

Excavations at Empire Warehouse, Bankside: new evidence for bear-baiting in Southwark, 1522–1682

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Introduction

This report summarises the results of two phases of investigation carried out

by AOC Archaeology during 2012 and 2015 at the site of Empire Warehouse on Bear Gardens, Southwark (EMH12,

NGR: TQ 53225 18047; Fig 1).¹ The excavations took place in eight areas (Fig 2, Areas 1–8) and produced significant faunal assemblages interpreted as being related to bear-baiting, which was a popular form of entertainment in the area during the 16th and 17th centuries. Cartographic evidence suggests that the site lay within an area of yards, kennels and ponds associated with the Bankside bear-baiting arena, and the faunal assemblages recovered represent new evidence for bear-baiting in Southwark.

Previous excavations by MOLA within the area of Empire Warehouse (EWH08) and 1 Bear Gardens/2 Rose Alley (BGU08; Fig 1)² also produced similar large animal bone assemblages which have been included for comparison in this discussion. This article summarises the results of the investigation with a focus on the horse, dog and bear skeletal remains associated with bear-baiting.

A history of bear-baiting in Southwark

Animal-baiting was a popular form of entertainment in Southwark between the mid-16th and late 17th centuries, practised in purpose-built arenas, known as 'bear pits' or 'bear gardens' with adjoining kennels and bear houses.³ A bull-baiting arena,⁴ bear-baiting arena and dog kennels are visible on the Agas map of c. 1562 (Fig 3) close to the south bank of the Thames, representing the earliest structures of their kind in this area. The first arena to be built within this area was Payne's Standings (Bear Garden 3). It predated 1540 and was subsequently rebuilt in 1583 (Bear Garden 3A). This complex stood until the early 17th

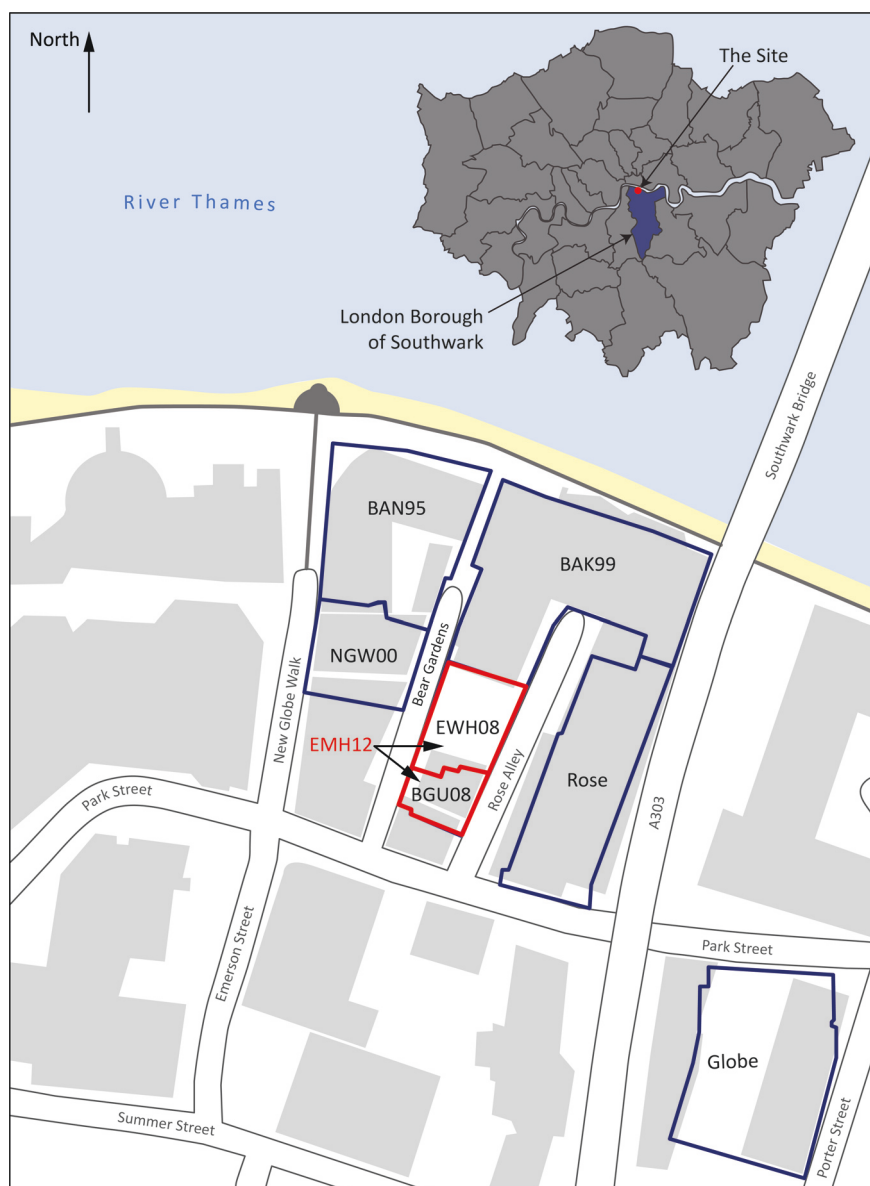


Fig 1: site location showing the Bankside area between New Globe Walk and Southwark Bridge Road and recently excavated sites (after Mackinder et al 2013, Fig 3): Benbow House (BAN95), Riverside House (BAK99), New Globe Walk (NGW00), Empire Warehouse evaluation (EWH08), 1 Bear Gardens/Rose Alley evaluation (BGU08), Empire Warehouse AOC excavation (EMH12)

century when it was replaced in 1613/14 by The Hope Playhouse, a bear-baiting arena and theatre (Bear Garden 4; see Fig 2).

