

# ABΛ Surveying

Professional surveying  
**solutions** for all projects



Faster • Safer • Cost Effective



High Accuracy • Less Risk Data Sets



The perfect foundation for on-going design



# ***“We provide solutions - not problems”***



Fully certified by the  
Civil Aviation Authority

## **Unsurpassed Resolution**

- 100-megapixel camera designed specifically for aerial photography
- Records ground detail smaller than 3mm from 50m and provides 1mm resolution at 20m for structural inspection
- 15 stops of dynamic range
- Precisely adjusted and calibrated lenses for sharp and crisp images



Our pilots are qualified surveyors with more than twenty years' surveying experience.

They understand the control and photogrammetric requirements needed to satisfy the accuracy and content specified for the survey.

We are a true one stop solution with twenty-eight years' experience of surveying railway infrastructure.

Audited by RISQS we can arrange access, carry out safety critical work, fly and control the site to the required accuracy, abstract and model it at any level of detail up to level 4 (LOD4) and are fully compliant with BIM Level 2.

## **Unsurpassed Safety**

- Custom built heavy lift multicopter
- Multiple levels of built in redundancy for ultimate safety and confidence
- 10mm accuracy with **NO** site access and only minimal access for 5mm
- Specially developed in-house positioning software



## **Unsurpassed Access**

- Survey in possessions or at **any time** with line blocks
- Flying at any height by having control of the site
- Possibilities for surveys improved significantly
- Inaccessible locations can be safely surveyed





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Our **expertise** ensures we offer unique solutions to the challenges that railway surveys throw up in the way of time and access constraints. Our use of remote data capturing equipment reduces costly line blockages and disruptions.

Laser scanning captures a **complete database** of the area. If any additional data is required, this can be extracted from the point cloud at a later stage, cutting out any future need for expensive and inefficient site revisits.



“Investment in good surveying is not a surveying cost - it is an insurance policy for the future”

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Operating the **highest specification** instruments, including Leica TS60 Total Stations, P40 Laser Scanners and GRP5000 Trolley measuring devices our experienced surveyors can undertake track alignment surveys quickly and accurately to provide cant and gauge measurements along the length of the track.

Specific details of permanent way, such as signals, welds, switches and platform edges, can be recorded as per the **client's requirements**.



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We provide **accurate** 3D datasets to effectively manage the 3D world we work and live in.

For major refurbishments and asset management of stations and other rail infrastructure, such as tunnels and bridges, we can supply everything from simple 3D wire frame models, to **fully BIM compliant** surfaced or solid models.

We have the **equipment, ability** and **experience** to extract data into any format such as AutoCAD, Microstation, Revit, Bentley MX Rail, SC0 Gauging Data for ClearRoute™, heights & staggers or any other industry standard format.



