



UK Head Office

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HS2 Capabilities Statement



Introduction

Holder of a Network Rail Principal Contractor's Licence, our dedicated, professional workforce delivers real, measurable value to projects throughout the UK, helping you understand your sites and the information generated from them. No matter the size, value or complexity, with XRAIL your rail project is in safe hands.

We've been working at the core of the nation's railways since 2003, evolving to become one of Britain's leading railway engineering, surveying and consulting organisations. Whether it's a renewal requiring extensive track surveys, a refurbishment requiring precision 3D laser scanning, a complex utilities mapping project or just a single UTX requiring track monitoring, XRAIL has the personnel, the experience and the know-how to support and enhance your most important projects.

Our dedicated Rail Department offers a fully integrated, turnkey approach to working on the nation's railway infrastructure. From desktop and design phases to survey, planning and technical engineering, our substantial team of rail professionals brings a wealth of knowledge and rail know-how to every job, proving an invaluable asset to the project. Whilst, for some clients, we provide a single, standalone service, others benefit greatly from our multi-disciplinary setup; our ability to generate and analyse data from all elements and throughout all stages of a rail project.

Why Use XRAIL?

From the Tier 1 and 2 contractors to specialist organisations and even Network Rail itself, we work for a broad range of clients from right across the rail sector. These clients return to us time and time again, safe in the knowledge that the service they receive will be second to none.

Our dedicated, focused teams understand that each client, each project and each site is different. As a result we pride ourselves on tailoring our service and deliverables to the exact requirement of the job at hand.

So, to answer the question, why shouldn't you use XRAIL?



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Principal Contractor's Licence

One of only two companies of our type with a Network Rail Principal Contractor's Licence



Professional, Friendly Staff

We pride ourselves on the professionalism and courtesy of our staff. We guarantee to treat all stakeholders as we would like to be treated.



First Class Customer Service

From the moment you get in touch to the second your deliverables land, we promise to communicate with your team promptly, politely and proactively.



Sustainable & Considerate

We promise to respect and give back to the communities and environments in which we work, sourcing both materials and personnel responsibly.



Nationwide Coverage

One of the leading firms of our type, we operate throughout the UK delivering a truly diverse range of services across a wide variety of sectors.



Proven Track Record

Every year we deliver hundreds of projects on time and on budget to a loyal client base. Over 70% of our work is based upon repeat business.



We Save You Money

By working harder, longer and more intelligently, over the years we've actually saved our clients millions in unnecessary costs and delays.



Honest, Transparent Pricing

The price we quote is the price you pay. If your brief is accurate and the scope remains the same there will be no additional costs whatsoever.



Training & Technology

We're constantly investing in the latest training, technology, software and systems. Our equipment and people are at the top of their game.



Fast, Efficient Delivery

Our business is based upon service quality, flexibility and speed. We work with you to deliver the results you need, when you need them.

Overview Of Capabilities

Established in 2003 as a land, engineering and railway surveying firm, XRAIL quickly diversified into structural investigation, geotechnical engineering, utilities mapping and more.

Today XRAIL has a number of specialist departments, each dedicated to a particular range of services or sectors. Whilst not an exhaustive list, we currently provide measurement, engineering and investigation services including...



Geo-Spatial

Including topographic surveys, 3D laser scanning and modelling, elevations, measured building surveys and more.



Utilities

Covering ground penetrating radar surveys, electromagnetic surveys, utility plan sourcing and composite CAD drawing production.



Structures

Including non-intrusive concrete scanning, construction materials testing, condition surveys etc.



Geo-Environmental

Including ground investigation, environmental risk assessments etc.



Civil Engineering

From minor civils and compound establishment to major civil engineering project management.



Site Engineering

Covering setting out, machine control, levelling, volume calculations and so on.



Environmental

Focusing on ecology surveys, ecological assessments, tree surveys, noise and vibration assessments and more.



