

2008-2009



Protocol

for reporting finds of archaeological interest

Annual Report to BMAPA 2008-2009



ENGLISH HERITAGE



November 2009

Prepared by

Wessex Archaeology

British Marine Aggregate Producers Association
and
English Heritage

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Project Background

Every licence area is intensively studied prior to the granting of a licence to dredge in order to protect our submerged heritage. Despite this, it was recognised that artefacts are still likely to be present in dredged loads. In August 2005 Wessex Archaeology (WA) drafted the Protocol, on behalf of English Heritage (EH) and the British Marine Aggregate Producers Association (BMAPA), to protect these finds and the sites of archaeological importance that they may signify. The Protocol provides a 'safety net' and is an efficient and effective mitigation option to preserve our heritage.

BMAPA member companies have voluntarily committed to implement the Protocol across all existing operations, encompassing wharves, vessels and production licence areas. Under the Protocol, finds recognised within dredged loads are reported to a Site Champion and then to a designated Nominated Contact who reports them to the curator. To expedite this process a Protocol Implementation Service run by WA was set up and WA is alerted to each new find through the dedicated reporting website of the Protocol Implementation Service. Munitions and suspected munitions are first made safe following the Guidance Note 'Dealing with munitions in marine aggregates' (June 2006)

and aircraft remains are considered in accordance with an annex to the Protocol published in February 2008 (both are available online or from WA).

WA is currently conducting some aspects of EH's role through the Protocol Implementation Service, although only where a find is deemed to be non-contentious and is unlikely to result in the creation of an exclusion zone. Finds that require a higher level of curatorial involvement are referred to EH in the first instance. Details of all dredged finds are reported to EH, BMAPA, The Crown Estate (TCE); the National Monuments Record (NMR); the appropriate local Sites and Monuments Record (SMR); the Historic Environment Record (HER) and the Finds Liaison Officer for the Portable Antiquities Scheme (PAS). All finds are also publicised on WA's website and the good work done by BMAPA companies with regard to the Protocol is made accessible through various dissemination programmes, conducted both by WA and by other companies.

The Implementation Service has now completed its fourth year of operation and it is the year October 2008 to September 2009 which is the subject of this annual report.

BMAPA Company	Nominated Contact	Position
Britannia Aggregates Ltd	Richard Fifield	Marine Resources Manager
Brett Aggregates	Richard Fifield	Marine Resources Manager
DEME Building Materials Ltd	Frank Devriese	General Manager
Hanson Aggregates Marine Ltd	Joe Burden	Marine Resources Manager
Kendall Bros (Portsmouth) Ltd	Richard Kendall	Managing Director
Northwood (Fareham) Ltd	Tom Hills	Operations Manager
Lafarge Aggregates Ltd	Malcolm Whittle	Marine Aggregates General Manager
Norwest Sand & Ballast Ltd	Nick Brown	Site Supervisor
CEMEX UK Marine	Graham Singleton and Joe Holcroft	Resource and Systems Manager and Assistant Resource Manager
United Marine Dredging Ltd	Andrew Bellamy and Simon Lockett	Resources Manager and Resources Co-ordinator
Volker Dredging Ltd	Will Drake	Marine Resources Manager

The First Four Years of the Protocol

The first four years of the Protocol have demonstrated the success of this type of scheme as a mitigatory option.

A total of 158 separate reports have been filed since October 2005 detailing over 700 individual finds. These have ranged from material dating from before the last marine transgression, during the Palaeolithic, to maritime artefacts, finds relating to past conflicts (both twentieth century and earlier), material derived from aircraft and domestic debris. Some of these artefacts represent chance finds which, were it not for the work of BMAPA companies, might not have been recovered. Others are indicative of significant sites of archaeological interest worthy of further archaeological investigation. For example, the discovery in the 2006 - 2007 reporting year of over 300 pieces of a German aircraft from Area 430 led to an in-depth archaeological study of the area, and the discovery in the 2007-2008 reporting year of Palaeolithic material from Area 240 is the basis of an ongoing WA investigation (more details on both projects are available on Wessex Archaeology's website).

Over the past four years the range and variety of material that has been discovered by BMAPA staff has developed an archive of information about the marine historic environment. Enquiries about BMAPA Protocol finds have been received from other companies working in the marine environment as these artefacts have the potential to help with archaeological research and the planning of commercial development in specific regions. Details of all finds reported through the Protocol can be found in the reports of the past four years which are available on WA's website.

During the last year, BMAPA finds have begun to be donated to museums with a ship's badge marked Cavendish being donated to the Royal Naval Museum in Portsmouth (see Case Study 2) and part of a Hawker Hurricane being donated to the Frinton and Walton Heritage Trust (see Case Study 1). This increases public and professional access to the knowledge gained through reported finds, shows the good work achieved through the Protocol and demonstrates, through public benefit, the value that the Protocol and BMAPA staff provide.

As a mitigatory option the Protocol has proven to be cost-effective as it negates the requirement of having an archaeologist monitor dredged material. This has been recognised by other marine industries, including offshore renewables developments, who are now considering protocols as mitigation options.

The example established by the BMAPA marine aggregates Protocol over the past four years has demonstrated that protocols are effective in protecting our marine heritage, discharging licensing conditions and demonstrating best practice by all parties involved. As the Protocol enters its fifth year we are confident that it will continue to add benefit to both public and professional audiences and BMAPA staff are highly commended for their dedication and enthusiasm, which is evident in the high level of reporting.

Further information about the Protocol and the Implementation Service can be found at:

<http://www.wessexarch.co.uk/projects/marine/bmapa/index.html>

Or by internet searching 'BMAPA Protocol'.



Raising awareness

Raising Awareness

WA operates an Awareness Programme to ensure that industry staff are aware of all aspects of the Protocol and to encourage its use. This has received three phases of funding from EH through the Aggregate Levy Sustainability Fund (ALSF), the most recent of which supports the Awareness Programme from 2009 to 2011. This latest phase of work aims to consolidate and extend awareness of the Protocol and build on the foundations laid by the 2006 and 2007 Awareness Programmes.

The 2009 - 2011 Programme consists of:

- Visits to wharves receiving aggregate from BMAPA companies, including those in Wales and on the continent;
- Visits to geophysical and environmental survey companies that service the industry;
- Two workshops for Nominated Contacts and staff in related marine industries including heritage professionals. One workshop was scheduled for 2009; the second will be scheduled in 2010;
- Five issues of the popular Dredged Up newsletter to publicise the service and highlight recent finds. These are published bi-annually and the first of these five issues was printed in April 2009.

Visits to Wharves and Vessels

Visits to wharves and vessels were deemed crucial to provide staff with the knowledge and confidence to recognise and report archaeological material amongst dredged loads. Visits to wharves were first conducted during the 2006 phase of funding and are being continued on a 'drip-feed' basis throughout the 2009 - 2011 funding programme. Priority is being given to those wharves that have not had an Awareness visit since 2006 as it is understood that staff may need further information and reassurance, and it is likely that new staff will have joined the company since previous visits.

Encouragingly, many wharves visited during the 2009-2011 phase of work have recalled previous visits although it is still deemed of

great benefit to re-visit and reinforce archaeological knowledge. It also provides the opportunity to distribute new resources to wharves and to disseminate the latest information on reporting, curation and conservation.

Visits to wharves, vessels and survey companies utilise a combination of formal and informal techniques, including presentations, group discussions and one-to-one discussion as appropriate to the circumstances and facilities.

Specific information is provided to staff on:

- The nature of the marine historic environment;
- Identifying typical marine finds and why they are archaeologically significant, using examples of finds reported through the Protocol;
- An outline of the Protocol and the responsibilities of staff under the Protocol;
- Tips for recording finds, including filling in the initial reporting form and advice for photographing finds;
- Handling, conserving and storing marine finds;
- Contacts for receiving additional advice on particular finds from local authorities or organisations;
- Legislation relating to archaeology on the seabed.

The 2009 - 2011 phase of Awareness work has also:

- Produced improved handouts giving advice on the Protocol, the reporting process, photography, conservation, munitions and concretions. These are available online and have been sent to every ship owned by BMAPA companies. They are being distributed to wharves during Awareness visits where they are presented in a folder for ease of storage and retention. This ensures that BMAPA vessels and wharves

have a permanent information source to refer back to when reporting finds. This is especially important for vessels and wharves that do not have cause to report often.

- Provided a new email address for all general enquiries about the Protocol - protocol@wessexarch.co.uk. This enhances and encourages dialogue between WA and BMAPA staff. Also, by providing a single point of contact, it ensures that the correct archaeological advice is offered soon after the discovery of an item. This does not replace the reporting system, whereby staff report finds to their Nominated Contact in the first instance.

Increased dialogue with stakeholders and associates has greatly added to the programme. Advice on conservation was provided by WA's in-house conservator Lynn Wootten and by Angela Karsten of EH, and has been disseminated both through the Awareness handouts and through Issue 5 of the Dredged Up newsletter. Communication with industry staff led to Dave Whitby, one of CEMEX's Site Champion's, suggesting that WA creates a photographic scale. This is now included in information packs and is being used to great effect to improve the photography of artefacts.

The current extension to the Awareness Programme is vital as company staff are likely to have changed since the initial phase of Awareness work in 2006. Further visits also reinforce and remind staff of the value of reporting finds through the Protocol and promote the latest advice for the protection of artefacts. Whilst logistically it is difficult to arrange times to visit ships, sending the latest handouts to the vessels has reinforced the value of the Protocol and reports are regularly received from dredging vessels.

If you would like an Awareness visit, or would like to receive more advice on finds and finds reporting, please contact WA via protocol@wessexarch.co.uk.

Newsletter

The Dredged Up newsletter has been produced twice a year to provide wharf and vessel staff with feedback on the finds reported through the Protocol over the previous six months, and it is intended that this will continue. The newsletter informs staff of the finds made at wharves and by vessels and also gives staff an opportunity to see their own finds publicised. In providing feedback on finds reported through the Protocol, and by enabling staff to see finds reported by wharves and vessels other than their own, the newsletter has proved to be popular amongst members of the aggregate industry. It is also a useful way to inform industry staff of updates to the Protocol and Awareness Programme and to Protocol related projects.

The newsletter is proving to be a useful tool for publicising the Protocol and the importance of the finds reported through the Implementation Service outside of those involved directly with the Protocol. Copies are distributed by EH to a variety of other organisations, individuals and to the general public.

Anecdotally WA staff have become aware that wharf and vessel staff are keen to appear in the newsletter, either in photographs or to be named and credited with making a find. This shows an admirable level of dedication to the Protocol and the Awareness Programme and WA is delighted with the positive response that both the newsletter and the annual reports have received.

Reports: Protocol

During the fourth year of operation Wessex Archaeology received 46 reports through the Implementation Service. These reports encompassed approximately 109 separate finds (see table below).

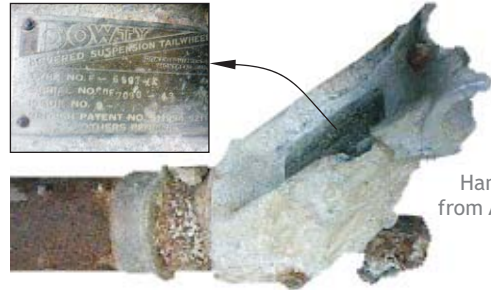
Further details of each discovery are included in the wharf reports appended to this report.

Reported	Report ID	Licence Area	Region	Wharf / Vessel	Description	No
07/10/08	Hanson_0188	474C	East English Channel	Denton Wharf	Tailwheel strut from a WWII Hawker Hurricane	1
15/10/08	Hanson_0190	106C	Humber	Arco Humber	Refractory or fire brick	1
15/10/08	Hanson_0191	408	Humber	Arco Humber	Undiagnostic metal sherd - ?net or lobster pot weight	1
24/10/08	UMA_0192	122/3	South Coast	Bedhampton Wharf	Antler, animal bone and iron plate (marked <i>Simpson Lawrence</i>)	3
29/10/08	UMA_0193	296	East Coast	Ridham Wharf	Part of a brass ship's log	1
11/11/08	UMA_0194	447	Thames	City of Westminster	Tailwheel strut from a WWII Hawker Hurricane	1
11/11/08	CEMEX_0195	251/451	East Coast or South Coast	Dover Wharf	Ship's badge marked ' <i>Cavendish</i> '	1
14/11/08	UMA_0196	296	East Coast	Greenwich Wharf	Auto-Klean filter plate	1
14/11/08	UMA_0197	296	East Coast	Greenwich Wharf	Vis or Radom pistol	1
14/11/08	CEMEX_0198	Unknown	Unknown	Northfleet Wharf	Ship's telegraph plate	1
17/11/08	UMA_0199	395/1	South Coast	Burnley Wharf	Cannonball	1
25/02/09	CEMEX_0200	319	East Coast	Northfleet Wharf	Flag pole top, deadlight/storm cover, metal object	3
09/03/09	CEMEX_0201	447	Thames	Sand Falcon	Mammoth tusk	1
11/03/09	Hanson_0202	242/328A/361B-C	East Coast	Arco Beck	Fossilised bone fragment	1
23/03/09	CEMEX_0207	137	South Coast	Portslade Wharf	2 bones, 2 pieces of worked wood, 19th century relish pot, wooden pulley	6
14/04/09	Kendalls_0214	351	South Coast	New Wharf	Worn iron drill bit, ?iron pipe spacer, sacrificial anode, copper lid, worked shale	5
21/04/09	UMD_0218	127	South Coast	Burnley Wharf	Pocket watch in 2 parts, fork, mechanical object	4
21/04/09	UMD_0221	127	South Coast	Bedhampton Wharf	Metal boat hook	1
21/04/09	UMD_0222	127	South Coast	Bedhampton Wharf	Short spiked stanchion	1
21/04/09	UMD_0223	127	South Coast	Bedhampton Wharf	Deer antler	1
21/04/09	UMD_0224	127	South Coast	Erith Wharf	Cannonball	1
06/05/09	Brett_0228	Unknown	Unknown	Cliffe Wharf	Ship's badge marked ' <i>Cavendish</i> '	1
08/05/09	CEMEX_0230	319	East Coast	Northfleet Wharf	Aluminium ?aircraft parts	2
08/05/09	CEMEX_0231	113/1	Thames	Northfleet Wharf	Handle, cleat, chain	3
22/05/09	Hanson_0234	372/1	South Coast	Burnley Wharf	German signal light, 6 metal fixtures/fittings, unidentified bone	8
28/05/09	UMD_0235	127	South Coast	Bedhampton Wharf	Wedge shaped lead weight	1
28/05/09	UMD_0236	127	South Coast	Bedhampton Wharf	Parts of a pocket watch case	2
28/05/09	UMD_0237	396	South Coast (Owers)	Bedhampton Wharf	Metal hinge, metal screw top unit	2
28/05/09	UMD_0238	127	South Coast	Bedhampton Wharf	Metal lock faceplate	1
28/05/09	UMD_0239	395/1	South Coast	Bedhampton Wharf	Sherd of ironstone pottery	1
28/05/09	UMD_0240	122/3	South Coast	Bedhampton Wharf	Metal lock, metal cap, metal label plate, metal gear ring	4
28/05/09	UMD_0241	122/3	South Coast	Bedhampton Wharf	Various metal items	23
28/05/09	Brett_0242	461	East English Channel	Cliffe Wharf	Cannonball	1
28/05/09	Brett_0244	461	East English Channel	Cliffe Wharf	Cannonball	3
29/05/09	Hanson_0245	474C	East English Channel	Arco Arun	Unidentified seabed obstruction	1
22/06/09	UMD_0248	122/3	South Coast	Burnley Wharf	Bone	1
22/06/09	UMD_0250	122/3	South Coast	Bedhampton Wharf	Metal plates	2
22/06/09	UMD_0252	127	South Coast	Bedhampton Wharf	Fossil	1
08/07/09	Brett_0253	Unknown	Unknown	Brett Wharf	Metal plate marked ' <i>TORPEDO G</i> '	1
20/07/09	Hanson_0256	240	East Coast	Arco Arun	3 rigging pieces and 1 unknown object	4
27/07/09	Hanson_0258	127	South Coast	Arco Avon	Stone bead	1
27/08/09	UMD_0259	430/458	East Coast or East English Channel	Erith Wharf	Brass spoon	1
01/09/09	UMD_0261	Unknown	Unknown	Ridham	Lead pipe and cannonball	1
01/09/09	UMD_0264	458	East English Channel	Ridham	3 cannonballs	3
03/09/09	CEMEX_0265	360	East Coast	Sand Falcon	Bone and tooth	2
30/09/09	Hanson_0266	106C	Humber	Arco Humber	Possible fossilised bone	1

Case Study 1: Aircraft Remains in the Fourth Year of the Protocol

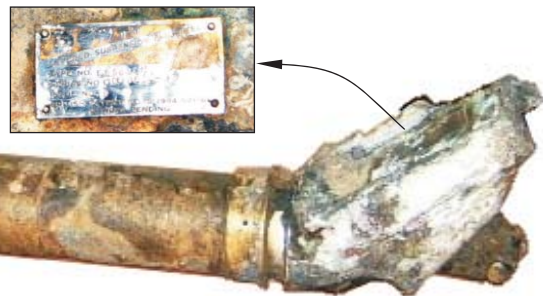
During the first three years that the Protocol Implementation Service was in operation, six reports detailing aircraft remains were made by BMAPA companies, two of which accounted for over 300 individual finds. As such, specific guidance regarding the handling and reporting of aircraft remains, especially in relation to the fact that aircraft crash sites have the potential to hold human remains and ordnance, was published as an annex to the Protocol in 2008.

In the 2008 - 2009 Protocol reporting year a further three reports, comprising a total of four finds, have been made that relate directly to aircraft sites and one report has been made that has the potential to relate to an aircraft crash site.



Hanson_0188
from Area 474C

The Hurricane played a vital role in the Battle of Britain and it is not surprising that the pieces have been discovered in the East English Channel and Thames regions as during the summer of 1940 the skies over these areas became the battlefield for the

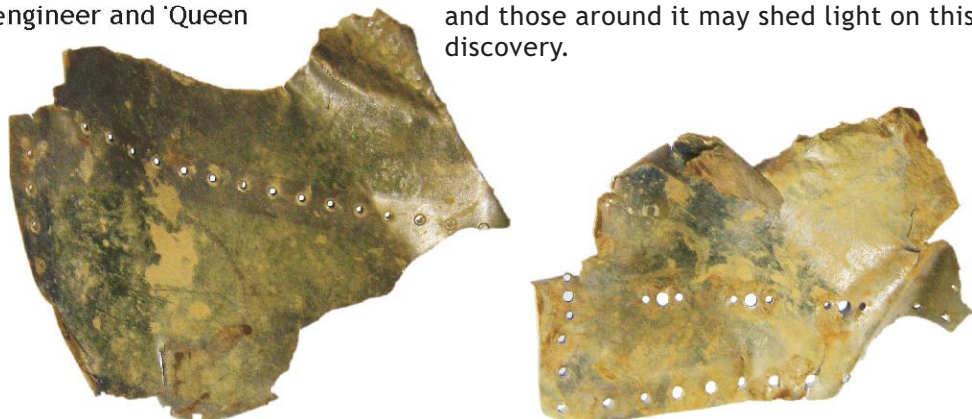


UMA_0194 from Area 447

Hanson_0188 and UMA_0194 were reported a month apart from licence areas 474C (East English Channel region) and 447 (Thames region) respectively. Both finds consist of tail wheel struts from Hawker Hurricane aircraft, and both were manufactured in Montreal, Canada by Messier-Dowty. They would then have been transported to Ontario, to the iconic Canadian Car and Foundry or 'Can Car' factory to be manufactured into completed aircraft. During WW2 around 1,400, approximately 10%, of all RAF Hurricanes produced originated in the Can Car factory, where they were manufactured under the guidance of chief engineer and 'Queen of the Hurricanes' Elsie Magill.

first major campaign to have been conducted solely by air forces. It is highly likely that future reports detailing aircraft remains will originate from these regions, and others on the south and east coasts.

