Dredged Up

Issue 29
Autumn 2021

Archaeology Finds Reporting Service Newsletter

Welcome to Issue 29 of ***Dredged Up***, the newsletter of the Marine Aggregate Industry Archaeological Protocol. Since the last newsletter in Spring 2021, **106 finds** have been reported in 23 reports.

Pages **2** and **3** have a roundup of the finds that have been reported since the last issue of *Dredged Up* by wharves and vessels alike. There were quite a few to choose from so thank you to each and every person who reported them.

Awareness visits are back! It has been a long time since we were able to see a lot of you face to face. Read all about them on page **4**.

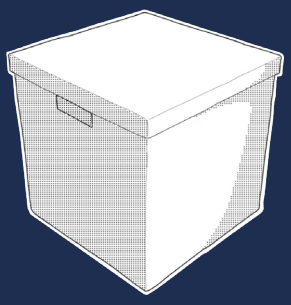
Page **5** contains a report on Phil Harding's visit to Dagenham Wharf to search for flint tools.

Photography is the hot topic in this issue: see pages **6** and **7** to learn more about it.

On page **8**, we meet some more of the wonderful Nominated Contacts that represent the aggregate companies involved with the Protocol.

What's in the box?

We have a new series of 'What's in the Box?' over on our Wessex Archaeology YouTube channel! Keep your eyes peeled for an episode featuring one of the Implementation Team and a very special find reported through the Protocol that was released on the 22nd September. To catch up with our previous episodes, head on over to our YouTube channel.



Finds Roundup

CEMEX_0986

CEMEX_0986 (see above) is an ejector that was discovered in Licence Area 137 in the South Coast dredging region, approximately 6.5 km south-west of the Isle of Wight. Michael Pettitt and Mark Nichols discovered it at Shoreham Wharf.

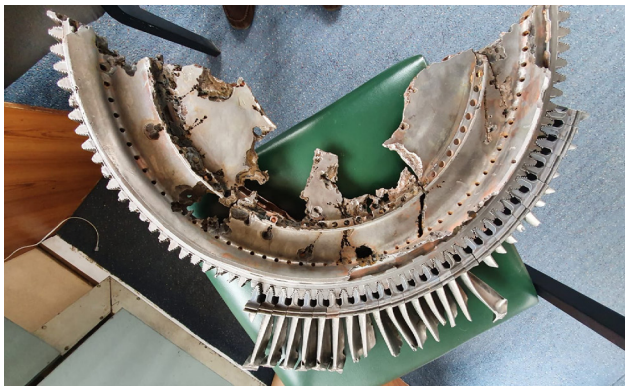
This small find is hollow and measures approximately 160 mm in length and has a diameter of 65 mm. There is a thread on the tapered end in order to attach it to another object. The brass ring around the wider end is covered with inscriptions including the Navy broad arrow and the letters 'CTOR' are visible.

Images were sent to Mark Khan, UXO Research Manager at Fellows International, who in conjunction with Lieutenant Colonel (retired) Norman Bonney and Major (retired) Ian Jones MBE, concluded that this object is an 'ejector' and is designed to eject the contents of a carrier rocket (eg, an illuminating flare). From its size and markings, it is most likely from a 2 inch Rocket Flare. They said that this object can be identified as a component part of a British Naval rocket. The rockets were launched from projectors and were simple unguided and non-rotating in type. They were used in an anti-aircraft role with explosive warheads and as carriers for illuminating purposes where a flare suspended on a parachute was ejected from the rocket. The illuminating flare burned with great brilliance and could illuminate a wide area showing the presence of enemy craft. Rockets were also fired into the path of an attacking aircraft trailing a wire that was designed to bring the aircraft down or damage it when it flew into the wire. Another type of anti-aircraft rocket distributed aerial mines suspended by parachutes.

Volker_0987

Volker_0987 (see below) was a large munition that was discovered on board *Mellina* by Master Pieter Smedts. It was dredged from Licence Area 351 in the South Coast dredging region, approximately 12 km south-east of the Isle of Wight. The find was disposed of by the EOD.

Images of the object were sent to Trevor Parker from the Ordnance Society, who said that the markings are on a fired 12 inch Mk I shell. There would be other stampings present on the shell, but they aren't visible from the photographs. He said that it will date from 1906 onwards and would have been used in association with the early Dreadnought class of Battleships. The BL 12 inch Gun Mark X was a British 45-calibre naval gun which was mounted as the primary armament on battleships and battlecruisers. The object may be a practice shell, or a nose-hardened, base-fused armour-piercing shell that either missed its target, or went straight through the target without exploding! Corrosion covering the base recess prevents more definitive identification.



