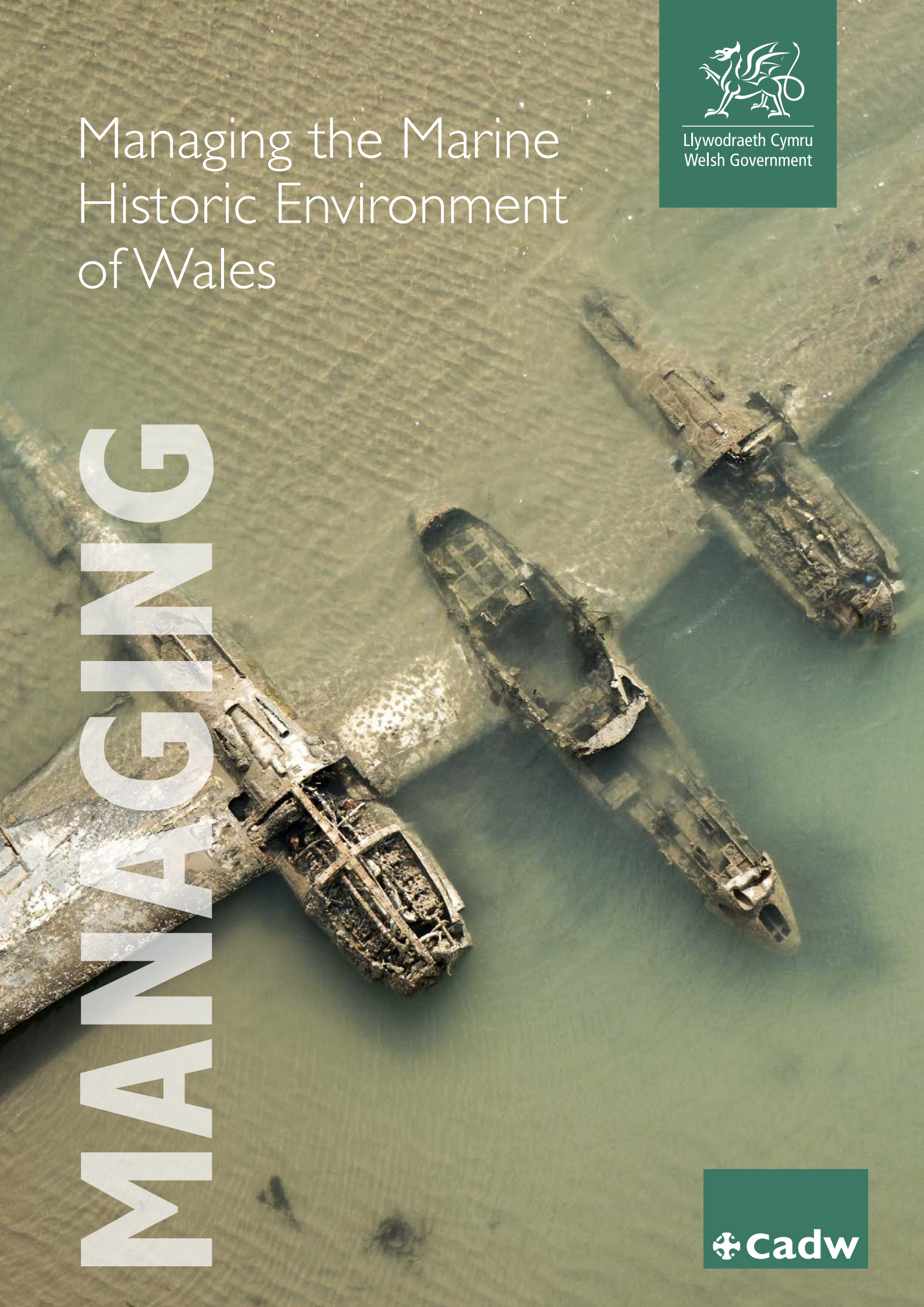
Managing the Marine Historic Environment of Wales



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Cadw is the Welsh Government's historic environment service working for an accessible and well-protected historic environment for Wales.

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.
This document is also available in Welsh.

Cover photograph: In 2019, this well-preserved Lockheed P-38 Lightning fighter, which came down off the North Wales coast in 1942, became the first crashed military aircraft in the UK to be protected as a scheduled monument. (Maid of Harlech Copyright Credit: © 2019 Joseph Mearman, SCSEE, Bangor University — All rights reserved).

Statement of Purpose

Managing the Marine Historic Environment of Wales explains the Welsh Government's approach to the marine historic environment and offers best-practice guidance for its protection and management. The marine historic environment can be defined as places under the sea and in the intertidal zone where evidence for human activity is preserved. Here, this means historic remains found below the high water mark.

The first part explains the different types of evidence, how to find it and what it can tell us about how people lived in the past. It also outlines some of the threats to the marine historic environment and opportunities for how it can be managed sustainably for the benefit of people now and in the future.

The second part sets out the broad legislative framework and policy towards underwater heritage in Wales, including the UK Marine Policy Statement[1] and the Welsh National Marine Plan.[2] It also sets out the responsibilities and approach of Cadw, the Welsh Government's historic environment service, towards the protection and management of the marine historic environment.

The third part contains practical advice and guidance for all those concerned with activities underwater. It explains how sea users, developers and public authorities can apply Cadw's *Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Conservation Principles)*[3] to make decisions about underwater activities that affect the marine historic environment.

Aimed at both public authorities and sea users — including recreational divers, archaeologists, shipping, fisheries, dredging, aggregate extraction, energy extraction and renewables and tourism — *Managing the Marine Historic Environment of Wales* will help everyone who has a role in protecting and managing the marine historic environment.

It will also be of interest to anyone who wants to learn about the archaeological evidence preserved under the sea or on the seashores of Wales.

Public authorities should use this guidance alongside the UK Marine Policy Statement, the Welsh National Marine Plan, the Welsh National Marine Plan Implementation Guidance,[4] *Planning Policy Wales*,[5] *Technical Advice Note 24: The Historic Environment*[6] and Cadw's *Conservation Principles* to inform their own policies and advice, and the statutory decision-making process. Information about marine licensing is available on the Natural Resources Wales website.[7]

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Fast Facts ¬

1 **Wales consists of about 21,000km^2 of land — and around 32,000km^2 of sea.**

2 **There are around 1,400 recorded wrecks in Welsh waters; currently 6 are designated as protected wreck sites.**

3 **The *Louisa* in Cardiff Bay, the iron tub boats in Burry Port harbour and the hulks at Ynyslas National Nature Reserve are protected as scheduled monuments.**

4 **Over 300 wartime military aircraft have been brought down at sea and have protected status.**

5 **In 2019, the remains of a Lockheed P-38 Lightning fighter that crashed off the North Wales coast in 1942 became the first military aircraft crash site in the UK to be protected as a scheduled monument.**

6 **There are 43 scheduled monuments in the intertidal zone.**

7 **There are 58 registered landscapes of outstanding or special historic interest in Wales — 25 border the coast.**

8 **Archaeologists, divers and developers must check what permissions and licences they may need when planning underwater activities that could affect the marine historic environment.**

Introduction ¬

Wales has been shaped by the sea. Sweeping beaches and forbidding cliffs, industrial ports and sheltered anchorages, seaside resorts and tidal lagoons all contribute to its unique character. Thousands of years of trade, exploration, defence, industry and leisure have left a physical mark in our marine historic environment and along our coast. Alongside this tangible evidence, a vibrant heritage of language, traditions and beliefs also survives.

Mention underwater archaeology and most people think of shipwrecks that only intrepid divers can explore. Although shipwrecks capture the imagination, they are a small part of Wales's marine historic environment. Just as remarkable are our submerged and intertidal landscapes, which can date back thousands of years. Traces of people from this distant past survive as footprints fossilised in peat or clay deposits alongside timber trackways and settlements.

The boundary between sea and land is fluid and changes over time. The extensive Severn Levels are a fragile landscape created when people reclaimed the land from the sea during Roman times and later. In contrast, large parts of Cardigan Bay were once dry land and then drowned under the sea, giving rise to the legend of Cantre'r Gwaelod — the lost land. Innovative seabed mapping has begun to highlight the potential for fully submerged landscapes to yield remarkable archaeology.

But just as the historic environment is not separate from the natural environment, so the sea and the land are not separate from one another. The shelter provided by a headland or an island from the prevailing wind may have determined where ships and boats anchored. The way a high tide filled an estuary allowed ships to dock in harbours where maritime communities lived and traded. Coastal fortifications relied on the sea for supplies and made use of uninterrupted viewpoints for defence or attack, and generations of mariners looked to the land for terrestrial landmarks for navigation. These viewpoints have value today, too, often as picturesque and popular locations.

We should cherish this maritime history and culture and be proud of it. It gives us a sense of place and helps shape our identity. It can also make an important contribution to the social, economic, environmental and cultural well-being of Wales through many different activities including tourism, learning and volunteering, and the regeneration of coastal areas. Together, these benefits can help create the Wales we want in the future by meeting the well-being goals set out in the Well-being of Future Generations (Wales) Act 2015.[8] This means that the evidence of our past preserved under the sea and on the seashore is every bit as valuable as that preserved on land and deserves equal respect and protection.

But the pressures on our seas and on our coast are increasing. There are demands from many sectors ranging from energy generation and fishing through to tourism and recreation. Balancing the socio-economic benefits of these industries with their potential impact on the whole of the marine environment is not easy and requires a holistic approach to marine planning.

By understanding the marine historic environment of Wales, why it is important and how it is protected, we can look at the impact of our actions and make decisions about how best to manage it sustainably for the benefit of future generations.

1. The Marine Historic Environment of Wales ¬

1.1 The Marine Historic Environment and Why it is Important ¬

The marine historic environment can be defined as places under the sea and in the intertidal zone where evidence for human activity is preserved. Here, this means historic remains found below the high water mark. This can include the upper tidal reaches of rivers as well as the coast itself.

Many built structures can be found in this zone — for example, piers, harbours and breakwaters — and these are important for understanding and appreciating the marine historic environment. Some of these structures have special national interest or importance and may be designated as scheduled monuments, listed buildings or be included in conservation areas. Many others do not have formal designation, but still make a significant contribution to local distinctiveness and can contain valuable information about the past.

You can find out more about the legislation that protects the marine historic environment in section 2 and about the permissions that you may need if you want to visit, investigate or develop it in section 3.

1.1.1 Shipwrecks and Aircraft ¬

Shipwrecks are sometimes described as time capsules, where all the objects relating to the lives of the crew and passengers, and all the elements of the working ship were in use right up to the moment of loss. Where all this material has been preserved just as it was at that moment, an extraordinary amount of information can be revealed about the people on board and the technology of the ship. As the wreck changes over time under the influence of physical and biological forces, some types of material may be lost. However, the oxygen-free (anaerobic) environment of seabed sediments means that some artefacts and structures can be very well preserved.

Shipwrecks hold evidence of dramatic stories of rescues, tragedy and heroism, human error and terrifying natural forces. Where were these ships going, what were they carrying and why were they lost? These are questions that can be answered by careful recording and study of the wreck site and all that it contains.

Sometimes a wreck is all but destroyed by natural processes or as a result of earlier attempts to salvage goods and materials. However, the wreck site might still be marked by a mound of cargo, the stones from the ship's ballast, or some of the larger objects such as anchors or cannon.

Six of Wales's shipwrecks are designated under the Protection of Wrecks Act 1973[9] because they contribute significantly to our understanding of the past on account of their historical, archaeological or artistic importance. These are:

- The Smalls Viking wreck site, Pembrokeshire
- The *Mary*, Skerries, Anglesey
- Pwll Fanog wreck, Menai Strait, Anglesey
- Tal y Bont wreck, Barmouth, Gwynedd
- *The Diamond*, Barmouth, Gwynedd
- *Resurgam* submarine, Rhyl, Denbighshire.[10]

You need a licence to dive, visit, survey, recover artefacts, excavate or obstruct access at these wrecks (see section 2.2.2).

Three sites are protected as scheduled monuments under the Ancient Monuments and Archaeological Areas Act 1979:[11]

- The *Louisa* in Cardiff Bay
- Iron tub boats in Burry Port harbour
- The hulks in the intertidal area at Ynyslas National Nature Reserve.[12]

You can visit scheduled sites on a 'look but do not touch basis'; anything more requires scheduled monument consent (see section 2.2.1). To find out more about the differences between a protected wreck and a scheduled monument, see section 2.2.2.

As well as shipwrecks, aircraft crash sites can be preserved underwater. Many were military aircraft. Far from being a peaceful backwater, Wales saw its fair share of militarisation during both the First and Second World Wars. Aircraft operating to or from airfields or seaplane bases along the coast crashed in Welsh waters during military operations. These included pilot training, flight testing and aircraft preparation as well as frontline roles in bombing raids, convoy protection and fighter cover for UK cities like Liverpool and Manchester.

Aircraft crash sites share many characteristics with shipwrecks in that the whole craft was usually lost in a single event. As with shipwrecks, we are left with the 'time capsule' effect — a moment and a story captured and preserved. Markings on the wreckage and patterns of debris scatter can be recorded to help analyse the way in which the aircraft crashed into the sea and sank. This archaeological information, combined with documentary evidence of flight plans and weather records, make it sometimes possible to tell the entire story of the aircraft — its makers, its service history, its crew and its loss.

Often downed aircraft break up scattering remains over a wide area of the seabed. This can make them difficult to identify by geophysical survey. Many crash sites are also military graves.

All military aircraft crash sites and some military wrecks are protected by the Protection of Military Remains Act 1986.[13] The reason for this designation is to protect the last resting place of UK service personnel (or other nationals); designated vessels do not need to have been lost during wartime. The Act defines two types of designation:

- protected places which can be visited by divers on a look, don't touch basis but where it is an offence to disturb or remove anything
- controlled sites where all operations including diving require a licence from the Ministry of Defence (see section 2.2.3).

