

Edinburgh Geological Society – Excursions 2023



Excursion title:	The Carboniferous Fife-Midlothian Basin		
Date & start time:	Saturday 19 & Sunday 20 August 2023, 09:00 hrs start on both days.	Finish time:	19 th c. 17:00 hrs; 20 th c. 16:00 hrs.
Leader(s):	Main excursion to be led by Victor Hême de Lacotte and Chester Davies (Ph.D students Keele University), supported by Dr. Louis Howell (Capricorn Energy), with Dr. Stuart Clarke (Keele University) & Drs. Graham Leslie & Mike Browne (BGS/EGS).		

Excursion aims and description:	<p>Four linked excursions over two days at sites around the Carboniferous Fife-Midlothian Basin. These will examine and discuss the Carboniferous stratigraphy and sedimentology of the Leven-Midlothian syncline on either side of the Firth of Forth.</p> <p>Saturday will be spent in Fife, visiting Kirkcaldy-Dysart and Lower Largo. Sunday will cover Joppa and Prestonpans in East Lothian. There will be opportunities to learn the rudiments of stratigraphical logging, to carefully examine key changes and translate our findings into interpretation of the offshore seismic data. Informal post-fieldwork discussions can continue over refreshments. Numbers will be limited to 15 participants, and ideally both days will be attended.</p> <p>Day 1 will be spent in Fife on the western limb of the basin syncline. Starting at Ravenscraig Park, Kirkcaldy we will examine the changes from the Carboniferous Upper Limestone Fm. (including the fossiliferous Calmy and Castlecary Lsts.), up into the Passage Formation, and further into the Lower Coal Measures Fm. at Dysart Harbour. We will examine particularly the sharply changing depositional processes in play, and the possible influence(s) of syn-depositional tectonism in relation to the structures that can be observed. Opportunity to learn rudiments of stratigraphical logging.</p> <p>After lunch, at Lower Largo, we will examine the passage from the Middle, up into the Upper Coal Measures Formation. How should this boundary be interpreted in sedimentological/structural terms? How do our findings translate into interpretation of the offshore commercial 3D seismic data for these same strata?</p> <p>Day 2 will examine strata on both limbs of the basin syncline in the Lothian sections at Prestonpans (east limb) and Joppa (steeper western limb). Compare/contrast our findings, from the previous day, of the upward changes from the Limestone Coal Formation, into the Upper Limestone Formation, and into the Passage Formation. How do these findings translate into interpretation of the offshore seismic data already examined?</p>
Meeting point:	<p>Day 1: Public car park for Ravenscraig Park, Kirkcaldy, [NGR ³2930 ⁶9265].</p> <p>Day 2: Public car park, Ox Walk, Prestonpans, [NGR ³3820 ⁶7430].</p>
Transport details:	The leaders will travel by (shared) private car; participants should do likewise where possible.
Excursion route:	<p>Day 1: Following coastal exposure to Dysart Harbour (Fife Coastal Path); drive to Lower Largo, public car park (with toilets) at [NGR ³4225 ⁷0260] for coastal exposure west and east of Lower Largo harbour.</p> <p>Day 2: Meet at car park adjacent to coastal exposure at Prestonpans to examine that coastal section. P.m., transfer to Joppa and examine coastal exposure there [NGR ³3215 ⁶7345].</p>

Terrain, walking distance, height gain:	<p>Day 1: a.m. 3–4 km; p.m. 3–4 km.</p> <p>Day 2: 1–2 km most likely.</p> <p>All on coastal sections, beaches and low coastal platforms, accessed by paved or otherwise good paths.</p>		
Specific or Medium- / High-Risk Hazards	Weather, tides, terrain, hammering		
Control measures required to mitigate against any Hazards referred to above:	<p>Good weather might be anticipated in August but be well-prepared, e.g plenty of fluids to drink and a sun-hat! Sun-cream.</p> <p>All on coastal sections, beaches and low coastal platforms, accessed by paved or otherwise good paths. Stout footwear essential, walking poles beneficial.</p> <p>Dates chosen for low tides during daylight hours. Ready access/egress from coast sections at all points.</p> <p>Please refrain from hammering wherever possible, collecting to be kept to a minimum. Camera (phone) and hand-lens <u>strongly</u> recommended.</p>		
Hard hats or Hi-viz clothing needed?	Leaders will have Hi-viz in order to be easily identified, hard hats perhaps useful in a few locations but not mandatory.		
May dogs be brought on the excursion?	Yes		
Toilet information:	At rendezvous car parks in Fife; and along Lothian coastline for Day 2.		
Geological map sheet:	Sheets 40E (Kirkcaldy); 41 (North Berwick); 32E (Edinburgh); also 33W (Haddington); 625k sheet, UK North	OS map sheet:	Sheet 59 Kirkcaldy; Sheet 66 Edinburgh
References:	A general knowledge of the stratigraphical succession will be useful (see published maps listed above) or e.g., Geology of Scotland (4 th Ed.). 2002.		