

# SASA Newsletter Article

## *Screw pile footings near significant trees*

SASA hosted a group of guest speakers from Anchorpile at the general monthly meeting on the 12<sup>th</sup> April 2010. Bernie Holding, Joanne Pimlott and Jon Rudd (consulting engineer) presented information on their screw pile footing system for residential and commercial slab foundations, and explained the advantages that this type of footing system has in reducing potential tree impacts when working in the vicinity of significant trees.

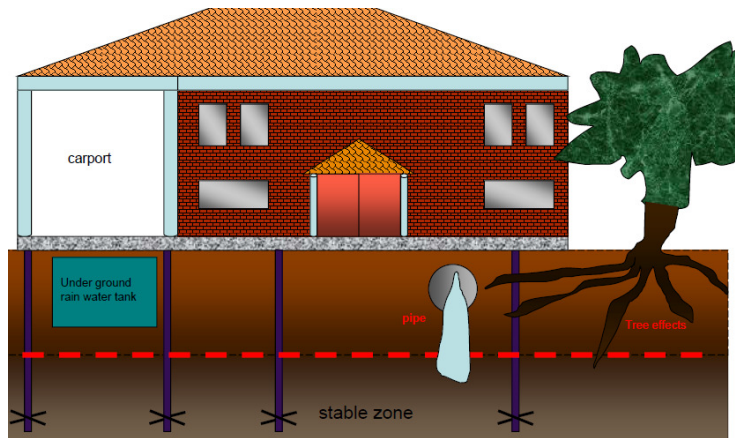
In essence, a screw pile is a galvanised high tension steel post with a large screw head (typically 250-300mmØ) that is screwed directly into the ground. The 1-2m sections are joined together until the screw head is anchored in stable soil, usually ~4-6m deep. This is deeper than typical raft and strip footings and has the advantage of being more stable at these depths. A void forming material (degradable cardboard) is placed in natural ground and the concrete slab is then poured on top of this.

This system has several advantages when working in the vicinity of trees, including:

- No large boring/piling machinery is required on site. The screw piles are installed on a screwing attachment mounted on the front of a small excavator. This has low impact on the surrounding soils and has lower clearances, reducing the need for excessive tree pruning.
- Continuous trenching for traditional raft and strip footings are avoided.
- The process of installing the screw piles produces no spoil. Soils do not need to be removed from site, further reducing the need for additional vehicles on site.
- If large roots are encountered, the roots typically deflect the screw pile rather than the root being severed. There is flexibility in adjusting the locations of the screw piles if large tree roots are encountered.
- There is no requirement to excavate the site or lower the grade within the vicinity of significant trees, provided the site is designed appropriately to achieve suitable floor levels.
- Many Councils prefer this footing system to traditional methods to reduce impacts on significant trees.

Anchorpile is an independent, South Australian owned and operated business specializing in the provision of fully engineered house foundations and footings structures entailing the use of screw piles. Anchorpile has a genuine interest in supporting the principles behind the Australian Standard AS 4970-2009: *Protection of trees on development sites* aimed at improving practices on development sites that have or may have an impact on trees.

They are happy for SASA members to contact them to arrange a site visit to see the installation of these screw piles on a real job site. For further information, contact Joanne at Anchorpile on 0417 808 052 or [jo@anchorpile.com.au](mailto:jo@anchorpile.com.au)



SASA does not endorse this particular brand or product. The information presented is for the general benefit of members.