Also reported, from Area 319 in the East Coast Region, were two fragments of aluminium with clear rivet holes visible around their edges (CEMEX_0230). It has not been possible to identify what type of aircraft they relate to, or what age they are, however further finds from the same licence and those around it may shed light on this discovery.



Aluminium fragments
from Area 319



Radom or Vis pistol

One of the most enigmatic finds reported during the 2008-2009 reporting year was a Second World War pistol identified as a Radom or Vis pistol. This type of gun, reported as UMA_0197, is thought by some to have been the finest pistol ever produced. It was made in Poland and was issued to Polish forces prior to the German invasion in 1939. After the invasion of Poland, German forces adopted the pistol for their own use. However, it was only routinely issued to German Paratroopers and to German police. The discovery of this pistol amongst aggregate from Area 296 in the East Coast region is therefore somewhat puzzling.

One possibility is that this gun originates from a lost aircraft, or it may have been lost with, or over the side of, a vessel. It could have been owned by a Polish airman who had retained it after the invasion and used it during subsequent service with the RAF.

The Polish air force, or *Polskie Siły Powietrzne*, consisted of a core of veterans who were highly experienced, having fought during the Nazi-Soviet invasion of Poland in 1939. Following the invasion, the Polish joined the French and English to defend against further German attacks. Despite the experience of many of the men, the British forces were initially sceptical of the Polish, giving them the low rank of 'pilot officer' and insisting that they work alongside a British counterpart. However, Polish fighters played a considerable part in the allied success in the Battle of Britain in 1940, with the Polish 303 Squadron being recognised as the most efficient fighter squadron in the latter half of the campaign. Incidentally, 303 Squadron primarily flew Hawker Hurricanes.

Alternatively the weapon may have been owned by a German airman who obtained it during the course of the war. The reported quality of the weapon makes either scenario plausible and it is hoped that further finds from Area 296, and those around it, may help to resolve these questions.

Aircraft submerged around the coast of Britain are an important resource. In some cases, they represent some of the only surviving examples of a particular type of plane. For example, in Pembroke, Wales, lie the remains of the only Mark 1 Sunderland known to survive. Similarly, off the coast of Kent lies an aircraft which, whilst currently not firmly identified, is thought to be a unique surviving example of an early war Luftwaffe Dornier.



Sidescan sonar image of the possible Luftwaffe Dornier on the seabed off the coast of Kent

Every licence area is fully investigated prior to the granting of the licence to dredge, in order to identify and protect sites that may be of archaeological significance, such as aircraft wreck sites. However, as is well evidenced by BMAPA Protocol reports, there are still likely to be finds made during the course of aggregate dredging that relate to aircraft. As every military aircraft is protected by the Protection of Military Remains Act (1986) it is crucial that all further finds are reported. This not only protects our submerged heritage, but also ensures that the correct legal procedures are followed when a find is made.

Case Study 2: Cavendish Badges

In November 2008 CEMEX's Dover wharf reported the discovery of a ship's badge marked 'Cavendish' (CEMEX_0195 - reported in Dredged Up 4). There have been several ships by the name of *Cavendish* but this badge relates to a destroyer built in 1944 for the Royal Navy. When CEMEX_0195 was discovered, images were sent to Jenny Wraight from the Royal College of Arms in Portsmouth who confirmed that the badge belonged to the destroyer.

The badge was designed in 1945, at which time there was an embargo on producing ships' badges apart from a single screen badge which was reduced to 12" in size. On this basis, it was initially believed that this example, which measures approximately 12", was the *Cavendish's* wartime badge.

However, our interpretation of this find, thought to be the only badge that would have been created for this wartime destroyer, altered after the discovery of a second, identical badge by Brett's Cliffe Wharf, Kent (Brett_0228). The second badge bears the same name and design and is the same size as the CEMEX badge.

WA contacted Jenny Wraight again after the discovery of the second badge and she suggested that one of the badges may be a copy. Such copies were made for presentation, either to high ranking officials who served on the vessels, or to towns who 'adopted' ships during Warship Week. Warship Week took place in 1942, before the *Cavendish* was built. During this time towns, cities and villages across the country were encouraged to raise money to 'adopt' a ship. Each town was given a financial target that they endeavoured to meet.

The *Cavendish* was adopted by Kendal, in Cumbria, after the sinking of Kendal's previously adopted ship in 1943. WA contacted Kendal Museum and the Town Clerk but neither had any recollection of owning a badge or of a badge in their collections.

Heather Johnson, Library Assistant at the Royal Naval Museum had a different hypothesis. She suggested that one of the



Cavendish badges discovered by Brett's Cliffe wharf and CEMEX's Dover Wharf

badges was produced for the *Cavendish* in 1944, and that the second was commissioned for her refit in 1955. This, states Heather, may be likely as both badges show considerable wear, indicating that both were displayed externally and making the creation of a replacement for the refit more likely. Prior to the refit the ship is said to have sustained 'malicious damage'. This may also have led to the destruction, damaging or removal of the original badge.

A further theory, that these badges originated on the lifeboats of the *Cavendish*, was considered, but the Royal Naval Museum, in Portsmouth, informs us that lifeboat badges would normally have measured approximately 5", whereas the two dredged examples measure 12".

The *Cavendish* had a productive life after WW2 until she was eventually retired. She arrived under tow in Blyth in Northumberland on 7th August 1967 where she was to be scrapped.

Heraldic Symbols on the *Cavendish* Badge

The badge, which would originally have been painted, shows a rope ring with a serpent knotted about the base. The serpent is described in heraldry as a 'serpent proper, nowed at the base of the ring'. 'Proper' refers to the natural colour of the serpent, which is normally interpreted as being green and 'nowed' describes its knotted form. The nowed serpent is taken from the crest of the Dukes of Devonshire, the Cavendish family, from whom the ship took her name and motto - '*Cavendo tutus*' - meaning 'Secure by Caution'. The gold ring alludes to Thomas Cavendish (b. 1555 - d. 1592), for whom the ship was named, and particularly to his circumnavigation of the globe. The crown atop the badge is the naval crown and has adorned all ships' badges since the establishment of the Ships Names and Mottos Committee in 1918.

Specialists

During the 2008 to 2009 reporting year specialist advice was sought from a number of experts in order to obtain the best possible interpretation and to offer the most appropriate advice to Nominated Contacts regarding the identification, conservation and curation of finds.

Details of the assistance given by specialists in relation to specific finds are included in the wharf reports appended to this report. Specialists that we have contacted in the past but have not contacted this year are still included in WA's internal specialist lists, but have been omitted from the table below.

Expert	Specialism	Institution/Organisation
Jon Adams	Maritime archaeology	Director of the Centre for Maritime Archaeology (University of Southampton)
Andrew Akerman	Auto-Klean products	Auto-Klean Filtration
Andy Carrant	Ice age mammals	Collections Manager (Palaeontology), Natural History Museum
Bob Davis	Archaeological artefacts	Archaeologist (Heritage), Wessex Archaeology
Diana Gregg	History of Portsmouth	Search Room Supervisor, Portsmouth City Museum and Records office
Jessica Grimm	Animal bone	Zooarchaeologist, Wessex Archaeology
Heather Johnson	Ship's badges	Library Assistant, Royal Naval Museum
Phil Magrath	Artillery	Curator of Artillery, Royal Armouries
Lorraine Mephram	Finds specialist, ceramics	Senior Post-excavation Manager, Wessex Archaeology
Marine Cathodic Protection System	Sacrificial anodes	Marine Cathodic Protection System Ltd
Nigel Nayling	Maritime archaeology and dendrochronology	Department of Archaeology and Anthropology, University of Wales at Lampeter
Richard Noyce	Royal Naval artefacts	Curator of Artefacts, Royal Naval Museum
John Roberts	Messier-Dowty products	Messier-Dowty
Richard Sabin	Cetacean remains	Curator, Mammal Curation Group, Natural History Museum
Joern Schuster	Archaeological artefacts	Post-excavation Manager, Wessex Archaeology
Graham Scott	Maritime archaeology and underwater fieldwork	Senior Archaeologist (Coastal and Marine), Wessex Archaeology
Rachael Seager-Smith	Archaeological finds	Senior Finds Specialist, Wessex Archaeology
Andy Simpson	Military aircraft	Curator, Aircraft and Exhibits Department, RAF Museum
Peter Smithurst	Firearms	Curator of Firearms, Royal Armouries Museum, Leeds
Liza Verity	Maritime archaeology	National Maritime Museum, Cornwall
Steve Webster	Maritime archaeology and underwater fieldwork	Senior Project Manager (Coastal and Marine), Wessex Archaeology
Jenny Wraight	Ship's badges	Admiralty Librarian
Peter Woodward	Dorset archaeology	Dorset County Museum
Lynn Wootten	Conservation	Conservator, Wessex Archaeology

Wessex Archaeology would like to thank all the specialists that have given their time to assist in the identification of finds over the past four years.

Liaison and Accessibility

Details of each discovery have been sent to:

- David Hilton, NMR and EH Maritime Team;
- Serena Cant, NMR;
- Mark Russell, BMAPA;
- Mike Cowling, The Crown Estate.

Details of discoveries regarded as wreck under the Merchant Shipping Act 1995 have been forwarded to the Receiver of Wreck. In the 2008 - 2009 reporting the following reports were deemed to represent items of wreck:

- Hanson_0188
- Hanson_0190
- Hanson_0191
- UMA_0192
- UMA_0193
- UMA_0194
- UMA_0196
- UMA_0197
- CEMEX_0198
- UMA_0199
- CEMEX_0200
- CEMEX_0207
- Kendalls_0214
- UMD_0218
- UMD_0221
- UMD_0222
- UMD_0224
- CEMEX_0230
- CEMEX_0231
- Hanson_0234
- UMD_0235
- UMD_0236
- UMD_0239
- UMD_0240
- UMD_0241
- Brett_0242
- Brett_0244
- UMD_0248
- UMD_0250
- Brett_0253
- Hanson_0256
- UMD_0261
- UMD_0264

In the fourth year of the Protocol, several discoveries were made relating to military wrecks or aircraft. The following reports were therefore forwarded to the Ministry of Defence.

- Hanson_0188
- UMA_0194
- CEMEX_0195
- CEMEX_0230
- Brett_0228

Although we have received a number of reports of artefacts relating to vessels, none of them conclusively relate to unknown and uncharted wreck sites. For example, the two ships badges marked 'Cavendish' relate to a ship that was scrapped, rather than wrecked. As no discoveries were found that are positively related to uncharted wreck sites there was no need to forward any reports to the United Kingdom Hydrographic Office (UKHO).

Finds information has been sent to the appropriate PAS Finds Liaison Officers, to the Local Government Archaeology Officers and the SMR/HER in the county of which each discovery was made.

Further details of liaison and the return of data to interested parties is included in the wharf reports appended to this report.



Location of discoveries 2008 - 2009

Discussion

Importance

During the 2008-2009 Protocol reporting year a total of 46 reports were made through the Implementation Service. These 46 reports encompassed 108 separate artefacts and one seabed obstruction.

The map on the previous page illustrates the distribution of the finds reported during this, the fourth year of the Implementation Service. Mapping the finds in this way allows archaeologists to identify patterns in the distribution of discoveries, and thus to highlight areas of archaeological sensitivity on the seabed. This will not only enhance our understanding of the marine historic environment but may also aid future licence assessments.

The value and importance of the Protocol is evident in the benefits it provides through public education, the protection of the marine historic environment and the enhancement of our archaeological understanding.

Reporting finds under the Protocol negates the need for inefficient watching briefs on board vessels or at wharves and so contributes to discharging licence conditions. In addition the enthusiasm shown by BMAPA staff in the protection and reporting of finds ensures that other legal obligations are met and demonstrates best practice. This example of good practice with regard to our heritage has been recognised not only by heritage professionals and those within BMAPA companies, but also by other marine industries that are beginning to look to protocols as mitigatory options and the BMAPA/EH Protocol as an excellent example of an effective protocol in action.

Key Issues

A number of issues have been raised over the past year that WA has begun to address to improve the usability and efficiency of the Implementation Service. Many of these were discussed by BMAPA representatives, the Crown Estate, Nominated Contacts, EH, WA and the Receiver of Wreck at the Awareness Seminar in October 2009. These key issues are explored below.

Initial Reports

In past years it has been noted that key information on initial reports was sometimes lacking. This improved greatly in the 2007 - 2008 reporting year as further advice was issued to wharf and vessel staff about what information is relevant and how to alert WA to information that is missing. Despite this there was still a high incidence of false reports or reports with information missing. It was felt that additional guidance needed to be issued to those using the reporting website.

To this end information sheets were created by WA giving further advice and containing illustrative screen grabs. These were distributed to Nominated Contacts in April 2009. This was thought to be especially relevant as no uploading instructions had been given since the inception of the Protocol Implementation Service and since this time a number of Nominated Contacts had either changed, or had not needed to upload. The new handouts have greatly improved the quality of information and reduced the number of false reports on the website.

Photography

The 2007-2008 report highlighted issues concerning the photography of finds. The quality of these images is crucial as identification is often made based solely on photographs. This has been addressed in two ways. Firstly new advice and guidance on effective photography is being issued as part of the information pack distributed to wharves and to vessels.

Photography of dredged finds has further improved after a suggestion from Site Champion Dave Whitby of CEMEX. Dave suggested including a photographic scale in the wharf packs on which finds could be placed for photography. Following this comment, made to WA during an Awareness visit, WA created two scales, one at A4 and one at A3 and laminated copies of these are included in wharf packs. The inclusion of a standardised scale on a neutral blue background not only allows archaeologists



Location of finds relating to vessels discovered off the south coast during the past four years

and specialists to assess accurately the size of each item, but also allows the image to be digitally prepared for publicity purposes. The scales are now being used by all wharves and vessels that have them and the quality of pictures has greatly improved.

Conservation

Conserving marine finds is notoriously difficult. Objects reach equilibrium with their environment and any rapid change to this can greatly affect the stability of artefacts. The removal of water and marine salts from an object, which occurs during drying, can greatly weaken the item leading to the loss of information or the loss of the artefact itself. It was felt that further advice needed to be issued to wharf staff to stress the importance of good conservation in protecting an object. Following discussion with WA's conservator Lynn Wootten and EH's marine conservator Angela Karsten, revised practical advice is being issued during Awareness visits. This advice encompasses finds that are still wet when recovered and best practice for finds that have already dried or partially dried when discovered. In order to ensure that this advice is rapidly disseminated to all relevant parties, an article written by Angela Karsten was included in the latest issue of the popular *Dredged Up* newsletter and further conservation advice is available in wharf and vessel information packs.

Chronological Distribution of Finds

It was highlighted during the production of Issue 5 of *Dredged Up* that the discoveries being made by BMAPA staff which may be assigned an approximate date-range largely originate from two broad archaeological time periods. The earliest finds date from the Palaeolithic and Mesolithic whilst the most recent finds date from the post-medieval and modern periods. Only two confirmed and one possible find date to the time in between.

This is largely due to the durability of archaeological finds. Datable material, such as pottery, has to be incredibly strong in order to survive numerous years within a submerged environment. Even finds of this nature which are able to survive years within a marine context are likely to be unable to survive the effects of the drag head and the subsequent processes of substrate removal. Prehistoric pottery in particular is highly friable and can

also be more difficult to recognise. The large absence of this material found to date does not reflect its absence from the seabed, just its scarcity. Any finds that are discovered which date from this intermediate period would be highly important, so keep your eyes peeled!

Disposal and Curation of Finds

The success of the BMAPA Protocol has led to the accumulation of large numbers of finds, some of which need to be kept submerged, at wharves and in offices across the country. When the Protocol was implemented the high volume of finds reported was not anticipated and so no permanent storage solution was put in place for their disposal or curation. Whilst a long term solution is still under discussion, we are pleased to report that finds are slowly making their way to museums and educational collections across the country. WA holds a number of finds for teaching purposes and finds are soon to be given to the Hampshire and Wight Trust for Maritime Archaeology for their teaching collection.

The Receiver of Wreck (RoW) is working hard to place finds with museums and where no museum can be found for the item the RoW is endeavouring to inform the holding company of their options as soon as possible. To further speed this process, WA staff are reporting items of wreck to the Receiver immediately they are reported. As the Receiver has one year in which to trace the initial owner of items, this shortens the period of time in which finds may need to be stored. The RoW will still advise on artefacts of wreck on a case by case basis.

Palaeolithic material, such as mammoth bone, is not subject to reporting to the RoW as it predates the use of vessels. This material may be requested by a museum, displayed at a wharf, given to teaching collections or donated to local schools. WA will advise on a case by case basis for this type of material.

Report Names

The Awareness extension has greatly increased communications between WA and BMAPA member companies. This has led to the realisation that some wharves are facilitated by a Nominated Contact from a connected company that has a different company name to that making the report.

In the past Nominated Contacts have reported finds under their own company name and thus the find became known by the name of the Nominated Contact's company. It was identified that it was demoralising for the reporting wharf or vessel to have their finds appear under a different company name and WA has arranged for further logins to the system to be developed. Communication with the relevant Nominated Contacts has ensured that finds are now reported and credited to the correct company. Similarly, finds reported by UMA staff are now appearing as UMD to reflect a change in company name that came into operation part way through the 2008 - 2009 reporting year.

Artefact Patterns and Distribution

The quantity of finds reported through the Protocol over the past four years allows us to identify and consider patterns of artefact distribution. Not only does this add meaning to finds already dredged, it also helps us to understand the marine resource better during future licence applications.

Distribution of Artefacts by Dredging Region

There are eight dredging regions around the UK:

- The Humber;
- The East Coast;
- The Thames Estuary;
- The East English Channel;
- The South Coast;
- The Owers;
- The South West;
- The North West.

In past years it has been well evidenced that the majority of dredged finds have been retrieved from the South Coast and East Coast regions. To quantify this statistically, of the 158 reports made in the past four years of the Protocol (for which the dredging region is known), the East Coast and South Coast region reports account for approximately 80% of the total.

One of the reasons for the enhanced number of finds from these regions is undoubtedly the volume of dredging that takes place here. In 2008 6,759,354 metric tonnes of aggregate

were removed from the East Coast region, and 4,150,040 metric tonnes were removed from the South Coast region. This equates to just over 50% of the total aggregate removed from all eight regions during 2008 (source: BMAPA official figures).