As well as statutory designations, shipwrecks and aircraft crash sites that are over 100 years old fall under the aegis of the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage[14] (see section 2.2.6).

1.1.2 On Land and at Sea ¬

The sea is and has been a place of work for fishermen, mariners and the armed forces for many hundreds of years. Their activities have left physical traces which connect the sea with the land along with traditions, tales and beliefs that have become part of our culture and language. Natural features, used and appreciated by people, have become part of the way the sea is understood and described, mapped, named and exploited. For example, reefs that have proven hazardous for ships, areas of seabed that form good fishing grounds, or distinctive features of the coastal landscape that have been used by generations of mariners as way markers reflect this relationship between people and place.

As an island nation, Britain has long been dependent on the sea as a key part of its defences. For hundreds — and sometimes thousands — of years, defensive structures have been placed on, in or next to the water. Defence of the nation creates a unique link between sea and land. The nineteenth-century forts along the Milford Haven waterway, for example, were constructed to defend against a French naval attack which never came. Their carefully designed interconnecting sightlines and firing arcs form a complex network of defences. These were intended to prevent enemy ships from getting within firing range of the Royal Naval Dockyard at Pembroke Dock. As naval fire power improved, so the lines of defence needed to extend further out along the coast.

The development of the Second World War Chain Home Low radar system saw the construction of unprepossessing concrete buildings along the coast to prevent enemy aircraft from coming in 'under the radar'. Further offshore, minefields were laid to prevent U-boats from entering Welsh waters and minesweepers worked tirelessly to find safe passage for shipping convoys. Today, occasionally, unexploded or spent mines are washed ashore demonstrating that evidence of the history of warfare still lies on the seabed.[15]

To really understand the remains we find offshore, we need to understand their relationship with defence systems on land, as well as the international dimension of the conflicts that they represent.

1.1.3 Landscapes Lost … ¬

Looking back 800,000 years, there was no Wales and no British Isles. A single land mass united Europe, Asia and Africa. Over the following hundreds of thousands of years, at least four successive ice ages shaped the continents. During the warmer periods between the ice ages, our early ancestors made their homes in Europe. Around 230,000 years ago, Neanderthal women and men *(Homo neanderthalensis)* found their way to Wales. They were probably in search of familiar prey and living conditions as they followed the ice sheets retreating northwards across Europe. Ultimately, however, Neanderthal people could not adapt easily to a changing climate and were replaced by other species of human, including our own *(Homo sapiens)*.

By around 12,000 years ago, the last ice age was coming to an end. The melting glaciers and ice sheets caused sea levels to rise and the vast, low-lying coastal plains started to disappear underwater. The higher temperatures meant that new vegetation could grow, which gave rise to a much richer assortment of plants and animals. We find evidence from this time — the Mesolithic or middle stone age — of communities living off the coast and its rich pickings. The archaeological remains are slight and often subtle. Mesolithic communities were hunter-gatherers, moving through the landscape and using different camps at different times of year. Evidence of structures — huts or shelters — is very rare and precious, and exceedingly vulnerable. The most common way of 'finding' our Mesolithic ancestors is through their flint tools.

Once in a while though, we get remarkable glimpses into their world. Imagine someone walking through wet clay on the foreshore leaving clear impressions of their feet. On a hot day these footprints dry and gradually the impressions are filled with softer sands and mud. The footprints gently fade from view and from memory. Remarkably, thousands of years later, a high tide or a storm will occasionally scour out the sand and mud leaving the footprints visible — an exposed and evocative reminder of the people who walked here before us. Some of these footprints have been found in Wales and they are rare and fragile reminders of our distant past.

Today, at locations right around the coast of Wales, it is possible to see intriguing remnants of forests — tree stumps and branches — in intertidal flats. Until a pioneering study in 1913, these forests were thought to be evidence of the biblical flood and called 'Noah's Trees'. The study argued that they were evidence of sea-level rise — something we now know to be associated with climate change. Radiocarbon dates show that some of these trees died around 5,500 years ago; others died up to 2,000 years later. Remains of willow, hazel, birch, oak and pine give us some idea of the type of forests that once covered these areas. Occasionally, remains of animals are found in these submerged forests. Antler and bone from deer, aurochs, bear and pig give us an insight into the environment at this time.

These drowned landscapes are remarkable survivals in their own right but they also contain evidence of past environments and the ways in which people used them. Alongside pollen, plants and peat deposits, there is the potential to find preserved elements of human culture such as dugout canoes, paddles and fish traps.

1.1.4 Landscapes Found … ¬

Although some of Wales's landscapes have been lost to the sea, other areas have been reclaimed from it. Within the open, flat area of the Gwent Levels, for example, human activity has long been governed by the huge tidal range of the Severn Estuary, which has varied since the last ice age. In response, people have settled, enclosed and drained the wetlands resulting in an unparalleled landscape that reflects hundreds of years of work keeping back the sea. Small areas of raised ground became the focus for occupation and activity from the prehistoric period onwards. Remarkable archaeology has been discovered here and there is undoubtedly much more.

Landscapes like the Gwent Levels extend out beyond the intertidal area under the sea and, until recently, were thought lost to history. But with technology, we are now re-discovering lost landscapes buried in seabed sediments. This can help us gain a better understanding of the ways in which the Welsh coastline is continuing to evolve.

Buried river channels (palaeochannels) can be identified, along with areas that would have been islands of higher ground, or features like lakes, valleys or low hills. Getting a picture of these lost landscapes helps us to understand how prehistoric hunter-gatherers would have used them. Lakes and rivers, for example, would have been a focus for fishing activities and have the potential to contain environmental evidence and organic artefacts. Archaeologists can also look at the pattern and distribution of prehistoric sites on land and use this evidence to predict where sites may be found underwater.

1.2 Discovering the Marine Historic Environment of Wales ¬

1.2.1 Looking for Sites and Submerged Landscapes ¬

How do we know what is out there under the waves? How do we find shipwrecks and map ancient landscapes? Whilst historic sites on the foreshore can be seen at low tide, underwater sites are invisible to most of us, but there are techniques which archaeologists use to locate and identify them.

Almost as soon as people first wondered whether they could find a way to breathe underwater, they began to wonder what they might find there; this is really the beginning of marine archaeology. With the invention of helmet diving in the early nineteenth century, divers were able to make underwater inspections. For example, the Deane brothers dived the wreck of the *Royal George* in 1832 and four years later worked on the wreck of the *Mary Rose* which led to the recovery of some of the ship's cannons for the Board of Ordnance.[16] The breakthrough came after the Second World War, thanks to the scuba diving equipment developed by Emile Gagnan

and Jacques-Yves Cousteau. Modern underwater diver tracking and communication systems now allow diving archaeologists to locate and describe artefacts on the seabed very quickly and build up a site plan.

Much of the early work concentrated on finding shipwrecks by taking written, verbal or illustrative accounts of a sinking and trying to work out the location of the wreck. This was immensely challenging. The loss of a vessel was often described in vague terms and a lot of detective work, and a lot of patience were required to pinpoint the location more precisely. Today, research not only aims to work out the likely location of the wreck, but also to find out as much as possible about where the ship was built, its service life, where it was coming from, its cargo and who was on board. This can be very rewarding and often involves both local and family history research.

Other shipwrecks are found by chance, when the seabed is being mapped in advance of offshore development or when divers are asked to investigate a seabed obstruction. *Resurgam*, the world's first mechanically powered submarine which sank off the coast of Rhyl, was discovered when a fishing net caught on the wreckage and a diver was asked to untangle it.

As the importance of the marine historic environment has become better known and understood, and technology has improved, systematic assessment of larger areas of the seabed is more feasible. Today, the use of underwater geophysical survey techniques to look at larger areas of the seabed is common practice.

New information is coming to light all the time which means that many historic assets may not be protected by formal designation. In fact, the proportion of sites which are formally designated is tiny and the importance of most underwater assets is not yet known or understood. It is therefore essential that all assets are considered in decision making. This is because the absence of designation cannot be taken to imply that undesignated assets are automatically of lesser significance; simply that their significance has yet to be established (see section 3.3).

Magnetometry

Magnetometers detect variations in the earth's magnetic field. These may be caused by iron or steel material on or under the seabed, which is why a magnetometer can be used to help find wrecks or other objects containing these metals.

Side-scan Sonar

One of the most common forms of underwater survey, side-scan sonar, uses a device which emits pulses of sound fanned out towards the seabed. The sound is bounced back from the seabed — or from any object on it — and these acoustic reflections can be used to build up a picture of the surface of the seabed. Objects are highlighted, as if caught in a beam, and their shadows are used to calculate the height of the objects above the seabed.

Side-scan sonar is often used in combination with two other types of survey — bathymetry and sub-bottom profiling.

Bathymetry

Bathymetry is the study of the depth and profile of the sea. Bathymetric surveys gather information about the depth of water which is used to produce a map of the changing profile of the surface of the seabed. These surveys are equivalent to a topographic survey on land.

Bathymetric survey works by sending sonar 'pings' from a vessel down to the seabed and measuring the time taken for the echoes to return. A boat-mounted Global Positioning System (GPS) allows the different depth readings to be located accurately. Single beam or multibeam sonar can be used, but multibeam has the advantage of gathering many thousands of data points which can be used to create three-dimensional pictures of the seabed.

Sub-bottom Profiling

Sub-bottom profiling works by sending a low-pitched sound into the seabed from a device towed in the water or mounted on a pole. The low frequency 'boomer' penetrates the seabed and reflects differently according to what it hits — sand, rock, gravel or archaeology. Sub-bottom profiling allows the layers below the surface of the seabed to be analysed so that buried features and geological layers that may contain evidence of former landscapes can be identified. Bathymetry and sub-bottom profiling are often used together to identify and map submerged landscapes.

Sub-bottom profiling and other survey techniques which use sound can have impacts on marine mammals and birds, so it is important to contact Natural Resources Wales for best-practice guidance in advance.

These related but different techniques are very often used together to build up a detailed picture of an area of the seabed and locate traces of shipwrecks, aeroplanes or lost cargo. When carried out on a much larger scale, very similar geophysical techniques can be used to look for submerged landscapes.

Once the data has been collected, it needs to be interpreted by people familiar with looking at geophysical surveys. They will also take into account documentary evidence and archaeological sites recorded in any previous studies. Finished studies are stored with the National Monuments Record of Wales and in local historic environment records.[17] They are usually publicly accessible.

1.2.2 Finding Out More and Getting Involved ¬

Although not many people are able to visit shipwrecks and aircraft crash sites under the water, the photographs, videos, surveys and plans brought back to the surface by others allow everyone a chance to get involved in understanding and interpreting these sites.

Without even putting a toe in the water, you can find out more about our marine historic environment. Initial investigations are more likely to be carried out from an archive or a computer than from a boat. Whether you want to know more about a particular site or just find out about your local area, there are plenty of sources of information to investigate. The list below will help to get you started.

Cadw

Cadw's Cof Cymru — National Historic Assets of Wales holds the records for designated and protected sites on land and in Welsh waters.
https://cadw.gov.wales/advice-support/cof-cymru

The Royal Commission on the Ancient and Historical Monuments of Wales

The Royal Commission on the Ancient and Historical Monuments of Wales is responsible for survey and investigation in Wales, including underwater sites. It maintains the National Monuments Record of Wales and manages the Historic Wales portal as an online gateway to all the national and regional records about the historic environment in Wales.
https://rcahmw.gov.uk/
www.historicwales.gov.uk

The National Monuments Record of Wales

The National Monuments Record of Wales is the national archive for information about the historic environment of Wales. It is maintained by the Royal Commission on the Ancient and Historical Monuments of Wales and includes the most comprehensive record of underwater sites in Wales. Online public access is provided through Coflein.
www.coflein.gov.uk

The National Library of Wales

The National Library of Wales holds a wide variety of archives, including local and national newspapers, which can be especially useful when researching shipwrecks.
https://www.library.wales/

Historic Environment Records

The statutory historic environment records for Wales contain information about all recorded archaeological and historic sites in Wales. They are maintained by the Welsh archaeological trusts and can be accessed through Archwilio. Archwilio is free to use for personal and research purposes, but it should not be used for development control or commercial projects. The Welsh archaeological trusts should be contacted directly for historic environment record information for development control and commercial projects.
https://www.archwilio.org.uk/arch/

Archives Wales

Archives Wales is an online catalogue which allows a single search to obtain information about more than 7,000 collections of historical records in the holdings of 21 archives in Wales.
https://archives.wales/

UK Hydrographic Office

The UK Hydrographic Office has an extensive archive of surveys, admiralty charts, correspondence, photographs, paintings and miscellaneous documents. Many of their early charts are now being transferred to The National Archives.
www.gov.uk/the-ukho-archive
www.nationalarchives.gov.uk

Marine Antiquities Scheme

The Marine Antiquities Scheme records finds made by divers, fishermen, boat operators and coastal visitors in England and Wales, and allows public access to the data for research.
https://marinefinds.org.uk

Nautical Archaeology Society

The Nautical Archaeology Society provides help, resources, training and events for everyone interested in underwater and coastal archaeology. A good starting point to get hands-on with our marine historic environment is to attend one of their courses. The Nautical Archaeology Society also runs an 'adopt a wreck' scheme, and encourages groups or individuals to research and monitor wrecks local to them.
www.nauticalarchaeologysociety.org

Wales Marine Planning Portal

The marine planning portal for Wales allows anyone to view maps online which show the distribution of human activities and natural resources in Welsh seas. The portal is an interactive planning tool to support the marine planning process and will make available the latest information which public authorities may consider as a 'relevant consideration' in planning decisions.
http://lle.gov.wales/apps/marineportal/#lat=52.5145&lon=-3.9111&z=8

1.3 Opportunities and Threats ¬

Out of sight, out of mind. For many years, this was very much the attitude towards the marine historic environment. Shipwrecks were the long-standing preserve of treasure hunters and explorers, and little was known about submerged landscapes. Today, we are more aware of the historical importance of these sites and the greater opportunities to understand and study the marine historic environment. We are also more aware of the threats to their survival.

