

Caring for

Military Sites

of the Twentieth Century

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 Cadw



Llywodraeth Cynulliad Cymru
Welsh Assembly Government

with the Welsh Archaeological Trusts



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Cadw is the Welsh Assembly Government's historic environment service.
Its aim is to promote the conservation and appreciation of Wales's historic environment.

First published by Cadw 2009
ISBN 978 1 85760 262 3
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Cover photograph: A World War 2 beach defence gunhouse at St Ishmael, Carmarthenshire.

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Caring for Military Sites of the Twentieth Century

Defence is a recurring theme in Welsh archaeology. Justly famous for its impressive Iron Age hillforts and spectacular medieval castles, Wales also possesses military remains of international importance from twentieth-century struggles: especially World War 1 (1914–1918), World War 2 (1939–1945), and the Cold War (1946–1989).

Many sites were demolished through official clearance schemes or have disappeared as a result of agricultural improvements, forestry plantation and development activity. However, many remain, either as standing structures or buried archaeological features. The events that led to their creation have profoundly affected our families, communities and landscape, and public interest in these remains is growing. Their survival or destruction is dependent on future management.

This booklet introduces the range of twentieth-century military sites that can be found in Wales and explains their importance to our understanding of the recent past. It describes the factors affecting their survival. Drawing on the experience of Cadw and its partners, it describes some simple actions that owners and land managers can take to help care for our recent military heritage.

The World War 2 anti-tank cubes on Fairbourne beach, Gwynedd, are the best-preserved coastal anti-invasion defences in Wales. They were built in 1940 to protect against the perceived threat of a German invasion of Wales from Ireland.





The Twentieth-Century Military Sites Project

The Fortress Study Group pioneered the study of modern military sites. Between 1995 and 2002, an army of volunteers and professionals created a database of over 20,000 World War 2 sites in the UK as part of the Council for British Archaeology's Defence of Britain project. In 2003, the Twentieth-Century Military Sites Working Group for Wales was set up. This group helps Cadw to identify the most important sites in Wales and works to make the public more aware of their significance.

The working group is a forum for discussing the impact of preserving these sites. Attitudes to them vary: you may find the remains fascinating and exciting, or too recent, ugly or commonplace to be of importance. For some people they are reminders of a painful past.

We are working to preserve some of these sites because they represent the global conflict that characterized the twentieth century. Large-scale military works had a dramatic effect on the urban and the rural environment and left a mark on the landscape of Wales. Collectively, these sites tell the story of how warfare changed during the century and how it touched the everyday lives of ordinary people. Radical and rapid technological advances and changing defence strategies allowed warfare to reach an unprecedented scale.

Archaeology, with its focus on people, structures, and landscapes, can make a contribution to our knowledge of this period, which comes from a wide range of information sources.

Cadw has begun the process of assessing which military sites or buildings should be given legal protection.

This might be because:

- it is well preserved
- its purpose is easy to understand
- it is valuable as part of a group or as part of a defence network
- it is a rarity
- it is of historic importance.

Military sites can be protected in other ways, including:

- effective management with archaeological advice provided through the planning system
- effective management through compliance with the requirements of the Welsh Assembly Government's agri-environmental scheme, Glastir.

Detailed recording of sites ensures that even if they disappear in the future, information about them will be preserved.

Scheduling and Listing

Ancient monuments and sites that are considered to be of national importance are added to the 'Schedule'. If you plan to carry out work that affects a scheduled monument, you need to consult Cadw staff first. Buildings that are judged to be of historic or architectural interest are added to the 'List', giving them legal protection. It is an offence to carry out works without permission, and the conservation officer in the local council can give advice on this.

This composite aerial photograph shows the ordered and well-built Royal Air Force (RAF) station at St Athan, Vale of Glamorgan, in 1942. The photograph shows aircraft dispersed around the site. Field boundaries are painted on the airfield for camouflage purposes (© Crown Copyright).

Wales at War

Contrary to popular belief, Wales was not a quiet backwater during the conflicts of the twentieth century. Its position, distant from the Continent, made it ideal for the manufacturing, maintenance and storage of armaments, but also for military training and research and development, including weapon testing. Fighter stations defended the industrial towns and the docks, which were targets for German bomber planes. In World War 2, Wales was in the front line in the Battle of the Atlantic and the coast was defended against a possible German invasion from Ireland.



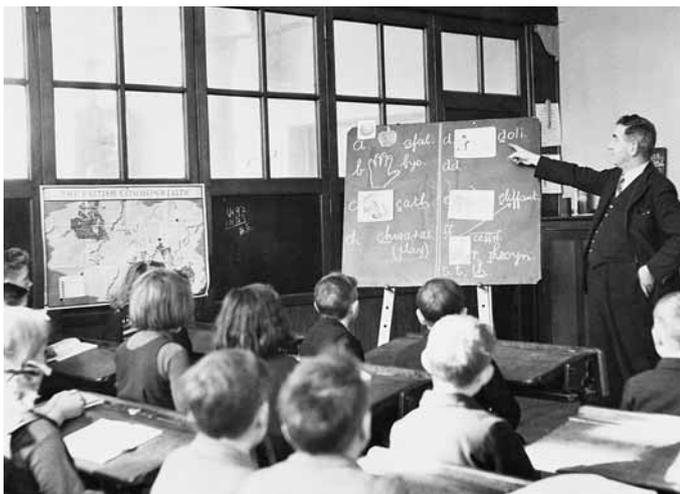
Top right: *The underground monitoring post at Llananno, Powys, part of a nationwide network during the Cold War to locate the position of Soviet nuclear weapon strikes and monitor the drift of radioactive fall-out.*

Above: *The World War 2 Coast Defence/Chain Home Low radar station at Margam, Neath Port Talbot, was built to detect German low-flying aircraft and surface vessels in the Bristol Channel. The metal gantry that supported the radar array is a unique survival in the UK.*

The Home Front

During World War 1 and World War 2 everyday life was affected more than in previous wars. Civilians were vulnerable to direct attack and policies such as evacuation and rationing were imposed on them. The term 'Home Front' recognizes the important contribution of civilians who worked in active support of the military by producing armaments and munitions. It sums up the fighting spirit of the people in difficult times, captured in songs such as Vera Lynn's *We'll Meet Again*.

