Geotechnical Consulting Group

Mr Mike Crilly

BSc MSc DIC

Associate Director

Proven experts in a geotechnical world

Professional summary

Mike Crilly is a geotechnical engineer with more than 35 years of experience in research and practice. He has extensive experience of raft and pile foundations, the interaction of foundations and basements with existing infrastructure, subsidence and heave resulting from the interaction of vegetation and clay soils, and the impact of tunnelling on buildings.

Education and Career

Since 2000: GCG, London

1990-2000: Building Research Establishment, UK

1987-90: PhD research, Imperial College London

1986-87: MSc (Distinction), Imperial College London

1983-86: Ove Arup and Partners, UK

1979-83: BSc (1st Class), University of Glasgow

Service on technical / professional bodies

2006-09: Executive committee member of the British Geotechnical Association

2003-06: Member of the Geotechnical Engineering Advisory Panel

2001-03: Member of the Geotechnique symposium-in-print committee

1995-2000: Member of the British Standards Institution Committee B/213/2 – Trees in relation to construction

1992-97: UK representative on the International Society of Soil Mechanics and Geotechnical Engineering's Technical Committee on Expansive Soils (TC6)

Experience with GCG

Since joining GCG in 2000 Mike Crilly has worked with a wide range of clients, advising them on a variety of geotechnical issues at tender stage through to project completion.

He has worked on a large number of projects assessing the impact of construction work on tunnels. These schemes have included the construction of excavations and foundations in close proximity to existing infrastructure, such as the assessment of the impact of developments at Heathrow Airport on LUL tunnels and at 351 Caledonian Road on the large diameter HS1 tunnels which run at shallow depth underneath. In addition, he has assessed the impact of new developments on both existing Crossrail tunnels, such as at 21 Moorfields, and on proposed Crossrail Line 2 tunnels, such as at Maria Fidelis School.

He has undertaken numerous tunnel condition surveys of both transport and water supply tunnels, in particular, he led the most recent inspections of the Affinity Water Iver No, 1 and 2 tunnels, linking Iver treatment works with the River Thames at Sunnymeads and with Thames Water's reservoirs.

He has acted as geotechnical advisor to structural consultants and contractors on a large number of projects involving deep foundations and basements. In particular, he has worked on the design and assessment of substructures for various buildings with raft and piled raft foundations, such as 20 Fenchurch St and 5-6 St James's Square. He has acted as Category III checker for the design of the large diameter base-grouted piles and piled rafts for developments at Canary Wharf. He has also been involved with a number of developments involving deep basements.

Mr Crilly has been involved in a number of projects involving shallow foundations, advising structural consultants on foundations and ground conditions for refurbishment works and acting as an expert in cases of subsidence damage to buildings.

Mr Crilly has published widely on the subject of foundations for low-rise buildings and is author of three BRE Digests and contributor to several others. He has served on a Géotechnique symposium-in-print committee, the Geotechnical Engineering

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Memberships

Member of the British Geotechnical Association

Countries worked

UK, France, Turkey, Kenya, Ireland, and Denmark

Advisory Panel and the British Geotechnical Association Executive Committee. He has been invited to present lectures at a wide range of seminars, conferences and courses.

Previous experience

On graduation in 1983, Mr Crilly joined Ove Arup and Partners. He was involved in a range of geotechnical work, including desk study appraisal of sites and the selection of suitable site investigation techniques, together with subsequent reporting and foundation design for a number of building projects. He was closely involved in the design of the foundations and deep waterproof basement for the St Enoch Centre, Glasgow, and was assistant Resident Engineer for the piling works. This period also included a one-year secondment to Mowlem, acting as section engineer for the construction of the A1 Portobello Bypass.

In 1986 he attended the MSc course in Soil Mechanics at Imperial College, later becoming a Research Assistant and conducting research into the effects of vegetation on the shrinking and swelling of clay soils. The research involved both field and laboratory work, and was sponsored by SERC, BRE and TRRL. As part of the research, he developed a simple field suction measurement probe, which he installed and tested on three road sites in Kenya. He also undertook commercial laboratory testing, supervised undergraduate laboratories and assisted academic staff with expert witness work.

After a brief period with Pell Frischmann Consulting Engineers Ltd, Mr Crilly joined the Building Research Establishment (BRE). At BRE, he was responsible for the majority of BRE's research programmes on low-rise building foundations including studies of the performance of, and problems associated with, foundations on shrinkable-expansible clays and on soft ground. He was also responsible for the organisation, supervision and direction of experimental work at the Chattenden shrinkable clay test site, establishing the BRE subsidence database and experimental work at the Bothkennar soft clay test site. At BRE, he has undertaken several consultancy commissions, many of which involved investigations into building damage to help settle disputes between insurers. Other commissions included:

- drafting of an engineering guide to the National House-Building Council's Standards on building near trees
- acting as advisor to the National Galleries of Scotland following deterioration of timber piles beneath the Royal Scottish Academy building
- design and delivery of a series of CPD courses for loss adjusters and the International Society of Arboriculture
- drafting of a national 10-year strategy for geotechnical research.