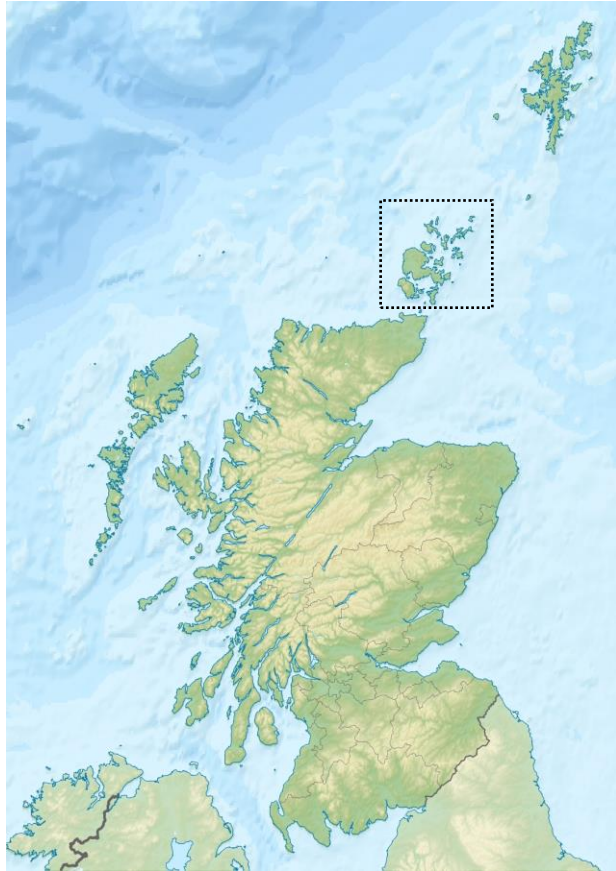






# Why Scapa Flow?



I have mentioned Scapa Flow during my previous WWW Group presentations covering the submarine *HMS Otter* and Trislander planes. With it's long and active role in British Maritime history, Tim suggested that I might one day give the Group a talk on Scapa Flow.....so here it is!

Scapa Flow has acted as an important harbour for over 1,000 years. It is an expanse of water, approximately 12 miles from east to west and 9 miles from north to south, lying within the shelter of the surrounding Orkney islands, off the north coast of mainland Scotland. It has a flat bottom at depths of between 60 and 150 feet, and an absence of strong currents, make it one of the great natural anchorages of the world.



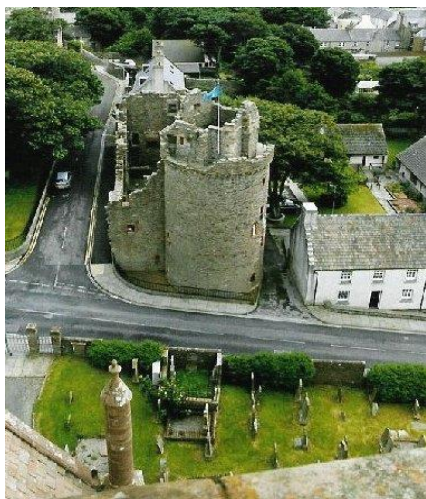
By Sialababamak - Own work, CC BY-SA 3.0,  
<https://commons.wikimedia.org/w/index.php?curid=6207501>

# Scapa Flow: From the Vikings onwards

Vikings moored their longboats in Scapa Flow. The Orkneyinga saga, also called the History of the Earls of Orkney and Jarls' Saga, is a medieval chronicle of the history of the Orkney and Shetland islands in the Viking era.

It describes King Haakon IV of Norway anchoring his fleet at St Margaret's Hope, on the island of South Ronaldsay, on the edge of Scapa Flow, in August 1263. He subsequently sailed south to join a battle between the Scottish and Norwegian Kingdoms, at Largs, on the Firth of Clyde in North Ayrshire.

**Bishop's Palace, Kirkwall**



On returning to Norway he again anchored some of his fleet in Scapa Flow for the winter, but he died that December whilst staying at the Bishop's Palace in Kirkwall.



Moving on to the mid 1600s, the period of the British Civil Wars, the Royalist general James Graham, 1st Marquess of Montrose, moored his ship, the Herderinnan, in Scapa Flow, as part of an attempt to raise a rebellion in Scotland, a undertaking that ended in failure.

