



**Morecambe
Bay**
Partnership



Defending the Docks

Exploring Barrow's Military Story

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Morecambe Bay Heritage

Morecambe Bay has an incredibly rich heritage with unique archaeological remains spanning 13,000 years.

From early humans within the cave at Kent's Bank Cavern, to the twentieth-century defences at Cark Airfield.

The Bay area includes historic promenades, iconic follies and lookouts, Iron Age hillforts, Bronze Age stone circles, Viking graves, important ritual and religious sites, a crucial Victorian railway, and internationally significant industrial, maritime and World War heritage. Not to mention a traditional fishing heritage that is unique to the area.

We are helping the Bay's communities to discover, record, understand, explore and celebrate this unique heritage landscape, ensuring the Bay's cultural and built heritage is recognised locally, nationally, and internationally, and safeguarded for the future.

The Recording Morecambe Bay website is a growing community archive that showcases Morecambe Bay's archaeological, industrial, maritime, and natural history along with stories and voices from those who have made the Bay their home.

The information has come from original research and surveys by Morecambe Bay Partnership, teams of dedicated community volunteers, creative artists, ecologists, local historians, Barrow Archives, Lancashire Archives, The Dock Museum and Lancaster Maritime Museum.



Furness Abbey

To find out more visit: recordingmorecambebay.org.uk

Barrow Industries

Barrow is famous for its history of shipbuilding and military engineering, but it was not always the bustling town it is today.

Barrow started out as a large farm, owned by the monks of Furness Abbey. It remained a tiny settlement of five houses until around 1780.

In the late 18th century mining companies in Backbarrow and Newland began to send iron ore to Barrow so it could be shipped to other parts of the country. Workers were needed to load the iron, so more houses were built, as well as a grocers shop and a general store.

Jetties were built connected to iron ore yards, so larger ships could be filled more quickly and in 1782 the Newland Iron Company made Barrow their main port for sending ore to Wales and the Midlands to be smelted.

In the 1850s James Ramsden of The Furness Rail Company saw the potential for Barrow to become an industrial centre. He persuaded the Duke of Devonshire to fund the expansion of the railway line and



Photo © Historic England

began to buy plots of land nearby which the company could use to build factories and warehouses.

Iron works were soon set up in the town so that the ore could be smelted and sold at a higher price. In the 1860s the works were upgraded to convert the smelted iron to steel, which would bring even more profit. This included the Barrow Hematite Steel Company in Hindpool, which became the largest iron and steel works in the world, mostly making rails for new train lines.

At the same time, Ramsden convinced the Dukes of Devonshire and Buccleuch to pay for an enormous system of docks so Barrow could compete with large trading cities like Liverpool. The Devonshire and Buccleuch Docks opened in 1867, followed by the Ramsden Dock in the early 1870s which was deep enough to float the largest vessels in the world at the time.

Shipbuilding

By 1871, fewer new train lines were being built and so the demand for rails slowed. The owners of the works needed to find new ways to sell their steel, so they founded the Barrow Shipbuilding Company.

The Company started out building leisure and working boats, the first of which was the steam yacht Aries in May 1873, and soon branched out into making gunboats for the Royal Navy. It brought experienced shipbuilders to the town and became known for its advanced designs.

Despite this reputation the shipyard was losing vast amounts of money and once again needed to diversify. With the help of Swedish weapons producer Thorsten Nordenfelt, the company rebranded as



Photo © Historic England



Photo © Margaret Bainbridge

Barrow Naval Construction & Armaments Company and began making submarines and guns for the Navy.

This allowed Barrow to become the first shipyard in Britain able to manufacture all of the parts of a battleship, including its weaponry, in one place. This was very popular with the Royal Navy as it reduced production costs and so it ordered the first of these ships, the HMS Vengeance, in 1887.

Unfortunately, by this time Nordenfelt had also run out of money and his subsidiary company was taken over by American-born inventor of the first self-powered machine gun, Sir Hiram Maxim in 1888. At the same time, the steel-making giants Vickers Sons and Company, drawn by the prospect of being able to supply complete battleships to the Navy, joined forces with Maxim to buy Barrow shipyard before the HMS Vengeance was launched in 1899.



Wartime Production

In 1914, when the First World War broke out, Vickers had been making ships and submarines for the Royal Navy for 17 years and had recently begun experimenting with airships.

The company's reputation made it the perfect choice for ordering large numbers of new fighting vessels. During the First World War the shipyard at Barrow employed 28,000 workers and made 64 new submarines for the war effort.

