A touch of spice: excavations at Cinnamon Street near Wapping Docks for the East London Line

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Introduction

Museum of London Archaeology (MOLA) carried out archaeological investigations at Cinnamon Street, Wapping, London E1, in the London Borough of Tower Hamlets, between July and August 2008 (Fig. 1).[1] These investigations were conducted on behalf of Transport for London as part of the upgrade and extension of the existing East London line to create a new urban railway, which forms part of the wider London Overground network. The investigations took the form of targeted watching briefs on two circular shafts (shafts 1 and 2), being constructed for emergency stairways from the Wapping Underground Station platform up to ground level. All archaeology was recorded in plan until each shaft flooded with groundwater, making archaeological monitoring impossible. The warehouses on the site were also recorded.[2]

Although the investigation consisted of two relatively small interventions, this was new information in an area that has had little archaeological investigation. The investigations have, therefore, opened a window into the world of the general populace who lived, worked and died in and around London. They show the potential of integrating archaeological and historical sources to enhance our image and understanding of London. Furthermore, excavations such as these provide the data for larger projects which interrogate our present understanding of London – projects, for example, like the cooperation between MOLA and Queen Mary, University of London, investigating Victorian London.[3]

Fig. 1: site location

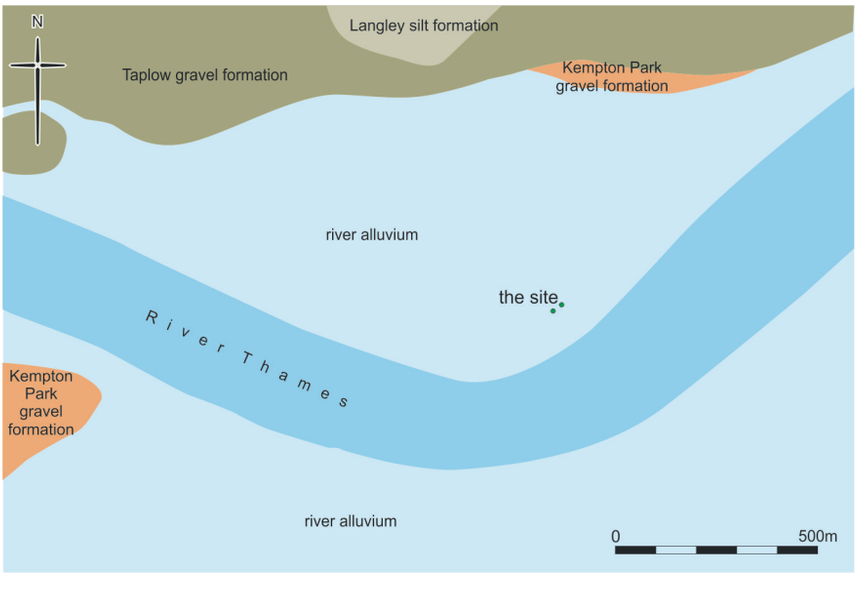

Fig. 2: map showing the location of the site within the prehistoric Thames valley

Wapping Marsh and reclamation (pre-1550)

Traditional understanding places the site within the floodplain of the River Thames where Holocene alluvial sediments overlie Pleistocene Shepperton gravels (Fig. 2). The investigations presented an opportunity to examine the development of the intertidal prehistoric landscape. Therefore, following excavation of the post-medieval archaeology, investigation in the two shafts continued downwards under geoarchaeological supervision, recording the alluvial deposits exposed in the sections (Fig. 3).

Geoarchaeological recording ceased in each shaft when the water table was reached and, as a result, did not obtain a full Holocene sequence to the top of the floodplain gravels. Shaft 2 only reached the surface of the alluvium, but the base of the recorded deposits in shaft 1, the longer sequence, was at -1.62m OD and this produced a range of environmental material which enabled a reconstruction to be made of the changing later prehistoric landscape at the river's edge, and in the wider floodplain. Both monolith and adjacent bulk samples were taken during excavation, and were sub-sampled and processed to recover a range of environmental remains such as pollen,

Fig. 3: view looking down into geoarchaeological investigation trench 1

diatoms, ostracods, plant macrofossils and insects. To enable a better understanding of the significance of the environmental evidence, the site data were added to that from surrounding sites to produce a model of the buried prehistoric topography, using 'surfer' software. The resulting image indicates that the site was actually located at the edge of the gravel terrace lying in a depression within a small channel (model author, G. Spurr) (Fig. 4).

The lowest deposits recorded were humic clay silts, which accumulated in a channel-marginal location, probably during the Neolithic. Microfossil (ostracod and diatom) evidence suggests a freshwater reed-swamp environment on the site, but with some tidal influence at this time. This may relate to the onset of a rise in relative sea level (RSL) that was beginning to have an impact in floodplain areas beyond the site.[4] Pollen evidence and numerous wood fragments show trees and shrubs to have been prevalent, with alder (*Alnus* sp.) pollen dominating, and indicate that alder carr (wet woodland) characterised the wider floodplain environment.