1.3.1 Natural Processes ¬

Underwater sites are exceedingly vulnerable. They are affected by natural processes — the rhythm and strength of the tides and currents, the occasional violence of storms, and sometimes the actions of living creatures which make wrecks their homes and hunting grounds.

Many coastal structures stand within one of the harshest environments in Wales — the intertidal zone. The constant cycle of wetting and drying, combined with the effects of salts in the water can cause normally robust materials to corrode very quickly. Structures at the mercy of winds and tides can be exposed to the full force of severe storms.

Coastal surveys and the modern techniques of marine archaeology lead to a greater understanding of the character of the local marine historic environment and how it is affected by these processes.

1.3.2 Climate Change ¬

Current climate change predictions suggest that sea levels will continue to rise and storms are likely to become more frequent. The acidity of the seas is increasing and, as sea temperatures rise, there is a risk of invasive species that are harmful especially to wooden wrecks and structures. Our marine and coastal historic assets will have to withstand ever stronger pressures from the sea.[18]

As we respond to these pressures, we alter our environment. The construction of sea defences and breakwaters can cause direct damage to vulnerable sites, but it can also have more subtle effects which are harder to predict. Changes to sediment movement patterns can cause intertidal sites to be buried under re-deposited sand or silt, or exposed as material is scoured away. For structures built on sands or mud, the removal of the soft substrate can undermine them resulting in damage or, sometimes, complete collapse.

Severe storms can have an impact on local beaches, revealing wrecks and structures that have never been seen before. These are often reported by members of the public, which allows historic environment records to be enhanced and wrecks identified for further research or potential protection.

Storms and changing weather patterns can also cause damage to coastal historic monuments through erosion. The loss of historic assets is likely to increase in the future as a result of climate change. The CHERISH project is a collaboration between Wales and Ireland and is examining and documenting the impact of climate change on coastal and underwater historic assets.[19]

1.3.3 Development ¬

Increasingly, underwater sites are vulnerable to development. Offshore power generation, cable laying, dredging and marina construction, for example, all have the potential to damage the marine historic environment. The damage can be direct, such as physical disruption caused by piling through a site or the clearance of areas of the seabed in advance of construction. Secondary effects, such as an increase in footfall in coastal areas, may also contribute towards erosion. Development may also have indirect effects, altering patterns of sediment deposition, for example, which can impact historic assets outside the development footprint.

Conversely, development can have positive effects through the preservation of archaeology in place, the discovery of new information and opening up public access. It is especially helpful if developers make their seabed data publicly available so that it can be used to improve our understanding and care of both the natural and historic environments.

Archaeological protocols for commercial activity mean that finds from the dredging, fishing and offshore renewables industries are now routinely reported and recorded.[20] However, the amount of material recovered and reported will depend on the nature of the commercial activity, the machinery used and the substrate. In Wales very few finds are reported, but this does not necessarily mean that archaeological material is not present; instead, it may reflect the types of industrial activity taking place.

It is essential to remember that the boundary between land and sea is changing and shifting. Relict landscapes can extend inland or out under the sea, depending on the changes in climate and sea level which have taken place since they were exposed and in use. This means that developments which span from the sea to land, such as the laying of pipelines and cables, could cause damage to buried landscapes that may not be immediately obvious.

You can find out more about managing the effects of development in section 3.2.

1.3.4 Salvage, Treasure Hunting and Archaeology ¬

Submerged sites are also vulnerable to the actions of people. Their remote locations and the difficulty of reaching them make these sites difficult to monitor and police. As a result, many sites have had items removed — either as souvenirs or to be sold for profit.

Salvage, treasure hunting and archaeology can sometimes look similar, but there are fundamental differences between them which are explained below. However, each may require formal consent and a marine licence (see section 3) and all artefacts recovered from any of these activities must be reported to the Receiver of Wreck (see section 2.2.4).

Salvage is mainly concerned with recovering the vessel and/or its cargo without necessarily any archaeological investigation. It can involve re-floating or towing a vessel to shore or, sometimes, simply moving it to clear a shipping channel. Valuable parts of the vessel or its cargo recovered for the owner or insurance company are often sold to help offset the financial loss. Salvage operations are often carried out on relatively modern wrecks.

Treasure hunting describes the search for vessels and objects which have commercial value. It is normally concerned with the sale of high-value items, which may include antiquities. Treasure hunters may carry out substantial background research into the history and location of a shipwreck, just as an archaeologist does, but the primary motivation is commercial gain rather than an interest in the past. Very often treasure hunters will only recover those objects or parts of the vessel which have a perceived monetary value, so the recovery can be incomplete or cause damage to the remaining material. Recovered objects often 'disappear' into private collections making them unavailable for study, or for others to learn from and appreciate.

Archaeology is the study of human history through the excavation of sites and the analysis of artefacts and other physical remains. Archaeologists study wrecked vessels for information and not their monetary value. Where objects are recovered, an archaeological programme will include provision for the conservation, maintenance and long-term storage of the object, and its publication. It is also important that objects are publicly accessible, in a registered museum collection for example (see Annexes 2 and 3).

The Chartered Institute for Archaeologists sets out a Code of Conduct[21] for its members and publishes standards and guidance which represent best practice for all archaeologists. The annex to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage also sets out the ways in which archaeological investigations should be carried out (see Annex 1).[22] Although the UK has not ratified the convention, it has adopted the principles set out in the annex as best practice in the management of underwater cultural heritage.[23]

The convention strongly advocates responsible access to our underwater cultural heritage. However, that access must go hand-in-hand with protection and conservation; cultural material should not be removed or disturbed for commercial gain.

If objects are removed from shipwrecks without proper archaeological recording, their context is lost and this diminishes our understanding of the site and leaves less for others to enjoy and to study further. In all cases, objects brought ashore, even from international waters, are classed as 'wreck' and must be reported to the Receiver of Wreck under the Merchant Shipping Act 1995.[24]

Recreational divers often play an important role in locating and identifying sites. They also help manage protected sites through reporting on a site's condition and access arrangements, and through their own investigations into the site's history and significance.

Stray finds are often recovered accidentally by divers, fishermen, boat operators and coastal visitors in England and Wales. The Marine Antiquities Scheme[25] provides another way to record these finds, both protecting and improving our knowledge of the underwater cultural heritage. The scheme allows finders to learn more about their discoveries, helps to characterise the archaeological nature of the marine environment and allows public access to the data for research.

1.3.5 Public Access ¬

It is important to engage the public with the marine historic environment and raise awareness — especially through new technology — to allow non-divers and non-specialists to access information. Coastal survey projects such as Arfordir[26] run by the Welsh archaeological trusts and U-boat Project Wales 1914–18: Commemorating the War at Sea[27] run by the Royal Commission on the Ancient and Historical Monuments of Wales have not only engaged new audiences but provided valuable information to add to the historic environment record.

The marine historic environment is an asset of social, economic and environmental value and its sustainable management can contribute towards achieving the goals set out in the Well-being of Future Generations (Wales) Act 2015.[28] By engaging people with the marine historic environment in a responsible fashion, we can help to ensure that it is appreciated and understood, and can be managed sustainably for the benefit of present and future generations.

The seas and coastlines of Wales draw both visitors and residents alike. The marine historic environment is an important part of what people want to see. Pressures of footfall, unsympathetic coastal development and a demand for a greater variety of recreational activities can make historic assets very vulnerable to damage. This risks degrading and changing the very coastal environment that we cherish. By contrast, informed and responsible management can enhance both the environment and the visitor experience.

2. Legislation and Policy Framework ¬

2.1 Protecting the Marine Historic Environment of Wales ¬

The marine historic environment should be managed and protected to the same standard as the terrestrial historic environment.

Although covered by different legislation, the same principles should be applied when considering changes to the historic environment both above and below mean high water so that there is a seamless approach to management and protection between land and sea.

2.1.1 Marine and Coastal Access Act 2009 ¬

The Marine and Coastal Access Act 2009[29] set out a requirement for a national marine plan and established the Welsh Ministers as the marine planning authority for Wales. Marine planning aims to ensure that development below mean high water spring tides is sustainable and considered, and that it contributes towards 'blue growth'.

The Marine and Coastal Access Act 2009 also introduced a requirement for marine licences for many types of activity below the mean high water springs mark. Natural Resources Wales is responsible for considering applications for marine licences in Wales on behalf of the Welsh Ministers. It considers a range of factors, including the impact of any proposed activity on the marine historic environment.[30] Enforcement of licence conditions or enforcement actions related to non-compliance with a marine licence is the responsibility of the Welsh Government.

Under the Wales Act 2017, oil and gas licensing in onshore areas and internal waters (intertidal areas, estuaries and coastal inlet areas) is devolved to Welsh Government. Beyond these limits, policy and management of oil and gas exploration and associated licensing and environmental regulation is administered by the UK Oil and Gas Authority (OGA) and the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED)[31] respectively. The latter is responsible for issuing licences in respect of decommissioning operations and use of explosives for ordnance clearance or during decommissioning.

Marine Licensing in Wales

Many types of activity require a marine licence. Natural Resources Wales can advise whether you will need one for your project.

Some archaeological and research activities are exempt from the need for marine licensing.[32] These may include deployment of temporary markers, or identifying markers within an area designated under the Protection of Wrecks Act 1973 (1).

Other, small-scale activities (such as the recovery of seabed cores and small grab samples, for example) are considered to have a very low risk of damage to the environment and go through a shortened, simplified licensing process. Further information on which activities fall under this 'Band 1' category is available from Natural Resources Wales.[33]

Even where activities are exempt from licensing, or are considered to be low risk, there may still be restrictions in place. You must check with Natural Resources Wales what these restrictions are and ensure you have complied with them.

2.1.2 UK Marine Policy Statement and the Welsh Historic Environment ¬

The 2011 UK Marine Policy Statement[34] provides the framework for the Welsh National Marine Plan and *Managing the Marine Historic Environment*, and sets out five high-level objectives for marine planning:

- achieving a sustainable marine economy
- ensuring a strong, healthy and just society
- living within environmental limits
- promoting good governance
- using sound science responsibly.

The UK Marine Policy Statement includes a clear vision for the marine historic environment. It acknowledges both the finite and irreplaceable nature of historic assets and their cultural, social, economic and environmental value, which can be a powerful driver for economic growth, attracting investment and tourism. It states that historic assets should be enjoyed for the quality of life they bring to present and future generations, and that they should be conserved through marine planning in a manner appropriate and proportionate to their significance.

2.1.3 Welsh National Marine Plan ¬

The Welsh National Marine Plan[35] has been developed alongside marine planning in England, Scotland and Northern Ireland. It is guided by the 2011 UK Marine Policy Statement but has a distinct Welsh context including delivering the legislation to support sustainable development (Well-being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016).[36]

The plan sets out an integrated, evidenced and plan-led approach to achieving its vision of clean, healthy, safe, productive and biologically diverse Welsh seas. It supports the move towards integrated marine governance and sets out both general cross-cutting and sector specific policies relating to the future use of seas within the plan area. The plan covers both Welsh inshore waters (out to 12 nautical miles) and offshore waters (beyond 12 nautical miles) and extends up to the level of mean high water spring tides. This means that it will overlap physically with terrestrial plans, which generally extend to mean low water spring tides, helping to facilitate integration between land and sea planning. The plan is supported by the Welsh National Marine Plan Implementation Guidance.[37]

Developers and other applicants should shape proposals and licence applications in accordance with the plan and implementation guidance. Public authorities will assess whether proposals are in accordance with the plan and implementation guidance when taking decisions on whether to grant consent. The plan should also be used by other users to understand the Welsh Government's policy for the sustainable management of those Welsh seas that lie within the plan area.

The plan sets out 13 plan objectives, supporting the five high-level marine objectives in the UK Marine Policy Statement. These objectives are supported by general cross-cutting policies setting out key economic, social, environmental, governance and sound use-of-science considerations which should be applied in the development of and decision making on all proposals. Sector specific objectives and policies to support and safeguard key sectors, including the tourism and recreation sector, sit alongside the general cross-cutting policies.

Plan objective 7 applies specifically to the marine historic environment.

Objective 7: support enjoyment and stewardship of our coasts and seas and their resources by encouraging equitable and safe access to a resilient marine environment, whilst protecting and promoting valuable landscapes, seascapes and historic assets.

While all general cross-cutting policies should be addressed when developing and taking decisions on proposals, Policy SOC_05 has specific focus on historic assets, supporting objective 7.

SOC_05: Historic Assets

Proposals should demonstrate how potential impacts on historic assets and their settings have been taken into consideration and should, in order of preference:

a. avoid adverse impacts on historic assets and their settings; and/or

b. minimise impacts where they cannot be avoided; and/or

c. mitigate impacts where they cannot be minimised.

If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.

Opportunities to enhance historic assets are encouraged.[38]

Policy SOC_05 recognises the importance of appreciating and protecting our coastal and underwater historic environment and making it accessible to present and future generations. Development and use of the marine environment can, however, affect historic assets both directly and indirectly, including: loss of, or damage to, historic material; alteration to the setting of historic assets which can positively or negatively affect the ability to understand and appreciate them or through burial or exposure (e.g. due to changing patterns of sediment movement).

Under Policy SOC_05 proposals should therefore demonstrate appropriate consideration of the potential impacts of developments and activities on historic assets and their settings in order to prevent substantial loss of or harm to assets as a result of inappropriate or uninformed development. This policy also aims to ensure that opportunities to better understand the significance of historic assets are encouraged and promoted. Policy SOC_05 should therefore contribute towards sustainable development by helping to protect our historic environment.

Two further general cross-cutting policies consider designated landscapes (Policy SOC_06) and seascapes (Policy SOC_07), including their historic component.