Monitoring

Includes structural monitoring, railway track monitoring, vibration monitoring, noise monitoring etc.



Telecoms

Including telecoms planning, duct and cable installation, reinstatement, utilities mapping, project management, design, as built surveys and more.

IN MORE DETAIL

Topographic Surveying

One of the largest, most respected land surveying firms in the UK, XRAIL is regularly commissioned to undertake high-accuracy projects for all manner of clients. From major national developers and civils contractors to Network Rail and the primary rail contractors, our teams deliver precision, Network Rail Group Standard-compliant data, on time and on budget, time after time.

From remotely operated survey drones and 3D laser scanners to robotic total stations and GPS receivers, our project managers carefully select the ideal tools to collect your survey data in the quickest, most accurate and cost-effective way possible.

With fieldwork completed and results checked, all data is transmitted to our head office where our highly experienced processing teams begin turning it into a series of precision drawings. From DWG and PDF to MOSS, Genio and three-dimensional BIM models, surveys can be provided in any file type and in both digital and hard-copy forms.

Regardless of the equipment used, our survey teams exercise best practice at all stages of the project, operating with professionalism, courtesy and respect for the public and other stakeholders.





IN MORE DETAIL

3D Laser Scanning & Modelling

At the forefront of 3D laser scanning and modelling, our professional laser scanning teams produce three-dimensional building and structure models that deliver previously unimaginable levels of information, detail and accuracy.

From three-dimensional surveys of land, track and structures to BIM models, embankment modelling, 3D walk-throughs and visual impact assessments, our laser scanning services are delivered efficiently, on time and on budget with deliverables (2D, 3D or BIM) being tailored to suit each client's requirements.

The fieldwork complete, all line work is produced meticulously in AutoCAD format with the end result being an incredibly accurate, flawless product. The precision and value of these scans cannot be over-estimated.

Not only has laser scanning expanded our offering and improved the accuracy of our deliverables, it has dramatically reduced the time it takes to deliver a large, complex building or structural survey.



IN MORE DETAIL

Utilities Mapping

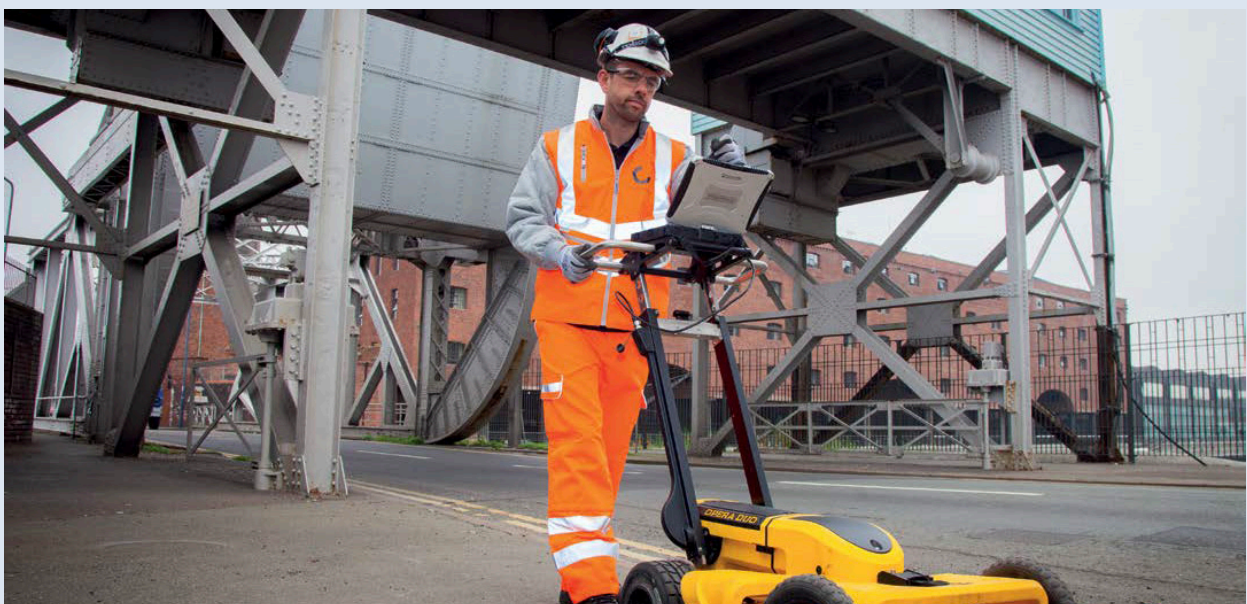
In a project context, missing, inaccurate or outdated utility information can lead to delays, conflicts, and interruptions in service. In a human context, however, inadequate information can lead to serious injury or even death.

