

Topcon Helps BNM Alliance Map Nottinghamshire for Sewer Project



BNM Alliance has embarked on a huge sewer project in the historic market town of Newark, Nottinghamshire, using mobile mapping technology from Topcon GB & Ireland.

The BNM Alliance is a partnership between North Midland Construction's (NM Group) NMCNomenca division and Barhale Construction. The two framework contractors have pooled their resources and expertise to deliver the Newark Waste and Water Improvements Project.

The £60 million strategic sewer upgrade, being carried out for water company Severn Trent, will see around 12 kilometres of open-cut sewers of varying diameters laid within and around the edge of the town. At the same time, tunnelling will be undertaken for a six

kilometre 'super-sewer' to increase capacity on the existing network.

"This was a quite a significant undertaking for Newark," explained Andy Clarkson, Senior Engineer at NMCNomenca. "The investment in the sewerage network is crucial to ensure Newark is able to expand over the coming decades as its population grows."

Before the work could begin, BNM Alliance needed to have a complete picture of the lay of the land. This meant mapping a 30 square kilometre area earmarked for the sewer development, in order to understand the precise location of everything, from streets, to A and B roads, to railway lines and many of the historic buildings.

With these challenges in mind, BNM Alliance opted for the IP-S3 HD1 mobile mapping system from Topcon. Flexible enough to be fitted to any vehicle, the system enables rapid mass data collection of an area therefore removing the need for traffic management and road closures which are high risk environments to work in. The resultant point cloud and imagery data can then either be integrated into existing workflows or be used as part of BIM modelling and visualisation process.

Weighing just 18 kilogrammes, the product is one of the most compact systems on the market which, combined with a quick-release roof mount, means that the unit can be quickly fixed on the vehicle by a single person. All of this helped save considerable time in carrying out the survey, and minimised disruption to local traffic.

"The town is so old in places, but the mobile mapping device has allowed us to pick out structures of special interest that we would not otherwise have spotted. This means that the designers of the sewer can input a wealth of additional data into BIM models. With this, they can change the locations of shafts, say, or the direction or diameter of the sewer, to protect historic buildings and cut the need for inconvenient surface works," explains Andy Clarkson.

Speaking about the project, Mat Kellett, UAS & OEM product manager at Topcon, concluded: "This is a fantastic example of how mobile mapping equipment can be used when planning the installation of temporary works to allow areas to be assessed virtually. Mobile-mapping increases productivity, reduces risk to workers and offers significant cost savings during planning. In turn, this saves companies time and resources, while keeping disruption to the local community to a minimum."

To find out more about the IP-S3 HD1, visit the Topcon website: www.topconpositioning.com