Dredged Up

Issue 26
Spring 2020

Archaeology Finds Reporting Service Newsletter

Welcome to Issue 26 of ***Dredged Up***, the newsletter of the Marine Aggregate Industry Archaeological Protocol. Since the last newsletter in Autumn 2019, **149 finds** have been reported in 11 reports and one wharf has been visited.

Hanson_0938_001 Middle Palaeolithic handaxe (see page 6)

On **page 2** and **3**, we celebrate another brilliant round of finds awards, naming best attitude by a wharf, best attitude by a vessel and best find.

Page 4 showcases a selection of finds that have been reported since the last issue of *Dredged Up*.

We also conduct other work at wharves and have recently been to Dagenham wharf to monitor cargo. See **pages 5–7** to learn more about it.

On **page 8**, there is some guidance on handling asbestos related materials.

If you would like to book an awareness visit, then get in touch by emailing **protocol@wessexarch.co.uk** or call **01722 326867**

If you haven't received a mug or photo scale card, then please get in touch with us!

2018–2019 Finds Awards

It's time to celebrate the annual Finds Awards! In this issue, we are pleased to announce the winners from the 2018–2019 reporting year which runs from 1 October 2018 until 30 September 2019. Anything found after this date will be considered for the Finds Awards in spring 2021.

Best Attitude by a Wharf

This year, the winner of the best attitude by a wharf is CEMEX Angerstein Wharf. In May 2019, staff at the wharf discovered a collection of fragmented aircraft material in a cargo dredged from Licence Area 511. As there had been a large turnaround of staff at the wharf since the last wharf visit, they were unsure on the procedure of reporting the finds. They got in contact with a member of the Implementation Team at Wessex Archaeology who was able to guide them through the reporting process over the phone. A member of the team gave an awareness visit to the wharf within a week of them contacting us. We would like to thank Angerstein Wharf for making contact when they were unsure what to do and for working with us to educate all the members of staff on the correct reporting methods. Since then, more aircraft and munitions have been successfully reported by the wharf.

Angerstein Wharf staff

Best Attitude by a Vessel

This year we are pleased to announce that two vessels won this award! Congratulations to Tarmac's *City of Westminster* and to Hanson's *Arco Beck*. Thank you to each vessel for reporting several finds through the Protocol over the past reporting year.

Tarmac's *City of Westminster* discovered an **aircraft propeller blade** (Tarmac_0907) in Licence Area 430 in the East Coast dredging region, approximately 28 km east-south-east of Southwold. It was found by Chaminda Tennekoon. Bob Clarke, an aircraft specialist at Wessex Archaeology, said that metal propeller blades, made of aluminium alloy (duralumin) came into production in the late 1930s, mainly in America, with Britain following suit in the 1940s. Its hollow hub is characteristic and used for balancing. The curve that can be seen on the propeller blade is distinctive evidence of damage to a rotating prop caused by hitting water at speed. However, Steve Vizard, an external aircraft specialist, believes it's a British blade from an RAF aircraft and that the configuration of the blade strongly indicates that it is a DeHavilland type prop unit. DeHavilland propellers were fitted to a variety of different RAF aircraft throughout the Second World War but Steve said it could be from an early Spitfire, or at least that period.


Tarmac_0907 aircraft propeller blade

Hanson's *Arco Beck* Malcolm reported a **vertebra** (Hanson_0929), recovered from Licence Area 240 in the East Coast dredging region approximately 10 km east of Great Yarmouth. Professor Adrian Lister from the Natural History Museum believes this is the second neck vertebra (axis vertebra) of an elephant. Without detailed comparisons, he could not say what species it is, but its size is consistent with woolly mammoth and as it was found in the same deposit as a woolly mammoth tooth (Hanson_0927), that is a probable ID. *Mammuthus primigenius* or woolly mammoth were in existence in Europe during the late Middle and Late Pleistocene, dating from 350,000 to 10,000 years ago.


Hanson_0929 vertebra

For details about all of the discoveries that were made during the 2018–2019 reporting year, you can access and download a copy of the Annual Report online

https://www.wessexarch.co.uk/sites/default/files/field_file/annual%20report%202018-2019%20low%20for%20web_0.pdf

CEMEX_0908

CEMEX_0908 canvas parachute

Best Find

The best find of this reporting year goes to CEMEX_0908; a **submarine pyrotechnic** recovered from Licence Area 137 in the South Coast dredging region, approximately 10 km south of the Needles. Michael Pettitt, Tim Bethune and Mark Nichols discovered it at Shoreham Wharf.

