

## Malcolm Hughes Rail Capability Information

### Rail Survey Services

**Track Surveys** – Plain line track surveys and complex Switch and Crossing (S&C) surveys with all Permanent Way details such as twists, crossing nose angles and switch sizes.

**Structure Gauging** – Gauging profiles in a variety of formats for analysing passing clearances of trains, measured with a Lasersweep™. Full point clouds and profiles can also be provided when Laser Scanning using our Trimble Gedo Scan™ System helical scanning trolley which collects high-resolution datasets of 3D points including track gauge and cant information.

**Platform Gauging** – Using a calibrated platform gauge or Lasersweep™ we can provide accurate Platform Gauging services.

**OLE Height and Stagger Surveys** – Overhead Line Equipment is surveyed accurately using a calibrated gauge. Our rigorous Quality Assurance procedures ensure accurate information is supplied that is related to a 3D coordinated track survey and chainage system.

**Control Networks** – Robust control networks are installed and computed using bespoke grids which utilise Snake Grid projections, localised site grids or control networks tied to Ordnance Survey coordinates.

**Track Monitoring** – We are experienced in providing specialist track monitoring regimes with reports highlighting any trigger values. Embankments and Structures can also be monitored.

**Laser Scanning** – scanning of structures including but not limited to; station canopies, bridges and viaducts, providing outputs in point cloud deliverables and 3D modelling in various formats including Revit and 3D Civils.

**Gauge Plate Installation** - Datum plates are installed after the installation or maintenance of track has occurred. The information on the datum plate is based on measurements to the running edge of the nearest rail. These can usually be found on station platform walls, bridge walls and OLE masts, and we have experience in installing and measuring datum plates on various projects throughout the UK.

**Drainage and Buried Utilities Surveys** – Detailed surveys of track and station drainage and buried utilities services.

## **Safety**

At Malcolm Hughes, we know that maintaining an in-depth understanding of the safety procedures and parameters is a high-level priority when working in this high-risk environment.

We have a considerable number of surveyors with Personal Track Safety (PTS) certificates.

Our teams are equipped with the latest Personal Protective Equipment (PPE). We are RISQS Verified.

We are compliant with the current and ongoing Government guidelines in England, Scotland & Wales regarding the COVID-19 pandemic.

## **Standards**

Malcolm Hughes work to the following Network Rail standards:

NR L2 TRK 3100 strategy and general

NR/L2/TRK/3100 suite of standards

NR/L2/CIV/177

Relevant NR Programme Surveying Strategy

