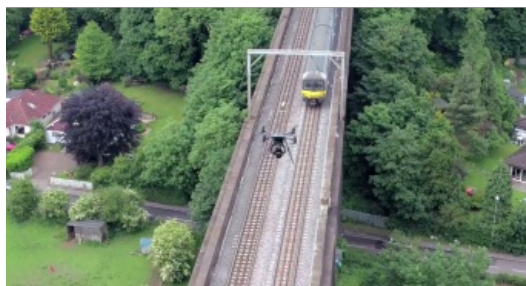


Plowman Craven Launches High-precision UAV Rail Survey System



Plowman Craven, one of the UK's leading survey and measurement companies, has launched a system that deploys UAVs to enable the comprehensive surveying of rail infrastructure to a sub-5mm accuracy. Able to cover the busiest and most inaccessible areas of the rail network from a working height of 25m, the Vogel R3D system can capture track condition and measurement data from a position of safety even during traffic hours. This removes the need for possessions and line blocks and drastically reduces the exposure of workers to risk. The result is a shortening of programme times and significant cost savings.

Chris Preston, senior engineer, Network Rail, commented that the application of the Vogel R3D system is a real game-changer for Network Rail and helps to satisfy many of survey requirements in a safe manner without the cost implications or potential programme delays associated with multiple possessions.

Data accuracy

Malcolm Donald, director of Plowman Craven said the Vogel R3D system really does represent a step change in the surveying of the rail environment. Not only does it massively reduce risk, cost and timeframes compared to traditional surveying methods, but – according to Plowman Craven – the data accuracy is also superior to traditional laser-scanning systems, making Vogel R3D a very attractive proposition with a wide range of applications. It can also be deployed on any infrastructure project that requires remotely-captured, engineering-grade data such as bridges or oil rigs, he added.

Developed from the company's years of expertise in laser scanning and photogrammetry, and underpinned by our robust survey principles, this ground-breaking system uses a state-of-the-art UAV platform and 100-megapixel camera to capture overlapping aerial images of an entire site.

3D Point cloud data

Bespoke workflows and software algorithms are then used to convert the imagery into 3D point cloud data that can be used to create a range of client deliverables ranging from track alignment to interactive site visualisations. Boasting an accuracy that is said to be superior to any other method of data capture, including even static laser scanning and train or trolley-based kinematic scanning systems, the Vogel R3D has been successfully trialled by Network Rail, with the survey accuracy results approved.

Extensive testing has confirmed that Vogel R3D meets Network Rail's Band 1 survey accuracy requirements of +/-5mm and is suitable for track alignment and topographical survey at all GRIP stages.

With enhanced flying permissions from the Civil Aviation Authority and a five-star RISQS rating, Plowman Craven is already an industry-leader in the provision of rail survey data. For more information on the Vogel R3D visit the [company's website](#).



<https://www.gim-international.com/content/news/plowman-craven-launches-high-precision-uav-rail-survey-system>
