

## BGA Evening Meeting

Thursday 9<sup>th</sup> March 2017 at 18:00

TELFORD THEATRE, INSTITUTION OF CIVIL ENGINEERS,  
ONE GREAT GEORGE STREET, WESTMINSTER, LONDON SW1P 3AA

### Geotechnical engineering in the coastal environment: Case Studies from Central Felixstowe & Clacton on Sea

**Peter Phipps, Mott MacDonald**  
**Lucy Wiggins, Mott MacDonald**

#### Summary:

Two coastal management schemes at Central Felixstowe and Clacton-on-Sea have safeguarded over 4,500 properties from erosion risks in the next 100 years. Both Schemes provided interesting interaction between the coastal management approaches and coastal cliffs with associated London Clay platforms under the beaches. Amenity and regeneration benefits in both communities have been a key driver for the Schemes, and successful outcomes are already tangible. Mott MacDonald developed a pro-active cliff management strategy for both schemes, that addressed both high priority stability remediation, and longer term sustainable management of the coastal cliff assets whilst also improving their social and economic value. The cliff management strategy was underpinned by understanding of the geomorphology, engineering geology and geotechnics of the cliffs. The presentation will consider; the knowledge and influence that the London Clay wave cut platform had on the design and construction, the re-use of excavated London Clay in driving sustainable design and whole life carbon management, through incorporation in the beach and works design and interesting aspects of interaction between settlement of the rock groyne structures on the London Clay platform, including sea-level rise scenarios, and how these effect time bound performance.

#### Biographies:

Peter Phipps is the Head of Coastal Engineering and Geomorphology at Mott MacDonald. He is a chartered engineer with over 20 years' experience of working within and providing expert engineering geomorphological and geological input for large multidisciplinary teams for a variety of major ground engineering, infrastructure and coastal projects.



Lucy Wiggins is a coastal geomorphologist with an interest in coastal management and the adaptation of the coast with climate change; and the study of ground movements and its impacts on coastal management. Lucy is experienced in the production business cases for coastal flood and erosion schemes to UK Government guidance.

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