Coins as Artefacts: How can the role of object biographies enhance our understanding of Roman coins in Lancashire?

by

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Abstract

Coins are commonly encountered on Roman archaeological sites and are viewed as an excellent means of dating these contexts. Consequently, analysis has often focused on the visual elements of a coin's design, namely the imagery and legend present on the surface. When considering the circulation, use and acceptance of coinage, there is a heavy reliance on static and rigid wear categories (worn, slightly worn and unworn) which focus on the visual preservation of the object. However, these categories are highly subjective and rarely defined. Moreover, coin wear is due to human interaction with the object from its production, through its use and into its deposition and therefore can be intrinsically linked to the social relations of which they are a part.

This thesis has applied a biographical approach, using the information provided by a coin's production, use and deposition (see Chapter 6). The methodology created has gone beyond wear as a static concept and has instead explored twelve different aspects, which until now have all been considered under the umbrella of 'wear'. By considering the aspects of wear as individual entities, further information on the production, use and deposition of coins can be considered. In turn enabling a more cohesive understanding of coins as objects in their own right.

This new approach is applied to coins from Lancashire (see Chapter 8) as well as evidence from the site of Plantation Place, London (see Chapter 9). In total over 1400 coins have been recorded from Lancashire, of which over 1000 have been individually examined and recorded to explore the 12 components of wear. The Lancashire dataset has demonstrated that biographical approaches can provide new interpretations of the acceptance and use of coinage. For example, whilst further work in this area is needed, if we accept that one reason for notches on the outside of a coin may be a result of coin production and we subsequently analyse their presence against the backdrop of chronology, we can begin to see the visual effects that political unrest would have had on the process of striking coins, with more notches present at times of political instability. Furthermore, by considering factors associated with a coin's reuse, such as perforations, we can begin to explore the visual political messages that societies are accepting, assimilating with, and projecting back into society. Finally, we can also start to understand the attitudes of a coin using society through the ways in which coinage has been clipped. During the clipping process the bust of the emperor on the obverse is almost always left intact, suggesting that, whilst coinage may have been considered a commodity, there was still a need to retain the

imperial portrait - either out of respect for the ruler or because intrinsically a coin could not be a coin without this feature.

This systematic and repeatable approach to coin wear has enabled a more detailed biographical picture to be constructed. By considering coinage as an object with its own unique biography, rather than just a dating tool, it has been demonstrated that these objects can be invaluable in understanding the changing function of coins as an object in their own right (see Chapters 10).

Furthermore, a biographical approach has highlighted that there are multiple different social relationships reflected in the biography of a coin; from the maker who can leave his mark on the coin at the point of production, to the user or multiple users throughout the coin's lifecycle, and in some cases the potential for the depositor in the ways in which the coins are deposited or lost. Consequently, by adopting a biographical approach to coins we can begin to add another layer of understanding to archaeological sites, which goes beyond the use of these objects as a tool for dating (Chapter 11).

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Acknowledgements

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Glossary

As – Low value copper alloy denomination Roman coin. The equivalent of 16 denarii.

Aureus – High value, gold denomination Roman coin. The equivalent to 25 denarii.

Clipped – a coin which has had the edges intentionally cut off.

Corrosion – Irreversible damage to the surface of an object due to a chemical reaction, e.g., the green patina on copper alloy coins.

Cracked – Damage to a surface usually in the form of lines where a material has split.

Creolisation – A linguistic term from historical archaeology, focusing on two languages being merged into one.

Denarius – High value silver denomination Roman coin. The equivalent of 16 As.

Dupondius – Low value copper alloy denomination Roman coin. The equivalent of 2 As.

Globalisation – The process by which people and territories become interconnected.

Mis-Struck – Where the imagery on a coin is not produced in its intended form. E.g., the bust is off centre on the coin flan.

Notch – An incision on the edge of a surface.

Nummus – Low value copper alloy denomination Roman coin, introduced in the third century.

Perforation – A hole made by piercing a material.

Plastic Deformation – A permanent change in shape of a solid object.

Primary Context – The first stage of an object biography. The birth/creation stage.

Romanisation – The process by which people became Roman.