The least prolific regions in terms of finds reports are still the South West and North West regions. This is thought to be predominantly because these regions are targeted for sands. Screens are used to ensure that material greater than 4 - 10mm is returned to the seabed making it unlikely that archaeological finds will be retrieved from these areas. It is noted that the only finds reported from these regions in the four years of the Protocol are those that have been found entangled in dredging apparatus, rather than on board or on land.

The 2008-2009 reporting year has seen an increase in reports from the East English Channel region. Previously only one report had been made of finds from this region (in year three of the Implementation Service). This year a further 6 reports have detailed finds from this region. This may be due in part to the slight increase in the amount of this area dredged between 2007 and 2008. In 2007 7.55km² of the area was targeted rising to 9.83km² in 2008. It may also be due in part to raised awareness amongst staff handling East English Channel material following the latest phase of Awareness work to support the Protocol.

Conversely, there has been a slight decrease in the number of finds retrieved from the East Coast region. Nine reports of finds were made from this area in the 2008-2009 reporting year, less than half the number reported the previous year. A small decrease in the km² dredged is noted but it is more plausible that the decrease in reports is related to the continued use of this area. It is noted, especially in relation to munitions, that items are more likely to be found during dredging in a new area or a new part of a licence. It is possible then, as this region produces a high volume of aggregate, that finds from this area have already been retrieved from surface layers and that dredgers are now targeting areas from which finds have already been removed and reported.

Distribution of Artefacts by Archaeological Typology

Aircraft

Three new reports relating directly to aircraft loss (UMA_0194, Hanson_0188 and CEMEX_0230) and one report that has possible links to aircraft (UMA_0197) have been made during the 2008-2009 reporting year. Since the Protocol was implemented in 2005, a number of reports relating to aircraft crash sites have been submitted, suggesting a relatively high potential for such finds within the South and East Coast dredging regions. Only one confirmed aircraft report has come from the East Coast region in the fourth year of the Protocol - two fragments of aluminium whose likely origin is an aircraft (CEMEX_0230). This region also provided a Second World War pistol (UMA_0197 - see Case Study 1) which it is thought may have originated from an aircraft. It is not currently possible to confirm this however and the possibility remains that the item was lost overboard from a vessel.

In the fourth year of the Protocol the Thames and East English Channel regions provided two interesting aircraft finds - the first aircraft material to be reported from these regions. Both areas yielded a tailwheel strut from a Hawker Hurricane (UMA_0194 and Hanson_0188). These were dredged from separate regions in separate dredging areas and due to the coincidence of them being reported only a month apart, positional information was confirmed by WA staff. Geophysical data of both areas was inspected and no significant anomalies that might indicate a crash site were found. An exclusion zone exists in the north of area 474C and it is possible that the HAML find (Hanson_0188) has migrated from here. For more information on these finds see Case Study 1.

Aircraft finds are to be expected around the south and east coasts with heavy losses over this area occurring during WW2. This does not negate the possibility of aircraft remains being found in other areas. The reporting of such finds is crucial to our understanding of this period and BMAPA staff play an important role in protecting submerged aircraft wreck sites.

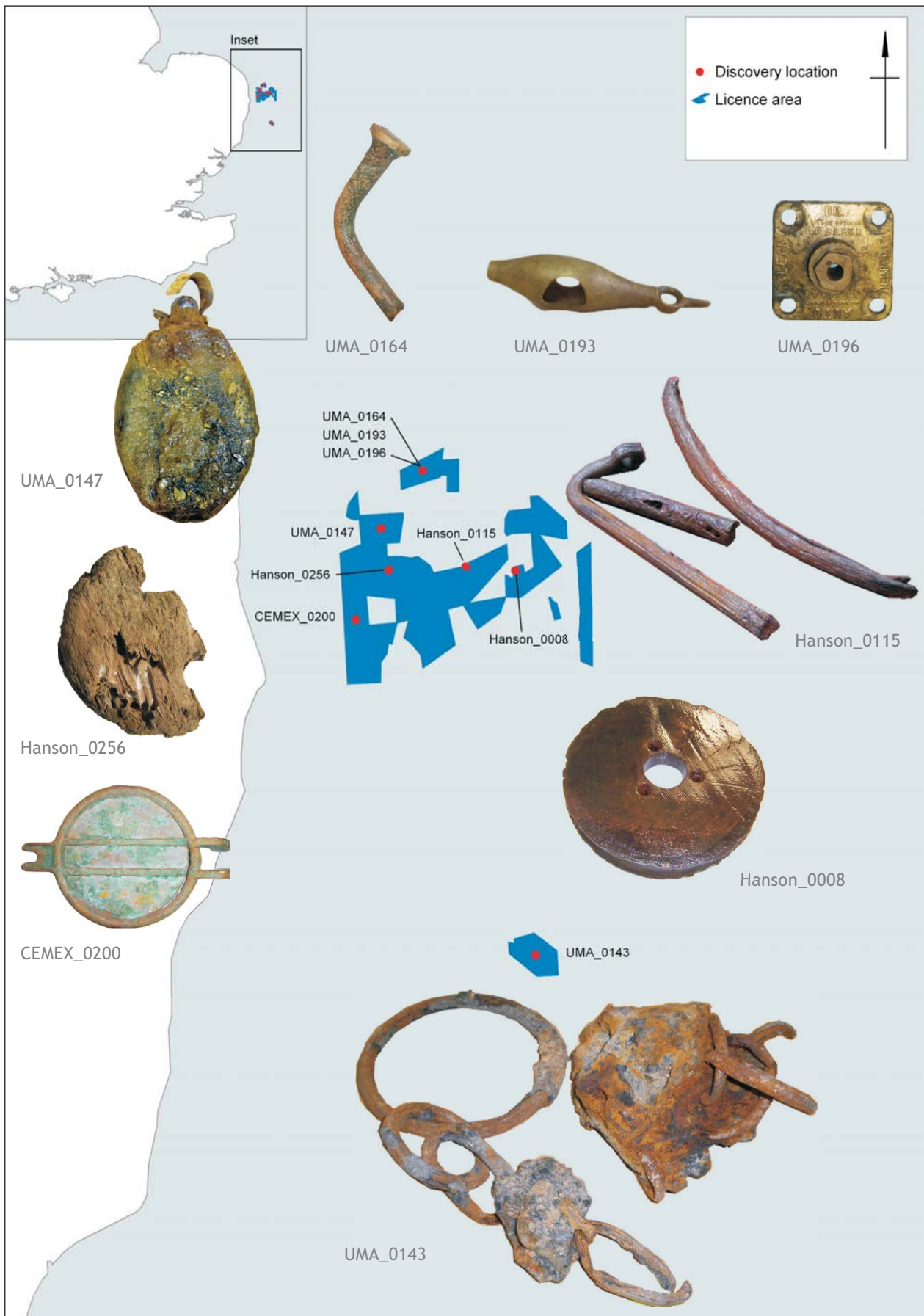
Palaeolithic Finds

There have been 4 finds that are likely to date to the Palaeolithic and several derived finds for which dating is uncertain but which may relate to the Palaeolithic, reported during the 2008 - 2009 reporting year. The finds for which dating is relatively certain are fossilised bone (Hanson_0202), mammoth tooth (CEMEX_0265) and mammoth tusk (CEMEX_0201). The mammoth tooth was found at the same time as a piece of deer antler (CEMEX_0265) which, as it appears to have begun the process of fossilisation, is also thought to date to this period.

These finds continue to be very important, especially in relation to last year's reporting of significant Palaeolithic remains from Area 240 in the East Coast region. The Palaeolithic finds reported in the 2008 - 2009 reporting year have been discovered in the East Coast, Thames and South Coast regions although this type of material can potentially be retrieved from any British licence.

Cannonballs

In past years there have been a number of cannonballs reported from the East Coast region, possibly relating to the Anglo-Dutch wars of the seventeenth century. No finds of cannonballs have been reported from this region in the fourth year of the Protocol, although several cannonballs have been retrieved from the East English Channel (Brett_0242, Brett_0244 and UMD_0264) and the South Coast regions (UMA_0199 and UMD_0224). Cannonballs were used for over 500 years and changed little in their construction during this period. They are common in marine contexts where they may have been lost in battle, sunk with a vessel or been lost as practice shots. For more information on the dating of this year's cannonballs, refer to the wharf reports included as an appendix.



Location of finds relating to vessels discovered off the east coast during the past four years

Maritime Artefacts

A number of artefacts have been reported in the 2008 - 2009 reporting year that relate to ships, the majority of which derive from the South Coast region. These have included a metal plate marked 'Simpson Lawrence' (UMA_0192), a wooden pulley (CEMEX_0207) and a sacrificial anode (Kendalls_0214), amongst other finds. This concentration of vessel-derived material follows a distribution pattern noticed in previous years. In this region, these finds do not necessarily relate to the loss of vessels as there is a well known spread of post-war debris lying to the east of the Isle of Wight from which the items may originate. This spread does not negate the presence of wrecks in the area and so despite the knowledge that many finds were likely to have been dumped as rubble, all material should still be reported in case they are indicative of an area of archaeological sensitivity.

In addition to maritime finds found in the South Coast region, there have been several reports of artefacts from the East Coast region which may be indicative of wrecks or losses from ships. These have included part of a ship's log (UMA_0193), a deadlight or storm cover (CEMEX_0200) and 3 wooden rigging blocks (Hanson_0256). These finds, and those reported from the South Coast region, reflect the potential for both older wooden ship material and more recent metal items to be recovered.

Finds of this nature are to be expected from every British licence area due to this country's long maritime history. Watercraft first appear in the archaeological record in the Mesolithic period, over 6000 years ago. Consequently, it is expected that artefacts from, or relating to, vessels may be found dating from the prehistoric period to the modern day, the remains of which may be present amongst dredged loads from every region.

Maps included in this report show the distribution of this material in the East and South Coast regions and more information on all of these finds is included in the appendix at the back of this report.

Conclusion

The 2008 - 2009 reporting year has been affected by a downturn in the economic climate which has had a negative impact on the construction industry as a whole. This has led to a decrease in the demand for aggregate and this, coupled with professional instability, has led to a decrease in the number of finds reported. The number of finds reported this year is still high, despite this decrease. It is understood that finds reporting is a secondary function of BMAPA wharves and vessels and the number of finds reported is commendable given the circumstances and corresponding reduction in staff numbers seen at some companies.

The value of reported finds cannot be underestimated. By locating them spatially and understanding the distributions of finds we have gained a far greater understanding of our submerged heritage. Not only does this increase our knowledge of our past, but it also allows greater insight into specific aggregate areas. Understanding these spatial distributions, such as those shown on the distribution maps included in this report, allows us to advise more thoroughly on future licence applications and indeed on work ahead of other marine development.

In addition to these benefits, there is a large public benefit in reporting finds. BMAPA finds continue to be used for teaching purposes and over the past 18 months have been seen, handled and appreciated by an estimated 10,000 people. The BMAPA discovery web pages continue to be some of the most popular on WA's website and the popular Dredged Up newsletter has proved to be a highly beneficial means of publicising finds. These are also made available on WA's website as the hard copies of past issues have been fully distributed and have now been exhausted.

We would like to thank everyone who has reported finds and protected our heritage in the 2008 - 2009 reporting year, and throughout the last four years of Protocol reporting.

The Future

The Protocol Implementation Service continues to be run by WA and finds are reported regularly. In 2009 The Crown Estate joined BMAPA as a funding partner to ensure the longevity of this important project. If you have any questions about finds reporting and the Protocol, please contact WA via protocol@wessexarch.co.uk.



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



Hanson_0188: Aircraft Tailwheel Strut



This artefact was discovered by A. Godwin and S. Engley from Denton Wharf on the 16th of October 2008. It was recovered from material dredged by the vessel *Arco Avon* in licence area 474 Central, approximately 44km south-east of Eastbourne.

Photographs of the object and the information on the data plate were sent to Andy Simpson at the RAF Museum, who agreed that the piece was part of an aircraft tailwheel, likely to have been built in Britain during the 1940/50s, due to the Dowty name on the data plate. However, he could not find any confirmation of this when searching RAF records for the type and serial numbers that were present on the data plate, and suggested enquiring with Messier-Dowty, the company that would have originally manufactured this object.

John Roberts, from Messier-Dowty, was contacted regarding the tailwheel. He confirmed that the piece was indeed part of a tailwheel unit built by Dowty for a World War II (WWII) Hawker Hurricane.

Dowty opened a factory in Montreal prior to the onset of WWII and began to construct parts for aircraft landing gear. The words 'Montreal Canada' are apparent on the data plate attached to the tailwheel, under the text believed to say 'Dowty Equipment Limited'. In 1946 Dowty closed their Montreal factory and moved to their current location in Toronto.

Once complete, the tailwheel was transported to the Canadian Car and Foundry, based at Thunder Bay, Ontario where it was built into a Hawker Hurricane ready for active service. The RAF commissioned 'Can Car' to construct over 1,400 of these Hurricanes; approximately ten percent of all the Hurricanes built. This occurred under the supervision of Elsie MacGill, the renowned 'Queen of the Hurricanes' and Chief Engineer of the company.

Hanson has an exclusion zone marked to the north of dredging area 474 Central, which is thought to be the location of an aircraft. It is believed that the aircraft tailwheel part was moved into the dredging area, from the exclusion zone, possibly as a result of intrusive scallop fishing. No additional exclusion zone was deemed necessary, however it is important to bear in mind that there is still the potential for other parts of the aircraft to move into the area and consequently be dredged up, highlighting the importance of following the BMAPA Protocol if objects are discovered.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record East Sussex
- The Local Government Archaeology Officer East Sussex
- The Finds Liaison Officer (Portable Antiquities Scheme) for East Sussex



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



Hanson_0190: Refractory Brick

This artefact was found by Mr O'Neill on board the *Arco Humber*. It was reported to Hanson on the 1st September 2008 having been found with material dredged from licence area 106C. Area 106C is approximately 24km North-east of Skegness, Lincolnshire.

This item, which was dredged in September 2008, was described by wharf staff as a fire or boiler brick based on its size and construction.

Images of this find were sent to Bob Davis from Wessex Archaeology's Heritage section for further analysis. Bob confirmed that it was indeed a fire or refractory brick which could have been used to line kilns, ovens and boilers. This example is frog-less, meaning that it does not have the indentations on its surface common amongst most modern bricks.

It has an inscription on one side which ends '...son'. It is common for factories to stamp their produce with their name, though Bob could not identify any likely manufacturer who uses or has used the suffix 'son'. It is unlikely that the brick would have been big enough to hold more than another three letters in addition to the 'son'. The script, which is fairly ornate, may suggest a late 19th century date for this item.

Many fire brick factories flourished in Lanarkshire in the latter half of the 19th century and it may be that Hanson_0190 originated in this region. Lanarkshire is rich in clay deposits ideal for manufacturing this type of brick and is still home to fire brick factories today, though the industry is a shadow of its former self.

The find appears to be isolated and there is nothing to suggest a provenance. It may have originated from a ship, either as part of the boiler or as cargo, and as such will be reported to the Receiver of Wreck. Further discoveries in the licence area could provide more information, and therefore it is important that they are reported through the protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Lincolnshire
- The Local Government Archaeology Officer for Lincolnshire
- The Finds Liaison Officer (Portable Antiquities Scheme) for Lincolnshire



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



Hanson_0191: Net or Lobster Pot Weight

This artefact was found in the drag head of the *Arco Humber* on the 12th September 2008. It was found during dredging activity in licence area 408, which is in the Humber region.

Hanson_0191 was described by wharf staff as an angled section of steel work. It measures around 0.8m long and was discovered after it became lodged in the drag head of the *Arco Humber*. Staff retrieved it when clearing it from the drag.

Hanson_0191 is not immediately diagnostic. Images of the item were sent to the National Maritime Museum in Cornwall where Liza Verity, Information Specialist at the Museum, showed them to colleagues. The Ship Model Curator believed that this item was probably used on a vessel as ballast or as an anchor for nets or lobster pots.

It has been cut using oxyacetylene gas giving it the 'ridged' appearance along several of its edges and around the hole in the top of the item. This would support the latter suggestion that this has served as a net or pot weight. The item appears to have been created by cutting a section of steel from a larger item with oxyacetylene gas and adding the hole in the top in the same way. The hole would have allowed the attachment of ropes or nets in order to secure Hanson_0191 to what it was intended to anchor.

As this item would have been routinely lowered to the seabed during its use it may have been accidentally lost or it may have been deliberately discarded when no longer required. However, since it would have been transported on board a vessel there is still the possibility that this find originated from a wreck site. No wrecks are currently known within the dredged regions of area 408 but all further finds from this area should be reported to ensure that the submerged heritage of licence area 408 is understood and protected.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for the East Riding of Yorkshire
- The Local Government Archaeology Officer for the East Riding of Yorkshire
- The Finds Liaison Officer (Portable Antiquities Scheme) for the East Riding of Yorkshire



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest

UMA_0192: Piece of Antler, Cattle Humerus and Iron Plate



These artefacts were discovered at UMA's Bedhampton Wharf by Darren Taylor. They were found in material dredged on 16th October 2008 from licence area 123/3, 12km east of Shanklin on the Isle of Wight.

UMA_0192 consists of an antler, an animal humerus and an iron plate, the lettering on which reads 'Simpson Lawrence and Co Glasgow Tarbert Pump'. These finds were discovered in material dredged from licence area 123/3 in October 2008. This licence area and those around it have yielded a wealth of archaeological artefacts found through dredging activity over recent years.

Andy Currant, curator of mammals at the Natural History Museum, and Jessica Grimm, Wessex Archaeology's archaeozoologist, identified the antler as having come from a Red Deer (*Cervus elaphus*). A stag will naturally shed its antlers once a year towards the end of winter and as this example shows no signs of cut marks or butchery it appears to have been shed naturally. Jessica Grimm identified the other animal bone as a humerus or upper front limb bone. It is hard to tell which species of animal it is from as the ends are badly eroded but it is of the correct size and shape to have come from cattle.

The iron plate bears the lettering 'Simpson Lawrence and Co Glasgow Tarbert Pump'. Simpson Lawrence was a well known manufacturer of marine equipment, including windlasses and toilets, until they were bought by Lewmar Ltd. in 1995. Lewmar, who are currently based in Southampton, were contacted but their staff were not able to provide any further information on this find.

It is thought that area 123/3 and those around it contain a spread of refuse material which was deposited after WW2 and which extends for several square kilometres. This has been reported by UMA, CEMEX and Hanson and is evidenced by the high quantity of diverse archaeological discoveries reported from these areas. Intriguingly Diana Gregg at Portsmouth City Museum and Records Office notes that there is no record of such a spread having been deposited and that the standard practice within post-war Portsmouth was to dump waste material inland or reuse it for various military projects. These finds are likely to be part of this spread, though the antler may date to the last ice age, some 12,000 years ago, when the area around the Isle of Wight was not inundated with water. The presence of the rubble does not preclude the occurrence of wrecks in the area and so all further finds should continue to be reported.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The Historic Environment Record
- The National Monument Record for Isle of Wight
- The Local Government Archaeology Officer for Isle of Wight
- The Finds Liaison Office (Portable Antiquities Scheme) for Hampshire



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMA_0193: Part of a Ship's Log

This object was discovered at UMA's Ridham Wharf by Justin Apps. It was found in material dredged on 16th April 2008 from licence area 296, approximately 18km east of Great Yarmouth.

