

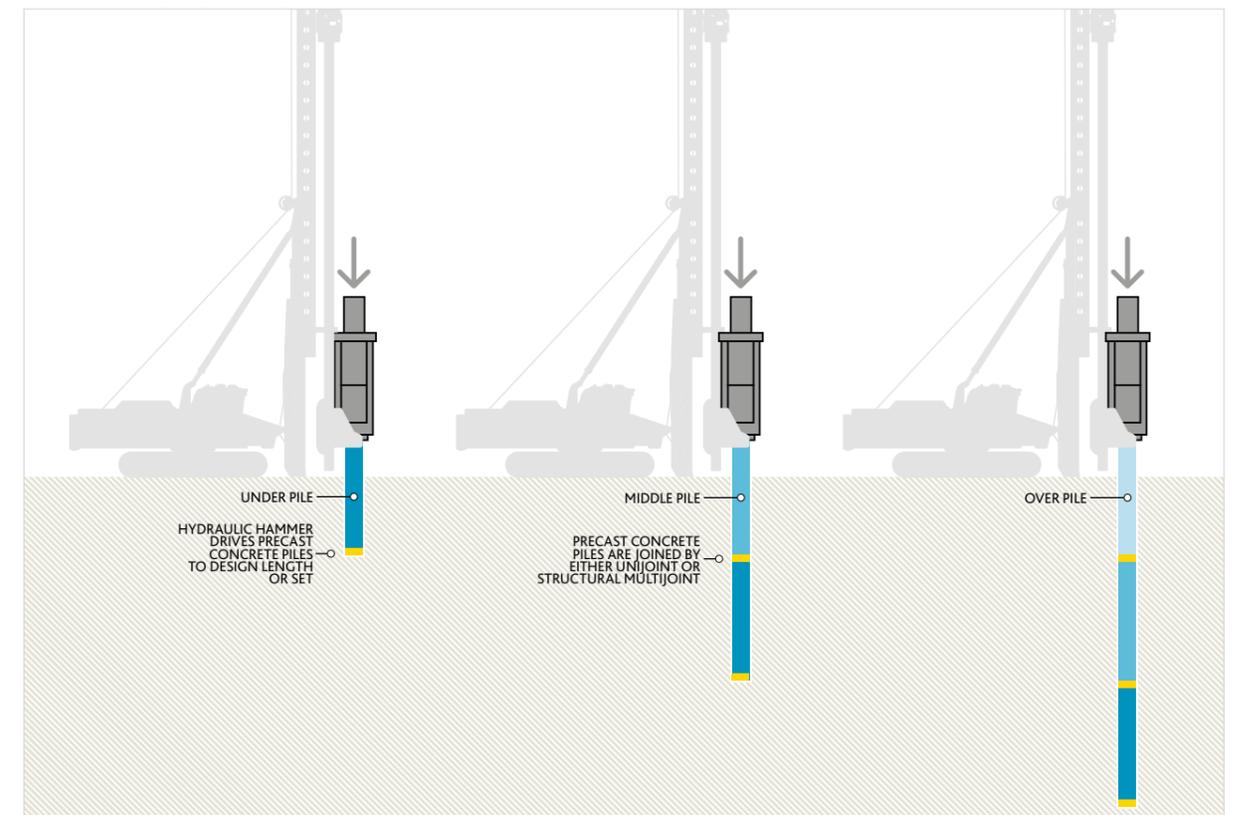
Driven piles

Due to their versatility, driven piles are widely used and are suited to most ground conditions. They are particularly suited where the founding strata is overlain by soft alluvial deposits or made ground. Driven piles are unaffected by ground water and don't generate spoil on site.



Driven precast concrete piling

Precast driven piling technique



Adaptions that can be made to deal with contaminated land include a tapered shoe at the end of the precast pile to minimise risk of aquifer contamination in line with Environment Agency guidelines. In areas where environmental disturbance needs to be kept to a minimum we offer the most up-to-date enclosed hydraulic hammers which significantly reduce noise.

Steel tube and H-piles can be used as well, to deal with obstructive ground or where high shear loads need to be taken.

- Precast concrete piles
- Steel tube piles
- Steel H-piles

The technique

Precast concrete piles are manufactured by Balfour Beatty Ground Engineering off site in standard lengths up to 15m, and driven into the ground using a hydraulic hammer until the required depth/resistance is reached. Where a greater depth is required, the lengths are joined together using the Multijoint or a pinned UNJoint. In this way, piles can be as long as required to meet the load bearing specifications. Driven piles can also be raked up to 1:3 depending on hammer weight and pile size.

Enlarged heads are an add-on to precast piles that help spread the load of a building or embankment over a greater area and ensures that increased loads can be placed on the piles without the risk of the pile puncturing the slab or geo-membrane. Significant savings in slab reinforcement and thickness can be realised when using enlarged heads on piles.

Precast driven piling technical capabilities

Dimensions	From		To		
Practical depth	Min 2.5m		Unlimited (72m longest to date)		
Standard pile sizes	190mm square	235mm square	275mm square	350mm square	400mm square
Load capability (typically) <small>(in the right conditions, piles would be capable of carrying loads 25% higher than the above indicated figures)</small>	300kN	500kN	800kN	1,200kN	1,500kN
Pile segment length	Normally between 3m and 15m in one metre increments				
Minimum working height	12m		23m		
Typical rig weight	36,000kg		67,000kg		
Noise profile at 10m	77-82db at rear of rig		85-90db at front of rig		