**The Reconstructed Viking Ship *Imme Gram***



By Tvilling at Danish Wikipedia - Transferred from da.wikipedia to Commons.,  
Public Domain, <https://commons.wikimedia.org/w/index.php?curid=6797349>

# First World War

In recognition of potential threats from continental naval powers such as the Dutch, French, and Spanish, Britain's major naval bases were traditionally based close to the English Channel.

In 1904, due to the build-up of the German High Seas Fleet, a British base was needed to overlook the North Sea. Delayed construction of potential Scottish ports at either Rosyth, or Invergordon, meant that at the start of the First World War, Scapa Flow, previously used for naval exercises was developed as the main base for the British Grand Fleet, supported by up to 12,000 personnel.

The Admiral of the Grand Fleet, John Rushworth Jellicoe, recognised the threat of possible German submarine or destroyer attacks on Scapa Flow. Consequently, early in the war Scapa Flow's defences were reinforced by sinking of blockships in entrance channels between the southern islands, enabling placement of submarine nets and booms combined with minefields, artillery, and concrete barriers.

**Blockship**



*A ship deliberately sunk by a navy to prevent the ingress of attacking enemy forces is known as a blockship*

German U-boats are known to have made two attempts to enter Scapa Flow and attack the British fleet. Both were unsuccessful.

Although early in the war *U-18* managed to enter Scapa Flow, the British fleet was absent. On leaving the harbour however her periscope was seen and she was rammed by both a trawler, and by the Royal Navy destroyer *HMS Gary*. One submariner died but the remaining 22 became prisoners of war.

Later, when Scapa's more complex defences were in place, *UB-116* was detected while entering the anchorage, and destroyed by shore-triggered mines, killing all 36 crew members.



# Surrender of the German Fleet

As part of the Armistice signed at the end of the war there was a demand for the German U-Boat fleet be surrendered and confiscated immediately, but the future of surface ships was uncertain. The intention was to inter them in Allied or neutral ports until their fate could be agreed during peace negotiations.

British Admiral Sir David Beatty presented the terms of the surrender to German Rear Admiral Hugo Meurer and other officers aboard his flagship, HMS *Queen Elizabeth*. Beatty had to ensure the surrender of 74 German ships, check they had been disarmed, and escort them to be laid up.

Subsequently, a joint convoy of 191 Allied and 70 German vessels, the largest fleet of warships ever assembled, sailed into the Firth of Forth, Scotland, on 21 November 1918. After being joined by a further 4 German ships and arrival at Scapa Flow most of the 20,000 crew men were returned to Germany, leaving only a small number of caretaker crews.

Those who remained were indeterminately stranded aboard their ships. There were lack of supplies and entertainment, with catching fish and seagulls being used as both a dietary supplement and recreation.

The overall appalling living conditions resulted in poor discipline.

German delegates arriving on HMS *Queen Elizabeth*



Image courtesy of The Imperial War Museum

By John Lavery - This is photograph Art.IWM ART 1265 from the collections of the Imperial War Museums., Public Domain, <https://commons.wikimedia.org/w/index.php?curid=30199159>

# Scuttling of the German Fleet: 21<sup>st</sup> June 1919

With the peace discussions ongoing and the Treaty of Versailles delayed until the end of June 1919, the Allies were divided over the fate of the German ships. Although some wanted a share for their own navies, Britain wanted them scrapped to prevent other nations gaining naval superiority.

Initially there was a call for the surrender of the interned ships by 21st June. The deadline was however extended to 23rd June, and aware of the potential for scuttling by the Germans, Rear Admiral Sydney Fremantle, the British commander guarding the German ships, planned to seize them on 23rd June on his return from seagoing exercises.

On hearing of the initial 21st June date however, Rear Admiral Ludwig von Reuter, in operational control of the German Fleet planned to scuttle his ships; he remained unaware of the revised date. On the morning of the 21st he saw his chance as the majority of the British fleet left Scapa Flow for exercises. He gave the order to scuttle.

Watertight doors and condenser covers had already been left open, and holes had been bored through some bulkheads, all to facilitate the spread of water once scuttling began and his crews opened seacocks, torpedo tubes and portholes.

When the few British ships left behind to guard the German ships realised what was happening, they informed the main fleet and attempted to save some of the ships. Only 22 were successfully beached in shallow water, the remaining 52 were scuttled within five hours, representing the greatest loss of shipping in a single day in history.

