



Dr D W Hight  
BSc MSc PhD DIC FREng CEng  
FICE  
Senior Consultant

**Areas of expertise**

Forensic geotechnical engineering and site characterisation; onshore and offshore foundations, slopes, earthworks, deep excavations, reclamations, ground improvement, retaining structures, tunnels and pavements; the measurement of soil and rock properties in situ and in the laboratory.

**Experience with GCG**

Dr Hight was one of the founding directors of GCG in 1983 and has been responsible for specialist advice to consulting firms, contractors, public authorities, solicitors, insurers and oil companies on a large number of UK and overseas projects. He has been instrumental in establishing GCG as one of the leading geotechnical consultancies focussing on technical excellence in performing all of its services.

Dr Hight has carried out technical audits of the foundations to major projects, including the Gullfaks "C" gravity platform, Chek Lap Kok Airport (Hong Kong) and the Rion-Antirion Fixed Link (Greece). He has served as expert witness in litigation, involving overwater site investigations, retaining wall failures, offshore foundations, piling, excavations for pipelines, ground improvement, reclamations, tunnel collapses, TBM progress in weathered rocks, and landslides. Dr Hight served as an expert witness in the Committee of Inquiry into the Nicoll Highway Collapse in Singapore. Other forensic investigations carried out by Dr Hight include tunnel collapses in the UK, at Gerrards Cross and Datchet, in Singapore, Sao Paulo and Chile, a quay wall collapse in Barcelona, and flow slide failures during construction of two major projects in Bangladesh. Recently, he has been investigating the failure of the Zagorskya pumped storage scheme outside Moscow, reclamation settlements in Jeddah, Saudi Arabia and reclamation and sea wall failures in Hong Kong.

Dr Hight advised on the design and construction of a new port development in Egypt, on geotechnical aspects of design and construction of Heathrow Airport Terminal 5, and on the investigation and interpretation of ground conditions at the Port of Miami Tunnel. For GCG's recent work on monopile foundations for wind turbine generators he aided the characterisation of ground conditions for sites in the Irish and North Seas. He is a member of the International Consulting Board advising on construction of the Teles Pires Hydropower Project in the Brazilian Amazon.

Dr Hight has undertaken several applied research contracts, including studies of Anchored Earth, pile capacity in sand, and embankments on soft clay. He has carried out a review of soil sampling and laboratory testing for the Science and Engineering Research Council and was responsible for the ground investigation at the UK soft clay test bed site at Bothkennar. More recently he was co-investigator in a major EPSRC funded research project into the characterisation of London Clay.



**GEOTECHNICAL CONSULTING GROUP**

*Continued over page...*

52A Cromwell Road London SW7 5BE United Kingdom  
Tel: +44 (0)20-7581-8348 Fax: +44 (0)20-7584-0157 Email:admin@gcg.co.uk

Dr Hight has published widely on the subjects of soil behaviour, offshore geotechnics, soil sampling, laboratory testing, stability problems, earthworks and foundations. He is the lead author of the CIRIA guide on "Engineering in the Lambeth Group". Dr Hight delivered the 38<sup>th</sup> Rankine Lecture in 1998 and the theme lecture on soil characterisation at the XV<sup>th</sup> International Conference on Soil Mechanics and Geotechnical Engineering in 2001.

### **Previous experience**

On graduation, Dr Hight worked for 10 years for Scott Wilson Kirkpatrick and Partners on designs of multi-storey buildings and power stations, the construction of the M6 motorway in Cumbria, and subsequently on site investigations and designs for motorways, marine structures, bridge and building foundations and slope stability problems.

In 1983, Dr Hight was awarded a PhD from Imperial College for his work on "Laboratory investigations of sea bed clays". His wider research at Imperial College covered the foundation behaviour of North Sea oil platforms and he was consulted on the design of cuttings in soils and soft rocks, remedial works for coastal landslides, earthworks and pavements for airports and roads in the UK, Middle East and Africa, foundations, retaining structures, and design of soils testing laboratories.

### **Education/Research**

Visiting Professor, Imperial College, London, 1993 - 2012  
Distinguished Visiting Professor, National University of Singapore, 2000  
Visiting Professor, Nanyang Technological University, Singapore, 1999  
Royal Society Industrial Fellowship, 1997 - 1998  
Visiting Research Fellow, Nottingham University, 1988 - 1989  
Visiting Research Fellow, Imperial College, London, 1985 - 1987  
Visiting Professor, Massachusetts Institute of Technology, 1983  
PhD, Imperial College, London, 1983  
Lecturer in Soil Mechanics, Imperial College, London, 1978 - 1983  
Research Fellow, Imperial College, London, 1975 - 1978  
MSc (Distinction), Imperial College, London, 1971  
BSc (1st Class), Imperial College, London, 1965

