

FIELD TRIP TO GRAVES PARK, SHEFFIELD

Sunday 5th August 2018



Exposure of the Greenmoor Rock in a former sandstone quarry at Graves Park, Sheffield. The Greenmoor Rock has been extensively quarried for building, walling and flagstone use and forms prominent ridges and cuestas around the southern and western fringes of Sheffield. It typically consists of fine-grained, ripple and planar laminated sandstone deposited mainly by overbank and crevasse splay floods associated with a fluvial channel system carrying and depositing sediment from a westerly source. *Photo: Andy Howard*

Excursion title	Upper Carboniferous stratigraphy in the southern Pennines and Yorkshire Coalfield – a geological mapping experience GRAVES PARK, SHEFFIELD		
Date & time	Sunday 5 August 2018 , meet at 10.30 am at Graves Park, Sheffield	Finish time:	4.00 pm at Graves Park, Sheffield
Leaders	Andy Howard , Honorary Research Associate, British Geological Survey; Colin Waters , Honorary Professor, University of Leicester		

<p>Excursion aims and description</p>	<p>The Excursion will demonstrate examples of the stratigraphy, sedimentation and changes in provenance of Pennine Lower Coal Measures (early Westphalian - Langsettian) sandstones and associated strata in the south Yorkshire coalfield region. There will be practical demonstrations of the techniques used in geological mapping of these strata in urban and peri-urban settings, providing insights on the levels of accuracy and certainty that can be attained and presented on geological maps in this region. The trip enables both comparisons and contrasts to be drawn with the stratigraphy, depositional environment and provenance of the late Namurian - earliest Westphalian succession to be demonstrated at Curbar Edge on Saturday 4th August, and also shows how a subtle and detailed stratigraphy can be mapped geologically in an urban setting. However, the trip can also be attended on a standalone basis.</p>
<p>Registration</p>	<p>Numbers are limited to 20, pre-registration is required by email to fieldtrips@yorksgeolsoc.org.uk</p> <p>Please include the full name of all attendees in the email.</p>
<p>Meeting point</p>	<p>Bunting Nook Car Park, Graves Park, Sheffield (Grid Reference SK 3579 8258). Car Park is pay and display, please bring plenty of change (daily charge £2.50 at 31 May 2018). Alternative parking is available on the roadside of Hemsworth Road to the east of the Bunting Nook car park entrance.</p>
<p>Getting there</p>	<p>By car, Graves Park is best approached from the east via the A6102 Sheffield outer ring road and then via Hemsworth Road – the park is well signposted from the A6102.</p> <p>The Park is well served by bus services, click here for a journey planner</p> <p>Click here for Google Map</p>
<p>First locality</p>	<p>At Meeting Point above</p>
<p>Excursion route:</p>	<p>Circular walk around the extremities of the Park and within the Park itself.</p>
<p>Terrain, walking distance, height gain</p>	<p>Total walking distance about 6 km on tarmac and gravel footpaths, woodlands and playing fields within the park. Locally muddy ground in woodlands and near streams. Total elevation change 100m</p>
<p>General information</p>	<p>Graves Park is Sheffield’s largest public park. It is normally very busy on Sundays and popular with families with young children. There may be sports events also taking place in the Park.</p>

	<p>The Park is a managed public space and any hazards generally present a low risk. Steep slopes are present in the Park and are locally unfenced, these can be slippery in wet weather. Vertical faces up to 3m are present in former stone quarries within the Park. We will visit rock exposures adjacent to streams and ponds, which may be slippery and muddy.</p>
Safety and Insurance	<p>Registrants will be sent a Health and Safety risk assessment and fieldwork Code of Conduct by email in advance of the trip. You are requested to read both these documents carefully before the trip and take account of risks and recommended safety measures and clothing when planning your attendance. You will be given a safety briefing by the leaders at the start of trip, and will be asked to sign an attendance register to declare that you have read these documents and understood the briefing.</p> <p>The Yorkshire Geological Society has insurance arranged by the Geologists' Association which covers the Society and field trip leaders for public liability. Personal accident insurance is a matter for individual members and participants to arrange as they consider necessary.</p>
Recommended clothing	<p>Stout footwear (walking boots) recommended, waterproof overclothing, sun hat and sun block</p> <p>Hard hats or high visibility vests are not required</p>
Recommended geological equipment	<p>Hand lens, compass (smartphone compass is satisfactory), ruler (15cm), clipboard (for holding A4 sized map and handouts), pencil and rubber.</p> <p>Optionally, smartphone with following apps installed (both available for free from Apple or Google app stores):</p> <p>British Geological Survey iGeology app</p> <p>Ordnance Survey OS Maps app</p>
Lunch and refreshments	<p>Lunch will be taken in or near the Rose Garden Café in the Park, hot or cold snacks and drinks can be purchased at the Café or participants may bring a packed lunch, which can be eaten in the gardens adjacent to the Café.</p>
Toilets	<p>Public toilets are available at the Rose Garden Café at the start and end of the excursion, and during the lunch break</p>
Geological mapsheet for reference	<p>BGS 1:50,000 series Sheffield Sheet 100, Bedrock and Superficial Geology, published 2011. Click here to view online</p>

<p>OS mapsheet for reference</p>	<p>1:50,000 Landranger Sheet 110 Sheffield and Huddersfield or Sheet 111 Sheffield and Doncaster</p> <p>1:25,000 Explorer Sheet 278 Sheffield and Barnsley</p>
<p>Recommended reading</p>	<p>Chisholm, J. I. 1990. The Upper Band–Better Bed sequence (Lower Coal Measures, Westphalian A) in the central and south Pennine area of England. <i>Geological Magazine</i>, 127, 55–74</p> <p>Hallsworth, C. R. and J. I. Chisholm, J. I. 2000. Stratigraphic evolution of provenance characteristics in Westphalian sandstones of the Yorkshire Coalfield. <i>Proceedings of the Yorkshire Geological Society</i>, 53, 43-72.</p> <p>Sheffield Area Geology Trust website: Greenmoor - Brincliffe Edge Rock, http://www.geologyatsheffield.co.uk/sagt/greenmoor/</p>



In 2001, the Foot and Mouth epidemic prohibited access to the usually favoured areas that the British Geological Survey used for geological mapping training. Graves Park was identified as a temporary training ground. It was subsequently used for many years, partly because of ease of access but also because it provided more realistic training for BGS geologists working on urban geology projects, which figured largely in the BGS programme at the time. The image shows training course participants stooping as low as possible among the daffodils to measure accurately the angle of a 3 degree sandstone dip slope near Graves Park, using Abney Levels. *Photo: Andy Howard*