To your left lap the cool waters of Scapa Flow. Encompassing an area of 120 square miles, it is one of the greatest natural harbours in the world. The harbour is enclosed by a ring of islands, including Burray and Glimps Holm, which make up the southern end of the Orkney archipelago.

Look to the rocky causeway ahead of you. Carrying the A961 road it is a vital link between Glimps Holm and Burray, and the only way to travel from island to island without a boat.

Despite its crucial function today, this causeway was built for another reason altogether. It is, in fact, one of four causeways in Orkney, and their construction was masterminded by none other than Winston Churchill.

Why did Winston Churchill build a series of causeways in Orkney?
For the answer let us return to the waters of Scapa Flow. As a large natural harbour, protected from the ravages of the North Sea, Scapa Flow has been used as a safe haven for ships since prehistory. The Vikings certainly recognised its potential and anchored their longships here more than a thousand years ago.

Traditionally the Royal Navy's Grand Fleet was based in the south, along the English Channel, to offer protection from one of Britain's oldest enemies - France. Following the outbreak of the First World War, the Fleet was moved in 1914 to Scapa Flow, which was closer to the German fleet based in the Baltic Sea. To protect the British fleet from German submarine attacks, the channels between the islands were barricaded with old ships that were deliberately sunk. These were known as block-ships. They were reinforced with mines, booms and large nets.

During the Second World War, Scapa Flow was chosen again as the base for the Royal Navy's fleet, being a safe distance away from the German airfields and bombers. Many of the defences built during the previous war had fallen into disrepair though. Some of the block-ships had shifted in the fast currents or disintegrated, so they no longer barricaded the channels between the islands.

On October 14 1939, a German submarine entered Scapa Flow and torpedoed HMS Royal Oak. In a terrible loss of life, 833 men died and over 1,000 were injured. The site is now protected as a war grave.

Clearly, there was an urgent need to improve defences. Attention focussed on the string of islands on the east side of the Flow, where the narrow channels between them gave direct access to the North Sea. The First Lord of the Admiralty, Winston Churchill, ordered barriers to be constructed to block off the channels.

These barriers had a secondary function too. They linked the islands and connected their remote communities to the Orkney Mainland. To make the causeways, over 250,000 tonnes of broken rock, quarried on Orkney, was dropped into the water. The rocks were then covered with massive concrete blocks, then roads were constructed along the top.

The remote location, harsh winters and Britain's wartime conscription of able-bodied young men, meant finding sufficient labour to build the barriers was initially very difficult. British victories in North Africa however led to large numbers of Italian prisoners of war (POWs). By 1943, over 2,000 men were working on the barriers - and 1,300 of them were Italian prisoners.

Some argued that forcing POWs to work on wartime defence installations was contrary to the Geneva Conventions. The British authorities insisted the barriers were merely 'improvements to communications', stressing their peacetime role for linking remote communities. In fact, Churchill formally opened the barriers four days after the Second World War had ended!

**Connecting communities**

Small communities on remote islands often rely on a ferry for everyday life, for work, seeing friends or just doing the shopping. Maintaining them is a very expensive business, and all the Scottish island ferries run with subsidies.

The Churchill Barriers gave people in the far south of the Orkney Isles much easier access to the island's capital, Kirkwall, and beyond. The Barriers vastly improved their opportunities for work, education, entertainment and social life. The Scottish Government has spent millions in recent years on building similar causeways and bridges, to the great relief of the locals.

Small islands linked to their large neighbours can be sustainable communities for years to come. The list of remote islands that are no longer inhabited is already a long one – without good communications, the list would grow.

Viewpoint created by Martin Haslett and Helen Rawling, RGS-IBG Discovering Britain
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