

## Electrification Project WALLSALL TO RUGELEY



*Client*  
ABC Electrification Ltd

*Consulting Engineers*  
Atkins Consulting Engineers

*Solution*  
Rotary Drilling

*Duration*  
3 Days

*Year*  
2015

### Project Overview

Van Elle’s Geotechnical Division was selected to carry out an ‘on track’ ground investigation to provide design information for piled foundations required for new overhead line electrification (OLE) infrastructure associated with upgrading to electric propulsion on the Walsall to Rugeley Line.

The work undertaken consisted of dynamic sampling, dynamic probing, hand digging and rotary drilling. Rotary drilling was completed in track side station areas, and off track areas adjacent to the Network Rail boundary fences. Van Elle was able to draw upon the experience of it’s own rail division which was a huge benefit.

Works were carried out during 55 hour weekend night shift possessions, with multiple crews working on three consecutive days to complete the boreholes. As requested by the client, the site work was fully supervised throughout this successful project.

When the team encountered difficult access, Van Elle’s engineer discussed alternative exploratory hole locations with the client in order to come up with and agree on a suitable alternative.

Along with the sampling, probing and drilling works that were carried out, Van Elle also undertook the following: Environmental and monitoring instruments were installed to monitor groundwater levels.

Laboratory testing of soil and rock core samples. Provided all information in a factual report.

### Key Challenges and Solutions

A significant percentage of the exploratory holes were located at the crest of embankments or on the shoulder of the ballast. Therefore, alternative locations had to be identified and agreed during the works to maintain the agreed programme.

The works needed to be carried out within the limited time allowed under the possessions to allow for engineering train movements & planned maintenance works (that had priority over the ground investigation works). This was a major challenge but the team achieved this with good organization, coordination and the right skillset.

The team needed to complete each possessions work with enough time to clear site before the line was reopened - time was needed to allow for safety inspections and for track hand back procedures.

The project involved working close to residential properties at night. Therefore, Van Elle had to carefully select the type of drilling method and model of rig used to avoid disrupting the residents.

