

## Highways

### Highways Agency and Associated Consultants

#### Full topographical and underground utility surveys of road alignments

##### Client

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##### Drivers/Benefits

Pre-construction Topographical As-built Surveys are required prior to any construction works being carried out to ensure the road alignment and levels are re-installed correctly. They also provide record information of the existing layout for future use. Underground Utility Surveys are also carried out to evaluate the risks and costs involved in any sub-surface ground works involved in the construction of the highway.

##### 40SEVEN Capabilities

Topographical Surveys provide a detailed picture of the highway alignment. All features are shown to a level of accuracy commensurate with the high tolerances required from the road building industry. The surveys are generally shown at 1:500 and are related to National (OS) Grid and Datum, generally by the use of GPS. Each surveyed point is positioned in 3 dimensions, allowing drawings to be shown with contours and spot levels, which then allow us to produce accurate ground models and 3D visualisations, if required.

The drawings can be output into whichever software package is to be used by the client, such as Autocad, Moss Genio or SCC.

##### 40SEVEN Services

A key consideration when carrying out these surveys is that of disruption to other road users. For Health & Safety reasons any works that require access to the carriageway need to be carried out using Traffic Management, which we all know can cause chaos on the roads. To minimise these problems we utilise the latest in surveying technology in the form of reflector-less and robotic Total Stations. These can be used during the day to survey road details remotely from the carriageway verge, therefore, eliminating the need for Traffic Management.

40SEVEN have carried out numerous surveys for road improvements including, most recently, significant sections of the A52 Trunk Road, East of Nottingham. Here survey works have been carried out for numerous reasons such as carriageway widening, safety barrier installation and street lighting installation. Another more unusual application, involved carryout out a safe distance visibility survey for the installation of solid white lines to denote 'no overtaking'. Here we had to physically observe and record the forward visible distance every 10m along the carriageway to enable road safety engineers to design the white lining layout for the road.

We have also carried out full Underground Utility Mapping Surveys of carriageways to identify any services that could potentially affect the design or costing of the works. Using Ground Probing Radar and Electromagnetic techniques, these were also supplemented by our own desktop service searches to identify both metallic and non-metallic services.

##### Summary

40Seven has over 16 years experience of carrying out all types of Highway Surveying Projects, from small junction realignments to 10km long surveys of the M1 motorway. There is no need to worry about arranging Traffic Management as 40Seven will assess and make all the necessary arrangements to ensure that all works are carried out in a safe and environmentally friendly manner.

**If you are interested in finding out more about how we can help with your project, please contact us on t: 08450 179 300 or alternatively email: [info@40seven.com](mailto:info@40seven.com).**

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