**One of the scuttled German ships being approached by, probably, a Royal Navy vessel.**



*Image Courtesy of The Imperial War Museum*

# Scuttling of the German Fleet



Internment at  
Scapa Flow 24  
November 1918 -  
20 June 1919:

Panoramic view of  
German fleet  
interned in Scapa  
Flow.

One of the scuttled ships



The upper-works of the German battle-cruiser  
*Hindenburg*



One of the sunk ships being approached by tugs



# Second World War

During the years of peace after the First World War the defences around Scapa Flow fell into disrepair. Blockships had begun to collapse, nets were no longer adequate and there was a lack of air and sea defences. Thus, when 1939 again brought war with Germany, although the area was identified as being the main British naval base, it was ill prepared.

Soon after the outbreak of war the German Commander of Submarines devised a plan to attack Scapa Flow to reduce the British North Sea blockade but also as a symbolic act of retribution, striking at the same harbour where the German Fleet had been scuttled at the end of the First World War.

***Royal Oak* at anchor after her 1924 refit**



Due to his navigation and boat handling skills Günther Prien was selected to take the German submarine *U-47* into Scapa Flow. The night of 13/14th October was selected due to the predicted lack of moonlight, and optimal tides. The approach would be aided by the incoming flood tide, while the exit would be assisted by the ebb tide.

*U-47* entered north of a small island, Lamb Holm, and in spite of its crew's skills it scraped the bottom and was temporarily entangled in the anchor chain of a blockship. *U-47* remained undetected despite being on the surface and illuminated by the Northern Lights and caught in the headlights of a taxi.

By Unknown author - Royal Navy picture, Public Domain,  
<https://commons.wikimedia.org/w/index.php?curid=7687746>

After 30 minutes Günther Prien identified potential targets. The first two torpedoes were fired at the HMS *Royal Oak*, one failed to explode, while the other was detonated by collision with the anchor chain. There was little visible damage or noise and the crew remained unaware of the attack. Prien re-loaded and fired again, this time with dramatic effect, blowing a hole in the armoured deck, and the ship sank within 13 minutes. A total of 835 men died either with the ship or later of their wounds.



# The Churchill Barriers

Within a month of the sinking of the *Royal Oak*, the area was visited by Winston Churchill who ordered construction of four permanent barriers to protect Scapa Flow, linking together islands from Mainland in the north to South Ronaldsay in the south. The idea of a permanent barrier went back to 1915, when engineer William Halcrow was invited to consider its construction. In the end however sunken blockships and anti-submarine netting were considered a more expedient solution.

**The Flooded Quarry on Lamb Holm,  
Used for the Churchill Barriers**



By Adam Ward, CC BY-SA 2.0,  
<https://commons.wikimedia.org/w/index.php?curid=2920941>

Following Churchill's visit the construction contract was given to Balfour Beatty and work began in May 1940. The total length of the four causeways was almost two miles. Its base contained 40,000 cubic metres of rock encased in wire cages that were dropped from overhead cableways into water up to 70 feet deep. These were overlaid with 300,000 tonnes of concrete blocks. Material was quarried on Orkney, and concrete blocks were cast on the islands before being brought to the cableways by a network of railways.

**Churchill Barrier 4**



Image courtesy of Tim Wright, Orkney U3A Photography Group 1

Construction of the barriers was enabled through an imaginative interpretation of the Geneva Convention, which prevented the use of prisoners for military projects. Instead, the barriers were described as "improvements to communications", and allowed the labour force to be significantly supported by around 1,300 Italian prisoners of war. Many of these men were housed in camps on the island of Burray, but included 550 on the island of Lamb Holm.



# Churchill Fourth Barrier: Blockships and Wrecks





# Lamb Holm and The Italian Chapel

Camp 60 on Lamb Holm housed Italian prisoners captured during the North African campaign and were subsequently recruited for construction of the Churchill Barriers. The camp originally consisted of around 13 drab huts, but its occupants set about transforming it. An artistically inspired prisoner, Domenico Chiocchetti, used a framework of barbed wire covered by cement to make a figure of St George, and concrete paths and flowers were placed on the camp together with newly constructed facilities such as a theatre and a recreation hut with its concrete billiard tables.