Tarmac_0988

Tarmac_0988 (see above) is an engine part that was discovered from Licence Area 254 in the East Coast dredging region, approximately 10.5 km east of Great Yarmouth. Stuart Willis discovered it on board *City of London*.

This unusual find was reported as a 'metal engine part that looks like a turbine from either a jet or steam engine'. The vessel also identified an 'RR' inscription that could possibly stand for Rolls-Royce. The part measures over 610 mm.

Chief Project Engineer Dr Mark Pacey and John Wagstaff at Rolls-Royce were kind enough to offer their views on the part. Their first thoughts on seeing the photos were that we have the remains of a bladed turbine disc from quite a small engine, which implies that it is probably from a military engine. Fortunately, the part numbers were still clearly readable in the blade picture, so they were passed on to the configuration team, who confirmed that they are high pressure turbine blades from a Rolls-Royce Avon engine.

The Avon powered a wide range of military aircraft from its introduction in 1950, including the English Electric Canberra and Lightning, the Hawker Hunter and the Vickers Valiant, and also had two civil applications: the de Havilland Comet (the world's first jet-powered civil airliner) and the Sud Aviation Caravelle. Rolls-Royce ceased production of the Avon aero-engine in 1974 and withdrew in-service support in 2006. However, an industrial variant of the Avon was also produced and is still available today, although Rolls-Royce sold its industrial gas turbine business to Siemens in 2016 and Siemens Energy are responsible for current production. In total, it is believed that in excess of 11,000 Avon engines were produced.

Dr Mark Pacey said that he had passed the details to the defence team and asked if they have any records showing why an Avon might have been in the sea near Great Yarmouth. However, it is quite likely that this was an industrial engine, in which case Rolls-Royce would not necessarily have a record of any loss.

Hanson_1005

Hanson_1005 (see below) was discovered in aggregate dredged from either Licence Area 401/2 in the East Coast dredging region, approximately 25.5 km east-south-east of Great Yarmouth, or 361 in the East Coast dredging region, approximately 26 km east of Great Yarmouth. Darryl Mason discovered it on board *Arco Avon*.

This object was reported by the vessel as a gold-coloured metal piece measuring 150 mm long tapering from 40 to 15 mm with a pointed, ornate cast top. It was reported as being heavy and believed to be made of brass. It is in good to moderate condition but with some dents/crushing at the base.

Euan McNeill, a senior manager of the Coastal & Marine team at Wessex Archaeology, identified the find as a fragment of a ship's log rotator. This is the upper section where the ring would be connected to the rope, and the fins of the rotator would be attached to the lower half.

This brass instrument is a mechanical log recorder dating to the early 20th century and was used to measure the distance travelled, therefore enabling the vessel's speed to be calculated. The ship's log would have had a fixing plate and would have been mounted to a suitable part of the vessel, usually the taffrail, the rail at the stern of the ship. The recorder was connected to a rotor that was towed behind the ship and the revolutions of the rotor were registered by a dial. This piece is in the style of a Walker Cherub log rotator which was first patented by Thomas Ferdinand Walker in 1878. The later very successful Cherub Mark III series was produced in great numbers between 1930 and 1994. This was likely to have been lost over the side of a vessel perhaps during stormy weather or if the rotor snagged on something.

Awareness visits are back!

We are very happy to announce that awareness visits are back after the hiatus during the height of the pandemic. We are very excited to see you all in person and the first visits are scheduled to Brett Cliffe Wharf and Hanson Frindsbury Wharf in late October with others to follow.

If you have never had an awareness visit before, a member of the Implementation Team comes to the wharf with a host of archaeological finds that everyone can handle and delivers a short presentation about the different types of of archaeological material that can be found, how they reach the seabed and how to report and care for finds when they're discovered. We are also there to answer any questions you have and to help in any way we can.

Printed handouts are also left at the wharf should anyone want to visit the material or introduce new staff to it in future. Following the awareness training, certificates of completion are emailed to the wharf for each individual that attended.

We're also happy to arrange repeat awareness visits if you haven't had one in a while or if there are a lot of new staff members.

To arrange an awareness visit, please get in touch with us by emailing **protocol@wessexarch.co.uk** or call **01722 326867**. Alternatively, contact us if you would like more mugs, pens or photo scale cards.

Image 1. Dagenham Wharf, credit Max Fowler; **Image 2.** Angerstein Wharf; **Image 2.** Burnley Wharf; **Image 4.** Shoreham Wharf.

