## Piling Equipment Specialists

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In the summer of 2024 ABI Equipment Ltd were contracted to supply a Delmag RH34 drilling rig to their colleagues at Bachy Soletanche for work at North Quay in Canary Wharf.

The 3.8-hectare site at North Quay in Canary Wharf was previously the construction laydown site for the Canary Wharf Elizabeth station. When completed development will include a 23-stroey building that will ultimately house a world leading centre for health and life sciences.

Our Delmag RH34 drilling rig was used by Bachy Soletanche to install 10No Ø1800mm, 10No Ø1500mm and 4No Ø900mm rotary bored marine piles to a maximum depth of 38.5 metres. The RH34 was selected by Bachy Soletanche due to the combination of its parallelogram mast system, permitting a large radius outreach, and relatively compact machine footprint. Due to the proximity of the Elizabeth Line tunnels, the use of a vibratory hammer was not permitted to install the permanent casing for each pile. Therefore, the 16m casings were lifted into the water by the attendant 250t crawler crane from the lower basement level into a pile gate on the stabiliser barge before being installed by the RH34 rig, using a specialist casing drive adapter designed and fabricated by Bachy Soletanche's plant department.

Ground conditions on site consisted of made ground and dock silt overlying river gravels, the Lambeth Group and Thanet sand. The bottom of the pile casing sits in the Lambeth clay, which is a challenge for the rig when it

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**North Quay Canary Wharf** 

Client: Bachy Soletanche

**Equipment:** Delmag RH34 Drilling Rig **Technique:** Rotary Bored Marine Piles





comes to installing the casing. The presence of the Lambeth granular formation and Thanet Sands has also meant that the piles were installed under polymer support fluid to maintain open shaft stability.

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In order to complete the works the Delmag RH34 was located on a barge supplied by Red7Marine and the combination of this rig and vessel has been used by Bachy Soletanche on a number of previous marine schemes.

Martin Stanley, Divisional Director-South, Bachy Soletanche said;

RH34 performed "The Delmag exceptionally well in challenging marine ground conditions at North Quay, offering the reach and reliability we needed on a complex piling operation. The support from the ABI team throughout the project was excellent responsive, knowledgeable and proactive at every stage."