This find is part of a patent or self-recording ship's log, a device used in the past to gauge vessel speed. It measures approximately 15cms long and is made of brass to protect it from the corroding effects of seawater.

This type of log was introduced in order to provide ships' crews with a more accurate and easier method of calculating speed and thus distance travelled than the common log which preceded it. A patent log operated by measuring the rotations of a finned rotator towed behind the vessel to calculate speed.

The egg-shaped item pictured above is part of the mechanism allowing the rotator to be attached to an instrument head and to the vessel itself. Rather than securing the tow line directly to the rotator, which was likely to cause knots during operation, the tow line would have been fastened inside this item. The hole in the body allowed the line to be knotted and the rotator would have been securely affixed to the ring seen on the right of the photo above. This allowed the device to spin freely on the tow line.



A Thomas Walker log with an example of UMA_0193 circled.

(<http://img.villagephotos.com/p/2004-7767317/CHERUBLOGFRNT%20001.JPG>)

The Oxford Companion to Ships and the Sea states that the patent log was invented in 1688 by the English instrument maker Humphrey Cole, and by the 18th century, the devices had become widely available. Initially the mechanical register was located on the vessel, but the accuracy of the device was limited by the effects of friction which falsified the readings. This problem was solved when English engineers Richard Gower, in 1792, and Edward Massey, in 1802, developed new types of logs that had the register mounted close to or on the rotator itself. In the first half of the 19th century, the revolutionary electric log was introduced by Edward Massey, and this, combined with improved marine clocks, made it possible to calculate distance run more accurately. As a result, the common log had become virtually obsolete by the end of the 19th century. The patent log itself became largely obsolete in the late 20th century, and logs of various kinds are now usually mounted on the hull of a ship rather than streamed behind it.

This example compares favourably with those produced by Thomas Walker around the turn of the last century though it is difficult to date it exactly. The artefact appears to be an isolated find, and as logs were streamed behind vessels whilst underway it could have been lost in use. Therefore, it is unlikely to indicate the presence of a wreck. Nevertheless, logs have been found on wreck sites, and any further finds from the area should be reported, as they may have the potential to determine the location of a previously unknown wreck site.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Norfolk
- The Local Government Archaeology Officer for Norfolk
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMA_0194: Aircraft Tailwheel Strut

This artefact was discovered by Rob Barker onboard the *City of Westminster* on the 3rd of November 2008. It was recovered from material dredged by the vessel in licence area 447 Cutline, approximately 19km east of Walton-on-the-Naze, Essex.

Photographs of the object and the information on the data plate were sent to Andy Simpson at the RAF Museum, who agreed that the piece was part of an aircraft tailwheel, likely to have been built in Britain during the 1940/50s, due to the Dowty name on the data plate. However, he could not find any confirmation of this when searching RAF records for the type and serial numbers that were present on the data plate, and suggested enquiring with Messier-Dowty, the company that would have originally manufactured this object.

John Roberts, from Messier-Dowty, was contacted regarding the tailwheel. He confirmed that the piece was indeed part of a tailwheel unit built by Dowty for a World War II (WWII) Hawker Hurricane.

Dowty opened a factory in Montreal prior to the onset of WWII and began to construct parts for aircraft landing gear. The words 'Montr' are apparent on the data plate attached to the tailwheel, under the text believed to say 'Dowty Equipment Limited'. In 1946 Dowty closed their Montreal factory and moved to their current location in Toronto.

Once complete, the tailwheel was transported to the Canadian Car and Foundry, based at Thunder Bay, Ontario where it was built into a Hawker Hurricane ready for active service. The RAF commissioned 'Can Car' to construct over 1,400 of these Hurricanes; approximately ten percent of all the Hurricanes built. This occurred under the supervision of Elsie MacGill, the renowned 'Queen of the Hurricanes' and Chief Engineer of the company.

All military aircraft are automatically designated as Protected Places under the Protection of Military Remains Act 1986. UMA has placed 60m exclusion zones around two seabed anomalies already known to exist in the licence area, and which are now thought to be the remains of the Hurricane. It is important to bear in mind that there is still the potential for dredging up further aircraft parts from this licence area, which could move from their current location into the dredging lanes. This highlights the importance of continuing to follow the BMAPA protocol. Guidance specifically relating to aircraft crash sites at sea can be found in the BMAPA Protocol Guidance Note -

<http://www.scribd.com/doc/2174360/Draft-Interim-Guidance-on-the-use-of-the-Protocol-for-Reporting-Finds-of-Archaeological-Interest-in-Relation-to-Aircraft-Crash-Sites-at-Sea>.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record Essex
- The Local Government Archaeology Officer Essex
- The Finds Liaison Officer (Portable Antiquities Scheme) for Essex



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



CEMEX_0195: Ship's Badge

This artefact was discovered at CEMEX's Dover Wharf amongst aggregate dredged from several licence areas. It was discovered by Richard Cork and reported on the 10th November 2008. It is likely to have come either from licence area 451 in the South Coast dredging region or from area 251 in the East Coast region.

This item is a ship's badge bearing the name *Cavendish*. Research undertaken by both CEMEX and Wessex Archaeology revealed that there were two ships named *Cavendish* in the last century, both of which were scrapped.

Jenny Wraight from the Royal College of Arms in Portsmouth studied images of the badge and identified that it was designed in 1945 for the later of these two vessels, which was a Destroyer. During the Second World War, Jenny states, there was an embargo on producing ships' badges apart from a single screen badge which was reduced to 12" in size. This would indicate that CEMEX_0195, which measures approximately 12", is the *Cavendish*'s wartime badge. The embargo was lifted in 1946 and the ship was modernised and re-commissioned in 1955. It is entirely possible that the ship's wartime badge was removed during the modernisation, though no records could be found to confirm this.

The badge shows a rope ring with a serpent knotted about the base. The serpent is described in heraldry as a 'serpent proper, nowed at the base of the ring'. Proper refers to the natural colour of the serpent, which is normally interpreted as being green and nowed describes its knotted form. The nowed serpent is taken from the crest of the Dukes of Devonshire, the Cavendish family, from whom the ship took her name and motto – 'Cavendo tutus' - meaning 'Secure by Caution'. The gold ring alludes to Thomas Cavendish (b. 1555 – d. 1592), for whom the ship was named, and particularly to his circumnavigation of the globe. The crown atop the badge is the naval crown and has adorned all ships' badges since the establishment of the Ships Names and Mottoes Committee in 1918.



HMS *Cavendish*

www.battleships-cruisers.co.uk/

Area 451, from which it has been suggested that this item was dredged, is situated to the east of the Isle of Wight. It has long been suspected that this area holds a spread of post-war rubble. There is no record of the deposition of such a spread but it is well evidenced by archaeological finds reported by BMAPA companies. It is highly possible that CEMEX_0195 was disposed of as part of this spread after its removal from the vessel as part of the 1955 modernisation.

The *Cavendish* had a productive life after WW2 until she was eventually retired. She arrived under tow in Blyth in Northumberland on the 7th August 1967 where she was to be scrapped.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Hampshire
- The Local Government Archaeology Officer for Hampshire
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



CEMEX_0195: Ship's Badge Requested by Museum

This artefact was discovered by Richard Cork at CEMEX's Dover Wharf amongst aggregate dredged from several licence areas. It was discovered and reported on the 10th November 2008. The Royal Naval Museum in Portsmouth would like to add it to their collections – making this the first BMAPA/EH Protocol find to be specifically requested by a museum.

CEMEX_0195 has had the honour of becoming the first find reported through the BMAPA/EH Protocol to be specifically requested by a museum.

When a find is reported through the Protocol, Wessex Archaeology researches its origin and creates a series of reports, including if necessary a report for the Receiver of Wreck. When CEMEX_0195 was reported it was investigated and found to have come from a ship which was scrapped, not wrecked.

The Receiver of Wreck requires reports of all finds that have originated on a ship – even if the vessel was not wrecked. However this find, the wartime badge of the *Cavendish* which is thought to have been removed during a refit in the 1950's and discarded with post-war rubble off of the Isle of Wight, has a very clear provenance. The Receiver therefore advised that a report for them was not necessary but suggested that the Ministry of Defence were contacted as they were the original owners of the vessel.

The MoD was informed and Richard Noyce, curator of the Royal Naval Museum in Portsmouth contacted Wessex Archaeology. He was especially impressed that the find had such a good provenance and history and that it had been found in such an interesting way. He has requested that CEMEX_0195 be transferred to the museum to be added to their collections.

The transfer of the find to the Royal Naval Museum will mean that it reaches a very wide audience and through this visitors to the Museum can learn about the good work that BMAPA companies are doing to protect our heritage in British waters.

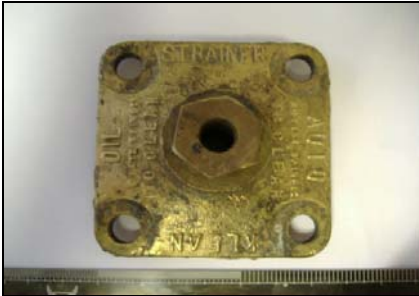
The high profile that this find will receive by joining the Museum's collections will be a testament to the hard work and responsible nature of all the people and companies who support the Protocol, but especially those of CEMEX's Dover wharf.

Wessex Archaeology would like to thank Richard Cork for discovering the find and everyone who was involved in its reporting and eventual display.



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMA_0196: Auto-Klean Filtration Plate

This item was reported by Paul Tallents in November 2008. It was discovered during metal detecting at Greenwich Wharf of material delivered by the *City of Westminster* from licence area 296. Area 296 is approximately 14 km east of Caister-on-Sea, Norfolk.

UMA_0196 was discovered at Greenwich wharf during the metal detecting of material from licence area 296. The find is made of brass and bears the words 'Auto Klean Oil Strainer – rotate spindle to clean'.

Auto-Klean is a company specialising in filtration devices. They were established in 1923 and are still in operation today. Wessex Archaeology contacted Auto-Klean and sent them images of UMA_0196. They were studied by Andrew Akerman who revealed that this type of part has been in manufacture since 1926.

Were a batch number stamped onto the item, Andrew tells us, he would be able to check company records, which date back to 1945, to identify exactly who this item was sold to. Unfortunately UMA_0196 appears to be only part of a larger item and no batch number was found on it when studied by wharf staff.

This type of filter had a wide variety of applications such as filtering lubricating oil, fuel oil or water. They were fitted to a diverse range of equipment including ships, aircraft, cars, canal boats, power stations and industrial steam engines.

It is not certain what this particular filter would have been used for but given its method of discovery, it is possible that it derived from a vessel or an aircraft. As it should have been securely attached by four bolts, one at each corner, it appears unlikely that UMA_0196 was lost accidentally or removed from a wreck. Based on the evidence available currently it would seem most likely that UMA_0196 became submerged after being deliberately discarded, though this cannot be confirmed.

It is important that all further finds from this area are reported as they will help us to further understand and protect the submerged history of licence area 296.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Norfolk
- The Local Government Archaeology Officer for Norfolk
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



A modern Auto-Klean filter

(Source: Auto-Klean Catalogue)



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMA_0197: Vis or Radom Pistol

This item was found by Paul Tallents on the 1st November 2008. It was found at Greenwich Wharf amongst material dredged from licence area 296. Area 296 is approximately 14 km east of Caister-on-Sea, Norfolk.

This item was found at Greenwich wharf and, in line with UMA's policy on ordnance, was immediately reported to the police. After this it was reported to Wessex Archaeology through the BMAPA/EH Protocol for the reporting of finds of archaeological interest.

Images of this item were sent by Wessex Archaeology to Peter Smithurst, Curator of Historic Firearms at the Royal Armouries Museum based in Leeds. Though this item bears a resemblance to both Browning and Colt firearms, Peter identified that this was in fact a *Vis* pistol which was designed in Poland in the 1930's. *Vis* is both a derivation of the maker's names and the Latin word for 'force'.

This type of firearm is often called a *Radom* pistol in Britain as the factory producing them was based in the town of the same name. It is considered by some to be the finest handgun ever made and was adopted as the official gun of the Polish army being phased in from 1935. In 1939 German troops defeated Poland and overran the factory. Such was the quality of the weapon that the German army adopted it as their official handgun and continued production under the name *9mm Pistole 645 (p)* – in which the final 'p' stands for 'Polnisch'.



This type of weapon was issued to Polish military forces, including the air force, prior to 1939 and to Luftwaffe paratroopers and German police after. It is plausible that this weapon was used by a Polish airman flying on behalf of the allies during WW2 or that a Luftwaffe airman had come into possession of the weapon. It may then have become submerged following an aircraft downing in the vicinity of area 296. Alternatively it may have come from a vessel. Given the nature of this find it is very important that all further finds are reported as they can help us to understand the submerged history of this area.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Norfolk
- The Local Government Archaeology Officer for Norfolk
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



CEMEX_0198: Ship's Telegraph Plate

This item was discovered at CEMEX's Northfleet Wharf by D. Whitby. It was found amongst aggregate and the dredging vessel, cargo and licence area are not known.

This find was discovered at CEMEX's Northfleet wharf by Dave Whitby. By the time it was discovered it was not possible to determine which cargo it had come from and thus which licence area it was dredged from.

Images of this item were sent to Richard Noyce, Curator of Artefacts at the Royal Naval Museum in Portsmouth, who confirmed that this item was originally part of a ship's telegraph.

A ship's telegraph was stationed on the bridge and allowed the Captain to send orders concerning vessel speed to the engine room. CEMEX_0198 clearly comes from a circular telegraph. These were introduced in the early 1800's and were in use until the middle of last century.

A telegraph consisted of a circular dial. When the Captain moved the handle attached to the dial to the required speed a bell would ring in the engine room and an indicator on the engine room telegraph would move to the position ordered by the bridge. To acknowledge the change in speed those in the engine room would move the handle on their telegraph to the same position as that on the bridge.

The language of the instructions on telegraphs has changed since they were first introduced. This find is likely to have come from an early example and the 'one third' and 'two thirds' orders would relate to either a forward or a reverse movement. 'Two thirds' indicates a slow speed for the vessel, such as may be used where hazards are present. 'One third' is the equivalent of 'dead slow' which may be seen on a more modern telegraph and is the speed used, for example, when docking a vessel.



Ship's Telegraph circa. 1940

Source:
<http://www.antiquesofthesea.com/telegraphs.html>

All proposed dredging areas are subject to archaeological investigation prior to the granting of a licence and there may be unknown wrecks in British waters that will be discovered by dredging activity. It is therefore very important that all further finds from CEMEX licences are reported through the protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Kent
- The Local Government Archaeology Officer for Kent
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMA_0199: Cannonball

This item was found by Dave Davies on the 11th November 2008. It was found at Southampton wharf amongst material dredged from licence area 395/1. 395/1 is located in the South Coast dredging region, to the east of the Isle of Wight.

UMA_0199 is an iron cannonball measuring approximately 5 1/2 inches in diameter. Cannonballs, or round shot, are one of the earliest forms of projectiles fired from cannons. They were manufactured and used from the late 15th century until the late 18th century. It is not the first cannonball discovered in the South Coast dredging region, which is not surprising given that the English Channel has been the site of many battles and minor conflicts for hundreds of years.

Images of this find were sent to Phil Magrath, the Curator of Artillery at the Royal Armouries Museum. He states that dating this find with any accuracy would be extremely difficult as cannonballs did not alter much in their construction over hundreds of years. Given the diameter, he feels that this cannonball would have been fired by either a culverin, if it is an early example, or an eighteen pounder, if it is a later example.

Finds of cannonballs on the seabed may relate either to the location of a battle (such shot will often exhibit signs of firing or impact damage) or to the location of a shipwreck. Even reports of individual cannonballs can therefore tell us much about warfare at sea or potentially pinpoint the location of a currently unidentified shipwreck.

As metal artefacts from marine contexts are very unstable once they are removed from the seabed they require professional conservation if they are to survive long term. In the short term the most effective treatment is to keep them submerged in fresh water.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Isle of Wight
- The Local Government Archaeology Officer for Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



CEMEX_0200: Modern Copper Object, Deadlight/Storm Cover and Metal Object

These items were discovered at CEMEX's Northfleet wharf by R. Burnham. They were found within the licence area 319 off of the East Coast of England on 21/02/09.

The diameter of the rim section of the modern copper object is approximately 45mm, 30mm approximately at the base, and 60mm at its widest point approximately. The approximate height of the object is 60mm. There is a linear striping that runs horizontally on the body of the object. The object is heavily covered in green oxidised corrosion. The rim of the object is dented and out of shape, and there are several large dents in the body of the object. This damage is most likely to have been caused post deposition, whether it was during the dredging process or not is not possible to ascertain.

Images of this item were sent to Joern Schuster, Post Excavation Manager, of Wessex Archaeology, who concluded that this artefact was modern in date, and that it was most likely a modern fixture or fitting. He also noticed the remains of a white sticker on the exterior of the object with a red border and what appears to be the numbers 1 and 5 in black. It is likely from the position of the 1 and 5 that there is another figure prior to the 1 but the exact nature of this cannot be concluded. The survival of the sticker would also suggest that the object has only been in the sea for a short period of time or has been resting in an anaerobic environment to facilitate the survival of the fragile organic material i.e. paper.

On the inside and outside of the flat section of the object appears to be the remains of a rusted screw which would suggest that the object would have been attached to something. It is likely that a pole of some sort would have sat inside the object with the screw fastening it in place, similar to a decorative end to a railing.

The deadlight/storm cover is approximately 27cm from the hinge to the fastening plate and the circular area has an approximate diameter of 18cm.

The image was shown to Graham Scott, Senior Project Officer in Wessex Archaeology who identified it as being a deadlight from a scuttle (porthole). The deadlight was used to cover the glass section of a scuttle from the inside and was reinforcement against heavy seas. It is not possible to ascertain a date for the deadlight however it is likely that it comes from a vessel after the mid 19th century. As it is definitely a ship's fitting it therefore is very likely that it came from a wreck within the dredging area.

The metal object is approximately 9cm long and 3cm wide. The image of the metal object was shown to Graham Scott, Senior Project Officer in Wessex Archaeology; he noted that the object does not obviously represent any ship's fixture or fitting. It is possible that the object may be from a ship or alternatively discarded rubbish. The orange colour of the oxidation appears to indicate an iron object and the level of corrosion would suggest that it was uncovered or deposited relatively recently (within the last year). The shape suggests that it would have been the end of a pole/rail of some kind, it is not possible to ascertain any further information about this object including date or provenance as so little evidence survives.

The deadlight is definitely an artefact from a ship and it is more than likely that it is from a shipwreck. The two other artefacts could also be ships fixtures and fittings; therefore it is entirely possible that these artefacts could represent a shipwreck assemblage.

