MARINE ANTIQUITIES SCHEME

GUIDE: SHIPS & BOATS

WHY ARE SHIPS AND BOATS IMPORTANT?

Ship and boat sites that are discovered may tell us more about the progress of technological development, such as the transition from wooden hulled ships to iron and later steel, as well as the change from sail to steam propulsion. They can also provide information on major themes such as migration, military undertakings and commerce.

WHAT WOULD I EXPECT TO DISCOVER?

Shipwrecks are the most commonly known underwater find, and this is unsurprising as there are thousands of shipwrecks lying in waters around the coast – the majority of which date to between 1840 and 1950. Some vessels are better represented in the known record than others. Recreational vessels, such as yachts, and cargo and transport vessels are well represented. In contrast, passenger vessels are relatively rare. As expected, relatively large numbers of military vessel wrecks are recorded.

Finds from ships and boats can come in all shapes and sizes and range from simple log boats to wooden sailing ships, steamships and even submarines. Common types of material include wood and metal.

Vessels and shipwrecks on the seabed rarely survive in their entirety. Instead, both natural and man-made factors influence what is left to be discovered. This can include the process of wrecking – whether accidental or deliberate – salvage operations both in the past and more recently, damage by fishing boats or nets, and disintegration through seabed movement.

There is a statutory obligation to report wreck to the Receiver of Wreck, part of the Maritime and Coastguard Agency. Recovered material believed to be 'wreck' needs to be reported to the Receiver of Wreck within 28 days of the discovery.

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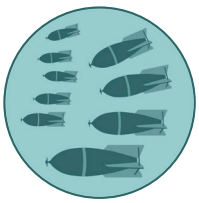
GUIDE: AIRCRAFT

WHY ARE AIRCRAFT IMPORTANT?

Aircraft material is important because all aircraft that were lost while in military service are automatically protected under the **Protection of Military Remains Act 1986**. During the Second World War there was a massive expansion in air activity and thus the submerged remains of aircraft predominantly date to this period – most of which crashed either in combat or training. Crash sites have significance for remembrance, commemoration, their cultural value as historic objects and the information they contain about both the circumstances of the loss and of the aircraft itself. Aircraft crash sites may on occasion contain human remains and should be treated respectfully. They may also contain unexploded ordnance and should also be treated with caution.



WHAT WOULD I EXPECT TO DISCOVER?

Aircraft material is generally lightweight, often made of aluminium, and may be fixed together by rivets. Metal materials may be encountered along with rubber and plastic. Aircraft can disintegrate significantly when they hit the surface of the water, due to their lightweight construction, and thus finds on the seabed may be twisted and distorted. Aircraft can also break up over some distance, spreading the wreckage across a wide area of the seafloor. Post depositional impacts may also mean that sites are dispersed when encountered.

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GUIDE: PREHISTORIC LANDSCAPES

WHY ARE PREHISTORIC LANDSCAPES IMPORTANT?

Some of the first things that spring to mind when you think of underwater heritage are shipwrecks and aircraft wrecks. Whilst shipwrecks are important, there is a huge range of other exciting and significant material that can be discovered under the sea. When sea levels were much lower than they are today our early ancestors would have exploited the vast areas of land which is now underwater. They may have left behind evidence of their activities. Prehistoric finds hold information which enables us to understand the human past so that we can protect it for future generations.

WHAT WOULD I EXPECT TO DISCOVER?

Finds relating to prehistoric landscapes often occur by chance through recreational divers and fishermen. Prehistoric finds include organic material, such as peat, charcoal, animal remains and fragments of bone, wood, leather and textiles, and stone tools and other artefacts. Prehistoric finds can be exposed on the seabed, although this is not always the case. The identification of sites is not always indicated through the presence of man-made objects. Prehistoric sites can be well preserved despite tidal currents on the seabed and multiple phases of sea level change and ice ages in the past.

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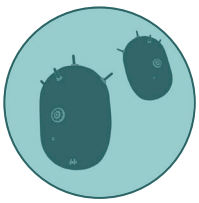
GUIDE: ORDNANCE & MUNITIONS

If you discover munitions – be careful! Despite long periods spent underwater, munitions can still be extremely dangerous and should always be treated with caution. The appropriate response when dealing with munitions is to report them to the police, coastguard or Ministry of Defence.

WHY ARE ORDNANCE AND MUNITIONS IMPORTANT?