Despite Parliamentary orders to the contrary, bear-baiting continued at The Hope until 1656 and then, following a brief hiatus, Davies' Bear Garden (Bear Garden 5) was built in 1662. The cessation of bear-baiting activities in this locality was eventually marked with the demolition of Davies' Bear Garden in 1682. Historical information concerning the quantity of animals kept for baiting purposes refers to 120 dogs, three bulls and nine bears (five great and four other bears) in the bear gardens dated to c. 1590, while by 1638 there appear to have been 70 dogs (mastiffs) and as many as 19 bears.⁵ The buried remains of Bear Gardens 3–5, including the Hope Playhouse, were protected through scheduling in 2016 (List Entry No. 1433280).

The archaeological evidence

The medieval sequence – Period 1: 13th to early 16th century

The earliest sequence of land use at Empire Warehouse (EMH12) was represented in Areas 5–8 by reclaimed alluvium and medieval silt deposits (Figs 2 & 4). The lowest deposit of alluvium, (506), lay at 0.56m OD and represented low-lying marshy ground. This was sealed by clayey silt (505, 608, 703 and 808) across the site occupying the same stratigraphic level (1.12m OD in Area 8 and 1.06m OD in Area 5). A second, darker layer of brown alluvial silt overlaid this deposit (504, 607, 702 and 807).

Small assemblages of pottery and ceramic building material characterise this early occupation phase, dating from between 1275 and 1500. An assemblage of 23 sherds (3.8kg, 19 ENV) contains London-type ware (LOND), Surrey whiteware, coarse Surrey-Hampshire border ware (CBW), Kingston-type ware (KING), and late London type ware (LLON). Within the assemblage of ceramic building material, medieval roof peg tile (102 fragments, 7.338kg) was the most common, ranging in date from 1180–1450 and early post-medieval peg tile from c. 1480 onwards. Of note are examples of medieval 'Westminster' (1250–1310) and Penn (1350–90) floor

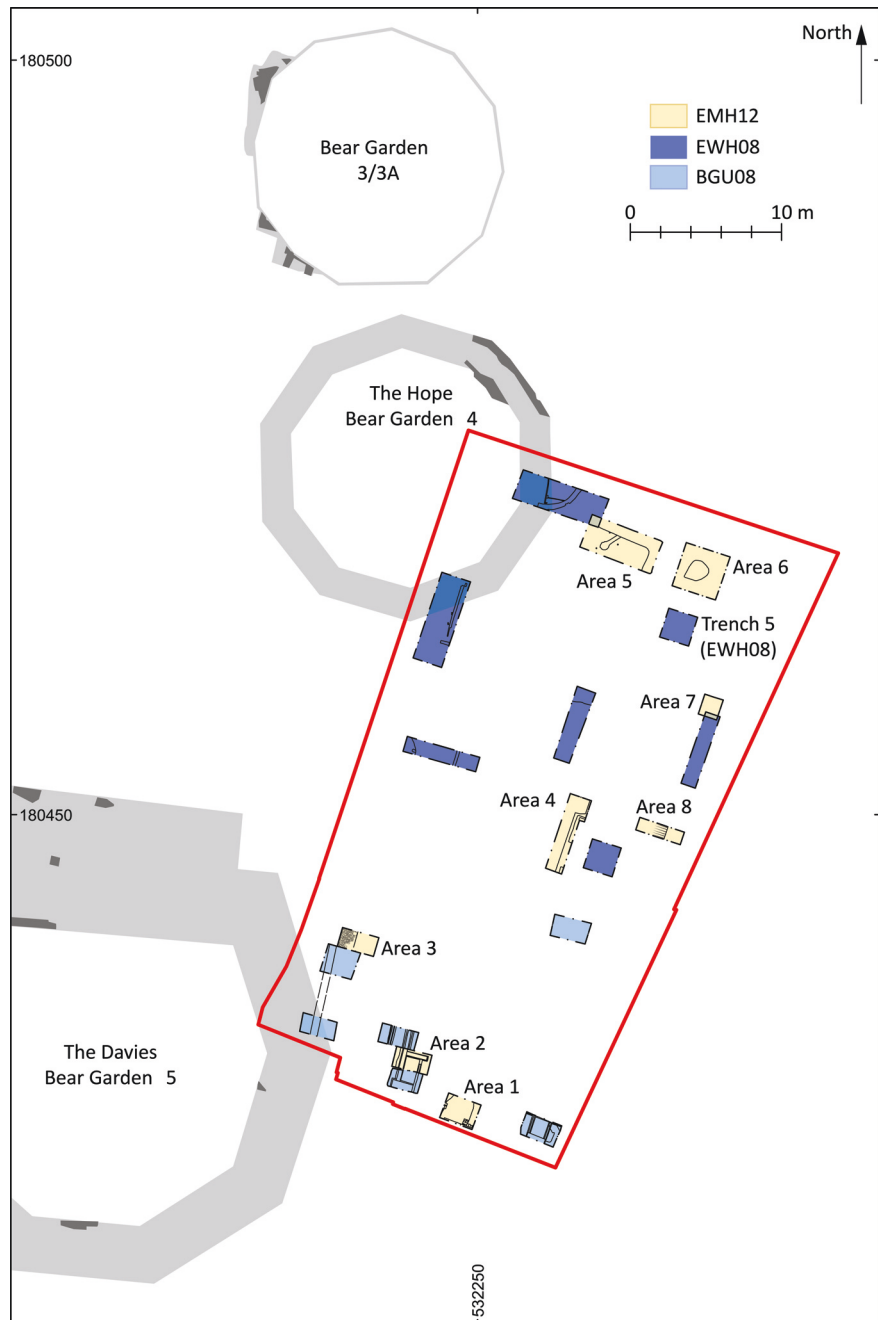


Fig 2: archaeological investigation trenches for Empire Warehouse (EWH08) and (EMH12) and 1 Bear Gardens/2 Rose Alley (BGU08) located in position with the outline plans of Bear Gardens 3, 3A, 4 and 5

tile, also found at Riverside House and potentially derived from nearby high-status buildings.⁶ A small element of redeposited/residual Roman pottery and tile was found in the Period 1 silt layers.

