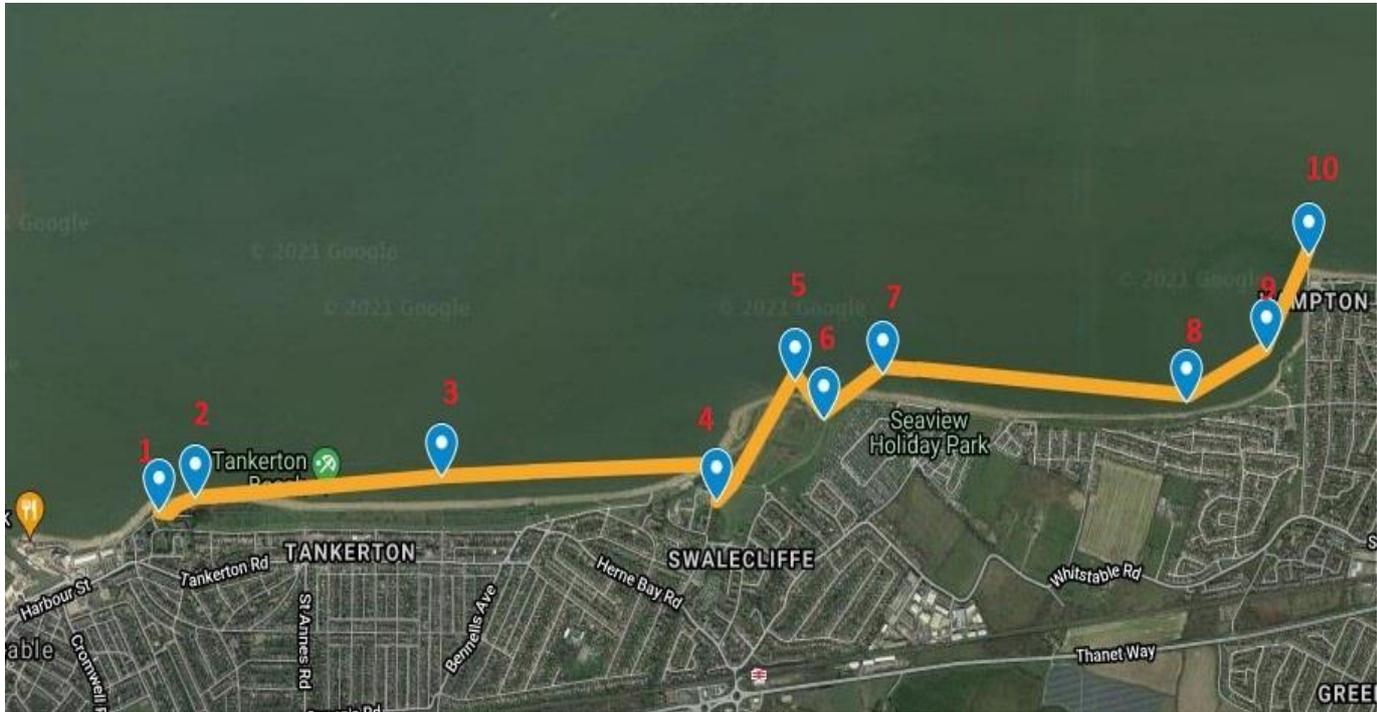


The London Clay, Brickearths and the Alluvial Sediments Between Whitstable and Herne Bay



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Introduction: (188 words)



Figure 1: 1930s The Crab and Winkle train track into Whitstable harbour – (Crown copyright expires 50 years after the creation of the image.)

The East Kent coast between Whitstable and Herne Bay has had a long and important history, some of which is still visible today in the Whitstable Oyster Fisheries, the working harbour and a thriving tourist industry traceable to the Victorian period. But this section of coastline also has another story to tell which goes back deeper into geological time...

The anaerobic (absence of free oxygen) environment of the London Clay has helped to preserve the archaeological record, continuing to reveal secrets of this changing foreshore. A malleable type of sediment that gives little protection for archaeology from the forces of the North Sea, it has also provided important minerals and materials. This has included both copperas stones and loose brickearths that both facilitated and maintained agriculture in the Bronze Age and helped to develop important brick building industries in the early 20th Century. Added to this geological picture are the

alluvial sediments that stretch around the east Kent Coast, making safe navigation difficult for seafarers in these shallow waters and perhaps hiding long lost Roman shipwrecks...

Point 1: Deep Time, London Clay and the Fossil Record in Southern England

(272 words)

We start to see the London Clay being formed into the geological record the Eocene Epoch, 56 to 33 million years ago. This is an interesting time in the earth's history, as the London Clay began to be formed after the Palaeocene - Eocene Thermal Maximum (PETM), a period when large amounts of CO₂ gas was released into the earth's atmosphere over a period of 20-50,000 years and mean global temperatures increased by about 5-8 degrees Centigrade.

This rise in mean global temperature resulted in a mass species extinction event and we can see an abundance of evidence of both fauna and flora in the London Clay Fossil record that thrived in a subtropical climate.



Figure 2: Fossil (want to get own photo from Whitstable Museum as they have a collection of London clay fossils)

Sea levels were much higher than they are today as the polar icecaps had melted and the London basin where the Clay first formed by slow sedimentary processes would have been mostly under a warm tropical sea. Imagine a northern Australian rainforest with dense forest vegetation, golden sandy beaches and basking sharks.

Today the London Clay formation covers a wide area of Southern England, from the London Basin where it is thickest at 150 meters, to Essex, Surrey, Kent (approx. 24 meters) and Wiltshire where it thins out to just 4 meters. Tankerton, Herne Bay and Minster on the isle of Sheppey are notable areas for fossil collectors, as these are areas where the London Clay is exposed near the surface and on the sides of seaward facing cliffs.

