Contextualizing counterfeits: Roman coin moulds in Britain and the Channel Islands

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ABSTRACT

This paper addresses the archaeological contexts of the clay moulds which were used to produce copies of Roman coins in third-century Britain. Research has focused primarily upon the technology and chronology of the use of moulds to produce copies of coins. The discarded remains of the used moulds are usually considered as 'waste' items derived from an industrial process. This paper focuses attention on the information for the archaeological contexts in which clay coin moulds were deposited. Using the best recorded finds, it builds upon earlier suggestions that disused moulds were regularly discarded in boundary locations (settlement boundaries, field boundaries, drainage features, shafts/wells, coastal locations and disused structures). It is proposed that the magical and ritual associations of production meant that the clay moulds derived from the copying operations, in addition to the coins that were produced, required careful handling.

Keywords: copying; coins; ritual; industry; water; context

> I cannot ... help mentioning my hope that ... these moulds, found at and near Edington, in such vast quantities, and in such various places, may possibly hereafter contribute towards clearing up the ancient topography of that particular neighbourhood. (Poole 1801, 103).

1. Introduction

This article explores the archaeological context of the 46 finds of Roman clay coin moulds (and mould fragments) that have been located in archaeological contexts across Britain and the Channel Islands (Figure 1).[1] These deposits vary from a single fragment of mould to

[1] I am very grateful to Professor Colin Haselgrove and Dr Richard Brickstock for help with and advice on this paper. Stephen Minnitt helped with information about the Somerset coin moulds, Jenny Hall provided advice about the London moulds and Fraser Hunter gave me access to his forthcoming article about the Scottish moulds. Figures 1, 4, 5 and 6 were produced by Christina Unwin. I am also most grateful to two anonymous referees for their detailed feedback on an earlier draft.

collections of over 800.[2] These items are dated by the impressions of Roman coins used to produce the copies and it is likely that most were used to produce copies of coins during the early- to mid-third century AD. The finds are spread across southern and eastern Britain, with clear concentrations in the south-west (Somerset/Dorset), the East Midlands and Yorkshire.[3] Comparable clay moulds are not uncommon in northern Gaul and Germany, indicating that this formed a regular method for copying coins across a large area of the western Roman Empire.[4]

This article identifies and characterizes the archaeological contexts in which the Roman-period moulds were deposited across Britain and the Channel Islands, which it is argued in the detailed study of context below were often connected with boundaries of various types (Figure 2). Some of these contexts relate to physical boundaries in the landscape but also included are pits, wells/shafts, peatland and coastal contexts, which formed other types of boundary locations.[5] It builds on an earlier paper by Fleur Kemmers which explored the potential votive context of deposits of clay coin moulds from the north-western Roman provinces, including abandoned structures, dried-up wells, sewers and rivers.[6] The limitation of the available information for the context of the clay moulds found across northern Gaul, Germany and Britain is noted by Kemmers, who observes that less than a third of the 170 discoveries have any contextual information. This study draws upon the British finds and provides support for Kemmers' conclusion that significant contexts of deposition are common. Table 1 lists 46 finds of clay moulds and mould fragments, from Britain and the Channel Islands.[7] Appendix A addresses the methods used for collecting this

[2] Important studies include: Boon and Rhatz 1966; Boon 1988; Hall 2014a; Tilley 2021; Brickstock 2022

[3] More research is required to assess the distribution of these moulds across Britain, but this article does not explore this issue. The denominations of the coins copied is also an important topic for research but there is not the space to explore this issue here.

[4] Aubin 2013.

[5] It is observed below that the moulds in peatland contexts were deposited at the edge of the occupied, cultivated and settled lands.

[6] Kemmers 2018, 196–9.

[7] The find from the Channel Islands is included since it is a well excavated example, although it could clearly be more closely connected with the coin copying that occurred on the Continent. The text refers general to 'coin moulds' although it should be acknowledged that this covers both complete moulds and fragments. These moulds are identified by the impression of Roman coins on one or both faces. Many highly fragmentary and damaged moulds may not have been identified during excavations.

data. The better recorded examples, 17 in number, are listed in Table 2, and these are mostly derived from archaeological excavations that have provided some detailed information on their contexts of discovery. The general contexts of a few of the earlier finds listed in Table 1 also raise interesting issues which are reviewed below.

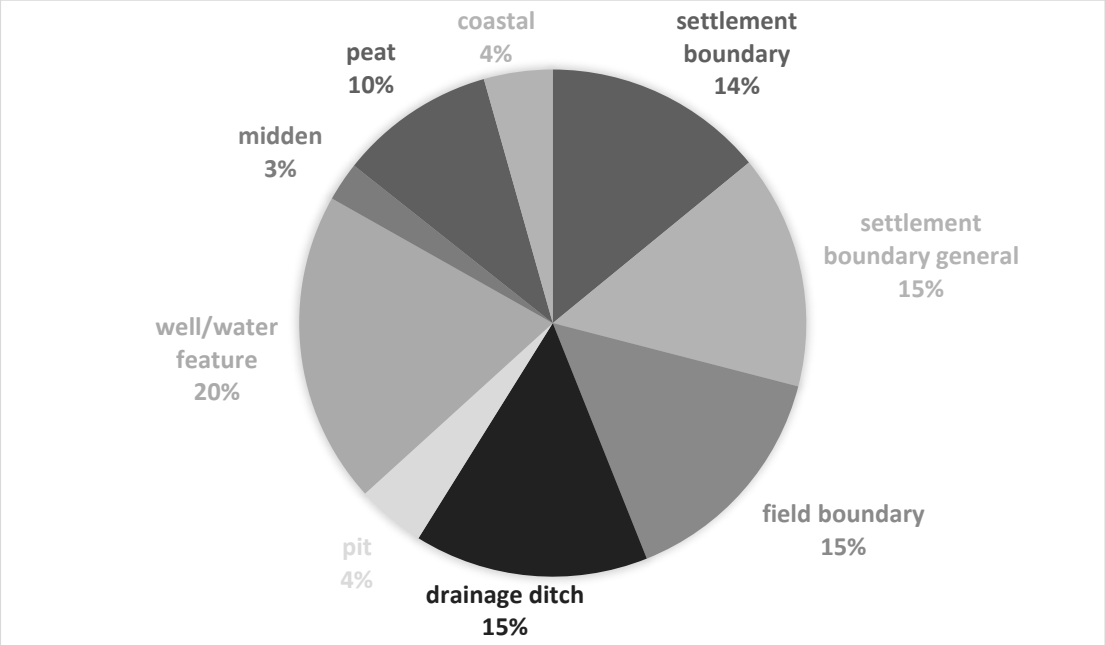

Figure 2. The number of times that collections of coin moulds are deposited in defined context types (see below for these context types). Table 1 illustrates that individual collections of moulds can fall into more than one of the nine context types. In the cases where a find falls into more than one context type, the total number of moulds has been divided by the number of contexts represented (for example La Plaiderie has three context types, so the 27 moulds are divided by three in categorizing the totals number of moulds per context type in Figures 2 and 3 and Tables 3 and 4).

1.1. Manufacture of coin copies using clay moulds

'Official' Roman coins were produced at mints across the empire using metal blanks, which were struck between engraved dies. Official Roman mints were only present in Britain for short periods, including the reigns of the usurper emperors Carausius and Allectus (AD 286-296) and under the Tetrarchy until around AD 325. Coins were copied in Britain, however, throughout the Roman period.[8] Several hoards of coin copying materials connected with the

[8] Hall 2014a, 167.

striking of coins have been found across Britain and these sometimes include iron dies.[9] Despite the use of dies to produce many copies, the simplest way to produce such an item was to cast it in a clay mould and this appears to have been the main way that coins were copied during the early to mid-third centuries.[10] Before and after this, much of the copying of Roman coins was conducted using iron dies.[11] These moulds were used to produce copies of silver *denarii* and copper-alloy *dupondii* and *asses*.[12]

Most past studies of these moulds have focused upon the technology and chronology of production of copies, and the meaning of counterfeiting as a clandestine or semi-authorized act.[13] There has been a suggestion that, although the copying of coinage may sometimes have been considered a serious criminal action,[14] at least some of this activity during the third century—the main periods in which the clay moulds were used—was intended to alleviate a shortage of coinage available to pay soldiers and to provide currency for economic transactions.[15] The production of copies of coins may also often have been intended to create items for deposition at sacred sites and in other ritual contexts.[16]

Excavations of sites at which coin were copied in Belgium, Gaul and France, indicates that the scale of production varied from fairly sustained and serious operations to the small-scale and short-term forging of limited numbers of coins.[17] The quantities of moulds from several locations in Britain suggests sites at which sustained copying occurred, for example Lingwell Gate (near Wakefield, Yorkshire) and 85 London Wall (London).[18] At two of locations, La Plaiderie (St Peter's Port, Guernsey) and Lyde Road (Yeovil, Somerset), archaeological excavations uncovered kilns that may have been involved in producing the

[9] Elllis 1999, 224–5; Hall 2014a, 169.

