

3 Corrie Shoreline

This short 2.5 km 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 older rocks in the north to the younger rocks in the south.

Parking: ///snacks.punk.brisk **Bus:** 324 to the north end of the village

1 Old Red Sandstone

conglomerates – 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 30° south of the equator meant a hot, arid environment, devoid of plants and animals.

2 Carboniferous volcaniclastic sediments – This is the start of a significant period of volcanism in Scotland, around 340 million years ago. These formed at the same time as the Campsie Fells and Arthur's Seat in Edinburgh. They are dark in colour and contains rounded cobbles of black basalt. It probably formed as a volcanic mudflow after an eruption. These are known as 'lahars' and are common during heavy rain after volcanic eruptions.

3 Basalt lava – 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?



Hexagonal structures are visible in the Carboniferous lava, these have been eroded by the sea

4 Limestone – 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 for limestone. Up the track you can

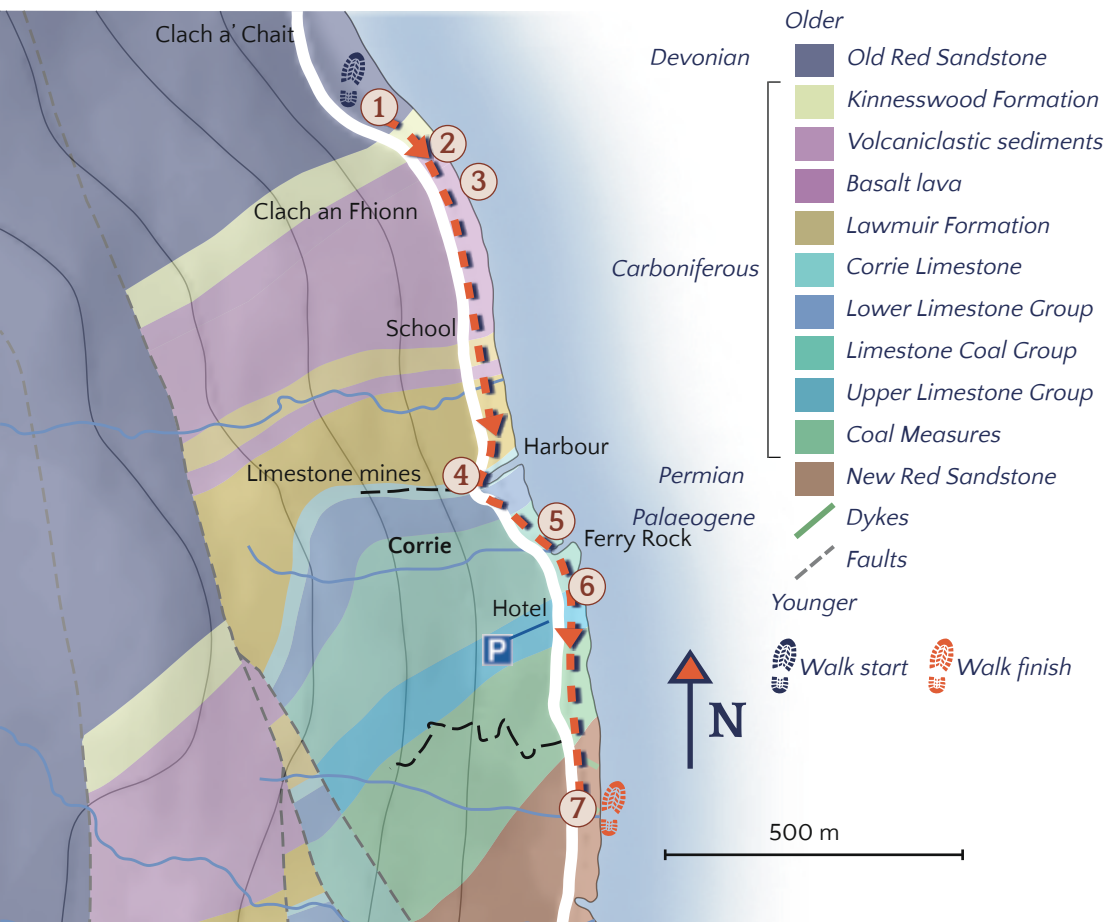
see the remains of a kiln where the limestone was turned into lime for use in farming. Do not enter.

5 Sedimentary cycles – 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!

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

6 Ferry Rock – 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.

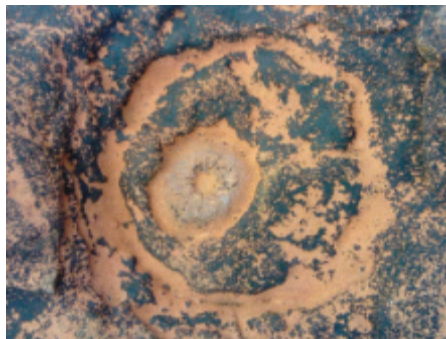
7 New Red Sandstone desert – The sandstones here are a very striking red colour, due to the



presence of iron oxide. 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. There are distinctive pockmarked areas of “honeycomb weathering”, likely caused by salt erosion and the frequent wetting and drying of the rock.

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. This was built by the Victorian physician Dr McCredey and his patients would bathe here. Fancy a dip?

Around 70m to the south of the bath is a strange circular marking on the face of the rock. This is a fossilised lightning strike (*fulgurite*) marking where sand dunes were struck by lightning and fused by the heat around 270 million years ago! Can you find it?



270 million years ago, a bolt of lightning struck a desert sand dune