Early post-medieval activity – Period 2, Phase 1: mid-16th to early 17th century
There was no continuous occupational interface preserved across the site between Period 1 and Period 2 except in Areas 6 and 8. The Period 1 silt layers (504, 607, 702 and 807) were truncated to between 1.39m and 1.45m OD by the basement of Empire Warehouse,

which was built in 1905. However, three principal features in Areas 4, 6 and 8 represented the development of land after 1580 in a north–south boundary ditch [804] and in two pits [606] and [403] (Fig 4), dated by pottery and ceramic building material to between 1580–1610. Ditch [804] had four fills (806, 803, 805 and 802). The lower fill (806) contained no pottery but examples of post-medieval peg tile (fabric 2276) dating from 1480 onwards were present.⁷

Two of the upper fills (803 and 805) contained early post-medieval wares

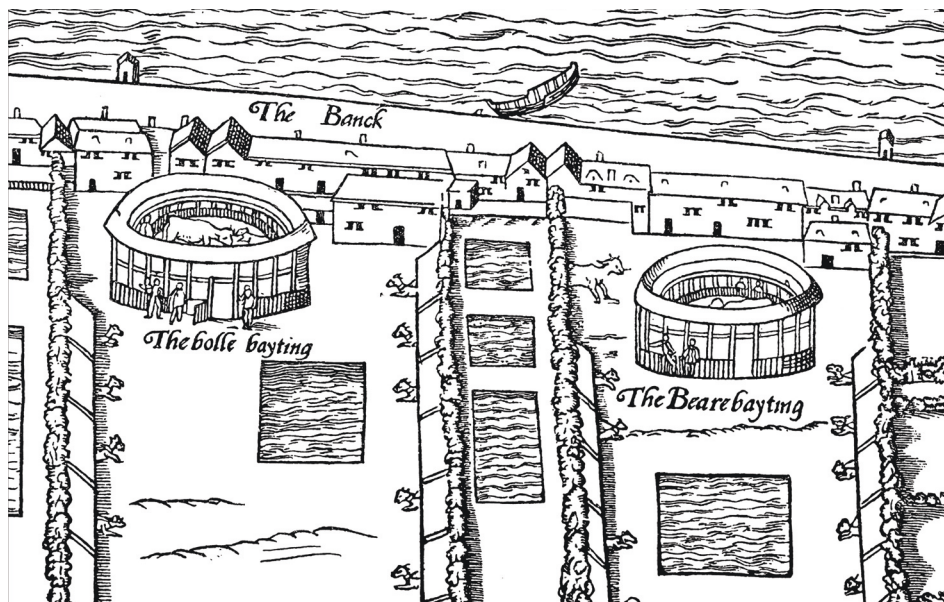


Fig 3: detail of the Agas map (c. 1562) showing the Bankside area with Bear Garden 2 (left) and 3 (right), the rows of dog kennels and the ponds 'for the washing of the bears' (CC BY-SA 4.0)

such as London-area red earthenwares (PMRE, PMR) and Surrey-Hampshire borderware with green glaze (BORDG) which date the fill of Ditch [804] as between 1580–1600. The latest layer (802) over Ditch [804] contained a small pottery assemblage dated 1550–1610. Also in the various fills of [804] were shellfish food remains including oyster (*ostriidae*), cockle (*cardiidae*) and winkle (*Littorina littorea*)⁸ and food waste such as cattle bones and a large faunal assemblage.

Pit [403] in Area 4 covered an area over 5m long, 1.3m wide and of 0.7m depth, and the presence of fish vertebrae in its fill may suggest that this was the re-use of an original Bankside fishpond or 'stew' as found both at Riverside House (BAK99)⁹ and Benbow House (BAN95).¹⁰ Both Pit [403] in Area 4 and Pit [606] in Area 6 were filled with dark organic sandy silt containing large assemblages of animal bone, with Pit [606] producing a small assemblage of residual medieval pottery comprised of an early post-medieval peg tile dated from 1480 onwards and an early post-medieval brick (fabric 3033) dating between 1450–1700.

By contrast, Pit [403] produced a rich cultural assemblage of early post-medieval pottery, ceramic building material and food waste in the form of shellfish including oyster (*ostriidae*), cockle (*cardiidae*) and mussel (*mytilidae*), occasional fish vertebrae, small mammal bones and hazelnut shell.¹¹

The early post-medieval pottery

assemblage (28 ENV, 0.8kg) includes early post-medieval London-area red earthenware (PMRE, PMSRG/Y) cauldrons, pipkins, deep bowls and a dish with incised line decoration on the rim, post-medieval red earthenware (PMR) and a post-medieval black-glazed redware (PMBL) mug/jug, dating the assemblage to 1580–1610. A small group of imported Raeren, Cologne/Frechen and Siegburg stoneware drinking vessels are also represented. One fragment of a plain clay tobacco pipe bowl (1640–1710) is presumed to be intrusive in this context.

A small group of metal objects, recovered from Pit [403], comprised an iron knife blade, a fragment of a moulded lead-alloy/tin object, a single copper-alloy pin and several small iron nails and fittings. The single-edged iron blade, possibly from a knife or set of shears (Fig 5),¹² has an elongated triangular blade, a straight back and a strongly tapering cutting edge. It has an unusually long narrow tip which has been bent back on itself at a sharp angle. The blade (107.5mm long and 19.5mm wide), was broken just beyond the rounded heel of the cutting edge and the tang is missing. The long narrow blade tip is more common on simple wrought iron shears for cutting cloth and hair.¹³

A moulded lead-alloy/tin fragment (RF18), incomplete and flattened, cannot be readily identified. Moulded ornamentation in the form of raised and recessed mouldings, now damaged,

are present on one face and only a small portion of a curving original edge survives. A torn rectangular notch on one edge suggests the presence of openwork elements to the design, but too little of the original edges of the sheet survive to determine its form and function with certainty.