The plan recognises that the historic environment can drive sustainable economic development, attracting tourism and providing enjoyable places in which to live and work. It is important that the historic environment is appreciated, protected and accessible for present and future generations. Historic assets of national significance are protected through designation, such as scheduled monuments, protected wreck sites and listed buildings (see section 2.2). Areas of distinctive local character and historic significance may be designated as conservation areas. Historic parks and gardens may be included on the statutory register of historic parks and gardens in Wales. There are also relevant non-statutory designations which are material considerations in the terrestrial planning system, such as World Heritage Sites and landscapes of outstanding or special historic interest. However, the absence of designation should not be taken to imply that undesignated historic assets are necessarily of lesser significance. The challenges of underwater investigation mean that the significance of many historic assets has not been formally assessed due to lack of access.

Cadw provides advice on development and use of the marine environment in relation to historic assets.

Understanding the significance of historic assets is key to informing decisions about future management and whether protection (up to and including designation) is appropriate under law and policy. Any opportunities to better understand the significance of historic assets should be encouraged and promoted. This implements the Welsh Government's approach to the sustainable management of the historic environment in Wales and aligns with Cadw's *Conservation Principles*,[39] which sets out guidance on evaluating and describing the significance of historic assets. Together, they will bring about a more integrated system of consenting and licensing developments and projects in the marine and terrestrial environments.

The implementation of these policies is considered further in section 3 — managing the marine historic environment — and in the Welsh National Marine Plan Implementation Guidance.[40]

2.1.4 Marine Character Areas ¬

Working on behalf of the Welsh Government, Natural Resources Wales carried out a study to identify the character of Wales's seascapes at a broad scale. Seascapes, like landscapes, reflect the relationship between people and place; marine character areas highlight the key natural, cultural and perceptual influences that make the character of each seascape distinct and unique.

Seascapes are about linking people and their cultures, and places and their natural resources. This is important as it allows us to understand and appreciate sense of place and local distinctiveness.

There are 29 marine character areas in Welsh territorial waters and there is spatial information and a description for each of them. This forms part of the information underpinning the Welsh National Marine Plan. Marine character areas and the effects of development on them should be considered when drawing up and assessing project proposals. Further information can be found on the Natural Resources Wales website.[41]

2.2 Protecting Marine Historic Assets in Wales ¬

As section 1 has shown, the marine historic environment includes shipwrecks, hulks, built structures and individual artefacts. It also includes landscapes — those which are now submerged as well as those which have been reclaimed — and buildings or structures which depend on the sea for their function or backdrop.

Individual historic assets in the marine environment can be protected through a number of pieces of legislation:

- Ancient Monuments and Archaeological Areas Act 1979
- Protection of Wrecks Act 1973
- Protection of Military Remains Act 1986
- Merchant Shipping Act 1995
- Planning (Listed Buildings and Conservation Areas) Act 1990.

2.2.1 Ancient Monuments and Archaeological Areas Act 1979[42] ¬

The Ancient Monuments and Archaeological Areas Act 1979 provides for the scheduling of monuments of national importance.[43] This can include any thing, or group of things, which evidences past human activity. Underwater sites within the 12 nautical mile limit of territorial waters can be protected through scheduling as well as those up to and above high water.

If a wreck has been scheduled, public access to it through diving is permitted on a 'look but do not touch' basis. Without scheduled monument consent, it is an offence to:

- damage or demolish
- destroy or remove
- alter or repair.

Not all scheduled monuments underwater are wrecks. A range of marine structures have already been designated for their protection including fish traps and harbours. As technology improves, we are seeing more and more fine-grained pictures of the world under the water that will allow Cadw to protect significant groups of objects as well as individual structures or vessels. These could be scatters of wreck material (including cargo) or concentrations of munitions which tell the story of particularly significant conflicts. It could even be collections of prehistoric artefacts which are evidence of the lives or rituals of our ancestors.

Cadw schedules monuments and administers scheduled monument consent on behalf of the Welsh Ministers. You can find out more about managing and making changes to scheduled monuments in *Managing Scheduled Monuments in Wales*.[44] Details of all scheduled monuments in Wales are available on Cof Cymru — National Historic Assets of Wales[45] and the Marine Planning Portal.[46]

2.2.2 Protection of Wrecks Act 1973[47] ¬

The Protection of Wrecks Act 1973 provides protection for wrecks on or in the seabed, or a site which may prove to be that of a wreck. It applies below mean high water and protects against interference by unauthorised persons. Details of all protected wrecks in Wales are available on Cof Cymru — National Historic Assets of Wales (and see 1.1.1) and on the Marine Planning Portal.[48]

Section 1 of the Protection of Wrecks Act 1973 provides protection for designated wrecks which are thought to be important because of their historical, archaeological or artistic importance, or of any objects contained (or formerly contained) within them.

Diving at these sites is prohibited unless Cadw has issued an appropriate licence (see section 3.1). A licence is required if anyone:

- tampers with, damages or removes any part of a protected vessel lying wrecked on or in the seabed (or any object formerly contained in such a vessel);
- carries out diving or salvage operations directed to the exploration of any protected wreck or removing objects from it or from the seabed, or uses equipment constructed or adapted for any purpose of diving or salvage operations;
- deposits, so as to fall and lie abandoned on the seabed, anything which, if it were to fall on the site of a wreck (whether it falls or not), would wholly or partly obliterate the site, or obstruct access to it, or damage any part of the wreck.

Section 2 of the Protection of Wrecks Act 1973 provides protection for wrecks that are designated as dangerous because of their contents. The Receiver of Wreck administers section 2 wrecks through the Maritime and Coastguard Agency, including the *SS Castilian*, which sank off Anglesey in 1943 carrying munitions to Lisbon in Portugal.[49]

In the interest of safety, there is a strict no-entry policy for wrecks considered dangerous because of their contents. These wrecks have a prohibited area around them.

Scheduled Monument or Protected Wreck?

Cadw assesses each wreck on a site-by-site basis to decide whether scheduling or designation as a protected wreck will secure the best protection and most appropriate management for the site. This will depend on the particular circumstances and nature of each site. For example, a wreck site in a popular dive location may be best protected through scheduling. This means that damage and disturbance to the site are prohibited, but divers can still explore and enjoy the wreck as an underwater museum.

In contrast, a remote wreck site which is vulnerable to uncontrolled salvage or treasure hunting, or which is particularly fragile, is better preserved through designation as a protected wreck. This means that the site remains as undisturbed as possible, minimising the risk of damage. It is also easier to identify unauthorised activities, since all access to the site requires a licence. Interested divers can still apply to visit or survey the site but there are greater access controls in place.

2.2.3 Protection of Military Remains Act 1986[50] ¬

The Protection of Military Remains Act 1986 makes it an offence to interfere with the wreckage of any crashed, sunken or stranded military aircraft or designated vessel without a licence. This is irrespective of loss of life or whether the loss occurred during peacetime or wartime.

In practice, the Ministry of Defence is responsible for designation as a protected place or as a controlled site.

Protected places include the remains of any aircraft that crashed while in military service or any vessels which sank or were stranded in military service after 4 August 1914. You are allowed to dive on an aircraft or vessel designated as a protected place on a 'look but do not touch' basis only. Any other activity requires a licence from the Ministry of Defence.

Controlled sites are specifically designated areas which cover the remains of a military aircraft or a vessel sunk or stranded in military service within the last 200 years. Within a controlled site, diving operations are prohibited unless you are authorised by a specific licence from the Ministry of Defence.

You can obtain further information on the Protection of Military Remains Act 1986 and its administration by contacting the Ministry of Defence.[51]

2.2.4 Merchant Shipping Act 1995[52]

Under the Merchant Shipping Act 1995, you must report to the Receiver of Wreck all wreck material recovered from UK territorial waters and any wreck material brought into the UK from outside UK territorial waters. The definition of wreck includes 'jetsam, flotsam, lagan and derelict found in or on the shores of the sea or any tidal water'. This includes:

- wreck material found in or on the sea
- wreck material washed ashore in tidal waters
- material recovered from a wreck site — regardless of age, size or apparent importance or value.

When you report recovered wreck material, the receiver will try to find the owner but also a museum home for any artefacts.

There are four main types of 'wreck' in the UK:[53]

Flotsam — goods lost accidentally from a sinking ship, which float and can be recovered.

Jetsam — goods which are deliberately thrown overboard (or 'jettisoned') to lighten the load of a ship in danger of sinking.

Derelict — goods or vessels abandoned at sea with no hope of recovery.

Lagan — goods deliberately cast overboard from a sinking ship, which are buoyed to allow them to be recovered.

2.2.5 Planning (Listed Buildings and Conservation Areas) Act 1990[54]

Some structures between high and low water may be listed as buildings of special architectural or historic interest. Cadw is responsible for listing buildings on behalf of the Welsh Ministers.[55] Most proposed changes will require listed building consent which is administered by local planning authorities. You can find out more about making changes to listed buildings and listed building consent in *Managing Change to Listed Buildings in Wales*.[56] Details of all listed buildings in Wales are available on Cof Cymru — National Historic Assets of Wales[57] and the Marine Planning Portal.[58]

Some areas above low water may be designated as conservation areas by local planning authorities because of their special architectural or historic interest. This means that there may be local policies in place designed to enhance as well as preserve specific aspects of character or appearance, which should be respected in any proposals for changes. You will need conservation area consent from the local planning authority if you propose to demolish a building in a conservation area. There is more information about conservation areas on local authority websites and in *Managing Conservation Areas in Wales*.[59]

2.2.6 The 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage[60] ¬

The 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage makes it clear that archaeological and cultural remains should not be commercially exploited. Although the UK Government has not ratified the convention, it has adopted the principles set out in the annex to the convention as best practice.[61]

The annex sets out the ways in which archaeological investigations should be carried out and should be used as best practice for any form of activities, or marine licensing of activities, directed at underwater cultural heritage in the territorial sea.

The annex is reproduced in full in Annex 1.

2.2.7 Permissions from the Owner of the Foreshore and Crown Estate Seabed Licences ¬

Just as when you are working on land, works within the marine environment require the landowner's permission. In the intertidal area, this is often The Crown Estate, though it may be another individual or organisation.

The Crown Estate is also responsible for granting seabed survey licences for activities taking place within 12 nautical miles of the shore.[62] Works that have a physical effect on the seabed, or interact with it, are likely to require a licence. These may include geophysical, ecological or archaeological surveys or larger-scale projects.

Further information on seabed licences is available online, and if you are unsure whether your proposed project requires a Crown Estate licence you can contact them to check.[63] Concessionary licence fees apply for some classes of not-for-profit and academic research activities.

This list is not exhaustive and other permissions may be necessary.

3. Managing the Marine Historic Environment of Wales ¬

Planning and carrying out projects or developments within the marine environment can be complex. Depending on the nature of your proposed works, you may require a number of different consents and licences. If you are a developer, you will also need to demonstrate that you have applied the Welsh National Marine Plan general cross-cutting policies and relevant sector policies, and that you have addressed both the potential positive and negative impacts of your proposal.

It is essential that you leave enough time to obtain all the necessary consents and to comply with any conditions attached to them. If your project is likely to affect the historic environment, you are encouraged to seek pre-application advice from Cadw, the Royal Commission on the Ancient and Historical Monuments of Wales and/or the Welsh archaeological trusts. This can help you to minimise negative impacts on the historic environment during your project design phase and reduce the risk of having to re-design elements of your project later on.

3.1 Introduction ¬

This section looks at the roles and responsibilities of divers, archaeologists, developers, sea users and public authorities when planning activities that may affect the marine historic environment. If you are a developer, it provides guidance which can assist in demonstrating how your proposal is in accordance with the Welsh National Marine Plan cross-cutting policies on the historic environment, particularly SOC_05: Historic Assets.

The underlying philosophy of conservation is set out in *Conservation Principles*.[64] Managing and making decisions about the marine historic environment in the light of these conservation principles means making sure that its significance and heritage values are protected or enhanced.

The basic principles used to assess the impact of any activity on a historic asset are:

- identify what you want to do and explain why
- understand the significance of the historic assets affected
- identify the best way to achieve your aim that respects the significance of the historic assets
- assess the impact of your proposed activity
- set out your proposed actions, including any mitigation.

This assessment should be a proportionate response to the activities proposed. It may be a very quick and easy process, or it can be a longer, more in-depth piece of research. For example, a diver wishing to visit and photograph an *undesignated* wreck site may need simply to double-check its identity and carry out some basic historical research. As long as all the members of the diver team know that the dive is to be

carried out on a 'look but don't touch' basis, it is unlikely any further permissions would be required. There would be no physical impact on the site and no physical mitigation would be required. By depositing the resulting photographs and video with the National Monuments Record of Wales, the dive team would increase the sum of knowledge about the site, which may enhance its significance.

In contrast, a proposal for a major development that would affect a considerable area of the seabed should be accompanied by a heritage impact assessment (see section 3.4). This would involve collecting data about all known sites and assessing the potential for the survival of other marine historic assets. The effects of the development would be modelled and predicted to establish what impacts they would have on the significance of the identified assets. Using this information, the developer would submit a proposal that has the least impact on the historic environment. This may include altering the plans for the development or carrying out and publishing archaeological works. For projects requiring an Environmental Impact Assessment, this information will form part of the Environmental Statement.[65]

3.2 Divers ¬

Access is allowed to wrecks scheduled as monuments and protected places. You can dive on a 'look but do not touch' basis; any other activity requires a licence.

Licences are required for all activities (including access) for designated wrecks and controlled sites. Activities should comply with the annex to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage (see Annex 1).[66]

No access is allowed to wrecks designated as dangerous under section 2 of the Protection of Wrecks Act. In Welsh waters, this means the wreck of the *Castilian*, on the East Platters Rocks, near the Skerries.

Access to undesignated wrecks should be responsible. Many organisations have produced codes of practice, such as 'Respect our Wrecks',[67] which aim to protect both the historic and natural environment.

