



Construction Plant-hire Association
Shoring Technology Interest Group
Shoring Technical Information Note



TIN 207

Shoring Designs based on Verbal Soil Descriptions

Verbal soil descriptions (VSD's) are normally provided by the principal contractor on site or the groundworks contractor who have either dug out soil material from a trial pit at the proposed excavation location or are already familiar with the site soil conditions. The information from the site comprises the opinion of the site team and the soil has not been subject to laboratory testing or other expert assessment and reporting.

Ideally VSD's should be used in conjunction with previous site investigation information to provide the most appropriate temporary works design. **However, in exceptional circumstances (e.g. emergency or reactive situations) this is not always possible and provided adequate safeguards are in place on site to confirm soil parameters are as described, designs can be based entirely upon the VSD.**

Notwithstanding the above it should never be the case that a cantilever or propped cantilever design is issued for construction use based only on a VSD due to the sensitivity of these designs to changes in soil parameters.

On planned works it is a legal requirement under CDM that the designer is provided with adequate site information - which for excavations means relevant geotechnical investigation information. Eurocode EC7 Annex B3 gives specific guidance on the spacing of investigation points and the depths (generally minimum 2.0m below formation or pile toe levels).

However, in many instances STIG members are not provided with any geotechnical site investigation information – only a VSD. This is often the case when customers are pricing the works. **Design solutions offered in such circumstances must be clearly marked 'Not for Construction'.**

On relatively shallow works <4.0m depth with an experienced site representative – e.g. a Temporary Works Supervisor - providing a VSD, STIG members can at their discretion provide a design **or an "off- the-shelf "standard solution.** If this is done, the design must be conservative and not be sensitive to minor changes to the assumed soil properties (e.g. Cantilever pile solutions issued **"For construction"** would not be appropriate). The design will carry a residual risk rider that the soil conditions encountered do not change from the VSD on which the design was based. Any change encountered should be reported to the designer so that the design can be reviewed.

On deeper works STIG members will not provide a design unless either:

- A signed trial pit log produced by a competent engineer is provided in lieu of the VSD;
- The design is signed off by a competent engineer, following review of the available information.

A competent engineer must be present on site as work proceeds (e.g. emergency dig downs) to confirm the soil properties and that the design is appropriate.

To avoid risk of injury, contractors are reminded that soil samples should be collected or assessed at a safe distance from the trial pit and that no person should enter an excavation unless it is supported or the sides battered or benched. Close approach should be avoided unless support and edge protection is present.

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