

Maidenhead Retaining Wall

**Client**

Balfour Beatty Rail/Crossrail

Consulting Engineer

Van Elle/Amey

Services Provided

Sheet piled retaining wall and associated civils works

Value

£1.6 million

Year Completed

2016

Project Overview

Van Elle Rail were delighted to be providing specialist on-track ground engineering solutions to Balfour Beatty on the Maidenhead part of the huge Crossrail WOTI (Western Outer Track Infrastructure) project.

As part of the works at Maidenhead station, a new track arrangement was required in order to allow trains to run through platform 5 at high speed. In order to facilitate the new track layout, the existing rail corridor had to be widened. At the design stage it was decided that a sheet piled retaining wall would be required in order to provide adequate space for the new track.

Excavation and preparation works began in November 2015, followed by the sheet piling, installation of anchor piles, tie bars and steel fabrication. Van Elle Rail were able to complete the works by March 2016 thanks to precise planning and an extremely dedicated workforce.



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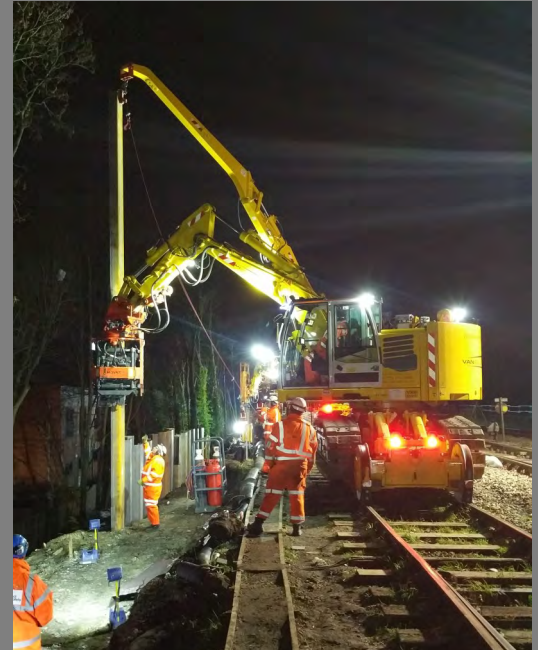
Why Van Elle Rail?

Van Elle Rail were approached by Balfour Beatty Rail following the successful delivery of similar schemes on the Crossrail project. Van Elle Rail, not only have extensive experience in geotechnical engineering solutions on the rail network, but are also ideally suited to piling at long offsets from an existing track due to their plant capabilities. For example, their state-of-the-art tracked Colmar T10,000 FSC and 5m Rhino horn extensions are able to undertake jobs that others may find particularly challenging.

Works undertaken

- Excavation and preparation works
- Sheet piling from RRV's during the Christmas blockade (10m long L603 Sheet Piles)
- Installation of H section anchor piles during mid week night time possessions (305x305x137 at 6m long)
- Installation of tie bars and steel fabrication in the week days during normal operation of the line
- Earthworks to form the track bed ready to receive the bottom ballast for the new track
- Van Elle also provided the Design, Site Engineering and Setting out/Survey in order to deliver the works as a complete package

On track piling was undertaken during the Christmas blockade and utilising mid week nights. Bulk materials were delivered to site by engineering trains in order to minimise the number of lorry movements into site and reduce CO2 emissions.



Plant used

- 4 No. Colmar T10,000 RRV
- 2 No. Colmar T10,000 FSC
- Komatsu PW150 RRV
- Movax side grip
- BSP impact hammers
- Rhino horn attachments

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Feedback

The client and Principal Contractors were extremely pleased with Van Elle's performance on this project.

Not only did our strong team have to execute this complex project to programme and to budget, but we also had 2 other challenging schemes to deliver over the Christmas period. With planning being key to any rail project's success, this was a true test of our capabilities. The logistics of servicing 3 large schemes with the correct plant delivered at the right times was quite a feat in itself. With Van Elle's in-house haulage fleet carrying out more than 40 wagon movements and no missed delivery/collection windows, we were able to maintain the programme and start/completion dates as planned. We were proud to have accomplished it all with happy clients and it was a testament to the quality and professionalism of our site teams and office staff.