Designation	Law	Access	Authority
Designated wreck	Protection of Wrecks Act 1973 Section 1	Licence required to visit, survey, recover surface artefacts and excavate.	Cadw, on behalf of the Welsh Ministers
Dangerous designated wreck	Protection of Wrecks Act 1973 Section 2	No access allowed.	Receiver of Wreck
Scheduled wreck	Ancient Monuments and Archaeological Areas Act 1979	Look but do not touch. Scheduled monument consent required for works which have a physical effect on the site.	Cadw, on behalf of the Welsh Ministers
Protected place	Protection of Military Remains Act 1986	Look but do not touch.	Ministry of Defence
Controlled site	Protection of Military Remains Act 1986	Licence required to visit.	Ministry of Defence

Cadw issues licences for designated wrecks. Application forms are available online at: https://cadw.gov.wales/advice-support/historic-assets/other-historic-assets/coastal-and-maritime-archaeology#section-wrecks-and-wreck
There is more advice about planning projects in Annex 2 and about reporting in Annex 3.

You may also need a marine licence from Natural Resources Wales to work on a designated or undesignated wreck. Information and application forms are available online at:
https://naturalresources.wales/permits-and-permissions/marine-licensing/?lang=en

And you will need the permission of the landowner which, in the case of the seabed, is likely to be The Crown Estate. Information and application forms are available online at:
https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/seabed-survey-licences/

The Ministry of Defence issues licences for protected places and controlled sites. You can contact the MOD-Navy Command Heritage at:
NAVYSEC-3RDSECTORMAILBOX@mod.gov.uk

FLEET-DCS 3rd SECTOR- HERITAGE
Navy Command HQ (MP1.4)
Leach Building, Whale Island
Portsmouth, PO2 8BY
Telephone: 023 9262 5351

You can contact the Crashed Military Aircraft division at:

Commemorations Team
Joint Casualty and Compassionate Centre
Defence Business Services
Room G35
Innsworth House
Imjin Barracks
Gloucester
GL3 1HW
dbs-jcccgroupmailbox@mod.gov.uk
Tel. 01452 712612 extension 7330/6303

If you recover wreck material (that is from a sunken vessel or aircraft) within UK territorial waters, or bring wreck material into UK territorial waters, you must report it to the Receiver of Wreck within 28 days. The Receiver of Wreck will research and establish who owns the wreck and liaise with the finder and owner, and other interested parties such as archaeologists and museums.[68]

If you recover material that is not a wreck, it is treated as the property of the landowner; in most cases relating to the seabed this will be The Crown Estate. In all cases, if the disturbance of such assets is planned, proper attention must be paid to determining their importance and factoring in appropriate mitigation (see section 3.4).

3.3 Archaeologists ¬

Cadw issues licences to excavate designated wrecks. Application forms and a fact sheet for archaeological advisors are available online at:
https://cadw.gov.wales/advice-support/historic-assets/other-historic-assets/coastal-and-maritime-archaeology#section-wrecks-and-wreck

Licences for intrusive archaeological investigations, such as excavation, are issued only where there is an accredited archaeologist directing the work. Licences for non-destructive investigations, such as survey work, are sometimes issued to groups who have limited archaeological experience, providing there is an external archaeological advisor to supply the necessary expertise. For this to work effectively there has to be positive involvement from the advisor, not just reaction to the request for occasional advice from the team. The advisor needs to maintain regular contact and a good working relationship with the licensees. As a minimum, the advisor will need to:

- help the team formulate a project design before applying for a licence and a fieldwork strategy before work begins on the site;
- assist the team with writing the report on the activities, ensure that adequate site records are maintained and that the archive is deposited in the appropriate historic environment record and copied to the National Monuments Record of Wales;
- advise the team on methods of disseminating information about the site through publications, lectures, etc.

Any archaeological excavation should be carried out in accordance with the annex to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage (see Annex 1)[69] and the Code of Conduct for the Chartered Institute for Archaeologists.[70]

Annex 2 contains more advice about how to plan a project on a protected wreck site and there is also helpful information in Historic England's *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide*.[71] Annex 3 provides information about licensee reporting.

If the site is scheduled, you will also need scheduled monument consent from Cadw. It is an offence to carry out any works that would disturb a scheduled monument or the ground within a scheduled monument without first obtaining scheduled monument consent. This requirement applies to a wide range of activities. For more information, see *Managing Scheduled Monuments in Wales*.[72]

It is best to seek advice from Cadw well before you plan any activity that could have any impact on a historic asset, whether or not it is designated.

You may also need a marine licence, the landowner's permission and a Crown Estate seabed licence.

3.4 Developers and other Sea Users ¬

On land, most developments require planning permission, whereas underwater most works need a marine licence.

The need for a marine licence and the relevant authorising body depends on the nature of the activity and its geographical location. Within Welsh inshore waters (up to 12 nautical miles) Natural Resources Wales is the body responsible for issuing licences for marine activities including:

- navigational dredging
- disposal of dredged material
- extraction of minerals by marine dredging
- any construction works that involve the placement or removal of material in the sea, such as the construction or alteration of harbours/jetties.[73]

Beyond Welsh inshore limits, oil and gas exploration and extraction are administered by the UK Oil and Gas Authority (OGA) and Offshore Petroleum Regulator for Environment and Decommissioning (OPRED).

When Natural Resources Wales determines an application, one of its considerations is the need to protect the environment. This includes 'any site (including any site comprising, or comprising the remains of, any vessel, aircraft or marine structure) which is of historic or archaeological interest.'[74]

Developers are responsible for ensuring that their proposals are in line with the Welsh National Marine Plan and must supply sufficient information to enable the relevant public authorities to make an informed decision. As part of this process, they should demonstrate that they have identified relevant historic assets and have considered the potential impacts from the proposal on them.

In practice, this may involve a heritage impact assessment (see section 3.5) particularly where the potential for impacts on historic assets is high. The level of assessment should be proportionate to the scale and impact of the project as well as the sensitivity of the environment concerned. In large-scale projects, this information will normally be part of an Environmental Statement.

The Welsh National Marine Plan Implementation Guidance[75] states that public authorities should be satisfied that the developer has adequately investigated and evaluated the significance of both designated and undesignated historic assets which may be impacted by the proposal. They should also be satisfied that the developer has taken appropriate measures to avoid, minimise or mitigate the impact on those historic assets and their settings in a manner that is proportional to their significance.

There should be a general presumption in favour of the preservation or enhancement of historic assets and their settings. For any development proposal affecting a historic asset or its setting, the primary material consideration is to have special regard to the desirability of preserving the asset, its setting or any features of special architectural or historic interest which it possesses. Where possible, designated assets and sites of equivalent importance should be preserved *in situ* within an appropriate setting.

The absence of designated historic assets should not be taken to imply that undesignated historic assets are automatically of lesser significance. Given the logistical difficulties and resource-intensive nature of working underwater, the significance of many marine historic assets is yet to be established. Nevertheless, all such assets, and their settings, should be considered in decision making.[76] It will sometimes be necessary to carry out investigations into previously unknown assets to find out more about them. This will allow a better understanding of their significance and how to factor them into decision making.

Developments in the marine environment which extend above the low water mark as onshore developments are also subject to planning controls and may require planning permission. Onshore historic assets must be considered in decision making where marine-based proposals for development impact upon them. Further guidance on the consideration of proposals with land use impacts on historic assets can be found in *Planning Policy Wales* and *Technical Advice Note 24: The Historic Environment*.[77]

It is the responsibility of the public authorities to ask for advice as necessary, and to ask for further information if required. If a marine licence is granted, conditions may be included so that the significance of the historic asset(s) is maintained as far as possible.

Natural Resources Wales will consult the Welsh archaeological trusts about archaeological sites in the intertidal zone, the Royal Commission on the Ancient and Historical Monuments of Wales about submarine sites and Cadw about protected sites. Cadw's advice would be in favour of the preservation of such sites or sites of equivalent importance *in situ* within an appropriate setting. If proposals include work on a scheduled or protected site, the relevant consent will also be required from Cadw. Natural Resources Wales will consult local planning authorities about listed buildings. Listed building consent will also be required from the local planning authority if proposals include work on a listed building.

For further explanation about the importance of the historic environment and the best practice a developer is likely to be asked to adopt with regard to appropriate mitigation measures, Cadw recommends consulting *Marine Aggregate Dredging and the Historic Environment: guidance note, Historic Environment Guidance for the Offshore Renewable Energy Sector, Marine Aggregate Industry Protocol for the Reporting of Finds of Archaeological Interest* and Joint Nautical Archaeological Policy Committee's *Code of Practice for Seabed Developers*.[78]

It is best to seek pre-application advice from Cadw and other relevant public authorities well before you draw up proposals that could have any impact on historic assets, whether or not they are designated.

3.5 Heritage Impact Assessment ¬

Protection is about managing change, not preventing it. This means that it is vital to understand the implications of any proposed change — starting from the applicant deciding what to do and how to do it, through to the decision maker determining whether or not to give consent.

Understanding the significance of our marine historic environment is the foundation for sound decision making. By identifying what makes the marine historic environment special and unique, it is easier to work out what the impacts of proposed change would be and adapt your proposals to find the best way to meet your needs and those of the marine historic environment. Heritage impact assessment is a structured process designed to help you do this. It can also be used to produce a formal heritage impact statement, which is a requirement for some consent applications including listed building consent and some scheduled monument consents.

Natural Resources Wales and other public authorities may ask you to submit the results of a heritage impact assessment with your application for a marine licence or other permissions, especially for large-scale projects or where the potential for impacts on historic assets is high. For projects requiring an Environmental Impact Assessment, this information will form part of the Environmental Statement.

Your heritage impact assessment will need to show how potential impacts on historic assets and their settings have been taken into consideration at an early stage and what action you propose to avoid, minimise or mitigate any adverse impacts. If significant adverse impacts cannot be adequately addressed, your proposals should present a clear and convincing justification for proceeding. Opportunities to enhance the marine historic environment are encouraged. This will give public authorities the information they need to understand the reasons for your proposal and to weigh up the risks and benefits.

Your heritage impact assessment should take into account sufficient information to enable both the significance of the asset or assets and the impact of change to be understood. It should be proportionate both to the significance of the historic asset(s) and to the size and scale of the development.

The relevant public authority should be able to advise you on the scope of your heritage impact assessment. It is advisable that qualified and competent experts advise developers at all stages.

You should begin your heritage impact assessment before you start planning proposals that may cause changes to the marine historic environment. The assessment process will help you to develop your proposals and identify appropriate approaches that will successfully manage historic environment interests.

The basic stages of heritage impact assessment, whatever the size and scope of the project, are:

1. explaining your objective — what you want to achieve and why it is desirable or necessary;
2. understanding the significance of marine historic assets — what assets are already known, what other assets might be there and what is important about them?
3. identifying your options — once you have understood the significance of the historic assets, you should be able to identify the best way to achieve your objective and respect their significance;
4. assessing the impact of your proposed works on the significance of the historic assets — what would happen if the works went ahead?
5. setting out the reasoning behind your preferred option, in the light of the assessment process — what can be done to sustain or enhance the marine historic environment? What can be done to avoid, minimise or mitigate negative impacts? This can include archaeological investigations before starting work, the exclusion of certain areas from development and monitoring secondary effects once the development has been completed.

Once you are clear about stages 1 and 2, stages 3, 4 and 5 may be repeated until you find the best proposal that meets your objective and has the maximum benefit for the marine historic environment.

3.5.1 Explaining your Objective ¬

It is important to be clear from the outset about what you want to achieve before thinking about how to do it. You will need to be clear about the purpose of any proposed change so that you can identify the most appropriate way to meet your objective. This may mean looking at different ways in which to achieve your objective.

3.5.2 Understanding the Significance of Marine Historic Assets ¬

This stage establishes which historic assets may be affected by the proposed works, and their significance. It should include an assessment of the setting of the assets and how that contributes to their significance.

The level of detail required at this stage will vary according to the complexity of the historic environment elements affected, and the scale and impact of the proposed development.

The first phase is likely to be a desk-based process, drawing together all the readily available sources of information. This will give a basic understanding of the marine historic environment and may also indicate areas of archaeological potential. In some, very simple developments, this may be enough to determine the likely impacts of your activities. However, in most cases, there will be a need to collect further data, taking advantage of recent advances in underwater survey technology. Remote sensing methods are ordinarily used to try to get an image of the seabed and of artefacts, wrecks and anomalies on it. See section 1.2.2 and the Wales Marine Planning Portal[79] for sources of information.

For projects requiring an Environmental Impact Assessment, this information will form part of the Environmental Statement.[80] It is important to make sure that this 'understanding' phase is incorporated into your project planning from the very beginning. A specialist historic environment professional will be able to provide advice on the quality of information required and save costs by ensuring that this information is acquired whilst other data is being collected (for example, for geotechnical investigations and borehole samples).

Once the information has been gathered, it will need to be assessed and interpreted. The person carrying out this interpretation (usually a historic environment professional) must be confident that the data is sufficient to allow an understanding of the historic assets affected by the proposed works so that the following questions can be answered:

- What are the assets?
- What are their heritage values?
- What is their significance?

The setting of the assets, and the contribution which this makes, should also be considered as part of this assessment.

Significance

Preparing a statement of significance is a useful way to draw together your understanding and explain it to others. Focusing on the heritage values of the historic assets will help you to analyse their significance. The statement of significance should include a brief description of the historic assets and a summary of their heritage values:

- Evidential value: the extent to which the physical evidence tells how and when the historic asset was made, how it was used and how it has changed over time. There may be buried or obscured elements associated with the historic asset which may also be an important source of evidence.
- Historical value: the historic asset may illustrate a particular aspect of past life or it might be associated with a specific person, event or movement; there may be physical evidence for these connections which it could be important to retain.
- Aesthetic value: the design, construction and craftsmanship of the historic asset. This can include setting and views to and from the historic asset, which may have changed through time.[81]
- Communal value: the historic asset may have particular significance for its commemorative, symbolic or spiritual value, or for the part it has played in cultural or public life.

