

UNIVERSITY OF  
BIRMINGHAM

# Midland Geotechnical Society Meeting Notice

[www.midlandgeotechnicalsociety.org.uk](http://www.midlandgeotechnicalsociety.org.uk)

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## Contact Us

Honorary Secretary:  
Scott O'Neill-Gwilliams  
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## Meeting Venue

Lectures start 7pm

Lecture Theatre G31, Dept of  
Mechanical and Civil  
Engineering, University of  
Birmingham B15 2TT

Refreshments are available  
prior to the meeting in the  
Shell lounge, Department of  
Mechanical and Civil  
Engineering, from 6:15  
onwards.

This lecture has been supported by sponsorship from:



## Monday 3<sup>rd</sup> December 2018

Dr Tim Newman, Jacobs

## Engineering geology of the Thames Tideway Tunnel With focus on the Kirtling Street shaft

The presentation follows the following agenda:

- It starts with a brief outline of and reasons for the Tideway Tunnel and what it intends to achieve.
- It has a very brief look at the engineering design of the interface between main tunnel, shaft and connection tunnel.
- The geological model (simple schematic) is presented.
- The next part talks about construction of the Kirtling Street shaft using the D-Wall technique and how various aspects of the London Basin geological sequence has affected the design and construction performance of this. It also gives a brief account of the steel sheet pile and CFA pile enabling works, prior to D-Walling.
- It then goes through the geological sequence during bulk excavation within the completed D-Wall structure, emphasising the importance of this in validating the existing preconstruction model.
- Finally, there is a section covering the construction of the twin 37m long, 10m diameter SCL TBM launch adits (East and West) and in particular the very significant geological challenges that had to be overcome to complete these in the top part of the Lambeth Group deposits.

### About the speaker:

Tim has over 30 years in geology and geotechnics having started off his career as an exploration (gold) geologist in the Northern Territory, Australia. He then spent the next five years as a mining geologist in Botswana, Southern Africa, working in a variety of copper-nickel mines (ranging from 30m to 900m deep). On returning to the U.K. he spent the next seven years as a geotechnical engineer with the tunnelling contractor, Taylor Woodrow,

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being resident on schemes such as the A27 Brighton bypass, Blackrock Stormwater Tunnel (also in Brighton), the Jubilee Line Extension (Contract 104, London Bridge) and the Ramsgate Harbour Tunnel (using Prevaulting for the first.....and I think last time in the U.K.). Following Taylor Woodrow's decision to pull out of tunnelling, he spent the next 15 years as a geotechnical engineer with Thames Water Utilities, working on an immense variety of ground conditions over SE England. Perhaps the most notable projects were the High Wycombe to Little Marlow transfer tunnel, the Thames Water Ring Main Extensions (north and south), the Lee Tunnel and the beginnings of GI for the current Tideway Tunnel which gave him the opportunity to complete a PhD at Imperial College into the causes of hypoxic gas during underground excavation in the Lambeth Group.

The construction phase for Tideway has been running for over a year now and Tim is overseeing operations at all 20 shaft construction sites.

### Upcoming lectures..

#### Monday 14th January 2019

Dam and Reservoir Engineering - the Last 50 Years and the Next 50 Years  
Dr Peter Mason, Stantec

#### Monday 4th February 2019

Hinkley Point C  
Gemma Sherwood, Atkins

#### Monday 4th March 2019

Non-destructive Condition Assessment  
Dr Asaad Faramarzi, University of Birmingham

#### Monday 1st April 2019

John Mitchell Award Lecture 2019  
Title & Speaker TBC once awarded

#### Monday 13th May 2019

Annual General Meeting & Environmental Lecture  
The use of geosynthetics in Environmental Applications  
Dr Russell Jones, Golder Associates - IGS joint meeting