- They can enhance our understanding of historical naval and aerial warfare
- They are indicators of the types of weapons deployed in past conflicts
- They may indicate the presence of the remains of a shipwreck or aircraft wreck



HOW COMMON ARE MUNITIONS?

Up to 10% of the bombs that fell on and around the UK during WWII failed to function and so far only a fraction of these have been recovered. In addition to these 'blind' munitions, ordnance from both world wars was dumped at sea and munitions on board sunken vessels are rarely salvaged.

RECORDING MUNITIONS

Always follow safe procedures when dealing with munitions. Before recording munitions via the MAS they must be made safe or identified as inert by the police or a military Explosive Ordnance Disposal Officer (EOD). Once the items have been confirmed as safe and suitable for handling they should be recorded as normal through the MAS.

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GUIDE: PALAEO-ENVIRONMENTAL FINDS

WHY ARE PALAEO-ENVIRONMENTAL FINDS IMPORTANT?

Palaeo-environmental evidence relates to the microscopic remains of plants (e.g. pollen, algae), animals and other organic remains (e.g. wood, nuts, seeds) sealed within layers of peat. These remains can be used to reconstruct past environments and landscapes that help us to understand how early humans and their ancestors lived. They can also tell us about how the landscape has changed by informing us about the configuration of the coastline in the past and the rise and fall of sea levels.

WHAT WOULD I EXPECT TO DISCOVER?

Peat is a black or brown fibrous organic-rich deposit that forms in low-lying boggy ground. As well as preserving microscopic remains which provide environmental evidence, large samples of peat may also contain other important objects such as stone tools, as well as wood, leather, textiles, pottery and other materials. Peat deposits can record when rising sea level flooded coastal land during prehistory. Alongside outcrops of peat, the seabed is composed of flooded landscapes like river valleys, lakes and hills, which are filled in or buried by marine sediments and seabed sand. Bedrock, or glacial till are often found at or under the seabed too. The preservation and extent of palaeo-environmental material depends on the degree of marine influence such as waves, tides and currents, in the past and present, as well as more recent human industry and development.

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GUIDE: BONE FINDS

ANIMAL BONES

Animal bones, including antlers, on the seabed may relate to a period when areas of the seafloor were exposed as dry land. Not only do they provide insight into the types of animals which roamed these ancient landscapes, they may also provide an indication of the diet of early humans and their ancestors, as well as the environment in general. All bones should be recorded through the MAS upon discovery.

The presence of any cut marks or other signs of butchery provide an indication of subsistence activities and should be noted when observed. Some may even be worked into tools. Although it is not possible to date bones by simply looking at them, those which are dark in colour may be displaying a degree of fossilisation that are likely to be prehistoric in date.

Animal bones can also be associated with a shipwreck site, or may be an isolated find which was discarded over board.

TEETH AND TUSKS

Teeth and tusks are represented similarly to animal bones and finds are not uncommon. Mammoth teeth, for example, are remarkably resilient and survive for thousands of years below the surface of the seabed. Mammoth roamed the Earth between five million years ago, up until their extinction around 4500 years ago. Tusks can equally indicate valuable traded goods carried by ship.

HUMAN BONES

The presence of human remains is extremely rare on wrecks of all dates and types. However, in some conditions such as anaerobic (oxygen-free) environments with silty sand, mud or clay, human skeletons have been discovered. Any human remains from wrecks can contribute immensely to the understanding of daily life during the period of wrecking. The discovery of human remains at military sites (aircraft or vessels) which fall under the **Protection of Military Remains Act 1986** are encouraged to be recorded using the MAS, however under no circumstances should any part of these finds be disturbed or removed from the seabed.

If human remains are discovered in the marine environment you must notify the Police.

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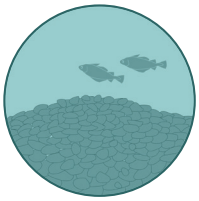
GUIDE: FLINT & STONE FINDS

STONE TOOLS

Stone tools are the oldest surviving tools used by humans and are amongst the earliest finds that can be discovered from the seabed. They are often made from flint, though many other types of rock could be used. They are relics from a landscape which now lies submerged under the sea and are invaluable in telling us about past activities and settlement patterns of early humans and their ancestors. Stone tools can be hard to recognise. Any stone that looks as though it has been worked or struck should be recorded through the MAS.

GUN FLINTS

Gun flints were used on a range of firearms from the early 17th century, including naval ordnance. They are particularly useful as their typology can help determine a wreck's date and provenance.