The overlying contexts show a transition from clayey-peat through to well-developed woody peat as the floodplain alder carr spread across the site itself. Alder (*A glutinosa*) seeds and catkins, seeds of lime (*Tilia* sp.), and hazelnut (*Corylus avellana*) shell fragments in the bulk samples confirm the wooded nature of the environment, and beetle remains provided further indication of deciduous trees, including alder. Wetland plants and aquatic beetles included species suggesting still and well-vegetated water, while several species typical of marshland and wet grassland were also identified. Radiocarbon dating shows that the onset of this brief period of floodplain woodland expansion occurred in the Early Bronze Age.[5] Pollen evidence suggests a decline in alder in the wider floodplain at this time, and the establishment of more open fen communities. Contemporary insect

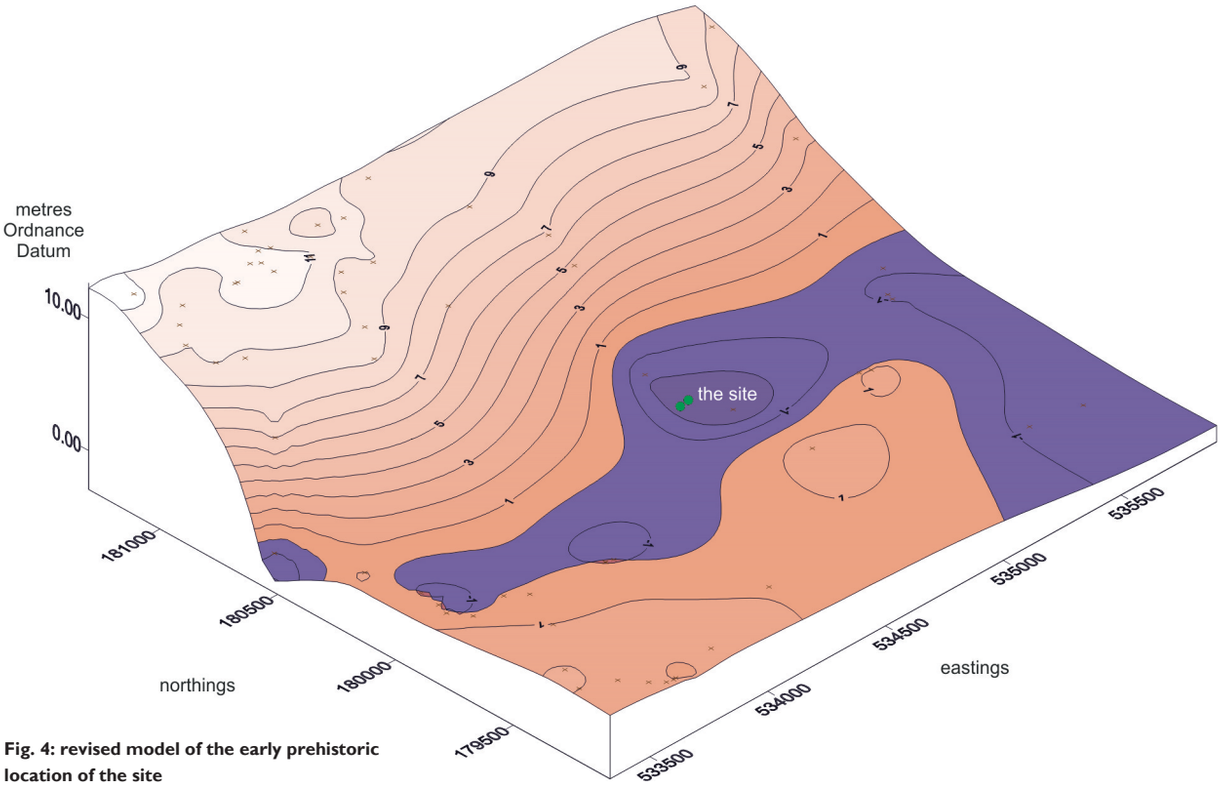

Fig. 4: revised model of the early prehistoric location of the site

evidence for drier grassland and animal dung suggests the river terrace adjacent to the site was being cleared and used for grazing.

By the later Bronze Age a return to clayey-peat implies the development of much wetter, more regularly inundated, woodland with pools of standing water and perhaps a saline influence indicated by estuarine diatoms. The pollen evidence suggests a resultant thinning of the alder carr and its replacement by sedge fen across the site. Plant macrofossils showed a corresponding decline in wood and other remains of tree species, while wetland plants and aquatic beetle species remained. This is supported by the ostracod record which showed a move towards reed-swamp environments. In contrast, pastoral activity appears to have continued on the dry river terrace adjacent to the site, as implied by beetles indicating turf and dung.

