Lecture on Wednesday 25th September 2024

Northampton Ironstone: Geology, mining and legacy land

Presented by

Dr Matthew Hooper FGS and Ian Dunkley FGS

Date: Wednesday 25th September 2024
Venue: Soiltechnics Ltd, Cedar Barn, White Lodge, off A43, Walgrave, Northamptonshire
Post code: NN6 9PY

Venue opens and refreshments from 6.30pm. Lecture starts at 7pm

After completing his geology PhD at the University of Leicester, Matthew Hooper joined Soiltechnics Ltd. as a geotechnical engineer involved in a wide range of geotechnical and geoenvironmental ground investigation projects for civil engineering and property development projects, including assessments of former opencast and sub-surface mines. As his career developed to Senior, Associate then Director level, Matt also became increasingly involved in structural building fabric surveys, where he now leads this team at Soiltechnics.

After an early career spanning corporate finance, dairy farming and shepherding, Ian joined Soiltechnics in 2013 'on the tools' as a fieldwork co-ordinator. He has worked his way up to a position of Director of GI South, completing a Land Management B.Sc along the way. He has participated in, planned and overseen numerous ground investigations for developers, landowners and Local Authorities. This includes many schemes on sites affected by the presence and exploitation of the Northampton Sand Formation, and he has extensive knowledge of the issues encountered and solutions applied. Ian is passionate that 'when ground investigations are scoped effectively, they are a valuable tool in managing ground related risks'. This certainly applies to land potentially affected by ironstone mining.

Abstract

Northampton Sand Formation ironstone was deposited during the Middle Jurassic as an Ooidal limestone on a shallow marine shelf at the northern edge of the London-Brabant Massif, the Northampton Sand Formation extends from North Oxfordshire to North Lincolnshire. The formation contains berthierine, siderite and pyrite minerals forming the ironstone deposits, illustrated in Figure 1, that have been extensively exploited since the mid-19th Century as a significant source of iron ore.

Figure 1. Core sample taken through Northampton Sand Formation.

Exploitation was focused around Corby (see Figure 2), Kettering and Northampton areas where extensive shallow quarrying, latterly using giant dragline machines like that shown in Figure 3, and locally underground mining. This has left an extensive imprint on both the population demographic of local communities and an extensive legacy of geological, geotechnical and environmental risk that continues to be a challenge to the present day. The presentation will provide an overview of each of these aspects and the mitigation of the risks associated with them.

Figure 2. Aerial view of ironstone workings in the Corby region, with an area at the top of the photograph of the characteristic 'Hills and Dales' terrain left after open-cast mining.

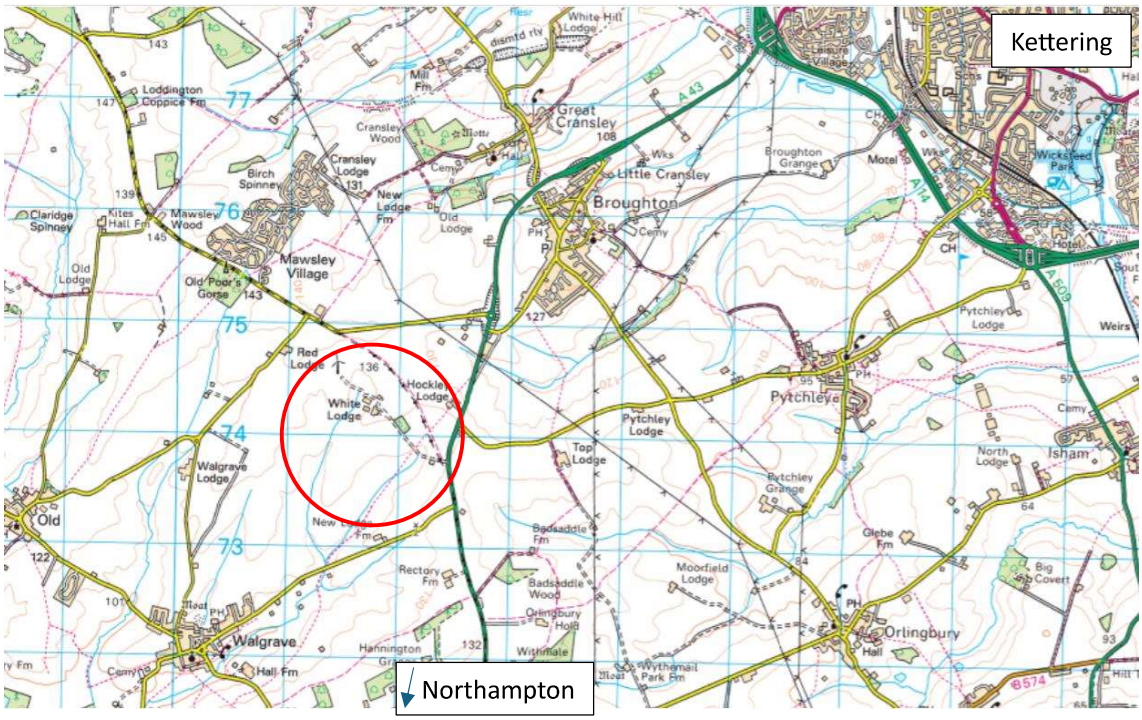
Figure 3. One of the Sundew draglines, a large electrically powered dragline excavator latterly used in mining operations in Corby's ironstone quarries.

Accessing the venue

The lecture is being held in the offices of Soiltechnics Ltd. at Cedar Barn, White Lodge, off A43 (Kettering Road), Walgrave, Northamptonshire NN6 9PY

By Rail: The nearest station is Kettering Station (East Midlands Railway services), about 5 miles away. Anyone wishing to travel by train should let the HCNRG Secretary know by email with a view to arranging a lift for you to and from the venue by another attendee. Please email: homecountiesnorthregionalgroup@gmail.com

By Car: The offices of Soiltechnics Ltd. and Cedar Barn venue are in a small cluster of buildings at White Lodge, which is reached about ½ mile down a private drive off the A43, as shown on the map below. The access drive off the A43 is on a gentle bend and is not signposted. There is plenty of free parking available at the venue.



This event is free of charge to all members of the Geological Society Home Counties North Regional Group. Priority will be given to Fellows and Student Fellows 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

Please provide your membership number when booking your place.

This event is supported by RSK, and Soil Consultants

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