



International Geosynthetic Society

United Kingdom Chapter



IGS/Midland Geotechnical Society

JOINT MEETING

Monday 12th April 2010

Haworth Building, University of Birmingham B15 2TT

6.30pm for 7.00pm

SUSTAINABLE GEOSYSTEMS IN CIVIL ENGINEERING APPLICATIONS

Patrick Cox
(Capita Symonds)

This presentation discusses the recently published Waste and Resources Action Programme (WRAP) guidance on Geosystems. In the context of construction projects interfacing with the ground, the term Geosystem refers to the composite working system in the ground. This includes engineering input, soil and an engineered geo-component. The guide is designed to help everyone involved in developing construction solutions (clients, designers, contractors and regulators) to understand when, where and how ground engineering Geosystems can provide cost-effective and programme-efficient solutions which simultaneously cut both materials wastage and the carbon footprint of construction. The guidance identifies and illustrates opportunities to use Geosystems as an alternative to traditional construction methods, with attendant savings in cost and carbon. It also includes a range of case studies demonstrating the considerable advantages in this approach, particularly by allowing the use of lower specification site-won materials which would otherwise go to waste or may require the import of primary materials. A further key advantage demonstrated is the reduction in use of high carbon products such as steel and concrete, prevalent in traditional ground elements of construction such as retaining walls. Cost and carbon savings achieved within these case studies are quantified.

Biography

Patrick currently manages the Ground Engineering team in the Civil Engineering/Major Projects department of Capita Symonds a large UK multi-disciplinary consultancy. A graduate of the early 90's, he worked through early career positions in the UK punctuated by a period of post-graduate study, before moving to Hong Kong in 1997 just before the handover, to work in the Government Geotechnical Engineering Office. Patrick has recently worked on the London 2012 project and Crossrail and specialises in characterizing ground risk and uncertainty and understanding geomaterials. Patrick contributes to CIRIA steering groups, working parties and is an invited speaker in local universities and at professional lectures.

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The IGS UK Chapter is a member of the Ground Forum