

Shoring

Claims for damage caused by failure of shoring or lack of shoring are not infrequent. Shoring is the provision of temporary support to an excavation so that the contractor can proceed with construction of the permanent work.

The type of shoring will depend on the type of soil conditions. In soil or clay, shoring commonly comprises vertical columns driven into the ground (soldiers) and backed with timber planking (whalers) designed to retain the natural material in the ground. In sandy material contiguous piling is often used. This consists of piles that are drilled immediately adjacent with one another such that they form a continuous wall with excavation following. For this to be carried out properly, though, strict procedure must be followed.

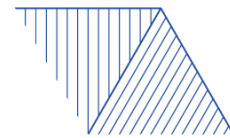
In large excavations ground anchors are often used to supplement the strength of the shoring system.

Shoring is often required where the contractor is required to excavate the ground on the boundary with a neighbour's property. Failure to install adequate shoring in such circumstances can lead to major failures and substantial third party claims, particularly when excavation is required in sand (which will not retain itself on a vertical face), due to its low cohesive characteristics.

The shoring system for a project needs to be designed by a consultant experienced in this type of work. It also needs to be specified on the drawings or in the contract documents, but frequently is omitted. The contractor then is likely to omit it from his construction, and with disastrous consequences, or is likely to use a token system such as garden stakes and galvanized iron sheeting. Such a token system cannot resist soil pressures or hydrostatic pressures.

If shoring is not specified by the architect, but is nevertheless required, a contractor is unlikely to allow for its cost in his tender for fear of not winning the tender. He is unlikely to be able to convince the principal that its cost should be a variation to the contract even though the project could not be completed without its inclusion.

Thus when failure occurs in an excavation devoid of shoring with, perhaps, resulting damage to the insured work or third party property, the insured inevitably adds the cost of shoring to his restoration costs when lodging his claim. In effect, he has gambled on completing the work without the need for shoring and has lost, whereas a more prudent builder would have installed shoring to suit the project. Shoring is not (or rather should not) be a matter of judgement. Clay material, for instance, when dry is a very hard material and can quite easily support itself when the cut is vertical. When saturated, the



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material has little or no strength, and would need a batter of at least 35o to be self-supporting. A few hours of moderate rain, therefore, can completely change the complexion of the site conditions.

There are also requirements concerning shoring included in various Codes and Acts, including the Building Code of Australia.

It is also important to realise that any shoring system will deflect or move as excavation takes place, thereby allowing movement of the soil that is being retained. The degree of deflection will depend on the strength of the wall, and the material that is being retained. There is, therefore, a degree of “inevitability” of movement of retained material.

Such claims need to be treated with caution. Frequently, there is no resultant damage – just the costs of re-shoring. The exclusions relating to defective design and workmanship/materials need to be viewed carefully in these instances.