During World War 2, the Government constantly gave out advice on how people should behave through a famous poster campaign and BBC broadcasts. Gas masks and identity cards were issued and air raid shelters constructed. The Government knew that large cities would be the target for German bombs and that casualties would be high. A policy of evacuation was introduced to move schoolchildren and teachers, mothers with children under the age of five, and disabled people out of the cities to the countryside where there was little risk of bombing raids. Similarly, a policy of rationing was introduced, as Britain had always imported food and other goods from overseas, mostly by ship, and people were encouraged to produce more food.



Top: The ceremonial opening of a new mosque in Butetown, Cardiff, in 1943. The original mosque had been destroyed during a German air raid (Imperial War Museum, D 15285).

Above: The World War 2 Civil Defence International Warden's Post at Butetown, Cardiff, included members of more than twenty different nationalities, reflecting the multicultural character of the dock area (Imperial War Museum, D 15328).

Left: Children evacuated from London are taught some useful Welsh words (Imperial War Museum, HU 36235).



Womens' War Work

Dame Laura Knight painted *Ruby Loftus Screwing a Breech Ring* (1943) for the Ministry of Munitions. It depicted a female worker screwing the breech ring on a Bofors 40mm light anti-aircraft gun at No. 11 Royal Ordnance Factory, Newport, Monmouthshire.

Previously, this delicate operation was thought impossible for a woman to do. The picture demonstrates the key roles that women undertook on the Home Front. Their horizons widened, but they did not receive equal pay and were rarely promoted above male colleagues.

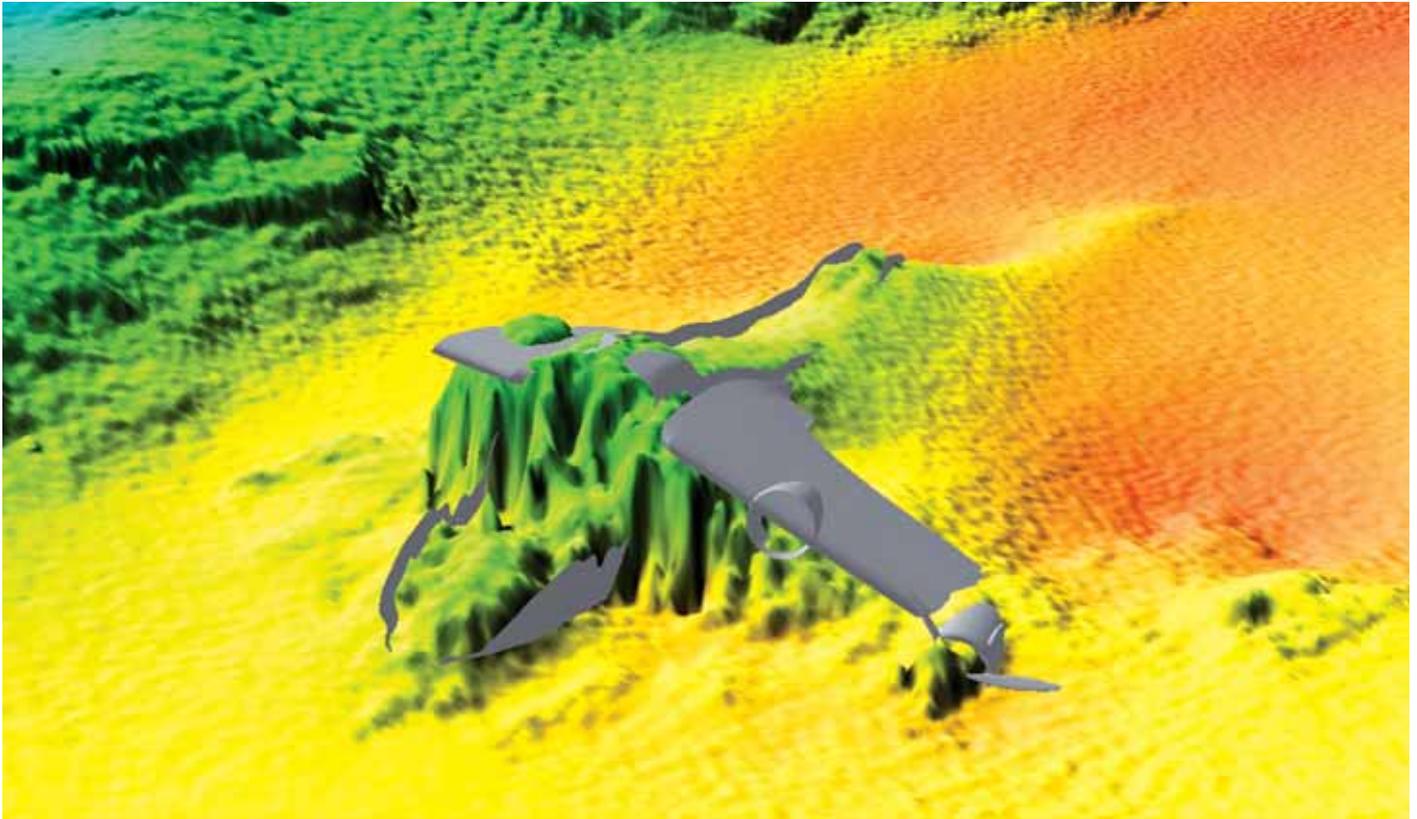
Women also served in the Women's Land Army and Timber Corps, as well as military non-combat units such as the Auxiliary Territorial Service (ATS) — where they often directed anti-aircraft gunfire — and the Women's Royal Naval Service (Wrens). One group of women was armed: ATS operatives staffed secret Special Duties Branch underground radio bunkers called Zero Stations.