Scratched – score or mark on the surface of an object.

Secondary Context – The second stage of an object biography. The life/use stage.

Sestertius – Low value copper alloy denomination Roman coin. The equivalent of four As.

Siliqua – High value silver denomination Roman coin. Introduced in the fourth century.

Surface Damage – damage to the surface of an object.

Tertiary Context – The third stage of an object biography. The death/deposition stage.

1 INTRODUCTION

1.1 Traditional Narratives

Figure 1.1-1. Copper alloy radiate of Claudius II 268-270AD

Traditional numismatic techniques often focus on coin identification based on imagery and legend. For example, Figure 1.1-1 above is a copper alloy radiate of Claudius II, dating to 268-270 AD (Harris Museum 2019). The obverse (heads) of the coin represents a right facing radiate bust, so named due to the radiate (spiky) crown worn by the Emperor, whilst the reverse (tails) of the coin depicts Victory advancing right holding a wreath and palm, with the legend reading "VICTORIA AVG". The legend of a coin often refers to the titles held by the individual represented in the bust and enables identification of the Emperors. Similarly, the legends on the reverse of the coin signify the individual deities represented. In this case, it is the legend that helps us identify the reverse figure as Victory.

Additional information, such as the Roman Imperial Coinage reference (i.e., RIC 107 for the coin depicted in Figure 1.1-1) may also be included as means of identification, as well as the Reece period group (i.e., Period 13 for Figure 1.1-1) for chronological comparisons. Contextually, this coin forms part of the Worden hoard along with 125 other issues. The hoard was discovered in 1850 in Low Meadow, Worden and divided between Mrs Farrington and the Preston Society for the Diffusion of Knowledge. One hundred and eight coins from the hoard were later acquired by the Harris Museum in 1948 (Robertson 1948, 215). Due to the preservation of the coins, it is thought that the hoard was likely to have been deposited shortly after the reign of Probus (Historic England Research Records: Monument Number: 42639). It may also be possible to assign a wear category to the coin in order to allow evaluation of the coin's use and circulation.

There are multiple different wear systems that may be used (e.g., Casey 1986, 151; Brickstock 2004, 7; PAS 2019 etc.), and each may assign a slightly different category dependent on the individual synthesising the data and their interpretation of the assigned definitions. For example, the PAS (2019) record for this hoard suggests that the coins are thought to be in poor condition, which may be synonymous with all coins being considered as very worn. However, if this individual issue is considered and ascribed a wear category it can be argued that it may only be considered slightly worn (Brickstock 2004, 7), or worn (Casey 1986, 151) depending on the individual who is looking at it and their experience of coins. This demonstrates the subjective nature of wear recording systems, which may have an impact on the overall interpretation of the coins.

Archaeological interpretations using coin studies tend to concentrate on the understanding of this categorised data in order to discuss coin loss, distinguishing between the presence of coins and their types associated with different social spaces; towns, the countryside and military sites (Reece 1995).

As such, it appears that the issues surrounding the analysis of Roman coins are both methodological and contextual. Methodologically, there appears to be little consistency regarding the specific coin information that is recorded in specialist reports, despite English Heritage's publication of the "Production, Analysis and Standardisation of Romano-British Coin Reports" (Brickstock 2004), outlining the information required for coin catalogues, irrespective of whether a full catalogue for the site is intended to be published at a later date. Table 1.2-1 below highlights the factors that are recommended for recording and demonstrates which factors have been recorded from 10 different site reports (Edwards and Webster 1985, Buxton and Howard-Davis 2000, Buxton and Howard-Davis 2000b, Brickstock 2005, Brickstock 2007, Biddulph 2011, Jones 2011, Ward 2012, Bowsher 2015, Godwin *Unpublished*) . Six of these were published after English Heritage's guidelines and many were produced by the same author. However, only one of these publication records all of the factors outlined by the guidelines, Plantation Place, indicating that, according to the English Heritage guidance, the remaining five publications are omitting evidence from their coin reports. Consequently, these site reports may be limiting the interpretations that can be made about the coin assemblages from their respective locations. The most recorded factor is denomination, with all ten site reports including this in their coin catalogue - this factor can be considered a unique identifier of coinage and therefore central to their definition. Furthermore, the inclusion of denomination enables certain interpretations to be made based on the wealth of an assemblage, as the majority of denominations are associated with particular material types (e.g., an aureus is one of the denominations made from gold). This may explain why material type is not a factor that is selected by the guidelines for publication, as material type can be inferred from the denomination. However, it may be argued that the link between material type and denomination requires a level of pre-existing knowledge and is therefore excluding information from the analysis of coinage. The least recorded categories across the 10 selected publications are weight, diameter and die axis, with only two reports recording these categories (Plantation Place and Metchley). The lack of recording of these factors, despite the guideline's suggestion of their inclusion, may be limiting the scope of coin current studies. These methodological discrepancies between site reports may also impact the wider contextual analysis, as they limit direct comparison of multiple sites unless the original archive is sourced to account for the publications which omit certain categories from their reports.

