The Geological Society

serving science & profession

Home Counties North Regional Group

FULL-DAY GEOLOGY FIELD TRIP

Friday 24 July 2015 10.30 – 16.00 approx

Sequence Stratigraphy, Carbonate Sedimentology, Palaeontology, Reservoir Characterisation, and Building Stone of the 'Oundle Stone' of the Middle Jurassic Blisworth Formation in Oundle village and in Churchfield Quarry, Northamptonshire.

Led by John Wong FGS

Meet: outside the W.H.Smith shop in the McDonald's Peterborough Services next to the A605 off northbound A1(M) junction 17 at 10.30 a.m.

John will give an introduction on the geology of the Oundle area and show you a variety of limestone and fossil specimens collected from Churchfield Quarry.

We then travel to Qundle for a walking tour to see the most beautiful and award-winning stone village in Northamptonshire. More than 90% of the buildings in the village are built of Oundle Stone, including churches, schools, hotels, and public houses. Oundle Stone is a variety of fossiliferous limestone building stone.

In the afternoon, we travel to Churchfield Quarry yard in the west of Oundle village near Lyveden, the quarry manger will give us a talk on the stone-cutting process, followed by a tour of the stone-cutting workshops with their office manager.

We will then go to the nearby Churchfield Quarry; a working quarry, which has been in operation for less than 5 years, as a result of which its location is not shown on any current Ordnance Survey maps. The geology in the quarry is predominantly Middle Jurassic Blisworth Limestone Formation of the Great Oolite Group, an analogue to the offshore West Sole Formation in the Southern North Sea.

The sequence stratigraphy in the quarry is a lowstand-regression sequence of different types of limestone formations - pelmicrite wackstone, biomicsparite packstone, and oosparite grainstone. There are also Quaternary limestone tills and recent floodplain river terrace deposits. We will discuss the diagenesis of the limestone, in particular the permeability and the porosity evolution through time and geological processes. John will discuss the reservoir zonation and the possible effects of the impermeable layers sandwiched between the limestones. We will look at the paleoecology of an unconsolidated unimodal oyster bed, which occurs near the top of the regression sequence of the limestone. The faunal assemblages change from predominantly benthonic

communities within the cement-supported limestone near the bottom of the sequence to the shallow marine communities within the bioclast-supported limestone in the upper part.

All participants must wear hard hats, high visibility vests or jackets, safety goggles/glasses, and suitable footwear such as lace-up boots. You may bring a packed lunch.

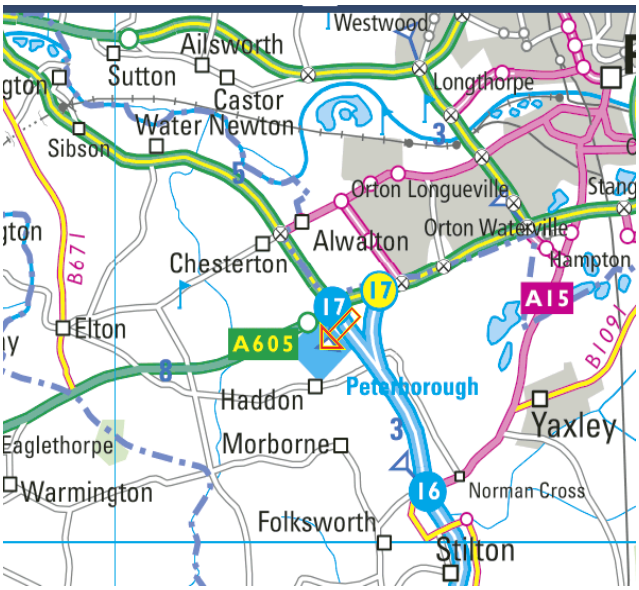
There is a maximum of 25 participants for this field trip with priority given to Fellows, Candidate Fellows and Juniors of the Geological Society who are members of the Home Counties North Regional Group.

Please book your places on a first-come-first-served basis by e-mail to homecountiesnorthregionalgroup@gmail.com

Attendees will be asked to sign the usual indemnity form for field trip insurance purposes before the start of the walk.

For more information on the Home Counties North Regional Group visit the website

http://www.geolsoc.org.uk/hcnrg



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