

Brighton Pier, U.K

Pile Encasement

Contractor: Commercial Marine & Piling Ltd

Engineer: Proserve Ltd

2012



Proserve Ltd.

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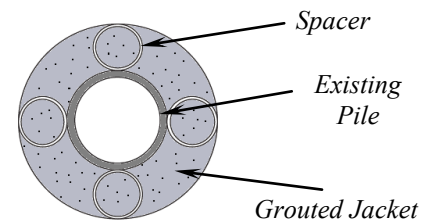
Brighton Palace Pier is a Grade II* listed building that opened in 1899. The pier stem and head total approximately 540m in length. A condition survey of part of the boat deck structure has showed that the poor condition of part of the boat deck meant that it must be replaced. Proserve were contracted to supply 24 concrete pile encasements and bottom infill rings to provide adequate protection to the new piles.

800mm Ø pile jackets were used to suit a 2m vertical span, fully fabricated from single layer material with a top envelope for hanging from the top steel clamp. Jackets were tremie filled using an automated pumping plant from the bottom filler sleeve and secured by a full length zip for fitting around pile and bottom envelope for a turn-up self closing seal to each pile. Temporary tensile corsets were used to restrain the fabric during grouting. The fabric jacket is designed to allow bleed water loss into the sea. The fabric acts as a permeable formwork improving the surface strength/durability of the concrete.

For the bottom ring infill detail, the concrete ring was installed to give a seal around the bottom of each pile. Each ring was a 1600mm OD & 500mm deep fully fabricated infill seal, with 1 zip and made from single layer fabric with 1 filler/vent sleeve to also allow for tremie grouting. Webbing loops were used to aid installation and position control during filling.



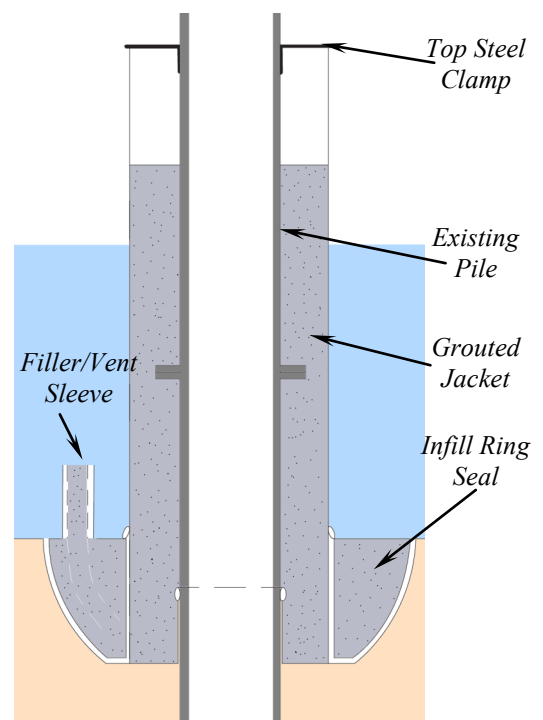
Brighton Pier



Encased Pile Section



Automated Pumping Plant



Vertical section