

Fig. 1: site location and location of Trenches 1 and 2 (© MoLAS-PCA)

A Military Man in the Lea Valley

Amelia Fairman

Introduction

Archaeological evaluations and excavations were carried out at the site of the former Parkes Galvanizing Ltd, Marshgate Lane, Stratford. The work was undertaken by a combined team from Pre-Construct Archaeology and the Museum of London Archaeology Service, MoLAS-PCA, between 14th August and 13th February 2008. The work revealed evidence of successive migrations of the Pudding Mill River before the mid-20th century. Evidence of managed and unmanaged channels was recorded, interspersed with flood deposits indicative of a wetland environment. Some of the more unusual items recovered included a near complete clinker-built boat and military equipment of the post-medieval period. Evidence for Roman occupation was also found, albeit in a truncated state.

This report is an interim statement written by one of the excavators.

Archaeological background

Two excavation trenches were located within a triangular plot of land adjacent to the River Lea, on the site of the former galvanising works (Fig. 1).¹ Both trenches yielded sufficiently significant archaeological material during their evaluation stages to require excavation. The location of the trenches within the curtilage of the former galvanising works placed considerable constraints with regard to trench position and potential for expansion, and the southernmost trench had to be investigated in two stages.

The site was located in the Lea Valley, east of Old Ford, in the modern borough of Newham, or the ancient parish of West Ham, Essex. This area remained relatively undeveloped until the mid-19th century, and was characterised by open fields and marshland, intersected by the Bow Back Rivers. These rivers were a complex

network of tidal watercourses with few natural obstructions to prevent their migration across the landscape.

Early industrial activity was characterised by numerous windmills and watermills which exploited these tidal rivers. At least eight mills are documented in the *Domesday* survey for this region alone,² and cartographic sources from the late 18th century indicate that at this time the industry was still flourishing. Corn-milling was one of the oldest industries in West Ham and did not decline until the 19th century, when many mills were either demolished or converted to other uses.³

At least one mill is known from the vicinity of the subject site, namely Nobshill Mill (Fig. 2). It existed from at least 1807 and was located along the east bank of the river. A review of tithe apportionment records revealed that, despite not appearing on early 19th century maps, a windmill on this site



Fig. 2: 1st edition OS 1867 (© MoLAS-PCA)

was listed as the property of George Hart.⁴ The same owner also maintained a watermill at the southern end of the Pudding Mill River and owned the marsh road connecting the two. The Nobshill property was used for corn-milling and was constructed as a post mill, whereby the whole body of the mill housed the machinery and was mounted on a single vertical post. This could then be turned to bring the sails into the wind. By 1896 the mill had presumably been demolished and the only property within the area was Knobshill Cottage (Fig. 3). The cottage remained here until c. 1951 prior to a diversion of the Pudding Mill River and extensive levelling and backfilling of the area c. 1953.

Environmental conditions

The longevity of water-management within the area was apparent within both trenches (Fig. 4). Within Trench 2 a boundary or drainage ditch, running north-east to south-west was recorded, the fill of which was radiocarbon-dated to the mid-late Iron Age. To the north of this, at the south end of Trench 1, a palaeochannel was identified, running roughly north-south. A possible branch of this channel ran north-east from it, with a potential confluence point at the southern limit of the trench. It was

unrevetted, and contained pottery of the 1st to 4th centuries. No further evidence of occupation dating from either the prehistoric or Roman periods was identified. Deposits in the north of Trench 1 suggest that the immediately post-Roman period was characterised

by rising water levels, inundation and abandonment.

The first attempt to manage these meandering and abraded river channels identified within the study area took the form of a sequence of pile and plank revetments, within a channel running north-east to south-west in Trench 1. It appears that the structure had been relatively long-lived and much repaired when in use: three successive phases of timber structures were constructed to consolidate the channel. A date range of c. 1400 to c. 1650 was proposed, based on technological grounds and materials used.⁵ The surviving tops of the stakes were recorded at c. 1.87 m OD, and were sealed by extensive deposits of post-abandonment collapse. The natural cutting of subsequent water channels heavily truncated the northern and southern portions of this structure.

