

Piling Equipment Specialists

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ABI Equipment Limited was asked by SPI Piling Limited to supply an ABI MZK1200 Combi-Clamp for their project at Kyleakin Fish Feed Mill Marine Works on the Isle of Skye, Scotland.

The piling works were carried out over a 15 week period starting in December 2017.

The Project

SPI Piling was commissioned by Marine Harvest (Scotland) Ltd to expand and upgrade the pier at Kyleakin on the Isle of Skye. The site is on the location of a disused quarry and was chosen by Marine Harvest as the location for their new £80m fish feed plant. The new plant will create 55 full time permanent jobs, providing a major boost to the local economy.

Project Features

The existing quay comprises a disused sheet piled finger pier extending some 110 m north from the shore. Prior to the new quay being constructed various demolition works were carried out.

The construction of the new quay included extending and expanding the size of the current pier to allow for all the plant equipment, conveyors and crane rails. The expansion also included the construction of a new quay wall either side of the existing wall. In addition the length of the quay has been extended to allow for the construction of a new 147m berthing face. The outer end of the quay was extended approximately 23 m seaward from the end of the existing quay.

The new quay comprises a combi tube wall with infill sheets to either side, with tie rods between the tubes. Towards the root of the quay the combi wall to the east side is tied back to an anchor wall in the reclaimed fill area to the west.

Kyleakin Fish Feed Mill : Pier Expansion

Client: Marine Harvest (Scotland) Ltd

Piling Sub-Contractor: SPI Piling Ltd

Equipment Supplied: ABI MZK1200 Combi Clamp

Application: Sheet Piling



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Project Difficulties and Restrictions

The main challenges of the project were the harsh winter weather conditions on the exposed north west coast of the Isle of Sky. The piling team had to contend with snow, rain and strong winds causing significant challenges, which threatened to cause delays.

Piling Method

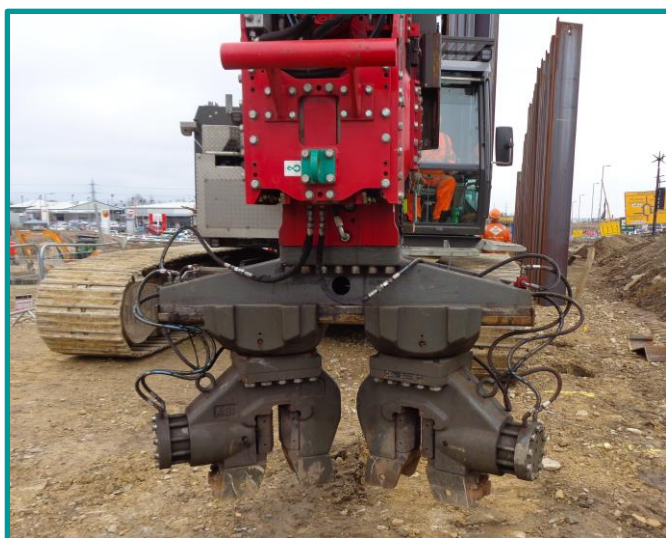
SPI Piling used their new ABI TM20 Mobilram fitted with an MRZV30VV (150-tonne) vibrator, and fitted the ABI MZK1200 Combi Clamp in place of the standard single clamp.

215no. pairs of AZ26-700 sheet piles and 80no. pairs of AZ28 sheet piles were installed.

The Combi-Clamp enables a more even stress distribution across the top of the sheet piles and ensures that the force from the vibrator is transmitted into the center of the pile section, which greatly improves the driving efficiency. Both of these factors help to eliminate the lateral vibrations of the pile during driving thus reducing noise, energy loss and ground disturbance.



A further 81no. Ø2580mm tubular piles were installed using the traditional method with crane suspended vibrator and impact hammer.



Managing Director of SPI Piling Alan Smith commented:

“We have been extremely impressed with the way in which the ABI MZK1200 Combi-Clamp has performed. It was relatively easy to install onto our existing TM20 Mobilram and the piling team have found it easy to use.”