The prisoners however still wished for a chapel. Through the combined efforts of a new camp commandant, a padre, the artist Chiocchetti and his fellow prisoners, their wish eventually became a reality.

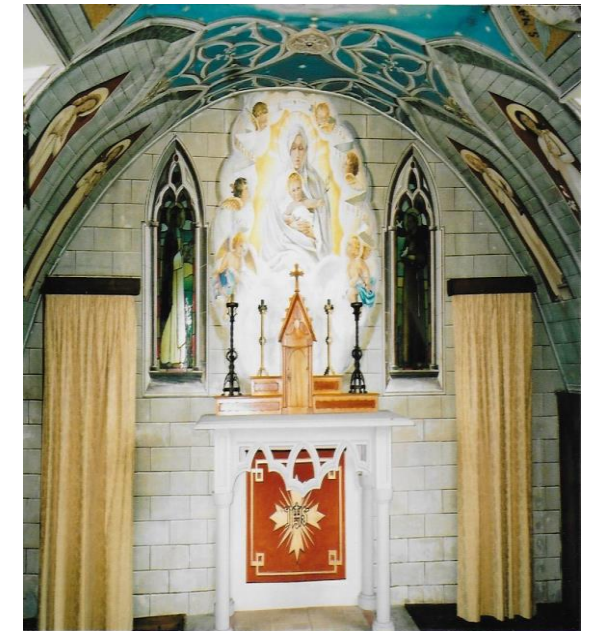


Two Nissan huts were placed end to end. Chiocchetti and his helpers, notably Giuseppe Palumbi a blacksmith, and Domenico Buttapasta, a cement worker, then set about converting the huts into a chapel. Plaster board, concrete, wood from wrecked ships, and reputedly, used corned beef tins, were all used as sources of material.

Chiocchetti recruited another artist to help fulfil his ambition for the interior of the chapel, and an impressive facade was built around the entrance to mask the outline of the huts.

Interest in the chapel has been maintained, and with the help of the BBC, Chiocchetti returned to assist with restoration work in 1960. Even today the site is an inspirational “must see” venue for any visitor to Orkney.

The altar in the Italian Chapel





# From Engineering Challenges to Recreational Opportunities

During the scuttling of the German fleet many of the larger ships came to rest either upside down or on their sides in deep water, but others remained just below the surface, or protruding from the water, presenting a hazard to small ships working in the area.

Initially there was no interest or attempt to salvage ships, probably reflecting the abundance of scrap metal from military remnants on land. By the 1920s however the situation had changed and the Admiralty invited tenders for the salvaging.

Ernest Cox, an engineer and scrap metal merchant won the contract. He aimed to use new technology and methods to raise even the deepest wrecks, a task that some thought impossible. Cox's team of divers, engineers and labourers worked for 8 years raising wrecks from the sunken fleet. At first, using pontoons and floating docks, small ships were winched to the surface and sold to provide funds for the more complex task of raising the larger battleships. This was achieved using compressed air, after sealing holes and creating air locks.

Poor weather and bad luck hampered much of the work, but Cox persevered and raised 45 of the 52 scuttled ships. The last and deepest one, *Derfflinger*, raised just before the start of the Second World War.

Torpedoes dating back to the Second World War, probably from the U-boat attack on the HMS *Royal Oak* continue to be discovered, some having been located over the last 20 years.

The combination of blockships and the wrecks of 7 German ships mean that Scapa Flow is a popular site for divers. Wrecks of the *Royal Oak* and *Vanguard*, which exploded during the First World War, are however designated war graves only visited by divers from the British Armed forces.

Scapa Flow has also become an ideal site for studying marine archaeology. The Scapa Flow 2013 Marine Archaeology Survey Project used a side scan sonar device, which reflects sound waves to produce an image of remains on the seabed to undertake surveys and archaeological diving evaluations at some of the sites within Scapa Flow, and at the Churchill Barriers.