Opposite: *Dame Laura Knight's painting of Miss Ruby Loftus at work in the Royal Ordnance Factory in Newport. Making a Bofors breech ring was considered the most highly skilled job in the factory, normally requiring eight or nine years of training. Loftus was aged 21 at the time of the painting and had no previous factory experience. Her ability to operate the lathe showed that women had proved themselves competent in a traditionally male environment, and was used in publicity at the time (Imperial War Museum, ART LD 2850).*

Top right: *The Minister of Labour, Ernest Bevin, MP, talking to Ruby Loftus during a visit to the Newport factory (Imperial War Museum, P 1947).*

Right: *ATS women operate the ranging equipment for a battery of 4½-inch guns during a night shoot at the anti-aircraft training camp at Tŷ Croes, Anglesey, in November 1941 (Imperial War Museum, H 15654).*





Military aircraft crash sites

Crash sites are a tangible reminder of the extent of airborne activity over Wales. Most date from World War 2. They are important because:

- those which contain human remains are war graves
- they provide a focus for remembrance
- the aircraft possess significant value as historic artefacts, and may be unique repositories of information about manufacturing processes and fittings.

Crash sites in upland and intertidal areas are usually the best preserved, together with aircraft submerged in rivers, lakes or the sea. They are all vulnerable to souvenir hunting and uncontrolled recovery.

All military aircraft crash sites in the United Kingdom and its territorial waters are protected sites under the Protection of Military Remains Act (1986) and it is a criminal offence to move or unearth any items. Cadw recognizes that all aircraft crash sites possess significant historic importance and some sites are of sufficient rarity to be of national importance because they:

- contain components of rare aircraft
- contain key parts that are well preserved
- are associated with significant events or individuals.

The sonar scan shows Short Sunderland T9044 lying on the bottom of Milford Haven. She was one of a batch of twenty Mark 1 aircraft built by Short Brothers and served with 210 Squadron. She sank at her moorings in a gale on 12 November 1940 (Image courtesy of SRD Ltd).

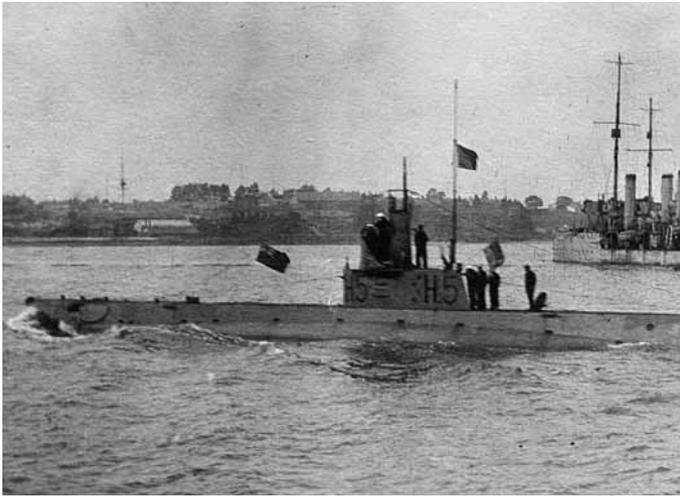


The Battle of the Atlantic

The Battle of the Atlantic was the longest campaign of World War 2. Half of Britain's food and two-thirds of its raw materials came from overseas and Nazi Germany deployed submarines (or U-boats), battleships and aircraft against Allied merchant shipping to cut off Britain's supply lines. The fall of France in 1940 forced the diversion of much seaborne trade to the western coastal ports including Cardiff, Newport, Holyhead and Barry. Winston Churchill realized that Britain would be brought to her knees if merchant ship losses carried on at the same rate. The convoy system across the North Atlantic was improved and communication between the Royal Navy and the RAF's Coastal Command was increased. This allowed Sunderland flying boats to detect submarines and enabled escorts to track them down.

Operating from bases including RAF Pembroke Dock, Sunderland flying boats achieved fame flying anti-submarine reconnaissance patrols and rescuing crews from torpedoed ships. In 1943, with over 100 flying boats, RAF Pembroke Dock was the largest flying boat base in the world.

The two great Sunderland hangars survive at Pembroke Dock and have been protected as listed buildings (above left). They are in the centre of the aerial photograph (above), camouflaged as terraced houses (© Pembroke Dock Sunderland Trust Collection). A Sunderland can be seen on water (above) and on dry land (top left: Imperial War Museum, CH 4355).



