Case Study:
Tate Modern, Bankside Power Station

Client:
Expanded Piling

Sector:
Infrastructure

Services Provided:
Piling

Location:
London

Value:
£227,608.00

Year:
2010

History of the Site

Designed by Sir Giles Gilbert Scott, Bankside Power Station was built in two phases between 1947 and 1963. Scott was also the architect for Battersea Power Station, Liverpool Anglican Cathedral, University libraries in Oxford and Cambridge, Waterloo Bridge, and the designer of the famous British red telephone box.

The western half of the structure, including the chimney, was built in 1952 and replaced an earlier coal-fired power station. The eastern half of the building was brought into commission in 1963. In 1981 Bankside Power Station closed as a result of increasing oil prices, making other methods of generating electricity more efficient. Between 1981 and 1994 when the Tate Gallery acquired an option on the site, the building remained unoccupied although did house an operational London Electricity sub-station that still remains today.

In the late 1980s when it became clear to Tate that its collection had outgrown its home on Millbank, it was decided to create a new gallery to house Tate’s international modern art, and a search began for a suitable site or building for conversion.

The redundant Bankside Power Station proved an astonishing discovery; a building of enormous size, great architectural distinction and superbly sited opposite St Paul’s Cathedral. This fascinating and historic, if rather neglected area, lent itself perfectly for the intended use of its largest structure and followed the arts theme established by the rebuilt Globe Theatre next door.

An international architectural competition was held, with over seventy architects entering, including some of the world’s most well-known names. The winner was the young Swiss practice, Herzog & de Meuron.

In April 2009 the Government gave the go ahead for the £215 million project to extend the Tate Modern with an 11 storey, brick and glass structure designed to significantly increase the capacity of the gallery.

Project Overview

Van Elle received the enquiry from Expanded Piling to carry out the installation of some 267 restricted access piles in place of the old power station storage tanks. The layout of the existing site is designed to retain as much of the original structure as possible, meaning that the restricted access piles had to be installed in headroom of only 6m.

Van Elle deployed 2 Klemm 709 piling rigs in July this year, with a programme of 15 weeks to complete the works. The temporary cased bored cast in-situ piles varied in diameter from 450mm to 600mm and in depth between 14m & 24m. As the piles were to be installed from a platform 12m below ground level and there was no easy access, the rigs had to be craned in from the main road, using a 120t mobile crane.

Van Elle’s restricted access division installed over 4100 linear meters of 600mm diameter bored cast in place piles up to 24m deep in restricted head room, along with over 1200 linear meters of 450mm diameter bored cast in situ piles, all forming part of the foundations for the new Tate modern extension.