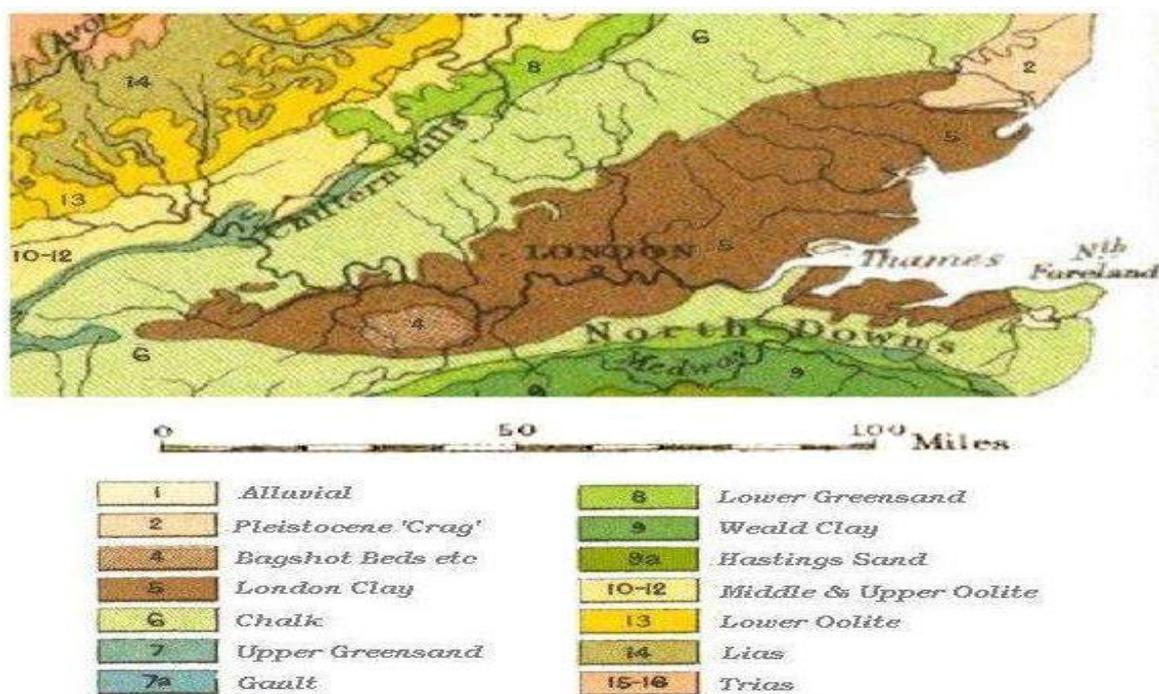


Figure 3: London Clay formation South of England – Open source Wikipedia:
https://en.wikipedia.org/wiki/London_Clay

Point 2: The Copperas Works

(385 words)

In 1995 timber posts set in mortar mysteriously appeared on the foreshore at Tankerton. It was soon established that these were part of the Copperas industry from the 16th Century, which played an important part in early industrialisation as one of the first major inorganic chemical industry in England.



Figure 4: Evaluation Area 3, Wooden posts and mortar structures looking North East 1995: Source Publisher Taylor and Frances (need permission).

Copperas had many uses:

- A saddening agent used with dye in the wool industry.
- The production of ink.
- Leather tanning and dyeing industries as a colorant.
- Nitric, sulphuric and hydrochloric acids used by guilders and early pharmacists.
- Gunpowder and pistol fuses: very probable links with Oare Gunpowder Works near Faversham.
- Mistakenly used by the Royal Navy to treat scurvy.

Inside the London Clay are nodules of Iron Pyrite, these are fossils which have absorbed the iron from the clay. The result is a rusty brown mineral called Copperas Stones which would have been collected by copperas pickers. The copperas stones were then transported into large raised wooden beds, packed out with clay, chalk and scrap-iron before being packed to a height of 2ft. After this the stones were periodically turned over to expose the copperas to damp outdoors elements, enabling their oxidisation into ferrous sulphate of iron (green vitriol) and sulphuric acid.



Figure 5: A copperas burner, foreground resting the copperas, Agricola's De Re Metallica 1556. (past copyright data can be used).

A liquor would drain from these large raised beds into a collection tank before being transferred to a lead boiler over a coal fired furnace. Because of the high boiling temperatures of the liquor, scrap iron was added to the boilers over the twenty days heating period, to insure the bottom of the lead boilers did not melt. Once cooled the copperas would form on the bottom and the sides of the tank as crystals (green-vitriol) and were separated into moulds to be shipped out in barrels.



Figure 6: Green Vitriol the refined chemical product: Open Source Wikipedia:
<https://en.wikipedia.org/wiki/Vitriol>

Today there is no visible archaeological record of the copperas works, though we know from early 18th century maps that the copperas houses were located at the top of Tankerton slopes. The excavated timber stakes formed the original copperas weathering beds and possibly part of a boat wharf used for shipping the copperas. Gradual decline in the southern copperas industry occurred from the late 17th to early 18th Century, as production moved further north to Yorkshire, nearer to industry. Cheaper sulphates were also being imported from southern Europe.

Point 3: Tankerton Bay Wreck (TBW)

(355 words)



Figure 7: TBW 2018 excavation – Wessex Archaeology 2021 (need permission).

In 2017 an oval shape on the foreshore was discovered which had a wooden base, after some further investigations it was identified as a wreck which dated back to the 16th Century. A community excavation was started in June 2018, to find out more about the Tankerton Bay Wreck (TBW).

TBW was most likely a carvel built boat/ship used to transport goods, as it had a large cargo area. It is difficult to discern if it was a (partially) open boat or an enclosed ship from the collapsed timber structure alone, but it could be described as resembling a Dutch medium sized coastal trader. There is a strong possibility that TBW was Dutch built and we know there was a significant amount of trade between southern England and Netherlands at this time. It was also notable that TBW was repaired over its lifetime with English oak and Scandinavian timber.