Wartime shipping losses

Amongst the many wrecks of ships that have foundered around the Welsh coast are military vessels, casualties of World Wars I and 2. They include often spectacularly well-preserved remains of submarines, minesweepers, motor gunboats, landing craft and three Liberty ships. They are not only a source of information but may also be war graves, and they may be protected in a number of ways.

The Protection of Military Remains Act (1986) allows for the protection of selected wrecks of vessels in military service by designating them 'protected places' or 'controlled sites', which prohibits activities such as diving. The *H5* submarine lost in Welsh waters in 1918 with twenty-seven crew members is designated as a controlled site.

Above: The British H class or Holland 602 submarines were constructed for the British Royal Navy between 1915 and 1919. The H5 was sunk after being mistaken for a German U-boat and rammed by the British steamship Rutherglen on 2 March 1918. All on board perished (© National Maritime Museum).



Military wall art

Whether official or unofficial, military wall art provides an insight into the personal experience of war. Any decoration applied deliberately to the surface of a building, ranging from instructional drawings, signage, stencils and murals, through to simple sketches and graffiti or even messages of protest, may provide valuable information about the former use of the structure.

Wall art may be executed in paint, aerosol, ink or pencil, or incised physically into building surfaces. It is vulnerable to damage, weathering and vandalism.

Above: The interior of the chapel at Henllan, Ceredigion, created by Italian prisoners of war.

Commemoration and remembrance

War memorials are widespread in Wales. They honour the dead, and are for the living a focus for commemoration and remembrance of personal sorrow, pain and the human cost of war. They range from the familiar crosses, statues and memorial halls to less common memorials such as sundials and sports pavilions. They provide an insight into military, social and art history.

The UK National Inventory of War Memorials records over 2,500 war memorials in Wales, including more than sixty memorial halls. Over 200 war memorials are designated as listed buildings. Significant war grave cemeteries are located at Caernarfon, Gwynedd, and in St Deiniols churchyard, Hawarden, Flintshire.



Right: *The war memorial at Aberystwyth, Ceredigion, included a sculptural element (© Medwyn Parry). Above: The Italian sculptor Mario Rutelli incorporated bronze figures depicting victory and humanity emerging from the chaos of war (Crown Copyright: RCAHMW).*

Charred senses and seared consciousness

The military events of the twentieth century retain a profound cultural resonance today. Policies such as conscription, rationing and Mutually Assured Destruction, together with experiences of events such as the Western Front, the Blitz and the Cuban missile crisis, firmly embedded aspects of warfare into the nation's psyche, affecting our politics, culture and economy.

War artists

During World War 1, the government commissioned artists to create a record of the war. A similar scheme commissioning artists to portray the war effort, administered by the War Artists' Advisory Committee, operated during World War 2. Exhibitions were organized to raise morale at home and to promote Britain's image abroad. Many of these paintings depicted life on the Home Front in Wales. Ceri Richards recorded tin-plate workers in south Wales. Ray (Rosemary) Howard-Jones painted coastal fortifications in the Bristol Channel.

During World War 2, fortifications were built on the headlands of Lavernock Point, Vale of Glamorgan, and Brean Down, Somerset, and the two Bristol Channel islands of Flat Holm and Steep Holm. Commanded from Swanbridge, Vale of Glamorgan, the guns protected convoy vessels from air and sea attack while they waited for the tide or for an unloading berth to become available. This painting of a covered six-inch naval gun emplacement on Steep Holm by Ray (Rosemary) Howard Jones (1943) is evocative of the wartime hardships and isolation endured by the men of the Royal Engineers and Royal Artillery who built and manned these positions (Imperial War Museum, ART LD 3525).





War poets

The term 'war poet' emerged in the 1920s to describe the soldier-poets who fought in World War I. Some of the best known, such as David Jones (Dai Greatcoat), Robert Graves and Siegfried Sassoon, served with the Royal Welch Fusiliers, and were either wounded or shell-shocked or both. The reality of war appalled them and they wrote poignantly about its effect on body and mind, powerfully expressing the horror and futility of war.

Sir Albert Evans-Jones (1895–1970), known as Cynan, served with the Royal Army Medical Corps in the Macedonian campaign. His poem, *Son of the Cottage*, treated World War I from a specifically Welsh perspective and won the Crown at the National Eisteddfod at Caernarfon in 1921.

Ellis Humphrey Evans (1887–1917) was known as Hedd Wyn. He joined the Royal Welch Fusiliers in February 1917 and began to write his poem *The Hero* (*Yr Arwr*). He later entered it for the National Eisteddfod, to be held at Birkenhead in September that year. On 31 July he was killed in action. Hedd Wyn was posthumously awarded the chair for his poignant poem. The bard's chair was draped in black cloth, symbolizing the chairs which now stood empty in thousands of Welsh homes as a result of the war.



*The boys' cries fill the wind
And their blood mingles with the rain.*

Hedd Wyn, *War*

*A gwaedd bechgyn lond y gwynt,
A'u gwaed yn gymysg efo'r glaw*

Hedd Wyn, *Rhyfel*

In 1923 a statue was unveiled in Trawsfynydd, Gwynedd, in remembrance of Hedd Wyn, a shepherd boy who left for a Flanders field and never returned home (© PhotolibraryWales.com).