This is possibly a fragment (surviving length 39.5mm) of a lead-alloy/tin openwork mirror case,¹⁴ a cheaply produced 16th-century badge¹⁵ or a miniature object, known as a 'trifle' in the late medieval and early post-medieval periods, used as a child's plaything.¹⁶ Although a child's toy may seem out of place amongst refuse discarded from a bear-baiting arena, documentary sources relating to the nearby Hope Playhouse note that children came to see the animals, particularly the bears, as at a zoo.¹⁷

The copper-alloy wound wire-headed pin (RF15), intact with the shank bent mid-length at a 90-degree angle, suggests casual loss during use. Such pins, used principally as dress pins for holding together women's garments, are common finds on urban sites and were produced from the 13th–early 20th century. They were particularly used between the 16th and 18th centuries.¹⁸ The pin (similar to Caple's Type B/C pin), with a crimped spherical head and short shank, becomes increasingly popular from the mid-16th century and is the dominant pin form used after 1700.¹⁹

A small number of incomplete hand-forged iron carpentry nails, a tack and a hooked terminal (RF16) were also recovered. The nails, with square-sectioned shanks and flat sub-circular heads, would have been used with such internal timber fixtures such as wooden panelling or furniture.

With the exception of the pin, a small item likely to have been accidentally lost during use, the other metal objects from Pit [403] are incomplete and were broken at the time of their disposal. Their recovery from a pit containing food debris associated with mid-16th- to early 17th-century bear-baiting gardens implies that they may represent broken items and floor sweepings from the nearby arenas.

One singular deposit (038) in the Empire Warehouse evaluation (Fig 4, EWH08, Trench 5) may also have been the infill of an original Bankside

fishpond and contained 75kg (770 fragments) of animal bone. The contents were dated by the ceramic assemblage as 1660–1700,²⁰ but this post-medieval assemblage may be intrusive. As such, the feature has been included here as Period 2, Phase 1/Phase 2.

Post-medieval activity –

Period 2, Phase 2: late 17th century
 Within the Empire Warehouse (EMH12) sequence, the top of the early post-medieval activity (Period 2, Phase 1) was truncated by later basements. The next phase dates from the early 17th century in Area 3, where the deposits

are predominantly associated with tin-glazed earthenware waste thought to be associated with the Bear Gardens Potworks of 1670–1710. Within this phase, a sequence of clayey silt deposits (314–309) frequently included charcoal and gravel, possibly from reworked earlier deposits and manufacturing waste.

In the lower deposits, the waste was primarily tin-glazed earthenware kiln waste (saggars, pegs) and biscuit-fired earthenware, while the upper layers also contained industrial waste from ironworking and glass-working. This correlates with previous research

suggesting glass-working at the Bear Gardens glasshouse commenced by 1671.²¹ An assemblage of biscuit-fired earthenware in these contexts compares with 1650–70 products found at Riverside House. Of note is an example of a thin wall tile with knife-cut edges in context (311), which is of interest as wall tiles of this proportion were only produced after c. 1676.²² The final layer of industrial waste was sealed by a thin layer of silt (308) laid down as a foundation for the building now known as 1 Bear Gardens.