The original cargo would have most likely been salvaged at the time of the wreck. No definitive answers were discovered, however the presence of cornflower could be an indication that the cargo contained cereals/grain, which would fit in with our understanding of the type of commodities being exported via the low countries from the Balkans. Unused roof tiles found in TBW is another mooted possibility as the last type of cargo it carried.



Figure 8: 16th century leather sandals TBW – Wessex Archaeology 2021 (need permission)

It is thought-provoking that TBW was found in such close proximity to the copperas's works, which would have been operational at the time. However, based on the limited amount evidence, we cannot conclusively say that TBW was heading west towards the Thames estuary or moving east towards Margate and northern Europe.

Well preserved wrecks of 16th Century ships are rare and surprisingly we still don't fully understand the shipbuilding industries of the Tudor period, an extremely important time in European maritime history that saw the fledgling development of international trade. This is why TBW was a discovery of international importance, which has the potential to yield further important data..

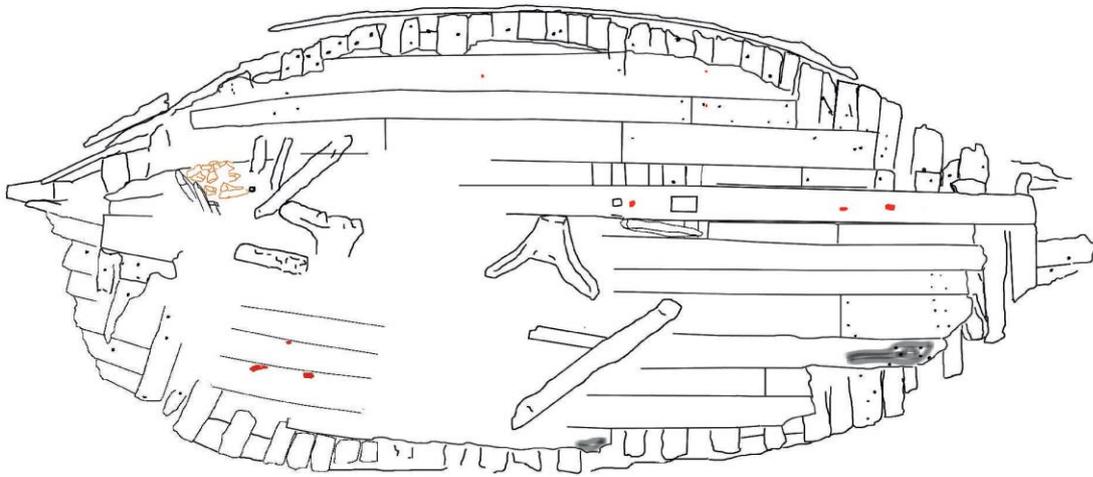


Figure 9: Topography TBW – Wessex Archaeology 2021 (need permission).

**Point 4: Within the Brickearths and London Clay - Swalecliffe
Bronze Age Well Complex (Word Count 437)**

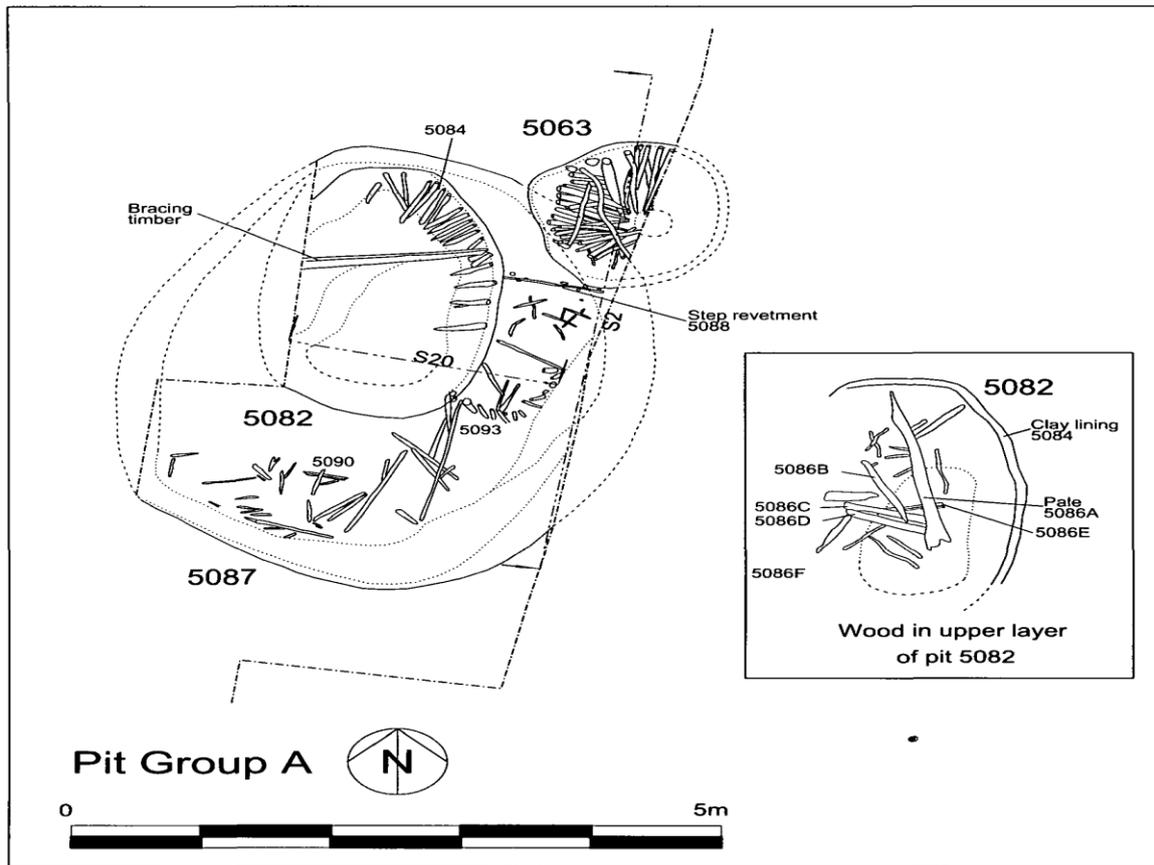


Figure 10: Plan of a pit group showing three of seventeen excavated wells. (need publisher permission Taylor and Francis – need permission)

When the water treatments works behind this treeline underwent a program of expansion in early 2000, an important network of Bronze Age wells were discovered.