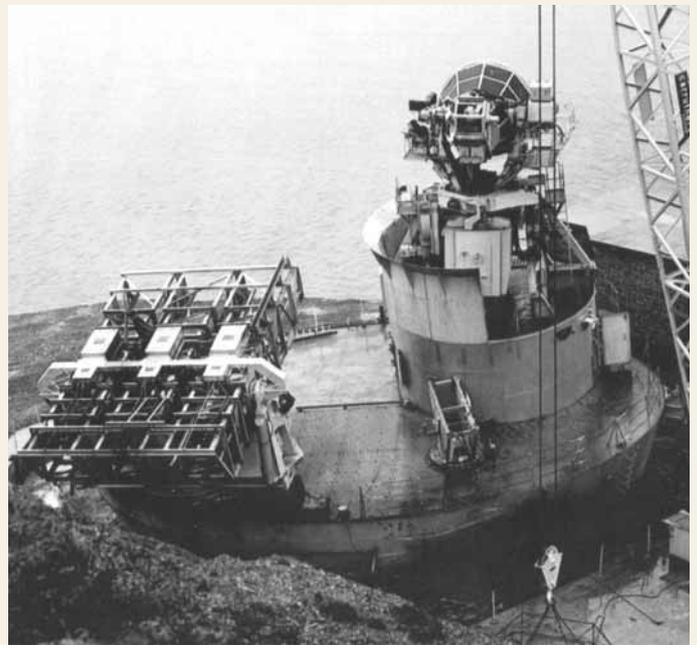
The Sea Slug Story

Sea Slug was a first-generation surface-to-air missile, developed by the Royal Navy. Work began in 1949 and the missile entered service on County Class destroyers, including HMS Glamorgan, in 1961. It could target high-flying reconnaissance aircraft and bombers.

One of the challenges was to find a way to launch the missile accurately from a rolling ship. To test the Sea Slug a simulated ship's firing platform was built near Aberporth in 1951–54. A hemispherical platform floated in a purpose-made dock, and staff could control its movement from the buildings alongside. The Gosling rocket booster engines used to power the missiles were made and tested at the former Royal Naval Propellant Factory's Guided Weapons Scheme Unit at Caerwent.

Both these sites have legal protection as monuments or buildings of national importance because they increase our knowledge of British Cold War weapon systems. The successful development of the Sea Slug missile represents one of the chief British technological achievements during the Cold War period and marked a point of significant escalation in the arms race.

Top right: A Sea Slug development round fired from the Range Head at Aberporth, Ceredigion (© Crown Copyright). The simulated ship rolling platform at Aberporth (right) surmounted by test radar and triple launcher equipment (© Crown Copyright). The Gosling rocket engines (bottom left) were tested at Caerwent, Monmouthshire (© Medwyn Parry), and the firing bay survives in good condition today (bottom right).





The Cold War

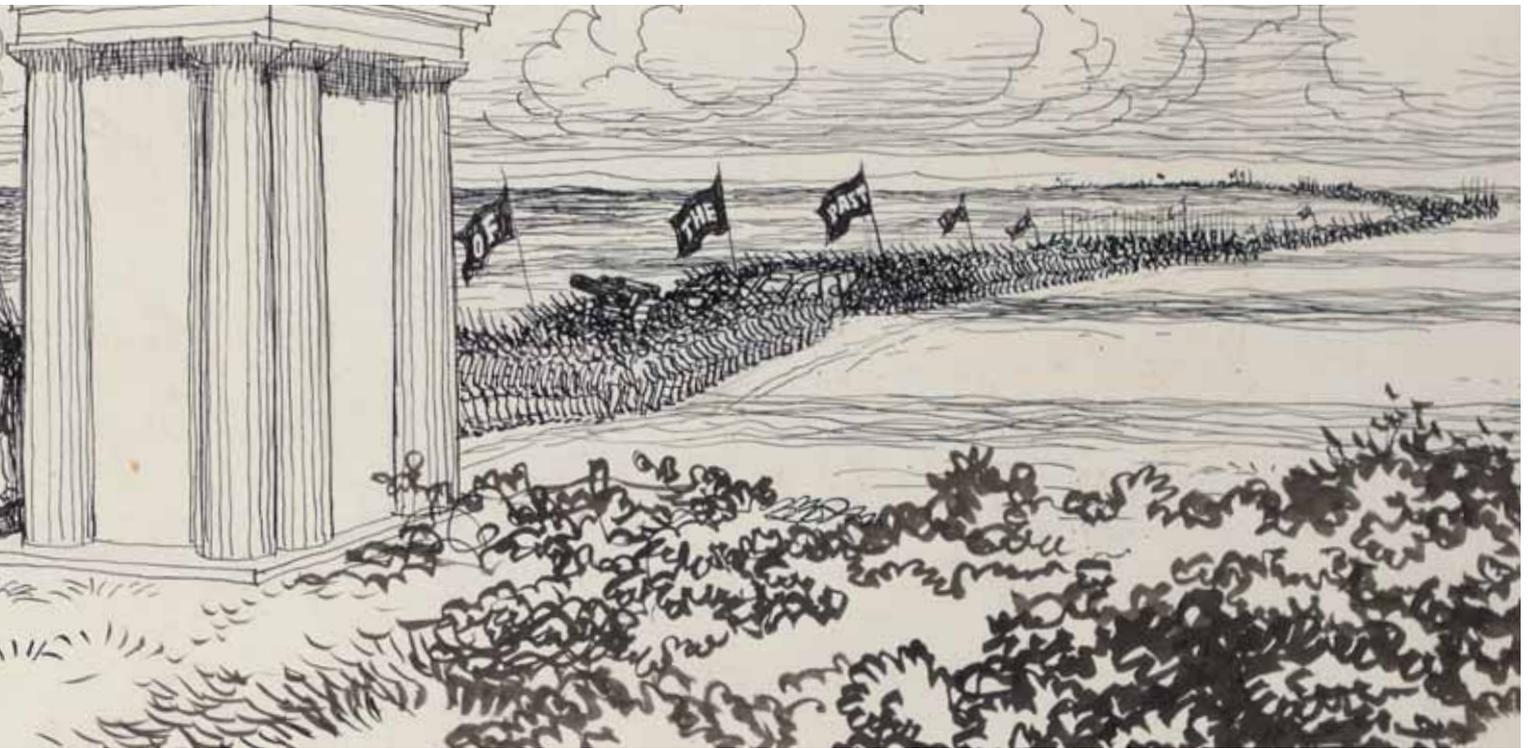
Cold War themes entered the public consciousness from the mid-1950s. The twin themes of espionage and the threat of nuclear war reached a UK-wide audience through the arts, music and even sport. The political cartoons of Leslie Illingworth documented many aspects of the Cold War. His cartoon, *Class of 1940* (29 May 1957), marked Britain's first hydrogen bomb test on Christmas Island. Illingworth, who was born in Barry, Glamorgan, and trained on *The Western Mail*, went on to draw cartoons for the *Daily Mail* and *Punch* magazine.