Within 1 Bear Gardens, deposits of made ground (208–214) were of a

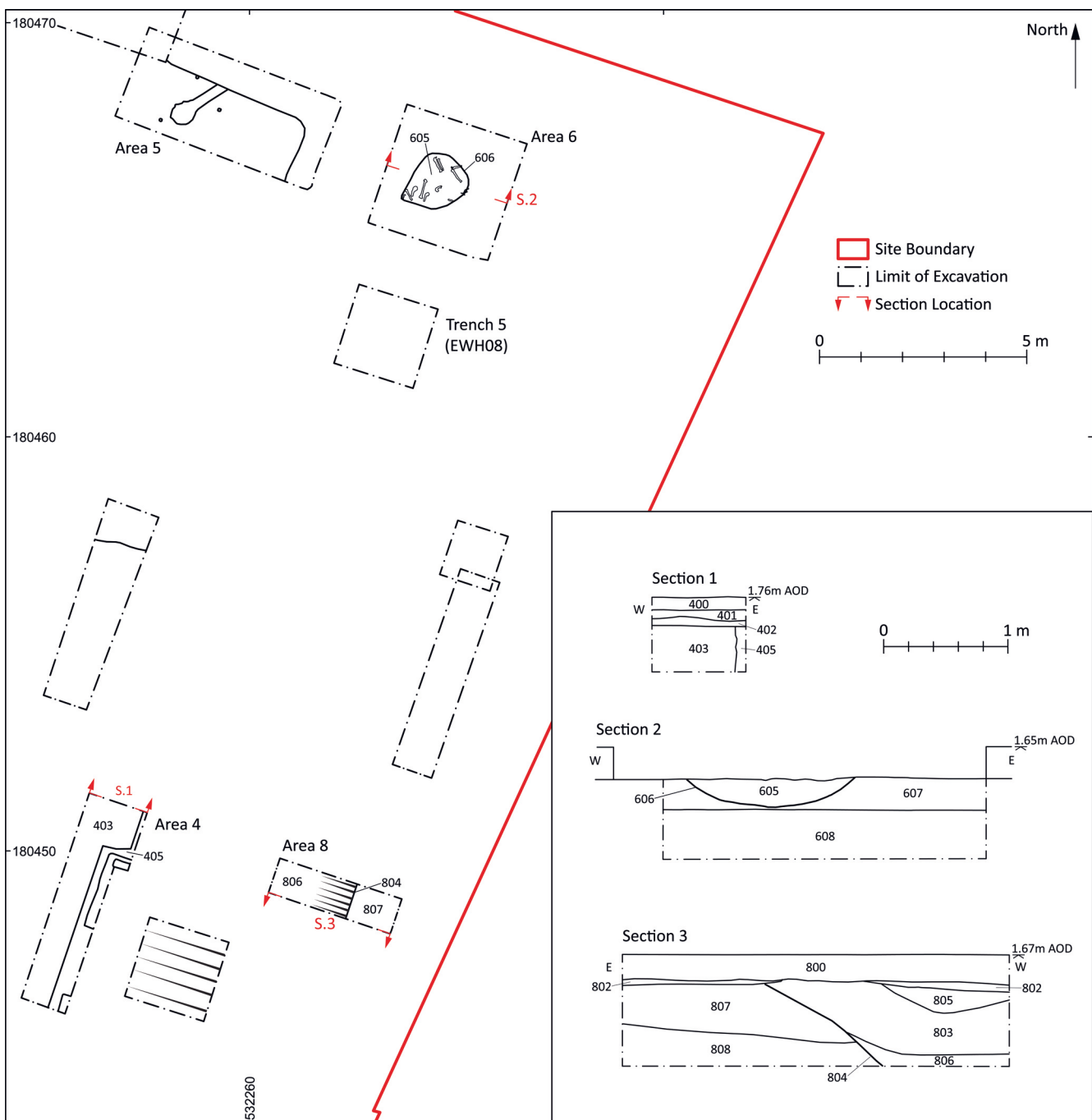


Fig 4: plan of EMH12 Period 2, phase 1 features and section drawings for Areas 4, 6 and 8 with location of EWH08 Trench 5 also shown

different, coarse, character containing industrial glass and ceramic waste; saggars, crucibles and glass slag and dated by clay tobacco pipe as mid-17th–early 18th century in date. All these layers contained waste likely to have come from the nearby Bear Garden Potworks and other industries.

Late post-medieval activity – Period 2, Phase 3: early 18th–19th century and Phase 4: late 19th century–present

On the southern perimeter of the site, late 18th- and 19th-century activity was represented by floor surfaces (107), late 18th- to 19th-century wall footings (105, 111, 202, 203, 205 and 215) and dumps of material from industrial processes. The dating evidence comes from a clay tobacco pipe bowl of 1780–1820. Two phases of 18th- and 19th-century building were represented by foundations. The latest concrete and cobbled surface structures on the site relate to the late 19th- and 20th-century construction of 1 Bear Gardens, 1 Rose Alley and Empire Warehouse.

The 1792–9 version of Richard Horwood’s map of Bankside shows three properties in the location of 1 Bear Gardens behind a short courtyard. This is likely to be the building represented in the archaeological record by the fragmentary foundations recorded in Area 1 [105 and 107] and Area 2 [215]. A rectangular group of buildings is indicated, oriented parallel to Bear Gardens. The latest concrete and cobbled surface structures on the site relate to the late 19th- and 20th-

century construction of 1 Bear Gardens, 1 Rose Alley and Empire Warehouse.

The Faunal Assemblage
by Kevin Rielly

The Empire Warehouse faunal assemblage demonstrates ‘signature’ attributes and is a significant addition to information already compiled from sites in the vicinity: Riverside House (BAK99), Benbow House (BAN95), New Globe Walk (NGW00), the Rose (SBH88; PR441) and the Globe (ACT91 and GLB96).²³ Similar to the faunal assemblage from Empire Warehouse, each of these sites provided significant quantities of horse and dog bones, the latter from notably large animals, as well as the occasional bear bone.²⁴

The analysis below includes the significant collection from Empire Warehouse dating up to the early 17th century (Period 2, Phase 1), which provides evidence for animal-baiting activities at the site. Assemblages from Period 2, Phase 2, may post-date such activities, but are also incorporated, as they tend to show similar attributes to those from earlier levels, as well as providing a large proportion of the bear bones recovered (Table 1).

A large collection of 17th-century remains recovered during previous investigations in (038) at Empire Warehouse (EWH08) is also included and, while the dating for this deposit is poor, the notable concentration of ‘signature’ species would suggest it was contemporary with bear-baiting

activities in the area and may relate to the Hope Playhouse or Davies’ Arena.

Horse (equid) evidence

The following discussion looks at each of the three main species in turn, starting with horse. A notable characteristic of the equid assemblage at Empire Warehouse is that all parts of the skeleton are represented,



Fig 5: single-edged iron blade, <RFI> from EMH12 [403], either from a knife or set of shears

suggesting the import of whole animals/carcasses. These were presumably butchered on the premises and, indeed, numerous cut-marked bones were observed among the collections from Empire Warehouse and from each of the five comparable sites in the vicinity.²⁵ The frequency of cut marks is somewhat variable, affecting from just 2% of the bones from Empire Warehouse (EWH12 Period 2, Phase 1, up to 13% from EWH08 (38)), and even higher proportions at New Globe Walk and Riverside House (40%) and Benbow House (70%).

This perhaps demonstrates a range of practitioners. All of these collections show a range of cut marks, indicating varied activities from skinning and jointing to defleshing, principally using a cleaver. Smaller proportions and absences of butchered bones from certain sites and phases could relate to a greater use of the knife, the lighter instrument undoubtedly causing less damage to the bone.

The absence of split vertebrae and the general abundance of complete or nearly complete limb bones are also particularly notable. These features suggest the negation of two of the principal components of cattle butchery: halving the carcass as an early stage in the jointing process and the removal of marrow and/or the production of marrow bones. It can perhaps be assumed that these activities may relate in part to the production of cooking joints and stew bones respectively, which are obviously not required when cutting up a carcass for dog meat.