Utility mapping surveys provide critical information on below ground conditions, clearly showing all manner of obstacles (utilities, voids, foundations etc.), their depth, position and type. What's more, this can usually be achieved without disturbing the ground and with minimal disruption to the public or other site workers.

This type of survey may also reveal elements that were not shown on construction drawings or statutory undertakers records. Simply showing their presence will allow you to plan your works accordingly, saving time, money and improving safety in the process.

From power, gas, water and telecoms to fibre-optics, drainage and sewers, our survey teams pick up all services in accordance with BSI PAS 128, the current British Standard for underground utility detection. From an initial desktop study and site reconnaissance to the detection and physical verification phases, our teams enforce best practice throughout the entire project. Key benefits include...

- Reduced levels of cost, delay and risk
- Improved levels of safety
- Unnecessary excavation kept to a minimum
- Disruption to rail, road and other site users severely reduced
- Highly accurate data provided to assist design and construction



IN MORE DETAIL

Ground Investigation

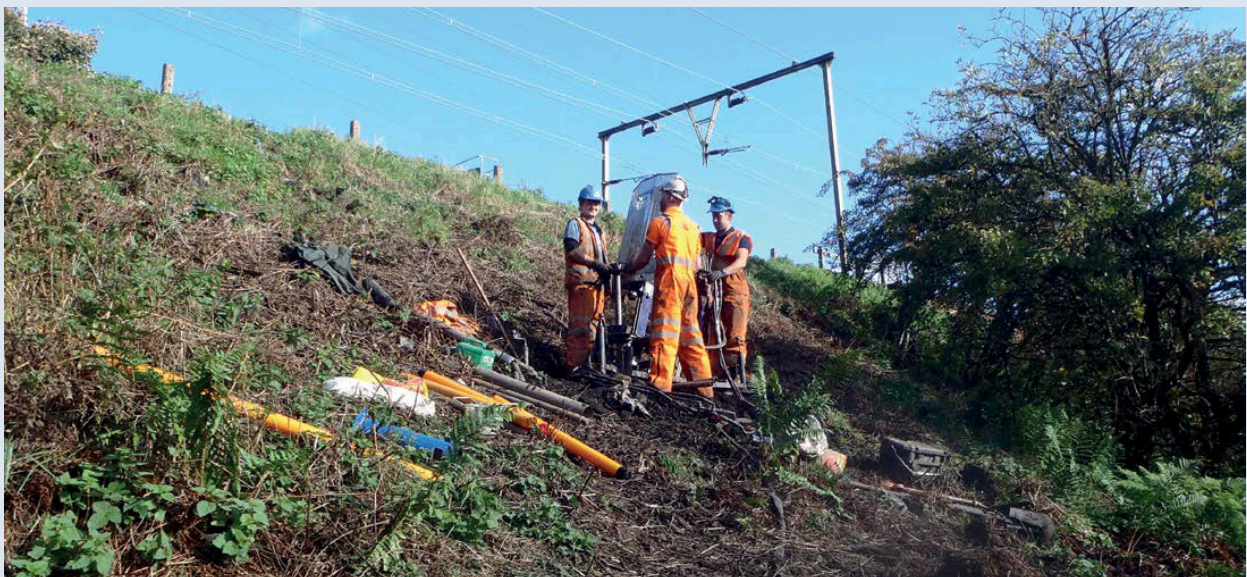
XRAIL's specialist engineers provide a flexible, comprehensive geotechnical investigation service designed to ensure a positive, safe and compliant outcome to your projects.