### **Scholarships/Awards**

Geotechnical Research Medal, UK Institution of Civil Engineers, 2008  
Spirit of Telford Award (for contributions to engineering knowledge), UK Institution of Civil Engineers, 2006  
Telford Gold Medal, UK Institution of Civil Engineers, 2003  
British Geotechnical Society Prize, 1993 (for work on sampling and testing of soft clay)

### **Professional Qualifications & Memberships**

Fellow of the Royal Academy of Engineering 2001 – present  
Fellow of the Institution of Civil Engineers, 1997 – present (Member since 1970)  
Member of the British Geotechnical Association

### **Service on Technical/Professional Bodies**

Chairman of the International Society's Technical Committee on Soil Sampling, 1994 – 2001  
Member of the International Society's Technical Committee on Small Strain Measurement, 1994 – 2001  
Chairman of the Southern Geotechnical Group, 1993 – 1997  
Member of the Géotechnique Advisory Panel, 1978 – 1981

*Continued over page...*

## Selected Relevant Publications

- Gasparre A., **Hight D.W.**, Jardine R.J. & Coop M.R. (2014). The laboratory measurement and interpretation of the small strain stiffness of stiff clays. *Géotechnique*, **64**, No 12, pp 942-953
- Hight D.W.** and Leroueil S. (2002) Characterisation of soils for engineering purposes. *Int. Workshop on Characterisation and Engineering Properties of Natural Soils*, Tan et al (eds), Vol.1, pp 255-360
- Leroueil S. and **Hight D.W.** (2002) Behaviour and properties of natural soils and soft rocks. *Int. Workshop on Characterisation and Engineering Properties of Natural Soils*, Tan et al (eds), Vol.1, pp 29-254
- Hight D.W.** (2001) Sampling effects in soft clays: an update on Ladd and Lambe (1963). *ASCE Geotechnical Special Publication No 119 'Soil Behaviour and Soft Ground Construction'*, pp 86-121
- Hight D.W.**, Ellison R.A. & Page D.P. (2001). *Engineering in the Lambeth Group*. CIRIA Funders Report/CP/83
- Hight D.W.** (2000) Sampling Effects in soft clay: an update. *Proc. 4<sup>th</sup> Geotechnical Engineering Conference*, Cairo, Egypt. Invited Lecture, 41pp
- Hight D.W.**, Georgiannou, V.N., Martin, P.L. and Mundegar, A.K. (1999). Flow slides in micaceous sands. *Proc. Int. Symp. on Problematic Soils*, IS-Tohoku '98, Sendai, Japan, Vol. 2, pp 945-957
- Hight D.W.**, Bennell J.D., Chana B., Davis P.D., Jardine R.J. & Porovic E. (1997). Wave velocity and stiffness measurements of the Crag and Lower Tertiaries at Sizewell. *Géotechnique*, **47**, No 3, pp 451-474
- Hight D.W.**, Lawrence D.M., Farquhar G.B., Milligan G.W.E., Gue S.S. & Potts D.M. (1996). Evidence for scale effects in the end bearing capacity of open-ended piles in sand. *Offshore Technology Conference*, Houston. OTC 7975, pp 181-192
- Hight D.W.** & Georgiannou V.N. (1995). Effects of sampling on the undrained behaviour of clayey sands. *Géotechnique*, **45**, No 2, pp 237-247
- Hight D.W.**, Georgiannou V.N. & Ford C.J. (1994). Characterisation of clayey sands. *Proc. 7<sup>th</sup> Int. Conf. on Behaviour of Offshore Structures*, Vol 1, pp 321-340
- Hight D.W.** (1993). A review of sampling effects in clays and sands. *Proc. Int. Conf. on Offshore Site Investigation and Foundation Behaviour*, SUT, pp 115-146
- Hight D.W.**, Bond A.J. & Legge J.D. (1992). Characterization of the Bothkennar clay: an overview. *Géotechnique*, **42**, No. 2, pp 303-347
- Hight D.W.**, Boese R., Butcher A.P., Clayton C.R.I. & Smith P.R. (1992). Disturbance of the Bothkennar clay prior to laboratory testing. *Géotechnique*, **42**, No. 2, 199-217
- Georgiannou V.N., **Hight D.W.** & Burland J.B. (1991). Behaviour of clayey sands under undrained cyclic triaxial loading. *Géotechnique*, **41**, No. 3, pp 383-393
- Hight D.W.** & Shibuya S. (1991). Undrained stability of offshore gravity structures. *Proc. Int. Conf. on Geotechnical Engineering for Coastal Development*. Geo-coast '91, Yokohama, Japan, Vol 1, pp 561-566
- Jardine R.J., **Hight D.W.** & McIntosh W. (1988). Hutton tension leg platform foundations: measurement of pile group axial load-displacement relations. *Géotechnique*, **38**, No. 2, pp 219-230
- Hight D.W.**, Gens A. & Jardine R.J. (1985). Evaluation of geotechnical parameters from triaxial tests on offshore clay. *Proc. Int. Conf. on Offshore Site Investigation*, SUT, 253-268