[10] Brickstock has argued, as the result of the study of several collections of coin moulds, that this method of copying coins may characterize production during the period AD 238 to around 260 or 270 (2022, 128–9; Richard Brickstock per com.). This suggests that many old coins were used in the copying process.

[11] Boon 1998, 124.

[12] Hall 2014a, 168.

[13] cf. Boon 1988; King 1996; Hall 2014a; Tilley 2021.

[14] Boon 1988, 1-2.

[15] Hall 2014a, 171–2; Kemmers 2018, 201–2; Eckardt and Walton 2021, 137.

[16] Homes and Hunter 2001, 173; Walton and Moorhead 2016, 841; Kemmers 2018; Bland et al. 2020, 66, 229. Coin copies form a particular high percentage of the assemblages in certain ritual deposits, including at Bath, Piercebridge and Coventina's Well (cf. Eckardt and Walton 2021, 137–9).

[17] Aubin 2013.

[18] Tilley 2021; Hall 2014a.

copies (below). Materials such as slag, crucibles and miscast coins which have been found with moulds may also suggest that several of the other finds on Table 1 were associated with coin production. Some of the well recorded finds, however, show no clear association with the industrial production of coinage and it is suggested below that these moulds may have been removed to deposit in boundary locations.

Clay moulds were used in an industrial process that made multiple copies; stacks or piles of moulds produced from seven and eleven individual coins.[19] Each individual mould was produced by impressing a coin between two discs of clay and stacks of clay discs were created, the coins removed, and the stacks encased within a rough clay vessel.[20] The copies were produced by casting using molten metal. Most of the coins used to create the moulds date to the late second and early third centuries, and the (assumed) date of the latest coin used to produce the moulds is included on Table 1.[21] There is considerable uncertainty about the extent to which recent coins were always used to produce the impressions in the moulds and some old coins may have been utilized in certain cases. The coins included in the collection from 85 London Wall, for example, mostly included issues of emperors reigning between AD 194 and 253, although three worn second-century coins were also used and had presumably remained in circulation for decades.[22]

The better stratified examples of moulds from recent excavations enable a fuller assessment of the degree to which old coins may have been used in copying and this provides a strong suggestion that at least some of these copying activities may have occurred several decades after the date of issue of the latest coins that were copied, as is evident from two cases discussed more fully below. At Redhouse (Adwick Le Street, Doncaster), for example, the context with the moulds was securely dated to the AD 260s or 270s by the discovery of eight Radiate coins but none of the coins used to produce the moulds is known to have postdated AD 202.[23] At Lyons Court Farm, Whitchurch (Somerset) a deposit contained moulds that had been created with coins which were primarily dated to AD 260–74, but other finds from the same context dated deposition to the middle of the fourth century.[24] These cases suggest that the end date of the coins included on Table 1

[19] Boon 1998, 152; Brickstock 2022, 128–9.

[20] Hall 2014a, 172–6.

[21] Drawing upon Hall 2014a, Table 1. These end dates are mostly taken from the research of Boon and Hall but with additional information for the collections of moulds that have been added to those included in Hall's list.

[22] Hall 2014a, 179.

[23] Brickstock 2022.

[24] Boon and Rhatz 1966, 14–15, 23.

may predate the copying of the coins by several decades. Presumably either old coins had been used to produce the copies or the materials from coin production at these two locations had been deposited and then moved to a sealed context after several decades.

Another detail that complicates the process of coin production in moulds is that on occasions these items were used to create blank copper-alloy discs. Where ceramic moulds are found which were not impressed with coins, these are assumed to have been used to create blanks for striking with an iron die. Most of the moulds from the deposit at Lyde Road, for example, were blank.[25] The discovery of coin blanks in certain contexts, such as the river finds from Piercebridge (County Durham), indicates these items may sometimes have been produced to deposit in place of cast or stamped coin.[26]

1.2. Explanations for the deposition of moulds

Recent studies of hoarding in the Roman period often suggest that items of metalwork were deposited for ritual reasons as offerings to gods and spirits of place in exchange for requests for favours.[27] These studies also acknowledge that valuable materials could sometimes be hoarded at times of stress and that individual hoards were not necessarily always intended to be closed. The *Iron Age and Roman Coin Hoards* volume assessed the potential ritual significance of the context in which coins were copied in the Roman period, observing that the available information emphasizes contexts such as caves, settlement boundaries and gateways.[28] This may help to explain some of the patterning in the context of the coin moulds, although well recorded finds of single or small quantities of moulds seem unlikely to directly represent production sites.

Many finds consist of small numbers; 29 of the 46 finds listed on Table 1 include ten moulds or fewer. The small numbers of poorly recorded finds from several well-known Roman sites may indicate that these items were misreported by antiquaries, having been found at less well-known locations elsewhere in the vicinity.[29] The prevalence of small quantities of moulds from so many sites cannot be entirely a result of the poor recording of early finds, however, since there are reliable records of single moulds from archeological excavations at a coastal midden at Brighouse Bay (Dumfries and Galloway), a drainage ditch at Stanion Villa (Northamptonshire) and an outdoor bathing pool at Wroxeter (Table

[25] Clelland and Budd 2010, 20. The quantity of blanks from Lyde Road is unparalleled in Britain.

[26] Eckardt and Walton 2021, 137.

[27] cf. Walton and Moorhead 2016, 841; Bland 2018; Smith 2018, 189–90; Bland et al. 2020.

[28] Bland et. al 2020, 66, 231–2.

[29] This may be the case with the mould finds from Ancaster, Castor, Chester, Colchester, Dorchester and Lincoln, where there is little information to support these early discoveries.

2).[30] These well-recorded finds must derive from coin production undertaken elsewhere, since clay moulds always seem to have been used in stacks to produce at least eight coins (which should result in the discovery of a minimum of ten moulds). Perhaps the used moulds, even in large quantities, were sometimes considered appropriate offerings for divinities.[31]

Unlike the coin included in hoards, it might be assumed that clay moulds would not have been hoarded, since these disused materials had no direct material (economic) value and could not be reworked or reused for any practical purpose. This assumes an overtly narrow definition of 'hoard', however, since certain materials may have been deposited in significant contexts during the Roman period for a variety of non-economic reasons. Indeed, the finds of moulds from the Central Criminal Court (London) and Redhouse (discussed in detail below) were deposited alongside Roman coins. It is noted during the discussion of the finds contexts (below) where the moulds where deposited with other potentially significant finds, such as coins, shale artefacts and human and animal remains.

2. Archaeological contexts of deposition

Seventeen (37%) of the 46 recorded finds of moulds have some detailed information about the archaeological context of their discovery (Table 2). The finds from modern excavations are significant, since these are usually well recorded. There is a degree of uncertainty over the information recorded for many of the older finds which is addressed below, but on occasions even the antiquarian discoveries include information that is relevant to the discussion of the context, as at Duston, Chilton Polden and Wroxeter 2.[32]

The following general context factors seem important:

[30] See the suggestion that the context of deposition of single finds of low-denomination Roman coinage can sometimes suggests that they formed ritual offerings (Bland et al. 2020, 59).

[31] Intriguingly, Landon has observed in his study of Iron Age coin mould trays that, although a certain lack of care seems to have been taken in production, the disused items were often carefully buried in ditches and pits (Landon 2016, 149–50)..

[32] Antiquaries were often fascinated by Roman coin moulds when they were discovered during agricultural operations, although they usually observed and recorded little contextual information about these finds (e.g. Baker 1746–7; Poole 1801; Sharp 1871).