In total seventeen were excavated, an unusually high concentration for just one area. The wells varied in diameter, some reaching 5 meters across with sloping revetments of timber and wattle lining going to depths of 2-3 meters. A few of the wells used a barrier of London Clay behind the woodwork to make them less permeable, but the close proximity of the Swalecliffe Brook allowed the ground water to naturally percolate via the Brickearths into most of the wells. The wood linings on some of the wells were also thought to protect them from becoming silted and unusable, possibly extending usage beyond 50 years.

Unusually the wells sloped downwards at an angle, with some incorporating timber steps halfway to the base. The timber steps could indicate a measure incorporated into the design during times of drought to access the lower water levels. Other wells also had planks and constructed wooden platforms at the edge to facilitate water retrieval. Evidence of a wooden fencing was found during the excavation, which would have been used to keep out animals and perhaps small children.

The timber retrieved from excavation has made an important contribution to our understanding and sequencing of the UK dendroecological record, and could be compared with other Bronze Age excavations such as Flag Fen in Cambridgeshire. The woodmanship used in the construction of the wells, steps and platform has also provided valuable information on the types of tools and techniques used at the time.

Three complete pots were recovered with some decorative fingernail scoring. The pots appeared to have been placed at the base of the wells as votive offerings. A very rare find was a preserved oak yoke, used for carrying water from the well across the shoulders.

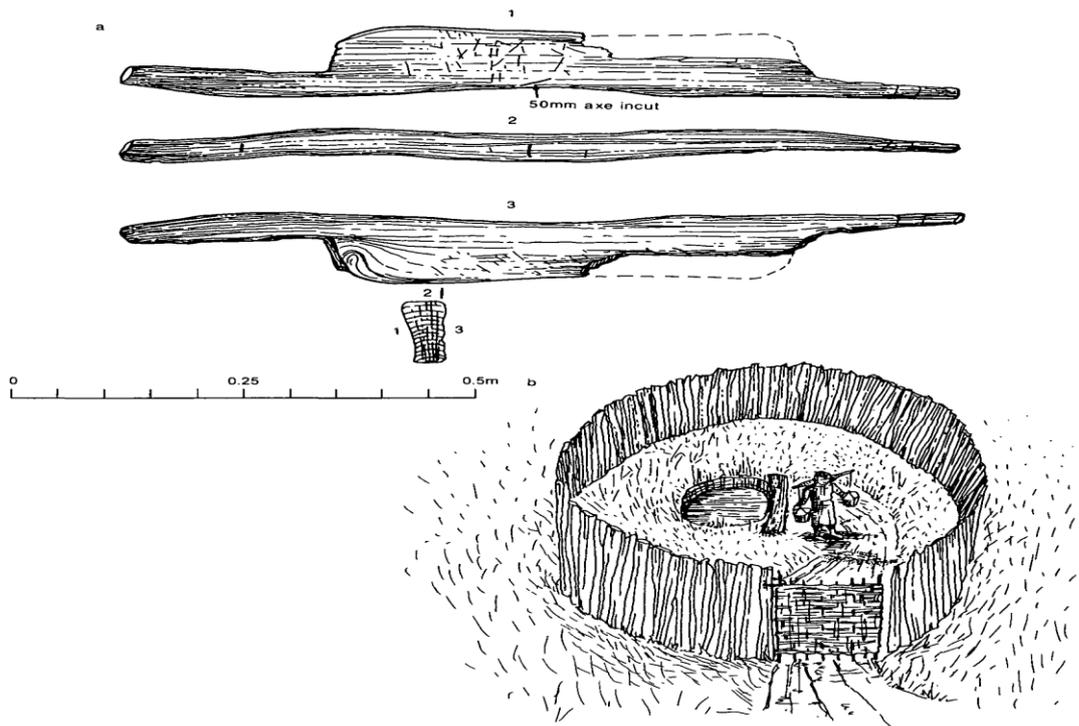


Figure 11: The oak yolk and artistic reconstruction of a well. (need publisher permission Taylor and Francis – need permission)

It is most likely that the well complex was used to store fresh water, which was then transferred to domestic livestock and nearby areas of occupation. The position of the wells near to the brook perhaps indicates that the tidal waterway had high salinity levels, which otherwise would have made it difficult for early agricultural thrive in the locality. the possibility of votive offerings may also suggest the wells had a spiritual dimension for these people. What is clear from the evidence is that continuous human habitation, agriculture and livestock management existed in this locality for over 500 years.

Point 5: The Slowly Revealed Long Rock:

(Words 274)



Figure 12: Posts and Brick Structure, could the posts be part of Victorian timber flood defences? could the brick structure be an exploded pill-box from the Second World War? (My image),

Most of the foreshore has been well protected along this part of East Kent with concrete fortification, timber groynes and the renewal of shingle defences. However Long Rock is a promontory that has been exposed to both wind and tides, resulting in the London Clay, Brickearths and Alluvium Gravels shifting through complex processes of accretion and erosion at approximately 5cm-10cm per year. Slowly but steadily different surfaces on the foreshore have been revealed, providing evidence for much older hidden landscapes.

