

# TSP Projects

Technical Solutions in Partnership

**Keynetix**  
**Geotechnical Data**  
**Management Awards**  
**2017**  
**Winner**

TSP needed a robust approach to data management to improve quality control and save time and money for Network Rail.

Here's how Keynetix helped them do just that.

### TSP Projects are using these Keynetix products:

- **HoleBASE SI Professional**
- **HoleBASE SI Extension for AutoCAD Civil 3D**
- **HoleBASE SI Extension for Microsoft Excel**
- **HoleBASE SI Data Entry**
- **HoleBASE SI Template Studio**

To date about £1.1M has been spent on this project on ground investigation, compared with similar projects, where the bill is £1.5M. The added benefit is that the level of detail in the data is also higher than usual.

### Callum Irving, Engineering Geologist, TSP Projects

TSP realised that a fully-digitised workflow and resilient data system was needed; one that used AGS 4 format for planning, scheduling and reporting of ground data, with checks and balances at stage gates.

The data management strategy also involved creating two new design roles: The Geotechnical Investigation Supervisor who oversees investigation work and the Geotechnical Data Manager who is responsible for day-to-day data challenges.

### THE SOLUTION

Working closely with Keynetix and the ground investigation subcontractor Central Alliance, TSP Projects created a fully-auditable data management system using **HoleBASE SI** to capture, store, audit and issue data.

### BUSINESS SITUATION

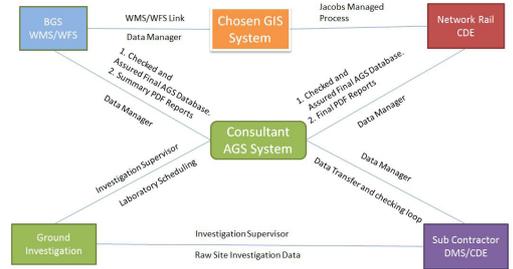
TSP were appointed as the Lead Design Organisation on the eastern section of the Trans-Pennine Route Upgrade Project (TRUe).

Network Rail is upgrading bridges, tunnels, track, junctions and signalling, the eastern section required more than 40km of ground investigations and more than 600 ground investigation locations. Robust data management was one of the top priorities.

### THE TECHNICAL REALITY

One of the key issues facing the construction industry on large projects is the management of ground data. Mismanagement of ground investigation data is estimated to cost the UK economy million of pounds in repeat work every year.

This structured approach ensures that data runs through two stage gates: The Geotechnical Investigation Supervisor is interested in the quality of the information taken at source. The Geotechnical Data Manager is concerned with how relevant the information is and how that information is communicated.



This ensures the client receives the information that is both relevant and practical to the proposed work and future designs. It also gives a degree of flexibility and ensures any data from external sources is reviewed and assessed before it is imported into the database.

### THE BENEFITS

The data management strategy means Network Rail received a fully-auditable AGS package of ground information on time and under budget that can be used at further GRIP stages, moving towards detailed design, and on future projects and maintenance.

Additional savings will come at the design stage, when TSP projects will create route-wide fence diagrams, risk maps and 3D models that will be used to make decisions on future investment and geotechnical risk.

By reducing the need for repeat works and recording information correctly, Network Rail has successfully reduced the geotechnical risk and saved money. This has meant more aspects of the project being given the go-ahead, coincidentally creating more work for the supply chain.

TSP Projects geotechnical team now use **HoleBASE SI** and the **HoleBASE SI Extension for AutoCAD Civil 3D** on a number of projects to improve design efficiency, reduce risk and make effective and efficient decisions in the early phases of projects.