Most of these deposits were placed in contexts that are interpreted (below) as having formed boundaries in spatial and/or temporal terms.[33] These contexts varied from the edges of settlements, to ditches that divided areas of land, to locations under a staircase that gave access to a turret on a town wall, to locations immediately above the high-water mark of the sea. The variability of these boundary locations illustrates that the deposition of moulds did not follow a single clearly defined set of rules, although there seems to be a degree of patterning in these acts of deposition.

Many of the deposits were placed in wet and waterlogged locations, although not all the finds can be explained this way.

A significant proportion of the well-recorded mould finds were deposited in abandoned structures or deposited late in the history of the occupation of an activity area, settlement, or structure.

Nine specific context types have been determined and are listed on Table 1 for the 20 sites where there is sufficient information to determine this information.[34] The details of individual sites mentioned here are discussed in more detail and referenced below.

Settlement boundary = deposition on a settlement boundary. On two occasions in London, (Criminal Court Site; 85 London Wall) the moulds were incorporated within the physical works of the boundary itself (in a turret on the town wall and in the town ditch respectively). The excavation of the other finds in this category indicate that they were deposited at the edges of settlements which had no clear physical boundary limit.[35]

[33] The character of the survival of archaeological deposits and the strategies of the excavations that located these finds must have partly helped to create the patterns in context types, since ditches, pits and shafts usually form the focus of attention during excavation and are often the only deposits left on sites that have subsequently been ploughed. The category of midden indicates that moulds were not always placed in such archaeological 'negative' features and it is suggested below that some finds from ditches may have been redeposited from earlier contexts in middens and other above-ground deposits.

[34] Including three locations where there is insufficient archaeological information for the finds to be included in Table 2.

[35] These contexts are situations in which excavations indicated that the moulds were deposited on the edges of an area of settlement. Evidently, this definition may oversimplify the complexity of the

Settlement boundary (general) = in two cases, the finds of small quantities of moulds were recovered from contexts just outside the walls of forts/fortresses and in one case (at Wroxeter) a single mould was found in a small building just within the earthwork rampart of the *town*. These finds have the appendage 'general' in Table 1 to indicate that they were uncovered close to a major settlement boundary rather than directly on or in the boundary.

Field boundary = deposition in a ditch that was defined by the excavator as an agricultural ditch. Some if not all of these will have been closely associated with settlements. On occasions, such ditches are likely to have carried water and, indeed, some may have held water.

Drainage ditch = deposition in a ditch which the excavator interpreted as for drainage. There is some overlap here with the agricultural ditches listed above.

Pit = deposition in a shallow pit. In the two corded cases, the pits in which the moulds were placed were located on the boundary of a settlement.

Well/water feature = deposition in the fill of a well or shaft, cistern or pool. These acts of deposition are assumed to have occurred after the disuse of the feature for its original purpose.

Midden = deposition in an agricultural midden. Only one case has been recorded, although additional examples may have been incorporated in midden materials before being dumped in pits or ditches (see below).

Peat = deposition in peat. At least two collections were placed in contexts that may have been peatland at the time of deposition. These contexts were located on the edge of marginal land just beyond the extent of the cultivated and settled landscape (below).

Coastal = deposition in a location on the coast. Two examples are included, each deposited near the coastline.

Listing these context types gives the results shown in Figure 2 (and Table 3). This may not present an entirely reliable picture of the contexts of deposition, however, since some of these collections are much larger than others. Categorizing these finds using the

settlements as occupied landscapes, but the details, presented below, are taken to support the identification given in this category.

total number of moulds from each type of defined context (rather than the number of occurrences) gives the results shown in Figure 3 (and Table 4). This gives rather different impression of the proportion of molds that come from the nine defined contexts of deposition. Most notable is the *very* small number of moulds from the contexts defined as settlement boundary (general), midden and coastal. Taken together, these three context types account for less than 1% of the total number of moulds from all contexts. It also indicates that 91% of the moulds occur in settlement boundary, field boundaries and drainage ditch contexts (since the two finds from pits are also located on settlement boundaries). The information displayed on Figure 3 has one clear limitation, however, since it clearly underestimates the significance of the deposition of moulds in peatland contexts. Antiquarian accounts of these discoveries record numerous moulds but do not provide any exact numbers (Table 1).

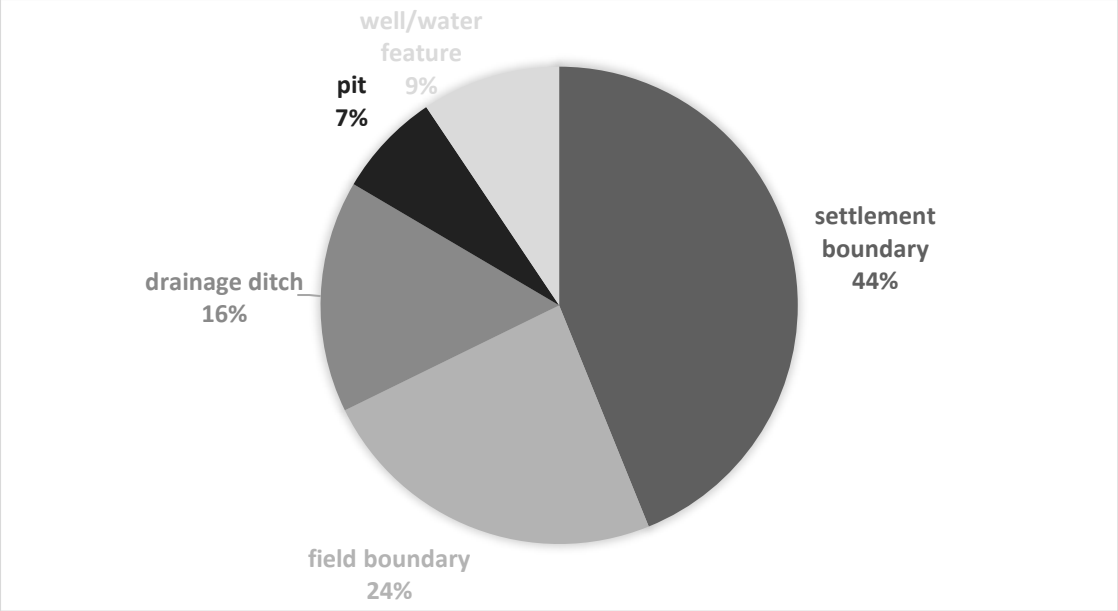

Figure 3: The total numbers of finds of moulds from different context types.

The association of moulds with boundaries of various types explains much of this patterning, although these contexts vary widely in character. 'Boundary contexts' were regularly marked by ritual offerings in the Roman period, including coins, metal object, human and animal remains.[36] Some of the ditches and drainage features considered below may have formed pools of water after rain, potentially associating acts of deposition with water. Other watery contexts in Britain, including rivers, lakes, bogs and wells, often produce

[36] Hingley 2006, 239; Smith 2016, 643.

evidence for the deposition of Roman coins and other votive offerings.[37] Many of the collections of moulds, although not all, were deposited in water.

Severn of the 17 collections of well-recorded moulds were deposited late in the history of the occupation of an activity area, settlement, or structure (marked as 'L' in Table 2). It is probable that other collections of moulds may also have been deposited in late contexts but that this was not clear to the excavators. The significance of depositing moulds within abandoned structures or in the final stages of the occupation of sites is difficult to assess, although during the Iron Age and Roman periods offerings were often deposited as part of closing rituals when buildings or settlements were being abandoned.[38] Although many of the contexts addressed occur on the edges of domestic spaces and between activity areas (e.g. field boundaries) abandoned structures such as buildings and wells also formed elements of occupation sites at which activities had ceased or were in the process of ending. Perhaps there is a connection with the practice noted above of using old coins in the copying process. In at least one case, however, the moulds seem to have formed part of a deposit dating to soon after the construction of a wall turret (Central Criminal Court, on London's Wall).