The wetter floodplain environment recorded around the later Bronze Age/Early Iron Age transition marked the onset of regular inundation by estuarine water, related to rising relative sea level, which caused freshwater vegetation (such as reed-swamp and sedge fen) to be replaced by inter-tidal mudflats. The silty clay sediments contained marine diatoms and pollen, derived from salt-marsh environments downstream and carried on the tide, as well as diatom assemblages typical of tidal mudflats. However, the small plant macrofossil assemblages suggest a drier, rather disturbed environment, probably representing the landscape position of the site at the edge of the river terrace, which may have been episodically flooded by tidal water. An increase in herb and grass (*Poaceae*) pollen provides a picture of a rough grassy ground cover, perhaps with rush-filled boggy hollows. Although no dating evidence is available, it is possible that this environment characterised the site prior to the construction of river embankments in the area.

By the time the uppermost alluvium accumulated, the site appears to have been generally removed from the influences of the tidal river, perhaps by the construction of a river wall. Diatoms and ostracods suggest that the stiff manganese-stained clay-silt was mainly influenced by land-based processes. This is confirmed by the plant macrofossils, which were derived from relatively dry habitats, with clear signs of human influence. Evidence for cereal cultivation and consumption was seen both in the pollen and in cereal bran from the bulk samples, while insects and wild plant remains suggest the presence of rotting organic matter. Seeds of rose (*Rosa* sp.) and hop (*Humulus lupulus*), as well as beetle remains typically found in gardens, may point to the use of the area for market gardening. The 'alluvial' nature of this context differs from the black deposits often found in post-medieval gardens, and may thus represent medieval cultivation, using manure and human waste as fertiliser, rather than the later sooty inputs.

The uppermost sediments were very heterogeneous and contained frequent quantities of anthropogenic (originated by humans) detritus, especially waste building material. It is likely that these sediments relate to the reclamation of the wetland environments of the Wapping Marsh.

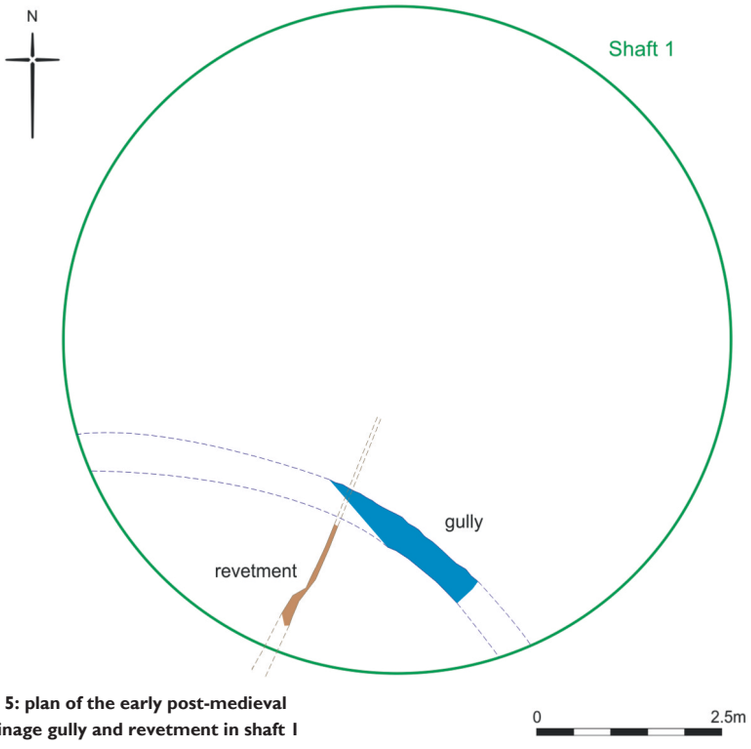

Fig. 5: plan of the early post-medieval drainage gully and revetment in shaft 1

Early modern, 1550–1800

The dramatic growth in the population of London over the later medieval period placed great pressure on the outlying lands surrounding the City, not just for housing but also for suitable industrial areas like wharves.[6] The area of Wapping marsh was finally drained in the late 15th/early 16th centuries and is believed to have been completed prior to 1535 by Cornelius Vanderdelft, a Dutchman brought to England because of his specialist skills.[7] Evidence of the arable nature of the site prior to its residential development was found in an early drainage gully. An environmental sample from this gully revealed a diverse assemblage of waterlogged seeds, the majority of which suggest that arable fields and/or waste land was present in the area around the gully. Some human waste was present in the gully fill, in the form of occasional grape (*Vitis vinifera*) and fig (*Ficus carica*) seeds and fragments of hazelnut (*Corylus avellana*) shell, while a seed of pot marigold (*Calendula officinalis*), an ornamental plant grown for its orange flowers, may have come from a garden cultivated nearby. The occasional pieces of pottery dated to the late 16th century demonstrate both how long this area had remained as arable land but also how quickly it was converted to residential use.

