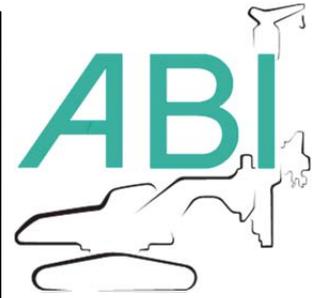


ABI Mobilram fitted with the latest generation vibrator gives BAM-Nuttall the edge at RNLi All-weather Lifeboat Centre construction in Poole Harbour, England.

BAM-Nuttall was recently awarded a contract to redevelop a facility for RNLi at the charity's headquarters in Poole on the south coast of England. Works involved the demolition of the existing buildings and installation of a new quay wall in front of the original 1970s wall. The new facility will provide increased load capacity for all-weather lifeboat production, maintenance and refit, and allow the charity to bring all-weather lifeboat building in-house.

The contract commenced in March 2013 and is due for completion in Autumn 2013.



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- Buildings to be demolished
- Site boundary

The steel sheet piles, weighing around 3,000kg, were to be supplied and installed in crimped pairs. The site investigation showed the ground to consist primarily of silts, sands and gravels but also highlighted the presence of very stiff layers of clay (N = 45/50 blows) within 2m of proposed toe level.



After consulting with ABI Equipment Ltd, the UK subsidiary of ABI Group, BAM-Nuttall opted to use an ABI-TM16/20B Mobilram equipped with the very latest vibrator technology - the MRZV28VV. This variable moment, variable frequency vibrator offers exceptionally low dynamic mass and produces 40% more static moment than previous generation units. The new vibrator can be used at high frequencies and relatively low static moment in non-cohesive sands/gravels or fine-tuned, as the soil conditions change, to increase vibration amplitude using more static moment at lower frequency, should the ground become more cohesive. This not only takes full advantage of the available engine power to best match the demands of the piling process, but it also offers significant increases in pile production rates and greater pile penetration – particularly



so with heavier piles and/or in more cohesive ground. The low total weight of the vibrator also means there is more capacity available to handle heavier piles, making the prospect of productively installing pairs of efficient sheet pile sections a reality.

“We were concerned that the stiff clay layers around pile toe level would halt the driving process when using a vibrator, and that we would have to bring in an impact hammer for the final drive”, says Chris Hall , QS for the project. “This would not only have added unnecessary cost to the installation process, it would also have been more time consuming and generated significant noise disruption for local residents and office workers. Ideally, we wanted to be able to pick-up a pair of piles, handle them into position and drive them to level in one process - with minimum disturbance to the surroundings”.

Sheet pile installation works were completed ahead of schedule using the ABI-TM16/20B Mobilram with MRZV28VV vibrator. Hall says, “we were impressed with the performance of ABI’s leader rig and new vibrator. The piles were installed productively and to the required level, with a high quality of installation. In particular, we were very surprised by just how quiet the process was, particularly compared with the crane suspended vibrator we had been using on other long reach work. All-in-all, we were delighted with both the equipment and the service provided by the team at ABI Equipment Ltd.”