2.1. Settlement boundaries

In four cases coin moulds were deposited in settlement boundaries in a variety of different contexts, and often in association with water (Table 1). These contexts produced 985 moulds, 44% of the total number from well-recorded contexts. In addition, three small collections of moulds (10 in total) were deposited inside or close to buildings that lay close to the ramparts of military and urban sites, indicating a slightly less clearly defined relationship with a major settlement boundary (defined as 'settlement boundary general' in Table 1). These boundary contexts included locations on or close to fort and town walls and locations on the periphery of settlements.

The fragments of moulds (27 in number) from **La Plaiderie** were mainly found in a pit (F. 127) positioned about 10 metres to the south-south-east of the remains of one of two excavated stone-walled buildings (Building 2).[39] The three recognizable coins that had been used for the moulds were dated to between AD 244 and 249.[40] The details obtained from the archaeological recording of the original excavation, conducted in 1985-7, restricted some of the discussion that was possible in the final publication. Nevertheless, this is one of the most

[37] Smith 2016, 642.

[38] Hingley 2006, 229, 244.

[39] Sebire, de Jersey and Monaghan 2018, 42–50.

[40] King and Boon 2018.

informative excavations since it is one of two sites at which the moulds were closely associated with kilns that may have been used in the copying of the coins.

Building 2 contained five stone-lined kilns that were interpreted, because of the discovery of the moulds and the absence of any definitive information about the industrial process from the kilns, as having been used in the production of coins.[41] This building had gone out of use before the coin copying was undertaken and the remaining stone walls may have provided shelter for the craftspeople involved, while the second earlier building also predated the coin production. The original function of these buildings is unclear, although they may have been warehouses given the position at the northern edge of an extensive Roman settlement and just above the tidal high-water mark of a sandy beach.[42] The coins were being copied in the shell of a disused building on the northern edge of an extensive settlement on the coast of an island in the Channel.

The other site where moulds were closely connected with kilns is the extensive Iron Age and Roman settlement at **Lyde Road** (Figure 4). This site was extensively excavated in 2009–18 and the results relating to the moulds have been published in a detailed Interim report.[43] The copying of coins, which presumably occurred during the late third or early fourth century (Table 1), was conducted on the east margin of this long-lived settlement in an area where there had been second-century industrial activity. The mould fragments numbered slightly over 300, ranging from small pieces to examples that were almost half complete. The impressions of coins on the moulds were taken from coins of Carausius (AD 286–93), although only a small proportion of the moulds had coin impressions, suggesting that most of the casts were to create blanks for striking with an iron die.[44]

The moulds were found in a pit (context 10145), located fifteen metres north of a group of three or four kilns (1100), which also included a crucible fragment and copper slag waste; these kilns may have had some association with coin production.[45] It may also be significant, considering the two cases in which moulds were deposited with coins, addressed above, that the pit at Lyde Road that produced the moulds also contained one of the five shale artefacts, a spindle-whorl (or pendant), recovered from these extensive excavations.[46] A second nearby hollow (10666), produced a second similar shale artefact along with a

[41] Sebire, de Jersey and Monaghan 2018, 42–50.

[42] Sebire, de Jersey and Monaghan 2018, 15–6.

[43] Clelland and Budd 2010; Higbee forthcoming. Caroline Budd and Lorrain Higbee of Wessex Archaeology) and Lorraine Mepham kindly provided additional insights into these finds.

[44] Clelland and Budd 2010, 18.

[45] Clelland and Budd 2010, 16–20.

[46] Clelland and Budd 2010, 16, 31.

human skull fragment and additional human bones. Black materials such as shale and jet were often used in Roman Britain to make objects with religious and apotropaic significance,[47] highlighting the potential significance of the deposit of moulds. The industrial area was defined by western (1034) and eastern (1044) ditched boundaries and was butted up against a long-standing Iron Age boundary ditch (1033) which served to drain surplus water into a natural erosion hollow to the south. Feature 1077 was located to the south-west and also served as a water drainage ditch. As at La Plaiderie, this industrial area was closely associated with water but in this case, it was a fresh supply rather than the salt water of the sea. In addition, as at La Plaiderie, the coin copying occurred in a late phase of the occupation of this long-lived site and little indication of later occupation was found at Lyde Road.[48]

These are the two of the most convincing sites for coin production using clay moulds in the study area. It is simple to think of practical reasons for the placing of industrial activities on the margins of settlements. The noxious fumes and fire risks that accompany metalworking may help to explain the boundary location at which much metalworking was conducted in Roman Britain.[49] Such processes may, however, also have been considered challenging and transformative activities that required divine favours.[50] Water is commonly required for industrial activities associated with metalworking, which could explain the proximity of production close to fresh water and/or the sea. Such contexts may also have possessed a ritual significance because of the perceived character of metal production.

Perhaps the most informative discovery of moulds associated with a settlement boundary are those from **85 London Wall**.[51] This collection of over 800 moulds was found in the waterlogged ditch that fronts the town wall of *Londinium* to the north of its circuit, at a point where the river Walbrook channeled flood water away around the edges of the town (Figure 5). The landward section of the town wall and ditch, including the section with these moulds, is thought to have been constructed between AD 190 and 220.[52] The land to the

[47] Eckardt 2014, 109–23.

[48] Clelland and Budd 2010, 17.

[49] Little research has focused on the exact context on site of copper-alloy metalwork production in the Roman period (Smith 2017, 189–92).

[50] Hingley 1997, 12–13; Hingley 2006, 217; cf. Smith 2017, 179.

[51] Hall 2014a, 167.

[52] A date-range which is partly derived from the dating of the coin moulds from the Central Criminal Court (Hall 2014a, 180; Hingley 2018, 173; Barker, Hayward and Coombe 2021, 277 n. 1).

north of the findspot became increasingly waterlogged during the third century, eventually leading to the development of the area known in medieval times as Moorgate.[53]

The coins used to impress the moulds dated from the reign of emperors who ruled from around AD 193–211 to AD 253.[54] Hall suggests that the moulds may have been deposited in the ditch on one occasion around AD 260.[55] They were dispersed through several layers of the stratigraphy of the excavated trench by the flow of water.[56] Human bones, burial offerings and building materials were also found alongside small fragments of mis-casts, fragment of possible crucible and cut coins. The Walbrook Valley to the north was used for the burial of the dead and some of the cemetery areas are known to have been eroded by river water and remains of the dead carried downstream, which probably explains the human bones and burial offerings from this section of ditch.[57] It seems unlikely that such a large quantity of moulds would have washed downstream any distance from higher ground, however, since such items are quite fragile and many were sufficiently well preserved for the coin impressions to be clearly distinguished.

How did these moulds and the associated finds derived from coin production come to be deposited at this location? There is plentiful evidence for Roman-period metalworking in the Walbrook Valley,[58] although known production sites were located within (to the south) of the line that was chosen for the town wall and ditch.[59] So where was the metalworking undertaken that produced the London Wall moulds? The land immediately to the north of 85 London Wall seems an unlikely location, unless there was an island of high ground close to the pool that formed from the town ditch. This raises the likelihood that the materials derived from the coin copying were brought from a location in the Walbrook Valley to the south of the town wall for deposition in the standing water in the ditch, raising the issue that even substantial collections of moulds may have been transported some distance before being deposited. The nearest gate through the Roman wall was at Bishopsgate, almost 300 metres to the east of 85 London Wall.

Several additional contexts where moulds were deposited in watery contexts are discussed below, although not all the finds located on settlement boundaries had a direct

[53] Butler 2006.

[54] Hall 2014a, 179.

[55] Hall 2014a, 183.

[56] Hall 2014a, 176–8.

[57] Hingley 2018, 206.

[58] Hingley 2018, 96–7.

[59] See, for example, Bailey 1988.

association with water. This is most clearly demonstrated by the two moulds from the **Central Criminal Court** (London) which were found during an excavation in 1966–9 included in a deposit of soil inside a turret on the west side of *Londinium's* town wall (Figure 5).[60] They were found associated with an almost mint condition *denarius* of Caracalla and three second-century coins. No additional finds connected with metalworking, such as crucibles and slag, were discovered in this context, so the coin copying may not have been occurring within the turret.