By 1927, Vickers was struggling financially as there was much less demand for warships. Some passenger liners were still being produced, but not enough to support the thousands of people who worked in the shipyard. Vickers laid off most of its workforce and merged with another weapons manufacturer, Armstrong Whitworth.

Orders for working vessels and passenger ships started to rise again in the 1930s and Vickers-Armstrong began to grow. When the government started to worry about another war in Europe the shipyard was at the cutting edge of naval technology.

When the Second World War broke out in 1939 Vickers-Armstrong was once again asked to make ships for the Navy. During the war, the shipyard produced 4 aircraft carriers, 2 cruisers, 12 destroyers, 89 submarines, 18 midget submarines, 11 cargo vessels, 2 transport ferries, 10 tank landing craft, 8 motor landing craft and 6 skids.



Vickers advertisement: Janes Fighting Ships 1914, HMS Indomitable, launched at Barrow, 1940. Image crown copyright.

RAF Barrow

At the start of the Second World War there were only one hundred permanent airfields in the United Kingdom and most of these had grass or metal-track runways.

The Air Ministry realised that many more would be needed if the Allies were to win the war and so it made plans to construct hundreds of new airfields with concrete runways.

During the war, around 450 new 'temporary' military airfields were established, 125 of which were built in 1942 alone. RAF surveyors travelled across the country to find land which could be taken over for military use.

Walney Island was one of the first places chosen for a new temporary airfield. Building of RAF Barrow began in 1940. Three runways were built in the shape of a giant 'A', which soon became the standard design for new airfields. There were three large steel hangars for repairing and maintaining the planes and fifteen smaller 'blister hangars' where they were stored.

Aircraft, equipment, workshops, fuel stores, armoury, control centre, guard house and fire station were spread around the airfield so that if one area was hit the others could still operate.

RAF Barrow, like RAF Cark was set up as a training airfield. The large open spaces of Morecambe Bay's tidal mudflats made the area perfect for teaching gunnery skills to the airmen. By the war's end, the Bay had in fact become one giant practice range, for both air to air and ground to air gunnery. Students flew Boulton and Paul Defiants and tried to shoot Westland Lysanders which were towed across the Bay as targets. The airfield also had ground-based training sites including machine gun and rifle ranges as well as gun turrets on rails to simulate firing from a bomber in the air.



RAF Barrow Dock Museum Collection



RAF 1946 Dane Ghyll Camp

Military Camps

Training continued at Walney until 1946 when the school moved to Anglesey. Courses lasted six weeks and by 1943 over 5000 Air Gunners had been trained.

The instructors and students needed accommodation and a series of hutted camps were set up south of the airfield stretching across North Scale to south of Mill Lane.

These camps initially had space to house 100 officers, 140 sergeants and 1,200 airmen. In December 1944 there were 1669 male (Royal Air Force) and 402 female (Women's Auxiliary Air Force) personnel at the base. Many of the troops stationed on Walney were Polish and there were also American G.I.s, continuing Barrow's longstanding tradition of being a

multicultural town. More camps were set up to the north of the town, including those at Ormsgill, Abbott's Wood, and Dane Ghyll. Most of the buildings in these camps were Nissen Huts, prefabricated tunnels made of corrugated steel, which were cheap and portable. At Dane Ghyll Camp, only five of the 74 buildings were made from brick. After the war, many of the people whose houses were destroyed by the bombing lived in these huts which they rented from the Council.



Barrow Blitz

All this military and manufacturing activity made the town a target for German bombing raids.

While most of Cumbria was thought to be a safe enough place to send evacuees from the cities, Barrow became much more dangerous.

Air Raid warnings were increasingly regular in the early months of 1941. Houses near the ironworks in Millom, just across the River Duddon, were bombed on the 2nd of January killing five people. On the 12th March, sixteen year old Margaret Bainbridge wrote in her diary that Walney airfield was bombed. There were four more sirens in the next two days and Margaret heard anti-aircraft guns being fired. At this point, Margaret, at least does not seem to be worried about houses being bombed as she stays in bed for all these warnings.

The situation became more serious for the residents of Barrow on Easter Monday when the Trevelyan Hotel and houses in Vernon Street were bombed, killing 15 people. The next night, more hotels, businesses, and houses were hit, killing another 18. Intensive bombing began again on the 3rd of May, lasting eight days, causing massive destruction.