STONE ANCHORS

Pierced stones or stone anchors are a well-known object found on the seabed. The majority of pierced stones thought to be anchors have either one hole or three holes, with very few demonstrating only two holes. Dating of stone anchors is very difficult as their simple yet effective design was unable to be improved upon; however, there are indications that they may have been in use until quite recently, even after the widespread adoption of iron anchors. Given the relatively robust nature of stone objects, they are unlikely to be vulnerable to damage or deterioration due to natural processes. Finds of smaller pierced stones are likely to be fishing weights.

BALLAST STONES

Ballast stones were used to stabilise ships empty of cargo. Stone ballast can survive in situ within the wooden structure of shipwrecks; or it can be the only indication of the location of a shipwreck where the wooden structure has rotted away. Ballast is also found at landing sites or ports where it has been jettisoned before loading cargo. The identification of the origin of ballast stones can indicate the origin of the vessel or its trade routes.

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GUIDE: LEATHER & TEXTILE FINDS

WHY ARE LEATHER AND TEXTILE FINDS IMPORTANT?

Leather and textile finds can tell us significant information about manufacturing materials and methods in the past. This can include the raw materials used, for example the analysis of leather can identify the species of animal used in its production. Such finds also give insight into the various uses of different materials in the past. Textile finds encompass woven and interlaced objects, felts, fibres such as hair, and cordage.

WHAT WOULD I EXPECT TO DISCOVER?

Leather and textiles, like a lot of organic materials, undergo complex changes in the marine environment. The appearance of such materials when discovered are dependent upon their condition when lost or discarded, the burial environment, the species of natural plant or animal fibres, the manufacture method used (e.g. tanning, weaving, interlacing, spinning and twining) and the object's history.

Common leather finds from wreck sites include parts of shoes and other clothing items. Textile items found underwater also include clothing, as well as flags, ensigns, canvas and rope. The latter are used in sails and rigging. A variety of types of natural fibres, including animal hair, was also used in caulking wooden ships, the process of sealing joins between planks in the hull.

Remember to store recovered leather and textile finds in water in a cool and dark place.

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GUIDE: CERAMIC FINDS

WHY ARE CERAMIC FINDS IMPORTANT?

Ceramic finds from the seabed are very important objects for discovering more about the use of the sea by past peoples. The life history of such objects can often be traced, from their manufacture and transportation to their use and discard or loss. In particular, ceramics often feature decoration, stamps or maker's marks which allow very accurate identification of the date of manufacture and origin.

WHAT WOULD I EXPECT TO DISCOVER?

Ceramic finds can include the whole array of items made of ceramic in the past – from earthenware pottery, Roman amphorae and ceramic tiles to bone china, bricks and pipe clay. Such finds might be part of a shipwreck, or may be an isolated find which was discarded from a ship when broken. If from a shipwreck, ceramics may have formed a large part of the cargo as a trade item, or may be personal belongings, or everyday items used by the crew during the voyage.

LEAVE CERAMIC WHERE FOUND

As with all objects at a shipwreck site, ceramic items should be left where found as their location not only helps in dating other finds at the site, but their position within the ship can reveal the purpose of the item on board, whether used by crew or part of the cargo. Items should only be recovered legally and with detailed recording and conservation in place.

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GUIDE: WOODEN FINDS

WHY ARE WOODEN FINDS IMPORTANT?

Wooden components of a shipwreck, such as parts of the hull, are extremely important as they can reveal how the ship was designed and built. Tool marks on timbers show the woodworking techniques used by shipwrights. Wood can also be dated and provide information on the raw materials used in ship construction or may even rarely be connected to submerged former landscapes. Dark, waterlogged wood is usually an indication of an older wooden object.

WHAT WOULD I EXPECT TO DISCOVER?

Wooden finds on the seabed are most likely to be part of a shipwreck, such as hull timbers. These timbers are usually identifiable as they may have been shaped or jointed and comprise some form of fastener – be it treenails (wooden pegs), copper bolts or nails. Other integral features of a ship are made from wood, including masts and spars, fixtures and fittings such as rudders and wheels, and rigging elements like blocks and deadeyes. Aside from shipwrecks, wooden parts of maritime infrastructure, such as jetties, wharves and groynes, can also make their way to the seabed.