The excavator Peter Marsden interpreted these finds as part of a collection of rubbish which was dumped behind a set of timber steps that led to the top of the turret and, presumably, gave access to the top of the town wall. The coin of Caracalla was relatively unworn, suggesting that these four coins and two moulds formed a hoard. The stratigraphy recorded by Marsden suggest that these items were deposited soon after the construction of the turret. A deposit of 'dirty gravel', interpreted as a hard floor surface laid down after the construction of the turret, underlay the brown soil which contained the moulds and coins.[61] The layer of grey earth above this brown soil included the fragmentary remains of six dog skeletons. Dogs were often deposited in ritual contexts in Roman London and it has been suggested that the coins and moulds were deposited as part of a ritual act conducted on the line of the town wall.[62] Ascending an elevated position on the town wall enabled crossing the boundary between earth and air.

Three other finds relate to the category defined above as of 'settlement boundary (general)'. The single mould from **Wroxeter 2** (Shropshire) was located in 1859 during excavations of a square building (or room) on a knoll, or small hill, which overlooked the ford at which Watling Street crossed the River Severn on the southwestern periphery of this Roman town.[63] Very few details of this find were recorded, although it was noted that a head sculpted in stone was found at the same spot along with Roman coins. The account of the discovery discussed the possibility that the building, which was attached to a 'more continuous wall', might have been a tower connected to the ramparts that surrounded Wroxeter, although no other turrets on this defensive work have been located.[64]

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[60] Marsden 1970, 5–6; Hall 2014a, 180.

[61] Marsden 1970, 5–6.

[62] Hingley 2018, 206.

[63] Wright 1863, 87; Wright 1872, 101. I am very grateful to Roger White for information and advice about the four separate finds of moulds from Wroxeter.

[64] See Wacher 1995, 449 n. 252. The Roman ramparts at this location appear to have been modified to become fishponds associated with a manor house, which has obscured the character of these defences (Barker 1990, 13).

Two finds of moulds were made near the outer face of military stone rampart. In the case of **Housesteads 1** a single mould was found in a narrow passageway between two buildings (Buildings III and IV) in the civil settlement to the south of the Roman fort during excavations in 1932.[65] It has been suggested that this mould and a collection of five coins found nearby might have been derived from a metalworking workshop in one of these building (Building IV), although this is unclear because of the early date of the excavation and the subsequent loss of the coins and other finds.[66] The coins found during the excavation of this civil settlement suggest that it was occupied from the second century to the AD 270s.[67] The findspot is about twenty metres south of the southern stone defensive rampart of Housesteads fort and at a point where there was usually an outer ditch (or ditches), although no such ditch existed in this case.[68] An observation while visiting this exposed site during a heavy shower is that the narrow alley between Buildings III and IV, where the mould was uncovered, turns into a rivulet carrying water running down from the outer face of the fort's rampart.

The eight moulds from **Aldwark** were impressed with coins of late second-/early third-century date and were found during the excavation of a stone-walled building located close to the eastern corner of the fortress at York.[69] This area appears to have been open ground during the second century and, although buildings were constructed here around the date indicated by the moulds, it remained at the edge of the extramural settlement.[70] The moulds from these two sites may well have derived from industrial working areas situated just outside the ramparts of military fortifications.

2.2 Field boundaries and drainage ditches

Another significant context for depositing moulds was their placement in field boundaries, and the three examples listed in Table 1 produced 536 moulds, which is 24% of the total of moulds from well-recorded contexts. It is probable that these field boundary contexts often held or channelled fresh water, creating an overlap with the context category of drainage ditch. Three additional collections of moulds (353 it total) deposited in drainage ditches represent an additional 16% of the the moulds from well-recorded contexts.

[65] Birley, Charlton and Hedley 1933, 94.

[66] Brickstock and Casey 2009, 376.

[67] Brickstock and Casey 2009, 365; Birley and Charlton 1932, 229.

[68] Birley, Charlton and Hedley 1933, 83–4.

[69] Magilton 1986.

[70] Ottaway 2011, 89.

The 400+ coin moulds fragments from **Redhouse** came from an excavation undertaken in 2003. These moulds, which had been deliberately smashed into small pieces before deposition, were found in a short section (context 1431) of the fill of the ditch of Enclosure 5, which is interpreted as a stock corral (Figure 6).[71] Excavations in the neighbourhood revealed an extensive series of linear ditches, settlement areas and agricultural enclosures of Iron Age and Roman date extending to around 70 hectares on a valley side. The short section of enclosure ditch that produced the moulds also contained eight Radiate coins.[72] There is no direct indication that the copies of coins were being produced at Enclosure 5 and the moulds and coins appear to have been deposited in the ditch of an abandoned earthwork enclosure of second-century date (as suggested by pottery found in the fill). These moulds were deposited at a location with a history, since the western boundary of the Enclosure 5 butted onto a north-south running linear ditch (D63) which was first established several centuries earlier. As at Lyde Road, these moulds were deposited close to the course of an ancient boundary.

The identifiable coins that had been used to produce the impressions on the moulds from Redhouse were issued under Septimius Severus from AD 202 to 210.[73] Copper-alloy waste was found in the same context, and the Radiate coins dated the deposition of the moulds to between AD 268–73.[74] The 70-year time gap between the coin impressions on the moulds and the production of the Radiates indicates, either that the moulds had been redeposited from an earlier context or that old coins were being used to produce copies. Another interesting aspect of this discovery is that the Severan coins which were being copied at this site were based on originals which presumably had a higher silver content than the radiate coins that were buried with the moulds.[75]

The collection of over 100 largely complete moulds at **Fulford** was placed in one of a series of ditches that defined pasture fields, two kilometres south of the Roman colony at

[71] Preece 2022, 38–43, Figure 28. The results of this work are currently available as a detailed but interim publication. Tracy Preece and Rob Atkins of Museum of London Archaeology kindly provided additional insights into these finds.

[72] Apart from these finds, the excavated sections of the enclosure ditch produced only a few sherds of Roman pottery and some animal bone.

[73] Brickstock 2022, 126–8.

[74] Brickstock suggests that the coin copying occurred during the AD 250 and may have extended into the 270s at a time of shortage of silver (Richard Brickstock pers com.).

[75] I am grateful to Colin Haselgrove for this observation.

York.[76] A few other contemporary finds were made in these field ditches, including two coins one of which was broken and still within its mould. There is no clear indication of a settlement close to this location and this find was not clearly associated with any indication of industrial activity. Presumably these moulds, like those from Redhouse, were brought to this site to deposit in the ditch.

At **London, Bermondsey Eyot**, two moulds were found in an agricultural ditch in an area of low-lying ground that may have been periodically flooded by the Thames.[77] This Eyot had been heavily waterlogged during the early Roman period and, although it may have been fairly well drained by the third century AD, there is little evidence for occupation on this area of land. The moulds were probably deposited in a wet boundary location, almost surrounded by water at high tide, half a kilometre to the east of the Tabard Square temple that lay on the southern edge of *Londinium* (Figure 5).[78]

Moulds were deposited in drainage ditches at three locations listed in Table 1. At **Lyons Court Farm** the moulds were initially found during the 1960s when workmen dug a ditch in a field with heavy soil that required extensive drainage.[79] An excavation was undertaken and additional moulds were found in a layer of dark soil, which also contained pottery, some casting material, crucibles and three coins. This midden deposit had been used in antiquity to fill a sandy hollow which the excavators interpreted as a stream that had silted up after the second century.[80] The extent of the excavation was too limited to provide a firm conclusion about the exact context of this discovery, although the excavators interpreted this material as rubbish derived from a nearby settlement that was deposited around 75 years after the dating of the latest coins that had been used to create the moulds.[81] The casting waste found with the moulds suggests that the copying of coins was occurring close to the site of the discovery, although the excavators noted that the 'striking lack' of scrap metal indicated that it had been removed before the debris was deposited in the hollow.[82]

The excavations at **Stanion Villa** uncovered an extensive area, revealing an Iron Age site and small Roman villa building, associated with additional structures and

[76] MAP 2005; Richard Brickstock pers com.

[77] Maloney 1999.

[78] Hingley 2018, 206.

[79] Boon and Rahtz 1966, 17.

[80] Boon and Rahtz 1966, 19, 25, Fig. 4.

[81] Boon and Rahtz 1966, 14–15, 23. Although it should be noted that this was based on the dating of two fragments of pottery.