1.2 Breaking Tradition

As demonstrated in Table 1.2-1, many coin publications do not record all of the factors outlined by the 2004 document, therefore limiting the data provided by these reports. By breaking away from this traditional model and approaching coinage from the perspective of creating an object biography, we can begin to explore their potential in more detail. Considering this, if we re-examine the radiate of Claudius II (Figure 1.1-1), we can observe that there are notches on the outer edge of the coin, which are likely to occur at the point of production when the coin is struck. These notches do not appear to be considered a flaw by Roman standards as the coin was uncovered as part of the hoard suggesting its use as official currency in circulation, originating from an official Roman mint and making its way to Britain. Analysing this may inform us of the intrinsic value of coinage in Roman Britain - that the overall look of the coin was not important and that notches do not influence society's view of the object as a coin with monetary value. Furthermore, the Claudius II example also demonstrates evidence of mis-striking, with the obverse design focused off centre to the right of the coin. By analysing the frequency of mis-struck coins in any given sample against the traditional data recorded (such as time period and material type), we can begin to make inferences about the intrinsic value and aesthetic standards of coinage in the Roman period. Moreover, by considering the wear and condition of the coin against other factors (rather than only attributing a numerical value to it) we can begin to interpret coin hoards in a new way through analysis of the type of coins that appear and the nature of the circulation of these coins before being buried as a hoard entity.

	Bremetenacum (Buxton and Howard-Davis 2000	Ribchester Bathhouse (Godwin Unpublished)	Ribchester, Civil Settlement (Edwards and Webster 1985)	Plantation Place (Bowsher 2015)	Kirkham (Buxton and Howard-Davis 2000b	High Speed I Excavations, Springhead and Northfleet (Biddulph 2011)	Vindolanda 2003-2004 (Brickstock 2005)	Vindolanda 2005-2006 (Brickstock 2007)	Metchley Roman Fort (Jones 2011)	Chester Extramurral Settlement s (Ward 2012)
Ruler/Issuer	✔	✔	✔	✔	✔	✔	✔	✔		
Catalogue Reference	✔	✔	✔	✔	✔		✔	✔	✔	✔
Date of Issue	✔	✔	✔	✔	✔		✔	✔	✔	✔
Mint				✔			✔		✔	
Denomination	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Obverse Legend			✔	✔	✔					✔
Obverse Description				✔					✔	✔
Reverse Legend		✔	✔	✔	✔					✔
Reverse Description			✔	✔					✔	✔
Condition/Wear	✔	✔	✔	✔			✔	✔	✔	✔
Diameter				✔					✔	
Weight				✔					✔	
Die Axis				✔					✔	

Table 1.2-1 Recorded Features Across Coin Publication

The Claudius II example (Figure 1.1-1) has highlighted an advantage in moving beyond traditional narratives and considering coins as artefacts in their own right, with their own unique biography. Reinvigorating coin research in this way will enable coins to assist in providing a more detailed interpretation of historical communities on an international, national, and local scale. This thesis aims to explore this by examining coinage from the county of Lancashire and demonstrating how the methodology can be applied outside of this region by comparatively exploring the site of Plantation Place in London. Plantation Place was selected as it offered an available contrast to the Lancashire examples in site type and chronology, whilst still maintaining a significant sample size of coins. Therefore, this comparison would demonstrate whether the methodology could be used to construct a biography of Romano-British coins, as opposed to just Romano-British coins found in Lancashire, which is particularly important when considering use and deposition phases of the biography.