An additional point of interest concerning the completeness of the bones is the relative absence of gnawing marks. While it can be supposed that bones were occasionally given to these dogs, the evidence

Periods:	1	2.1	2.1/2.2	2.2
Species				
Cattle	23	85	1	27
Equid	56 (6)	359 (17)	313 (21)	83 (6)
Cattle-size	30	142	3	24
Sheep/Goat	11	61	5	52
Pig	4	8		7
Sheep-size	8	31		6
Dog	67 (10)	343 (20)	65 (7)	23 (4)
Brown bear	7 (2)	7 (2)	1 (1)	15 (4)
Cat		2		
Rabbit		8		
Small mammal		2		
Chicken		3		
Grand Total	206	1,051	388	237

Table 1: species abundance in each Period showing total counts of bones and minimum number of individuals (in brackets), combining the data from the two evaluations (EWH08 and BGU08) and the later excavation (EMH12) with the exception of Periods 2.1/2.2 corresponding to the collection from EWH08 [38]

would suggest that these animals were principally fed on the meat stripped from the bone. This may well have taken place soon after slaughter as perhaps suggested by the practice of feeding ‘hunting hounds...horse-flesh newly slain, and warm at the feeding’.²⁶

It has been suggested that equids such as those found at Empire Warehouse were supplied via local knackers’ yards,²⁷ facilities where old animals were taken for slaughter. It is of interest in this respect that the trade in horses during this period included a category termed ‘dog horses’ signifying particularly low-priced animals.²⁸ The horses represented are undoubtedly older stock, generally aged in excess of 10 years with several closer to 20 years old,²⁹ and could be described as ‘horses in decline’.³⁰

The high proportion of bones with various pathological anomalies are also suggestive of low value, with potential age and/or work related conditions particularly prevalent. These include at least five separate animals with ankylosis (fusion) of the vertebrae and possibly as many as ten with anomalies in the tarsal joint and in particular the proximal metatarsus, featuring various degrees of osteophytic lipping, pitting of the articular surfaces, signs of infection and bone fusion. These may well include possible cases of spavin and at least two cases of osteoarthritis.

Similar pathological traits have been observed on the equid bones from the other animal-baiting sites, and close comparisons can also be drawn with the extensive array of partially articulated equid remains dated to the 15th and 16th centuries found at Elverton Street just west of Westminster Abbey, which clearly represent knackers’ waste.³¹

The supposed derivation of the equids used at the bear-baiting sites from knackers suggests that they are likely to represent a cross-section of the various equids used in London at this time. They undoubtedly encompass a wide array of sizes with those from Empire Warehouse ranging from a small pony at 123.9cm to a large dray horse at 172.5cm (N=99).³² The average values notably increase from 140.4cm in Period 2, Phase 1 (N=25) to 147.9cm (N=69) in the potentially later collection at Empire Warehouse,

EWH08 (38), this also providing the largest animal.

Dog (canid) evidence

There are numerous historical mentions of mastiff dogs at the bear gardens,³³ often referred to as large, fierce and ugly. These dogs presumably derive from medieval mastiffs, principally used as guard dogs although also for hunting (boars) and bear-baiting.³⁴ The shapes of the skulls found at Empire Warehouse, and indeed from the other bear garden collections, clearly demonstrate some similarity, sharing notably broad heads and palates (see Fig 6).³⁵ Their shoulder heights³⁶ are all in excess of 59cm with the majority between 65 and 77cm with one notably large specimen at 86.6cm (Period 2, Phase 1).

It is perhaps surprising that a proportion of these large dogs were female. The overall ratio from Empire Warehouse³⁷ is 16 males to 4 females with most of the latter sex from Period 2, Phase 1 demonstrating a ratio of 7:3. In contrast, each of the skulls which could be sexed from New Globe Walk, Riverside House and the Rose (a total of 8) were clearly male. A greater level of consistency is shown by the age distribution with very few examples of limb bones with unfused articular ends, these signifying animals younger than 1.5 years.³⁸ It would certainly seem that the majority of these dogs had enjoyed a reasonable number of years, although whether entirely as fighting animals is difficult to say.

It is known that the Master of the Bears (a Court appointment), in addition to licensing bear-wards (as here at Bankside) was also responsible for commissioning the collection of dogs for bear-baiting. These would have been collected from throughout the country. Historical evidence, pertaining to these bear gardens and dating to 1604, comments on dogs being obtained from as far away as Kent and Lancashire.³⁹ It does not mention the ages of the dogs collected, but they were presumably fully-grown adults.

Bear-baiting as a sport understandably took its toll on the animals concerned, despite the best efforts of the proprietors, who would of course suffer financially if baiting resulted in the demise of bull, bear or dog involved. Thus, these events were carefully choreographed, ensuring that

‘opponents could be separated before serious harm ensued’. Baiting was viewed as a ‘scenic spectacle, a showpiece of controlled violence under the auspices of a master-producer’.⁴⁰

While animals being killed outright would not necessarily be evident in the archaeological record, there is clear evidence for a variety of healed injuries. This is particularly visible among the dog skulls (13 out of 25) at this site, notably on the dorsal surface between the orbits and at the anterior extremity. One skull from (403) Period 2, Phase 1 exhibits traumatic injuries in both areas, with a depressed fracture near the left orbit and a clearly broken snout (Fig 6), while another skull, from (605), also Period 2, Phase 1, has suffered a heavy blow and/or a puncture wound near the right orbit (Fig 7). This could conceivably represent a bite mark. A number of these skulls also showed



Fig 6: dorsal view of a dog skull from EMH12 [403] (Period 2, phase 1) with a depressed fracture adjacent to the left orbit (A) and fracture lines at the anterior part of both nasal bones (arrowed)



Fig 7: latero-dorsal view of a dog skull from EMH12 [605] (Period 2, phase 1) showing a major fracture adjacent to the right orbit (arrowed)

damage to one or both canines.