You can find out more about heritage values in Cadw's *Conservation Principles*.[82]

This provides a framework against which to structure your assessment of the significance of a historic asset.

Remember also that a historic asset may not be a single site. A submerged landscape, or section of it, may be a historic asset, as may a scatter of wreckage. Assets may span both marine and terrestrial environments and incorporate non-tangible elements into their settings.

An assessment of significance will be informed by current archaeological knowledge and understanding. Any designated assets will be considered to be of high significance. Designated assets include:

- World Heritage Sites
- protected wrecks
- scheduled monuments
- listed buildings
- conservation areas
- registered historic parks and gardens
- registered historic landscapes of outstanding or special historic interest.

However, the absence of designated historic assets should not be taken to imply absence of special interest. Nor should it be assumed that undesignated historic assets are of less significance. Given the logistical difficulties and resource-intensive nature

of working underwater the significance of many marine historic assets has yet to be established. All such assets and their settings should be considered in decision making.

It is likely that the assessment of significance will identify knowledge gaps. In some instances, if these are substantial, it may be necessary to commission more work. In other cases, particularly where the impact of works is predicted to be small, it may be enough simply to identify and acknowledge the gap.

Setting

Sites do not exist in isolation; they are part of the broader marine environment. Each site has a setting; it is the surroundings within which it is understood, experienced and appreciated, including present and past relationships to the surroundings. Its extent is not fixed and may change as the historic asset and its surroundings evolve. Elements of setting may make a positive, negative or neutral contribution to the significance of the historic asset.

Setting is not itself a historic asset, though the area comprising setting may contain other historic assets. The importance of setting lies in what it contributes to the significance of a historic asset.[83]

Setting

Sarn Padrig — or St Patricks Causeway — is a reef stretching out into Cardigan Bay towards Ireland. The causeway is formed of glacial deposits left by retreating ice sheets at the end of the last ice age. This distinctive geology is repeated in other shingle reefs running more or less parallel under the waters of Cardigan Bay. In Welsh legend, these reefs are the dykes that protected the now-drowned land of Cantre'r Gwaelod. Sarn Padrig, however, has another claim to fame: even 2 miles (3.2km) offshore, parts of the reef dry out at low tides making it a notorious 'shipcatcher' and the cause of many wrecks.

Geophysical survey along the reef has identified around 250 anomalies that may have been caused by human activity and at least 10 separate locations contain verified wreck remains. Although the reef itself is not an archaeological site, it provides the setting for the wrecks which are found on and near it. It is the reason that they are there and is the common feature which this otherwise unrelated group of sites share. When seeking to understand the individual wrecks, we need to consider their relationship not only to the reef, but also to each other: they are each a small part of a bigger story as well as being sites in their own right.

3.5.3 Identifying your Options ¬

Once you have understood the significance of the historic assets, you should be able to identify the best way to achieve your objective and respect their significance.

You may need to re-examine your proposals once you have assessed their potential impact.

3.5.4 Assessing the Impact of your Proposals ¬

To assess the impact of the potential development, you need to answer the following questions:

- What will happen to the historic assets if these works take place?
- How will their heritage values be affected?
- What impact will there be on the significance?
- Will the relationship with setting be altered?
- Will the changes be positive, neutral or negative?
- Will they be short term, long term or permanent?

Impacts can be direct or indirect. Direct impacts are often physical changes to an asset which arise as a result of the development. They can be positive, negative or neutral.

For example, part of a wreck may be moved or buried during development. Movement could result in a negative impact through loss or damage to the wreck; alternatively, burial may have a positive impact through improving its condition and long-term stability.

Indirect impacts can also be positive, negative or neutral. For example, the installation of a new breakwater will deliberately alter the local physical processes, including tidal flow and wave climate. This will alter the strength and direction of waves and currents and will therefore change the way in which sediments are transported and deposited. This may have the effect of covering up or uncovering historic assets, some of which may be outside the development footprint. Work to model changes to sediments, tidal flow or wave patterns may be necessary to assess the full impact of a proposed development.

Wrecks on the seabed can be very vulnerable to seemingly small changes in their environment. Many wrecks become quite delicately balanced eco-systems in their own right; changing elements of these can result in unforeseen consequences.

Assessing impact successfully depends on a thorough understanding of significance, based around the heritage values of a historic asset. Not all values will carry equal weight. Where a particular value — for example, the evidential value — has been identified as making a particular contribution to an asset, even a relatively small change to that value may substantially alter the overall significance of an asset.

Depending on the nature of the works or development proposed, there may also be impacts on the wider marine character area (see section 2.4.1) or on the adjacent landscapes. These should also be assessed.

3.5.5 Setting Out your Preferred Option ¬

You will need to set out the reasoning behind your preferred option in the light of the assessment process. In line with cross-cutting policy SOC_05 of the Welsh National Marine Plan, you will have to show how your proposed work will sustain or enhance the significance of any historic assets, or explain how it will avoid, minimise or mitigate negative impacts of the development on the marine historic environment.

Preservation *in situ* is always the preferred option, where possible. To achieve this, it is sometimes necessary to redesign parts of the original scheme so that the historic asset is not subject to direct impacts during construction, operation or decommissioning. It is sometimes possible to design schemes so that the preservation of historic assets is enhanced by the proposed works.

How to Avoid Negative Impacts

Micro-siting. Sometimes moving an element of the development a small distance can alleviate negative impacts. Where this is possible, without affecting the overall development envelope, it is known as micro-siting. For example, this may allow an identified geophysical anomaly to be left *in situ* rather than disturbed. This approach does not involve further assessment of the anomaly and does not resolve whether it is of archaeological significance.

Archaeological exclusion zones. These are areas of known or potential archaeological sensitivity, which are formally marked out as exclusion zones during any construction works that take place. Depending on the nature of the works, archaeological exclusion zones may be in place only during construction and/or decommissioning phases. This is the time when the sites are more vulnerable to accidental damage from the works themselves or from shipping movements and anchorages. Alternatively, archaeological exclusion zones may be put in place for the duration of the project. In these cases, they must be officially defined and agreed by all parties and monitored to ensure their effectiveness. Archaeological exclusion zones do not necessarily contribute to the sum of archaeological knowledge, but they can be a cost-efficient way to make sure that potential sites are protected.

How to Minimise Negative Impacts

Active protection. Some sites may require intervention to preserve their identified heritage values. The aim is still to preserve the site *in situ* but solutions will have to be tailor-made based on the vulnerabilities, significance and environmental conditions at each site. Works may include sacrificial anodes to slow down the corrosion of metals, or sandbagging to prevent a site from further scouring, for example.

A programme of monitoring will also have to be put in place to check that these protection measures are working. This means that there needs to be a thorough understanding of the baseline condition of the site before any conservation works begin. Sometimes programmes of monitoring may be necessary over a number of years, and developers should be prepared to demonstrate that they have processes in place to achieve this.

How to Mitigate Negative Impacts

Mitigation should, where possible, ensure that the heritage values of the identified asset(s) are maintained. It is concerned with what happens at the site. Most often, mitigation includes a programme of archaeological work, which may include geophysical or other survey, photographic or video recording, remotely operated vehicle assessments or an archaeological watching brief. Other methods of mitigation may include the physical protection of a site, for example, by placing a steel cage over the site to prevent unauthorised access, or instigating a specific management regime to prevent damage from anchors or fishing.

Mitigation should not be confused with offsetting or compensatory proposals which take place off site. For example, the removal or partial destruction of a wreck might be offset by the placement of an interpretation panel on the harbour or the development of a publicly available mobile phone app.

Such proposals should be presented to the decision-making authority so that it can weigh the benefits of the scheme, including the compensatory measures, against the impact of the development on the historic asset and its setting.

Archaeological intervention. Archaeological intervention may be necessary to find out more about a historic asset before a proposal receives consent. Alternatively, if destruction is deemed to be the only option having balanced all other factors, then survey, excavation and recording will be part of the mitigation strategy. Any archaeological excavation should be carried out in accordance with the annex to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage (see Annex 1)[84] and the Code of Conduct and standards promoted by the Chartered Institute for Archaeologists.[85] Finished reports should be deposited with the National Monuments Record of Wales and in local historic environment records, where they will usually be open to public access.[86]

There is also helpful information about developing and implementing archaeological projects in Historic England's *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide*.[87]

Impact assessment is an iterative process, built on a thorough understanding of the historic assets affected. The greater the significance of the historic assets (whether or not recognised through formal designation), and the greater the potential consequence of change, the more comprehensive the level of assessment and mitigation required.

Cadw's guidance on heritage impact assessment explains more about the heritage impact process.[88]

Duties and Responsibilities of the Developer/Activity Proposer, Archaeological Advisor to Developer/Activity Proposer and Public Authority as Decision Maker

Developer/ Activity Proposer	Archaeological Advisor to Developer/ Activity Proposer	Public Authority as Decision Maker
To consider the historic environment at an early stage and to seek advice, including whether any permissions are necessary.		To provide appropriate pre-application guidance, seeking advice from specialists where necessary (see Annex 4).
To employ an archaeological contractor as necessary to provide input to the project development.	To provide impartial advice and information to professional standards.	To provide appropriate pre-application guidance, seeking advice from specialists where necessary.
To provide their archaeological contractor with marine geophysical and geotechnical data to enable them to undertake necessary environmental assessment.		To ensure that specifications for gathering geotechnical and geophysical data for engineering purposes include gathering data for archaeological purposes.
	To undertake necessary and proportionate archaeological work to professional standards, and supply appropriate report(s) to the client.	
To ensure that the results of archaeological work are incorporated into the project design and that mitigation is designed as necessary.	To advise the client as necessary in the process of drawing up plans/licence applications.	
To submit all relevant documentation for licensing applications.		To ensure that documentation is sufficient and fit for purpose; and that adequate information is supplied to allow for informed decision-making, consulting with specialists where necessary.

Developer/ Activity Proposer	Archaeological Advisor to Developer/ Activity Proposer	Public Authority as Decision Maker
		To balance the historic environment alongside all other material considerations and reach a decision, with conditions as appropriate.
To comply with all conditions.	To provide advice about monitoring reports and the fulfilment of other archaeological conditions.	To receive and review monitoring reports as required.
	To ensure that all archiving is completed to appropriate standards.	To sign off conditions as required.
To review all project documentation and ensure that any lessons taken from it are applied in future cases.		

Annexes ¬

Annex 1 ¬

Annex to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage[89]

Rules concerning activities directed at underwater cultural heritage.

I General principles

Rule 1: The protection of underwater cultural heritage through in situ preservation shall be considered as the first option. Accordingly, activities directed at underwater cultural heritage shall be authorised in a manner consistent with the protection of that heritage, and subject to that requirement may be authorised for the purpose of making a significant contribution to protection or knowledge or enhancement of underwater cultural heritage.

Rule 2: The commercial exploitation of underwater cultural heritage for trade or speculation or its irretrievable dispersal is fundamentally incompatible with the protection and proper management of underwater cultural heritage. Underwater cultural heritage shall not be traded, sold, bought or bartered as commercial goods.

This rule cannot be interpreted as preventing:

a. the provision of professional archaeological services or necessary services incidental thereto whose nature and purpose are in full conformity with this Convention and are subject to the authorisation of the competent authorities;

b. the deposition of underwater cultural heritage, recovered in the course of a research project in conformity with this convention, provided such deposition does not prejudice the scientific or cultural interest or integrity of the recovered material or result in its irretrievable dispersal; is in accordance with the provisions of Rules 33 and 34; and is subject to the authorisation of the competent authorities.

Rule 3: Activities directed at underwater cultural heritage shall not adversely affect the underwater cultural heritage more than is necessary for the objectives of the project.

Rule 4: Activities directed at underwater cultural heritage must use non-destructive techniques and survey methods in preference to recovery of objects. If excavation or recovery is necessary for the purpose of scientific studies or for the ultimate protection of the underwater cultural heritage, the methods and techniques used must be as non-destructive as possible and contribute to the preservation of the remains.

Rule 5: Activities directed at underwater cultural heritage shall avoid the unnecessary disturbance of human remains or venerated sites.

Rule 6: Activities directed at underwater cultural heritage shall be strictly regulated to ensure proper recording of cultural, historical and archaeological information.

Rule 7: Public access to in situ underwater cultural heritage shall be promoted, except where such access is incompatible with protection and management.

Rule 8: International cooperation in the conduct of activities directed at underwater cultural heritage shall be encouraged in order to further the effective exchange or use of archaeologists and other relevant professionals.

II Project design

Rule 9: Prior to any activity directed at underwater cultural heritage, a project design for the activity shall be developed and submitted to the competent authorities for authorisation and appropriate peer review.

Rule 10: The project design shall include:

a. an evaluation of previous or preliminary studies
b. the project statement and objectives
c. the methodology to be used and the techniques to be employed
d. the anticipated funding
e. an expected timetable for completion of the project
f. the composition of the team and the qualifications, responsibilities and experience of each team member
g. plans for post-fieldwork analysis and other activities
h. a conservation programme for artefacts and the site in close cooperation with the competent authorities
i. a site management and maintenance policy for the whole duration of the project
j. a documentation programme
k. a safety policy
l. an environmental policy
m. arrangements for collaboration with museums and other institutions, in particular scientific institutions
n. report preparation
o. deposition of archives, including underwater cultural heritage removed, and
p. a programme of publication.

Rule 11: Activities directed at underwater cultural heritage shall be carried out in accordance with the project design approved by the competent authorities.

Rule 12: Where unexpected discoveries are made or circumstances change, the project design shall be reviewed and amended with the approval of the competent authorities.

Rule 13: In cases of urgency or chance discoveries, activities directed at the underwater cultural heritage, including conservation measures or activities for a period of short duration, in particular site stabilisation, may be authorised in the absence of a project design in order to protect the underwater cultural heritage.

