

CAPABILITIES

Electrification





Electrification

VolkerRail offers cost effective and professional electrification services as a single discipline provider, or as part of a multi-disciplinary project team.

Our experienced and professional workforce has the ability to manage all phases and aspects of a railway electrification project - from development, design and implementation through to testing, commissioning and final hand back into service.

Services offered by our electrification division include:

- Design and build
- Foundation
- Steelwork erection
- Switchgear
- Bonding design and installation
- Height and stagger survey analysis and adjustments
- Installation, testing and commissioning
- Independent design checks

To complement our project activities we also offer an isolation management service.

Overhead line electrification

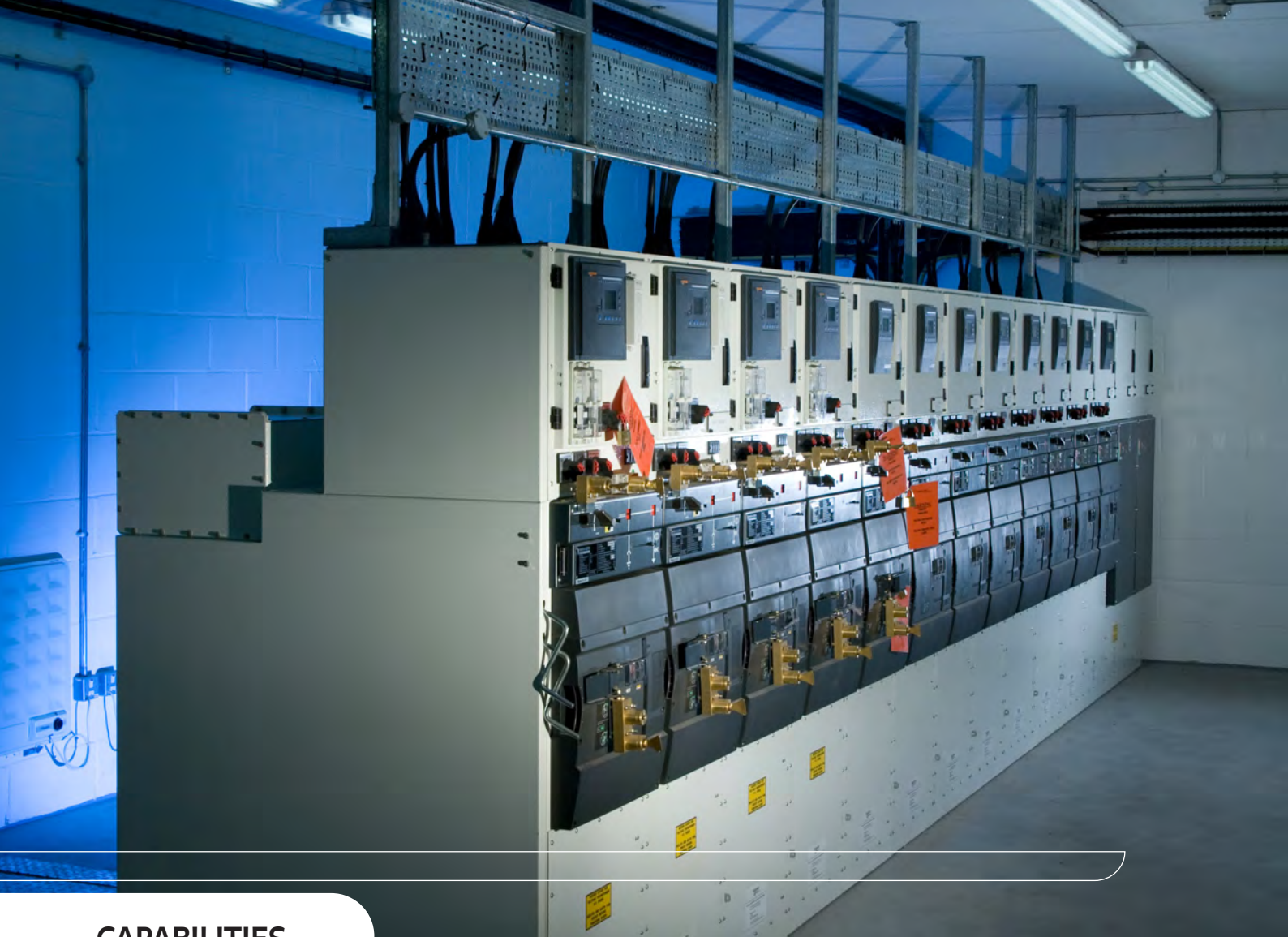
Our in-house construction teams have the experience and capability necessary to successfully deliver all aspects of overhead line electrification works for mainline and light rail systems.