By applying new methodologies to coin interpretation in particular, we may begin to unravel how these objects can inform the construction of these identities within Roman Lancashire, going beyond simply identifying the point in time and ruling Emperor they represent. By considering physical attributes of coins as a consequence of their biography, it is possible to identify when these attributes are likely to occur during a coin's lifecycle and analyse what this demonstrates about the use and acceptance of the object in a coin-using society.

1.3 Aim

The fundamental aim of this thesis is to analyse coinage in more depth than has previously been permitted by traditional narratives, allowing for the exploration of a coin's object biography from the artefact's production all the way through its lifecycle to its deposition. This will enable an understanding of the value of a biographical approach to Roman coinage and its potential application in the field of Roman archaeology. This method requires new factors to take precedence in the analysis in order to progress from the subjective and undefined wear categories currently in use.

1.4 Objectives

Considering the aim outlined in Section 1.3, the objectives of the thesis are as follows:

1) What features and properties give a coin its function as a coin, and how can these be linked to the intrinsic worth of the object, outside of its economic function?

2) Can a new methodology focused on an object biography be created and applied to Roman coins from Lancashire? The intention is that the factors recorded will each relate to an aspect of a coin's object biography (production, circulation, and deposition) and be tested on samples from Lancashire and Plantation Place, London.

3) Do the results from this study demonstrate how a biographical approach can better inform on the use and acceptance of coinage in the Roman world? How could this approach be of benefit to coins found in archaeological context in the future?

It is hoped that this methodology can be applied or adapted to suit coins uncovered in archaeological contexts across different time periods enabling an object biographical approach to have a more prominent contribution in our understanding of the past.

In order to answer the questions outlined above this thesis will first examine the chronological context of Roman Britain, and the strands of archaeological theory pertaining to Roman Britain, including Romanisation. Furthermore, an in-depth examination of the Roman economic system and the role of object biographical theory will also be conducted to provide an understanding of the parameters this thesis is working within. The ways in which these two strands of archaeology may intertwine is outlined through the methodology chapters, which outlines the biographical features of a coin which will be applied to Roman coin samples from Lancashire and Plantation Place in the subsequent results chapters. Finally, this thesis will aim to go beyond traditional narratives and explore how the recorded factors may deepen our understanding of Roman coins, and allow these valuable objects to be seen in a new light.

2 UNDERSTANDING THE CHRONOLOGY OF ROMAN BRITAIN

2.1 Pre-Roman North West Britain

Analysis of Iron Age communities in North West Britain is extremely difficult due to the lack of archaeological evidence and material culture uncovered (Hodgson and Brennand 2006). This issue has led to the region generally being described as a 'black hole' in our knowledge of the period (Haselgrove et al. 2001). The Archaeological Resource Assessment for the North West has suggested that the scarcity of archaeological evidence may be indicative of small dispersed settlements which could reflect an egalitarian society (Hodgson and Brennand 2006, 51).