Also of interest was a series of ribs, presumably from a single individual, each with callus formation, suggestive of partial to perhaps complete fractures, adjacent to the sternum. This could be interpreted as a crush injury, perhaps incurred during a baiting. A Spaniard, visiting London in 1544 referring to the bear-baiting, mentions that ‘the bears are ferocious and of great strength; they not only defend themselves with their teeth, but hug the dogs so closely with their forelegs, that, if they were not rescued by their masters they would be suffocated’.⁴¹

Butchery, as well as gnawing, marks signify that these animals were exploited after as well as before their death, joining the imported horse remains as dog food. The disarticulated nature of the dog remains is a clear indication of their dismemberment.

Bear (ursine) evidence

The bear skeletal remains recovered from Empire Warehouse most likely represent brown bears, although it is well known that polar or white bears were used at the Hope (Bear Garden 3) under the auspices of Philip Henslowe.⁴² The 19 bears mentioned by John Taylor in 1638, all referred to by name, mention two white bears: Will Tookey and Mad Besse.⁴³ Regarding the identification of the bear remains from this site, it should be noted that a posterior skull fragment from Empire Warehouse, EMH12 (403) Period 2, Phase 1, and a maxillary fragment from EMH12 (313) Period 2, Phase 2, (Fig 8) are clearly similar in size to the

corresponding parts of a brown bear skull found at Drapers’ Garden, City of London, dated to the 4th century AD (PCA Reference Collection).

There is a total of 30 bear skeletal fragments from this site, taken from most parts of the skeleton, with a notable concentration in Bear Garden, BGU08 (037) Period 2, Phase 2, comprising the major part of a single forepaw (five metacarpals and five phalanges). These and indeed the great majority of the bear remains are from fully adult individuals. Comparison with data compiled from the black bear⁴⁴ suggests that these bears are generally in excess of 4 to 6 years, but with a small proportion younger and some older than 6 to 8 years. The exception is a scapula from Empire Warehouse, EWH08 (010) Period 1, with an unfused proximal end signifying a juvenile, perhaps a 1st- or 2nd-year animal.

Similar age groups were noticed among the bear remains from the other sites, with a generally good proportion of those between 4 to 6 and 6 to 8 years of age. It can be suggested that this age range, including youngsters, may well suggest that these animals were trained for this sport from a young age.

Just two pathological specimens were noticed, both representing traumatic injuries to the anterior surface of the tibia. The first example, from Empire Warehouse, EMH12 (403) Period 2, Phase 1, shows a marked swelling (haematoma) close to the proximal end (knee joint). The other example exhibits a somewhat smaller haematoma at the distal end, ie close to the hock/ankle joint. These probably represent blunt force injuries and it is perhaps most likely that they were the result of handler damage or possibly self-inflicted, as opposed to having occurred during the baiting.

The demise of the bears was again marked by a degree of post-mortem usage, with some butchered bones (a pelvis with heavy jointing and two humeri with defleshing cuts). Unlike the canids and probably the equids, however, these bones may also represent cuts of meat intended for human consumption. Oddly, it was their feet which apparently offered the best eating, as mentioned by Turbeville writing in 1576,⁴⁵ which is perhaps significant considering the previously described forepaw from Bear Garden,

BGU08 (037). However, no cut marks were observed on these particular bones.

The other sites certainly provided further evidence for butchered bear remains, and the importance of this commodity is clearly highlighted by a letter written in 1607 by Edward Alleyn and Philip Henslowe, who had obtained joint Mastership of the Bears in 1604, referring to accounts for bear meat sent to a number of English towns, implying a relatively widespread trade in such meat during their tenure.⁴⁶

Discussion

Excavations at Empire Warehouse have revealed a glimpse into the sport of bear-baiting: a cruel and gruesome pastime by today’s standards, but one which was a popular form of entertainment in Britain until relatively recently (the banning of bear-baiting via the Cruelty to Animals Act did not occur until 1835). Nevertheless, bear-baiting, along with other forms of entertainment, shaped London’s Bankside, through the construction of a series of theatres and arenas during the 16th century. Archaeological investigations at the site of Empire Warehouse have provided details on how the area was used prior to this period, supporting existing understandings.

Land on the south side of the Thames was reclaimed in the early 12th century. Bankside became a private access road from c. 1218–19⁴⁷ and was the Kings Highway from 1539/40.⁴⁸ Evidence for land reclamation was identified at Empire Warehouse (EMH12), and was comparable with that identified at Riverside House (BAK99). The dates of pottery relating to this phase of activity at Empire Warehouse (Period 1: 13th–early 16th century) range from 1275–1500 and may extend into the early 16th century. It seems that tenements fronted the river from at least the 14th century, although further inland and to the south of Maiden Lane (modern Park Street), the area was open fields and meadows into the 15th century.⁴⁹ The lack of buildings of this date at the site of Empire Warehouse (EMH12) attests to this.

Evidence for bear-baiting was present on site in features and deposits dating to the mid-16th–early 17th

century (Period 2, Phase 1). These relate to a period of deliberate backfilling and disposal of carcasses from the bear-baiting arena in channels, pits and ponds/stews, equating to a similar phase of activity at Benbow House (BAN95)⁵⁰ and New Globe Walk (NGW00).⁵¹ With injuries consistent with bear-baiting and with ceramics dating to 1580–1610, these remains were most likely associated with Bear Gardens 3 and 3A dating to 1552/83 to 1613. There is no suggestion that the deposition of earlier 16th-century animal bone waste was restricted to the infilling of channels, as had been suggested in an early phase of investigation at New Globe Walk (NGW00).⁵²

Truncation on the site means that there is no continuous stratified sequence leading into the mid-/later 17th century, but finds derived from industrial processes provide information about the use of the site after the decline of bear-baiting activities (Period 2: Phases 2–4). A sequence of dumped deposits in Area 3 contains waste and biscuit-fired earthenware typical of both a tin-glazed earthenware potworks, c. 1670–1710, and the later glassworks, both of which are known to have been operating at the Bear Gardens. Despite the lack of industrial buildings, the distribution of industrial waste across the south end of the site is widespread and precedes 18th- and 19th-century building development.