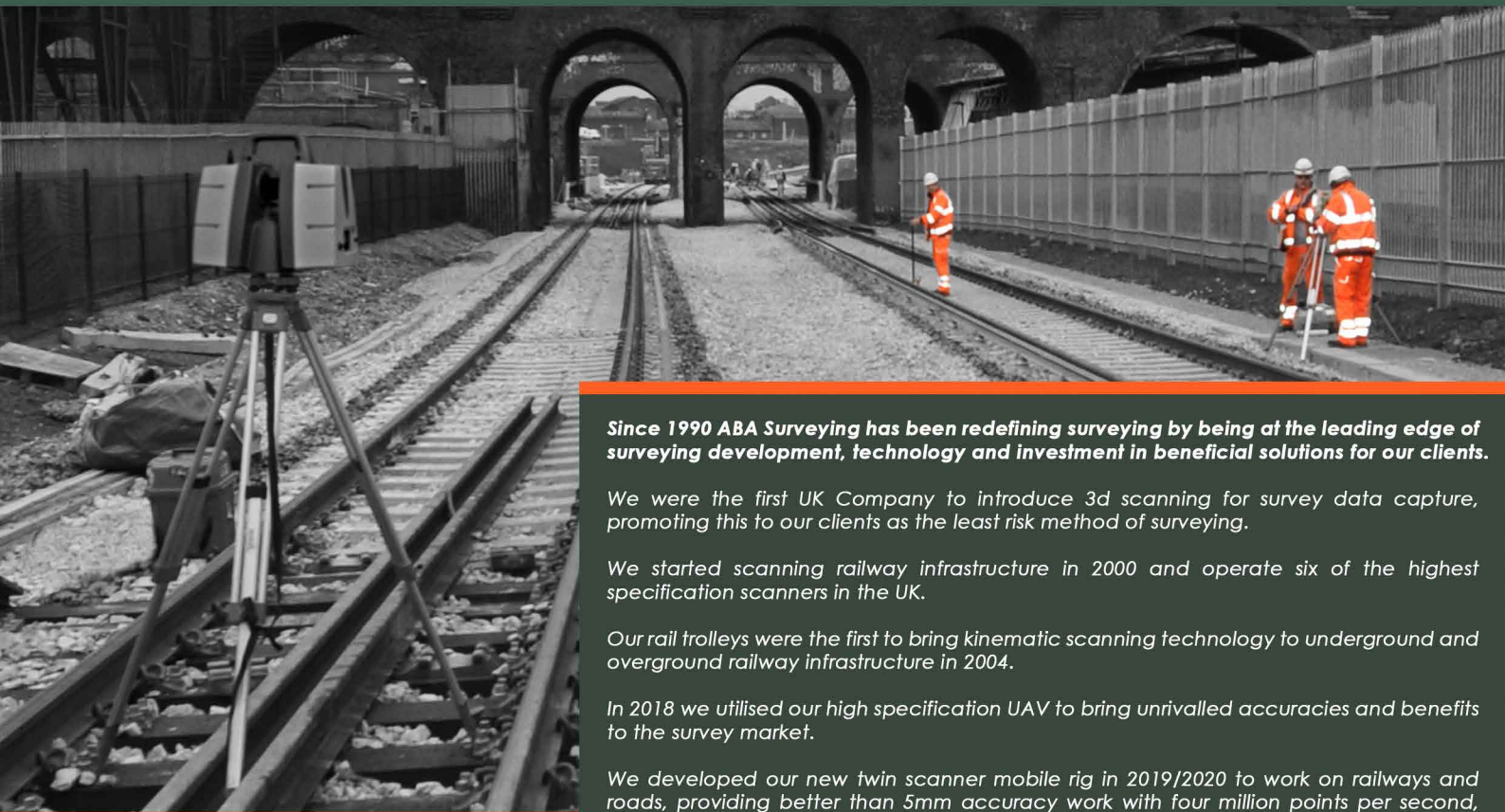
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Our **in-house planning** capabilities and utilisation of Network Rail's portal enable us to plan work more effectively, efficiently and safely, allowing us to request and book work sites, either our own or to co-ordinate shared access with others. We can also prepare all levels of paperwork, for example, Risk Assessments, Work Package Plans (WPP), Task Briefing Sheets (TBS), Safe System of Work Packs (SSoW) as required per site visit.

**ABA Field Surveyors** are PTS (NWR and LUL(TfL)), CSCS and Confined Space certificated and our Senior Surveyors hold COSS, SWL and IWA competencies.



*Our experience makes  
all the difference*



**Since 1990 ABA Surveying has been redefining surveying by being at the leading edge of surveying development, technology and investment in beneficial solutions for our clients.**

We were the first UK Company to introduce 3d scanning for survey data capture, promoting this to our clients as the least risk method of surveying.

We started scanning railway infrastructure in 2000 and operate six of the highest specification scanners in the UK.

Our rail trolleys were the first to bring kinematic scanning technology to underground and overground railway infrastructure in 2004.

In 2018 we utilised our high specification UAV to bring unrivalled accuracies and benefits to the survey market.

We developed our new twin scanner mobile rig in 2019/2020 to work on railways and roads, providing better than 5mm accuracy work with four million points per second, giving the highest resolution point cloud, less time for staff exposed to risk situations (survey at walking speed on a rail trolley means surveying done at 3km per hour) and less cost for managing that risk (surveys at road speed on a vehicle mean no traffic management requirements).

Data collection time and cost cut by >90% compared with traditional surveying and, potentially, 24/7 office data abstraction if required.

All our work is BIM Level 2 compliant, having been active on both the committees of Survey4BIM and BIM4rail, we continue helping to shape the future of surveying and promoting best practice throughout the industry.

We are a true one-stop survey solution provider with our in-house access planning and safety critical staff.

Let us show you our new, better, safer and more cost-effective ways to provide your survey data where our experience will make the difference.

## Our services include

3D Modelling  
S&C Surveying  
Signal Sighting  
Asset Management  
Heights and Staggers  
UAV Surveys • Gauging



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