



Professional summary

Dr Smith is a geotechnical engineer with 27 years of experience, including in research as well as practical industry applications. He has particular experience and expertise in site investigation, including for geotechnical and geo-environmental aspects. Dr Smith is also particularly experienced in dealing with issues related basement and subsurface construction, and the effects this can have on existing structures. He also has a specific interest in UXO risk assessment.

Education and Career

Since 2003: GCG, London
1999-2003: PhD, Imperial College London
1995-99: Dames and Moore, UK
1994-95: MSc (Distinction), Imperial College London
1991-94: BEng (1st Class), Imperial College London
1988-91: British Railway Southern Region, UK
1988-91: HNC in Civil Engineering, NESCOL

Scholarships / Awards

2014: ICE Safety in Construction Prize for UXO risk assessment paper
1995: Imperial College Soil Mechanics Prize
1994: The Skempton Prize for excellence in Soil Mechanics

Memberships

Graduate Member of Institution of Civil Engineers
Member of the British Geotechnical Association

Experience with GCG

Since joining GCG in 2003, Dr Smith has been extensively involved in planning, supervision and reporting of ground investigations, for sites in London, elsewhere in the UK and abroad, which have included both land-based and off-shore or over-water works. These investigations have included both geotechnical and geo-environmental work, and Dr Smith has worked closely with environmental sub-consultants in support of the latter. Dr Smith was a member of the project working group responsible for the production of the UK Specification for Site Investigation, 3rd Edition.

Dr Smith co-authored Crossrail's procedure to assess the risk posed from Unexploded Ordnance (UXO) to the ground investigation works, and worked in liaison with experts in UXO risk mitigation to develop a construction phase UXO risk assessment for the entire Crossrail route. He was a member of the Project Steering Group for CIRIA project RP1051: 'Unexploded Ordnance (UXO) Risk Management for Land-Based Projects: A Short Guide'.

Dr Smith has experience in the assessment of building settlements due to underground excavations, having undertaken settlement assessment work for projects associated with London Underground and for domestic basement construction. Dr Smith has also been closely involved in the settlement assessment work undertaken on behalf of the Crossrail project, having been seconded to Crossrail for seven months during 2010.

Dr Smith has also been involved in numerous projects involving both commercial and residential development of sites throughout London, and with a number of commercial developments outside the UK. This work has involved providing advice on scoping of ground investigations, interpreting ground investigation data, assessment of the hydrogeological conditions and determining likely ground movements resulting from the proposed developments, for a range of different project sizes and foundation solutions. He has also assisted in developing practical construction methodologies for these works that ensured stability of both the structure being redeveloped and adjacent structures.

Countries worked

UK, Lebanon, Azerbaijan, Georgia, Germany, Croatia, Slovenia, and Romania

Associated with the commercial developments that he has been involved with, Dr Smith has produced piling and earthworks specifications, and assisted in developing foundation solutions, including assessments of settlements. Dr Smith has also investigated incidents of reported slope instability at sites in the UK, and developed recommendations for remedial works, and looked into issues of slope stability for sites outside of the UK. He has also been involved in assessing the impact of construction-induced vibrations on nearby structures, including both domestic properties and sensitive heritage structures, in the UK and abroad.

Previous experience

Prior to joining GCG, Dr Smith was working as a Research Assistant at Imperial College of Science Technology and Medicine, undertaking research into infiltration into unsaturated soils, using numerical modelling techniques (the Imperial College Finite Element Program - ICFEP). This work led to the development of a fully coupled capability to model the behaviour of unsaturated soils and identified a number of aspects of unsaturated behaviour that had not previously been taken into consideration. The work was presented to a meeting of the Malaysian Institution of Engineers in Kuala Lumpur, and to the Geotechnical Engineering Office in Hong Kong, and to a meeting at the Hong Kong University of Science and Technology. The results of this research were accepted as the thesis requirement for the award of a PhD.

Prior to his work at Imperial College, Dr Smith was employed as a Staff Engineer at Dames and Moore. During this time, he was primarily involved with the planning, supervision and reporting of geotechnical investigations on a number of sites across the UK. He also undertook supervision of an off-shore investigation for a coastal reclamation project in Beirut. Additionally, Dr Smith carried out site supervision and reporting of ground investigations for an oil pipeline in the Republics of Azerbaijan and Georgia.

Many of the sites Dr Smith worked on were 'Brownfield' sites, and his experience includes planning, supervision and reporting of a number of geo-environmental site investigations, primarily in the UK, but also including a power station site in Croatia. His geo-environmental experience includes the collection of samples for environmental/chemical testing and routine monitoring of environmental remediation systems.

Dr Smith has also been involved in supervision and remediation of a number of hydrocarbon contaminated sites in the UK, involving excavation of contaminated soil and backfilling, plus associated civil engineering works.

Prior to commencing his undergraduate degree, Dr Smith was employed as a Senior Technical Officer at British Railway's Southern Region (later Network Southeast) Regional Civil Engineer's office. Duties here included the design of light steel structures, reinforced concrete structures, survey work and draughting (both manual and using CAD).