A further phase of post-medieval water management was identified within both areas. In Trench 1 this took the form of parallel lines of wattle revetting, denoted as structures [100] and [114] to the north and south respectively (Fig. 5). No evidence of re-use or repair was noticeable within either structure, suggesting a single phase of use. The northern stakes were driven into alluvial silts, which

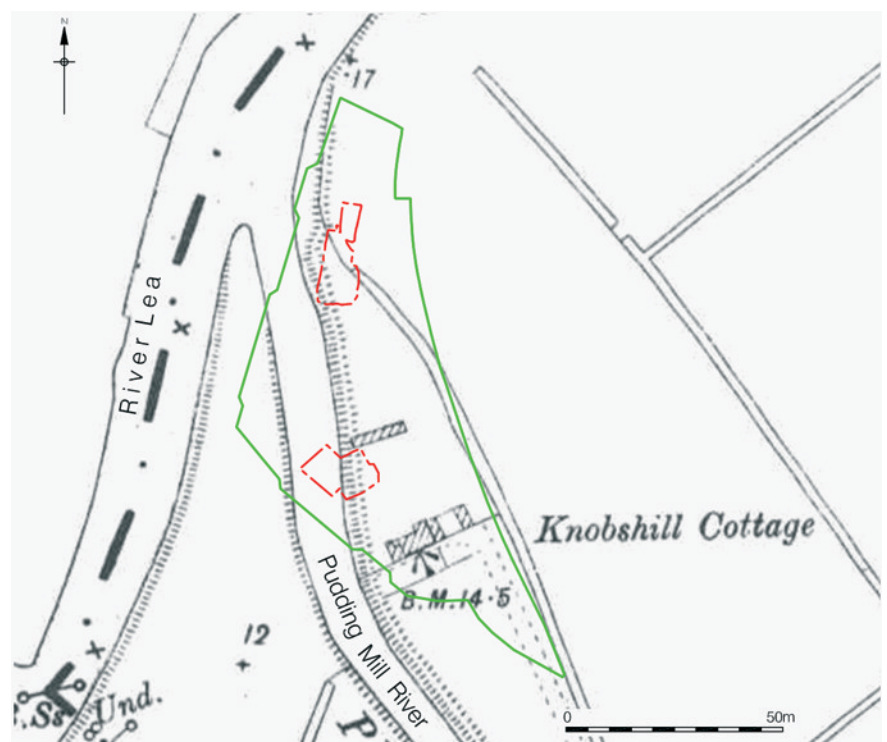


Fig. 3: 2nd edition OS 1896 (© MoLAS-PCA)

suggested an artificial narrowing of a naturally in-filling channel or backwater environment. By contrast, the southern stakes were associated with substantial ground consolidation, which implied attempts at bank stabilisation prior to its construction. The rods between the stakes were woven in handfuls of three or four at a time, utilising a 'slew' weave; a quick but not necessarily the strongest means of weaving wattlework.⁶ The southern length of wattlework was distinctly more solid in its construction than its northern counterpart, consistent with a bank predisposed to erosion. A combination of the solidity of the wattle and a preserved height at a maximum elevation of 2.80 m OD suggested a post-medieval date.

In Trench 2 a substantial pile and plank river bank revetment, structure [2014], with associated rubbing stakes, was encountered (Fig. 6). It was recorded from c. 2.4 m OD, which according to comparative historic water levels, is almost a metre lower than would be expected; therefore its original height is likely to have been in the region of 3.5 m OD.⁷ This structure retained and reinforced the east bank of the Pudding Mill River relatively close to the point at which it joined the lower Lea. The workmanship and quality of materials utilised suggested a late 17th to early 19th century date. Unfortunately none of the timbers had enough annual rings for tree-ring dating to be attempted. Furthermore, the use of apparently new materials as opposed to re-used timbers suggests that some money was spent on this structure.

Late Victorian river levels in this area would have been in the region of 4 m OD,⁸ and this was supported archaeologically and cartographically. Benchmarks listed for the buildings convert to about 4.40 m OD. Furthermore, buried soil horizons dated to the late 16th to 19th century were recorded within the northern extent of Trench 1 at levels of 3.60–3.80 m OD. These horizons demonstrated that an interlude of drier environmental conditions followed the abandonment of the wattle revetting, of sufficient length to allow vegetation, including some large trees, to establish themselves along the river bank. It is feasible that these soil horizons are roughly

contemporary with the functioning of the Nobshill Mill.