[82] Boon and Rahtz 1966, 13.

enclosures.[83] The buildings appear to have been demolished during the late second to third centuries and, at this time, a set of ditches, connected with drainage and stock control were dug close to a road and a ford to the southeast of the villa complex. [84] A single and complete valve from a coin mould was found in the southern terminal of one of the drainage ditches, just north of the Roman road and ford. This ditch was interpreted as a drainage feature which took surplus water from a brook which flowed from an intermittent spring to the north. One side of the Stanion mould was formed from the impression of a coin of Tetricus I (AD 270–3). Although worn, it appears well preserved for a clay item that had been washed down from an archaeological context further upstream, raising the possibility that this item was deliberately deposited in the ditch. The excavated buildings of the villa are thought to have been abandoned and demolished by the time the mould was produced,[85] suggesting that it was removed from somewhere else to be deposited in this watery context. A larger complex of later Roman buildings may have been constructed close to the demolished villa, although occupation in the area immediately north of the findspot had ended by the 270s.[86]

The two moulds found during the nineteenth century in the Car Dyke at **Nocton** (Lincolnshire) seem more remarkable, since no additional Roman material appear to have been made at this location at this time.[87] Unfortunately this early discovery was not recorded in any detail. The Carr Dyke acted as a major drainage feature for the low-lying Fenlands of East Anglia.[88] As Kemmers has argued, although abandoned wells, sewers and watercourses would be good places for dumping 'rubbish', water was often also associated with classical thoughts about the underworld.[89] Evidently, wells and other water features are known to have been widely used as contexts for the deposition of special objects during the Roman period in Britain.[90]

Several of the other finds from watery contexts listed in Table 1 have far less full information for the context of deposition. The two moulds recorded by the Portable Antiquities Scheme (PAS) from the mudlarking operations on the Thames foreshore at London, found at **Putney/Fulham** and **Swan Lane**, form part of a large collection of Roman

[83] Walker 2012.

[84] Walker 2012, 40; Meadows 2012.

[85] Walker 2012, 38.

[86] Walker 2012, 6, 41.

[87] Phillips 1934, 119, 176.

[88] Mattingly 2006, 385.

[89] Kemmers 2018, 197.

[90] cf. Smith 2018, 144–47.

artefacts from these collecting operations.[91] These moulds were probably deposited on the Thames foreshore or washed down from settlement features that had been eroded during heavy rain.

2.3 Wells, shafts and pools

There have been three discoveries of moulds from wells and cisterns, which are broadly reminiscent of, although not anything like as remarkable as, the finds from the well at Augst (Switzerland) where several thousand moulds were associated with human and animal remains, including dogs and a white-tailed eagle, and fragments of stone architecture.[92] The twentieth-century excavations at Wroxeter have produced two finds of single coin moulds from watery contexts. One mould (**Wroxeter** 3), with an impression of a *sestertius* of Marcus Aurelius (AD 140–4), was found in the infill of the *natatio* (or open air-swimming pool) which formed a feature in the courtyard of the bath basilica buildings.[93] The infilling layer of this pool also included quantities of building material, glass, pottery and two coins and was dated (based on the latest pottery) to c. AD 210–30. A second mould (**Wroxeter 4**), impressed with a coin of Septimius Severus (AD 193–217), was found in a cistern (A 17) located to the east of later Roman buildings that were built over the remains of the bath-basilica complex in Phase Z.[94] This large and deep pit was constructed to hold water since its sides had been revetted with clay and stakes.

The nineteenth century excavations of one of a number of very narrow wells or shafts at a Roman settlement and cemetery site at **Duston** (Northamptonshire) located over 200 mould fragments alongside waste from the mouths of bottle-shaped moulds and two metal spoiled castings of coins.[95] The moulds were found 10 feet from the base of the shaft and, if it had served as a well, they were evidently deposited after it was disused as a source for water. There is no record of any additional significant finds from the excavation of this shaft but, presumably, the metalworking may have been occurring close by. At the Roman fort at **Housesteads** a single mould (Housesteads 2) was discovered in a well or shaft at Chapel Hill to the south of the civil settlement.[96] This shaft was located close to the temple of Mars

[91] See Thames Museum no date.

[92] Kemmers 2018, 197.

[93] Brickstock and Casey 2000, 98; Ellis 2000, 38–41; Macreth 2000, 69.

[94] Barker et al. 1997, 165–166, Plan A11, A171, A172; Brickstock and Casey 1997. Barker argued that the Phase Z features dated to around AD 450-550, although Lane (2014) has recently cast doubt on this idea and these buildings are probably later Roman.

[95] Sharpe 1871, 30, 34–5; Boon 1988, Fig. 11.

[96] Birley 1961; Brickstock and Casey 2009, 376-377.

Thincsus and other Roman finds from this context included a bucketful of pottery, eight coins, bone pins, wood and a bucket handle.

2.4 Peatland

Another highly significant damp and watery context in which coin moulds were deposited in some quantities is peat. Several collections of moulds, amounting to at least several hundred, have been made in two, or perhaps three, distinct locations at the foot of the Polden Hills close to **Bawdrip** and **Chilton Polden** (Somerset).[97] The larger number of moulds from close to the latter village were found in the early eighteenth century and on two occasions in the nineteenth. Poole noted that he had collected several hundred moulds in 1801, while Stradling described 'numerous' moulds which were deposited in peat, 'almost adjoining' a 'pottery kiln'. Stradling's antiquarian description is now thought to have been describing one of the many mounds on the edge of the Somerset Levels associated with the production of salt.[98] The poorly recorded information from the sites at Bawdrip and Chilton Polden suggests that the coins were copied at several sites in the wetland environment at the northern interface between the Polden Hills and the raised bog in the Levels. More recent archaeological research has indicated that these wetlands had not been reclaimed for agriculture by the Roman period and were mainly used for cutting peat for fuel and as a source of wild game and fish.[99] This is a reminder that industrial production in Roman Britain was probably as much a ritual as an industrial process.

A potentially comparable find of moulds was recorded in 1804 on the edge of the Somerset Levels at **Highbridge**. The digging of the foundation for a bridge uncovered, at a depth of seven feet of alluvial deposit, a stratum of compressed peat and lying beneath it a heap of Roman pottery in fragments, with pieces of small bricks such as those used to separate vessels in a kiln.[100] This find also included 'mouldings' for casting coins and in view of the discussion of the finds from Bawdrip and Chilton Polden the ceramics identified as Roman pottery were probably briquetage from salt production.

Some other findspots of moulds might well have been deposited in waterlogged peatlands, as for example at Lyons Court Farm (above). That some of the moulds from the highly productive site at **Lingwell Gate** were found because of changing water levels in the

[97] Poole 1801; Stradling 1850, 58–9; Haverfield 1906, 352. Poole's record of his discoveries is attributed to Eddington, although he notes that the findspot was around a quarter of mile to the north of Chilton (Polden), evidently indicating the same site discussed by Stradling.

[98] Grove and Brunning 1998, 67; Rippon 2005, 109.

[99] Gerrard 2007, 960.

[100] Phelps 1854, 103–4; Haverfield 1906, 352 n.139.

Bowling Beck, which skirts the site, and when a field bordering this stream was drained for agriculture,[101] suggests a comparable wetland context for the act of deposition oif this sizable collection of moulds.

2.5. Middens

Some of these collections of coin moulds may initially have been deposited in middens before being re-deposited in ditches, for example at Lyons Court Farm (above). Another remarkable find with excellent contextual information is the single mould from the excavation of a coastal shell midden at **Brighouse Bay** (Dumfries and Galloway).[102] This mould is from a location beyond the Roman northern frontier, although it is notable that two coin moulds has also been found in lowland Scotland in a surface context at the Roman fort at Newstead (Borders).[103] The Brighouse Bay mould was found in one of nine small areas of shell midden which produced additional cultural material, including Roman pottery (which is rare in this part of Scotland).[104] The undamaged condition of the mould, which featured the impression of coins of Aquilia Severa (AD 220) and Severus Alexander (AD 222) on each side, suggests that it had not been disturbed after disposition.[105] A complete and undamaged iron spearhead of Iron Age or early historic date was found in a second area of midden: such artefacts are very rare discoveries in northern Britain and usually interpreted as votive deposits.[106] The coastal location of this mould find is broadly reminiscent of the context of the moulds from La Plaiderie, just above the tidal high-water mark on the coast of Guernsey. The single mould from Brighouse Bay may well have been removed from a context elsewhere, perhaps at some considerable distance, to be deposited in a special place. Perhaps it stood in lieu of a Roman coin as an offering in a geographical location where such items cannot have been in common circulation.