The first element of this find is a broken metal cylindrical tube that measures 820 mm long and 70 mm wide that appears to be made of aluminium with an associated brass mechanism, inscribed with "Ejector No. 2 MK I/L II MB/44" as well as the Navy Broad arrow. Wire and a series of electrical components are also visible. The second component of this find is a canvas parachute that, despite a few holes, was complete with the remains of the string that would have held it to its origin.

Images were sent to our in-house specialists Alistair Byford-Bates, Bob Davis and Bob Clarke. Alistair and Bob Davis both said that it looked 'percussive' and suggested that both finds were connected.

After research, it has been suggested that this find is an example of a Submarine Emergency Identification Signal, Star, Mk 2 Mod 2 or Mk 3 Mod 0. They were for use exclusively with the submarine signal ejector and were ejected by compressed air. On rising to the surface of the water, Submarine Emergency Identification Signals Mk 2 Mod 2 and Mk 3 Mod 0 project a Single Star Grenade Mk 5 to a height of 250 feet (76 m), where a parachute would open to support the star, which would burn for approximately 13 seconds. The complete signal was available in one of three colours (red, green or yellow) and should not have been ejected at depths greater than 160 feet (79 m), as the time required to reach the surface was limited to the 27 seconds allowed by the fuse. They consisted of a buoyant tube of aluminium 18.5 inches (470 mm) long and three inches (76 mm) in diameter, which contained the Single-Star Grenade Mk 5 Mod 0. Early issues of Submarine Emergency Identification Signal Mk 2 Mod 2 contained either Smoke Grenade Mk 3, for day use, or Three-Star Grenade Mk 4, for night operation.

Bob Clarke had a different idea for the find. He said it looks more like a 2-inch UP (unrotated projectile) Anti-Aircraft Rocket which were successfully deployed in the anti-aircraft Z Batteries, operated by the Home Guard. He said the parachute looks to be 5 feet (1.5 m) in diameter based on the images, which unfortunately is a standard size. He said it may not be associated with the other find.

This item is believed to date to the Second World War, where it may have been deployed as a flare from a submarine. It is not possible to confirm whether both finds are associated with each other at this time although it is believed to be the case.

Shoreham Wharf staff

All our winners receive a £100 cheque from BMAPA and a certificate of their achievement. Congratulations to all you all!

Finds reported since the Autumn

Since the autumn Newsletter, we have had 149 archaeological finds reported through the Protocol. Some examples of the materials reported are found below.

DEME_0932 (below) is a **large munition** that was discovered in Licence Area 351 in the South Coast dredging region, approximately 12 km south-east of the Isle of Wight. Jef Bruneel discovered it on board *Mellina.* This munition was observed caught in the draghead of the aggregate dredger and measured 940 mm (37 inches) long with a diameter of 320 mm (12.5 inches). The driving band was still visible at the base of the munition and was grooved, indicating that it had been previously fired. The Royal Navy bomb disposal unit came to assess the munition and positively identified it as a 12.5-inch Palliser round from the 1860s, estimated to weigh between 350 and 400 kg. A Palliser round is an iron armour piercing shell of the mid to late 19th century, named after the inventor, Sir William Palliser. These shells were powder-filled but did not use a fuse. Instead, they relied upon the shock of striking the target to set off the burster. These shells were effective against wrought iron armour but shattered against steel armour. This shell may have come from a rifled muzzle-loading (RML) 12.5-inch gun that were designed for British battleships and were also employed for coast defence. The munition was determined to be non-explosive; however, it was blown up in a controlled explosion on the seabed.

DEME_0932

These **two tubes** (CEMEX_0934) (right) were dredged from Licence Area 340 in the South Coast dredging region, approximately 8.5 km south-east of the Isle of Wight and discovered by Michael Pettitt at Shoreham Wharf. The staff at the wharf said that they thought it was more likely to be a resin than plastic. They also said that it reminded them of cordite. Cordite is a smokeless propellant developed and produced in the United Kingdom to replace gunpowder as a military propellant. Images of the object were sent to Trevor Parker, from the Ordnance Society who said that they may be sticks of propellant, but that without the sizes, it is very difficult to tell. Further communications with the wharf gave the dimensions of the tubes. The largest tube measured approximately 450 mm and had a diameter of 60 mm while the smaller tube measured approximately 270 mm and had a diameter of 40 mm. Trevor said that the other possibility if they are ordnance is that they are related to plastic explosives.