The Pudding Mill Boat

Alongside pile and plank revetment [2014] in Trench 2, a small lightweight clinker built boat [1004] was discovered (Figs 6 and 7). In keeping with nautical archaeological custom for un-named craft, the feature has become known as the 'Pudding Mill Boat'. Some damage had occurred to the hull, which appeared slightly distorted, and other parts had been somewhat crushed by the massive amounts of late 19th and 20th century overburden. Otherwise, due to tarring on the boat and local waterlogging, the timbers themselves had survived relatively intact and well preserved, with an estimated 70% of the original boat remaining.⁹

The boat measured 4.51 m in length (including the lower iron rudder hinge) and 1.51 m in width, with a maximum preserved depth of 0.5 m, including a 155 mm deep false keel. The vessel was removed in its entirety from the trench for further off-site investigation. Immediately apparent was the 'clinker built' construction of the boat. This system was introduced into Britain during Saxon times and is a method in which a rounded hull is constructed from partially over-lapping planks fastened over their edges. The planks are set around a back-bone of longitudinal timbers to form a hull shell, with strengthening frames added later.¹⁰

What is interesting about the boat is that it demonstrated at least three changes of use over its lifetime. The initial construction utilised thin planking of 8–10 mm thickness fastened with distinctive handmade, diamond-shaped, copper 'roves'. The vessel was likely to have been constructed during the first quarter of the 19th century. Its design and small size suggested it was initially used as a lightweight 'gig' or rowing boat for use as a water taxi. It could have been originally designed for carriage aboard a larger ship or for independent use. The boat was subsequently modified with the addition of a deep false keel, in order for it to serve as an early sailing pleasure craft. Its third, and most likely final, phase of use was as a gun punt. Attempts were made, but abandoned, to remove the false keel, and two crosswise lockers

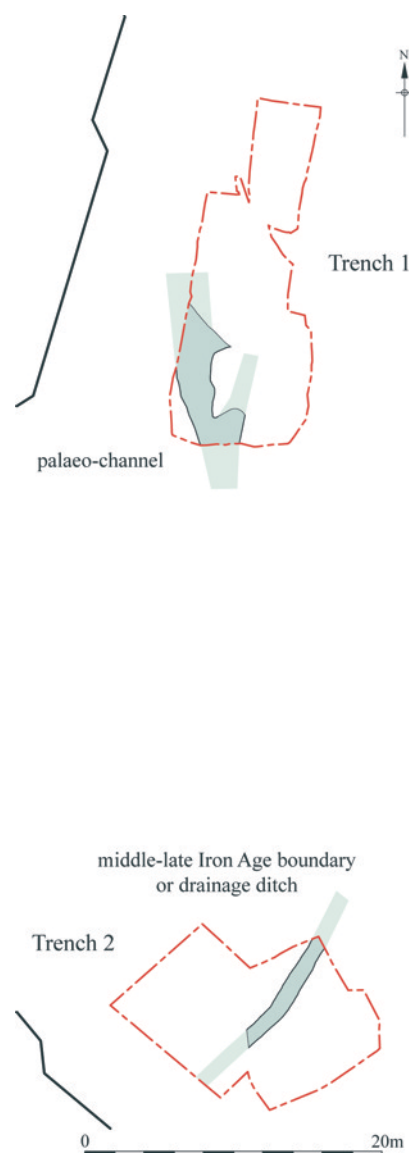


Fig. 4: earlier channels (© MoLAS-PCA)

were added. Numerous repairs and localised strengthening were observed, presumably to support the 'punt gun'. Loose lead shot [1002] discovered within one of the lockers supports this interpretation.

The Pudding Mill Boat was significant for a number of reasons. First, the craft falls into the category of nautical woodworking termed by Samuel Pepys the work of 'boat builders', the least well represented or studied aspect of the three technological divisions he proposed, the other two being the work of 'shipwrights' and 'barge builders'. The boat also utilised a number of distinctive components, such as the handmade copper fastenings, which makes it distinctive when compared to



Fig. 5: post-medieval revetments (© MoLAS-PCA)

the rest of the London archaeological corpus.¹¹ Furthermore, it may be regarded as a 'technological missing link'. The vessel stands as an example of the 'last transitional phase of clinker boat-building' prior to the finalisation of recent practices by c. 1890 with mass produced copper nails and machine-worked timbers. The origin of the boat

remains uncertain however. Technologically it could easily have been built in the region, or, if it did function as a form of water taxi aboard a larger vessel, it could have come from much further afield. If the latter interpretation is to be accepted, the boat was likely to have been purchased from one of the numerous ships'

breakers' yards known to have existed in the vicinity.

