Witch Craig Wall

Witch Craig Viewpoint

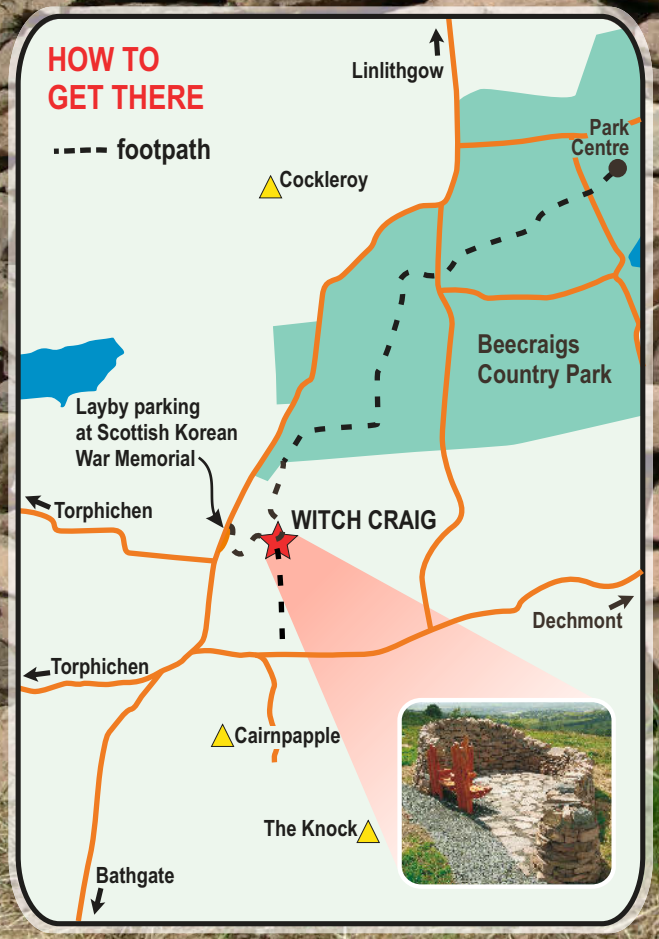
In 2003, through the cooperation of a number of individuals and organisations, the viewpoint at Witch Craig was constructed as a welcoming sheltered resting place for the benefit of walkers in the Bathgate Hills.

With views that extend from the Bass Rock in the east, to Arran in the west, the unique design of the viewpoint was chosen to reflect the historical and agricultural heritage of the area and provide a structure that would fit well into the hill landscape, with its dry stane dykes.

But, as well as a resting place it also has an educational purpose since built into the curved wall are 43 special rocks collected from locations across the dramatic panorama of central Scotland that greets the visitor. The viewpoint therefore also serves as an unusual interpretation feature, to raise the awareness of visitors, not only of their surroundings but also of the geological heritage in front of them.

Approached from Beecraigs Country Park to the north, Cairnpapple Hill in the south or from the Scottish Korean War Memorial at the foot of the craig, the viewpoint is somewhere to enjoy a breathtaking panorama, aided by an artist's impression mounted on the wall, and appreciate the diversity of Scotland's geological wealth.

This leaflet provides an insight of the geological story of the view, and is designed to help you find some of the special rocks.



The viewpoint was constructed through the partnership of:

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SCOTTISH NATURAL HERITAGE

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FIND THE STONES!

STONES are pieces of rock loosened and removed by natural processes or by man, and range in size from large boulders to tiny pebbles. The viewpoint is made mainly from Perthshire sandstones that are 400 million years old. However, some of the stones in the wall (randomly placed) were specially chosen to represent the rocks and landscape we can see from the vantage spot. They also illustrate the diversity of colour and texture of stones.

To understand more about these we use the accepted system where all the Earth's rocks fit into three groups.

IGNEOUS ROCKS IN THE WALL

Igneous rocks began life as hot liquid under the ground which then cooled. As they cooled they hardened into a jigsaw of interlocking crystals. The sizes of the crystals usually reflect whether they solidified at or near the surface (small) or deep underground (large).

Basalt from Markle Quarry in the Garleton Hills, East Lothian: A fine-grained dark rock with scattered larger crystals spread throughout; from a lava flow about 340 million years old.

Carnethy Porphyry from Carnethy Hill, Pentlands: This lava flow contains prominent elongated crystals showing the direction of flow in the molten material just before solidification; about 410 million years old.

Basalt cobble from the shore at Queensferry: Characteristic black fine grained rock. Evidence of a period of volcanic activity producing a lava flow; possibly 330 million years old.

Granite from Arran: The nearest granite to the Lothians and Edinburgh is from the northern edge of the Moorfoot Hills south of Middleton, Midlothian. A coarse-grained rock that cooled slowly at depth underground; about 410 million years old.

Gabbro (Teschenite) from Craigie Hill (near the Forth Bridges): An eye-catching very coarse-grained rock that formed a sheet by slow cooling at a modest depth; about 330 million years ago.

SEDIMENTARY ROCKS IN THE WALL

Sedimentary rocks are formed when the weathered and eroded products from pre-existing rocks, such as sand or mud, or the remains of once-living plants or animals, settle in layers (mainly under water) which are compacted by burial and become cemented and hard.

Fossiliferous limestone from Wairdlaw (just northeast of Witchcraig): This rock is mainly made up of calcium carbonate deposited either chemically or organically by the accumulation of shells etc. or skeletons of once living organisms on a tropical sea floor about 325 million years ago.

Haggis rock (Greywacke) from the Southern Uplands: This is a conglomerate deposited in a long lost ocean where gravel sized fragments of rocks rapidly accumulated and became cemented together over 420 million years ago.

Conglomerate from Craigmillar Castle, Edinburgh: Here water-worn rounded pebbles and cobbles are cemented together in a sandy matrix and with a calcium carbonate cement. Comparable with riverbed deposits as seen in the Highlands today, this ancient river gravel is about 350 million years old and was laid down in a desert.

Burdiehouse Limestone from Almondell Country Park, West Lothian: This widespread local limestone was much used in the past for the preparation of lime for agriculture, limewash and for construction of buildings. Deposited in a warm, almost tropical lake, mainly by algal blooms, about 330 million years ago.

Yellow Sandstone from St. Mary's Academy, Bathgate: This piece of ashlar sandstone shows how stone can be accurately squared and dressed to make a good fit with other blocks.

Greywacke Shale from the Southern Uplands: This is a consolidated clay where a layering is produced by repeated influxes of sand on to the muddy bed of a long lost ocean over 420 million years ago.

Spent Shale from Oakbank: Local oil-shale beds contain hydrocarbons. When heated above 500˚C a mixture of oils was obtained and the waste shale subsequently tipped on bings. The distilling process was first patented by local scientist James 'paraffin' Young at Bathgate in the 1850's. Oil-shale was the product of massive algal blooms in a warm sub-tropical lake about 330 million years ago.

METAMORPHIC ROCKS IN THE WALL

Metamorphic rocks are formed when existing rocks are altered within the Earth by increased heat and/or pressure.

Greenstone from Aberfoyle: an imprecise name for a rock of igneous origin which has been altered to produce a green mineral called chlorite.

Slate from Aberfoyle: These are pressure-altered mudstones which split into thin sheets along 'cleavage planes' that develop at right angles to the pressure acting on them. Because of the squeezing, new elongated crystals grow that tend to line up in the same direction.

British Geological Survey
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