Hanson_0941

Hanson_0941 (above) is a fragment of **orange pottery** from Licence Area 240 that measures 140 mm by 85 mm with a visible handle. The find was brought back to Wessex Archaeology's head office in Salisbury where Finds Manager Rachael Seager Smith and Senior Archives Manager Lorraine Mepham examined the find. They said that the sherd is from a post-medieval glazed Redware colander with two side handles which dates from the 18th century onwards. The handle would have been attached to a shallow bowl-like shape dotted with holes to drain food items. Both specialists said that several areas in Britain and on the continent had their own production centres, all making similar vessels, however, the source of this sherd is impossible to identify as it was found on the seabed. The specialists also said that both surfaces are (slightly patchily in the case of the exterior) coated in a self-coloured glaze during the manufacturing process, which, given the pale orange firing, makes the vessel look orangey-yellow. A glaze is a layer or coating of a vitreous substance which has been fused to a ceramic body while the vessel was being fired. Glazing can be done to decorate or waterproof an item.

CEMEX_0934

The requirement to report the discovery of munitions through established company procedures overrides any obligation to report or record them as part of the archaeology reporting protocol that is in place.

Munitions should only be photographed and reported through the Marine Aggregate Industry Archaeological Protocol once suitably qualified EOD professionals have determined that it is safe to do so.

Operational Wharf Monitoring

A brief guide that highlights the different stages in the monitoring and reporting of finds at wharves.

Background

As well as the Marine Aggregate Industry Archaeological Protocol wharf visits, we also visit CEMEX Northfleet and Hanson Frindsbury wharves a few times a year to carry out a programme of two-day archaeological operational wharf monitoring, where a team of two or three archaeologists monitor the oversize cargo at the receiving wharf.

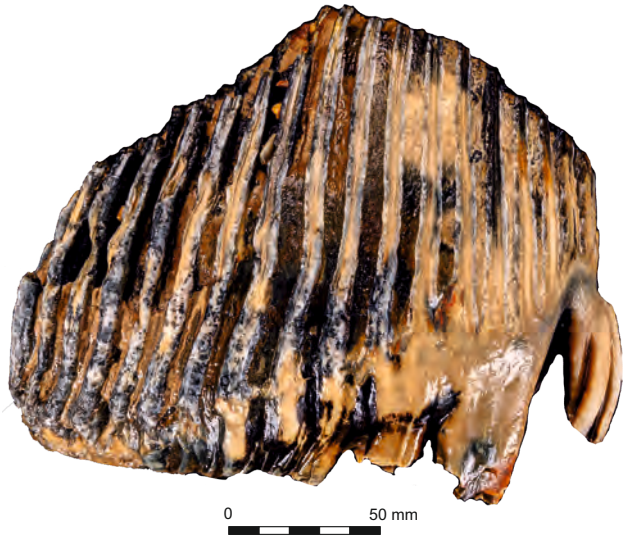
In 2007/2008, Palaeolithic artefacts including flint handaxes, flakes and cores, as well as a series of prehistoric animal bones, were discovered by Mr Jan Meulmeester in stockpiles of gravel at SBV Flushing Wharf, Netherlands and reported them through the Protocol. The finds were dredged from Licence Area 240, off the east coast. It is as a result of these significant finds that cargoes from this area continue to be archaeologically monitored.

Hanson Dagenham Wharf

In September 2019, during the dredging and processing of cargo from a new lane in Area 240, lane F10, three megafaunal finds were reported by *Arco Beck* and Dagenham wharf: Hanson_0927 a single lamella (enamel plate) of an upper molar of a woolly mammoth; Hanson_0929 a second neck vertebra of an elephant, likely woolly mammoth; and Hanson_0931 a section of tusk. In early November 2019, a large mammoth tooth (Hanson_0935) was discovered on board *Arco Avon*, from the same area. Professor Adrian Lister from the Natural History Museum concluded that this was a virtually complete 3rd (last molar) of a woolly mammoth aged about 35 years old. He said the top edge of the molar is extremely worn, whereas the roots are in pristine condition indicating that the roots were protected by still being attached to the skull until recently.