It is estimated that the Pudding Mill Boat was between 20 and 40 years old when it was finally abandoned.¹² The changes in use may therefore have been influenced by late Victorian trends and activities. Pleasure boating became particularly fashionable from the mid-19th century. Numerous accounts of expeditions were published as well as guidebooks. One such guidebook,¹³ written in 1899, suggested that the 'present vogue of boating' was a matter of 'barely thirty years' growth' and goes on to describe in detail the various types of pleasure craft, key routes along the Thames and boating etiquette. In the year prior to publication approximately 10,480 pleasure boats had been registered on the Thames alone. This 'craze' was not restricted to the Thames however. One of the more famous literary accounts of Victorian pleasure boating *Three Men in a Boat* was based on the personal experiences of the author, Jerome K. Jerome, himself a former member of the Lea Navigation Boating Club.¹⁴ The popularity of the book was believed to have been responsible for as much as a fifty percent rise in the numbers of registered boats in the year following its publication in 1889.

The transformation of the Pudding Mill Boat from pleasure craft to working boat may have been out of necessity or due to a change of ownership. Punt guns were commonly used during the 19th and early 20th centuries for shooting waterfowl. The guns were too big to hold and the recoil too powerful, so they were mounted directly onto punts. It is estimated that a single shot could kill over 50 waterfowl resting on the surface. Hunters could have either worked individually or in small fleets to improve their catch.

A military connection

It was from the latter phase of the boat's use that some of the most interesting artefacts derived. These included an unusual mixture of leather items which suggested some kind of military connection. They included a partial 'rifle bucket', strap fittings, a fragmentary leather document case and a thin embossed copper-alloy disc or medallion, which could have come

from a pack-saddle harness. The strap fittings could be related to this and similarly derive from a pack-saddle harness. The top 'flap' of the carrying case was of calfskin and included a carrying handle of cattle hide attached with flat-headed studs of galvanised iron. Cases such as this were known to have been used to carry a wide range of military equipment, including ammunition.

The rifle bucket of moulded cattle hide is particularly noteworthy as being one of only three examples known from archaeological contexts. One dating to the Civil War was found in a well at St. Paul-in-the-Bail, Lincoln¹⁵ and the other, interestingly, was from a second site in the Lea Valley.¹⁶ The rifle bucket was introduced c. 1884¹⁷ and would have been carried on a saddle in order to carry a rifle securely whilst riding, without completely impeding access to the weapon.

The Essex Yeomanry

Whether the military property originally belonged to the owner of the boat or had been acquired elsewhere is impossible to establish with any certainty. Nevertheless, it is possible to speculate on the source of the property. This sort of assemblage is most likely to have derived from a local Yeomanry division, a descendant of the earlier volunteer cavalry regiments. The Essex Yeomanry first appeared in 1797 in response to the threat of French invasion. Troops comprised farmers and prominent landowners who were able to buy their own uniforms and provide their own horses.

By 1803 Britain had declared war on France and subsequently volunteer forces were raised throughout the country. Initially these troops had an important role in civil defence, but with an absence of civil disturbances, the troop was disbanded in 1828 and subsequently reformed as the West Essex Yeomanry Cavalry in 1830, to help protect government factories at Waltham Abbey and Enfield Lock. This division suffered the same fate, and was in turn disbanded by 1877.

Many Essex men went on to serve in South Africa 1899–1902 in the Imperial Yeomanry, which was raised by Captain R.B. Colvin to deal with the Boer Commandos. The success of this

division led to the formation of new units in Britain for home defence. Subsequently Lt. Col. Colvin raised the Essex Imperial Yeomanry, with squadrons at Colchester, Halstead, Epping and Southend. The Southend, or D, squadron included a Romford troop which incorporated Ilford and Stratford. The Essex Yeomanry ceased being a military body for civil power on 1st April 1908 and was absorbed into the newly formed Territorial Force, or present day Territorial Army.¹⁸

Whether the property had derived from a former member of the D

squadron of the Essex Yeomanry remains conjectural until further conservation can be carried out on the finds. A closer examination may yet reveal distinctive markings which can be used to pinpoint the regiment. Other examples of rifle buckets are known from the National Army Museum and could prove useful parallels.¹⁹

Conclusion

The two trenches yielded considerable evidence of the management of the Pudding Mill River before its mid-20th century diversion. The wattle revetting,

