

Bryn Cowlyd Water Treatment Works Basement

CLIENT: Skanska

LOCATION: Wales

YEAR OF COMPLETION: 2016

The Bryn Cowlyd WTW was part of a £31m AMP6 investment programme by Welsh Water to ensure the continued supply of drinking water to North Wales. Construction of the WTW was awarded to Skanska under Welsh Water's Capital Delivery Partnership.

As part of the works, a large 60m x 30m excavation up to 5m deep was required in varying ground conditions. This included complex ground conditions in the east characterised by soft clays and loose sands, significant ground water ingress.

We were appointed by Skanska to undertake the design of the excavation temporary support. This involved modelling the construction sequence in PLAXIS to enable design of the perimeter sheet piled wall and to determine prop and waling beam design effects to allow specification of proprietary props. During construction it was confirmed that site measured ground water inflow was in line with our predictions.

KEY FACTS:

- Short listed for the BCIA Temporary Works Award 2017
- Soft ground
- Staged excavation analysis