Evidence of the probable final draining is possibly identified by the discovery of a revetment within shaft 1 (Fig. 5). The revetment is a simple post and plank construction, which was

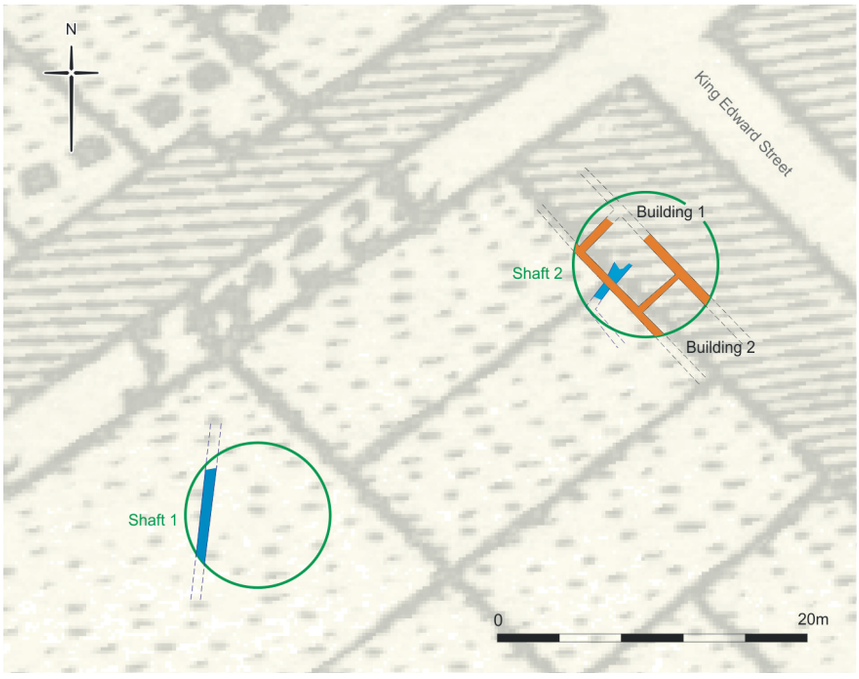

Fig. 6: plan showing the excavation area in relation to Morgan's 1682 map; note the concordance between the building in shaft 2 and houses on King Edward Street

structurally very light and certainly not weight-bearing, with no base-plate or braces present, suggesting that it did not need much support. An environmental sample from inside the revetment produced a large amount of waterlogged plant material composed largely of cereal bran, with a number of fruit stones and pips, and seeds of wild plants, the latter suggesting a similar environment to that described by the gully above. The cereal bran and fruit remains strongly suggest that the revetment was being used for the disposal of human faeces and probably other domestic waste.

Pottery from the secondary fill of the revetment indicates that it could have gone out of use as early as 1612 and as late as 1650. Interestingly, although small, the assemblage indicates an area where households owned a full range of ceramic vessels, which included a number of relatively costly items.[8] Alternatively, the small piece of pantile also found within this fill would suggest a disuse date range of 1630–50.[9] Furthermore, the revetment was cut in the north-west of shaft 1 by a large pit over 2.3m long, which contained pottery dating to 1630–50. A map of 1635 which sets out wharf ownership along the waterfront between Wapping and King Edward Stairs shows that the area was by that time heavily congested.[10] Although these features were overlain by various reclamation/ground-raising deposits, evidence of later activity in shaft 1 was minimal. The area appears to have remained open and undeveloped as shown on Morgan's map of 1682 (Fig. 6).[11]

The opposite was apparent in shaft 2, where there was little evidence of pre-16th century activity. The first evidence is that of a brick yard surface which has been dated *c.* 1580–1800. The yard had then been truncated in the north-west of shaft 2 by a construction deposit dated *c.* 1640–60 primarily on tobacco pipes.[12] However, the small ceramic assemblage, dominated by imports from the Rhineland, found mixed with the tobacco pipes, was dated *c.* 1580–1630. Overlying the construction deposit were the remains of several walls related to a building (B1) fronting King Edward Street (now Clave Street). The remains comprised the foundations of two rooms totalling *c.* 6.8m in length, shown in red (Fig. 6). The bricks used to construct this wall date from *c.* 1550–1666 and suggest that this building pre-dated the 1673 fire in Wapping which destroyed at least 200 buildings, including all those along King Edward Street.[13]

Three blue-on-white decorated tin-glazed wall tiles dating *c.* 1620–50 were identified and undoubtedly belong to this pre-1673 building, despite having been found in a demolition dump of a later period. Two of the wall tiles have a slightly grey, crazed surface glaze, indicating heat damage. These may relate to the fire but could also have been affected by heat from a hearth, as in London this type of tile would originally have decorated fire place surrounds.[14]

