

M1 J33 Rotherham Case Study

Soil Nail services for a new motorway service station near Rotherham at M1 Junction 33.

Aarsleff was engaged by Welcome Break to provide soil nailing services for a new motorway service station near Rotherham at M1 Junction 33. The project required steepening of an existing natural slope to create space for an access route to the HGV amenity area and ensure safe construction and provide an extended longer-term design life to the typical standard.

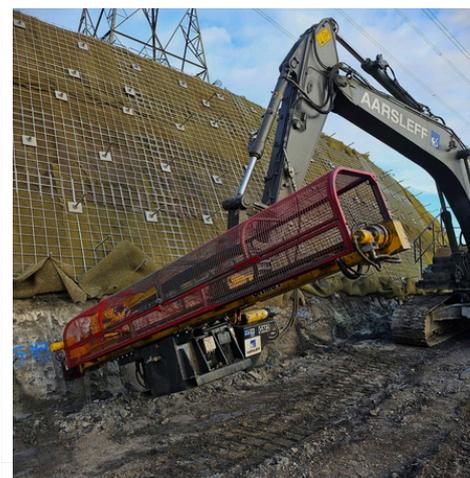
The project involved installing 216 soil nails 32mm in diameter totalling 2271.5 linear meters along with structural facing and test nails. The primary objective was to modify the slope, which had an initial incline of approximately 30°, to achieve a steeper angle of 60°.

One of the key challenges of the project was the site's proximity to a railway line on its western boundary, as well as a National Grid electrical pylon located at the crest of the slope. To mitigate risks and prevent ground movement that could affect these critical infrastructures, Aarsleff conducted a comprehensive Ground Movement Assessment Report to support the Geotechnical Design Report. This assessment ensured that any potential impact on surrounding structures was assessed and monitored.

The soil nails were installed using a specially designed and fabricated excavator mounted soil nailing mast developed by Aarsleff's Plant and Fabrication department. This bespoke equipment enabled precise and efficient installation, ensuring the stability of the newly formed slope while improving on-site productivity and safety.

The work commenced in August and was scheduled for completion within an eight-week timeframe, concluding in October.

Through careful planning, technical expertise, and a proactive approach to risk management, Aarsleff successfully delivered a safe and effective soil nailing solution. This project showcases the company's ability to navigate complex site constraints while delivering high-quality geotechnical solutions for major infrastructure projects.



Data

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Client

Welcome Break

Challenges

Site's proximity to a railway line on its western boundary, as well as a National Grid electrical pylon located at the crest of the slope

Contact

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