The Swalecliffe Brook to the south which flows down from Blean near Canterbury to the Long Rock, is thought to be part of an ancient paleochannel, a tributary that flowed into the Swale valley during the last ice age. This has been substantiated by an array of finds within the intertidal zone of Long Rock. These have included ancient timber remains thought to be part of a submerged forest, woolly mammoth and rhinos remains dating back to 25000 BCE, and numerous early flint tool implements.

As well as the well complex covered in point 4, a concentration of Bronze Age hoards and the emergence of possible Bronze Age footprints (figure 13), other discoveries like wicker woven mats (figure 14) and at least three strange wooden basket structures (figure 15) make Long Rock an area of great interest for archaeologists. However excavations have not occurred in this area and many questions remain unanswered, though the CITiZAN Project endeavours to record some of this interesting foreshore before it finally disappears.

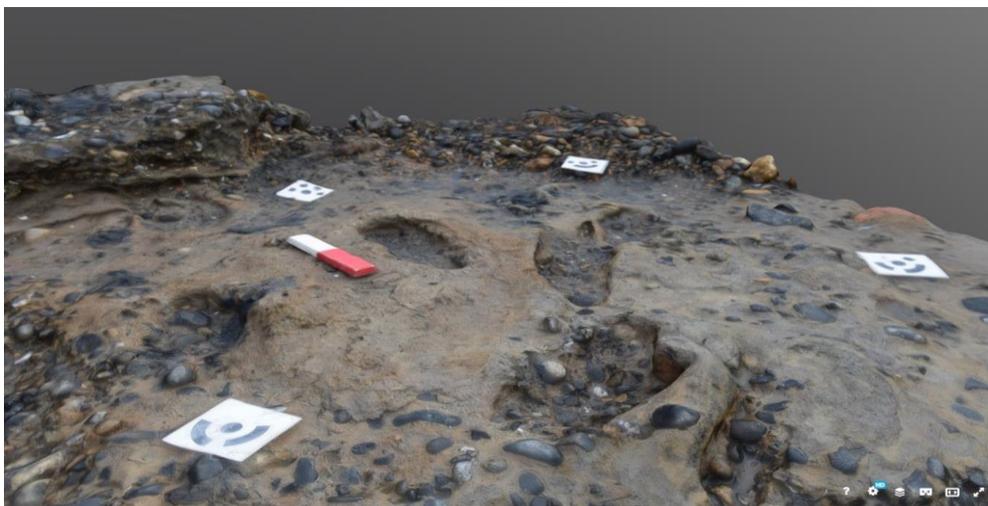


Figure 13: Possible Bronze Age foot prints 2018. (Citizen)



Figure 14: Exposed Wicker Mat (Citizen 2021)



Figure 15: Exposed Wicker basket, 29th April 2021. (Citizen 2021)

Point 6: The Swalecliffe Court Brickfield

(My word count 269 does not include words in three press clippings which would be pictures).

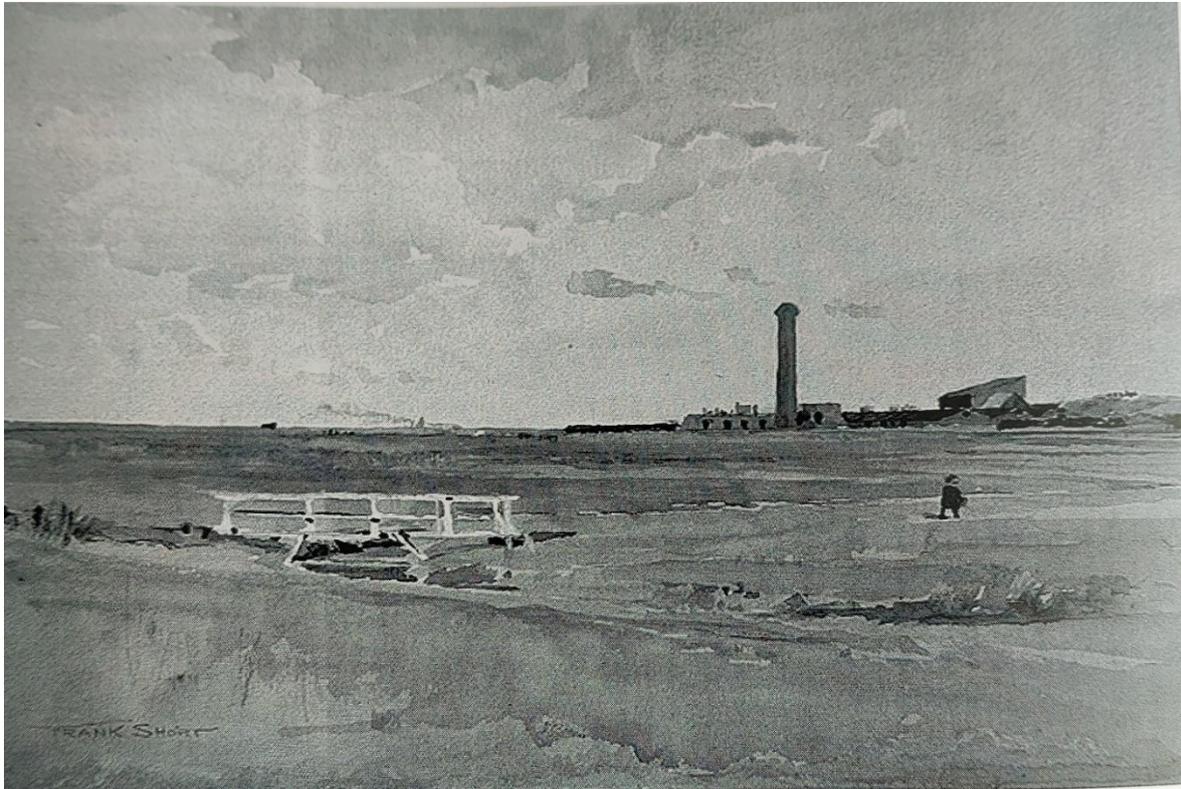


Figure 16: The Swalecliffe Court Brickfield by Sir Frank Short RA, 1909 foreground bridge over Swalecliffe Brook. (copyright open source from book)

The Swalecliffe Court Brickfield was a relatively small brickfield in comparison to Eastwoods at Coyer Creek near Faversham, which produced and exported an estimated 12 million bricks per year to London. It was also a relatively short lived brickworks, believed to only be in production between 1899 to 1909. Like Eastwoods the location near to the East Kent foreshore allowed the bricks to be loaded onto Thames barges and sent to London; on the return journey the barges would have been filled with the “Rough Stuff” which was rubbish and coal dust acquired from domestic use to be re-used as fuel to bake the bricks in the kilns.