VolkerRail has developed and UK certified an innovative four module high output wiring system, which has the capability of full line tension winding in and out of the conductor wires together with handling and access units. This is fully supported through the use of additional specialist rail mounted plant and fully trained maintainer operators, allowing us to provide a coordinated single point electrification delivery team for projects across the UK.



Address: Eagre House, J3 Business Park, Carr Hill, Doncaster, South Yorkshire, DN4 8DE **Telephone:** +44 (0)1302 791 100

Email: marketing@volkerrail.co.uk **Website:** www.volkerrail.co.uk



CAPABILITIES

High voltage power distribution





High voltage power distribution

VolkerRail has the ability to offer complete specialist high voltage installations and electrification work packages from distribution network operator terminals to track side switch.

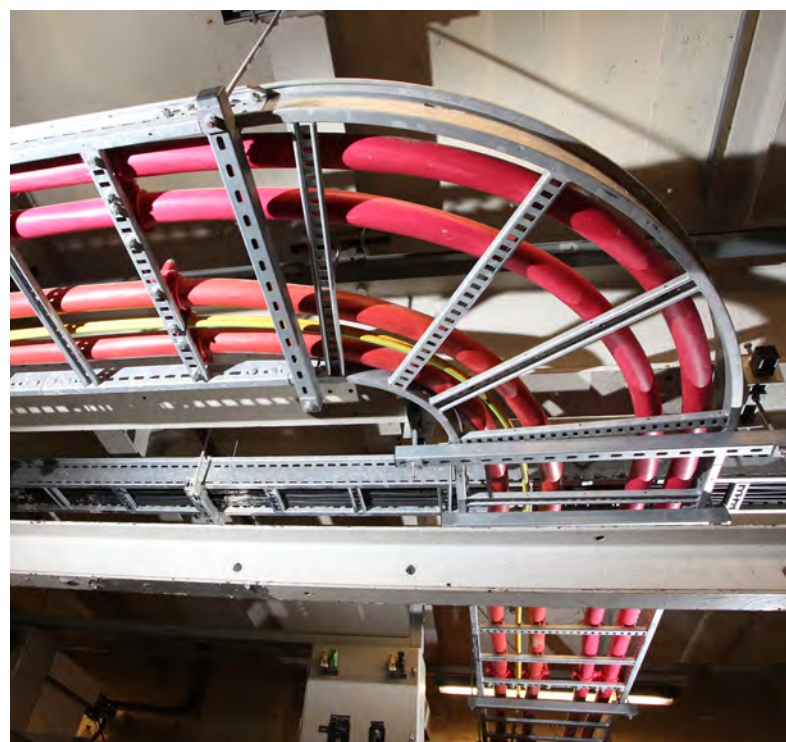
Whether small one off single discipline or maintenance projects to large multi-million pound complete turn-key power distribution packages we offer a cost effective, flexible and professional electrification solutions to meet your needs.