There are 5 known wrecks recorded within approximately 1500 metres of the position of the finds discovered by CEMEX and these include 3 steam ships, 1 HM trawler and 1 wooden ketch. It is entirely possible that these objects are items of debris from one of these vessels or even an unknown vessel in a similar area. This can not be confirmed due to the ambiguity of the interpretation. It is therefore very important that all further finds from CEMEX licences are reported through the protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for East Anglia
- The Local Government Archaeology Officer for East Anglia
- The Finds Liaison Officer (Portable Antiquities Scheme) for East Anglia



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



CEMEX_0201: Mammoth Tusk

This tusk was discovered by N. Coombs onboard CEMEX's vessel the *Sand Falcon*. The tusk was reported on the 9th March 2009 having been dredged from Licence Area 447, approximately 20km south-east of Harwich.

This find was discovered aboard the *Sand Falcon* dredging vessel by N. Coombs and was identified as an animal tusk by the CEMEX staff. Photographs of the find were sent to Andy Currant, the Palaeontology Collections Manager at the Natural History Museum. Andy identified the tusk as belonging to a *mammuthus primigenius* also known as a woolly mammoth. Andy further identified that this fragment was from the end of the tusk nearest the skull.

This is not the first mammoth tusk to be reported through the protocol. A mammoth tusk (Hanson_0035) was discovered just as it was about to enter the crusher at Purfleet Aggregates in Thurrock, Essex in February 2006. The tusk was discovered within material dredged from licence area 408, approximately 50 miles NE of the Wash. Two de-laminated sections of mammoth tusk (Hanson_0126) were later discovered in December 2007, in material dredged from licence area 240, approximately 11km south-east of Great Yarmouth.

The age of this tusk fragment is unknown. Mammoth fossils occur within a broad date range in Britain from the Wolstonian ice age (380,000 to 130,000 years before present) to the end of the Devensian ice age (10,000 years before present). However, a dated sample from the tusk found at Purfleet Aggregates suggests a date towards the end of the Middle Palaeolithic period (150,000-40,000 years before present) during the last ice age known as the Devensian. During the Devensian, a large proportion of the world's water was incorporated into ice sheets, resulting in a fall in sea level which was approximately 120m lower than it is today. As a result, large expanses of the North Sea seabed were revealed as dry land. It is quite possible that this mammoth tusk fragment dates to this period in which the Thames Estuary dredging region was revealed as dry land, outside the limits of the Devensian ice sheet.

Although finds of mammoth remains are relatively rare in Britain, since the start of the BMAPA/EH Implementation Service more than 18 finds relating to mammoths have been reported through the Protocol by members of the aggregate industry. These discoveries not only highlight the importance of the protocol in enabling rare finds such as this to be reported and researched, they also highlight the potential which exists for important archaeological material to be present within the marine environment.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The National Monuments Record
- The Historic Environment Record for Essex
- The Local Government Archaeology Officer for Essex
- The Finds Liaison Officer (Portable Antiquities Scheme) for Essex



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



Hanson_0202: Fossilised Bone Fragment

This artefact was found by R. Kluczny on the *Arco Beck*. It was recovered on 22nd of February, 2009 during dredging activity in Licence Area 361 off the east coast, about 24km south-east of Great Yarmouth.

This fragment of fossilised bone is approximately 22cm across and 13cm long. The find was generously loaned by Hanson to Wessex Archaeology for further study. Jessica Grimm, a bone specialist at Wessex Archaeology, examined the find and identified it as part of a humerus head. The humerus is the upper forearm bone, and the head is the 'ball' where the bone would have joined the shoulder. The size of the bone indicates that it would have belonged to a large mammal, such as a mammoth.

It is not known how this bone came to be on the seabed, however there are a couple of possibilities. It could have been washed from terrestrial deposits by rivers or eroded from nearby cliffs or beaches. Alternatively, it could be from the last Ice Age, when sea levels were lower and what is now the North Sea was dry land. During the Ice Age, a number of animals would have lived on the land, including woolly mammoth, woolly rhinoceros, horse, giant deer, red deer, reindeer, bison, musk ox and cave lion. Many of these large animals would have been hunted by our early human ancestors, until the Ice Age ended and sea levels began to rise, slowly submerging the plains. The area from which this bone was dredged became fully submerged about 10,000 years ago.

A number of other prehistoric finds, thought to date to past Ice Ages, have recently been discovered in the area off the coast of Great Yarmouth, including mammoth bones and teeth (Hanson_0018, Hanson_0126, Hanson_0169 and Hanson_0180). All of these finds provide valuable information about the types of animals that lived in this area during the last Ice Age, and therefore about the potential for human occupation. Consequently, we encourage wharf and vessel staff to report any further finds thought to be of archaeological significance discovered in this region.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The National Monuments Record
- The Historic Environment Record for Norfolk
- The Local Government Archaeology Officer for Norfolk
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest

CEMEX_0207: Wooden Pulley Block, Two Pieces of Bone, Two Pieces of Worked Wood and a Piece of Pottery

These items were discovered at CEMEX's Portslade Wharf and the report was compiled on 23/3/09 by G. Singleton. The finds were recovered from the Isle of Wight region.



These finds were discovered at CEMEX's Portslade wharf. By the time it was discovered it was not possible to determine which cargo it had come from and thus which licence area it was dredged from, only that it came from an area off of the Isle of Wight.

The pulley block is made entirely of wood and measures approximately 24 x 18 cm. Staff at the wharf identified the object as a pulley block. Photographs of this object were sent to Nigel Nayling, a timber specialist at the University of Wales. He confirmed the identification of the object made at the wharf. Identification comes from the presence of a hole, known as a swallow, visible when the block is turned on its side. This would originally have held a sheave over which a rope would have run to operate the pulley. On examining the remaining photographs of the wood, no fastenings or tool marks were apparent. As such it cannot be ascertained whether the objects derived from a vessel or not.

The pottery has been likened to a relish pot of pale blue earthenware decorated with a polychrome transfer depicting battle scenes by Wessex Archaeology's Lorraine Mephram. The decoration on the pot appears to be from the Napoleonic period due to the military uniforms. A partial inscription reads 'the battle of the A...' with the final word missing except for the first letter 'A'. Looking at Napoleonic Battles with a name beginning with an 'A' only 11 examples exist and of this only one battle has a 'the' before the place name. This is the battle of la Albuera, which was a small Spanish village, where a mixed force of Spanish, Portuguese and British corps faced elements of the French Army of the South on the 16th May 1811, both sides faced heavy casualties but the French Army was eventually forced to retreat. It has not been possible to identify the scene depicted with 100% certainty however this is the most likely from the evidence available.

The pulley block is likely to have originated from a sailing vessel of some kind; therefore it is entirely possible that this artefact originates from a shipwreck. The two pieces of wood could potentially be derived from a shipwreck as their angular nature could be indicative of a functional purpose. The pottery although isolated could also be a part of a ships inventory/cargo. It is entirely possible therefore that these items are in fact an assemblage of artefacts from either one or a number of shipwrecks within the area.

The two bone pieces have been identified by Wessex Archaeology's archaeozoologist Jessica Grimm as being a complete left metacarpus and the proximal part of a left radius and ulna (fused) of a large bovine, possibly aurochs (large cattle). The Aurochs is said to have arrived in Europe approximately 250,000 years ago and thrived until their extinction in the 17th century. The fused radius and ulna indicates a mature animal and the size of the metacarpus would suggest it is from a female aurochs. It is entirely possible that the two bones are from the same animal however this can not be said for sure unless further study is completed. These finds could therefore represent a prehistoric surface, submerged under the seabed or alternatively the bones could have washed in following their erosion from other sealed contexts.

All proposed dredging areas are subject to archaeological investigation prior to the granting of a licence and no wrecks are known in the dredged portions of any of the licence areas around Britain. However, there may be unknown wrecks in British waters that will be discovered by dredging activity. It is therefore very important that all further finds from CEMEX licences are reported through the protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Isle of Wight
- The Local Government Archaeology Officer for Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for Isle of Wight



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest

Kendalls_0214: Copper Lid, Worn Drill Bit, Small Iron Object, Sacrificial Anode and a Shale Platter

This unusual assortment of five objects was discovered by Sibby at the New Wharf in Shoreham on the 8th of March 2009. They were recovered from aggregate dredged by the *Norstone* within licence area 351, approximately 16.5km south of East Wittering, West Sussex and 20.5km east of Shanklin, Isle of Wight.



This mixed range of objects was found from licence area 351 located off the south coast of England. The objects were shown to our in-house finds specialists here at Wessex Archaeology and images were also sent to various external sources in order to discover the function and age of each object, which will hopefully indicate whether they originated from a wreck site located within the licence area.

The thin circular metal object with two small holes is made of copper and is thought to be the lid of a cooking pot or kettle; the two holes being used to attach a handle. Since copper is an excellent conductor of heat, saucepans and kettles made from this material have been used for at least the past four hundred years. Due to the relatively small size of the lid and thus the corresponding pot/kettle, this object probably originated from a smaller vessel.

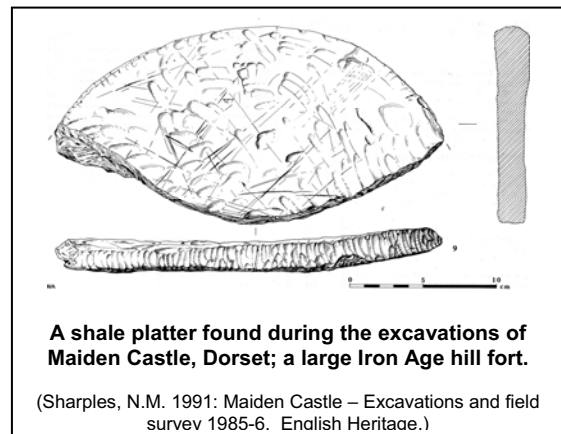
The corroded iron object was shown to Bob Davis, a Senior Researcher at Wessex Archaeology, who identified it as a heavily worn down drill bit. The object had most likely been dropped overboard as jetsam, because it was no longer of any use. It is difficult to provide an accurate date since tools of this type did not really develop or change much since their original metal construction, however Bob believes it to be over 50 years old.

The smaller iron object with the indented ends was also shown to Bob Davies who suggested that it may be used to space pipes as they are being installed or repaired onboard vessels. If this object was used on a metal ship then it could be as much as 150 years old.

The heavy metal alloy object was originally thought to be a lead ingot, however due to the unusual shape with the flat imprint along one of the surfaces, other possible functions were explored. As a result, MCPS Limited, a specialist company that design and manufacture cathodic protection and marine growth prevention systems, positively identified the object as a sacrificial anode, which is incorporated into a cathodic protection system where the anode corrodes whilst other metallic components, such as the hull or rudder of a ship, are protected. MCPS Ltd identified this object as a zinc alloy anode that would have had a steel insert (that has since corroded away). These are the most common anodes used in the UK and may have been constructed from the 1950s onwards, since this particular shape of anode originated in the UK at around this time.

The final piece is made of shale, a sedimentary rock that is formed after long-term compression of fine-grained sediments, and most likely originated from the Kimmeridge shale beds in Dorset. Prior to its current damage, this object would have been a flat oval shape with a worked rounded outer edge. One possible function for the piece was suggested by Rachael Seager Smith, a Senior Project Officer in our Finds and Environmental section, as a multi-functioning plate similar to our contemporary chopping boards.

Possible cut marks are apparent on both sides of the object, although these may have been caused by the post-depositional effects whilst on the seabed. Despite being thicker than other similar platter artefacts, it is possible that this object may date back to the late Iron Age although is more likely to be from the early Roman period; making the object almost 2000 years old. The plate is also particularly heavy (especially when waterlogged) most likely caused by this extra thickness, however this may have been necessary for keeping it in one place onboard a rolling vessel.



Other suggestions for this object have come from Ralph Jackson at the British Museum, who thought it could be a three-legged table top dating to the Roman period, although due to its thickness and lack of corresponding mortises on the underside, this idea does not sound likely. Finally, Peter Woodward the curator from Dorset County Museum, suggested it could be a preparation piece that would have been used on a lathe and may have been used as ballast during transport on the boat prior to being lost overboard.

Other than the shale object, the rest of the finds date to the modern period and are neither thought to derive from a wreck site nor are considered contentious and therefore no exclusion zone is deemed necessary within the licence area. However, the shale object is believed to be contentious due to its early date and relative rarity, and although an exclusion zone is still not recommended, it is essential that all wharf staff are especially aware that other objects potentially dating to almost 2000 years ago could be dredged up in the future. Discoveries like these highlight the importance of continuing to report any further objects using the BMAPA Protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for the Isle of Wight
- The Local Government Archaeology Officer for the Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for the Isle of Wight



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest

UMD_0218: Fork, Pocket Watch and a Mechanical Switch

These objects were discovered by D. Davies at UMD's Burnley Wharf in Southampton. They were recovered from aggregate dredged by the *City of Chichester* on the 19th February 2009 from licence area 127, approximately 11km west of the Isle of Wight.



These objects were reported to Wessex Archaeology by Burnley Wharf. The photographs were shown to Wessex Archaeology finds specialists Bob Davis and Lorraine Mephram.

The first object is about 20cm long and no more than 2.5cm in width. It is clearly a four-pronged fork. Whilst forks are known to have been used in Western Europe for the past millennia, this is a modern example dating from the 19th or 20th century. It may be jetsam cast into the water voluntarily, or flotsam as a result of shipwreck.

The second object would appear to be the case to a pocket watch. The watch case is broadly 5cm in diameter and in two parts. The lower portion in the photograph is the front cover, possibly with some kind of marking upon it. The upper portion in the photograph is the watch and its backing plate with a nodule/winding mechanism located at the 12 o'clock position. Pocket watches date from the post-medieval period (1500's) up to the early to mid-20th century, when they were superseded by wrist watches. This is a modern example most likely dating to the 19th or early 20th century.

The metal object measures approximately 14.5cm by 10.5cm. This square-shaped ferrous object is possibly some kind of limit switch involving rotary movement. It has a hexagon shaped inlet and two anodes/electrical connectors. It is of unknown provenance but would appear to be modern. It is reasonably robust and thus may have come from a commercial fishing or trawler vessel. Further research is required to positively identify this part.

Although these objects could be derived from a shipwreck it is likely that they represent isolated finds. More precise dating is difficult at this stage, but they would appear to be modern. The seabed surrounding and approaching the Isle of Wight has produced numerous finds dating to the 19th and 20th century, a number which have been reported through the BMAPA Protocol. Much of this debris could have been lost overboard (jetsam) or be part of the scattered debris field of a shipwreck (flotsam). Further discoveries in the licence area could provide additional information and hint at possible distribution patterns. Therefore, any future finds should be reported through the Protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Hampshire and the Isle of Wight
- The Local Government Archaeology Officer for Hampshire and the Isle of Wight
- The Finds Liaison Officer (Portable Antiques Scheme) for Hampshire



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMD_0221: Metal Boat Hook

This boat hook was discovered by S. Smith at the Bedhampton Wharf. It was found in material dredged by the *City of Chichester* on the 29th March 2009 from licence area 127, approximately 11km west of the Isle of Wight

This artefact is about 26.5cm in length and approximately 4.5cm in width. The green patina seen on the surface suggests it is made of copper alloy. This boat hook would have been attached to a wooden pole (at the base) and used to snare rope on the surface of the sea, in particular, to secure mooring buoys.

It is difficult to give an accurate date for this boat hook, although relevant staff specialists at Wessex Archaeology believe it to be modern in provenance. Boat hooks of this nature are known to have been in existence since at least the 16th century.

Of note, this object was dredged up on the same day as a metal stanchion (UMD_0222) and thus may comprise an assemblage of objects from a scattered debris field or shipwreck site. Of course, it may well have become detached, lost accidentally and is simply an isolated find. High levels of commercial and leisure activity around the Isle of Wight has engendered considerable amounts of modern debris on the seabed. Despite this, further finds in the area could aid interpretation and should be reported through the Protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Hampshire and the Isle of Wight
- The Local Government Archaeology Officer for Hampshire and the Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



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UMD_0222: Stanchion

This stanchion was discovered by S. Smith at UMD's Bedhampton Wharf. It was found in material dredged by the *City of Chichester* on the 29th March 2009 from licence area 127, approximately 11km west of the Isle of Wight

This artefact is about 22.5cm in length and no more than 4cm in width. It is made of a metal alloy, possibly copper as evidenced by the green sheen seen on parts of the surface.

This is a short spiked stanchion of some kind. It is difficult to give an accurate date for this object, although staff specialists at Wessex Archaeology believe it to be post-medieval or modern in provenance. This stanchion may have been utilised on a vessel as an upright bar or a supporting post for chains and ropes, fed via the two eye-holes. The spiked end may have been driven into timber and suggests it may have come from a wooden or composite vessel.

Although this artefact may be derived from a shipwreck and other ferrous artefacts have been reported from the area (e.g. UMD_0221), it appears to be an isolated find. It may well have become detached from a vessel and lost accidentally. High levels of commercial and leisure activity around the Isle of Wight has engendered considerable amounts of debris on the seabed. Despite this, further finds in the area could aid interpretation and should be reported through the Protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Hampshire and the Isle of Wight
- The Local Government Archaeology Officer for Hampshire and the Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



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Protocol for Reporting Finds of Archaeological Interest



UMD_0223: Antler

This antler was discovered by D. Lutman at UMD's Bedhampton Wharf. It was found in material dredged by the *Arco Dee* on the 27th January 2009 from licence area 127, approximately 11km west of the Isle of Wight.

This antler is approximately 28cm in length. On receiving a report of this find, a photograph was sent to Jessica Grimm, a zooarchaeologist at Wessex Archaeology, and Richard Sabin at the National History Museum. Upon examining the photograph both suggested it was an antler from a large cervid (deer). In particular, Richard Sabin pointed out that it may belong to a red deer (*cervus elaphus*). This antler does not appear to have been worked anthropologically i.e. butchered or used as a tool. However, due to the nature of identifying animal bones from photographs, this is by no means conclusive.

A number of animal bones have been discovered and reported since the protocol was established in 2005. There are various ways in which animal bone may come to be found on the seabed. For example, animals were often carried on board ships as cargo and provisions, and thus, may end up on the seabed as a result of shipwreck or via waste disposal. For instance, evidence from the *Mary Rose*, an early 16th century naval vessel, showed the presence of dogs as well as venison. However, animal remains may also be washed into the sea via alluvial outwash arising from river systems.

A further explanation relates to sea-level change and glacial activity, highlighting periods throughout pre-history when the seabed was exposed as dry land. During an ice age, a larger proportion of the world's water becomes incorporated into ice sheets, resulting in a fall in sea level. For example, at the peak of the last glaciation (around 18,000 years ago) sea level was about 120m lower than it is today, and large parts of the English Channel, including those associated with the Isle of Wight were exposed as dry land suitable for human occupation. These landscapes, dominated by river systems, would have provided a rich protein source for hunter-gatherer populations.

It is not currently known how this bone came to be on the seabed. However, the discovery of further material from this area has the potential to enhance our interpretation, and as such, future finds of archaeological interest should be reported immediately.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The National Monuments Record
- The Historic Environment Record for Hampshire and the Isle Of Wight
- The Local Government Archaeology Officer for Hampshire and the Isle of Wight
- The Finds Liaison Officer for Hampshire



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UMD_0224: Cannonball

This cannonball was discovered by a watch officer at UMD's Erith Wharf. It was found in material dredged by the *City of London* on the 5th March 2009, from licence area 127, approximately 11km west of the Isle of Wight.