The brickwork may also represent the reconstruction work undertaken after the fire, as the presence of brick foundations appears to contradict the report given to the Crown by the landholders after the fire. In 1674 a petition from the Governors of Bridewell, the post-Reformation owners of a large area of Wapping which included King Edward Street, suggests that all the houses at the time of the fire had been built of wood. The petition indicates that the Governors had had good success in persuading the inhabitants to rebuild in brick.[15] They do note that the rebuilding has been difficult due to the boggy and soft nature of the ground. After the fire the Governors took the opportunity to not only 'straighten' the alignment of the wharves but to do the same with the streets and set them back slightly. However, a new building was identified overlying on the same alignment of B1, also of late 17th/early 18th construction, and it is possible that this is the post-1673 building. The buildings consisted of walls built on the same alignment but with no central internal wall. The bricks were reused, unfrogged and orange-red of the same dimensions as the earlier buildings; the mortar was hard grey sand with frequent chalk inclusions. The earlier brick yard was then partially removed and covered with a layer of compacted metalled ferrous slag. It lay at 1.77m–1.86m OD and consisted of similar bricks laid out in parallel lines. This building was serviced by an early brick cesspit (S3) which was fed by a circular brick-lined sewer or drain (S4), 2.8m long with an internal diameter of 0.30m and external of 0.53m (sewer shown in blue on Figs 6 and 7). It is interesting to note that this cesspit appears to lie within the basement of no. 11 King Edward Street. While this is not an unusual location for a 'dry' cesspit, this one appears to have had sewers draining liquid into it.[16] A similar sewer/drain was witnessed in shaft 1, which drained towards

Cinnamon Street to the north.

Although archaeological and documentary sources confirm the existence of King Edward Street from 1673, its existence prior to that date is more difficult to determine. While ceramic evidence certainly points to activity in the immediate area in the mid-17th century, both structural evidence and population data are lacking. Evidence from 16th- and 17th-century taxation records indicates a growing population; however, none of these sources provides evidence of the location of the people named.[17] The parish records survive from early in the 17th century, and although they do occasionally give the address of the person recorded, it is not until 1673, the year of the fire, that King Edward Street is recorded.[18] Is this because the street only came into existence from that date, or is it that the fire caused the authorities to be more stringent in their recording of people? It is noticeable that a number of street names first appear after that date. It is very possible that during the rebuilding after the 1673 fire, due to the boggy nature of the area, more extensive foundations were dug removing any evidence of the earlier, less solid foundations.

The parish registers indicate that this street was home to people with a wide range of professions, which included a surgeon, a gilder and Custom House officer. However, the primary trade represented in the registers was that of 'mariner', a profession intimately tied to the area.[19] Along the Thames waterfront, throughout Limehouse, Radcliff, Poplar, etc, lay the docks that received the goods that fed London's growing population and industries. In return these areas appear to have been at the forefront of the influence of new materialistic fashions, particularly in ceramics. Certainly a range of 'foreign' ceramics have been identified on the site, which come from areas such as the Rhineland, north Germany, Holland, Spain, Portugal and northern Italy. These sources reflect closely the shipping routes used by the English merchants and north European traders calling at ports in the Low Countries such as Antwerp and, after its sacking in 1585, at Middleburg and Flushing. By the early 17th century the ports of Dordrecht, Ostend and Dunkirk were also used and by 1620, Rotterdam and Amsterdam.

Little obvious development took place over the 18th century. No structural changes were identified. Documentary sources, such as Sewer Rate books, continue to show that property owners paid for the use and contributed to the upkeep of the common sewers identified on the site.[20] The parish registers continue to record people at King Edward Street. Even the open area which fronted Cinnamon Street to the south and lay to the west of the King Edward properties appears to have remained 'unused'. However, it appears to have become associated with some sort of timber yard nearby as identified on Horwood's map of 1799. It is also clear from Horwood's map that building 1/building 2 aligns with no. 11 King Edward Street (Fig. 8).[21]

The 19th and 20th centuries

The 1st edition Ordnance Survey 1:1250 scale map of 1868 shows little had changed; even the house numbering had remained the same, yet no further archaeological remains of the internal structure of the building have survived. There is little evidence of any internal development, but it is clear that the yard at the back of the building was re-laid at some point during the 18th and 19th centuries. However, we are able to develop some idea of the people that resided in the property due to the increased survival of documentary sources over the 19th century. Insurance records show that in 1802, no. 11 was inhabited by a J. Hervens who had property and clothing of insurable worth of £100.[22] By 1815 it was inhabited by a William Wright who was insuring only his apparel and books. It would appear that the Governors of Bridewell had taken over the insurance of the property from 1812.[23] Evidence from the negotiations between the Governors of Bridewell and the Thames Tunnel Company in the 1840s for the sale of the properties indicates that nos 8 to 11 King Edward Street were held by yearly lets.[24] The census records from 1841 to 1871 appear to confirm that there was very little continuity of tenure throughout that 30 year period, although only taken every ten years it is impossible for them to show if yearly tenure was a wide-spread practice. Nevertheless, only five names/families can be traced through several censuses.[25]

Evidence of what these people may have owned came from a capped Victorian cesspit that had replaced two