Phil Harding at Dagenham Wharf

In 2008, 88 Palaeolithic artefacts including handaxes, flakes and cores, as well as over 100 prehistoric animal bones, were discovered by Mr Jan Meulmeester in stockpiles of gravel at SBV Flushing Wharf in the Netherlands and were reported through the Protocol. The finds were dredged from Licence Area 240, off the east coast of England. As a result of these significant finds, cargoes from the East Coast region continue to be monitored at CEMEX Dagenham and Hanson Dagenham wharves. We visit these wharves a few times a year to carry out Operational Sampling; a programme of archaeological operational wharf monitoring, where a team of two archaeologists monitor the oversize cargo at the receiving wharf for archaeological material.

In November 2019, new lanes were opened in Area 240 and a total of 30 flint artefacts including five handaxes and 111 animal bones were recovered from Lane F10 prior to and during the monitoring works. 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.

Any flint artefacts collected during Operational Sampling are brought back to our offices and looked at by out flint expert, Phil Harding. Phil has always been keen to visit the wharf himself and search for some of these rare flints, so it was arranged that he could visit Hanson Dagenham along with Stuart Churchley, from Historic England, to look through an F10 cargo (allowed through a special dispensation).

In total, 18 pieces of animal bones and 15 flint fragments were collected including an unfinished handaxe and flakes that represent handaxe production. Previous finds have dated to the Middle Palaeolithic (around 250,000 years ago) and it is thought that these do too.

Thank you to Hanson and everyone at Dagenham Wharf for all the help and for being so enthusiastic.

Credit for all photographs to Max Fowler.

Photography Tips

Photographs of recovered finds can be vital for their identification. Specialists are often consulted in order to determine what the object is, its age or even its provenance. As these specialists are located all over the country and often not able to view the finds in person, their only way to assess them is through photographs. Although the quality of photographs has significantly improved in the last few years, here are some useful tips for taking them:

- Please use a photo scale. Any measured scale such as a ruler is fine but waterproof A4 and A3 photoscale sheets and branded photoscale cards are available on request. Photoscale cards are particularly useful if the object being photographed is very small or very large. If you need any sent to you, please email **protocol@wessexarch.co.uk**.

- Take photographs in natural light if possible. A room with lots of windows or outside is preferrable to artificial lighting as it can cause a photograph to be blurry or produce too much glare, especially if using the waterproof A4 and A3 photoscale sheets.

- Try not to cast a shadow across any part of the object.

- Take plenty of pictures from as many different angles as possible. This is particularly important to give us the best chance of identifying the objects and as precaution in case the object deteriorates once fully dry.

- Do take additional photos of any details you might see, such as maker's marks, numbers, letters and stamps. These small details can often lead to a positive identification of the find. For example, numbers and inspection stamps on aircraft components can determine the type or nationality of an aircraft or give clues of where the specific part sat on the aircraft.

We would much rather receive too many photographs of an object than not enough! Thank you to all of you who have submitted photographs to us over the past 16 years. They are a vital part of the archive of the Marine Aggregate Industry Archaeological Protocol and ensure that any finds can be viewed by future generations if they so wish to do so.

1.


2.


3.

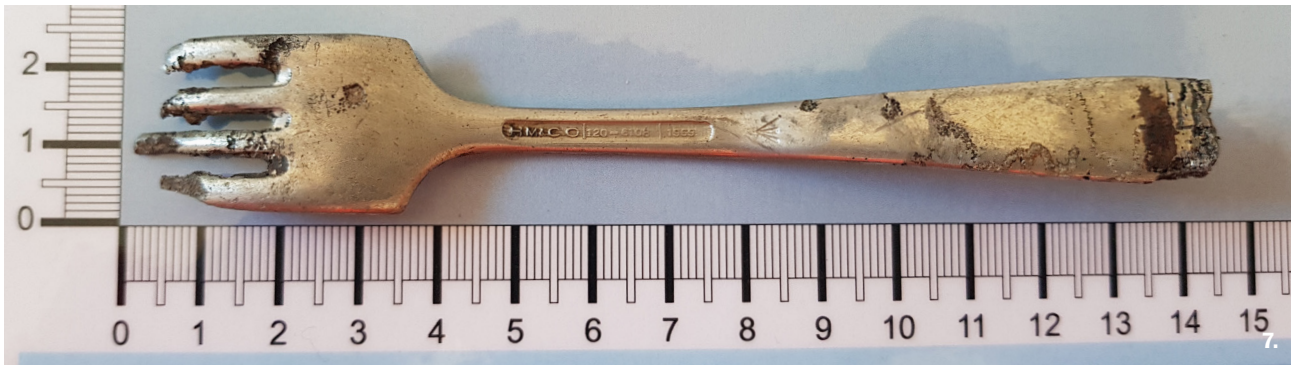

4.

These four photographs of DEME_0957 demonstrate the photography principles set out above: **Image 1.** shows the whole vessel in even light with photo scale included; **Image 2.** shows DEME_0957 from a different angle, so that the depth of the vessel is seen; **Image 3.** shows the detail of the vessel's spout; **Image 4.** shows the detail of the vessel's stamp.