III Preliminary work

Rule 14: The preliminary work referred to in Rule 10 (a) shall include an assessment that evaluates the significance and vulnerability of the underwater cultural heritage and the surrounding natural environment to damage by the proposed project, and the potential to obtain data that would meet the project objectives.

Rule 15: The assessment shall also include background studies of available historical and archaeological evidence, the archaeological and environmental characteristics of the site, and the consequences of any potential intrusion for the long-term stability of the underwater cultural heritage affected by the activities.

IV Project objective, methodology and techniques

Rule 16: The methodology shall comply with the project objectives, and the techniques employed shall be as non-intrusive as possible.

V Funding

Rule 17: Except in cases of emergency to protect underwater cultural heritage, an adequate funding base shall be assured in advance of any activity, sufficient to complete all stages of the project design, including conservation, documentation and curation of recovered artefacts, and report preparation and dissemination.

Rule 18: The project design shall demonstrate an ability, such as by securing a bond, to fund the project through to completion.

Rule 19: The project design shall include a contingency plan that will ensure conservation of underwater cultural heritage and supporting documentation in the event of any interruption of anticipated funding.

VI Project duration — timetable

Rule 20: An adequate timetable shall be developed to assure in advance of any activity directed at underwater cultural heritage the completion of all stages of the project design, including conservation, documentation and curation of recovered underwater cultural heritage, as well as report preparation and dissemination.

Rule 21: The project design shall include a contingency plan that will ensure conservation of underwater cultural heritage and supporting documentation in the event of any interruption or termination of the project.

VII Competence and qualifications

Rule 22: Activities directed at underwater cultural heritage shall only be undertaken under the direction and control of, and in the regular presence of, a qualified underwater archaeologist with scientific competence appropriate to the project.

Rule 23: All persons on the project team shall be qualified and have demonstrated competence appropriate to their roles in the project.

VIII Conservation and site management

Rule 24: The conservation programme shall provide for the treatment of the archaeological remains during the activities directed at underwater cultural heritage, during transit and in the long term. Conservation shall be carried out in accordance with current professional standards.

Rule 25: The site management programme shall provide for the protection and management in situ of underwater cultural heritage, in the course of and upon termination of fieldwork. The programme shall include public information, reasonable provision for site stabilisation, monitoring, and protection against interference.

IX Documentation

Rule 26: The documentation programme shall set out thorough documentation including a progress report of activities directed at underwater cultural heritage, in accordance with current professional standards of archaeological documentation.

Rule 27: Documentation shall include, at a minimum, a comprehensive record of the site, including the provenance of underwater cultural heritage moved or removed in the course of the activities directed at underwater cultural heritage, field notes, plans, drawings, sections, and photographs or recording in other media.

X Safety

Rule 28: A safety policy shall be prepared that is adequate to ensure the safety and health of the project team and third parties and that is in conformity with any applicable statutory and professional requirements.

XI Environment

Rule 29: An environmental policy shall be prepared that is adequate to ensure that the seabed and marine life are not unduly disturbed.

XII Reporting

Rule 30: Interim and final reports shall be made available according to the timetable set out in the project design, and deposited in relevant public records.

Rule 31: Reports shall include:

a. an account of the objectives

b. an account of the methods and techniques employed

c. an account of the results achieved

d. basic graphic and photographic documentation on all phases of the activity

e. recommendations concerning conservation and curation of the site and of any underwater cultural heritage removed, and

f. recommendations for future activities.

XIII Curation of project archives

Rule 32: Arrangements for curation of the project archives shall be agreed to before any activity commences, and shall be set out in the project design.

Rule 33: The project archives, including any underwater cultural heritage removed and a copy of all supporting documentation shall, as far as possible, be kept together and intact as a collection in a manner that is available for professional and public access as well as for the curation of the archives. This should be done as rapidly as possible and in any case not later than ten years from the completion of the project, in so far as may be compatible with conservation of the underwater cultural heritage.

Rule 34: The project archives shall be managed according to international professional standards, and subject to the authorization of the competent authorities.

XIV Dissemination

Rule 35: Projects shall provide for public education and popular presentation of the project results where appropriate.

Rule 36: A final synthesis of a project shall be:

a. made public as soon as possible, having regard to the complexity of the project and the confidential or sensitive nature of the information, and

b. deposited in relevant public records.

The foregoing is the authentic text of the convention duly adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organisation during its thirty-first session, which was held in Paris and declared closed the third day of November 2001.
http://www.unesco.org/new/en/culture/themes/underwater-cultural-heritage/2001-convention/official-text/

Annex 2[90] ¬

Planning a Project for Divers and Archaeologists

Applying for different types of licensed access will require different levels of planning. Please note that any work that disturbs the seabed or involves the recovery of artefacts will require a full project design to accompany the application form.

Site Ownership, Location and Administrative Responsibility

Although some historic shipwrecks have an identifiable owner, many do not. However, title to personal effects of people on board will normally lie with the beneficiaries of each individual's estate. Cargos may also have separate, identifiable owners. Under the Merchant Shipping Act 1995, ownership is usually vested in the Crown if the original owners cannot be traced.

It is important to recognise in Wales that the seabed within which a wreck lies is owned and administered; the administrator would normally be The Crown Estate, but it may also be the National Trust or another land-owning body. As a general rule, The Crown Estate encourages legitimate use of the foreshore and this would probably extend to the seabed. Any intrusive investigations or the fixing of equipment to the seabed will usually require The Crown Estate consent in addition to consent from other regulatory bodies.

In addition, some sites may be located in areas where navigational and administrative responsibility lies with a harbour authority. Such areas are clearly marked on navigational charts and local by-laws may be in force to ensure navigational safety. Licensees are expected to make contact with owners and appropriate authorities, where known.

Intrusive and Non-intrusive Investigation

All activities undertaken on protected wreck sites must comply with accepted standards of archaeological investigation. It is also recommended that projects are compatible with, and reflect, Cadw's *Conservation Principles* and its published policies and guidelines, as well as with the wider statutory and policy framework, inclusive of the UK Marine Policy Statement.

The investigation of archaeological sites can be separated into non-intrusive and intrusive activities. Non-intrusive activities include measured and geophysical survey, drawing, photography, note-taking or even simply visiting a site. Intrusive investigations can range from geotechnical (borehole) surveys, evaluation and excavation, to other interventions, such as recovering artefacts exposed on the site, probing and sampling.

All intrusive investigations are destructive to a greater or lesser extent. Every time a part of a site is dismantled by excavation, the information in that area will no longer survive in its original form. With good archaeological techniques there will be a record kept of the sediments, the objects within them and the relationship between the finds and the matrix in which they are held. This 'preservation by record' is only of use if the records are detailed, well ordered and stored in a suitable archive where others can have access to them in the future.

A site destroyed by excavation is irreplaceable. There are a finite number of historic wrecks in the sea and it is therefore important to consider whether excavation is necessary, or whether investigation should wait for some time in the future when, inevitably, new techniques may enable fuller investigation without disturbing the site. Most buried sites will last almost indefinitely if left undisturbed.

Intrusive investigations are also more demanding in terms of finance, time, commitment, expertise, conservation and publication.

Because of the potential complexity and the potential destruction of archaeological evidence, applications for intrusive work on protected wreck sites have to be considered extremely carefully before a licence is issued.

Thought should be given to the preliminary dissemination of results and data, where appropriate. Some organisations already publish assessment reports — usually online — so that useful or significant data is made available in advance of analysis.

At the outset of a proposed marine project on a protected wreck site where material is proposed for recovery, owners (where known) and project participants should be asked to sign a waiver recognising the requirement to report wreck material to the Receiver of Wreck foregoing any claim, and foregoing any claim to non-wreck material. Also, discussion of the deposition of material should be undertaken to include the Receiver of Wreck as well as the potential receiving museum, although it is recognised that the final deposition of wreck material cannot be agreed until the legal process of establishing ownership has taken place.

Dive Trails

Maritime archaeology is often inaccessible, lying deep beneath the waves and out of sight of the majority of the population. This means that is it vital to engage audiences with maritime archaeology through specific education and outreach programmes designed to raise the profile of our shared submerged cultural heritage. By making the results of research widely available it is possible to increase knowledge and understanding, attract new visitors, and prompt new questions to ensure that the historic environment is placed high in the consciousness of future generations. Dive trails are one mechanism that enables this to be achieved.

Dive trails provide interpretation material and enhanced access by licensed visiting divers. The presence of licensed divers on site can also act as a deterrent to anyone thinking of illegally accessing the wrecks.

There are additional benefits too, including social and economic benefits through learning or recreational use, or tourism.

If you are thinking about installing a dive trail on a protected wreck site, the first step is to discuss the proposal with Cadw.

Fieldwork Safety

All activities taking place under licence should avoid unnecessary risks and must conform to recognised safe operational practices. It is therefore a condition of all licences that fieldwork is carried out to recognised safety standards. The licensee has a responsibility to ensure that all authorised activities on a protected wreck site are undertaken in a manner that is both safe and appropriate. In line with the main diving training agencies, Cadw will not endorse solo diving procedures.

Recreational diving organisations have published guidance on safe diving practices and guidance on risk assessment for diving which aim to place emphasis on the prevention of incidents while promoting safe diving practices to all divers. General advice on diving safety is also available from the British Sub Aqua Club (BSAC www.bsac.com).

For vessel safety, the Combined Diving Associations have produced *Guidelines for the Safe Operation of Member Club Dive Boats* (see www.bsac.com). However, it must be remembered that small vessels operating commercially under the British Flag or in British waters must comply with the Merchant Shipping Regulations or an appropriate Maritime and Coastguard Agency Code of Practice.

As a minimum, it is also recommended that team members who work on vessels undertake personal survival training or the Royal Yachting Association Small Craft Basic Sea Survival course and be familiar with appropriate emergency radio procedures. First aid, oxygen administration and Royal Yachting Association Boat Handling qualifications should also be considered (https://www.rya.org.uk/Pages/Home.aspx).

For those diving at work, the Health and Safety at Work Act 1974 forms the basis for much of the legislation covering health and safety at work. The main set of regulations that apply to diving are the Diving at Work Regulations 1997. These regulations cover all dives when one or more divers are at work and seek to control the hazards and risks associated with diving. Guidance offered by the Health and Safety Executive's Diving at Work Regulations 1997 defines a diver as 'a person at work who dives'. This phrase covers divers who dive as part of their duties as an employee, but diving does not have to be the main activity of the employee.

All divers at work must hold an approved diving qualification suitable for the work they intend to do. A list of current approved qualifications can be obtained from the Health and Safety Executive; employed divers without a Health and Safety Executive approved qualification will not be considered competent to dive as a nominated member of a dive team.

The Health and Safety Executive has produced a set of five Approved Codes of Practice (ACOPs), one for each of the different sectors of the commercial diving industry. The ACOPs give advice on meeting the requirements of the Diving at Work Regulations 1997. Further information on diving at work, including free diving information sheets, is available from the Health and Safety Executive: www.hse.gov.uk/diving/index.htm.

The Scientific Diving Supervisory Committee (SDSC) is the recognised representative body for the Scientific and Archaeological sector with regard to the Diving at Work Regulations. Further information on the SDSC is available online at: https://uk-sdsc.com/

Preparing a Project Design

The project design sets out the academic justification for the proposed project. In effect, it is the culmination of the heritage impact process described in section 3.4. It will usually be multi-authored, with specialists in each area contributing as required.

The more relevant information that is provided within a project design, the easier it is for Cadw to understand exactly what is proposed. The project design should set out the plan for the fieldwork and include all standards to be met and all processes that will be used. Developing a project design is straightforward and advice can be sought from the Royal Commission on the Ancient and Historical Monuments of Wales.

Some types of licence require a nominated archaeologist to be part of the team and it is important that they are involved in the preparation of the project design.

Thorough guidance for the preparation of a project design is given in Annex 1 and in Historic England's *The MoRPHE Project Managers Guide*.[91] However, the following elements will always need to be addressed:

- project background
- aims and objectives
- method statement
- resources and programming
- safety statement.

During the project, the nominated archaeologist will advise on or direct the fieldwork, dealing with finds and taking samples for environmental study.

Reporting, archiving and disseminating the results of the project are also essential.

Annex 3[92] ¬

Licensee Reports for Divers and Archaeologists

Archaeological reports usually follow a standard layout, namely:

- project background
- aims and objectives
- methodology
- results
- recommendations.

A suggested format for archaeological reports is given in Rule 31 of the annex to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage (see Annex 1). Based on this, the following format is recommended for licensee's reports:

a. summary

b. an account of the project's objectives

c. an account of the methods and techniques employed

d. an account of the results achieved

e. basic graphic and photographic documentation on all phases of the activity

f. recommendations concerning conservation and curation of the site and of any underwater cultural heritage removed, and

g. recommendations for future activities.

A licensee's report should not contain any discussion or comment of a personal nature that the licensee would not wish to be part of the public site archive, as the report will be deposited with the National Monuments Record of Wales archive.

Where copyright remains with the licensee (and except where confidentiality is justified), the licensee will be expected to grant a non-exclusive licence authorising the use of the report, and any material within it, for non-commercial purposes including teaching, research and private study. In any case where confidentiality is required, this should be made clear in the report, along with the reasons for such a requirement.

The report should be as objective as possible, factual, independent, to the point and preferably typed. Wherever possible, digital copies of the report are preferred.