Conclusion

The results of archaeological excavations at Empire Warehouse have added to our understanding of the wider Bankside area during the medieval and post-medieval periods, particular its rich history as a centre for

entertainment and leisure activities during the early post-medieval period, including the baiting of animals.

The numerous excavations within the Bankside area (Fig 1) have revealed the remains of the northern arenas (Bear Gardens 3, 3A and 4) as well as a portion of the kennels.⁵³

The faunal assemblages from contemporary deposits within these sites, now including Empire Warehouse, are undoubtedly associated with the bear-baiting activities practised in this locality, incorporating the remains of bears and mastiffs as well as large quantities of knackered horses, presumably brought to the kennels to feed the dogs. While principally related to Bear Gardens 3 and 3A,⁵⁴ this latest site may also have provided collections associated with the Hope Playhouse, Davies' arena, or both.

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Fig 8: brown bear maxilla from EMH12 [313] Period 2, phase 2 – lateral view

Conservation and Lucy Whittingham (post-excavation). Specialist contributions were made by Sue Pringle (ceramic building material), Lucy Whittingham (pottery) and Dawn McLaren (registered finds).

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Les Capon has worked in professional archaeology since 1989. He joined AOC Archaeology in 1996 and works on sites of all periods, also carrying out Historic Building Recording.

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5. C L Kingsford 'Paris Garden and the bear-baiting' *Archaeologia* 70 (1920), 166.

6. I M Betts *Medieval 'Westminster' floor tiles* MoLAS Monogr 11 (2002) 53; a decorated 'Westminster' floor tile (design W72, fabric 2199, 1250–1310) was found in the lowest alluvial deposit (608); a glazed Penn floor tile (1350–1390) was found in context (504).

7. Fragments of post-medieval peg tile fabric 2276 are characterised by fine moulding sand, a trait dating from c. 1480 onwards (S Pringle pers comm).

8. P Fitz 'The Molluscs' in L Capon *op cit* fn 1, 68.

9. *Op cit* fn 3, 14.

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11. Fitz *ibid*.

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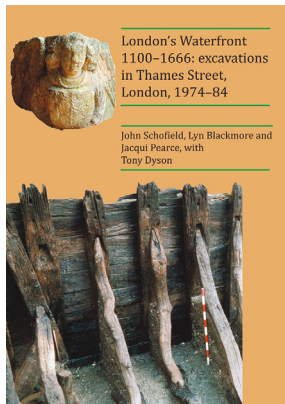
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London's Waterfront 1100–1666: excavations in Thames Street, London, 1974–84



**J Schofield, L Blackmore,
J Pearce & T Dyson**

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John Schofield is to be congratulated on his long-term commitment to this publication project (over 40 years in the making) as should the City of London Archaeological Trust, who supported so much of the post-excavation programme. The volume sits somewhere between an archive report and a considered synthesis, and is thus not an easy read. But that is because it is first and foremost a repository of information, much of it made accessible for the first time. There is indeed a wealth of information encapsulated in this volume waiting to be extracted and re-interpreted, and scholars will be drawing from it for the next 40 years.

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www.colat.org.uk/assets/doc/londons-waterfront-1100-1666.

17. J L Hotson *The Death of Christopher Marlowe* (1928), 68–9, quoted in *op cit* fn 3, 17.

18. *Op cit* fn 16, 281–3; C Caple 'The detection and definition of an industry: the English medieval and post medieval pin industry' *Archaeol Journal* **148** (1992), 241–55; C Caple 'Pins and Wires from Site SD' in C M Cunningham and P J Drury (eds) *Post medieval sites and their pottery: Moulsham Street, Chelmsford* CBA Research Report 54 (1985); C Caple *Objects. Reluctant witnesses to the past* (2006), 128–9;

A R Goodall 'Objects of non-ferrous metal' in J P Allan *Medieval and Post-Medieval finds from Exeter, 1971–80* Exeter Archaeol Rep 3 (1984), 337–48.

19. C Caple (1985) and (2006) *ibid*; A R Goodall (1984) *ibid*.

20. Jacqui Pearce, pers comm.

21. *Op cit* fn 4, 98.

22. Jacqui Pearce, pers comm.

23. A total of five adjacent sites, which are (moving anticlockwise about Empire Warehouse) Riverside house, Benbow house, New Globe Walk, the Rose and then the Globe playhouses, with information taken from J Liddle 'The animal bones' in A Mackinder and S Blatherwick *Excavations at Benbow House Southwark, London SE1* MOLA Archaeol Studies Ser III (2000), 52–4; J Liddle 'Animal bones' in *op cit* fn 3, 81–3; K Rielly 'Animal bones' in J Bowsher and P Miller *The Rose and the Globe – playhouses of Shakespeare's Bankside, Southwark, Excavations 1988–90* MOLA Archaeol Monogr 48 (2009), 248–52.

24. As initially demonstrated in the collection from Benbow House, J Liddle 'The animal bones' in Mackinder and Blatherwick *op cit* fn 10.

25. *Ibid*.

26. G Markham *Country contentments or, The husbandmans recreations* (1633) 17, quoted in Liddle *op cit* fn 23, 53.

27. See, for example, Liddle in *op cit* fn 23, 53.

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Stuart England (1988).

29. Ages calculated using crown heights after Levine 1982 and incisor wear in P C Goody *Horse anatomy. A pictorial approach to equine structure* (1983);

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32. Calculating shoulder heights from complete limb bones following the factors given in A von den Driesch and J A Boessneck 'Kritische Anmerkungen zur Widerristhöhenberechnung aus Längenmaßen vor- und frühgeschichtlicher Tierknochen' *Saugetierkundliche Mitteilungen* **22** (1974), 325–34 and where N is the number of bones.

33. See, for example, *op cit* fn 5, 161–2 and 166 as well as Mackinder *et al op cit* fn 23, 23.

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