



King post walls are a cost effective earth retention system, either as a permanent or temporary solution, which can be constructed using concrete panels, timber sleepers or beams, or steel panels.

#### // BASIC TECHNIQUE

King post walls are quick and simple to install. A continuous flight auger, large diameter or minipiling rig is used to create a bore hole which is filled with concrete to form a base for a H pile. Panels of precast concrete, timber sleepers or steel can then be slotted into the H piles to form the retaining wall.

Alternatively the steel H piles can be driven directly into the ground depending on soil conditions.

#### // APPLICATIONS

Applications are numerous and king post walls are suitable for most earth retaining requirements including embankment retention and flood defence walls. They are especially suitable for temporary works.



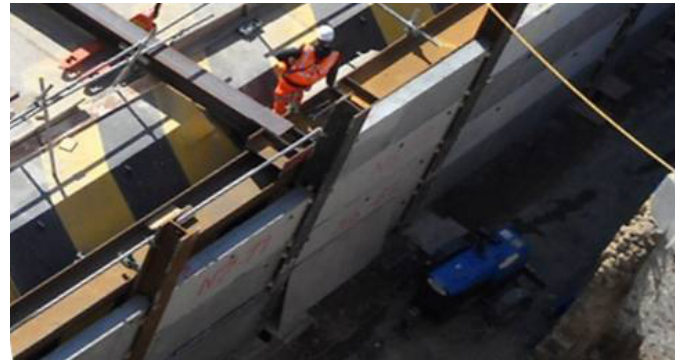
**// STRENGTHS**

- Cheaper alternative to sheet piling
- Simple, fast and versatile solutions
- Virtually silent and vibrationless
- Cost effective system for use in hard ground
- Can be tied back with ground anchors
- No spoil generated on site
- Speed of installation
- Piling unaffected by ground water
- Ready for immediate follow-on construction

**// CASE STUDY - BLACKFRIARS STATION, LONDON**

BBGE completed complex foundations work to facilitate the construction of the first railway station to straddle the Thames in London as part of the Thameslink Programme.

Ground engineering works comprised installation of a King Post Wall, with the King Posts 600mm in diameter and cased to in excess of 10m.



**// CHALLENGES**

The team comprising of BBGE, main contractor Balfour Beatty Civil Engineering and customer Network Rail overcame a number of challenges including working adjacent to a live railway line and above a live Underground track in small constricted spaces.



To overcome the restrictions of working in a confined space and above the live Underground track, a Track Protection Structure (TPS) and a temporary King Post Wall was installed by BBGE and placed above the London Underground tracks to ensure no disruption to existing services and to create a safe working environment. The installation of the King Post Wall allowed the piling platform to be raised to a single level, thereby providing the required safe working space for the large piling rigs without any undue load being exerted on the TPS.

**FOR FURTHER INFORMATION CONTACT:**

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