From major civils schemes to multi-million pound rail renewals, our PTS-qualified team will actively manage your ground investigation project from consultation, desktop study and investigative phases to analysis, factual or interpretive reporting.

Unlike the majority of GI firms, our specialist rail rig has been specially designed for sites with limited access. Due to the modular nature of the rig, it's possible to carry out work alongside the open railway without the need for a possession and, with a limited height of 1.95m, it can also work safely underneath live overheads without an isolation.

Another advantage of this rig is its ability to carry out in situ tests from the slope and utilise casings to keep the boreholes open to achieve greater depth. At present, a depth of 14m has been achieved with this rig, dependant upon ground conditions. Services include...

- Phase 1 site walkovers
- Desk studies
- Phase 2 geotechnical ground investigation
- Land condition assessments
- Ground gas assessments
- Foundation and contaminated land assessments
- Remedial design
- Project management & supervision



IN MORE DETAIL

Environmental & Ecology Surveys

Now more than ever environmental factors are having a significant impact upon construction and engineering projects. What's more, with UK and EU legislation becoming ever larger and more complex, it can often be difficult keeping track of what your obligations are.

With an enviable client base within the UK's construction, civils and rail sectors, XRAIL provides a range of consulting, investigation and advisory services designed to keep you safe, compliant and legal. Whilst environmental factors can have a significant impact upon both timescales and costs, our responsive, flexible consultants help smooth the path of your project by providing professional, qualified environmental guidance. Services include...

- General ecological appraisals
- JNCC phase 1 habitat surveys
- Bat surveys, breeding bird surveys, Great Crested Newt surveys, badger surveys
- Ecology chapters for environmental statements
- Natural England Licence applications
- Tree surveys
- Tree protection plans
- Arboricultural impact assessments
- Arboricultural method statements
- Intrusive flora surveys



IN MORE DETAIL

Directional Drilling

Particularly useful for cable diversions that may be required due to new infrastructure, directional drilling is a technique in which a steerable boring head is pushed through the ground whilst being rotated. When the pilot bore is completed it is enlarged to the required diameter by pulling a reamer back towards the drilling machine. When the hole has been opened to the required size the product pipe, duct or cable is pulled into place.

XRAIL will produce the Forms 1, 2 and 3 for the crossing if it is to be installed under the existing railway. Our highly experienced utilities teams would perform a comprehensive buried service search in the area prior to the directional drill being carried out. All of the drilling rigs used come complete with a recycling unit to reuse drilling fluid such as bentonite.

All works to be carried out in accordance with Network Rail standards; in particular:

- R/L3/140 'Model Clauses Specifying Civil Engineering Work'
- NR/SP/CIV/044 'Under Track Crossings'

To back up our directional drilling services, both structural and track monitoring can be specified to safeguard the surrounding infrastructure where required.



IN MORE DETAIL

SmartWater™

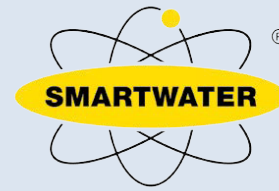
SmartWater™ is an internationally operating crime fighting and crime prevention company with an established track record for detecting and deterring criminal activity. Well known to criminals because it represents a genuine threat to them, SmartWater™ offers HS2 direct access to a range of security products and services to enhance both security and safety on the UK's rail network.

These products and services are underpinned by a patented crime-prevention strategy that limits opportunities for criminal activity on the railway - including cable theft, trespass, graffiti and vandalism. XRAIL is Smartwater's only authorised installation partner for the UK's rail network.