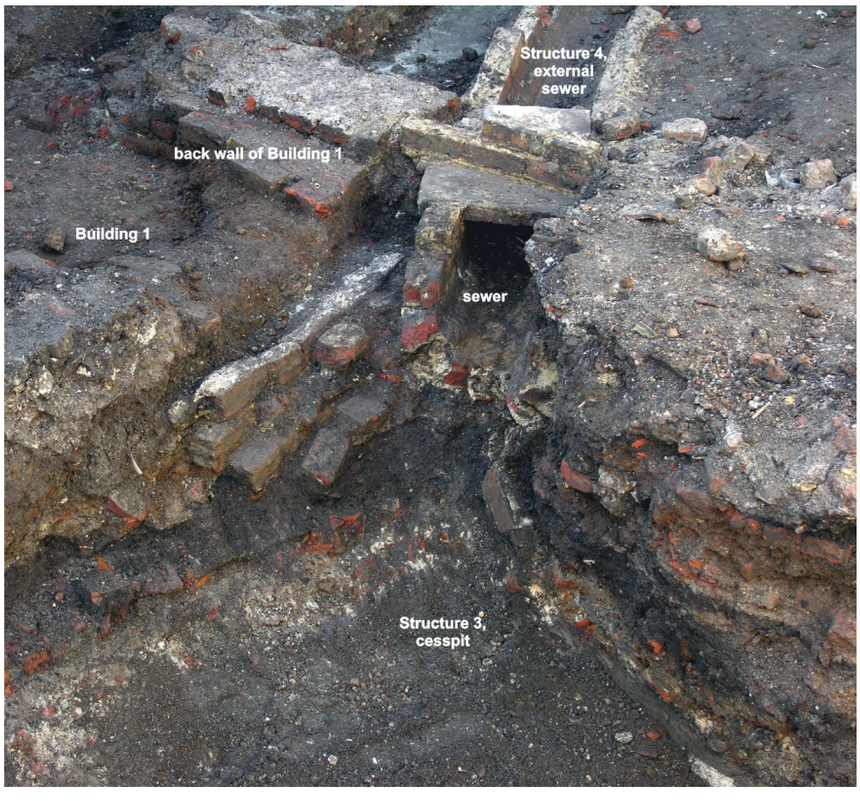

Fig. 7: detail looking south-west at the junction between structure 4 and structure 3

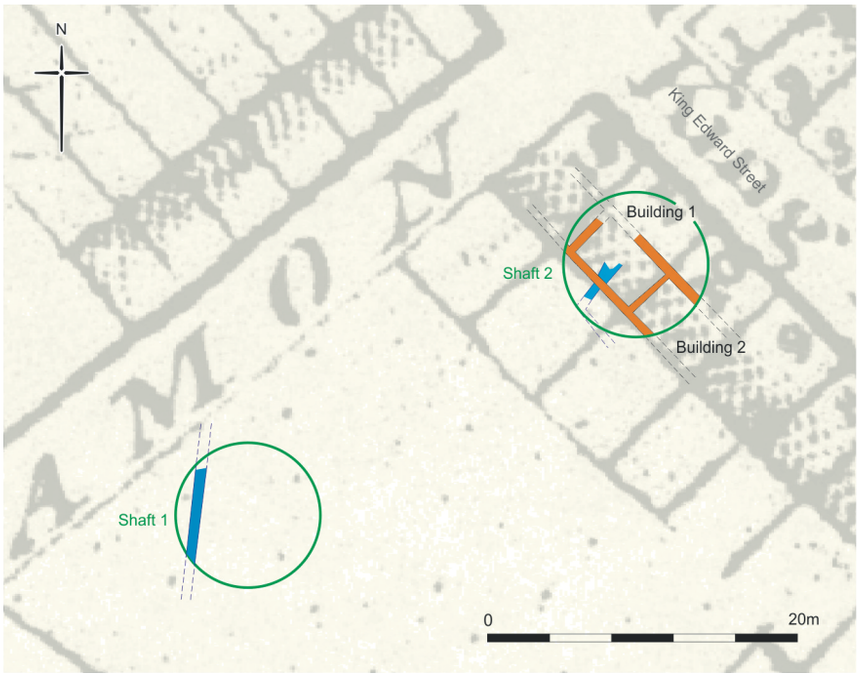

Fig. 8: plan showing building 1/building 2 in relation to Horwood's map of 1799

earlier cesspits. In April 1856, the parish Sewer and Drains Committee of Limehouse District ordered the landlord of the five properties, a Mr Garbutt, to cease attempting to lay a 9-inch pipe from them connecting to the main sewer running under Cinnamon Street, until he had received the appropriate permissions.[26] In May 1856, he was given such permission, which thereby removed the need for the cesspits at the end of the gardens of nos 8 to 12 King Edward Street. A comparison of the excavation plans with the 1st edition OS map shows that this particular cesspit belonged to no. 11 (Fig. 9).[27]

The cesspit was 1.5m square and constructed to the south-west of the building, abutting the rear wall of no. 11 King Edward Street. It consisted of single-skin brick walls to a height of 3.27m OD. It had a thin layer of wood under the floor and was filled with four successive deposits, only one of which, the primary deposit, was intact and was dated *c.* 1820–50. It contained an assemblage of 53 sherds, weighing 1.4kg, which included 14 vessels. The assemblage of the lower fills of the cesspit totalled only seven sherds of poorly-preserved tablewares comprising plates, soup plates, bowls and tea cups as well as tea cups in bone china and painted refined whiteware. The primary, capping fill, of the cesspit contained an assemblage of 48 sherds (1.3kg) from 14 vessels which comprised a mix of finer tablewares, such as three transfer-printed whiteware teacups (two of London shape with a matching saucer decorated with a blue Chinoiserie print and one cup decorated with a woman sitting at table in a landscape scene), more mundane household vessels including a Sunderland mottled slipware dish, a yellow mocha decorated chamber pot, an English stoneware blacking bottle and some ceramic household fittings, for example, a blue transfer-printed whiteware 'fixed' (i.e. plumbed) wash basin.