This cannonball is approximately 16.5cm (6.5 inches) in diameter and was recovered from a dredging area broadly 11km SWW of the Needles, off the Isle of Wight. An image of this large canon ball was sent to Phil Magrath, an ammunitions expert from the Royal Armouries Museum.

This is not the first cannonball to be discovered in the South Coast region during dredging operations. For example, two cannonballs were found in material dredged from licence area 340, to the east of the Isle of Wight (UMA_0082). This example is perhaps a 32 or 42 pounder which would have been fired by a large calibre iron or brass cannon or carronade fitted to a first or second rate vessel. It does not show any obvious signs of having been fired and dates from around the post-medieval period up to the mid-19th century. Cannonballs were superseded in the mid-19th century due to improvements in shell and shrapnel technology and through the use of the extruded bullet.

Maritime activity in the English Channel expanded greatly with the opening up of trade networks and contact with the 'New World'. The Solent region, in particular, was one of the busiest pre-15th century traffic routes in England and has bore witness to numerous battles and minor conflicts in recent history. A cluster of cannonballs on the seabed may suggest the location of a battle (fired shot often shows signs of firing or impact damage) or the location of a shipwreck. However, cannonballs may also come to rest on the seabed due to more innocuous reasons such as target practice and the dumping of cargo or ballast at sea.

Ferrous artefacts such as cannonballs are very unstable once they are removed from the seabed. They often require professional conservation. It is recommended objects are kept wet by being submerged in cool fresh water. If already dry, objects should not be re-submerged.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Hampshire and the Isle of Wight
- The Local Government Archaeology Officer for Hampshire and the Isle of Wight
- The Finds Liaison Officer (Portable Antiques Scheme) for Hampshire





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Brett_0228: Ship's Badge

This artefact was discovered at Brett Aggregate's Cliffe Wharf amongst aggregate dredged from several licence areas. It was discovered by John Snazle, Ashley Wilkinson, Derek Payne and Tony Payne and reported on the 1st May 2009. It was found in mixed stock which originated from several licence areas. These are 340, 451 and 351 (in the South Coast region to the east of the Isle of Wight), 228 (in the East Coast region) and 441 (in the Humber region).

This item is a ship's badge bearing the name *Cavendish* and is the second such badge that has been dredged in recent months. The badge shows a rope ring with a serpent knotted about the base. The serpent is described in heraldry as a 'serpent proper, nowed at the base of the ring'. Proper refers to the natural colour of the serpent, which is normally interpreted as being green and nowed describes its knotted form. The nowed serpent is taken from the crest of the Dukes of Devonshire, the Cavendish family, from whom the ship took her name and motto – 'Cavendo tutus' - meaning 'Secure by Caution'. The rope ring, which would have been painted gold, alludes to Thomas Cavendish (b. 1555 – d. 1592), for whom the ship was named, and particularly to his circumnavigation of the globe. The crown atop the badge is the naval crown and has adorned all ships' badges since the establishment of the Ships Names and Mottos Committee in 1918.

The first badge, discovered by CEMEX in November, was identified by Jenny Wraight, Admiralty Librarian at HM Naval Base, Portsmouth as the badge of a Destroyer built in 1944. During the Second World War, Jenny states, there was an embargo on producing ships' badges allowing only a single screen badge which was reduced to 12" in size. It was initially believed that the CEMEX badge, which measures approximately 12", was the *Cavendish's* wartime badge. However, the Brett badge, being of the same size and style, throws this into question.

Wessex Archaeology contacted Jenny Wraight again and she suggested that one of the badges may be a copy. Such copies were made for presentation, either to high ranking officials who served on the vessels, or to towns who 'adopted' ships during warship week. Warship week took place in 1942, before the *Cavendish* was built. During this week towns, cities and villages across the country were encouraged to raise money to 'adopt' a ship. Each town was given a financial target that they endeavoured to meet.

The *Cavendish* was adopted by Kendal, in Cumbria, after the sinking of Kendal's previously adopted ship in 1943. Wessex Archaeology contacted Kendal Museum and the Town Clerk but neither had any recollection of owning a badge or of a badge in their collections.



HMS *Cavendish*

www.battleships-cruisers.co.uk/

Heather Johnson, Library Assistant at the Royal Naval Museum had a different hypothesis. She suggested that one of the badges was produced for the *Cavendish* in 1944, and that the second was commissioned for her refit in 1955. This, states Heather, may be likely as both badges show considerable wear, indicating that both were displayed externally and making the creation of a replacement for the refit more likely. Prior to the refit the ship is said to have sustained 'malicious damage'. This may have seen the destruction, damaging or removal of the original badge.

The *Cavendish* had a productive life after WW2 until she was eventually retired. She arrived under tow in Blyth in Northumberland on the 7th August 1967 where she was to be scrapped.

The discovery of two badges from the same ship within months of each other is truly remarkable, not least because of the large surface area of the seabed around the British Isles. It is a true testament to the hard work of Brett staff that this find was recognised and reported as it has allowed the story of the *Cavendish* to be explored many years after her demise.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Kent
- The Local Government Archaeology Officer for Kent
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



CEMEX_0230: Possible Aircraft Parts

These two fragments were found by Adam Johnson at CEMEX's Northfleet Wharf in Gravesend, Kent on the 8th May 2009. They were recovered from aggregate dredged by the *Sand Harrier* within licence area 319, approximately 8km off Great Yarmouth, on the coast of Norfolk.

Staff at Wessex Archaeology initially identified these fragments as aluminium aircraft parts. From an examination of the photograph, the two metal fragments are approximately 24cm and 21cm in length and 18cm and 13cm in width. Both fragments display cross rivets on their surface, the one on the right showing holes drilled for possible anchor nuts.

The image was also sent to Andy Simpson at the RAF Museum in Hendon. Staff at the museum confirmed that the fragments belong to an aircraft although they were unable, given the limitations of a single photograph, to provide a more comprehensive classification. It was suggested that the panel on the right has holes drilled for either anchor nuts or the female parts of a line of 'Oddie' fasteners, although the 2" spacing was thought to be a little close for a line of fasteners.

Crashed aircraft are particularly important to archaeologists, as they offer a unique form of evidence for the historical development of flight and inform on crucial historical episodes of modern warfare. Additionally, all crashed military aircraft are protected by law under the Protection of Military Remains Act 1986. The discovery of aircraft remains is of importance, particularly as aircraft crash sites may contain human remains.

Whilst these fragments are not necessarily indicative of the presence of a coherent aircraft crash site, the discovery of further remains from the area should be reported immediately. Further finds could not only aid the interpretations of this particular discovery, but could also be mapped to enable the identification of meaningful patterns in the distribution of finds within this area. This in turn has the potential to identify sites and archaeologically sensitive areas on the seabed, perhaps resulting in the discovery of a previously unknown aircraft crash site.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Norfolk
- The Local Government Archaeology Officer for Norfolk
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest

CEMEX_0231: Handle, Cleat and a Concreted Chain



These objects were discovered by Adam Johnson at CEMEX's Northfleet Wharf in Gravesend, Kent on the 8th May 2009. They were recovered from aggregate dredged by the *Sand Fulmar* within licence area 113/1, approximately 26km off the coast of Suffolk.

These objects were reported to Wessex Archaeology via the Northfleet Wharf. The photographs were circulated amongst staff at the Coastal & Marine Unit.

The first object is about 16cm long and no more than 8cm in width. It appears to be a heavily rusted door handle. The second object is about 19cm long and no more than 6cm wide. It appears to be a rusted cleat, a device found on vessels which enables the attachment of rope. The final object is approximately 30cm long and is comprised of a series of oval metal links about 5cm in length. The middle section of this chain is surrounded by a large lump of concretion. Chain cables came into general use in the 1820's, the links looking much the same now as they did then.

This collection of objects probably represents the rigging and fittings from a small to medium sized vessel. In particular, the chain may be part of an anchor that has separated due to snagging. Although these objects could be derived from a shipwreck it is likely that they represent isolated finds.

Whilst precise dating is difficult, they would appear to be modern in origin. The seabed surrounding and approaching East Anglia has produced numerous finds dating to the 19th and 20th century, a number which have been reported through the BMAPA Protocol. Much of this debris could have been dumped, lost overboard (jetsam) or be part of the scattered debris field of a shipwreck (flotsam). Further discoveries in the licence area could provide additional information and hint at possible distribution patterns. Therefore, any future finds should be reported through the Protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Suffolk
- The Local Government Archaeology Officer for Suffolk
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



Hanson_0234: Signal Light, Metal Fittings and Piece of Bone

These artefacts were discovered at Burnley Wharf by J. Jerromes. They were recovered from material dredged from licence area 372-1 HAML ii, which is located 8km south-east of Bembridge on the Isle of Wight.

Photographs of these finds were showed to a number of specialists from Wessex Archaeology and the RAF Museum, in order to determine whether they were just general debris or could have come from a shipwreck or aircraft wreck in the area.

The metal artefacts in the first photo have a small plaque that reads 'Signalscheinw 2', indicating that this is a 'Signalscheinwerfer': a German signal light. This signal light would be similar to an Aldis lamp – a visual signalling device used for optical communication, often using Morse code. Signal lights were used by naval ships from the late 19th century and were common until the mid-20th century. The lights were used for communication between ships or from ship to shore. This light is likely too large and heavy to have been used by an aircraft, however, there is the possibility that it could have come from a U-Boat or E-boat, although it would have likely required additional protective casing.

In the second photo, the artefacts are relatively generic fixtures and fittings that could be used for a multitude of purposes. The photo was shown to Bob Davis, a finds specialist at Wessex Archaeology, and he suggested that three of the artefacts could have been used for plumbing. The octagonal piece has an internal diameter of about 10cm (4inches) and could be a pipe connecting collar for a 4inch water pipe. The large piece with four holes could again relate to 4inch water piping, and the four holes would allow it to be bolted to a larger feature such as a tank. Neither piece appears to be related to steam pipes, because they lack the sealing flanges and gaskets needed to contain high pressure. The small circular piece is similar to a sealing 'olive' used in water pipe compression joints. Olives are squashed within the joint between a bend and another pipe to create a water tight seal. The fourth object appears to be a rectangular fixing plate with chamfered screw holes indicating that the screws were intended to sit flush. While these fixtures and fittings could have been used for many terrestrial uses they could also have been used on board a ship.

The bone fragment measures 7cm across and 10.5cm long. Despite having showed photos to a number of bone specialists, it remains unidentified. Because of this, it is difficult to determine the bone's provenance. It could be from the Upper Palaeolithic when sea levels were lower and the area to the south-west of the Isle of Wight was dry land, or it could have washed out from river gravels or other terrestrial deposits. Alternatively, it could have a maritime interpretation, as it could have been from provisions taken to sea and thrown overboard after the meat was consumed.

Although these are probably isolated finds, there is the possibility that they could have come from an unknown wreck, possibly a German boat from the late 19th or early 20th century, as they could represent a signal light, plumbing and provisions. Previous research and a geophysical assessment of this area has concluded that there are no known wrecks in licence area 372/1, however there are two sidescan anomalies in the eastern part of the area. These were interpreted as boulders that had possibly washed out of glacial till, but the possibility that they were other, perhaps archaeological, debris was not ruled out. Outside of the licence area, there are two unknown wrecks and three fouls, and material from the unknown wrecks could have spread into the licence area.

Any further discoveries in this area should be reported, as they could provide more information about the provenance of these artefacts, and may have the potential to reveal a previously unknown shipwreck.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for the Isle of Wight
- The Local Government Archaeology Officer for the Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMD_0235: Lead Weight

This object was discovered by S. Smith at the Bedhampton Wharf from aggregate dredged by the *City of Chichester*. The material was dredged on the 10th of May 2009 from within licence area 127, which is approximately 11km off the western extremity of the Isle of Wight.

Images provided by the wharf were shown to our in-house specialists here at Wessex Archaeology and also external sources, in order to confirm its function and age.

This wedge shaped object measures 8cm in length and is 4.5cm wide and deep at its broadest part. The object narrows towards the top to approximately 1.5cm wide and 1cm deep. There is a small hole with an approximate diameter of 0.5cm located 2cm from the apex of the object. This would presumably have been used to thread rope, wire or fishing line through. The object weighs 1.56lbs (0.71kg) and Bob Davis, a Senior Researcher at Wessex Archaeology, verified that it is made of lead. There looks to be some damage on the surface of the object, possibly caused by the post-depositional effects whilst on the seabed.

Two possible functions for the object are a sounding lead or a fishing weight.

Richard Noyce from the Royal Naval Museum thought that the object is an early type of sounding lead due to its crudely made shape. Prior to more modern devices, sounding leads were essential for mariners in determining water depth, by assessing how much rope had been released for the weight to touch on the seabed. They were also used for discovering the vessel's location, by identifying a sample of seabed sediment that was collected by attaching sticky tallow to the base of the weight. The earliest record of a sounding lead being used in this manner dates to the 6th century BC.

If this object is indeed a sounding lead then it is difficult to date since its simple shape and size means that it could feasibly date from any period. There is also a lack of markings on the object which, if present, could be used to indicate its maker or weight. Furthermore, it is relatively light compared to other sounding leads and this may affect the speed with which it drops through the water. The object also lacks an indentation on the base, where the tallow would be placed to collect the seabed sediment sample, a common feature on sounding leads. Modern examples of sounding leads are longer, sleeker and cast in a mould, which could either confirm it as an earlier type or one that was particularly crudely made.

Therefore a more likely suggestion is that this object is simply a fishing weight or sinker that could have snagged on a seabed obstruction breaking the line. Its size and weight (light for a sounding lead yet heavier than most fishing weights) suggests that the attached line and hook would be much lower in the water or even on the seabed; attracting bottom dwellers or deep sea fish.

Similar to **UMD_0235**, other examples of lead sinkers found on the Thames foreshore also have a similarly rough outline and are wider towards the bottom becoming narrower at the top where a hole is apparent. These have been dated to the medieval period and therefore, it is reasonable to assume that **UMD_0235** may also date to this period.

Discoveries of weights associated with marine industries are fairly common due to the frequency with which they are lost. It is important to continue to report such items under the BMAPA protocol so that a sequential typology of these types of objects can be created helping us understand the development of their design/shape, their use, and the location of their loss throughout history.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for the Isle of Wight
- The Local Government Archaeology Officer for the Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire

Reference:

Steane, J and Foreman, M. 1988: Medieval Fishing Tackle, in M. Aston (ed.) *Medieval Fish, Fisheries and Fishponds in England*, British Archaeological Reports 182 (Oxford), p137-86 (<http://ads.ahds.ac.uk/catalogue/adsdata/cbaresrep/pdf/074/07412001.pdf>)



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMD_0236: Pocket Watch Case

This pocket watch case was discovered by S. Smith at UMD's Bedhampton Wharf. The case was recovered from aggregate dredged by the *City of Chichester* on the 10th May 2009 from licence area 127, broadly 12km west of the Isle of Wight.

This object was reported to Wessex Archaeology by Bedhampton Wharf. The photograph was shown to Wessex Archaeology finds specialists.

This would appear to comprise the casing and bezel to a pocket watch. The metal backing plate is broadly 4-5cm in diameter; no visible markings can be seen upon it. The other part is the bezel which would have surrounded the face and held the crystal in place. A nodule/winding mechanism is located at the 12 o'clock position. Pocket watches date from the post-medieval period (1500's) up to the early to mid-20th century, when they were superseded by wrist watches. This is a modern example most likely dating to the 19th or early 20th century.

Although this object could be derived from a shipwreck it is likely that it represents an isolated find. More precise dating is difficult at this stage, but it would appear to be modern. The seabed surrounding and approaching the Isle of Wight has produced numerous finds dating to the 19th and 20th century, a number which have been reported through the BMAPA Protocol. For example, a pocket watch of similar dimensions was recovered from licence area 127 in February 2009 (see UMD_0218). Much of this debris could have been lost overboard (jetsam) or be part of the scattered debris field of a shipwreck (flotsam). Further discoveries in the licence area could provide additional information and hint at possible distribution patterns. Therefore, any future finds should continue to be reported through the Protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Hampshire and the Isle of Wight
- The Local Government Archaeology Officer for Hampshire and the Isle of Wight
- The Finds Liaison Officer (Portable Antiques Scheme) for Hampshire



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest

UMD_0237: Copper/Bronze Hinge & Metal Screw Unit



These objects were discovered at the Bedhampton Wharf from aggregate recovered by the *City of Chichester*. The material was dredged on the 10th of May 2009 from within licence area 396, which is approximately 12km off the coast of West Sussex.

These two finds were reported to Wessex Archaeology by Bedhampton Wharf. Images were shown to specialists within Wessex Archaeology. The metal hinge is about 30cm in length and no more than 5cm in width. It was initially thought to be a simple door hinge; however, on further inspection its thickness and robustness suggests a weight bearing internal hinge for a box or large storage container. The machine engineered holes, three on one side and four on the other, would have received screws and probably been attached to a sturdy wooden lid.

The other object is a metal screw top unit. Fixed to a wood backing about 13cm in length, the unit is comparable in size to a common door knob. The unit has two electrical wires coming out of its base which pass through the wooden backing. The identity of this object is somewhat unclear but it is thought to be an electrical bell or a fixture or fitting of some fashion. Both objects are believed to date from the 20th century.

Although these artefacts may be derived from a shipwreck and other artefacts have been reported from the licence area (e.g. UMA_0113), they appear to be isolated finds, having possibly become detached from a vessel and lost accidentally. Despite this, an extended area to the east of the Isle of Wight has produced numerous finds of 20th century building debris, thought to be related to the clean up of bombing debris from World War II and named Nab Tower finds. Thus, it is possible that these finds are related to demolition rubble of some fashion. Further discoveries in this licence area could determine the true nature of these finds and may indicate the location of a previously unknown shipwreck or aircraft crash site. Therefore, it is important that any further finds of archaeological interest in this area are reported through the protocol.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The National Monuments Record
- The Historic Environment Record for West Sussex
- The Local Government Archaeology Officer for West Sussex
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMD_0238: Metal Lock Faceplate

This object was discovered by D. Lutman at UMD's Bedhampton Wharf from aggregate recovered by the *City of Chichester*. The material was dredged on the 10th of May 2009 from within licence area 127, which is approximately 11km off the western extremity of the Isle of Wight.

This iron lock faceplate was shown to our in-house specialists here at Wessex Archaeology in order to discover the age of the find and perhaps indicate what type of object it may have locked.

Indeed, Bob Davis, a Senior Researcher at Wessex Archaeology did confirm that this object is the faceplate of a small lock that most likely dated to the early 20th century.

Strangely, another almost identical object was found during the same day of dredging, but from a different licence area, located on the opposite side of the Isle of Wight – area 122/3 off the east coast. A photograph of **UMD_0240** is shown to the right.

The faceplates on each object appear identical including the location of the keyhole and associated gap (to the right of the keyhole), which was used to secure the internal locking mechanism in place. Therefore it is reasonable to assume that these types of locks may have been fairly common.



