



Industry: Rail and Transit

Products: ProjectWise, MicroStation, Bentley Rail Track

Users: Track Access Services, Network Rail, Crossrail

Country: United Kingdom

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Track Access Services Completes Data Capture at a Quarter of the Cost

Track Access Services (TAS) met Network Rail's survey requirements on Crossrail West's 60-kilometer route using laser positional survey. Completing the task in two hours, its scanning rig captured 150,000 points per second, along with 360-degree digital photographs. The rig is mounted on a survey locomotive, and the work is carefully scheduled in the operating timetable, avoiding the significant cost and safety implications of track possessions or speed restrictions.

Leveraging the power of MicroStation, an additional 10 days of post processing enabled TAS to deliver a geo-located 3D point cloud adjusted to Network Rail's Snakegrid co-ordinate system at a relative accuracy of +/- 25 to 50 mm. This dataset was delivered, together with synchronized HD video and selected 3D assets extracted from the point cloud, for upload to ProjectWise.

The savings for this project alone are estimated at USD 355,000, roughly a quarter of the typical cost of static laser scanning, which previously was considered to be the only viable alternative.

It should be noted that this figure does not take into account additional significant cost savings achieved through the avoidance of track possessions or speed restrictions, which typically require several people per visit, including Certified Occupational Safety Specialists (COSS), look-outs, surveyors, and assistants. In addition, at least three additional update surveys will be required at key project stages in the future, further extending data collection cost savings.

Rob Farrell, engineering data manager, Crossrail ONW, concluded, "Major infrastructure programs need a quick and affordable (and safe) method of surveying the 'as is' on the ground, especially after a major commissioning. This survey met this criteria and provided rapid information to our designers to progress with the latest 'as is' information possible."

Image Link: <https://www.hightail.com/download/bXBhYnU1TIF3NUILSk5Vag>

Caption: Track Access Services, Network Rail, Crossrail- Laser Positional Video Survey for Crossrail West