Although the German intelligence map on the next page shows that the main targets of the raids were industrial and transport sites, especially the Vickers shipyard and engineering works, most of the bombs hit the nearby houses. The works at Vickers, the docks and the railway did all receive direct hits, but the damage was not great enough to cause serious disruption. The local population were more seriously affected.

Between April and May 1941, 83 civilians were killed, 330 were injured, and several thousand homes were damaged or destroyed.



Margaret Bainbridge's diary entries

Air Raid Precautions

Britain was not totally unprepared for the bombing raids which took place across the country.

When it became clear that Germany was making plans for a war in Europe the British government assumed that this would involve bombing civilian targets. In 1937 the Air Raid Precautions Act was passed to set up local command centres tasked with coordinating teams of volunteers.

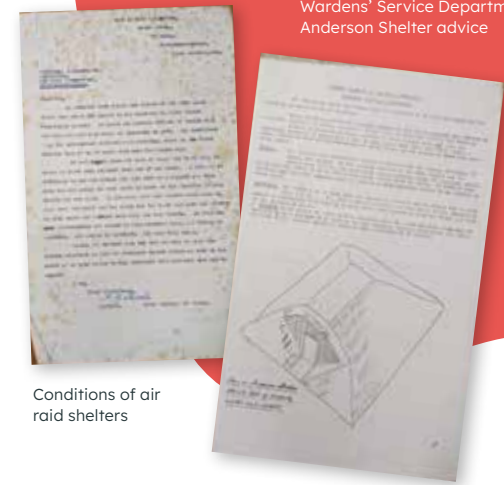
The main role of these volunteers was to make sure blackout rules were followed, hand out gas masks, and to help people get to a shelter during air raids. They were also trained to fight fires, dispose of unexploded bombs, rescue people from bomb-damaged buildings, and perform first aid.

In Barrow there were ten of these groups, each with their own Group Warden. Groups worked on rota systems, with at least four members on duty at each post. Many Wardens were men who could not join the military because they worked in industries that were needed for the war effort. Many women also volunteered either as a full A.R.P. Warden or as part of the Housewives' Service. The Housewives' Service was set up so women who did not have enough free time to take on regular duties could still help if there was an air raid. Members had similar training to A.R.P. Wardens but were only called on in case of emergency.

In 1941, the Hindpool area of Barrow was patrolled by Group G, led by Captain C. G. Lowden. Approximately 8,890 people lived in this area at the time. Group G had 94 'Whole Time Wardens', 22 of whom worked for Vickers, and 11 for the Barrow Haematite Steel Company, and 42 members of the Housewives' Service.



School air raid shelters Barrow Archives



Wardens' Service Department Anderson Shelter advice

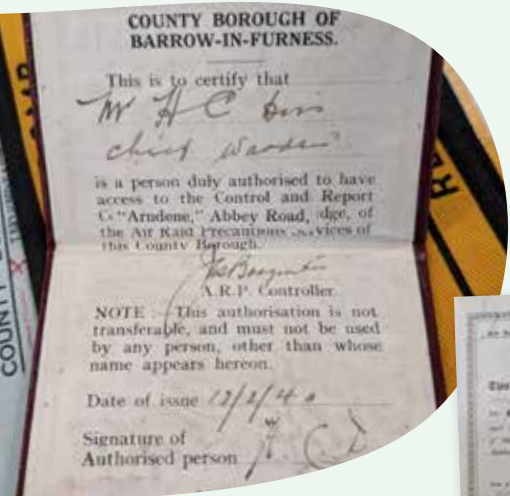
Conditions of air raid shelters

The Warden's Services Department was also responsible for distributing temporary air raid shelters for residents to put up in their gardens. These steel Anderson Shelters were designed to be cheap to produce and easy for the average person to build. They did, however, need to be placed in a hole at least 2 feet (around 61cm) deep and covered in 15-30 inches (40-76cm) of soil to provide any protection. Surveys in 1940 found that most of the shelters in Barrow had not been buried deeply enough and many had been placed too close to houses to give any protection in an air raid. Air Raid Precaution Wardens were tasked with advising the public on how to make their shelters safer.

Public shelters were mainly for use by people who did not have space for an Anderson shelter at home or who could not reach their own shelter quickly enough when the warning siren went off. Before the horror of the 1941 Barrow Blitz, many people were reluctant to use these public shelters as they were cramped and in poor condition.

Fifty-one public air raid shelters were set up at businesses such as the Ritz, the Gaiety Cinema, and the Lakeland Laundry, as well as at the library, parks, synagogue, and school playgrounds. These had capacity for 13,650 of Barrow's estimated population of 67,080.