LEAVE WOODEN OBJECTS WHERE FOUND

Wooden objects that have been lying in water for a long time become very brittle and may split, collapse and disintegrate when brought up on land and be allowed to dry out. The best way of preserving shipwrecks and wooden finds is therefore to leave them at the bottom of the sea, where conditions are close to perfect – dark, cold and without oxygen.

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GUIDE: METAL FINDS & CONCRETIONS

WHAT WOULD I EXPECT TO DISCOVER?

The potential range and date for metal objects is so wide that it is difficult to provide general guidance, however overall, machinery, fixtures and fittings, anchors and other identifiable material would be of interest. Types of metal could include copper and its alloys such as bronze or brass, iron – wrought, cast or steel – lead, silver, gold and tin and its alloys like pewter.

Concretions are dense clumps of hard material that develop on the surface of iron or other ferrous metals as they corrode. A concretion can form one clump around an object or become large sections on iron shipwrecks. Other material from the seabed often becomes stuck to a concretion, making these finds often difficult to differentiate from rocks on the seafloor. Within a concretion the object gradually corrodes away, sometimes leaving only a hollow space. It is easy to see if a concretion has been freshly pulled off an iron object as it has a bright orange rust colour.

WHY ARE CONCRETIONS IMPORTANT?

Concretions can easily hide the shape of a find, making it impossible to identify. However, you should not assume that concretions are unimportant; x-rays can sometimes reveal what lies underneath the concretion, or injecting filler can make a mould of the hollow space.

HOW TO RECORD A CONCRETION?

As with other types of finds, the more information provided the better. When recording concretions useful information includes length, width, diameter and thickness of concretion, where possible.

KEEP YOUR EYES PEELED

Some people miss concretions as they can look like rocks from the seafloor. If you find something you're not sure about, record it via the MAS.

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GUIDE: PHOTOGRAPHY

WHY ARE PHOTOGRAPHS IMPORTANT?

The photographs that we receive of new finds are very important as they help us to identify them. Photographs provide a lot of information about each find and can be sent to specialists around the country.

TIPS

- Make sure there is a scale in the photo – you can use a ruler or known object, such as a coin or pen, to help show the size of the find.
- To avoid light spots in the photo, make sure any excess water is wiped off.
- Ensure the photo is taken at the highest resolution possible and in focus.
- Photograph each find individually, not as a group.
- Take up to 10 photos at different angles; the more photographs and views, the easier it is to identify the find.
- Take close-up photos of markings or features that you think are unusual or important.

CHECKLIST

Can someone tell from the photos:

- The size of the find
- The shape of the find
- The material of the find
- Any unusual markings

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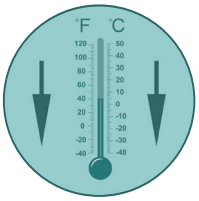
GUIDE: FINDS CONSERVATION

Finds of a historical nature should be left in place and undisturbed so that the marine environment can be enjoyed by future generations. Nonetheless recoveries are often made, intentionally or by accident (for example while fishing), so it is important that these finds are appropriately conserved and stored.

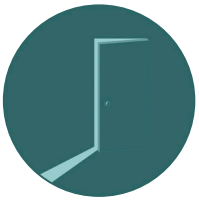
Marine finds are very fragile and can dry out quickly; even seemingly robust objects such as cannonballs can quickly degrade if they are not treated correctly.

WHAT TO DO WITH A RECOVERED FIND?



1. Place the find into a container, preferably plastic to avoid corrosion, and completely cover with seawater. If the find is large, cover as much as possible with seawater and wrap the rest in wet fabric or polythene.
2. Label the container or wrapping and store in a cool dark area.
   Label: date (DD/MM/YYYY), finder name, contact number and site/location.
3. Check the condition of the find regularly. Change the seawater every three weeks and note any cracks or flaking.

THREE KEY RULES



1. Wet – Keep the find wet by covering with water in an appropriately sized container
2. Cool – The hotter the environment, for example air temperature, the more likely it will corrode so place the find somewhere cool
3. Dark – Place the find away from direct contact with light, such as in a drawer or cupboard

THINGS TO AVOID

- **Supermarket bags** – they contain harmful chemicals
- **Drying** – when wet finds dry quickly they crack and disintegrate
- **Tissue paper** – tissue will degrade in water
- **Bubble wrap** – textured wrapping can leave impressions on soft finds
- **Placing different finds together** – some types of material can be affected by contact with others
- **Metal containers** – metal can cause problems such as corrosion
- **Glue** – some glues are harmful; if a find breaks don't fix it

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