UMD_0240, found in licence area 122/3

However, **UMD_0240** does provide more information than the one reported as **UMD_0238**, since it is still attached to the backplate and looks to have the locking mechanism still intact within. It also allows us to understand how the lock was integrated into an object and perhaps indicate what that object might be. The keyhole is located perpendicular to the mortise plate (which is located at the top of the lock in the photo of **UMD_0240**), which implies that the locks were not used on a standard door, but something like a chest/cupboard where the lid/door opened vertically. On a normal door, the keyhole would be located parallel to the mortise lock.

It is believed that the locks only functioned as a simple closing and locking mechanism rather than for any serious security measures. This is emphasised by their relatively small size, approximately 5cm by 5cm, and also the fact that they would have been attached using only the four small screw holes in the corners of the slightly larger backplate.

This object was discovered in licence area 127, off the west coast of the Isle of Wight. In the past, many other objects have been reported from material dredged from within this area. Due to the quantity and varying types of objects found, including some metal odds and ends (**UMD_0218**, **UMA_0112**, **UMA_0176**, and **UMA_0097**), pottery and brick (**UMA_0077**), it appears that unwanted material may have been dumped offshore. Dating these objects has shown that areas like these were probably necessary for the removal of waste material from towns, like Southampton, that had been devastated by bombing during the Second World War. There is a similar dumping ground off the Island's east coast.

It is therefore thought that the lock, **UMD_0238**, could have been part of this offshore deposition of debris. However, since our understanding of these areas is not complete it is important for wharf staff to continue to recognise and report objects in the future. Ideally this will further our knowledge and understanding of the archaeology found around our coast and makes your input into the BMAPA Protocol essential.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The National Monuments Record
- The Historic Environment Record for the Isle of Wight
- The Local Government Archaeology Officer for the Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for the Hampshire



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UMD_0239: Sherd of Pottery

This artefact was recovered by G. Cooper at Bedhampton Wharf. It was discovered in material dredged by the *City of Chichester* on 28 April 2009 in licence area 395/1, which is located 11km south-west of Selsey, West Sussex and 14km south-east of Bembridge, Isle of Wight.

This sherd of pottery measures 7.8cm x 4.5cm. Photographs of this find were shown to Lorraine Mephem, a Post Excavation Manager at Wessex Archaeology, for more information.

Although not complete, the stamp probably reads 'GENUINE IRONSTONE'. 'Ironstone' china is essentially a hard white earthenware that is very strong. Ironstone was first patented in 1813 by Charles Manson as a cheaper alternative to porcelain, but once his patent expired in 1827, potteries around Staffordshire and further afield produced it (www.thepotteries.org). Ironstone was mass produced, and because it was durable and inexpensive it was favoured for everyday use. In fact, because of its sturdiness and its popularity in rural areas, it was sometimes known as 'thresher's china', but these qualities would have also made it ideal for use at sea. Ironstone was used not only in the UK but also exported to the colonies in the United States and Canada, as well as to Europe.

The letters 'E F B O' at the centre of the stamp could stand for E.F. Bodley & Co. of Longport Staffordshire. This company was established in 1862 and became E.F. Bodley & Son in 1883. Between father, Edward Fisher Bodley, and son, Edwin James Drew Bodley, they operated three pottery manufactories – Scotia, New Bridge and Hill Top (www.thepotteries.org). The firm survived until 1896.

It is not known how this artefact came to rest on the seabed. There was heavy maritime traffic along the south coast of England throughout the late 19th century, so the pottery could have come from any one of a wide variety of ships destined for any number of ports. While the discovery of a considerable amount of pottery could indicate the presence of a previously undiscovered shipwreck, an isolated piece such as this one could just as well have been thrown overboard by a crew member.

Each artefact that is discovered not only has the potential to tell its own story, but as part of a larger assemblage it can provide details about the usage of the sea in this area over time. Therefore, any further artefacts that are discovered in this area should also be reported.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for West Sussex
- The Local Government Archaeology Officer for West Sussex
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



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UMD_0240: Four Metal Finds

These artefacts were discovered by S. Smith and Dean Lutman at Bedhampton Wharf in material dredged by the *City of Chichester* on 10 May 2009. The dredger had been working in licence area 122/3, which is located 8km south-east of Bembridge, Isle of Wight.



Photographs of these metal finds were forwarded to Bob Davis, a finds specialist at Wessex Archaeology, for interpretation.

The metal lock measures 7cm x 5cm. The lock is relatively small, lightly made, and is only fixed from one direction. Because of this, it appears to be a mortise lock for a cabinet or cupboard, rather than a door. Bob also noted that the key hole is at an odd angle (perpendicular to the mortise plate) which may suggest that the door it was fixed to opened vertically, like on a chest or trunk. The lock most likely dates to the early 20th century, and is almost identical to UMD_0238 that was recently discovered in licence area 127.

The metal cap with the words 'TWENTIETH CENTURY' measures 5.6cm in diameter. It could have been used for a variety of purposes, however its origins are presently unknown.

What remains of this small label plate measures 6.9cm x 2.5cm. It is inscribed 'AIR LANCEM' and 'MOTEUR AUX', which may be the French 'AIR LANCEMENT' and 'MOTEUR AUXILIAIRE'. One possibility is that this partial label plate would have indicated the air intake for the forced induction system of an auxiliary compression ignition internal combustion engine.

The metal gear ring is open framed and lightly built, with a diameter of 5.3cm. The attached pawl would have acted as a brake to stop a spring unwinding. This artefact appears to be part of a clockwork mechanism, and the size of the gear indicates that it could have been part of a large clock.

Although it is difficult to ascertain the source of these finds, previously dredged up artefacts from licence area 122/3 have been interpreted as either possible shipwreck material or WWII domestic scrap and demolition debris. The variety of finds here are unlikely to have come from a single shipwreck, and are therefore more likely to be debris – whether thrown overboard from a passing vessel or dumped debris. The exact nature of the debris is not fully understood, and as each discovery has the potential to provide further insight into the archaeology of this area, any further discoveries should be reported.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Isle of Wight
- The Local Government Archaeology Officer for Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



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UMD_0241: Twenty Three Assorted Objects

Twenty three metal objects were discovered by S. Smith, G. Cooper and D Lutman at Bedhampton Wharf in material dredged by the *City of Chichester* on the 10th of May 2009. The dredger had been operating in licence area 122/3, which is located 8km south-east of Bembridge, Isle of Wight.

These finds represent many generic fixtures, fittings and domestic items and have been categorised into domestic and industrial deposits. Bob Davis a Senior Researcher at Wessex Archaeology's headquarters in Salisbury was shown the photograph and aided in many of the objects interpretation. The ten objects within the domestic category include; a four pronged fork, padlock face plate, time piece bracket, belt buckle, a square switch cover, two more designed switch covers, a damaged window handle composing of a cylindrical hinge and two metal arms (similar to those found on *Crittall* window frames, the notable Essex manufacturer), a door handle and damaged door handle and a doorbell/isolation switch.

The Industrial remains can be further subcategorised into structural fastenings, one mechanical component and miscellaneous items that could have been utilised for a multitude of basic functions.

Of the structural fastenings two countersunk iron screws were found. They have slot heads and an inner chamfered surface; one is approximately 15cm long the other bent screw is around 12cm in length. These types of screws can be utilised in many different ways as the smooth surface along the shaft toward the head of the screw prevented timber from splitting. However, machine made point ended screws were only developed from the 1840s onwards. The iron solid rivet has what seems like a greenish tinge which could represent a small amount of copper alloy inserted during its manufacture. Its basic dimensions of c.15cm in length, a 3cm rounded head and a flat end (known as a *bucktail* which is then clinched). The fact that the end is flat may be due to the end being sheared off. The rivet would have had a structural function possibly placed through either a bridge, crane or building frame.

The mechanical component consists of a circular object with a central hole and squared cut notches at intervals. As yet it has an unknown orientation and function, although it may have been used within a rotary device.

The miscellaneous items that make up the rest of the assemblage contain a range of items; two ring fittings, a damaged circular washer, a small flat piece of metal with a single hole at one end, and four brackets of differing size and shape one of which is elliptical and open ended.

As the assemblage illustrates such a wide spectrum of domestic, commercial, industrial and miscellaneous functions it is difficult to interpret the individual items relationship to one another. There is also a strong suggestion due to the large amount of disassociated debris found over the last year or more (especially in such a reasonably conserved state) that rubble from World War II was discarded in this area. There is no official record of this occurring although the age of the material, where it can be ascertained, is consistent with this possibility.

It is interesting to note, however, that an inscribed spoon found in the same dredging area in January 2008 possibly originated from a Royal Navy vessel. Whether area 122/3 represents a mixture of shipwreck material contaminated with discarded objects can not be fully assessed as yet. Therefore it is important that further finds from within this area are reported as they will help us gain a better understanding of its archaeological potential.


References:

<http://www.buildingconservation.com/articles/nails/nails.htm>

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Hampshire
- The Local Government Archaeology Officer for Hampshire
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire

<http://www.wessexarch.co.uk/projects/marine/bmapa/>

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Brett_0242 & Brett_0244: Cannonballs



On the 1st of May 2009 three cannonballs were discovered by Ashley Wilkinson at Brett Aggregates' Cliffe Wharf. The finds were part of material lifted by dredger *DEME Charlemagne* while operating in area 461 approximately 50km south of Beachy Head on the East Sussex coast and they were recorded as Brett_0244. On the 12th of May within the same area of 461 another cannonball was found this time by Ian Lee-Amis at Brett Aggregates' Cliffe Wharf from the same vessel and was recorded as Brett_0242. Both reports were compiled by Tony Payne the day after each find was made.

From the medieval period onwards the English Channel has played host to all kinds of naval warfare, with engagements leading to shipping losses by many different European nations. Although no known battles or skirmishes took place in area 461 it should be noted that it is placed on the fringe of the international boundary between the UK and France and the current record of shipwrecks is unreliable this far offshore.

Area 461 was surveyed with geophysical equipment in 1998. This data was assessed in a broad archaeological assessment by Wessex Archaeology in 2003 which reported that two known 20th century wrecks are deposited within this application area.

Three geophysical surveys have since taken place, the first in 2005 recorded 108 anomalies (mainly of low archaeological potential). The 2008 survey recorded 25 of low grade archaeological potential and only three were identified in 2009. The reports indicated that anomalies of archaeological potential were randomly placed within, and surrounding Area 461, they also confirmed the seabed was subject to change.

The Brett_0244 finds included three round shot; one measured approximately 7 inches (17.8cm) in diameter of and two others with diameters of 5 inches (12.7cm). The 5 inch cannonballs both have mould markings and one shows a large patch of surface corrosion possibly due to an impact scar. The Brett_0242 cannonball is approximately 6 inches (15.2cm) diameter and seems in good condition.

Cannonballs can be interpreted in a number of ways establishing clues to their manufacture date and relationship to the area in which they were found.

As they appear to be of cast iron and of a size roughly between 5 and 7 inches in diameter they could only have been manufactured after approximately 1509 to 1513 when the production of cast iron cannonballs coincided with the advent of cast iron cannon. In the following one hundred years leading colonial empires began to formulate their own tactical awareness and the cannon they required to achieve those tactics, thus the rise of standardised cannon shot of differing calibres.

As the 6 inch diameter cannonball from Brett_0242 appears to be a regular continuous sphere, this establishes its weight of around 32lbs, which is a uniform mass for large *Demi-cannon* of the late 16th to 17th century. The two 5 inch diameter cannonballs from Brett_0244 are possibly associated to the *Culverin* type with the mould markings offering little in the way of linkage to manufacture. The 7 inch diameter shot is likely to weigh 42lbs, which would mean a gun with a *Cannon* or possibly *Cannon Drake* size bore. All these weapons and the round shot they fired were gradually utilised in a number of key ways and soon standardised throughout this period by many ambitious seafaring nations and most notably by the English.

The 42pdr *Cannon* were heavy guns and, and were only armed within the lower deck of the largest of ships such as First Rate naval vessels during the 17th and 18th centuries, but by 1703 naval reform looked to ultimately replace all of them with *Demi-Cannon*.

The Establishment of Guns reform of 1716 replaced traditional cannon names with those of the maximum shot in which the cannon could fire under. This meant *Culverin's* were called 18 pounders, *Demi-cannon* 32 pounders and *Cannon* were known as 42 pounders, which were reinstated on most First Rate vessels.

Throughout the 18th century 32lb shot retained its place as the standard for all English man-o'-war and with technological advances by John Armstrong and later Thomas Blomefield more accurate smoothbore cannon were produced during the second half of the century. This led to 32pdrs becoming preferred by the naval authorities who would again gradually replace the larger 42pdr cannon on nearly all First Rates. Some bronze 42pdrs, however, remained in service well into the 19th century.

As technology developed 18, 32 and 42 pounders became shorter lighter and more accurate, and these became known as *Carronades*. These deadly cannon were the beginning of the end for regular round shot as they used hollow cast iron cannonballs and were of a lower calibre which was believed to create more splinters on impact with a ships hull.

If all the cannonballs are associated with each other then such a combination of round shot within the English Channel could be a good indication that a large vessel was wrecked in the vicinity of Area 461, although there is no record of such. It is also possible that these four cannonballs belong to a British ship. However it is often believed by some experts (even due to the lack of documented evidence), that British ships of the line during the period of the late 17th century to early 19th century did not carry such a combination of 18pdr, 32pdr and 42pdr guns.

Although this may have been the case, it is possible these cannon were used together prior to reliable shipping records and logs. There are also a number of other possible scenarios for these finds being deposited on the seabed which include practice firing, used as a defensive/warning shot, or as part of an engagement, or lost as part of a cargo.

Area 461 potentially could contain further archaeological material of this sort and therefore, it is important that any further finds are reported as these finds may represent the remains of a shipwreck.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Sussex
- The Local Government Archaeology Officer for Sussex
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



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Protocol for Reporting Finds of Archaeological Interest

Hanson_0245: Seabed Obstruction

A large seabed obstruction was encountered on the 28th February 2009 by the dredger *Arco Arun*. It was encountered within licence area 474 Central, approximately 36km south-east of Beachy Head.

The BMAPA Protocol provides for finds discovered at wharves, on board dredging vessels and on the seabed. The obstruction, of unknown size, had an impact on the dredging gear of the *Arco Arun* and was 'sensed' on board the vessel. A full inspection found no serious damage to the dredge pipe, although damage to the obstruction is as yet unknown.

Wessex Archaeology carried out an Archaeological Assessment of licence areas 473, 474 and 475 in 2005 (Ref: 58630.02). Features (not necessarily of archaeological interest) were identified on the basis of sidescan sonar or sub-bottom profile surveys. Four sites of archaeological potential were found within dredging area 474 and five within the established 1km buffer zone. Three of the four are small and isolated geophysical anomalies of unclear origin, although they may be erratics (large glacial rocks deposited after the last transgression). Anomaly **WA 4029** is of the highest archaeological potential within the dredging area and was reported as being 15m in length. Whilst it is believed to be part of a larger buried wreck, it is over 2.5km from the reported obstruction. Anomaly **WA 4035** is closest to the obstruction, marginally outside the active dredging area and around 800m south west of the obstruction. Identified by sidescan sonar, **WA 4035** is described as an 'object made up of two thin strong reflectors'. Whilst objects on the seabed can be moved via large-scale sediment movements, intrusive trawling, cable laying and strong currents, it is not thought that any of the known anomalies relate to the obstruction encountered by the *Arco Arun*.

Hanson has previously reported a find from area 474 Central (Hanson_0118). In 2008 part of a levered tailwheel from a WW2 Hawker Hurricane was recovered approximately 1.5km north-east of the reported obstruction. Hanson has an exclusion zone marked to the north of dredging area 474 Central, and this is thought to be the location of an aircraft. This tailwheel may have been moved into the dredging area from the exclusion zone, possibly as a result of intrusive scallop fishing or extreme currents. The reported obstruction is a considerable distance from Hanson_0118 and is unlikely to be associated with that find. Additionally, the obstruction is unlikely to relate to an aircraft as, with the exception of items such as the engine, their lightweight construction is such that it is likely that aluminium components and fittings are liable to be ingested by the dredging pipe and found in the load. No such finds have been reported.

More generally, the Eastern English Channel is an important maritime region both in terms of trade and as a historic theatre of war, and thus, known maritime casualties' probably only represent a small percentage of actual losses recorded within this region. To this degree, there is the potential for the presence of unknown and undocumented wrecks and artefacts from various periods dating back to the Mesolithic period (c. 8,500 – 4000 BC). However, similar to aircraft remains it is likely that finds would have been recovered in the load associated with the dredging when the obstruction was encountered. Wreck sites tend to comprise scattered debris fields and one would expect wreckage of a varied nature to be recovered during active dredging operations.

Whilst the obstruction is somewhat un-quantifiable, it is currently thought that the likeliest explanation is that it is a glacial erratic boulder. Although sites and items related to maritime activity are initially assessed on a site by site basis, the impacts and effects of marine dredging are offset by following some key mitigation strategies, namely, avoidance and the reduction of associated impacts. As a result a 50m exclusion zone has been implemented around the obstruction. This location should be assessed as part of a review of geophysical data undertaken as part of any licence monitoring activities. Due to the lack of physical remains it is not currently thought necessary to inform the various heritage organisations concerning this obstruction. However, the discovery of further finds from this area has the potential to enhance our interpretation, and as such, future finds of archaeological interest should be reported immediately.

Reference:

Wessex Archaeology, 2005, *Eastern English Channel Areas 473, 474 and 475. Marine Aggregate Extraction. Archaeological Assessment Ref. 58630.02.* Unpublished report.



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UMD_0248: Cattle Bone

This artefact was discovered by N. C. Sait at Burnley Wharf in material dredged by the *City of Chichester* on the 11/6/2009. The dredger had been working in the Licence Area 122/3, which is located 8km south-east of Bembridge, Isle of Wight

The bone is approximately 20cm in length by 12cm at its widest part and 4cm at its narrowest point.

A photograph of this artefact was sent to Jessica Grimm, an animal bone specialist at Wessex Archaeology, for interpretation. It is believed to be a left humerus of a Bovid. The size would suggest that it is probably not an aurochs or wisent, therefore it is most likely that of cattle. It is not possible to ascertain a date for the bone from the image provided.

It is entirely possible that the bone could have come from a sealed pre-historic surface submerged under the sea or it could have been recovered from a secondary context following erosion from other sealed contexts. Due to the nature of the find it is also possible that the bone may be waste material thrown from a passing vessel, or even that it is an artefact from a wrecked vessel that was carrying cattle at the time of loss.

Discoveries of animal bones are relatively common place in the waters around Britain. This said every find still presents an insight into the rich archaeological potential for British Territorial Waters. It is therefore important to continue to report such artefacts under the BMAPA Protocol as to further enhance the understanding of our maritime heritage.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Hampshire
- The Local Government Archaeology Officer for Hampshire
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



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UMD_0250: Metal Artefacts



These artefacts were discovered by S. Smith at Bedhampton from material dredged by the *City of Chichester* on the 9/5/2009. The dredger had been working in the Licence Area 122/3, which is located 8km south-east of Bembridge, Isle of Wight.