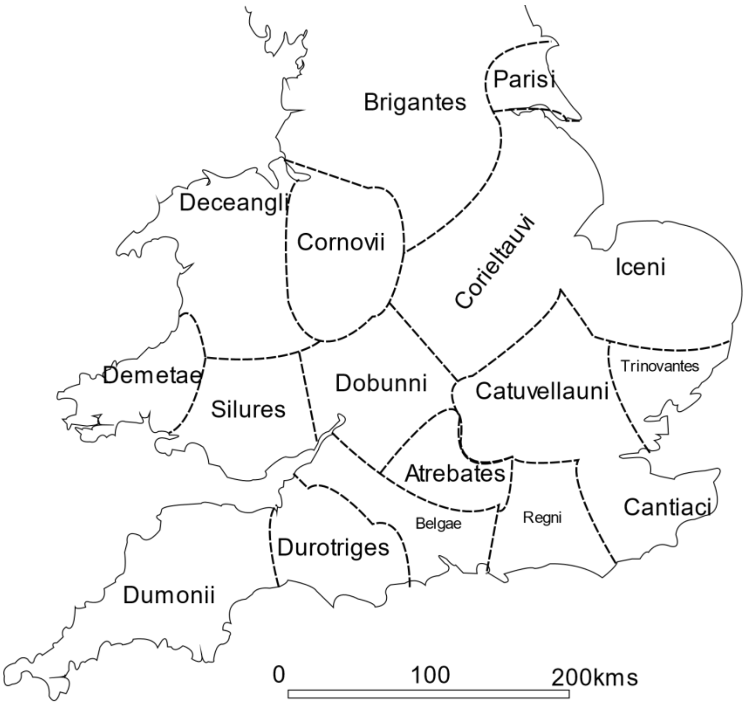


Figure 2.1-1 A map to show the distribution of Iron Age tribes in Britain

If we consider the numerous tribal communities known to occupy the Southern regions of Britain, it is reasonable to suggest that the North was also made up of many disparate communities, despite the broad label of the ‘Brigantes’ being assigned to the North as a whole (Figure 2.1-1). It is therefore possible that ‘Brigantes’ instead represents multiple disparate communities occupying the landscape of Northern Britain and, rather than being one unified culture, perhaps represent a federation of societies (Braund 1984, 1). Alternatively, these smaller tribal groups in the region may have been governed by the Brigantes, who acted as a a higher ruler of these groups (Hartley and Fitts (1988, 1). It is important to note that much of the knowledge of Iron Age communities and their cultural labels is based on contemporary Roman writings, and it is therefore difficult to establish whether this separation of Britain’s territories is accurate or merely a product of Roman invention (Hodgson and Brennand 2006). The ‘Brigantes’ are mentioned by Tacitus and also cited in Juvenal and the Antonine Itinerary (Higham 1987, 7), and throughout these documents is assigned several definitions. In general, it is used to encompass the entire Northern community, with Ptolemy identifying the tribe as ‘stretching sea to sea’ (Ptolemy, II, 3, 10). However, Tacitus uses the term more specifically to refer to the community directly associated with Cartimandua, the queen of the Brigantes. It is argued that this duality of meaning ascribed to the term suggests that it may simply represent an example of a dominant community acting as a patron for peripheral tribes (Higham, 1985, 102). The lack of knowledge surrounding the social structures of Iron Age communities in Northern Britain highlights the need for more extensive, development-led archaeological excavations within this region in order to provide a deeper insight into the Iron Age to Roman transition (Hodsgon and Brennand, 2006).

It is often assumed that the Brigantes, under Cartimandua, were Roman allies following the invasion of Britain, particularly after she handed over Caratacus to the Roman army in AD 51 (Hanson and Campbell 1986, 73). Tacitus implied that the queen of Brigantes obtained her wealth as a direct consequence of her assistance to Rome (Tacitus, histories, III, 45). However, whilst several possible locations have been explored for the capital of the Brigantian territory there is still no definitive answers as to where the power centre for this northern tribe was located. The lack of investigated and published sites in the northwest means that, understanding of ‘Brigantes’ archaeology is often based on eastern sites. Traditional arguments, suggest that the capital of the Brigantes is located at the hillfort of Almondbury, near Huddersfield (Hanson and Campbell 1986, 74), other possible locations include Barwick in Leeds, where a hillfort has been identified under Norman archaeology (Hansom and Campbell 1986, 74), which is thought to be in a better strategic position than Almondbury, through the east-west route across the Pennines, as well as enabling north-south communication only 4km away from the later Roman road from Lincoln to Aldborough (Hanson and Campbell 1986, 74). However, the only other archaeological evidence from the area comes from two stay Roman coins finds, one of the Republic and one of Claudius, and therefore it is difficult to be sure of their stratigraphy within pre-Roman contexts. Two other possible sites are also mentioned in the archaeological literature, one at York and the other at Aldborough, though no known pre-Roman architecture has been identified at either site (Hanson and Campbell 1986, 75).