An interesting parallel for the Roman moulds from these two middens is provided by two of the three of the largest deposits of Iron Age ceramic coin trays from Britain, which were not immediately buried but left for some time exposed to the actions of weather and

[101] Tilley 2021, 17, 26.

[102] Maynard 1994.

[103] Holmes and Hunter 2001; Fraser Hunter pers com.

[104] Maynard 1994, 20.

[105] Boon 1994.

[106] Hunter 1994.

rooting animals.[107] It has also been noted that Roman coin hoards were sometimes buried in association with midden deposits, including two examples from coastal middens.[108]

3. The types of sites which produce coin moulds

To address the character of the communities involved in the copying of coins, we can consider the types of sites that have produced coin moulds. This analysis, once again, is affected by the available information for many sites that have produced moulds, although the type of site from which these finds derived can be determined for 28 of the discoveries of moulds (Table 1; Table 5). The highest proportion (36%) come from towns (colonies and *civitas* capitals) and moulds have also been found at small towns, fortresses/forts, civil settlements, other rural settlements and associated with field systems (Figure 7). Civil settlements are classified here as the extramural sites connected with fortresses and forts.

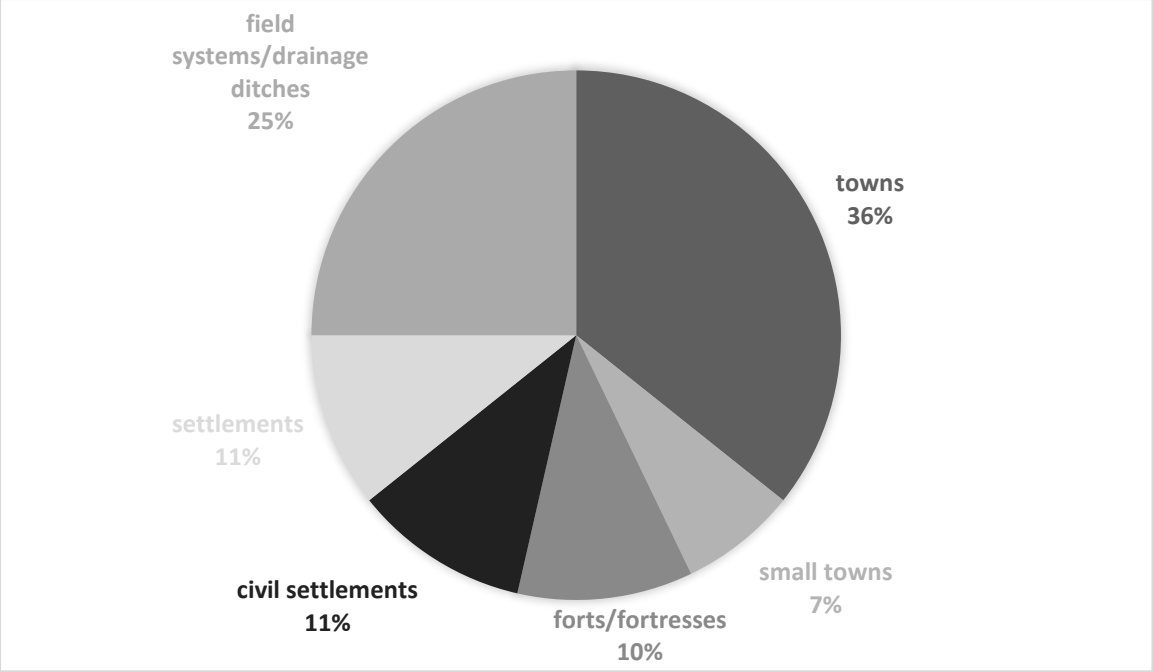

Figure 7: The proportions of types of sites at which clay coin moulds have been found

That 65% of the total number of discoveries of moulds come from towns, forts and civil settlements might suggest that the copying of coins was primarily an official act occurring in urban and military sites. It has been suggested that the late third century copying of coins may have been an official response to the lack of coinage to pay soldiers

[107] Landon 2016, 149.

[108] Bland et al. 2020, 201.

and civil servants, which would suggest that there should be a predominance of moulds at military and official urban sites.[109] This apparent emphasis on these more 'Roman' types of sites is challenged, however, by the 11% of the finds that derive from (rural) settlements and the remarkable 25% from field systems/drainage ditches (which are invariably rural in context). The uncertainties with the recording of individual finds, however, is clearly obscuring a rather stronger focus toward rural sites.

Most of the finds of moulds from towns, small towns and military sites include very small numbers and these were often recorded some time ago and do not have secure archaeological contexts (Table 1). For example, the three finds from forts/fortresses are not sufficiently well recorded to be reliable.[110] The better-recorded moulds from the civil settlements at Aldwark and Housesteads were also associated with the forts, but these only add ten moulds. The small numbers of poorly recorded finds from several well-known towns, small towns, and forts may be a result of the mis-location of these discoveries by antiquaries (above).

Looking at the total number of moulds from different types of sites where the exact number of moulds was recorded during excavation present a very different picture since 63% of the total number of these moulds have been found excavating rural sites (Figure 8; Table 6). In addition, one of the urban deposits, from 85 London Wall (814+ moulds) is responsible for all but twelve of the well-recorded moulds from towns. The well recorded finds from Wroxeter (Wroxeter 3 and 4) were single finds. The London Wall find was associated with debris derived from coin copying, which had probably been occurring in the industrial area of the Lower Walbrook Valley. Excavations in the Walbrook Valley have uncovered industrial sites and domestic occupation and it is likely that the occupants of this landscape were poor tenants or slaves of members of the elite who lived elsewhere in London, in the south of Britain or even further afield.[111] This clearly indicates that some people on the margin of *Londinium* were involved in copying coins, although the rural focus of much of the coin production is emphasized by all the other substantial collections of moulds from well-recorded sites.

[109] Walton and Moorhead 2016, 842–3.

[110] From Binchester, Chester and Newstead. We do know, however, that cast copies of coins were being produced by the military during the 203s and 240s at the legionary fortress on the Danube (Boon 1988, 124; Eckardt and Walton 2021, 138).

[111] See Hingley 2018, 197.

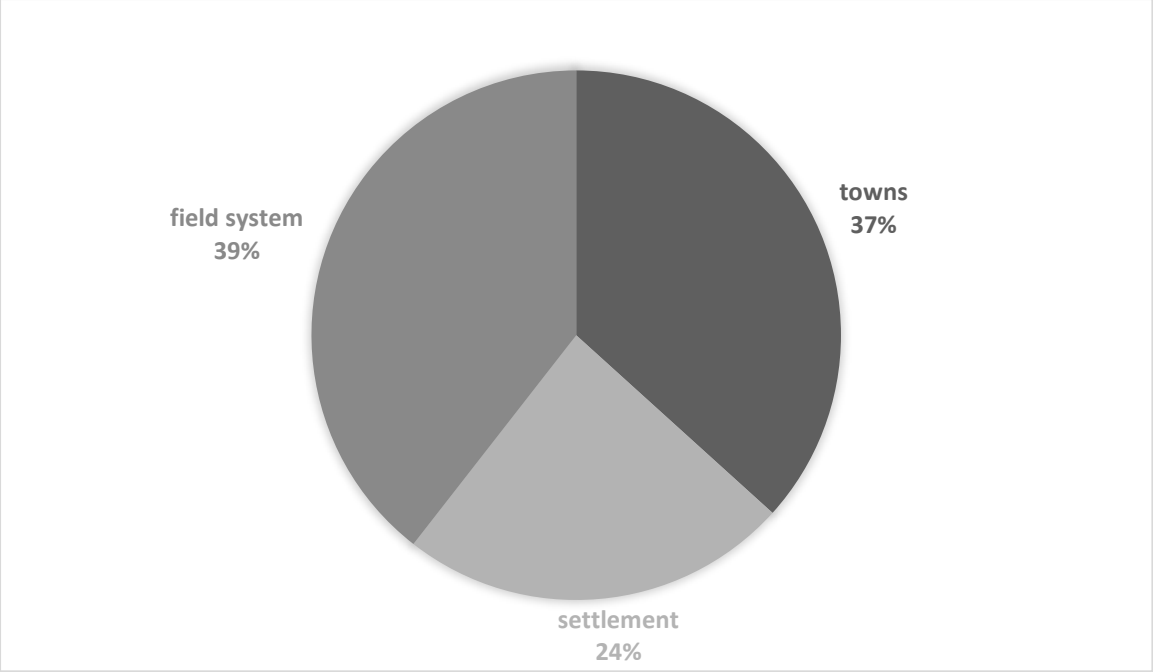

Figure 8: The number of moulds from well-recorded deposits at defined types of sites

