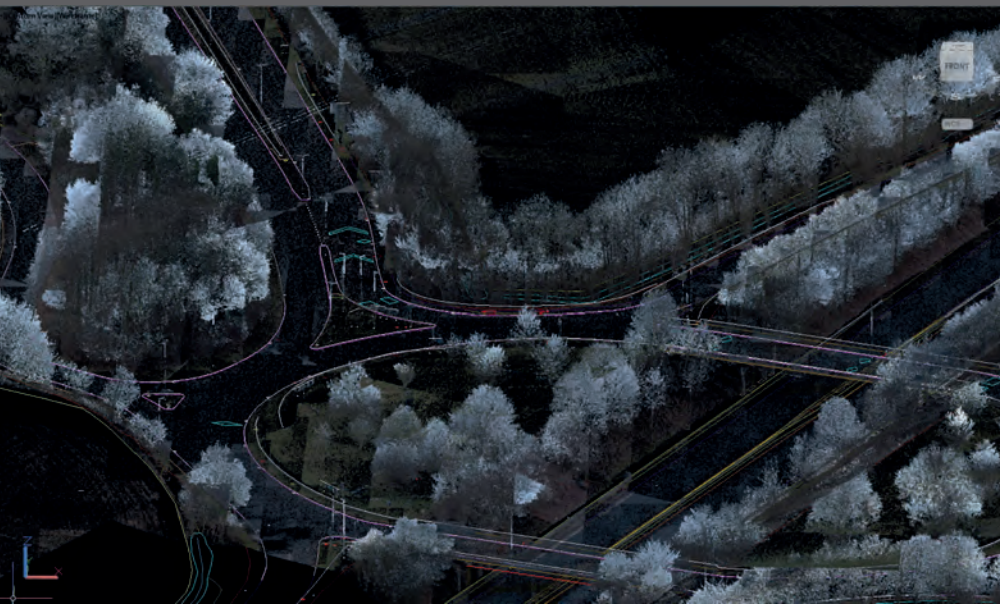


Case Study

Customer:
Malcolm Hughes Land Surveyors Ltd

Project:
Surveying the Wrexham A483

Solution:
KOREC Professional Services (KPS) and the Trimble MX9



Surveying the Wrexham A483 with minimal traffic management

“Using the right tool for the job” is the cornerstone of every highways survey undertaken by Malcolm Hughes Land Surveyors. KOREC’s MX9 mobile mapping service is an essential part of this approach, enabling the company to deliver high accuracy data with minimal or no traffic management.

It’s been twelve months since the launch of KOREC Professional Services (KPS), a division established to support KOREC customers on mobile mapping projects, as much or as little as required. In every case, the key to a successful customer partnership and outcome is the division’s ability to adapt to the individual requirements of each of the projects undertaken.

During the past year KPS has worked on multiple mobile mapping surveys with Malcolm Hughes Land Surveyors Ltd, a company that offers all types of measured survey solutions across the UK and Ireland. The company has a strong commitment to the adoption of any new survey technology that is beneficial to its client base and has a “right tool for the job” ethos. It has therefore used KPS’s Mobile Mapping service on many occasions on highways projects.

Under the guidance of Malcolm Hughes Land Surveyors Survey Manager and highways specialist, Andrew Thompson, the company takes an individual approach to each survey selecting the methodology that best fits the idiosyncrasies of a particular job. Active both on site and in the office preparing quotes, it is down to Andrew to decide how best to deliver each project. For example, on large projects where accuracies of +/-10mm are acceptable, mobile mapping is seen as a cost-effective and efficient solution; on jobs where they need to achieve +/-5mm height accuracy or where mobile mapping is unable to capture the data such as buried assets, then mobile mapping surveys are supplemented with a total station survey or the company’s Clear Cone+ patented van-mounted technology (providing monitoring and utility mapping).

Another deciding factor in Andrew’s choice is Traffic Management. Its length and availability often dictating the survey methodology as does the growing

“KPS has been an able partner when it comes to capturing and processing this data, providing a service that fits in with our requirements.”

**Andrew Thompson,
Malcolm Hughes**

tendency to have more than one discipline on site at the same time such as surveying and drainage.

Surveying the Wrexham A483

On a recent job on behalf of Mott MacDonald, the client required an 8km survey of the Wrexham A483, including junctions and off network areas, along with additional roads totalling another

8km. In this case, the deliverable was 2D and 2D CAD files - a point cloud was not required as part of the deliverables. The



Key benefits:

- Ability to safely collect high accuracy data across 16km of highways
- Cost savings due to a reduction of surveyor time on site
- Cost savings due to a reduction in the need for traffic management
- Flexibility of KPS to capture and process data as part of an overall project

About KOREC Professional Services (KPS)

Recent advances in mobile mapping technology are enabling surveyors to look at new ways of tackling the type of demanding projects they regularly undertake, from highways engineering surveys to road asset mapping.

KOREC Professional Services (KPS) was established exactly a year ago with the primary aim of supporting our customers on projects using the latest Trimble field to finish mobile mapping solutions offering project delivery through expert advice, services and consultancy at every stage of a project.

During the last 12 months, these projects, at home and abroad, have covered an enormous range of applications from the mapping of world-famous racetracks, to the supply of data to the OS for the creation of a 3D models for driverless car research, to bridge strike surveys and the capture of large city areas for asset management purposes.

In each case, the choice of mobile mapping has solved a specific problem: How can I undertake this complex road survey without shutting the road, requiring costly traffic management? How can I keep my surveyors off the highway and safe during a pothole survey? How can I ensure that I capture all the assets on my highway survey, without the need to return to site?



▲ The deliverable included 2D and 2D CAD files

job therefore included a mobile mapping element (to be delivered by KPS with the Trimble MX9 system), air-borne LiDAR and traditional topo using total stations and GPS. Traffic Management was required for surveying hidden features and at the same time Malcolm Hughes established control at 100m intervals to assist in the processing of the point cloud.

The Trimble MX9 is a vehicle mounted system that collects dense point cloud data along with 360° immersive georeferenced imagery using an industry-leading spherical camera, GNSS/INS technology and dual-head laser scanning sensors. The dual headed lasers are capable of capturing 2,000,000 points per second in a single pass providing optimum coverage and detail with a regular scan pattern both of which are fundamental to the MX9's ability to generate the highly detailed point cloud required for this high-accuracy survey.

Using the MX9, KPS captured the 16km of carriageway to provide the bulk of the survey data. This proved to be the fastest, safest and most efficient method with Andrew Thompson reporting that mobile mapping cut the cost of both Traffic

Management and the time surveyors were on site. The captured data was processed by KOREC and presented on time.

Andrew concludes, "We review projects on what is required as part of the deliverables and of course on accuracy requirements. We also compare alternative methods with the costs of completing the survey conventionally. With the ongoing development of mobile mapping, we feel it is important to embrace this technology and use it where best suited in terms of costs, safety, accuracy and survey requirements/deliverables. KPS has been an able partner when it comes to capturing and processing this data, providing a service that fits in with our requirements. Mobile Mapping is an important addition to what we can provide."

All information and pictures kindly supplied by Andrew Thompson.

About Malcolm Hughes Land Surveyors Ltd

Malcolm Hughes Land Surveyors Ltd is part of the Ogilvie Group and offers a full range of innovative topographical, hydrographic, engineering and geographic survey solutions across a range of sectors in the UK. www.malcolmhughes.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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