Further reports were made to us from Dagenham wharf of several worked flint tools and animal bones, one of which displayed unusual cut marks thought perhaps to be human butchery marks. Due to the abundance of the finds and the potential significance of the bone, it was decided that a visit would take place the following week to assess the oversize of the remaining cargo.

The oversized material was transported via a mechanical shovel by an appointed machine driver to a concrete slab a short distance away and spread thinly. Two archaeologists from Wessex Archaeology and one from Historic England along with three staff members from Hanson visually inspected the cargo for any archaeological material.



Hanson_0935 mammoth tooth

Inspecting aggregates for archaeological finds

Dagenham wharf

Archaeological Exclusion Zone

Once lane F10 had been identified as producing significant material, an exclusion zone was placed around the lane and dredging ceased in order to minimise disturbance to the area and other potential finds.

What happens next?

In total, 30 flint artefacts and 111 animal bones were recovered from lane F10 prior to and during the monitoring works. One of the bones was identified by Hanson's own Aaron Chidgey as having unusual markings, initially considered to be possible butchery marks.

All the finds were bagged during the visit and transported back to Wessex Archaeology where each individual item was given a unique ID number, washed by the finds team and photographed before being analysed by our in-house specialists.

Phil Harding analysed all the flints and determined that there were five handaxes dated to the Middle Palaeolithic as well as 18 flakes, two possible flakes, a flint blade, a core, and three natural flints that showed signs of thermal fraction.

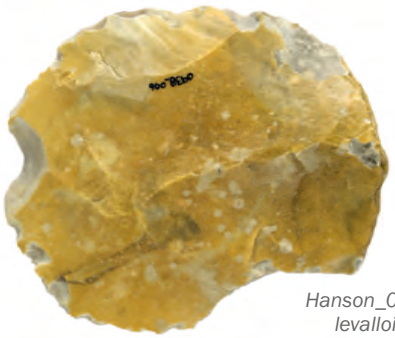
Another Wessex Archaeology specialist, Lorrain Higbee, examined all the animal bones and reported that most of the bones belonged to mammoth but also included deer, aurochs, cattle, horse and undiagnostic large mammals.

Hanson_0937_001
scapula (shoulder blade)

The potential butchered **scapula bone** (Hanson_0937_001) was taken to the Natural History Museum to be inspected by animal bone expert Dr Simon Parfitt and marking specialist Dr Silvia Bello in order to confirm what the marks were as well as the species it belonged to. Simon instantly identified the bone as a woolly rhino scapula. Silvia analysed the bone under the microscope and determined that the bone was not butchered/modified by humans but had been chewed by animals, possibly hyenas.

