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## 3 Corrie shoreline

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This short walk takes you through 100 million years of Arran's geological past. During this time, Scotland was moving north across the equator from the Southern Hemisphere. At Corrie you can follow this journey from the oldest rocks to the youngest.

**1 Old Red Sandstone conglomerates** [NS 02186 44229] — These rocks formed around 370 million years ago, as sediment was eroded from the nearby Caledonian Mountain Range. The sands and gravels were washed into valleys during flash flood events. Arran's position around 300 south of the equator meant a hot, arid environment, devoid of plants and animals.

**2 Carboniferous volcanoclastic sediments** [NS 02222 44177] — This is the start of a significant period of volcanism in Scotland. Volcanic rocks of this age make up Arthur's Seat in Edinburgh, and the Campsie Fells. The rock here is dark in colour, and contains rounded cobbles of black basalt, as well as other material. It probably formed as a volcanic mudflow after an eruption. These volcanic mudflows, or 'lahars' are common during heavy rain after volcanic eruptions.

**3 Basalt lava** [NS 02263 44035] — This blocky black rock is a Carboniferous lava flow. If you look closely at fresh surfaces you can see crystals of brown olivine and black pyroxene. Lava flows like this often form hexagonal columns, for example at the Giant's Causeway (Northern Ireland) and Fingal's Cave (Staffa). Can you see any hexagonal patterns in the rocks here?

**4 Limestone** [NS 02311 43565] — These cliffs show layers of limestone and mudstone that were deposited in a shallow tropical sea when Arran was near the equator. The Old Corrie Harbour across the road is not a natural feature, it was quarried out for limestone. Up the track you can see the remains of a kiln where the limestone was turned into lime for use in farming. Do not enter.

**5 Sedimentary cycles** [NS 02522 43456] — Between the old Corrie Harbour and Ferry Rock you can see repeating layers of sandstone, limestone, and mudstone. These cycles show rising and falling sea levels, as limestone and mudstone are marine sediments and the sandstones are river sediments. The sandstone tends to form ridges crossing the shore — some contain plant fossils!

Please do not damage or attempt to remove any fossils. This entire shoreline is a protected Site of Special Scientific Interest (SSSI).

**6 Ferry Rock** [NS 02586 43346] — Ferry Rock is a small promontory made of white sandstone. This rock is very pure, and makes an attractive building stone. You can still see the drill marks on the north side of the rock where it was quarried.

**7 New Red Sandstone desert** [NS 02556 41881] — The sandstones here are a very striking red colour. They were deposited in a great sandy desert when Arran was 30° north of the equator. You can still see evidence for the individual dunes which formed around 270 million years ago. The deep hollow that has been carved into the rock is known as the Doctor's Bath. It fills up with water at high tide, and Victorian physician Dr McCredey would have his patients bathe in it. Around 70m to the south of the bath is a strange circular marking on the face of the rock. This 'fossilised fulgurite' shows where the sand was struck by lightning and fused by the heat, 270 million years ago! Can you find it?

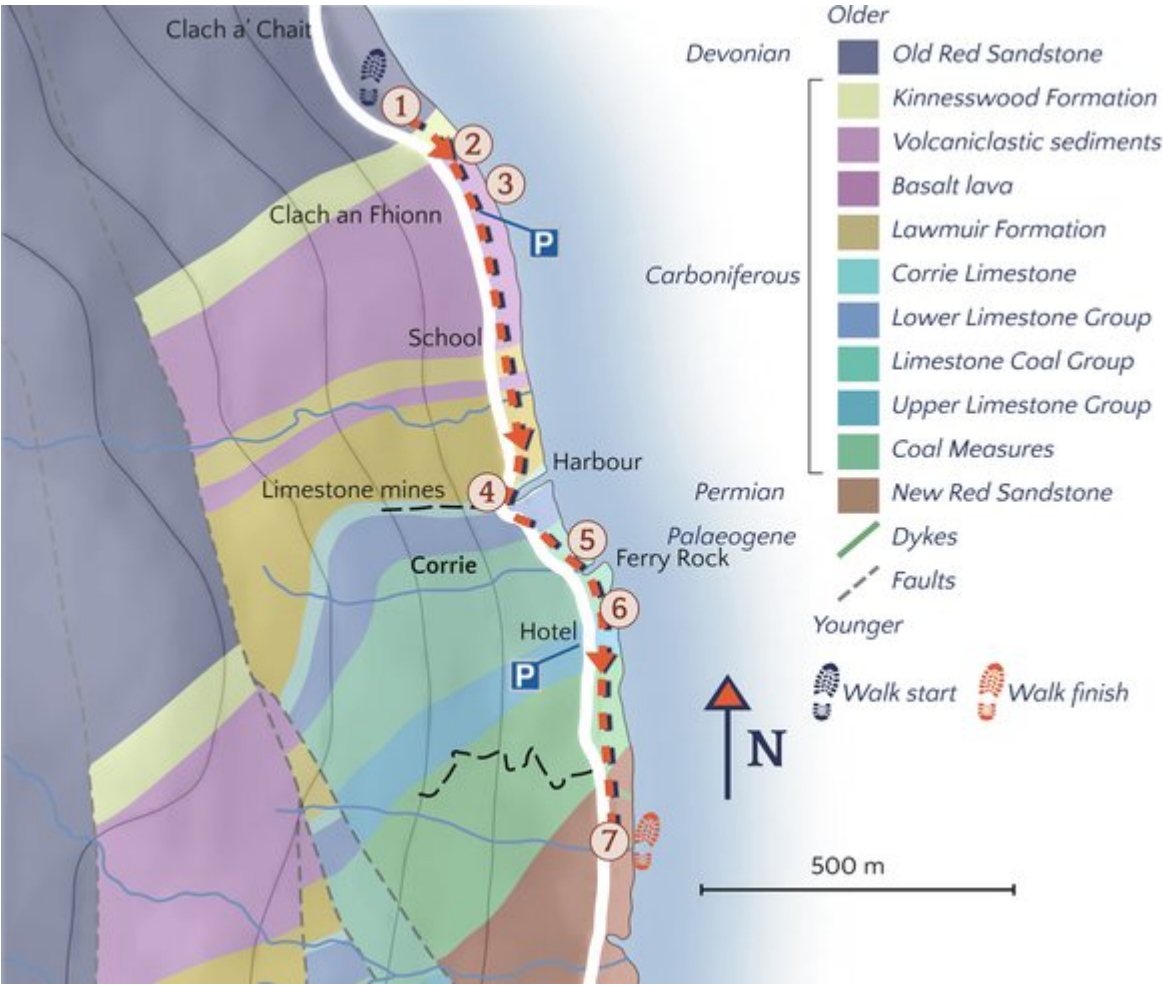
## Figures

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Route map.

The lavas at Corrie formed in the same way as the Giant's Causeway (above), but are much older!

270 million years ago, a bolt of lightning struck a desert sand dune. The resulting pattern can still be seen today!



Location map. 3 Corrie shoreline.