Above: Illingworth's cartoon *Class of 1940*, shows thousands of soldiers carrying banners collectively reading 'class of 1940' and 'the mass armies of the past' marching under a triumphal arch. Behind them is a man riding a scooter, symbolizing modernity. It carries a rocket labelled 'H' depicting the hydrogen bomb (© Solo Syndication / Associated Newspapers Ltd).

Protest movements

An active protest culture developed in Wales, as elsewhere. The study of this can be described as the archaeology of opposition. In 1936, a workmen's shed at Penyberrth, near Pwllheli, was deliberately set on fire by members of *Plaid Genedlaethol Cymru* at the climax of a public campaign against a new training camp and RAF aerodrome. In 1981, the Welsh group *Women for Life on Earth* walked from Cardiff to the American airbase at Greenham Common, Berkshire, to protest against the announcement to store cruise missiles there. They went on to establish the long-running Women's Peace Camp, which drew enormous press coverage.

Right: Welsh peace protestors destined for Greenham Common marching across the Severn Bridge in September 1981 (© Women's Archive of Wales).



Conclusion

Our knowledge of the number and range of recent military sites in Wales has grown substantially over the last few years and will continue to do so. Many sites have disappeared, and others may only be apparent from the air or through detailed archaeological investigative work. Those that survive are important, and we are working to protect sites and structures where evidence for their layout, function and purpose can be seen.

Caring for these sites:

- protects a valuable and often fragile resource
- contributes to the diversity of our landscape
- safeguards elements of our history which are often the focus of community pride.

An understanding and appreciation of our recent military heritage is essential if this important inheritance is to be preserved for future generations.

Wales's military heritage is at risk

Much of the land occupied by the military during the twentieth century has been returned to civilian use. Many of the structures were intended to last only a few years and were demolished or backfilled intentionally. Those that survive represent a finite and diminishing resource often reduced through a lack of understanding of their rarity and significance. They are at risk from a range of threats:

- lack of understanding and appreciation
- unsuitable agricultural and forestry practices
- vandalism and neglect
- structural problems including decay and collapse
- lack of maintenance
- insensitive development or conversion
- the impact of climate change, together with our responses to it
- the removal of eyesores to 'restore' the landscape
- unacceptable use of metal detecting and uncontrolled souvenir hunting.

The survival of our recent military heritage depends on careful management. Modest changes can often result in significant improvements. In all cases prevention is better than cure.



Built structures

These are frequent survivors in the Welsh landscape. These historic remains, even apparently solid military structures, are often fragile and vulnerable to damage by apparently harmless activities. Former military buildings should not be demolished or 'tidied up' until surveyed and appraised for significance.

Options to consider

- Implementing and maintaining appropriate repair and maintenance programmes for roofs, gutters, doors and windows to keep buildings weatherproof.
- Buildings should not be repainted until any surviving war art has been identified and appraised.
- The special character of buildings should be preserved. This requires an assessment of character and significance.
- Existing doorways and windows should not be altered, nor new entrances constructed.
- The scale, density and visual connections within and between buildings should be maintained.
- Appropriate sustainable reuse should be promoted to conserve the buildings wherever possible.
- Where ruined structures survive, collapsed material should be assessed and where appropriate recorded before removal.
- The branches of overhanging trees should be removed.
- Scrub and sapling growth on or near to buildings should be assessed and controlled.
- The controlled opening of surviving sites to the public may generate income for farmers.

Volunteers remove vegetation from a gun emplacement at Lavernock Point, Vale of Glamorgan.

Carew Cheriton Control Tower

RAF Carew Cheriton, an airfield near Tenby, was used by the RAF's Training and Coastal Commands from 1939 to 1945. The control tower is unusual as it was built in 1941 by a local contractor to a unique design, rather than the standard Air Ministry pattern. Unusual features include the bay window and the earthen blast mound that protected the building.

Since 2000, a community group has restored the building from a derelict shell to provide an evocative insight into wartime life for education groups and other visitors.

Before and after: the control tower at RAF Carew Cheriton, Pembrokeshire, has been restored to offer a glimpse of life in wartime Britain (© Carew Cheriton Control Tower Group).



Military earthworks

These are rare, but survivals include World War 1 practice trenches. The majority of World War 2 anti-invasion fieldworks were constructed from earth. Although most have been backfilled, they can often be identified as crop marks from aerial photographs.