Blue plaque in recognition of Ernest Cox

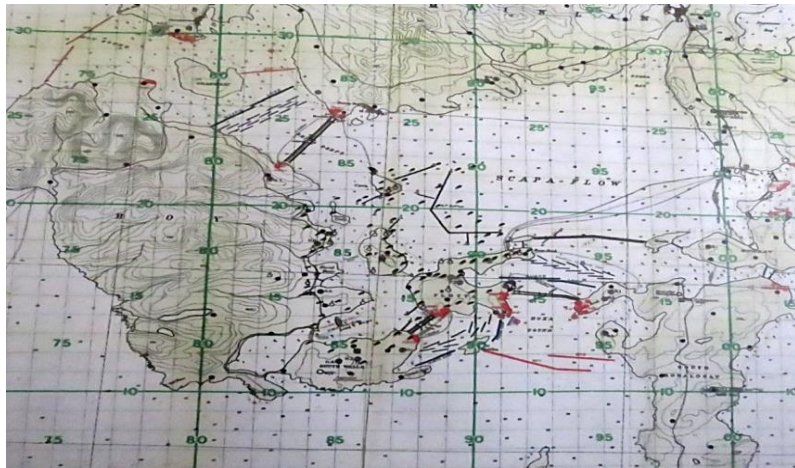
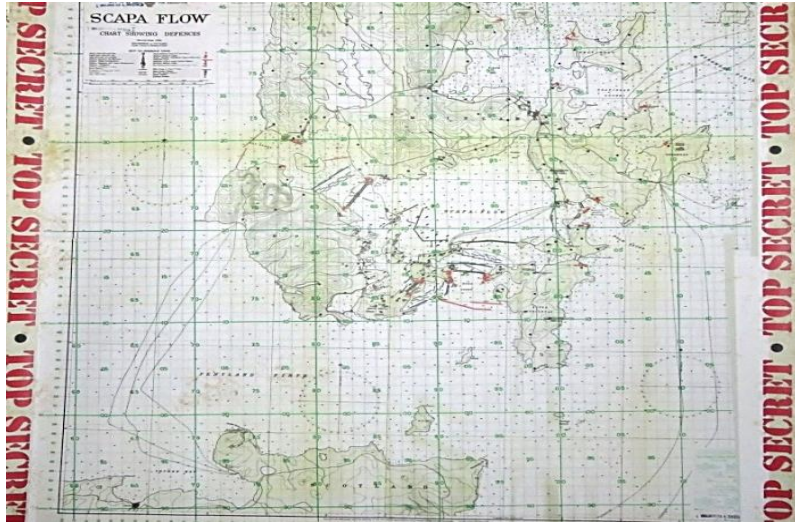


By Roger Kidd, CC BY-SA 2.0,  
<https://commons.wikimedia.org/w/index.php?curid=13225950>



# What about Wings and Wheels?

During World War II, Orkney had four military airfields. The images below show remains of Royal Naval Air Station Twatt, or HMS *Tern*, on the Western Mainland, and their secret maps of Scapa Flow's defences.



# More Wings and Wheels

The immense role of Scapa Flow in military naval history may overshadow the fact that it was also the site of a landmark event in aviation history.

On August 2nd 1917, Squadron Commander Edwin Harris Dunning, of the British Royal Naval Air Service, became the first pilot to land an aircraft on a **moving** ship. He landed his British single seater biplane, a Sopwith Pup, on the Royal Navy battlecruiser HMS *Furious*, on Scapa Flow.

Sadly, celebrations must have been short-lived, as he was killed 5 days later during another attempted landing. An updraft caught his port wing, throwing his plane overboard. He was knocked unconscious, and drowned in the cockpit.

In 1992, a memorial stone was unveiled at Swanbister Bay in Orkney in recognition of his feat. The 100th anniversary of the successful attempt was remembered at Scapa with a fly past by a Hawk aircraft, and unveiling of a plaque made by a local craftsman.

Squadron Commander Dunning's Sopwith Pup during his fatal attempt to land.