The labour involved in brick production was hard going as it involved shifting and processing large quantities of heavy moisture rich brickearthsand it would have been extremely polluting. Kent bricks were baked in kilns for a staggering five weeks to remove all the moisture content to produce a finished brick, though ultimately it was the fuel intensity that made the manufacture of bricks in Kent non-viable. In the early 20th Century Shaly Clay was discovered near Peterborough, which had a high tar content, meaning the bricks came with their own combustible fuel source and required little fuel to manufacture.

In the early 20th Century the brickworks' 120 ft. chimney took on a different purpose as a familiar navigational point for returning fisherman traveling home, but also a meaningful and contentious part of the landscape for the local community...

That Chimney Again! (clip local newspaper early 20th century - old photo to be used instead of this text)

To the editor: Dear sir thousands of people residents and visitors must have remarked on the pleasant view which greets the eye when standing on the tankerton slopes by the flagstaff, one looks Eastward. The picturesque little bay, the hills beyond and now studded with homesteads of varying aspects, and the pier in the distance from a picture which attracts all and even fascinate some that unkind fate or unconscious authority is responsible for that hideous chimney that rears its head waste of the skies and awful disfigurement of a fair landscape some people I believe are under the impression that it serves as a useful purpose and contraction with a not over salubrious necessity of town light but that is not so it is not used now for the original purpose nor has it been for some long time the building around are derelict and fast falling into ruins. (check again)

In reply :

That Chimney Again (clip local newspaper early 20th century- old photo to be used instead of this text)

To the editor: dear sir from the tone of his rude remarks about that poor inoffensive chimney at Swalecliffe I can only conclude that Mr bendall is a newcomer to Tankerton or that he was suffering from a particular bad liver on that day that he wrote them. So endeared is this edifice to the hearts of all that residents would have soon think of London without st. Paul's or a box without centre law as well cliff without his chimney viewed from the sea the rich warm red of its bricks find a wonderful setting in the grass slope to the hills beyond from those hills the tall column appears like an Egyptian needle on the shores of a sapphire sea can it be that Mr Ben decipher beauty is aesthetics all his ability to rise above mundane associations find no satisfaction in contemplating this rich jewel it is for this that an unknown designer laboured in vain

On the 22 September 1935 the brickworks were sadly demolished, although this did not go exactly to plan...

And So The Hospital Had No Collection: (Clip local newspaper 1935 - old photo to be used instead of this text)

'A factory chimney at Swalecliffe near Whitstable which has been a landmark for fishermen for many years was to have been pulled down at noon today arrangements had been made for thousands of people to see the sight of the chimney crashing and a collection was to be made for the local hospital, unfortunately two hours before it was time to do so the chimney came crashing down on its own accord when only about six people were present.'

'Workmen who were in the base of the chimney at the time narrowly escaped with their lives this was the first time such a collapse has been known to happen. Hundreds of people who walked miles to see the spectacle were disappointed and the special collection for the hospital was not taken'. 'It has been suggested that sea air had softened the mortar of the bricks.'



Figure 17: 1935 The collapsed chimney - Swalecliffe Court Brickfield. – (Crown copyright expires 50 years after the creation of the image.)

Point 7: Wooden Wheels and Oysters Spats

(411 words)



Figure 17: Preserved Wooden Wheel found near mussel beds not far from the Long Rock, Spring 2021, could this have been part of cart used in the 19th Century oyster industry? (Source own picture).

The Herne Bay, Hampton & Reculver Oyster Fishery Company was founded by an Act of Parliament in 1864 but disbanded 1879. It rivalled the prosperous Whitstable Oysters Fishers Company, which allowed paid up members to own shares and by 1866 was looking to expand its profit margins east of the foreshore towards Swalecliffe.

However, this part of the foreshore was already leased by Lord Cowper to the newly established Herne Bay, Hampton & Reculver Oyster Fishery Company, as an area which produced good quantity of young native oyster Spat. The dispute was taken all the way to the House of Lords. Amongst other accusations the rival Whitstable company accused the newcomers of renegeing on their original

charter to establish a new oyster company, as they were not dredging the grounds clear of seaweed, therefore allowing starfish to invade the grounds and eat the young oyster spat before maturity. The fledgling Herne Bay, Hampton & Reculver Oyster Fishery Company was very much painted as the outsider, none the less the Whitstable company was fined and never did expand east towards Swalecliffe.