Campbell and Hanson (1986, 75) suggest that up until the point of their 1986 publication the 'most obvious' location for the capital of the Brigantes had not been considered, the earth work complex at Stanwick, North Yorkshire. However, extensive excavation at the site between 1981 and 2011 and its subsequent publication in 2016 (Haselgrove et al.) may provide considerable evidence in favour of this location being the Brigantian capital. The excavations revealed an Iron Age enclosure, roughly forming an irregular pentagon in shape and composed of curving arcs of earthwork (Haselgrove 2016, 13). The remains represent a large upcast bank, two to three metres in height, fronted by a single ditch of similar depth and accompanied by counterscarp (Haselgrove 2016, 13). Within the perimeter there are two internal earthworks also dating to the Iron Age (see figure 2.1-2).

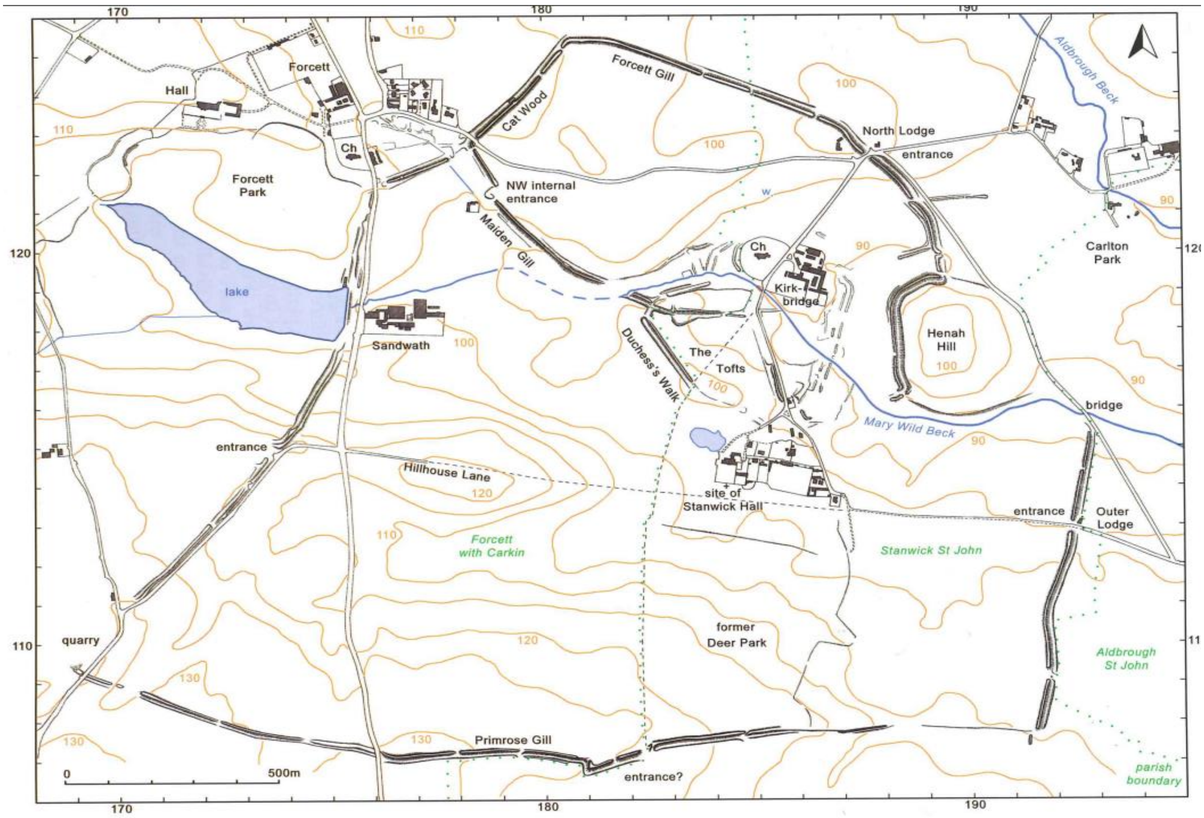


Figure 2.1-2 Haselgrove 2016. A plan of the Stanwick Enclosure

The first, Maiden Gill, blocks off access to the northern part of the interior, dividing the area from the rest of the complex (Haselgrove 2016, 13). The second internal earthwork forms the southwestern side of the Tofts through Duchess's walk, though at the southern end the earthwork all but vanishes and is only traceable through a shallow scarp (Haselgrove 2016, 15). The 1981-89 excavations revealed six periods of occupation, originating in 80/70BC all the way through to the 17^{th}-18^{th} Century AD. The first five periods cover the Iron Age through to the Roman period, dating from 80-70 BC to AD 65-75. The excavations of these periods (Figure 2.1-3) highlight a series of intercutting ditches and gullies, as well as post-holes indicating a four post and six post structure (Haselgrove 2016, 45-49). Period 6 looks at the later cultivation of the site in the 17^{th} and 18^{th} centuries, which is defined by the remnants of ridge and furrow (Haselgrove 2016, 49).

