

Design Tips for Improved Piling Safety



The Problem / Challenge

A designer working with a piling contractor recognised that piling techniques can be prone to leaving open shafts in the ground during their construction.

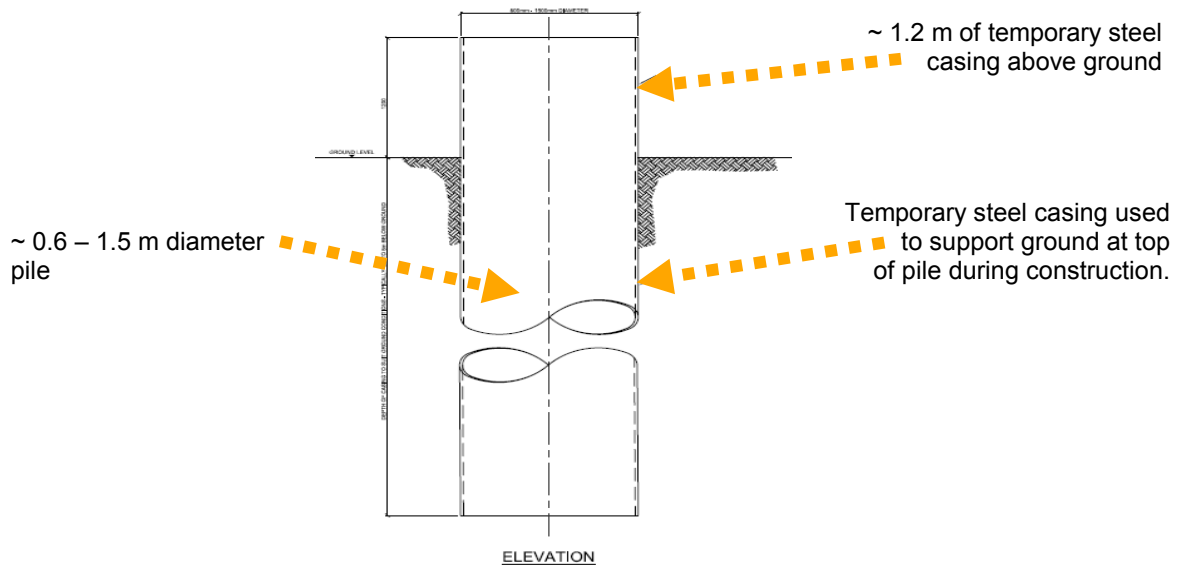
The risks

There was potential for personnel to fall into the shaft.

Piling machinery tracking over the shaft could damage the top of the pile shaft or even become destabilised and overturn.

The solution

When specifying a temporary steel casing for use in the pile construction, a longer casing was selected, leaving ~1.2m to act as a parapet around the top of the open shaft. Once the pile had been formed the steel casing could then be moved to the next pile under construction.



The Benefits

The risk of falls down the shaft and of the overturn of site vehicles was substantially reduced. (Of equal significance, the designer was also aware of the health risks associated with the breaking down of pile caps by hand. A method of mechanical cropping was selected that minimised the need for hand finishing of the pile.)

Key Point

The designer employed by the piling contractor worked closely with the project team to improve the piling methodology. This methodology was then transferred to subsequent sites.