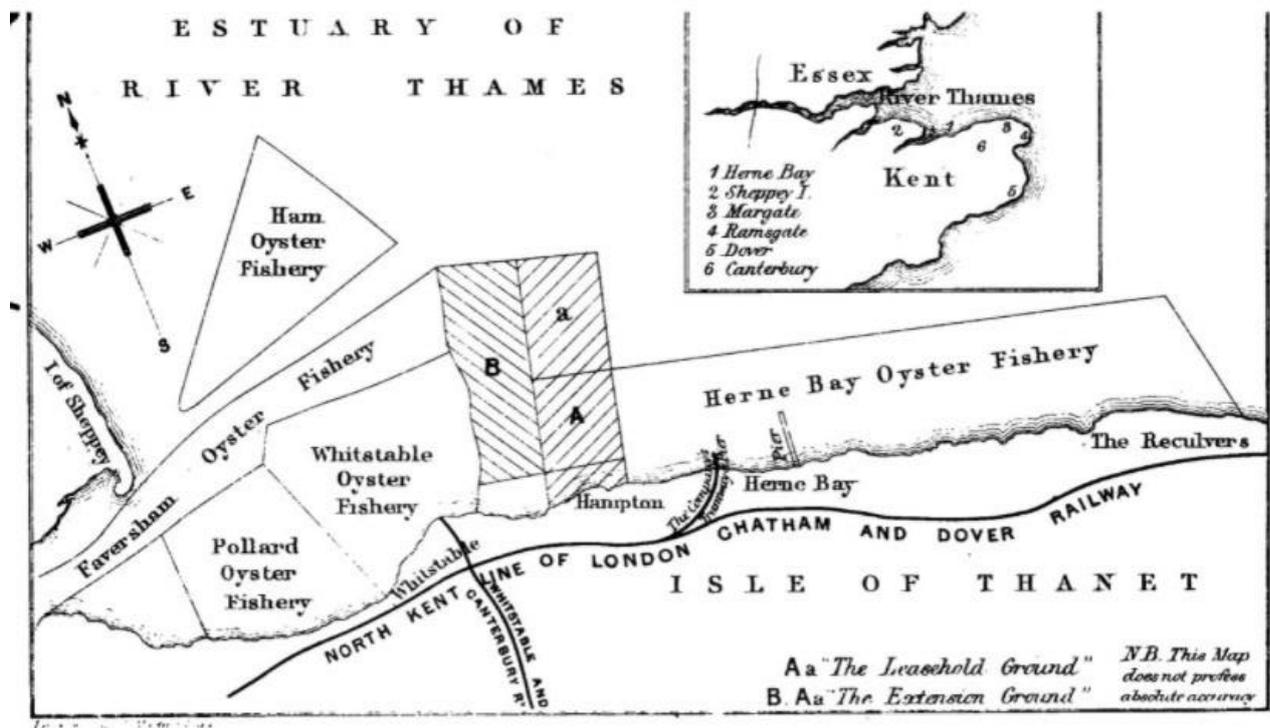


Figure 18: Map showing disputed oyster grounds in 1866, note the tramway linking to the main rail line. (open source House of Lords 1866)

The Herne Bay, Hampton & Reculver Oyster Fishery Company did in fact develop both the land and foreshore at Swalecliffe between 1864-79. It built the large 1054 ft. pier at the Hamptons (now 300 ft.) to facilitate anchorage for the oyster smacks and a tramway that linked three quarters of a mile to the main London railway track. Boxed and crated oysters were pulled by horses and occasionally on windy days sail power was used. The company also built houses for

employees, and experimented with building five large concrete oyster ponds to cultivate oysters.

The company did well in the late 1860s, but it did not succeed over the longer-term. Part of the reason was lack of funding and restrictions of oyster sales as prices became high with increased demand and new Acts of Parliament were passed to preserve fish stocks by restricting oyster trawling between the months of June and August. This was compounded further by some very harsh winters that destroyed much of the companies oysters stocks as the concrete ponds were too shallow for the frost.

In the 1880s the tramway was dismantled, although parts of it can still be seen near the main London railway line. The long pier went into disrepair after storm damage and the land was sold in plots to housing developers.



Figure 19: View of Hampton west towards Swalecliffe in the 1870s, when the oyster company was running, note the large pier, oyster ponds, tramlines and housing for company employees. (Crown copyright expires 50 years after the creation of the image)

Point 8: Pudding Pans and Lost Roman Boats

(words 405)



Figure 20: Pudding Pans, Roman Samian Ware, found near Whitstable Kent now at the Ashmolean Museum oxford. (copyright Ashmolean need permission or can take photo from Whitstable museum)

Towards Herne Bay is a sand bank called Pudding Pan (approx. 4km north-east) and north of pudding pan is Pan Sands (approx. 7km) . It is thought that both these areas contain Roman shipwrecks, dating 180-200 AD for Pudding Pan and 65-85 AD for Pan Sands. They have never been discovered, perhaps because of the shifting geomorphology of the sediment and poor underwater visibility in the North Sea.

Over the last three hundred years Whitstable Oyster trawlers have retrieved over 500 pieces of high status Roman Samian Ware (mainly from Pudding Pan 180-200 AD); these became known as ‘Pudding Pans’ as the trawler men would take the pans home to use as kitchen ware. In the late 19thC the pudding pans started to be collected by museums and private collectors; most notable was a Whitstable jeweller called William Holden who paid the fisherman for pudding pans pulled up in the dredging nets and proudly displayed them in his shop on Whitstable high street.



Figure 21: Relative positions of Pudding Pan (4km N, East) and Pan Sands (7km N, East) from the coast line (British Museum Publication)

We know from the potter's stamps on the base of the pudding pans that they were manufactured in France in the region of Lezoux central Gaul. The pudding pans, which amount to the majority of the finds from 180-200 AD, are of a plain undercoated Samian ware type, which could have meant they were destined for domestic markets. It's notable that similar types of Samian Ware have been found in New Fresh Wharf London, from the same date range and also bearing the same potter's stamps. The finds have been consistent over the last three hundred years, which implies that that there is still a significant amount to be recovered.

We also know from the damage patterns on the recovered pudding pans that they have been on the sea bed in an inverted stack formation. If this is the case, then the remaining pudding pans could be buried deep in the Kentish flats and it's possible we are only skimming the surface of what could be discovered.

Despite 400 years of Roman occupation we don't have clear archaeological evidence of a Roman shipwreck in UK coastal waters. We do have riverine finds, most notable is an old barge embedded in the mud on the site of Guys Hospital in London, 1889. But an actual wreck found at sea with a cargo has been elusive, and would constitute an extremely rare and significant find.