In October 1940 Captain Lowden wrote to the A.R.P. Controller asking to use wood from fencing in Park Drive for people to stand on in the Blake Street Recreation Ground shelter which had flooded. The Controller shared Lowden's worries about people catching pneumonia and sent surveyors to stop water getting into the shelter. During and after the Barrow Blitz, the public understood the need for good quality shelters and made sure to use them whenever the alarm sounded.



ARP identity card and training certificate



This map shows the coastal defences which were recorded by the Defence of Britain project. Red icons indicate a building that still exists, yellow icons show buildings which have been removed or were not accessible at the time of the survey.



Defending the Docks

The buildings of Barrow were more challenging to protect.

Unlike people, they could not be moved into a shelter during a bombing raid.

Instead, defences were built along the coast and across Walney Island to stop German attacks before they could reach the military and industrial centres of

the area. The types of defences that were built and the direction they were facing show that those in charge were worried about attacks coming from both the air and the sea.

Protecting the Channel

In 1940, 'stop lines' were constructed across Britain to defend vulnerable places against invasion.

These lines were intended to slow down German tanks for long enough that army reserves could be deployed to the area. The stop lines were made up of pillboxes, anti-tank ditches, barbed wire, traps and road blocks.

In Britain, the Directorate of Fortifications and Works came up with seven standard designs for pillboxes to be used across the country. This was supposed to make them cheaper to build and easier to mass produce the moulds which the concrete was poured into. Many areas adapted these designs to suit the local land surface and the materials available for building.



Sandscale Haws Type 24 Pillbox Morecambe Bay Partnership

Most of the pillboxes in the Furness Peninsula are a variant of the FW3/24 pillbox. This was a hexagonal bullet proof pillbox, with five walls of equal length and one long flat wall with a doorway which faced away from the sea. These were built along the western coast of Barrow from Sowerby, down to the tip of Walney, to provide lookouts in case of invasion from the Irish Channel. Others were established to protect the Walney Channel guarding the entry to the shipbuilding works of Vickers. Each pillbox could accommodate seven men with rifles or light machine guns.

Walney also had two more substantial Coastal Batteries, one at Hilsford Point and one at Furness golf club, which were adapted from earlier artillery bases. These fortifications, with their 6-inch Mk VII naval guns on heavy duty concrete plinths were designed to prevent ships from approaching the coast. The batteries also had large searchlights inside protective emplacements for finding and targeting enemy ships and aircraft at night. Alongside these were observation buildings, store huts and bases for portable anti-tank weapons called spigot mortars.



Hilsford Fort

Anti-Aircraft Defences

The main defences against attacks from above were anti-aircraft guns.

There were three Heavy Anti-Aircraft Batteries on Walney Island, at Southend Haws, Biggar, and West Shore Park.

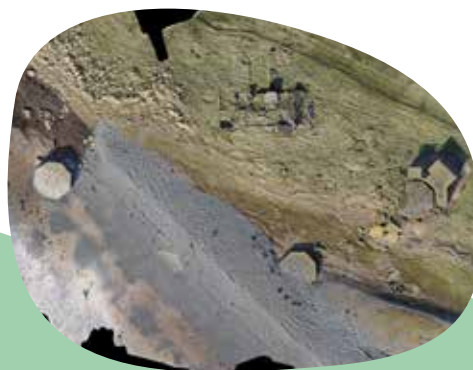
There were three more batteries in Barrow's immediate vicinity, one at the south end of Barrow Island, one at Rakesmoor, and one at Roose. There was also one at Ireleth, which protected the mouth of the River Duddon.

These batteries were made up of five octagonal concrete pads, each 7.8 x 7.8 metres, with steel fixings for guns. Reports from 1942 suggests that each battery had four QF 3.7-inch anti-aircraft guns, designed by Vickers, which were mounted on a travelling platform with detachable wheels so they could be repositioned. These travelling platforms were fixed to a pedestal which was bolted to the concrete base.



Each of these batteries had a central command building and military camp associated with it. They were also surrounded by trackways, barbed wire, trenches, and roadblocks. The batteries at West Shore Park and Biggar are also thought to have had portable radar systems to detect approaching aircraft, and a fixed Chain Home Low Radar Station was built at Hawcoat in 1941.

Most of these batteries were recorded from aerial photographs and have since been removed, however the Southend Haws site still has remains of the concrete pads, ammunition stores and ruins of buildings visible today.



