

Acton Diveunder, West London



Bauer Technologies recently completed the contract for the piling works for the Network Rail Acton Diveunder project in West London. The £4m project was awarded by Principal Contractor, BAM Nuttall and required Bauer Technologies to install 950lin.m of secant and contiguous pile walls, consisting of 1400no CFA piles in diameters of 600mm, 750mm and 900mm. The piles, which were up to 16m deep, were installed using a CFA adapted Bauer BG28 piling rig. The works were executed within the live rail environment, within a shunting yard adjacent to the Acton Main Line. Both the restricted working area and the linear nature of the site proved real challenges to Bauer.

Each working day was meticulously planned around train movements, access restrictions and pile installation cycles, to minimise potential detrimental impacts on the piling works, live main

rail lines and other third parties involved in the project. Working closely with a specialist team of engineers from BAM Nuttall, Bauer Technologies developed a robust process for ensuring advanced Adjacent Line Open (ALO) drawings were approved by BAM Nuttall, to allow the works to continue without causing delays. The ALO initiative is an integrated process embedded within the rail sector, to demonstrate control over plant movement in close proximity to running train lines. All large plant operating on site was fitted with Network Rail approved slew restrictors, to ensure that the highest possible level of control was maintained throughout the project. Stringent lifting controls were also implemented for the project, to ensure safe execution of the works, with particular focus on mitigating the potential for overswing across adjacent live running lines or any clash with Network Rail infrastructure.

The second phase of the Acton Diveunder project raised a further site specific challenge to Bauer Technologies. It soon became apparent to the team on site that there was a requirement to be extremely creative with mobilisation of the plant and equipment, due to the location of a low bridge and the need to cross a live railway line in order to access the rigging up area. Rising to this challenge, Bauer Technologies used its in-house expertise to dismantle critical parts of their rig, in an organised sequence, to enable it to be re-assembled once in position.

Commenting on this complex phase of the project Kevin Hague, Operations Manager, said *"Bauer Technologies specialist engineering staff carried out thorough dimensional checks and performed trials required to satisfy the Client team, demonstrating that mobilisation and erection of the plant could be achieved without failure or*



incident. Working under an approved staged sequence of works the rig erection was successfully completed, without any problems.

This demonstrates the unique in-house capability that Bauer Technologies has to tackle and solve significant logistical challenges involving plant”.

Speaking about the overall project, Bauer’s Managing Director, Martin Blower said: *“This was an exciting project for Bauer Technologies, as it*

further strengthened the existing relationship we have with BAM Nuttall and it marked the first Network Rail project the Company has undertaken. The close proximity of live rails is always a major consideration on any Network Rail Project and posed a significant challenge on the Acton project”.

Phase 1 of Bauer’s scope of works at Acton commenced in April 2013 and was completed in August 2013. Phase 2 of the project commenced in March 2014 and was completed in May 2014.

The Diveunder is part of the Crossrail project being delivered by Network Rail. When Crossrail services begin in 2018, there will be a marked increase in trains running along the Great Western Main Line. Presently trains need to cross main line passenger tracks when entering and leaving the Acton freight yard. Once the Diveunder is completed it will provide paths for freight trains going to and from the Acton Yard, without disrupting passenger rail services.

Client:

Network Rail

Principal Contractor:

BAM Nuttall

Piling Contractor:

BAUER Technologies Limited

Contract Period:

Phase 1: April 2013 - August 2013,
Phase 2: March 2014 - May 2014

Project Value:

£4 million

Equipment Used:

- CFA adapted BAUER BG28

Bauer’s Scope of Works:

- Installation of 950lin.m of secant and contiguous pile walls, up to a depth of 16m, consisting of 1400no CFA piles in diameters of 600mm; 750mm and 900mm