



**Dr P.G.Smith**  
**BEng MSc DIC PhD**  
**Associate Director**

**Areas of expertise**

Site investigation, unsaturated soils, geo-environmental engineering, UXO risk assessment, basements.

**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 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.

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.

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.

**Areas worked**

UK, Lebanon, Azerbaijan, Georgia, Croatia, Slovenia, Romania.



**GEOTECHNICAL CONSULTING GROUP**

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### **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 have not previously been taken into consideration. The work was presented to a meeting of the Malaysian Institution of Engineers in Kuala Lumpur, and in Hong Kong, to the Geotechnical Engineering Office and to a meeting at the Hong Kong University of Science and Technology. The results of this research have been 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).

### **Education/Research**

PhD, Imperial College, London, 2003.  
MSc (Distinction), Imperial College, London, 1995  
BEng in Civil Engineering, Imperial College, 1994  
HNC in Civil Engineering, NESCOL, 1991

### **Scholarships/Awards**

Imperial College Soil Mechanics Prize, 1995  
The Skempton Prize (for excellence in Soil Mechanics), 1994  
ICE Safety in Construction prize, 2014 for UXO risk assessment paper.

### **Professional Qualifications & Memberships**

Graduate member of the Institution of Civil Engineers, 1994 to present.  
Member of the British Geotechnical Association.