In 1871, the three properties at the north end of King Edward Street, nos 10, 11 and 12 were sold by the Bridewell estate to the East London Railway Company.[28] However, ownership of the properties was transferred just after the 1871 census as people are recorded in residence at no. 11. It is likely that the houses were demolished soon afterwards as they do not appear on the Ordnance Survey 2nd edition 1:1250 scale map of 1894.

In 1901, Messrs Alex Jacob & Co lodged plans with the Engineers' department of the then Borough of Stepney for two proposed sheds abutting the air shaft.[29] Shed 3 (it was part of a complex of three sheds, shed 1 having already been erected) was constructed and was used by Alex Jacob's paper and rag collection business for a number of years. However, Jacobs & Co operated until the 1930s and the shed was then used by a successive range of businesses until its demolition in 2008.[30] The only find of 20th-century date was a single advertising label from the American Swift Beef Company depicting a calendar of the years 1907–8. The corner of a modern building (B3) was located in the south edge of shaft 1 with a concrete floor and small internal divisions; it probably relates to shed 2.

Acknowledgements

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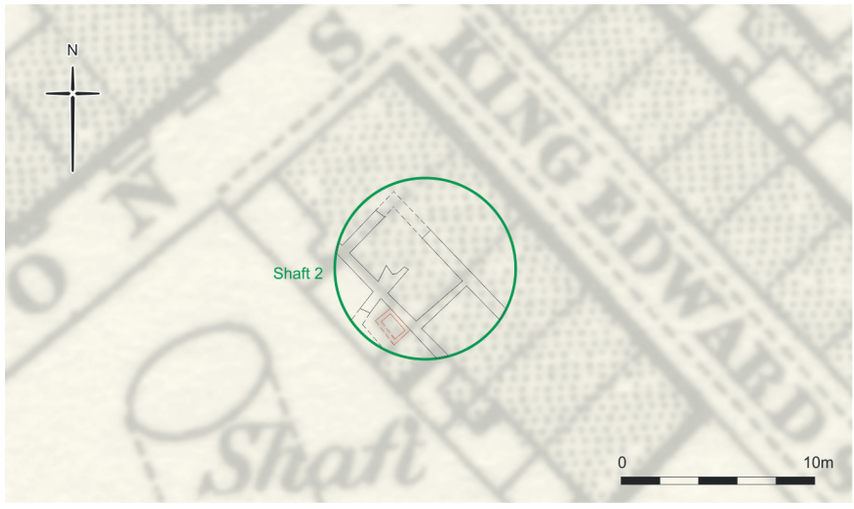
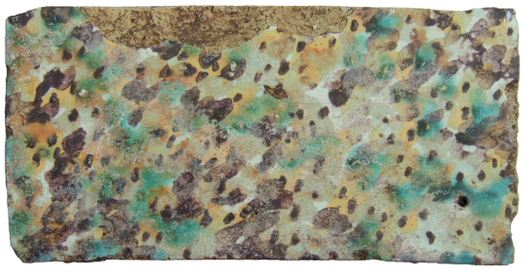


Fig. 9: plan showing building 1 in relation to 1st edition Ordnance Survey map, 1868; cesspit shown by red outline

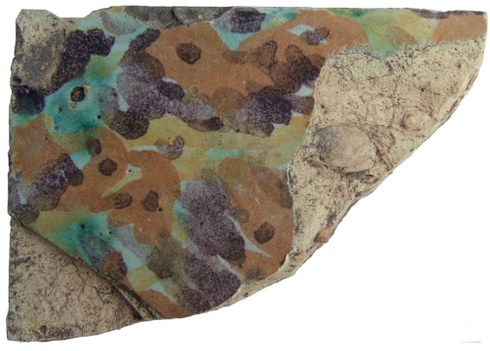
New style tile?

John Phillips examines what appear to be the first examples of colourful flecked Tudor/Stuart-period tile in London, and perhaps Britain.

A recent excavation of the former Portioner's House in Beddington Park (BDK12) produced three pieces of tin-glazed floor tile with flecked decoration.[1] There are two colour schemes: one using white, green, yellow and purple decoration with a trace of brown, the other with a lot of brown. One tile preserved its original width of 136 mm. One edge had been trimmed with a knife cut while the clay was still soft. The thickness of two tiles shown here tapers from 15 mm to 18 mm.