This picture of predominantly rural production on sites with no apparent military or administrative connection is supported by the finds from several other significant deposits where the exact number of moulds is not recorded. Large collections of moulds were located by antiquaries at Bawdrip, Chilton Polden and Lingwell Gate in rural locations. At Lyons Court Farm, many moulds were found during the nineteenth century in the same area that produced the collection of 350 moulds in 1960.[112] These rural sites may, from the available information, have been involved in sustained industrial production of coins and it is unfortunate that we know so little about them. Who was responsible for the copying operations in the countryside? Perhaps communities in certain rural areas of Britain and in the Walbrook Valley at London had a greater need for copies of coins than those living in forts and many of the towns. Or perhaps, if coin production was often a clandestine activity, these communities were at a greater remove from officials who might intervene?

Three other rural sites that were involved in coin production are known, although the copying at these sites did not involve the use of moulds. The Iron Age and Roman hillfort of Coygan Camp (Carmarthenshire) produced coin copying materials from a pit under the floor of a workshop,[113] while the cave at White Woman's Hole (Somerset) and the mine at 'The

[112] Boon and Rhatz 1966, 13.

[113] Boon 1967.

Roman Mine (Draethen, Glamorgan/Monmouthshire) also produced comparable deposits.[114] Boon interpreted the contexts of these deposits by suggesting that the copying was being kept hidden from the authorities. Caves and hillforts are not, however, uncommon contexts for the depositing of coin hoards and these are usually interpreted today as locations which commonly had heightened ritual associations that led to the acts of deposition.[115] The discovery of the coin blanks derived from manufacturing materials at *Magiovinium* (Fenny Stratford, Buckinghamshire) demonstrate that coin copying did occur at small towns.[116] Perhaps the information for the deposition of clay moulds overexaggerates the rural focus of this copying activity.

4. Summary

The key suggestion in this paper is that the contexts in which clay moulds were deposited indicates the ritual nature of these industrial activities. Most of the contexts in which these items occur are on boundaries and a close association with water is evident for many. These contexts vary widely in character and the number of moulds deposited in individual cases was also highly variable. It appears likely that single or small quantities of moulds were regularly removed from the industrial site and deposited at a particular locations, including contexts in drainage ditches, agricultural boundaries, wells, pools, settlement boundaries and middens. The larger deposits may usually have derived more directly from the places at which the coins were being cast, although the finds from 85 London Wall seem to have been removed some distance from the production site and deliberately discarded in a marginal watery pool.

The likelihood is that all industrial actions involving metalworking in Iron Age and Roman Britain drew upon a common and transformative range of ritual beliefs that helped to structure the waste deposits that derived from the productive process.[117] The variability in the contexts of deposition reviewed above demonstrate, however, that we cannot explain all discoveries by interpreting them with a single idea in mind. The clay moulds and the other waste materials derived from coin production may have had no particular material value once the process was completed, although the burial of moulds in two coin hoards and the inclusion of a shale bead or pendant with another collection of moulds has been noted. This may well suggest that the disused and broken moulds themselves could sometimes play

[114] Boon 1972.

[115] Smith 2018, 144–6; Bland et. al. 2020, 191–2, 195

[116] Zeepvat 1994.

[117] This would explain the connections observed between the context of deposition of Iron Age coin trays and Roman coin moulds mentioned above.

significant roles as items for ritual deposition. On other occasions, these items may have been waste which required careful deposition because of the ritual associations of metalworking and coin production.

The focus of production in rural areas suggest that further excavation and research may enable a more detailed comprehension of the types of communities involved in the copying of coins. Additional examples of well-recorded deposits of moulds from future excavations may challenge or supplement some of the suggestions made above. A comparable contextual study of clay coin moulds in northern Gaul and Germany that picks up on some of the patterns observed by Kemmers might well draw contrasting conclusions to those outlined above. It would be interesting to know the exact balance of the information for production in towns, in military sites and in the countryside across these regions of the empire. The creation of coins using such moulds was, clearly, an international phenomenon during the third centuries.

The collection of detailed archaeological information for metalworking in Britain and on the Continent could also be explored through new research that addresses the context of the deposition of metalworking residues of all types. It is unlikely that the production of coins was the only aspect of copper-alloy working that drew upon ritual beliefs, and the production of items such as broches, statues and figurines also requires attention.

Appendix A: Compilation of Table 1

Hall's recent survey listed twenty-six finds of coin moulds from Britain (Hall 2014b). I have renamed a few of these finds to give them more specific locations in Table 1. For example, the record for Edington on Hall's table has been attributed to Chilton Polden. I have also subdivided a few of Hall's listed finds into multiple find locations to reflect the focus of this paper on context. For example, London has produced moulds from excavation at three sites, while the two moulds listed by Hall from Housesteads come from excavations on two distinct sites. 16 findspots for moulds not recorded on Hall's list are included in Table 1. These include a few old finds that have been located during subsequent research, several recent discoveries recorded by the PAS and recent finds from excavations.

Figures

Figure 1: Roman clay coin moulds from Britain and the Channel Islands (for the information for these finds, see Table 1). The caption shows the total number of moulds from single collections and whether this number is certain or uncertain.

Figure 2. The number of times that collections of coin moulds are deposited in defined context types (see below for these context types). Table 1 illustrates that individual collections of moulds can fall

into more than one of the nine context types. In the cases where a find falls into more than one context type, the total number of moulds has been divided by the number of contexts represented (for example La Plaiderie has three context types, so the 27 moulds are divided by three in categorizing the totals number of moulds per context type in Figures 2 and 3 and Tables 3 and 4).

Figure 3: The total numbers of finds of moulds from different context types.

Figure 4: The context of the Roman coin moulds from the archaeological site at Lyde Road. Only the eastern part of this extensively excavated site is shown on this figure and the main occupation area in the Iron Age and Roman period lay further to the west. Phase 3 relates to the third century AD, Phase 2 to second century AD and Phase 1 to the early-middle Iron Age. The Iron Age and Roman settlement site at Lyde Road lay immediately to the west of this industrial area. Redrawn from Clelland and Budd 2010, figure 7, with permission.

Figure 5: Four finds of Roman coin moulds from *Londinium* (after Hingley 2018, Figure 8.10). The finds from 85 London Wall, Central Criminal Court and Bermondsey are from excavated contexts. The area within the town walls was fairly intensively occupied during the third century, although the area of settlement to the south of the river may largely have been restricted to the edges of the roads.

Figure 6: The context of the coin moulds from Redhouse. Phase 2 relates to the agricultural enclosure which is dated to the second-century AD and Phase 1 was Late Iron Age. Redrawn from Preece 2022, Figure 28 with permission. This illustration shows one small part of this very extensive Iron Age and Roman landscape.

Figure 7: The proportions of types of sites at which clay coin moulds have been found

Figure 8: The number of moulds from well-recorded deposits at defined types of sites.

Tables

Table 1: List of Roman ceramic coin moulds/mould fragments from Britain and the Channel Islands (updating lists by Boon 1988, 127; Aubin 2003, Figure 4 and Hall 2014b, with additional relevant references given below)

Table 2: Details of well contextualized finds of coin moulds

Table 3: Number of times that collections of coin moulds are deposited in defined context types.

Table 4: The total numbers of finds of moulds from different context types.

Table 5: Types of sites producing clay coin moulds)

Table 6: The numbers of moulds from well-recorded deposits at types of site

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