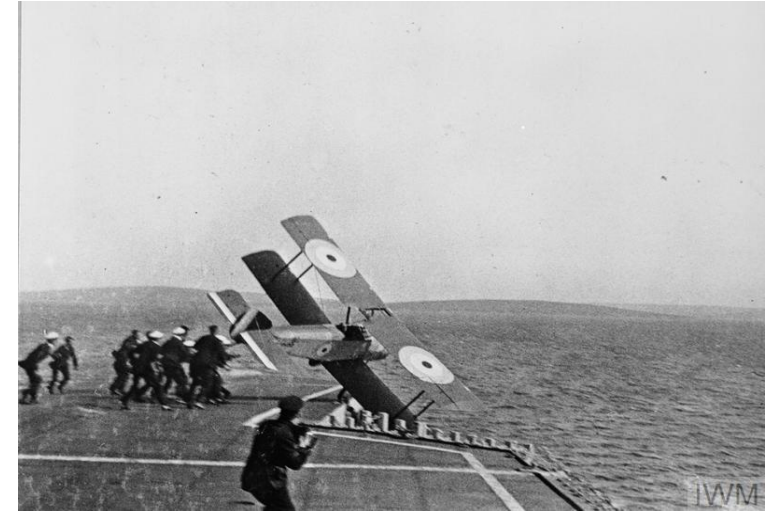


Image courtesy of The Imperial War Museum  
By Photographer not identified. - This is photograph Q 80597 from the collections of the Imperial War Museums (collection no. 7111-11), Public Domain,  
<https://commons.wikimedia.org/w/index.php?curid=8815459>

Having dealt with “Water” and “Wings” we can complete the transport trio with “Wheels” by remembering the role of trains in supporting both World Wars. In particular the Jellicoe Express which ran between London Euston and Thurso in Scotland, linking the capital city with three great naval ports and the Fleet’s anchorage in Scapa Flow.

The train was named after the Admiral of the Grand Fleet, John Jellicoe, mentioned earlier in this review. It is estimated to have transported about half a million service personnel during the two wars. A commemorative plaque at Crew station recognises that it was one of the few stops on the route where sailors and soldiers could join the train. It also served as a welcome refreshment stop, where over 300 women volunteers worked around the clock to provide refreshments.



# A Final Thought

Thinking back, my initial interests in Orkney and Scapa Flow weren't Wings Wheels and Water, but wildlife, archaeology and scenery, which are often evident together at coastal sites or on shores. One site in particular was The Old Man Of Hoy, for which I had childhood memories of it being climbed by Sir Chris Bonington.

In preparing this review I found that Sir Chris was indeed a member of the first team to climb The Old Man, in 1966, and again in 1967, when it was broadcast live by the BBC.

Perhaps more amazing is that Sir Chris repeated the climb in 2014, to celebrate his 80<sup>th</sup> birthday!

The Old Man is a 449 foot sea stack of the coast of Hoy, an island which shelters Scapa Flow, and is visible by boat travelling from mainland Scotland, and from the cliffs of Hoy, accessible by foot.

*Perhaps after reading all this review which has now taken in Wheels, Wings, Water... and climbing with hands and feet... it is time to relax with a wee dram of whisky from the Scapa Distillery, which overlooks Scapa Flow.*



By Lakeworther - Own work, CC BY-SA 3.0,  
<https://commons.wikimedia.org/w/index.php?curid=7566170>

