

## RETAINING RIVERWALL

Olympic Site - London (2011)



Main contractor Bam Nuttall selected Dawson Contract Piling to install 5m temp and 10m permanent sheet piles. The permanent piles were set to level using a 2 cylinder silent and vibration less system, to form a retaining wall along the river on the Olympic site.

Work was carried out on a 20m x 20m floating pontoon using a LRB125 piling with a Ø400 auger / resonance free vibrator/ 2 cylinder push pull system and was completed safely and on time to the clients requirements.



## Technical Specifications

The LRB125 fixed mast leader rig was positioned onto the floating pontoon. This was made up from 18 link float pontoons to a size 20m x 20m approx. With the pontoon position and secured the piling rig commenced pre-auguring. A Ø400mm auger was run into the ground at the clutch interlock position. The purpose is not to remove a plug of soil but to agitate the ground in preparation for the piling rig to switch over to its resonance free vibrator. This will help in reducing noise and vibration and with an excavator in close proximity any large boulders or obstructions can be removed.

The maximum self-weight of a sheet pile is less than 700kg. A 40mm diameter lifting hole is provided in the top of each sheet. A tested and certified lifting chain and chain clamp is used by the piling excavator to lift the sheets.

A temporary pile gate of 5m long H piles was set up independently of the pontoon.

The Auger motor is then removed and the resonance free vibrator attached.

The piling rig then engaged the pile into the jaws of the rig and gently guide the 10m permanent pile through the previously agitated ground using the pre-stressing force of the machine assisted with the minimum of vibration of 10% in to the soil. The procedure is carried out till all the piles are stood up in that area.

Once all the piles have been stood up as previously described, the twin cylinder silent and vibration less pushing system was attached to the piling rig as all previous attachments. The 200 ton capacity push pull system would then be positioned onto the first pair of piles, and started to gently jack the piles in a sweeping motion into the ground. This system helps maintain the pile lines verticality and alignment. This is repeated until all piles are to level or refusal.