Point 9: Disappearing Communities

(399 words)



Figure 22: 1888, Hernecliff gardens added onto Hampton Terrace. (Crown copyright expires 50 years after the creation of the image.)

The abonnement, destruction and final disappearance at the turn of the 20th Century of Herne Cliff and Eddington Gardens was due to natural erosion from the sea, but also expedited further by the construction of Hampton Pier. All that remains today of this community is the old seawall which can be accessed at low tides.



Figure 24: 2021, Picture taken facing west shows the last remains of the sea wall at low tide (own picture)

The first construction of housing was initiated by the oyster company for its workers, this was called Hampton Terrace. When the oyster company was liquidised in 1881 it was extended by an additional three houses towards the sea, as Herne Cliff Gardens and later Eddington Gardens were added a little further back from the shoreline.

The developers advertised the plots directly to Londoners, laying on private trains, paddle steamers and free luncheons and Hampton on Sea was to have new infrastructure in the form of shops, reading rooms, temperance hotel and a bandstand. It was advertised as a suburb of Herne Bay, a place to relax away from London and enjoy seaside pursuits, however the developers quickly realised that the shoreline was volatile despite continuing to advertise the land plots.



Figure 25: 1910, Hernecliff Gardens disappearing... (Crown copyright expires 50 years after the creation of the image)

In 1903 retiree Edward Reid moved into number 4 Eddington Gardens. Reid was an extraordinary character; he was the first man in England to jump from a parachute at 1000ft, an accomplished balloonist, actor, singer, conjurer, pastry chef and also the head of Whitechapel CID, leading the early investigations into Jack Ripper. He called his house Reid's Ranch, had a flag pole and painted battlements on the side of his house. He also erected a wooden hut in his garden called "Hampton on Sea Hotel" from which he sold lemonade and postcards of "disappearing Hampton on Sea". He was also in constant correspondence with local authorities and the press, championing the cause for his disappearing community.



Figure 26: Reid's Hampton on Sea Hotel. (Crown copyright expires 50 years after the creation of the image)

Sadly the problem of sea encroachment and flooding was multifaceted, the principle cause was thought to be the strong tidal currents exacerbated by Hampton pier. Beach material would shift from east to west along this part of the coast, but the construction of the pier caused sediment and pebbles to build up. This resulted in tidal currents and formed strong loop eddies of up to 10 knots on the west side of the pier, eventually eroding the land by 1911.

Point 10: Kentish Flats Offshore Windfarm and Archaeology.

(words 385)



Figure 27: Location of the Kentish Flats Windfarm (open Source Wikipedia)

In 2002 Wessex Archaeology undertook an assessment for the Windfarm located 10 km North of this location, the power cables for the windfarm run directly underneath this spot to the sub-relay station situated in the carpark to the right. The Kentish Flats offer a suitable geology as the London Clay makes it easier to install wind turbines, compared to hard bedrock sea beds found elsewhere.

It was necessary to investigate possible wrecks in proximity of the power cables, including Roman wrecks and more recent WW2 Spitfires, Hurricanes and Defiant aircrafts thought to have been lost over the sea near Herne Bay and protected under the Military Remains Act 1986.

In 18,000 BCE the sea level off the East Kent coast would have been 120 meters lower than it is today, the North Sea was a dry land bridge connecting the UK to mainland Europe and it would have been possible to walk to Denmark across an area called Doggerland. It was only in the late 19th Century that this forgotten land mass was rediscovered and named but for many years before fisherman have dredged up strange land animal bones, ancient forest wood. This has especially been the case on the Kentish flats with discoveries of

multiple Mesolithic hand axes, some dating as far back as 100000 BCE.

Ninety six – one-litre geotechnical grab samples were taken from the seabed, but sadly no archeologically remains could be discerned from the samples taken. It is unlikely that any surface structures of settlement can be found from either the Mesolithic and Palaeolithic on the flats, as the wave action from marine encroachment would have displaced archaeological remains and flattened the seabed. However, identified infilled river Paleochannels running southwest/northeast across the windfarm could have preserved remains and the sediment accumulation could also have preserved archaeology .

The side scan sonar and sub-bottom profiler data revealed 32 interesting anomalies on the seabed, though some of these could have been shoals of fish or just accumulated debris such as fishing nets. It was thought that at least two unidentified wrecks were discovered in the data and Wessex Archaeology recommended a exclusion zone of 100 meters around these possible wreck sites within the windfarm area.

Future Sea level Rise and the Citizen project:



Significant archaeological sites along our sinuous coast and on the foreshores of our tidal estuaries are continually eroded by winds, waves and tidal scour. CITiZAN (Coastal and Intertidal Zone Archaeological Network) is the first systematic national response to this threat.

The project focuses on nationally important, exposed archaeological sites: the remains of prehistoric forests, Roman buildings, ancient salt-working sites, lost medieval ports, fishing settlements, coastal defences from both World Wars and countless abandoned boats, barges and ships. The CITiZAN project delivers community-based training to create an infrastructure and network of volunteers with the skills and systems to be able to record, monitor and celebrate the highly significant, but fragile and threatened archaeological sites.

The project has developed a standardised survey, monitoring and web-based recording system and delivers a national training programme to participants through three regional centres, in London with project lead MOLA (Museum of London Archaeology), in York with partner organisation the Council for British Archaeology and in Portsmouth with the Nautical Archaeology Society. A national

network is being established to monitor, record, and interpret coastal and intertidal sites, and actively engage CITiZAN volunteers through the website and outreach programme.

CITiZAN is funded by the National Lottery Heritage Lottery Fund, Historic England, the National Trust and Lloyds Register Fund with additional support from The Crown Estate.

For more information on the project, or to become a volunteer, please visit or contact us at citizen@mola.org.uk