

## Integrated Ground Investigations – the way forward ?

**Nicholas Armstrong**  
Engineering Manager  
Fugro, UK.

### Seminar overview:

Geotechnical design in the U.K. continues to rely on ground models based on information obtained in boreholes constructed by cable percussion techniques, and shear strength profiles derived from quick undrained triaxial tests and standard penetration tests, an approach which has changed little in the last 40 years. Commencing with a brief overview of UK practice and investigation methods, the presentation will cover the benefits of “dynamic site characterisation” and the integration of investigation methods, such as surface geophysics; CPT (cone penetration tests), drilling and sampling, and laboratory testing, drawing on best practice approaches developed for some of the largest and most challenging infrastructure projects.

The presentation will demonstrate that an integrated geophysical and geotechnical programme can often provide significant additional site characterisation information at no greater cost and in less time than a traditional “boreholes only” programme, and how the integration of multiple data streams can generate robust ground models, reduce uncertainty and pre-construction risk, as well as improve performance in the key areas of safety, programme, environmental impact and cost.

### Biography:

Nick Armstrong has been involved in ground investigation for over 40 years. After graduating in engineering geology and geotechnics at Portsmouth Polytechnic he joined Thyssen where he learnt his trade in the coal fields of South Wales. Subsequently, Nick joined Wimpey Laboratories and then Fugro Geoservices, working on projects throughout the UK, North America, Asia and North Africa. He was awarded a master’s degree in geotechnical engineering by the University of Surrey in 1989. Nick is the Engineering Manager at Fugro’s UK headquarters in Wallingford and is the current honorary secretary of the British Geotechnical Association.



### When and where:

**Wednesday, 6th of February, 19:00-20:00**  
**Wolfson Room, Lucy Cavendish College**

### Queries:

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