

You may not consider a city the best place to see interesting geology, but think again! The city of Glasgow was, quite literally, built on its geology – it may even have been named after one of its rocky features. The geological history of the Glasgow area can be read in the rocks and sediments exposed within the city, from the streams to the buildings and bridges.



Fossil Forests

In Carboniferous times, forests of Lycopod 'trees' grew on a swampy river floodplain. In places the stumps of Lycopods, complete with roots, have been preserved. At Fossil Grove, a 'grove' of fossilised Lycopod stumps was excavated in the Limestone Coal Formation during mining. The fossils were preserved in-situ on their excavation in the late 19th century, rather than taken to a museum – one of the earliest examples of 'geoconservation' in the world!

Another fossil stump, originally found in a mine in Nitshill, can be seen standing in Househill Park.



In 2013 the British Geological Survey conducted a Geodiversity Audit of the City of Glasgow for Glasgow City Council to identify and describe the best geological features in the city area.

Here we take you on a tour of some of the sites....

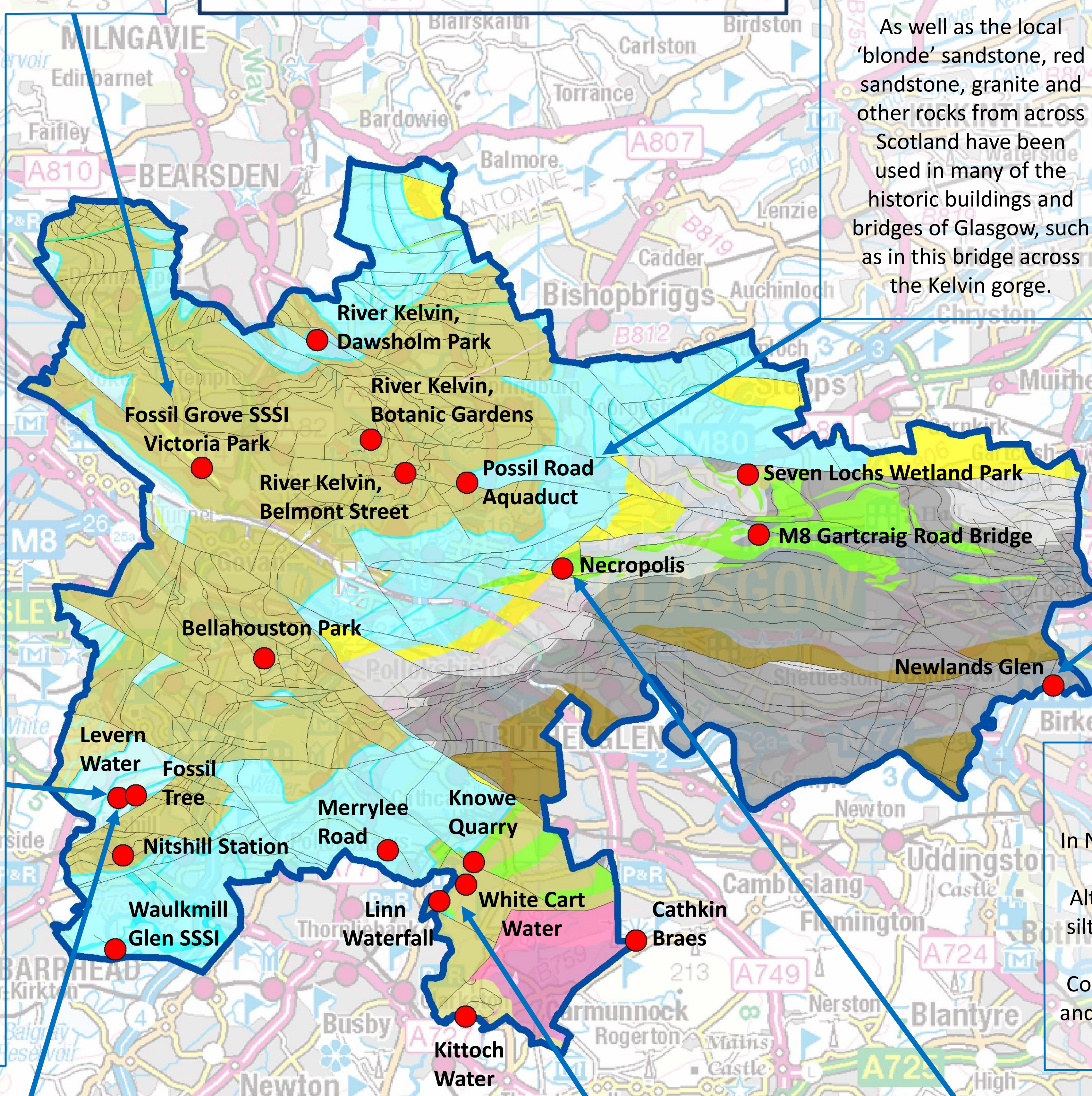


Quarrying and building stone

Sandstones in the Carboniferous sedimentary rocks in the Glasgow area were commonly quarried for building stone. Many former quarries have been infilled, but the 'dressed' faces of worked sandstone, with 'tool' marks still visible, can be seen in some road cuttings, such as the one below in the Upper Limestone Formation at Possil Road.



As well as the local 'blonde' sandstone, red sandstone, granite and other rocks from across Scotland have been used in many of the historic buildings and bridges of Glasgow, such as in this bridge across the Kelvin gorge.



Fossil leaves and stems in siltstone



Coal fragment

Newlands Glen

In Newlands Glen, rocks of the Scottish Middle Coal Measures Formation can be seen. Although mostly made up of sandstones and siltstones, these rocks contain numerous thin coal seams and lots of plant fossils. Coal was worked underground from collieries and pits throughout much of the Glasgow area during the 19th century.

Levern Water

The Levern Water runs through a former mining area. Waste rock from the underground mines has been deposited around the river and landscaped to form a park. The 'contact' between the man-made deposits and the underlying glacial sediment (till) can be seen along the river.



White Cart Water

Along the picturesque river in Linn Park, sedimentary rocks of the Carboniferous age Limestone Coal Formation can be seen.

At Linn Waterfall, the sedimentary rocks have been intruded by a resistant microgabbro sill which forms the waterfall that gives the park its name (right, top). Hexagonal columns can be seen in the sill at the falls, similar to the columns at the Giant's Causeway in Northern Ireland. Downstream of the waterfall the river runs in a deep gorge. Landslips along the gorge walls indicate that the steep gorge is unstable but also produce good exposures of the sandstones and siltstones that were once deposited by ancient rivers (right, bottom).



Glasgow's Necropolis

The Necropolis sits on a hill formed by a resistant microgabbro sill, dated at 273 million years old. An early name for the hill was the Grey Rock, after the dull colour of the crags. The Grey Rock was an important religious and military site prior to the 6th century, and developed as a cemetery during the Victorian Period. One interpretation of the name 'Glasgow' is 'the place of the grey rock' suggesting the city may have been named after this prominent geological feature.