South Walney HAA Battery from above



Snab Point decoy camp



Barrage Balloon

There were also smaller anti-aircraft positions, like this FW3/23 pillbox at Cavendish Park. These had a large open bay at the back with a central concrete pillar which was used to mount a light machine gun. They had a much shorter range than the heavier guns, so were only effective against low-flying aircraft. The one at Cavendish Park overlooks the dismantled railway cutting and was intended to fire at German planes as they tried to bomb the railway. Behind it sits a concrete block with a metal holdfast which was likely used to hold a searchlight.

Not all the anti-aircraft defences of Barrow have left such lasting impressions on the landscape. In April 1941 the Airforce began putting up barrage balloons to block the path of incoming aircraft. These twenty-metre long, hydrogen-filled balloons were tethered to the ground by thick steel cables. The cables made flying dangerous and forced pilots to take different routes towards their targets, often into the firing line of an anti-aircraft gun.

Cavendish Park Type 23
© Martin Bates

In her diaries, Margaret Bainbridge tells us that by the end of May there were 24 balloons over Barrow, although five were destroyed in a lightning storm on the 12th of July. Margaret also tells us that the smokescreen was used on the 7th and 11th of June, where large barrels of oil were lit giving off thick black smoke meant to cover the town making it difficult to find important targets from the air.

Decoy camps were also set up in open areas to try to trick bombers into thinking they were hitting towns or military camps. Pretend buildings were placed and controlled fires were lit to look like a town which had not been blacked out properly, or one which had already been bombed. Sometimes trenches were dug, and foundations laid to look like searchlight batteries from above.



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Our Volunteers

Many of these defences are still visible today, some are in good condition, but many are disappearing quickly.

Coastal erosion, development and decay are destroying the buildings and features that remain. Structures are crumbling and collapsing, some are falling onto the shore where they are battered by the power of the tides, and many are in isolated locations and vulnerable to neglect and vandalism.

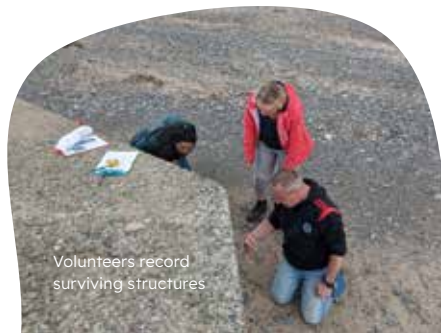
Our team of volunteers have been working hard to record and monitor the condition of these buildings so that future generations can learn about them, even if the structures themselves are lost forever. The team has learnt how to recognise different types of defensive buildings and rapidly record their important features. They have photographed many of the remaining defences, and created 3D



Cavendish Park surveying lessons

models from the images, as well as making detailed measured drawings of some of the structures.

These records have contributed to making a virtual reality archaeological model and experience of Walney in the 1940s which is being used to teach young people about the local landscape during the war. The records will also be deposited with the Cumbria Historic Environment Service to add to the database of archaeological sites for the county.



Volunteers record surviving structures

What Can We Do?

The nature of coastal erosion makes it impossible to preserve all these remains where we find them.

Recording the buildings which are most in danger of being swept out to sea and keeping an eye out for any changes is the most effective way of making sure important information is not lost forever.

As the coastline is constantly changing, this is a huge job. People who live in or visit the Barrow and Walney area can help by taking photographs of military buildings while out and about and sending them to Morecambe Bay Partnership.



Do remember that you need permission from the landowner where there is no public access, we do not want anyone to trespass. You will also need to be careful about where you go as many of the buildings are not safe and some may be cut off at high tide.

This helps us keep track of which remains are still in good condition and which we are at risk of losing.

You can also help by sharing the story of Barrow's military history. Many of the pillboxes around the town are covered in graffiti and litter, which has meant some have been closed off, and others are not as nice to visit. The more people know and care about this fascinating part of the past the more likely they are to look after the buildings that remain.



Coastal erosion effect on military building



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Thank You

Morecambe Bay Partnership would like to say a big thank you to all the volunteers who gave up their time to participate in this project.

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Finally, thank you to Susan Benson at Cumbria Archive Service and the team at LA12 for being so generous with their time and expertise.

All archive images courtesy of Cumbria Archive Service.



Morecambe Bay Partnership

We are a charity working for people, nature and heritage and to keep Morecambe Bay special. Our charity's vision is for Morecambe Bay to be an exceptional place to live & an outstanding place to visit. A place where the local economy provides healthy, happy, low carbon living for everyone. Nature is more abundant, heritage is understood, protected & celebrated, and our culture is thriving.



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