



Basement Design and Construction Problems at Oxford Westgate

Dr Wilson Kesse[†] & Mr Corin Walford[‡]

[†] Project Lead Engineer – Laing O'Rourke**‡** General Manager – Laing O'Rourke

Seminar overview:

The new Oxford Westgate shopping centre involved the construction of a 20,000 sq. m double height basement, within an archaeologically sensitive development site. This talk will discuss the geotechnical challenges and constraints encountered and the design solutions put forward by main contractor Laing O'Rourke to tackle this large element of work whilst effectively dealing with issues including heave, flotation, water ingress and materials sorting.



When and where: Wednesday, 09 November, 19:00 Erasmus room, Queens' College

Queries:

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Biography:

Dr Wilson Kesse is a Temporary Works Project Lead Engineer at Laing O'Rourke. He specialises in design for construction of structures that involve complex soil-structure interactions, encompassing top-down construction, deep basement propping and ground movement assessment.

Having obtained his undergraduate degree in University of Science and Technology, Kumasi, Ghana, he went on to complete a PhD with the Structures Group at the University of Cambridge. His PhD research was on the use of Prestresed CFRP straps for enhancing shear capacity of RC Beams.

Prior to joining Laing O'Rourke in 2008, he worked with the Advanced Composites Group at Tony Gee & Partners on the strengthening of existing structures with Carbon Fibre Reinforced Plastics.

Mr Corin Walford studied engineering at the University of Cambridge, before joining bridge consultancy Robert Benaim & Associates in 2002 as a graduate structural engineer. He worked on several large highway structures including the A876 Clackmannanshire Bridge across the Forth Estuary in Scotland, and the N8 Blackwater Viaduct in Co. Cork, Republic of Ireland, both built using the incremental launching technique.

He joined Laing O'Rourke in 2007 and is General Manager of the Temporary Works department, leading a team of 30 engineers providing in-house engineering and constructability advice for all their UK projects.

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