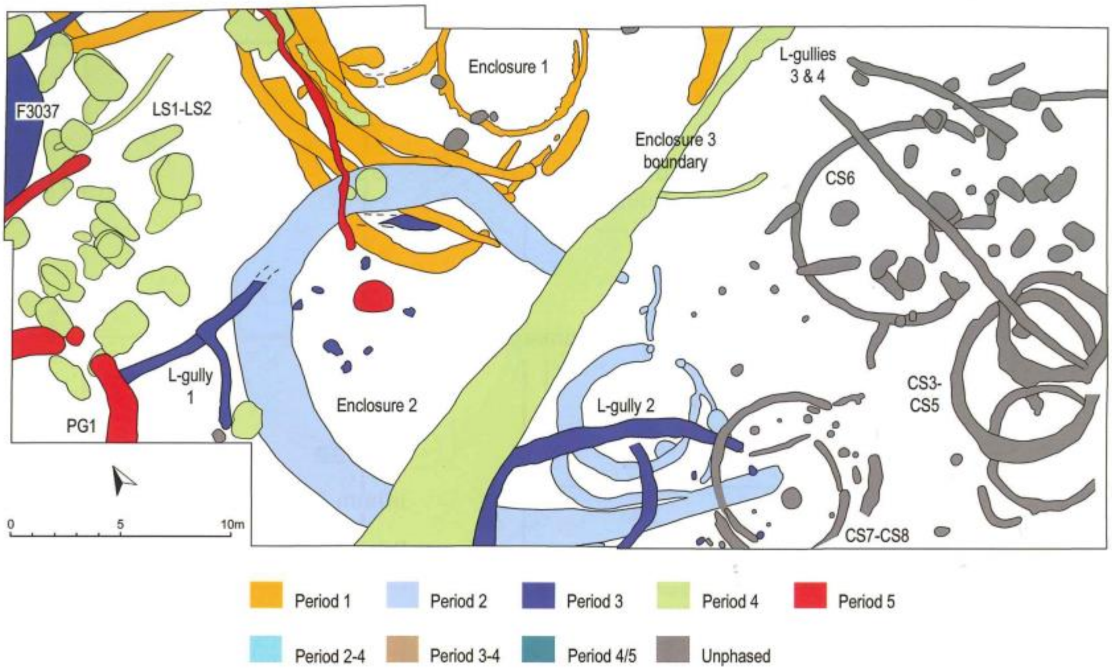


Figure 2.1-3 Haselgrove 2016. Plan to show the distriution of features at Stanwick

The wealth of material evidence also indicates the complex nature of the site. Three coins have been associated with these excavations The first dates to the Iron Age (specifically 20 BC – AD 10) and is associated with Corieltavi tribe from the East Midlands (Haselgrove and Kenyon 2016, 183). The second coin is a denarius of P. Petronius Turpilianus and is a rare find in Britain and the third a imitation dupondius of Claudius I. Together Augustan denarii and the imitation Claudius I are typical finds in Southern Britain following the invasion in AD 42. However, their presence at a site which was abandoned by the time Roman coinage was prevalent in the geographical area is unusual (Haselgrove and Kenyon 2016, 186). Nine first century brooches were identified during the course of the excavations (Allason-Jones and Haselgrove 2016, 191). Sixteen crucible fragments were identified which could represent up to thirteen different vessels (Lowther 2016, 200), one of which displays evidence for a 'tong mark' in the metal residue on the inner face, as well as coppery residue on two of the other vessels which implies copper-alloy metal working may have been being undertaken at the site. The pottery recovered numbered 1424 sherds, spanning the late Iron Age to later first century AD (Willis 2016, 207). The Iron Age pottery forms one of the largest excavated collections from the north of England, whilst the Roman assemblage represents early finewares and amphorae (Willis 2016, 207).