A photograph of these artefacts was sent to Steve Webster, a Senior Project Manager for Wessex Archaeology, for interpretation. Both artefacts are brass and appear to have been roughly cut from existing sheets of metal rather than made specially. The metal star is approximately 8cm from point to point; it has two holes drilled through it and has the letters 'No 3 Steering' stamped onto it. The other artefact is approximately 10cm by 7cm, it has three holes drilled through it and the letters '15 Volts' stamped onto it.

The plate with '15 Volts' stamped onto it is probably a cover that could be fixed into position over some sort of electrical appliance or battery. It appears to be in good condition suggesting it was deposited relatively recently (in the last 20 years) or has been buried for much of the time it was submerged.

The star with 'No 3 Steering' stamped onto it is probably a plate marking a component relating to the steering system. It appears to be in good condition with only a small bend on the lower point of the star. This would suggest that the star was deposited relatively recently (in the last 20 years) or alternatively it was buried for much of the period it spent underwater.

It is likely that these artefacts came from modern vessels due to the low level of corrosion. The similar level of corrosion could also suggest that these artefacts are in fact both from the same vessel. However the different font used for the stamping could also be evidence that these artefacts were from different vessels.

It is known that the areas off of the Isle of Wight have been used as dumping grounds. It is therefore entirely possible that the artefacts were a part of this dumping assemblage and may have not been artefacts from wrecked vessels. It is also equally possible that the two artefacts were in fact from wreck sites, or even the same site and they could point towards the presence of a modern wreck within the dredging area 122/3.

It is not possible to confirm whether or not these artefacts are material from the dumping ground or if they are wreck debris. Therefore it is very important that all further finds from these licence areas are reported through the Protocol

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Hampshire
- The Local Government Archaeology Officer for Hampshire
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



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UMD_0252: Mammoth Tooth

This artefact was discovered by G. Cooper at Bedhampton from material dredged by the *City of Chichester* on the 10/6/2009. The dredger had been working in the Licence Area 127, which is approximately 11km off the western extremity of the Isle of Wight.

A photograph of this artefact was sent to Jessica Grimm, an animal bone specialist at Wessex Archaeology, for interpretation. It is believed to be a mammoth tooth. The mammoth tooth is approximately 10cm by 9cm. There is clear vertical striping which runs from the flat face of the tooth down towards where the roots would have been.

Finds of mammoth remains in Britain are relatively rare. Woolly mammoths lived in this part of Europe to the end of the Devensian ice age (c. 10,000 years ago) but there are few dated examples. Unfortunately it is not currently possible to confirm a date for this tooth.

This mammoth tooth may have come to be on the seabed having been washed from terrestrial deposits by rivers or eroded from cliffs or beaches, or it may date to the last Ice Age. During the last Ice Age, which is known as the Devensian glaciation, a greater proportion of the world's water was incorporated into ice sheets, resulting in a fall in sea level. As a consequence of this large swathes of land that currently form the bed of the North Sea were dry land. Being topographically lower, this would have been prime land for our ancestors and the animals they hunted. The area from which this tooth was dredged became fully submerged around 10,000 years ago as the Ice Age ended and water was released from the ice caps.

Whilst this tooth currently appears to be isolated, it is very important that it was reported and that all further finds from this area are also reported, as every new find of Ice Age origin helps to inform our understanding of how past humans lived and adapted to their landscape.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The National Monuments Record
- The Historic Environment Record for Hampshire
- The Local Government Archaeology Officer for Hampshire
- The Finds Liaison Officer (Portable Antiquities Scheme) for Hampshire



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Brett_0253: Torpedo Name Plate



This discovery was made at Cliffe Wharf by P. Nash. It was discovered at the wharf and could have been dredged from a number of licence areas around the coast of Britain on an unknown date.

The green tinge on the photograph would suggest that the find is made of copper alloy and is approximately 13cm long by 4cm. The word 'Torpedo' is embossed onto the plate and the first letter of the next word appears to be a 'G'. The condition of the artefact looks fairly stable although some small corrosion patches are beginning to appear.

The photograph of the find was set to the Royal Naval Submarine Museum for interpretation. It was suggested that the name plate was probably from a compartment on a ship which would have been associated with the Torpedo equipment. Two possible phrases which have been suggested include 'Torpedo Gear Store' and 'Torpedo Gyro'.

It is not possible to ascertain the exact phrase that would have completed the name plate. However it is safe to assume that the plate would have been attached to something that had an application associated with the torpedo systems.

The term torpedo was first used in the early 1800's but not in the form we now understand. The idea of a self propelled torpedo, which is how we know it today, came to fruition in the 1870's. It is therefore likely that the vessel that the name plate came from post dates the 1870's.

It can not be said whether or not the name plate is part of a wreck or if it is a piece of debris either thrown or lost from a vessel. Along with this the exact dredging area is unknown which also effects the possible interpretation of the artefact as certain areas off of the coast of Britain are more likely to turn up waste/wreck material of different types than others.

The lack of knowledge of the origination of the find could be addressed by watching the type of finds that are recovered elsewhere in order to see if anything comparable is recovered that could further the understanding of the name plate. It is therefore important that any further finds should be reported through the BMAPA Protocol for future comparisons.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Kent
- The Local Government Archaeology Officer for Kent
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



Hanson_0256 Three Timber Objects and an Unidentified Find



On the 12th of July 2009, on board the Dredging vessel *Arco Arun*, four objects were discovered by M. Morley from Area 240, 8 miles off Great Yarmouth on the East coast of England.

Area 240 is of great importance to the cultural understanding of prehistoric landscapes around the UK coastline. In February 2008, 75 Palaeolithic artefacts in good condition, including hand axes and flakes were discovered at the SBV Flushing Wharf in the Netherlands. Bones of large animals were also found and it is believed that all these finds were around 20-50cm below the seabed when dredged. Therefore all archaeological finds can provide further insights into the dynamic nature of this complex area of the seabed.

Two of the damaged timber objects are certainly elements of standing rigging and are both probably dead-eye's as they have what appears to be two auger/chiselled lanyard holes and an outer rope score. Dead-eyes provided strength usually between lanyards and stays or shroud ropes. Both were originally circular and now illustrate bore holes, possibly from Shipworm (*Teredo Navalis*) and some iron staining. This would indicate that the objects were probably exposed on the seabed for some time.

The last of the three timber objects only has one central auger hole and appears to have an iron layer corroded to its surface on one side. It also has iron staining on the other, which illustrates a circular wheel (possibly iron) was used as a component within this element. This damaged piece could have been used either as a singular block or as a pulley. However, even after a discussion with Nigel Nayling a ship timber expert from the University Wales Lampeter, it is difficult to make a definite conclusion as to its function.

The cylindrical object was interpreted by the wharf staff as a pungent smelling waxy substance that had hardened within a tub or bucket and then been thrown overboard. On one side there is a circular imprint with a central dimple which suggests this was possibly from a modern plastic bucket/tub.

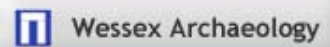
In 2005, multibeam echosounder images displayed numerous east to west sand waves, sandbanks and two possible submerged channels. Whether this area of the seabed is volatile or unchanging is still uncertain.

Nevertheless the condition of these recent finds provides further information on how the seabed operates and also suggests the range of more diverse archaeological evidence within this area.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Norfolk
- The Local Government Archaeology Officer for Norfolk
- The Finds Liaison Officer (Portable Antiquities Scheme) for Norfolk

<http://www.wessexarch.co.uk/projects/marine/bmapa/>





BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



Hanson_0258: Stone Bead

This stone bead was discovered by John Quayle onboard Hanson's *Arco Avon* vessel having been dredged from Licence Area 127 approximately 11km west of the Isle of Wight. The bead was reported through the Protocol on the 27th July 2009.

The exact position from which this find was discovered is unknown, although it is reported to have been discovered in material dredged from Licence Area 127 in the Isle of Wight region.

This find was reported by the staff onboard the *Arco Avon* as a stone bead. The bead measures approximately 1cm in diameter and has a hole passing through its centre, measuring 5mm in diameter.

Photographs of this find were sent to Lorraine Mephram, the Head of Wessex Archaeology's Finds Department. On assessing the photographs alone, Lorraine commented that the find appeared to represent a stone bead. However, it is not possible to conclusively ascertain whether this stone was deliberately or naturally perforated and as such the possibility exists that this stone is natural.

Recently it has come to light that some sponges fossilise into objects such as this one. Despite the fact that the object may be of natural origin, there is compelling evidence that people in the past collected these items and used them as beads.

It has not been possible to provide a date for this find. The earliest examples of beads date to the Palaeolithic period (approximately 700,000 to 10,500 years before present) with examples made from seashells. The archaeological record indicates that beads of stone became more common in the Neolithic period (4000 to 2400 BC). While it cannot be confirmed, it is possible that this stone bead is prehistoric, dating to a period in which the sea level was so low that areas of the English Channel and the North Sea were exposed as dry land. Alternatively the bead may have eroded into the sea having derived from a terrestrial deposit.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The National Monuments Record
- The Historic Environment Record for the Isle of Wight
- The Local Government Archaeology Officer for the Isle of Wight
- The Finds Liaison Officer (Portable Antiquities Scheme) for the Isle of Wight



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMD_0259: Brass Spoon

This spoon was discovered by Barry Gould at UMD's Erith Wharf in June 2009. The spoon is thought to have been discovered in either material dredged from Area 430, some 24km off the coast of Southwold or Area 458, approximately 40km south of Hastings.

The location from which this spoon was discovered on the seabed is unknown. In the initial report submitted through BMAPA, staff at the wharf state that it is possible that the find originated from either Area 458 in the East English Channel region dredged on the 30th June 2009 or Area 430 in the East Coast region dredged on the 26th June 2009.

The spoon is brass in material and is reported to have been engraved with what appears to be the word MAPPING or MAFFINA. Photographs of the spoon were sent to the Head of the Finds department at Wessex Archaeology, Lorraine Mephram. On examining the photographs, Lorraine commented that a wide date range can be assigned to spoons of this shape, dating to the early 18th century onwards.

It is possible that the inscription on the spoon reads MAPPIN thus providing further insight into the find. Sources relating to the Mappin cutlery and silversmiths firm vary. The following account has been attained from the official Mappin & Webb website (<http://www.mappin-and-webb.co.uk/>). Jonathan Mappin opened his first small silversmith workshop in Sheffield in 1774. Mappin's reputation for producing high quality silver spread and the business grew steadily with stores opening in London in the mid-19th century. In 1858, following a rapid expansion of the Sheffield factory, Jonathan Mappin invited his brother-in-law, George Webb, to join him in business. This led to the establishment of Mappin and Webb.

The date of this spoon is unknown, although with the absence of 'Webb' engraved on the item it is possible that it pre-dates the establishment of Mappin & Webb in the mid-19th century. It is not known how this spoon came to be on the seabed. It appears to be an isolated find, having eroded from a terrestrial deposit and transported out to sea or it may have been lost overboard from a vessel. If further associated material comes to light it may help us work out the origin of this find. Finds such as this illustrate the importance of reporting inscriptions on archaeological material where present – they can greatly inform upon the investigation of the find enabling its archaeological importance to be attained.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The National Monuments Record
- The Historic Environment Record for East Sussex and Suffolk
- The Local Government Archaeology Officer for East Sussex and Suffolk
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMD_0261: Cannonball & Lead Pipe

This find was discovered by Justin Apps at UMD's Ridham Wharf. The area from which the find was discovered was unknown. This find was reported through the Protocol on the 1st September 2009.

This interesting find comprises a length of lead piping sealed longitudinally within which there is a cannonball. On reporting the find, the wharf staff noted that 3 cannonballs were observed within the pipe. Having received the object, Wessex Archaeology only observed one cannonball within the pipe.

The pipe is approximately 60cm in length and is measured to have an internal diameter of approximately 7.5cm. The diameter of the cannonball is approximately 3 inches which would equate to a 3 pounder shot.

This rather unusual find has somewhat baffled both archaeologists and specialists alike. Photographs of the find were sent to Phil Magrath, Curator of Artillery at the Royal Armouries Museum in Fort Nelson. Unfortunately Phil was unable to identify the object.

Photographs of the object were also sent to Jon Adams, the Director of the Maritime Archaeology Centre and Head of the Archaeology Department at the University of Southampton. Jon suggested that the object may represent a length of scupper pipe. He further suggested that the round shot may have found its way into the pipe by accident, perhaps rolling into the tube during rough seas or the wrecking of a vessel. Round shot were often placed on the deck ready for use so this explanation is entirely plausible although remains to be confirmed.

At present it is not possible to conclusively identify this object, although the staff at Ridham Wharf will be noted if any further information comes to light. It is quite possible that this object derives from a vessel and may thus indicate a previously unknown shipwreck or area of wrecking debris. However, without knowing the location from which this find was dredged the origin of this find will remain unknown. If further finds of this nature are discovered it is imperative that the location from which they were dredged be noted.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for Kent
- The Local Government Archaeology Officer for Kent
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



BMAPA/EH

Protocol for Reporting Finds of Archaeological Interest



UMD_0264: Cannonballs

These finds were discovered by Chris Fryer at UMD's Ridham Wharf. They were discovered in material dredged from Area 458 approximately 40km south of Hastings on the 10th May 2009.

These cannonballs were discovered in the East English Channel dredging region. The largest of the cannonballs represents only half of a cannonball. It measures 130mm in diameter and weighs 11 pounds. The smaller cannonballs comprise one complete and one half round shot. The complete round shot measures 75mm in diameter and weighs 4.2 pounds. The half round shot also was measured to have a 75mm diameter and was weighed at 2.5 pounds.

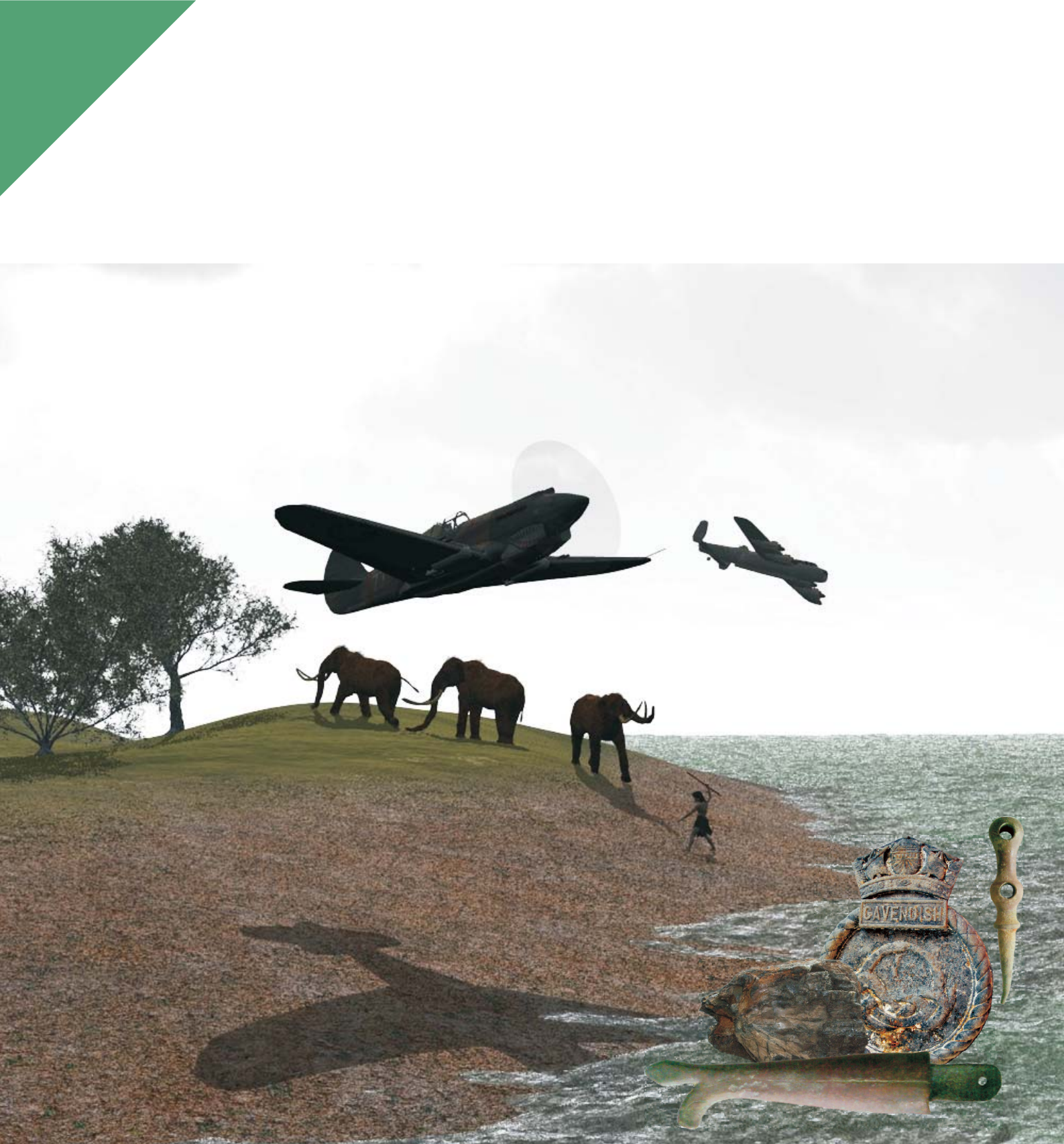
Photographs of the finds and details regarding their dimensions were sent to Phil Magrath at the Royal Armouries Museum in Fort Nelson. Phil commented that the diameter of the larger round shot is approximately 5 inches and thus represents a calibre equating to an 18-pounder sea service gun. The smaller cannonballs were measured to be approximately 3 inches in diameter which would equate to a 3-pounder gun. It would not have been unusual for a vessel to have both 18-pounder and 3-pounder guns onboard.

While one would expect an 18-pounder gun to fire an 18-pound shot this was not always the case. Phil explained that a strategy adopted to vary the ballistics in order to fire a shot with a low weight to calibre ratio from a much lighter gun was to bore out a smaller calibre gun. In this case, it was likely that a 12-pounder gun was bored to accommodate a 5 inch round shot for a standard 18-pounder.

It has not been possible to precisely date these cannonballs. Iron round shot are known from archaeological and documentary sources to have been in use between the late 15th century until the late 18th century. This evidence provides a broad date range for these finds. Cannonballs are particularly valuable artefacts. They may indicate the presence of an uncharted shipwreck, whereby the timbers have eroded away leaving only the more durable items on the seabed. Alternatively they may relate to naval battles and consequently important historical episodes. If further items of archaeological interest are discovered from this Licence Area it is imperative that they are reported through the Protocol immediately in order to highlight any areas of potential archaeological sensitivity.

Information about this discovery has been forwarded to:

- English Heritage
- BMAPA
- The Crown Estate
- The Receiver of Wreck
- The National Monuments Record
- The Historic Environment Record for East Sussex
- The Local Government Archaeology Officer for East Sussex
- The Finds Liaison Officer (Portable Antiquities Scheme) for Kent



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BMAPA is one of the constituent bodies of the Quarry Products Association, the trade association for the aggregates, asphalt and ready-mixed concrete industries.



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