Know Your Risk

SmartWater's strategy delivers an enhanced understanding of risks faced by your project or route. This work is carried out on your behalf, allowing security measures to be used in a more targeted and economical way:

- SmartWater™ Analysts assess your historic crime data, searching for hotspots, patterns and trends, thereby identifying areas of the network deemed 'most at risk'.
- SmartWater™ investigators – consisting of ex-police and military personnel – carry out trackside threat assessments to gather intelligence and identify vulnerabilities, such as damaged fencing, access routes used by criminals and items most likely to be stolen.
- Targeted visits are made to potential outlets for stolen goods (including scrap dealers) in partnership with the police to educate dealers and restrict the resale of stolen goods.
- SmartWater™ will liaise with British Transport Police, establishing close ties, sharing information and maximising community engagement opportunities. This can include visits to schools



to educate pupils about the dangers of railway trespass.

Proactive Risk Management

- Taking the time to identify risks and vulnerabilities allows you to concentrate time and resources where they will have the most impact. In some circumstances this targeted approach removes the need for expensive, labour intensive measures such as 24/7 manned guarding.
- SmartWater™ has at its disposal a range of security products which can be rapidly deployed by XRAIL in identified hotspots with little or no maintenance.
- This includes covert cameras to identify thieves and trespassers and SmartWater™ traceable liquids which conclusively prove ownership of your assets and heighten criminal accountability. This is supported by the strategic use of the SmartWater™ brand – itself an established deterrent – on high-visibility signage aimed at criminals.

Intelligent Application

SmartWater™ maximises opportunities to both deter and detect crime on the rail network, heightening evidential opportunities and empowering British Transport Police to more easily prosecute offenders.

By combining threat assessments with a true understanding of risk, SmartWater™ can help you minimise wastage by ensuring that security measures are deployed in the right places at the right time – maximising your return on investment.

All SmartWater™ investigators are fully qualified to operate trackside and have the necessary skills and expertise to deliver a service you can rely on. What's more, XRAIL is the UK's only authorised installer of this technology on the rail network.

IN MORE DETAIL

Minor Civils

XRAIL, deliver safe, sustainable minor civils services to a broad range of clients both on and off the UK's railway infrastructure.

From the excavation and installation of buried services, trial holes and under track crossings to the construction of both new and extended platforms, our dedicated minor civils teams deliver value-driven, reliable services throughout the nation.

A leading provider of both ancillary and minor civils services, we work in partnership with major rail and civils contractors as well as numerous smaller firms, helping them deliver their projects on time and on budget. These organisations benefit from our highly skilled, specialist workforce who, when combined with our senior management team, take a uniquely tailored approach to each project.

By treating each client and site as individuals and by training and equipping our teams to the very highest standards, we help ensure a positive and profitable outcome to our client's projects. Whilst by no means an exhaustive list, some of our most commonly used services include...

- The excavation and installation of UTX (under track crossings)
- Installation of concrete signal gantry bases
- The installation of signage both on and off the railway
- Installation of REB, DNO and LOC foundations
- Cable installation
- Digging of trial holes in conjunction with our specialist utility mapping teams
- The refurbishment and installation of
- troughing and cable routes as well as SPT walkways
- The establishment of site compounds
- Installation of fencing, hardstanding, lighting, temporary office accommodation,
- CCTV and other security infrastructure
- The installation, extension and refurbishment of railway platforms, roads, footpaths and access features
- De-vegetation

To back up our minor civils offering, XRAIL also possesses the added dimension of a comprehensive site engineering service. Our specialist teams have extensive experience setting out both track and structures, from plain line and complex S&C to bridges, OLE bases, platforms and station buildings. We also provide machine control services to the rail sector using GPS, laser or total station technology.

Get in Touch

For more information on our range of services or the best approach for your project why not call our office on **+44 (0) 3450 600 700**. A member of our team will be happy to help.



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