Our in-house team of specialists including project managers, site managers, Level A engineers and testing and commissioning engineers have the knowledge required to complete all aspects of work from design through to substation installation, jointing and testing including:

- Distribution cabling and jointing up to 33kV and 1500V DC
- Cable installation
- Supervisory control and protection systems
- Civils works to support the distribution works
- Testing and commissioning
- SCADA
- Replacement and refurbishment of vacuum circuit breakers

We also have the ability to complete high voltage and traction power design, supply and installation including:

- Comprehensive electrical track equipment works
- Site surveys and associated reports
- Low voltage building services installation and testing to BS7671
- DC switchgear installation
- Transformers, rectifiers and combined transformer rectifier units
- AC switchgear installation





CAPABILITIES

Major projects





Major projects

VolkerRail has the resources and expertise to undertake a wide range of multi-disciplinary rail projects.

Our railway engineering capabilities range from the re-establishment of disused railways, construction of urban mass transit systems and high speed mainline rail systems; as well as large scale track renewals, signalling, electrification, high voltage power distribution and line side civil engineering schemes.

Our in-house specialist project teams provide fully integrated solutions to the rail sector. We possess the expertise needed to drive innovation and efficiency during project development phases and our detailed knowledge of rail maintenance, infrastructure system performance and renewal and installation techniques enables us to offer project specific optimisation through reduced whole life costs.

Joint venture and alliance work

VolkerRail also engages in collaborative working agreements as a proven strategy for delivering complex railway projects.

Alliances and joint ventures are an important part of this strategy for success. We have built strong relationships with other major contractors and together with our strengthened offerings, combined skills and enhanced financial strength, we have delivered some of the biggest multi-million pound construction projects in the rail industry over the decade.

These projects include the expansion of Manchester's Metrolink Network, the Stafford Area Improvement Programme; which was the first pure construction alliance contract in the UK rail industry, the East Coast Main Line Power Supply upgrade and, the East West Rail scheme; which will see VolkerRail work within an alliance agreement to construct a rail link connecting Oxford, Milton Keynes and Bedford with London Marylebone, via Aylesbury.

With the added support and skill base of the wider VolkerWessels UK group, we have the knowledge and resources to complete any rail infrastructure project in the UK.



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CAPABILITIES

Metro and light rail systems





Metro and light rail systems

VolkerRail is a specialist metro and light rail contractor.

Over the last 20 years we have been involved in a large variety of projects from annual maintenance and small project renewals in Sheffield, Croydon, Manchester, Birmingham and Glasgow to large joint venture projects including the Midland Metro extension, Manchester Phase 2, 3A and 3B, Nottingham line 1 extension and Dublin metrolink.

We have the ability to adapt our offerings, for various bespoke systems throughout the networks; using varying trackforms including embedded sleepers, full depth shoulder, shallow depth shoulder in bituminous road type, direct fix and ballast trackforms.

With every trackform or system comes a specialist encapsulation system. Our team is highly skilled and have experience with Phoenix Boot, Vector Boot, ALH Series 6 site pour, pre-coated series 6, CDM blocks, Edilon site pour/blocks and RailOne sleepers along with various rail profiles.

Our in-house capability also includes a fleet of access, renewal and maintenance machines, which have been tailored to the requirements of urban rail infrastructure, civil, overhead line electrification, signalling, power and highways and traffic management capabilities.



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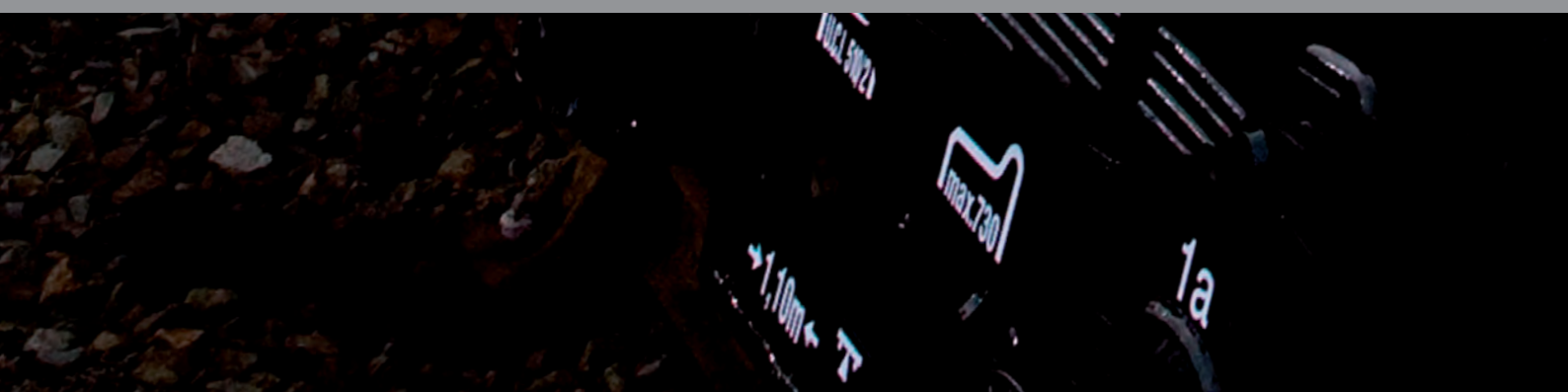
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CAPABILITIES

