

**Customer:**  
Rook Services

**Project:**  
Electrical Cable Installation

**Solution:**  
Trimble GeoXH

## Case Study



service which would provide them with real-time decimetre accuracy. The Trimble GeoXH could be used either independently to record features such as fence lines, kerbs and road lines or in conjunction with one of their GPR to record positional information and depth information. Nick continues, "We can either link the GeoXH directly to one type of GPR to plot our path directly, or more commonly, we can use it in conjunction with a smaller GPR, retracing our steps and recording positions and any relevant attribute information for each point. At the end of the day, this information can be sent to our AutoCad operator in the office who can create a 3D model or utility plan, accurate to 5 or 6 cms, clearly showing any relevant information such as average depth between points. This is exactly what the client wants – a professional looking, reliable plan that clearly shows them whether there is clear access for their proposed pipeline or electricity cable."

Nick concludes, "We purchased the Trimble GeoXH because it really stood out during our trials. It provided the decimetre accuracy we required at a good price, couldn't be easier to use and is rugged and light. We have four guys out surveying across the UK and it's vital that the information they supply to our AutoCad operator is clear and precise - it's not as if we can just pop into the office to talk things through. The GeoXH has enabled us to keep our team mobile and the quality of the positional data we're getting – we are consistently achieving decimetre accuracy - means that our operator trusts the

"...It can be used for so many applications, it's unreal.

information we are sending through. Importantly, it means that we can give our clients exactly what they want, an accurate, professional plan

with results they can trust. Anyone can use this system, it's simple and reliable and if there ever has been an issue, the KOREC technical support team has been on hand to fill in any gaps. It can be used for so many applications, it's unreal. The GeoXH really is the last piece in the jigsaw for Rook Services when it comes to supplying a quality job."

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## Avoiding Strikes with GPR and GPS

Decimetre accuracy Trimble GeoXH is 'last piece in the jigsaw' for utility contractor Rook Services

Based in Bromsgrove, Worcestershire, Rook Services Ltd is founded on the belief that good technology, properly deployed, can bring the greatest benefits to its clients.

Established over 25 years ago, the company specializes in utility services, ground excavation and underground mapping undertaking work for a wide range of clients including National Grid and the Gas Alliance. Under the guidance of Craig Murphy, Managing Director, the company is an established user of ground penetrating radar (GPR), an imaging technology used for subsurface earth exploration and ideal for applications, such as locating underground utility plant.

Whilst the benefits of this technology had clear implications for their clients - improved work safety, avoidance of delays, avoidance of damage to plant and equipment – Rook Services felt they could add further value to their services if they combined their GPR expertise with

the ability to produce accurate, professional utility plans that the client would trust.

Survey Engineer Nick Richards explains, "We would typically find ourselves in a field in the middle of nowhere trying to locate existing utilities from an out of date or inaccurate plan. On top of this, if we were working in a field with animals, we couldn't use stakes and our paint markings were frequently washed away in the rain. Utility locations have really only been recorded since the 1960's so we often had no idea what was down there. We desperately needed a solution that would enable us to reliably record the vital information that our GPR had located along with any relevant attribute information – the answer was GPS."

Rook Services trialled several systems before contacting KOREC and opting for a Trimble GeoXH hand held solution with FastMap data capture software on board. They supplemented this system with a subscription to Trimble's VRS Now



▲ The Trimble GeoXH is perfect for mapping the information recorded by Rook Services' GPR (Ground Penetrating Radar)

### Project Details:

*Installing 275 kV cable from Wooster Drive substation to Kirby substation in Liverpool for the Electricity Alliance on behalf of National Grid*

Rook Services is currently on site in Liverpool installing 10km of electricity cable for the Electricity Alliance. Asked by the client to survey their proposed cable route, Rook Services is responsible for the location and marking out of all existing

utilities and ensuring that the trenching gangs does not rip anything out. Contracted to be there for the duration of the project, Nick Richards, Survey Engineer for Rook Services reports that during the excavation of the whole 10km route, there was not a single strike despite passing through a random collection of industrial, residential and agricultural areas. "In the space of 500m we must have located at least 60 services crossing the

trench which was 1.4m wide by 1.4m deep. Avoiding strikes is paramount for health and safety reasons and can also be extremely costly if local offices and businesses are left without electricity – using GPR and GPS we were able to avoid a single strike on this job."

[www.rookservices.co.uk](http://www.rookservices.co.uk)

## Contact us:

Please do get in touch for further information on any of the products or services mentioned in this case study, a demonstration, support or just a chat about your requirements.

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