Options to consider

- Remove trees growing on earthworks by cutting at ground level and killing roots.
- Remove saplings.
- Encourage a healthy grass sward.
- Monitor and control livestock levels, particularly when wet, to minimize damage by poaching or erosion.
- Control scrub by grazing or periodic cutting.
- Locate stock feeders and water troughs away from sites.
- Repair erosion scars with appropriate guidance.
- Prohibit vehicular access across sites.
- Route drains and fences away from any sites.

Above left: *World War I practice trenches at Bodelwyddan, Denbighshire (Crown Copyright: RCAHMW).*

Military wall art

Wall art is vulnerable to damage, weathering and vandalism. Specialist conservation advice is always needed. Photographs and detailed drawings will preserve information for the future.



Options to consider

- Conserve in situ where possible. Particularly within a listed building or scheduled ancient monument, wall art should be maintained as part of an overall programme of conservation for the site to ensure its long-term survival.
- Where conservation is not practical or the wall art is of limited interest, it should be carefully recorded, allowing for eventual loss.
- Detaching it and removing it elsewhere is a method of last resort when it cannot be preserved at its original location. Success is dependent on obtaining specialist advice. Undertake detailed recording and find a new home before removing it.

Above right: *Cartoon drawings of aircraft on walls of the officers' accommodation block at Dale airfield, Pembrokeshire.*



Military wrecks

Military wrecks may be protected in several ways.

- Under the Protection of Military Remains Act (1986) wrecks may be designated 'protected places' or 'controlled sites'. The Ministry of Defence intends to identify all British military wrecks and assess them for designation.
- Wrecks of special historic interest may also be designated under the Protection of Wrecks Act (1973). Best practice favours the preservation of historic wrecks in situ on the sea bed or on shore. Where off-shore development is planned, the remains of wrecks will be included in the assessment of environmental impact with appropriate mitigation where appropriate.
- Any wreck material raised from the sea bed, or found elsewhere but brought within UK territorial waters, must by law be reported to the Receiver of Wreck under the Merchant Shipping Act (1995).
- Advice should be sought from Cadw if any wreck, newly discovered on the sea bed or on the beach, appears to be of significant historic or archaeological importance.

Military aircraft crash sites

All military aircraft crash sites in the United Kingdom and its territorial waters are protected sites under the Protection of Military Remains Act (1986). It is a criminal offence to tamper with, damage, move or unearth any items at such sites, unless authorized by the Ministry of Defence (MoD).

Enquiries and guidance on the licensing of military aircraft excavations within the United Kingdom should be directed to the MoD's Historic Casualty Casework Team at the Joint Casualty and Compassionate Centre.

Above: The well-preserved remains of the United States Air Force Lockheed P-38F Lightning fighter aircraft that crash-landed on Harlech beach on 27 September 1942. The aircraft is significant, as it is the oldest surviving P-38 and the only intact 'F' model in original condition (Image courtesy of TIGHAR.org).

Cadw recognizes that all aircraft crash sites possess significant historic importance. Sites that contain components of rare aircraft, key parts that are well preserved or retain historic importance for their association with significant events or individuals are of sufficient rarity to be of national importance.

In addition to the MoD's responsibilities, Cadw advocates the following good practice guidelines:

- Crash sites should not be unnecessarily destroyed or removed without the creation of an adequate record.
- Sites of national importance should be preserved in situ. Scheduling may be undertaken in some cases, which will legally protect them as scheduled ancient monuments.
- When previously unknown crash remains are discovered during development, any work on that site must cease as human remains and/or ordnance may be present. The police must be informed immediately and advice sought from the relevant Welsh Archaeological Trust.
- When aircraft are to be recovered, an appropriate methodology for investigating, excavating, recording, conserving and publishing the remains must be adopted. Excavation should be undertaken in accordance with the Institute for Archaeologists' Code of Conduct and comply with its Standard and Guidance for archaeological excavation to ensure the maximum recovery and recording of all available archaeological evidence. Detailed information and advice can be provided by the Welsh Archaeological Trusts.
- Copies of all investigative reports should be deposited with the National Monuments Record at the Royal Commission on the Ancient and Historical Monuments of Wales and the relevant Welsh Archaeological Trust's Historic Environment Record.





Rhydymwyn Chemical Weapons Factory

Ministry of Supply Valley Works, located adjacent to the village of Rhydymwyn, Flintshire, was developed from 1939 as a top secret site for manufacturing and storing chemical weapons. The long narrow site is located in the bottom of a narrow valley, and a complex of interlinked tunnels and caverns was excavated into the hillside. On the surface over 100 specialized buildings were constructed. Between 1941 and 1945, one building, known as P6, was associated with a project code-named *Tube Alloys*: the British effort to develop an atomic bomb.

After a period of remedial work required for health and safety purposes by the Chemical Weapons Convention (1997), the site was opened up as a nature reserve run by North East Wales Wildlife. It is now run for the benefit and enjoyment of the general public and is also home to otters, grass snakes and several species of bat. There is a visitor centre and a programme of events for education and recreation. The Valley History Society is actively researching the history and archaeology of the site.

The site is important for its surviving remains and its place in the international politics of the twentieth century. The site's connection with chemical weapons production and atomic weapon research challenges visitors to think about a difficult subject.

Top: An aerial view of the long narrow site and one of the integrated tunnels (middle right) (© Valley History Society). The nature reserve now offers opportunities to learn new skills and enjoy the history and natural history of the site (© NEWWildlife).