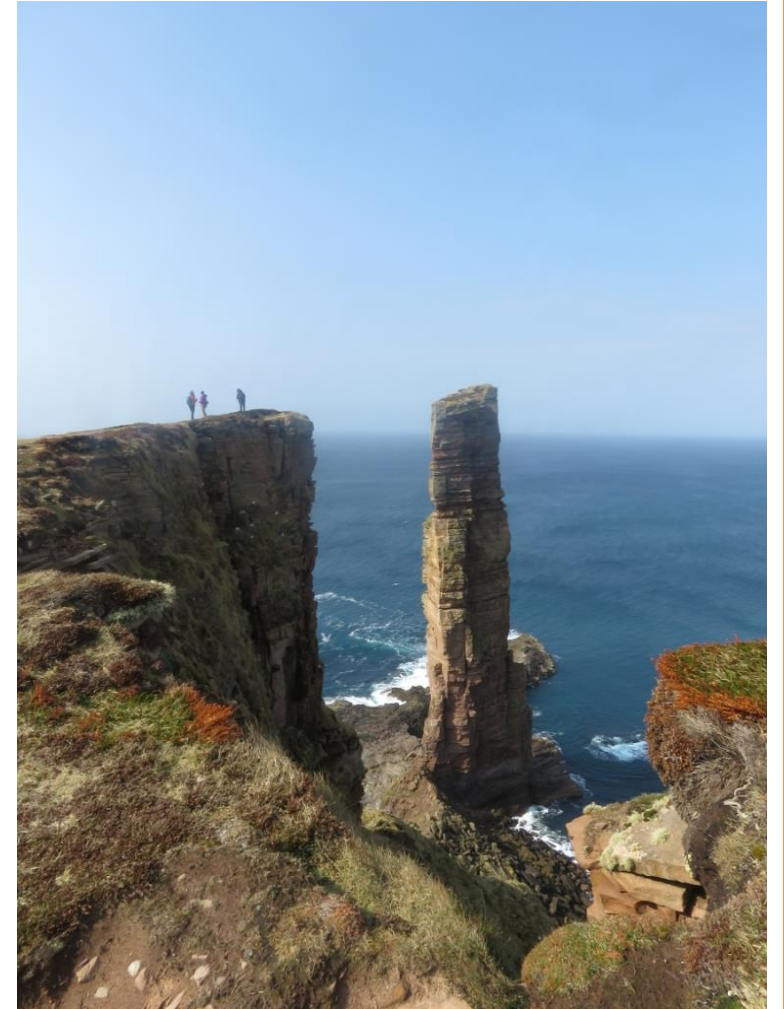


Image courtesy of Tim Wright, Orkney U3A Photography Group 1

# The Challenge of The Old man Of Hoy



# Acknowledgments and Further Reading

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This presentation was derived from my visits to Orkney and motivated by discussions at the WWW Group meetings. Although I have used a few personal sources of reference, due to the COVID-19 lockdown most information has come from internet sources. I apologise in advance for any errors, or irritating omissions. I have tried to give snapshots of a range of topics. If any have attracted your interest, below is a list of some of the resources I have used, but you will find many more.

I also particularly wish to acknowledge Tim Wright of Orkney U3A Photography Group 1, for providing images for use in this review.

## **Scapa Flow (general):**

[https://en.wikipedia.org/wiki/Scapa\\_Flow](https://en.wikipedia.org/wiki/Scapa_Flow)

<https://www.undiscoveredscotland.co.uk/hoy/scapa/index.html>

<https://www.visitscotland.com/info/see-do/scapa-flow-p669101>

## **First World War:**

<https://www.iwm.org.uk/history/the-scuttling-of-the-german-fleet-1919>

<https://www.iwm.org.uk/collections/search?query=scuttling+german+fleet&pageSize=30&style=list&filters%5BwebCategory%5D%5BPhotographs%5D=on>

[https://en.wikipedia.org/wiki/Scuttling\\_of\\_the\\_German\\_fleet\\_at\\_Scapa\\_Flow](https://en.wikipedia.org/wiki/Scuttling_of_the_German_fleet_at_Scapa_Flow)

## **Second World War:**

[https://en.wikipedia.org/wiki/HMS\\_Royal\\_Oak\\_\(08\)](https://en.wikipedia.org/wiki/HMS_Royal_Oak_(08))

U-boat Tactics in World War II, Gordon Williamson, Osprey Publishing Ltd

## **Churchill Barriers:**

<https://www.orkney.com/listings/churchill-barriers>

[https://en.wikipedia.org/wiki/Churchill\\_Barriers](https://en.wikipedia.org/wiki/Churchill_Barriers)

<https://www.undiscoveredscotland.co.uk/eastmainland/churchill/index.html>

## **Italian Chapel and Lamb Holm:**

<https://www.undiscoveredscotland.co.uk/eastmainland/italianchapel/index.html>

[https://en.wikipedia.org/wiki/Italian\\_Chapel](https://en.wikipedia.org/wiki/Italian_Chapel)

<https://www.orkney.com/listings/the-italian-chapel>

[https://en.wikipedia.org/wiki/Lamb\\_Holm](https://en.wikipedia.org/wiki/Lamb_Holm)

## **Engineering and Recreation:**

[https://en.wikipedia.org/wiki/Ernest\\_Cox](https://en.wikipedia.org/wiki/Ernest_Cox)

## **Wings:**

[https://en.wikipedia.org/wiki/Edwin\\_Harris\\_Dunning](https://en.wikipedia.org/wiki/Edwin_Harris_Dunning)

<https://www.bbc.co.uk/news/uk-scotland-north-east-orkney-shetland-40791496>

## **Wheels:**

<https://royal-naval-association.co.uk/news/remembering-the-jellicoe-express/>

## **Old Man Of Hoy**

[https://en.wikipedia.org/wiki/Old\\_Man\\_of\\_Hoy](https://en.wikipedia.org/wiki/Old_Man_of_Hoy)

<https://www.orcadian.co.uk/sir-chris-bonington-back-on-old-man-of-hoy/>