Aaron Chidgey with identified flint tools and holding the scapula

Hanson_0938_001
handaxe



Hanson_0938_006
levallois flake

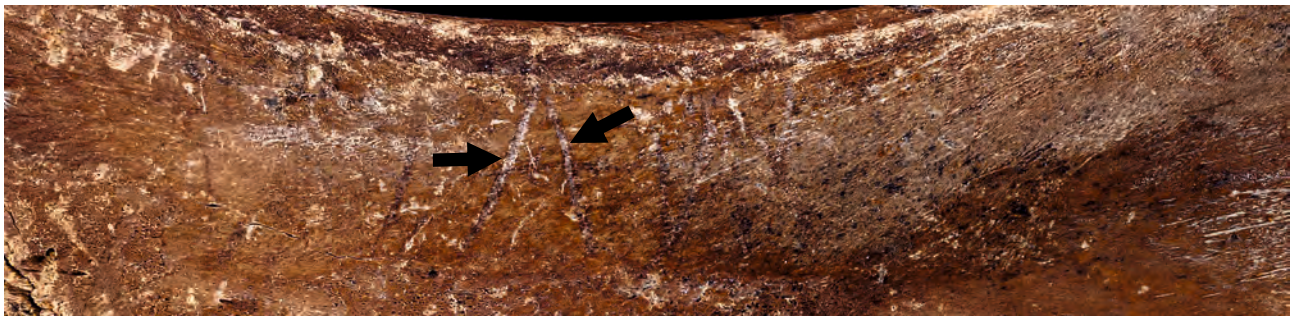
Hanson_0936_001
handaxe

For comparison, we were shown other woolly rhino scapulae from the Natural History Museums collection. One from the site of Kent's Cavern that had been similarly chewed by hyenas and one from Boxgrove (right) that had actually been butchered by hominins. The butchery marks on the Boxgrove bone are so fine, they look like they've been done with a needle, showing how sharp a handaxe can be! The chewing marks appear much thicker. It is important that any future bone found on any aggregate vessel or at any wharf is examined for any visible markings that may add to its archaeological value.

All the analyses of the finds were included in a report produced by Wessex Archaeology and sent to Hanson and Historic England that outlined the importance of the finds discovered and gave suggestions as to the potential of the new dredging lanes within the exclusion zone.

A big thank you to all those who helped with the monitoring work, and a special thank you to Dagenham employee Aaron Chidgey who discovered several finds including handaxes and the possible butchered bone, as well as being a valuable asset to the archaeologists during their time there.

Detail of fine butchery marks on an animal bone from Boxgrove



Teeth marks on Hanson_0937_001 scapula bone

Specialist Bio – Dr Silvia Bello

I graduated at the University of Turin (Italy) and completed two Masters and my PhD studies in Marseilles, France, before arriving at the Natural History Museum (NHM) in London in 2002 with a post-doctoral European Grant. I joined the 'Ancient Human Occupation of Britain' Project at the NHM in 2005 and since 2012 I have been directing three projects financed by the Calleva Foundation and the Leverhulme Trust. Over the last 12 years I have been pursuing my research in the evolution of human behaviour through the analysis of bone assemblages, aiming to recognise and interpret different expressions of human actions. These include hunting, butchering and feeding choices, production and use of bone and antler artefacts and the cultural modifications of human remains within funerary and cannibalistic practices.

Dr Silvia Bello examining the bone at the Natural History Museum

Asbestos in Marine Finds

The **Marine Aggregate Industry Archaeological Protocol** was established in 2005 and since then over 1800 finds have been reported by industry staff. A recent assessment of finds has determined that a small number of items may include asbestos containing materials. The items that have the greatest potential for asbestos containing materials relate to maritime or aviation mechanical artefacts (pipework, valves, structural members) where asbestos containing material typically formed part of gaskets or seals. A less known carrier of asbestos is fibrous material such as rope or cladding, some of which appear with metal finds. There is also potential for asbestos to be associated with items of ordnance.

It is important to stress that only a very small number of finds have demonstrated evidence of asbestos containing materials. Furthermore, the risk associated with these items when they are first discovered is considered to be low, particularly when they are wet.

In the unlikely event that any asbestos containing material may be present in a find, the potential risk will increase as the item dries or is disturbed. All maritime or aviation engineered artefacts that are recovered onboard dredgers or at wharves that are dry should be placed in a sealed container or bag immediately and labelled appropriately. If the find suspected of containing asbestos is wet or damp upon discovery, it should be re-submerged in fresh water and left alone as this suppresses the asbestos fibres.

Examples of finds that could contain asbestos

If any material retained by a wharf and currently being displayed is causing concern, it is recommended that these items are assessed for potential asbestos containing materials by a specialist at the earliest opportunity. Only trained and competent people are permitted to deal with asbestos containing materials and the item may need to be disposed of in accordance with legal requirements.

It is the responsibility of the wharf to keep any material found until told otherwise by the **Receiver of Wreck**, and therefore, except where finds are considered to be of particularly high interest and require specialist conservation, the implementation team will leave artefacts at the wharf, rather than taking them back to the Salisbury office.

Feel free to contact us with any finds related queries by emailing **protocol@wessexarch.co.uk** or call **01722 326867**.

For more information on the Protocol,
how to book visits or to request copies of any awareness material
please contact Wessex Archaeology
Email: **protocol@wessexarch.co.uk** Tel: **01722 326867**
or visit Wessex Archaeology's Protocol website
www.wessexarch.co.uk/projects/marine/bmapa

Protocol
for the Reporting of Finds of Archaeological Interest

mpa essential materials sustainable solutions bmapa

THE CROWN ESTATE

Prepared by wessex archaeology