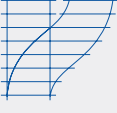







# Topographical Survey for Rail Network Management and Expansion

<p>Case Study</p>  <p>Rail Survey</p>	<p>Client</p> 	<p>Project Dates</p>  <p>May 2018</p>	<p>Location</p>  <p>Aberdeen to Stonehaven</p>
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## Scope

Atkins Global contracted the UTEC team to undertake topographical surveys at 10 locations on the rail corridor between Stonehaven and Aberdeen in May 2018.

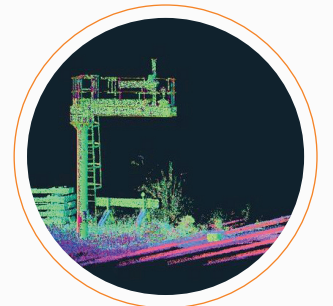
Surveys at these locations were coordinated into a local grid and tied into Ordnance Survey control, established at or near the site, to allow a minimum of two permanent control stations to be installed at each site, in accordance with the Network Rail Survey & Mapping Advice Note NR/EE/AN/00026.

## Solution

Four UTEC surveyors, with Network Rail Personal Track Safety (PTS) accreditation, carried out the project which took seven days utilising UTEC's Leica TS15 1" Total Station a Trimble S8 1" Total Station and a Leica C10 Laser Scanner.

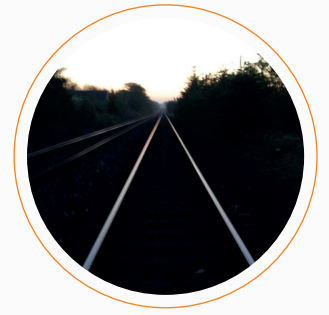
UTEK's surveyors collected the following data from each site:

- Positions of all rails surveyed from the gauge point on the running edge
- Track surveyed at 10m intervals. This was reduced to 5m intervals for curves with a radius less than 500m
- Track features: welds, joints, twist rails, IBJs, cable routes, location cases, signalling equipment & any other relevant features
- Track materials
- S&C (Switches and Crossings) switch tips, crossing noses, first and last though bearers



- Point numbers
- Signal posts and ground signals, including type and signal numbers
- Telecoms masts and bases
- Yard fencing and gate for down sidings (type and extents)
- Cable routes and cross track cables, noting width and type
- Drainage features along the length of the surveyed track and within the S&C to include: culverts (position and invert levels at ends); drainage routes where visible; catchpit and manhole covers (including accessible invert levels)
- Mileposts
- Structures
- Location cases
- All signs

Additionally, the client requested a Laser Scan Survey of an existing cantilever sign.



## Result

As UTEC StarNet had previously surveyed some of these sites during an initial phase of the project in 2017 the team were able to efficiently carry out the work to update the existing data and seamlessly add the variations required by the client.

*"I just wanted to offer my thanks to your team for completing the works promptly and without issue. They were a good group and I would be happy to work with them again."*

Andrew Aird | Assistant Engineer, Atkins Global



## About UTEC

Since 2005, UTEC, an Acteon company, has grown to become one of the world's largest independent offshore and onshore survey providers.

We provide a wide range of survey, positioning and data management services using the most advanced equipment and techniques.

Our highly experienced team have more than 4000 years of combined survey experience and can find solutions for our clients' most complex challenges.