Images 5 and 6: this larger item (Tamrac_0985) has been photographed on an A3 scale sheet with the stamps photographed up close; **Image 7:** this photograph of Tarmac_0865 allows us to see the stamp on the fork handle and includes a scale.


5.


6.



7.

Photogrammetry

Occasionally, when finds are rare, at risk of severe degradation, or are to be returned to their original finders, the Studio at Wessex Archaeology will produce photogrammetry models of the objects. This is done by taking hundreds of images with a 50–70% overlap from various heights and angles and using software to stitch them together to create a 3D model of a real-world object. This 3D model can then be manipulated to show different angles and surfaces of the object. It is also possible to adjust the lighting and contrast which can sometimes lead to unidentified features being revealed that are not always visible with the naked eye.

This can be done with objects of various sizes and materials, and it allows archaeology to enter the digital age and the homes of those who can not see the objects in the flesh. If desired, and the object is small enough, these digital 3D models can also be printed by a 3D printer and painted and weighted to mimic the real object.

In 2019, several handaxes were discovered and reported from Dagenham wharf. They came to our offices at Wessex Archaeology for analysis by our in-house flint expert Phil Harding and when it was agreed they would be returned to the wharf to be displayed, photogrammetry models were made of all of them in order for us to have them on record. They are accessible on our sketchfab site and an example of one can be found by going to the link below:

sketchfab.com/3d-models/middle-palaeolithic-handaxe-north-sea-4-952c46243f4149e995b18d6f40bcc919

Nominated Contacts

Here are some more of the wonderful Nominated Contacts we have working with us. They are crucial in the running of the Protocol as they report finds to us after having received information from wharf and vessel staff. We would like to thank you all for your support and your extra effort to ensure the level of reporting is kept to a high standard.

Will Drake (General Manager)
Volker Dredging Ltd

I've worked at Volker Dredging Ltd for over 10 years now and from day one I've been fascinated by the range of finds that have been reported through the Protocol. From the East Coast we've recovered some amazingly preserved mammoth and woolly rhinoceros teeth which are constant reminders of how the landscape and fauna of the UK has evolved over the millennia. We've been closely involved in the Palaeo Yare study following the discovery of stone handaxes and worked flints on adjacent licence areas. However, the finds that interest me the most are probably the ones we've made in the English Channel where we've dredged up numerous cannonballs over the years. These paint a vivid picture of our naval history and can be dated quite accurately, although we'll never know the full story of how they came to rest on the seabed.

Joseph Holcroft (Licence Manager)
CEMEX UK Marine Ltd

I have worked at CEMEX in my current role for over 11 years. While relatively common, finds of cannonballs are always of interest to me, particularly in relation to the areas they have been dredged from. One of CEMEX's joint areas lies off the Suffolk coast, east of Southwold (Area 430) and several cannonballs have been found here. Having grown up in Suffolk and spent time in Southwold, it is fascinating to think that these finds could have been fired during a naval battle off the coast. During the Third Anglo-Dutch war in 1672 the Battle of Sole Bay was fought off Southwold. While perhaps not a widely known engagement, it has a local brew named after it (Adnams Broadside) and the Anglo-Dutch wars helped shape the Royal Navy for years to come.

My favourite individual CEMEX find is a piece of Roman pottery, which showed signs of wear. It is interesting to think how it came to be on the seabed, whether thrown overboard or originating from an undiscovered wreck. The Archaeology Protocol is a great initiative, and it always amazes me the range of finds that are reported, from fossils less than the size of a one pence piece to parachutes!

Christophe Matton (Geologist Manager)
Marine Mineral Resources & Product Quality, DEME Group

As a Geologist I have been managing the Marine Mineral Resources for DEME Building Materials for about 15 years. Over this time, I have seen the growing importance of archaeological research and assessment. A comprehensive framework of knowledge, understanding and methodologies have been developed, resulting in high levels of engagement throughout the marine aggregate industry. The development and application of the Protocol has proven to be an effective and successful tool to gather historic information on submerged archaeological material ranging from prehistoric finds up to shipwrecks or aircraft crash sites. The bi-annual Dredged Up newsletters are always a pleasure to read. Often it is remarkably interesting and fascinating to find out the history behind sometimes apparently uninteresting objects dredged up from the seabed. Some of the finds that DEME have discovered were extremely well preserved, eg, a fossilised tooth of a woolly rhinoceros dredged up from Licence Area 228 or a post-medieval jug (seen on page 6) that was discovered from Licence Area 340. I really admire the commitment and professionalism with which Wessex Archaeology examines and handles every object reported by the industry. Therefore, I hope very much that this valuable cooperation may continue well into the future.