Annex 4 ¬

The Roles and Responsibilities of Cadw, the Royal Commission on the Ancient and Historical Monuments of Wales and the Welsh Archaeological Trusts

Cadw

- Cadw is the Welsh Government's historic environment service working for an accessible and well-protected historic environment. On behalf of the Welsh Ministers, Cadw has a statutory role to schedule wrecks or designate them as protected sites.
- Cadw grants licences to dive on and excavate protected wrecks. Cadw also grants scheduled monument consent to excavate scheduled monuments.
- Consenting authorities, including Natural Resources Wales, consult Cadw about designated sites affected by applications for consents and marine licences.
- Cadw provides informal pre-application advice to developers about proposals that would affect designated historic assets.
- Cadw's Cof Cymru — National Historic Assets of Wales holds the records for designated and protected sites on land and in Welsh waters. http://cadw.gov.wales/historicenvironment/recordsv1/cof-cymru/?lang=en

Royal Commission on the Ancient and Historical Monuments of Wales

- The Royal Commission on the Ancient and Historical Monuments of Wales is responsible for survey and investigation in Wales, including underwater sites. It maintains the National Monuments Record of Wales and manages the Historic Wales portal as an online gateway to all the national and regional records about the historic environment in Wales www.historicwales.gov.uk.
- Consenting authorities, including Natural Resources Wales, consult the Royal Commission on the Ancient and Historical Monuments of Wales about underwater sites affected by applications for consents and marine licences.
- The Royal Commission on the Ancient and Historical Monuments of Wales provides informal pre-application advice to developers about proposals that would affect offshore underwater sites.

Welsh Archaeological Trusts

- The Welsh archaeological trusts maintain the statutory historic environment records for Wales, which contain information about all recorded archaeological and historic sites in Wales and can be accessed through Archwilio https://www.archwilio.org.uk/arch/
- Consenting authorities, including Natural Resources Wales, consult the Welsh archaeological trusts about archaeological sites in the intertidal zone affected by applications for consents and marine licences.
- The Welsh archaeological trusts provide informal pre-application advice to developers about proposals that would affect archaeological sites in the intertidal zone.

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https://cadw.gov.wales/advice-support/conservation-principles/conservation-principles

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https://gov.wales/technical-advice-note-tan-24-historic-environment

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8 Well-being of Future Generations (Wales) Act 2015
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9 Protection of Wrecks Act 1973 https://www.legislation.gov.uk/ukpga/1973/33/contents

10 See Wrecks of Wales
https://cadw.gov.wales/advice-support/historic-assets/other-historic-assets/coastal-and-maritime-archaeology#section-wrecks-of-wales
Cof Cymru — National Historic Assets of Wales https://cadw.gov.wales/advice-support/cof-cymru
Coflein http://www.coflein.gov.uk/en
Marine Planning Portal http://lle.gov.wales/apps/marineportal/#lat=52.5145&lon=-3.9111&z=8

11 Ancient Monuments and Archaeological Areas Act 1979
https://www.legislation.gov.uk/ukpga/1979/46/contents

12 Details of all scheduled monuments in Wales are available on Cof Cymru — National Historic Assets of Wales. https://cadw.gov.wales/advice-support/cof-cymru
Details about those scheduled monuments in territorial waters and on land are shown on the Marine Planning Portal. http://lle.gov.wales/apps/marineportal/#lat=52.5145&lon=-3.9111&z=8

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http://www.unesco.org/new/en/culture/themes/underwater-cultural-heritage/2001-convention/official-text/

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Report wreck material. https://www.gov.uk/report-wreck-material

25 The Marine Antiquities Scheme https://marinefinds.org.uk/

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30 Natural Resources Wales — marine licensing
https://naturalresources.wales/permits-and-permissions/marine-licensing

31 OPRED https://www.gov.uk/government/organisations/offshore-petroleum-regulator-for-environment-and-decommissioning

32 The Marine Licensing (Exempted Activities) (Wales) Order 2011
http://www.legislation.gov.uk/wsi/2011/559/introduction/made

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https://naturalresources.wales/permits-and-permissions/marine-licensing

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Environment (Wales) Act 2016 http://www.legislation.gov.uk/anaw/2016/3/contents/enacted

37 To be published in 2020.

38 Welsh National Marine Plan https://gov.wales/welsh-national-marine-plan-document

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https://cadw.gov.wales/advice-support/conservation-principles/conservation-principles

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https://naturalresources.wales/evidence-and-data/maps/marine-character-areas/?lang=en

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https://gov.wales/technical-advice-note-tan-24-historic-environment
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Further Information ¬

Legislation, Planning Policy and Guidance

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Welsh National Marine Plan
https://gov.wales/welsh-national-marine-plan-document

Licences

Natural Resources Wales — marine licensing
https://naturalresources.wales/permits-and-permissions/marine-licensing

Cadw — licences to visit, survey, recover surface artefacts and excavate from designated wrecks
https://cadw.gov.wales/advice-support/historic-assets/other-historic-assets/coastal-and-maritime-archaeology#section-wrecks-and-wreck

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https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/seabed-survey-licences/

The Crown Estate Coastal Survey Licences
https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/coastal/coastal-survey-licences/

Ministry of Defence — licences for protected places and controlled sites.

You can contact the MOD-Navy Command Heritage about wrecks at:

Navy Command HQ (MP1.4)
Leach Building
Whale Island
Portsmouth
PO2 8BY
NAVYSEC-3RDSECTORMAILBOX@mod.gov.uk
Tel: 023 9262 5620.

You can contact the Crashed Military Aircraft division at:

Commemorations Team
Joint Casualty and Compassionate Centre
Defence Business Services
Room G35
Innsworth House
Imjin Barracks
Gloucester
GL3 1HW
dbs-jcccgroupmailbox@mod.gov.uk
Tel: 01452 712612 extension 7330/6303

Wreck and salvage law
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https://www.wessexarch.co.uk/sites/default/files/field_file/COWRIE_2007_Wessex_%20-%20archaeo_%20guidance_Final_1-2-07.pdf

Historic Environment Guidance for Wave and Tidal Energy, Historic England, 2013
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JNAPC Code of Practice for Seabed Developers, Joint Nautical Archaeological Policy Committee and The Crown Estate, 2006
http://www.jnapc.org.uk/jnapc_brochure_may_2006.pdf

Managing Change to Listed Buildings in Wales, Cadw, Welsh Government, 2017
https://cadw.gov.wales/advice-support/historic-assets/listed-buildings/managing-change-to-listed-buildings

Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide, Historic England, 2015
https://historicengland.org.uk/images-books/publications/morphe-project-managers-guide

Managing Scheduled Monuments in Wales, Cadw, Welsh Government, 2018
https://cadw.gov.wales/advice-support/historic-assets/scheduled-monuments/best-practice-guidance#section-managing-scheduled-monuments-in-wales

Marine Aggregate Dredging and the Historic Environment: guidance note, Historic England, 2003
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Marine Aggregate Industry Protocol for the Reporting of Finds of Archaeological Interest, British Marine Aggregate Producers Association, Historic England and The Crown Estate, 2008
https://www.wessexarch.co.uk/our-work/marine-aggregate-industry-protocol-reporting-finds-archaeological-interest

Setting of Historic Assets in Wales, Cadw, Welsh Government, 2017
https://cadw.gov.wales/advice-support/placemaking/heritage-impact-assessment/heritage-impact-assessment

Standards and Guidance for Nautical Archaeological Recording and Reconstruction, Chartered Institute for Archaeologists, 2014
http://www.archaeologists.net/sites/default/files/ClfAS%26GNautical_1.pdf

Historical Information

Archives Wales — an online catalogue that allows you to search information in more than 7,000 collections of historical records in the holdings of the 21 archives in Wales.
https://archives.wales

Archwilio — provides online public access to the historic environment records for each local authority area in Wales. Archwilio is maintained and supported with further information held by the Welsh archaeological trusts.
www.archwilio.org.uk

Coflein — the online catalogue for the National Monuments Record of Wales, the national collection of information about the historic environment of Wales.
www.coflein.gov.uk

Cof Cymru — Cadw's online record of the national historic assets of Wales, which includes listed buildings, scheduled monuments, protected wrecks, World Heritage Sites and registered historic landscapes. Registered historic parks and gardens will be added to Cof Cymru during 2020.
https://cadw.gov.wales/advice-support/cof-cymru

Historic Wales — an online gateway to national and regional historic environment records.
www.historicwales.gov.uk

LANDMAP — the online landscape baseline resource maintained by Natural Resources Wales. LANDMAP datasets are also published for download for use in a Geographical Information System (GIS).
http://lle.gov.wales/Catalogue?lang=en&text=landmap

Marine Antiquities Scheme — records finds made by divers, fishermen, boat operators and coastal visitors in England and Wales, and allows public access to the data for research.
https://marinefinds.org.uk

Marine Character Areas — marine character areas highlight the key natural, cultural and perceptual influences that make the character of each seascape distinct and unique. Each area profile includes a description of the key characteristics, including their natural, cultural and perceptual influences, as well as land-sea inter-visibility maps.
https://naturalresources.wales/evidence-and-data/maps/marine-character-areas/?lang=en

The National Library of Wales
www.library.wales

Wales Marine Planning Portal — the marine planning portal for Wales allows anyone to view maps online showing the distribution of human activities and natural resources in Welsh seas. The portal is an interactive planning tool that is intended to support marine planning and will make available the latest information which public authorities may consider as a 'relevant consideration' in planning decisions.
http://lle.gov.wales/apps/marineportal/#lat=52.5145&lon=-3.9111&z=8

Further Reading

A Research Framework for the Archaeology of Wales
Maritime Research Agenda 2017–21
https://www.archaeoleg.org.uk/pdf/review2017/maritimereview2017.pdf

Arfordir — Coastal survey of Wales. See the websites of the four Welsh archaeological trusts.

U-boat Project Wales 1914–18: Commemorating the War at Sea
http://uboatproject.wales

The Coastal Archaeology of Wales, A. Davidson (ed.), Council for British Archaeology Research Report 131, 2002

The Lost Lands of our Ancestors: Exploring the Submerged Landscapes of Prehistoric Wales, Dyfed Archaeological Trust, 2011
http://www.dyfedarchaeology.org.uk/lostlandscapes

The West Coast Palaeolandscapes Survey, Visual and Spatial Technology Centre Institute of Archaeology and Antiquity, University of Birmingham, 2011
http://www.dyfedarchaeology.org.uk/lostlandscapes/WCPStechnical.pdf

Wales and the Sea, M. Redknap, S. Rees and A. Aberg (eds), Royal Commission on the Ancient and Historical Monuments of Wales, 2019

Contacts ¬

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cadw@gov.wales
https://cadw.gov.wales/

Royal Commission on the Ancient and Historical Monuments of Wales
Ffordd Penglais
Aberystwyth SY23 3BU
Tel: 01970 621200
www.rcahmw.gov.uk
nmr.wales@rcahmw.gov.uk

National Monuments Record of Wales
nmr.wales@rcahmw.gov.uk
www.coflein.gov.uk

You can arrange to visit the public search room in Aberystwyth where staff will explain the resources available in the National Monuments Record for researching the marine historic environment, including historic maps, drawings, photographs and survey records.

Natural Resources Wales
Natural Resources Wales
c/o Customer Care Centre
Ty Cambria, 29 Newport Road, Cardiff CF24 0TP
Tel: 0300 065 3000
enquiries@naturalresourceswales.gov.uk
http://naturalresources.wales/

Natural Resources Wales administers marine licences and can provide information and advice on using LANDMAP historic and cultural landscape information and seascapes.

Welsh Archaeological Trusts
Clwyd-Powys Archaeological Trust
41 Broad Street, Welshpool SY21 7RR
Tel: 01938 553670
trust@cpat.org.uk
www.cpat.org.uk

Dyfed Archaeological Trust
Corner House, 6 Carmarthen Street, Llandeilo SA19 6AE
Tel: 01558 823121
info@dyfedarchaeology.org.uk
www.dyfedarchaeology.org.uk

Glamorgan-Gwent Archaeological Trust
Heathfield House, Heathfield, Swansea SA1 6EL
Tel: 01792 655208
enquiries@ggat.org.uk
www.ggat.org.uk

Gwynedd Archaeological Trust
Craig Beuno, Garth Road, Bangor LL57 2RT
Tel: 01248 352535
gat@heneb.co.uk
www.heneb.co.uk

Nautical Archaeology Society
The Nautical Archaeology Society
Fort Cumberland, Fort Cumberland Road, Portsmouth PO4 9LD
Tel: 02392 818419
nas@nauticalarchaeologysociety.org
www.nauticalarchaeologysociety.org

Maritime and Coastguard Agency
Receiver of Wreck
Spring Place, 105 Commercial Road, Southampton, SO15 1EG
Tel: 02380 329 474
row@mcga.gov.uk
www.gov.uk/government/groups/receiver-of-wreck

Cardiff Marine Office
Anchor Court, Keen Road, Cardiff, CF24 5JW
Tel: 02920 448 822
Fax: 02920 448 820

Milford Haven Marine Office
Gorsewood Drive, Hakin, Milford Haven, Pembrokeshire, SA73 3HB
Marine office phone: 01646 699 604
Marine office fax: 01646 699 606

Ministry of Defence

The Ministry of Defence deals with wrecks of military vessels and aircraft.

You can contact the Wreck Section at:

FLEET-DCS 3rd SECTOR- HERITAGE
Navy Command HQ (MP1.3)
Leach Building
Whale Island
Portsmouth
Hants
PO2 8BY
Tel: 023 9262 5620

You can contact the Crashed Military Aircraft division at:

Crashed Military Aircraft Defence Business Services JCCC
Room G35
Innsworth House
Imjin Barracks
Gloucester
GL3 1HW
dbs-jcccgroupmailbox@mod.uk
Tel: 01452 712612 extension 7330/6303

UK Hydrographic Office

Admiralty Way
Taunton TA1 2DN
Tel: 01823 337900
www.gov.uk/the-ukho-archive

Health and Safety Executive (HSE)

Diving Operations Strategy Team
Redwing House
Hedgerows Business Park
Colchester Road
Springfield
Chelmsford
Tel: 01245 706234
www.hse.gov.uk/diving/index.htm

The British Diving Safety Group

West Quay Road
Poole
BH15 1HZ
Tel: 0800 328 0600

The National Archives
Kew, Richmond
Surrey TW9 4DU
www.nationalarchives.gov.uk

The National Library of Wales
Aberystwyth
Ceredigion
Wales
SY23 3BU
https://www.library.wales/

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