Plant and welding

 **VolkerRail**





Plant and welding

As the first company to introduce the Kirow rail mounted crane into the UK and being one of the few contractors with a rail safety case to run plant on the mainline railways, we are a market leader in rail plant supply.

We have the flexibility to meet a wide variety of client needs, from single visit plant-only spot hires to multi-year supplier, maintainer and operator frameworks.

Our equipment is also supported by our in-house operator/maintainers who have undergone extensive training and are considered some of the best in the country, receiving regular commendations for their safe, flexible and professional approach.



Our modern on track plant and road rail fleet includes:

- Ballast regulation capability, from hand tools to R24 on track plant ballast regulators
- The UK's largest fleet of Kirow rail mounted cranes and track relaying machines including full lift planning services
- Power generation, lighting and welding plant
- Road-rail excavation and access equipment, in heavy rail and light rail configurations including high out-put wiring solutions
- Managed site 'tool stores' with site based maintenance fitters
- All approved types of aluminothermic welding
- Welding technology to re-build worn rail both in grooved and normal rail profiles
- The largest fleet of Beaver tamping machines in the country; from detachable RRV equipment to Unimar tampers, Beaver tampers via Plasser & Theurer 08 (4x4) and Matisa B41 and B45 S&C tampers

We also offer a range of small plant and equipment for use in repair, maintenance, construction and renewals of heavy and light rail infrastructure. All are specially designed and built for low noise and vibration, significantly reducing the likelihood of HAV problems for operators.

Our specialist plant team can also provide a fully integrated planning service. Our skilled and experienced engineers advise on equipment requirements, crane lifts, access routes, machine operations and the most effective methodology; including adjacent line opening works (ALO).



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CAPABILITIES

Signalling





Signalling

VolkerRail provides cost-effective engineering solutions for railway signalling projects throughout the UK.

Our project management and engineering capabilities enable us to complete all aspects of design, project engineering, installation, testing, commissioning and maintenance support; across all signalling technologies, ensuring both value for money and timely delivery for our clients.

We also offer complete turn-key signalling solutions and have the skills and experience necessary to complete Network Rail GRIP stages 1-8 signalling disciplines including:

- Design and correlation, including report production
- Feasibility and optioneering studies
- Asset condition reports
- E810 compliance and principle reports
- Outline and final project specifications
- Scheme plan production
- Professional consultancy service
- Detailed design



We also provide comprehensive services in the construction, testing and commissioning of signalling equipment and systems including:

- Lineside location/REB
- Electro mechanical interlocking
- Route relay interlocking
- Geographical interlocking
- Free-wired interlocking
- Fringe works
- Signal box panel
- Signals and indicators
- Points
- Track circuits and axle counters
- First and second line maintenance services