Sources of Advice, Grants and Support

Contact details are listed on page 26.

- **Cadw** is the Welsh Assembly Government's historic environment service and is responsible for advising Welsh Ministers on the scheduling of ancient monuments and the listing of buildings. Cadw provides technical advice and grants towards the cost of practical conservation work and repair.
Consent must be obtained from Cadw for works to scheduled ancient monuments.
- **Conservation Officers** in local authorities offer advice relating to listed buildings and broader conservation issues, including conservation areas.
Consent must be obtained from a local authority for works to a listed building.
- **The Welsh Archaeological Trusts** provide information and advice on all issues relating to the historic environment.
- **The War Memorials Trust** is a charity that works for the protection and conservation of war memorials in the UK. It provides conservation advice and educational information and runs the Small Grants Scheme for the conservation, repair and protection of war memorials.
- Once identified, twentieth-century military sites could enjoy protection under the new **Glastir agri-environmental scheme** for farmers, and support may also be available through this scheme for the practical conservation of these sites. Details have yet to be announced and further information will be available from the Department for Rural Affairs: Rural Payments Wales Divisional Offices.

How can I find out more?

The four **Welsh Archaeological Trusts** maintain regional **Historic Environment Records (HERS)**, which aim to record all of the known historic and archaeological features for their areas. Access to the HERs is free, but an appointment may be required.

The Royal Commission on the Ancient and Historical Monuments of Wales maintains the National Monuments Record of Wales (NMRW), which has a more complete record of historic buildings; the Defence of Britain project archive; original wartime and post-war RAF aerial photography of Wales. Access to the NMRW is free, but an appointment may be required.

You can also search for records on their online database **Coflein** (www.coflein.gov.uk) using keywords or interactive maps.

Historic Wales (jura.rcahms.gov.uk/NMW/start.jsp) is a map-based site that combines records from various sources.

Many military sites are not chronicled in formal records. The Welsh Archaeological Trusts and the Royal Commission always welcome information on new discoveries.

Useful Resources

Books

- A. Borg, *War Memorials* (London, 1991).
- W. D. Cocroft and R. J. C. Thomas, *Cold War: Building for Nuclear Confrontation 1946–1989* (Swindon, 2003).
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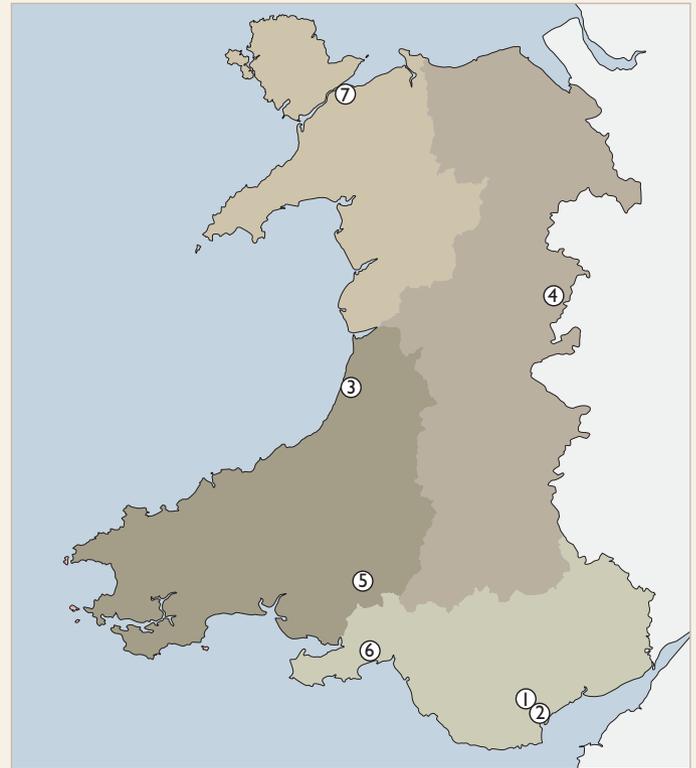
- The Council for British Archaeology's **Defence of Britain** project database is available at: www.britarch.ac.uk/projects/dob/index.html
- The **United Kingdom National Inventory of War Memorials** is available at: www.ukniwm.org.uk
- The **Royal Commission on the Ancient and Historical Monuments of Wales**: www.rcahmw.gov.uk
- **National Library of Wales**: www.nlw.org.uk
- **Fortress Study Group**: www.fsgfort.com



One of six target frames on a 600-yard rifle range surviving in thick undergrowth near Dolgellau, Gwynedd. Built in World War I and also used during World War 2, each cast-iron target frame enabled a target to be raised, fired at, lowered and repaired or replaced (© Medwyn Parry).

Map and Useful Addresses

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- ② **Environment Planning and Countryside
Divisional Area Offices**
Department for Rural Affairs
Welsh Assembly Government
Cathays Park, Cardiff CF10 3NQ
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www.wales.gov.uk/environmentandcountryside
- ③ **Royal Commission on the Ancient
and Historical Monuments of Wales**
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Tel 01970 621200
www.rcahmw.gov.uk
- ④ **Clwyd–Powys Archaeological Trust**
7a Church Street, Welshpool SY21 7DL
Tel 01938 553670
www.cpat.org.uk
- ⑤ **Dyfed Archaeological Trust**
The Shire Hall, 8 Carmarthen Street,
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- ⑥ **Glamorgan–Gwent Archaeological Trust**
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- ⑦ **Gwynedd Archaeological Trust**
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