The tiles probably date from the late 16th or the first half of the 17th century. The 16th century occupants of the Portioner's house are not certainly known, but it had become the rectory of Beddington by 1601 and remained so until about 1789. It was then let to two successive tenants and finally demolished in or about 1843. The tiles appear expensive for the house and may have been reused from Carew Manor, about 220 m away, where four small pieces with the brown design have been found, one in demolition rubble in a secure early 18th century context. There are precedents for the design in the Netherlands but it is not known in London in the 16th or early 17th century.[2]



1. The site is on the eastern edge of the London Borough of Sutton at TQ 2945 6513.
2. Ian Betts *pers.comm*.

archaeological fieldwork at Wapping Station; and David Divers of English Heritage. The site was managed by George Dennis and supervised by Sian Anthony. The author would like to thank all the MOLA staff who worked on the site.

The report includes contributions by Enid Allison (insect remains), Ian Betts (building material), Nigel Cameron (diatom sequence), Anne Davis (plant remains), Geoff Egan (accessioned finds), Rupert Featherby (historical sources), Nigel Jeffries and Lucy Whittingham (post-Roman pottery), Mike Morley and Graham Spurr (geoarchaeology), Jacqui Pearce (clay tobacco pipes), Alan Pipe (animal bone), Dr Rob Scaife (pollen sequence) and John E. Whittaker (foram/ostrocod sequence). Illustrations were prepared by Juan Jose Fuldain, site photography by Maggie Cox and finds photography by Andy Chopping.

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1. The site archive will be placed in the London Archaeological Archive and Research Centre under the site code WPO08.
2. S. Anthony and M. Morley *East London line project, Central Section, Wapping Station, Cinnamon Street, London, E1; A post-excavation assessment,* unpubl MOLA archive report (2008), 7–8. The National Grid Reference is TQ 534993 180238.
3. www.geog.qmul.ac.uk/victorianlondon
4. M. Morley, and R.G. Scaife (in prep) 'Late Quaternary floodplain landscapes responding to climatic and anthropogenic forcing: evidence from the Lower Thames in East London and implications regarding past human activity'; V. Yendell (in prep) 'Towards a human scale view of the Holocene Thames in east London: similarities in deposit sequence versus integrated palaeo-environmental and topographic landscape reconstruction' *Trans London Middlesex Archaeol Soc.*
5. M. Morley 'The geoarchaeological assessment' in *op cit* fn 2, 51–2.
6. *Victoria County History Middlesex, **11** – Stepney , Bethnal Green,* 1–63.
7. D. Morris and K. Cozens *Wapping 1600-1800: A social history of an early modern London maritime suburb* (2009) 2.
8. N. Jeffries 'The pottery' in *op cit* fn 2, 19–22.
9. I. Betts 'The building material' *op cit* fn 2, 17–19.
10. The National Archives (TNA), MR 1/248, Middlesex (now in London Borough of Tower Hamlets). 'Four plans of names areas with their several housings and wharves, 1635'.
11. W. Morgan 1682 'London &c Actually Surveyed', reproduced in H. Margary *London &c Actually Surveyed' by William Morgan, 1682* (1977).
12. J Pearce 'Clay tobacco pipes' *op cit* fn 2, 25–7.
13. Morris and Cozens *op cit* fn 7, 15–16.
14. Betts *op cit* fn 2, 17–19.
15. London Metropolitan Archives (LMA), Bridewell Estate Records CLC/275/MS33361: documents relating to houses built along the foreshore of the River Thames and to stairs to the Thames – details re 1673 fire; 1700–1848.
16. N. Holder and N. Jeffries *Spitalfields: a history of the London suburb from 1539 to the 1880s, Archaeological excavations at Spitalfields Market 1991–2007, volume 4,* MOLA Monogr Ser in prep, 309–18.
17. TNA lay subsidies for Wapping, 1598 E179/142/239, 1610 E179/142/270 and 1626 E179/142/292.
18. LMA, Wapping parish registers P93/JN2.
19. Morris and Cozens, *op cit* fn 7.
20. LMA, Sewer or Level: Lower Wapping, 1774, THCS/2343, 1795 THCS/275, 1846, THCS/530.
21. R. Horwood *Plan of the Cities of London and Westminster the Borough of Southwark and parts adjoining shewing every house* (1799).
22. LMA, Sun Fire Insurance MS11936/423/725919: 11 King Edward Street, 1802.
23. LMA, Sun Fire Insurance MS11936/423/873403: Nos 8–12 King Edward Street, 1812.
24. LMA, CLC/275/MS33370.
25. Census records for 1841, HO107/715, 1851, HO 107/1550, 1861, RG9/283, 1871, RG10/545.
26. Tower Hamlets Archive (THA), L/LBW/A/2/1.
27. Ordnance Survey 1st edition 5in:mile map of 1871.
28. LMA, CLC/275/33370, Wapping Estates: deeds, papers and correspondence concerning the transfer of land at Wapping to the Thames Tunnel Company 1824–40 and its successor the East London Railway Company 1805, 1824–1916.
29. THA, L/THL/D/2/30/37.
30. E. Dwyer *The impact of the railways in the East End 1835–2010* MOLA Monogr 52 (2011).