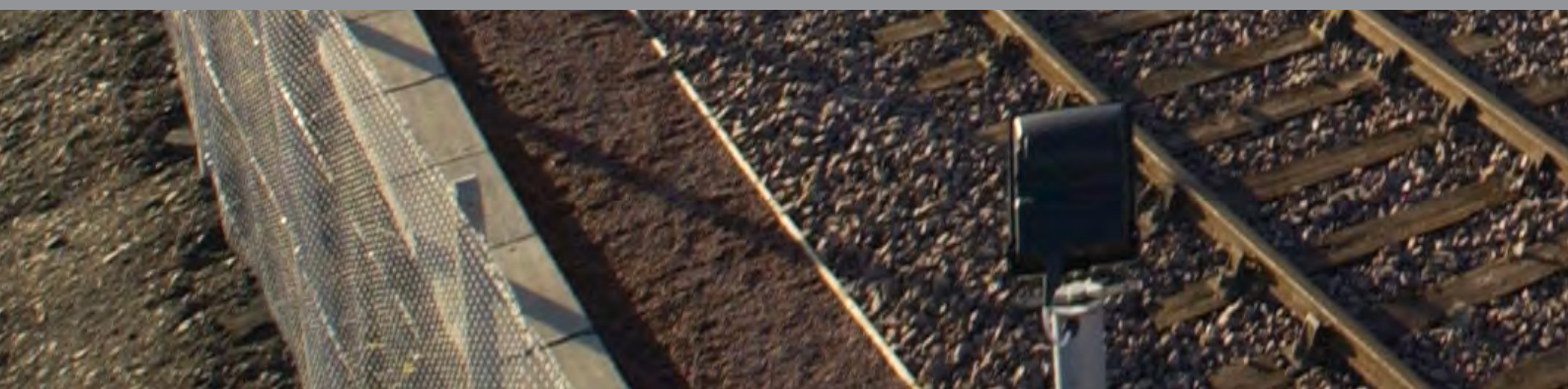
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CAPABILITIES

Track construction and renewals





Track construction and renewals

VolkerRail has established an industry leading reputation for the delivery of new build rail projects and the renewal of life-expired track.

Our expertise comes from years of delivering a wide range of projects in the public and private sectors. These range from complex multi-disciplinary new build schemes, through to the renewal of plain line and S&C during tight weekend possessions.

We also have a strong track record of delivering track, OLE and signalling elements at new intermodal and train-care depots.

Our range of skills cover every aspect of permanent way renewals, from component exchange to the highest technical levels of mechanised on-track machine activity and track construction, including surveying, designing, planning, supplying and installing:

- Plain line (all gauges and construct types)
- Switches and crossings (all construction types)
- Track construction in/on slabs and road surfaces
- Crane rails
- Level crossing renewals
- Harmelen Level crossings
- Track lowering
- Switching and crossing remodelling using the new modular techniques and tilting wagons

Our in-house specialist teams have successfully delivered projects for a vast range of clients, each with different site specific requirements, complexities, timescales and standards from inception to physical completion at site and hand back.

We also offer re-sleepering/re-timbering, re-railing, component overhaul, tolerance and adjustment/correction, ballasting and management of operating mechanisms and switches.



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CAPABILITIES

Track maintenance





Track maintenance

VolkerRail has consistently delivered first class maintenance services to a wide range of private and public clients for over 70 years.

Our clients nationwide include steelworks, oil refineries, docks and harbours, intermodal facilities, MOD sites and light rail and metro systems.

We cater for all client requirements, from maintaining and managing a maintenance team of skilled trackmen to providing ad-hoc and periodic maintenance, with our teams of fully mobile inspectors and skilled trackmen.

Our detailed understanding of track standards and client requirements allows us to tailor our maintenance services by infrastructure usages, factoring in track type, axle loadings, and annual tonnage. This approach delivers affordable maintenance costs whilst ensuring that track availability is always the priority.

Our services include:

- Professional track inspection and condition report
- Provision of an asset management facility
- Prioritising maintenance requirements and budgetary assistance
- Fully managed infrastructure maintenance
- Planned renewal of life expired track and components
- Survey and design service
- Signalling support and maintenance
- Thermic welding, switch and crossing weld repairs and deposition welding
- High voltage and low voltage support and maintenance
- Level crossings construction



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