interpretative reports historically prepared by Soils Limited.

With sufficient sampling and testing and information, as outlined above, a design can then be produced and a Geotechnical Design Report prepared.

Cost implications:

Possibly higher up front. However, savings can be made on the size of foundations or sub-surface structures, by the potential adoption of lower factors of safety.

Want to know more?

The above is meant as a basic guide, if you would like to know more about Eurocode7 or our design capabilities then please call us for an informal chat.

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