

Eastern Bay Link Flyover, Cardiff



The Eastern Bay Flyover is a critical component of the Cardiff Eastern Bay Link (EBL), which will connect the A4232 at Queens Gate roundabout with the A48 at Ocean Way roundabout in Tremorfa. When complete EBL will improve access to Cardiff Bay, as well as to the Cardiff Central Enterprise Zone - enhancing connections within the Cardiff City Region. Opened officially by Transport Minister Edwina Hart AM, the development brings an enormous number of benefits to the region.

In particular it will help local residents through reduced congestion, the provision of cycling and walking opportunities and ultimately encourage the economic regeneration of the region. It will also enhance road safety in the area and reduce casualties, whilst improving the resilience of the strategic road network around Cardiff. Perhaps the most important benefits will be the

reduced journey times, opening up the area to commuters and the number of apprenticeship opportunities that will be created during the construction phase.

The £57.3m development is being funded and managed by the Welsh Government, with Dawnus Ferrovial Agroman Joint Venture (DFAJV), the Main Contractor, awarding the piling contract to BAUER Technologies Limited.

Bauer Technologies commenced piling works in March 2016, completing the project quickly, efficiently and without lost-time incidents. 252no., 1200mm rotary bored piles with depths up to 32m were installed using Bauer's own BG30 and BG39 piling rigs. Casing vibrators were used to place and extract single wall casings up to 17m long. Notably, Bauer also successfully carried out three pile maintained load tests using Osterberg cells.

The £2m project presented a number

of challenges; work had to be undertaken adjacent to a live railway line and without striking any of the numerous live services in the piling area. The risk assessments Bauer implemented and their associated mitigation measures allowed the piling team to install all piles without interruption to rail traffic, which was an incredibly important aspect of the project.

The geology itself posed a number of issues too, as the area has been subject to heavy and intensive historic industrial use. This site history led Bauer to encounter numerous unexpected underground obstructions, although the BG30 and BG39 rigs were able to overcome these with ease using Bauer's heavy duty coring equipment.

The project was a complete success: Bauer's performance resulting in the early handover of completed pile groups.

This meant that follow-on trades were able to commence construction of pile caps and bridge piers earlier than expected, giving the project the very best start possible. As a result, the first precast bridge gantry sections were being installed while at the same time Bauer was constructing the final bearing pile on site.

Speaking about the project and Bauer's performance on-site Gustav Jahnert, Project Manager for BAUER Technologies Limited said: *"It was a great project to be involved with as there were many challenges to overcome. I was extremely pleased with the team's professional approach to the entire project. In addition to the high standards of Health and Safety and quality set by all parties, the successful completion of piling works was made possible by close cooperation and a pragmatic, performance-orientated site management by DFAJV and Bauer."*



Client:

Welsh Government

Principal Contractor:

Dawnus Ferroviai Agroman JV

Piling Contractor:

BAUER Technologies Limited

Contract Period:

March 2016 - June 2016

Project Value:

£2 million

Equipment Used:

- BG30 and BG39 piling rigs
- Slip casing and heavy casing vibrators

Bauer's Scope of Works:

- 252nos Ø1200mm bored piles, up to 32m deep
- 3nos pile load tests using Osterberg Cells