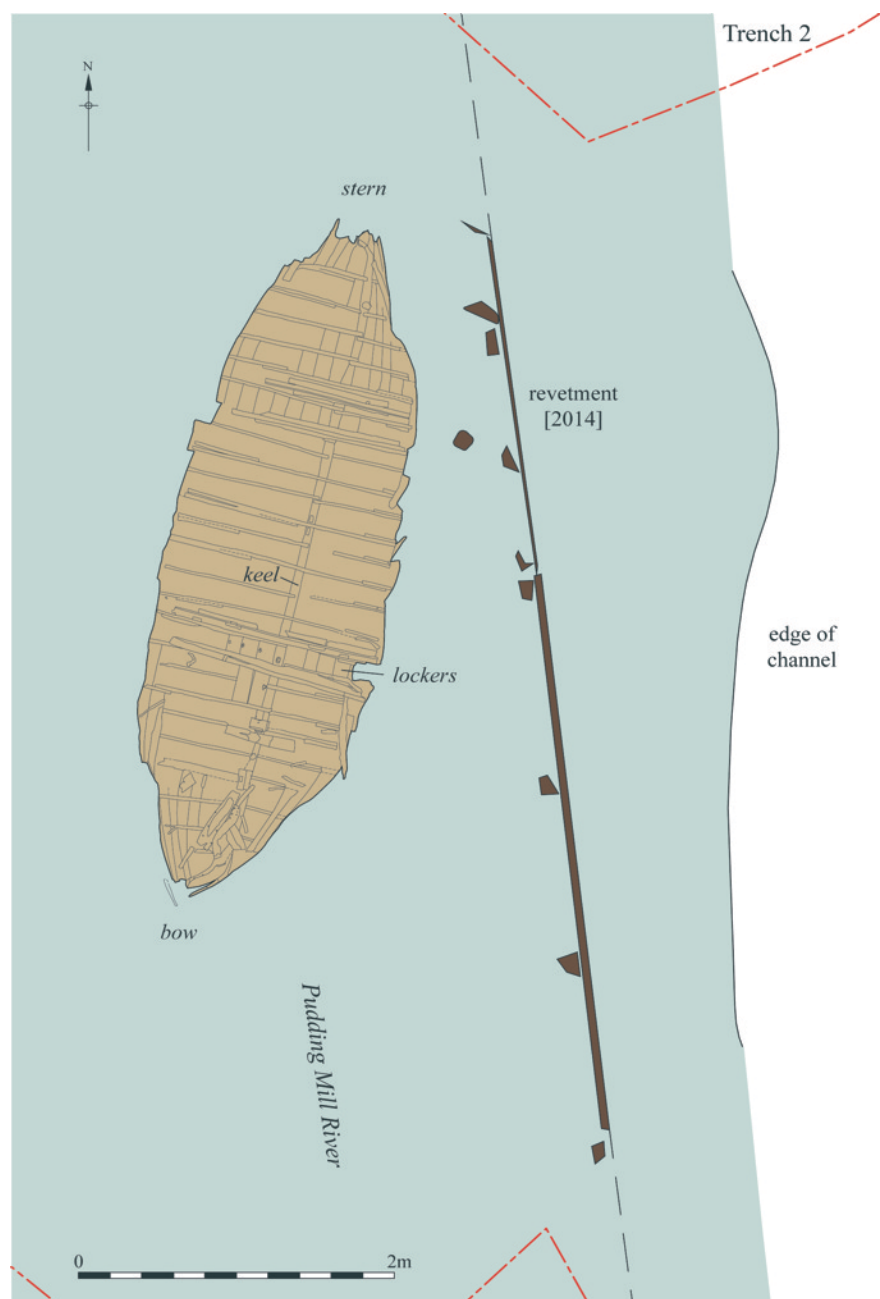


Fig. 6: the boat and revetments (© MoLAS-PCA)



Fig. 7: the Pudding Mill boat in situ (© MoLAS-PCA)

and the later and more substantial pile and plank revetment, are likely to relate to properties which formerly lay on the

east bank of the Pudding Mill River, namely Nobshill Mill and Knobshill Cottage. Finds such as the Pudding Mill

Boat and the rifle bucket are notable for their archaeological rarity and resultant lack of study. These artefacts give important insights into the lives of local people from this part of the Lea Valley during the post-medieval period, a period in which, contrary to much of the surrounding borough, the landscape remained relatively rural and undeveloped. As parts of the landscape have now changed beyond all recognition, these insights would have irretrievably been lost had it not been for archaeological intervention.

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Amelia Fairman is currently an archaeological supervisor with Pre-Construct Archaeology Ltd. She has extensive excavation experience throughout London, and further afield in Egypt. She has a particular interest in military history.

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19. Examples: NAM. 1983-02-34-1, dating to 1896, for carrying a Lee-Enfield or Lee-Metford Rifle, and NAM. 1983-10-81-1, dating to 1940, for Lee-Enfield rifles, would make interesting comparisons. Photographic evidence may derive from example NAM.2006-09-31-3, which depicts Lt Brodie with a captured horse, 1914, and illustrates a rifle bucket and sword.