As demonstrated the site represents a complex series of structures, which along with the material evidence suggests a rich and diverse past throughout the Iron Age periods into the early Roman period, something which is rare from the archaeological evidence of the North of England.

Haselgrove (1996) highlights that there are very few hillforts in Cumbria and North Lancashire, despite the favourable upland nature of the surrounding geography. The few that have been identified are comparatively small in nature compared with the south of Britain. For example, Castlecliff is a small hill fort that shows evidence of stone and timber ramparts in its early phase. Radiocarbon dates from this site remain uncalibrated but indicate dates for the mid-first century BC (Harding 2017, 47). With no calibrated dates for this site, the accuracy of the dating evidence is uncertain and therefore the lifecycle of this site could be shorter or longer than reported.

Whilst widespread and distinct settlement evidence for Iron Age communities in the North-West is considerably lacking, there is some evidence of the types of activities these communities may have been participating in. It is thought that Very Coarse pottery, briquetage, a type of low-fired pottery, was used in the transportation and drying of salt (Nevell 2005, 9). Nevell (2005, 12) highlights that evidence of Very Coarse pottery published from Great Woolden Hall provides a secure date range spanning the entirety of the Iron Age period. However, there is very little artefactual evidence of the Iron Age period in the North West of Britain and, whilst examples of Very Coarse pottery do offer an Iron Age date there are insufficient quantities of other pottery types and a distinct lack of other artefactual evidence to offer a sufficiently broad picture of the period. Very Coarse pottery may provide evidence of salt transportation; however, the lack of other pottery types implies a reduction in the use of ceramics throughout the Iron Age (Hodgson 2006). The lack of material culture from this period in general does little to support interpretations of trade and exchange, particularly in Lancashire, as it is difficult to track the movement of objects and people during this time. Furthermore, this lack of distinct artefactual evidence makes it increasingly difficult to identify permanent settlements, which does little to add to the archaeological knowledge of the Iron Age in North West Britain.

Another example of Iron Age activity comes from pollen analysis from Lancashire, which has previously suggested that wide scale clearance occurred in the landscape around the time of the Roman invasion. However, the vegetational history from the Forest of Bowland would instead assign this forest clearance to be of Iron Age origins (Mackay and Tallis 1994, 571). The study implies that there is an initial gradual decline in tree pollen in the Forest of Bowland from 100BC-36BC, followed by a sharp drop by around 60%, consistent with a specific phase of woodland clearance occurring during the Iron Age (Mackay and Tallis 1994, 578). This widespread clearance of woodland is likely connected to human interaction with the landscape, and thus can be seen as evidence for communities occupying the North West during this period. Despite this, there is still a lack of archaeological evidence to support permanent settlement in the region.

Moreover, not only is there an absence of archaeological evidence for Iron Age communities in life but there is also little evidence for them in death. The archaeological record for Iron Age burial practices in the region is somewhat absent, with a rare possible example being three inhumation burials found at Crosby Garrett (Whimster, 1981).

Due to the absence of literary resources from Iron Age Britain, as well as the obvious bias of Roman literary accounts in referencing native communities, it is often difficult to construct a narrative for pre-Roman populations. As such, the evidence provided by Iron Age coinage has often been used to try to reconstruct these narratives and analyse the successes and failures of kingdoms and elites (Creighton 2000, 1). The coinage of Iron Age Britain, and more widely North West Europe is thought to have been based around the gold staters of Philip of Macedon (Creighton 2000, 26). The obverse (or face design) depicts a stylised head of Apollo, whereas the reverse depicts a two-horse chariot. As the Iron Age communities began to mint their own coinage, these designs became more loosely based on the original depictions. For example, the reverse designs on Armorican coinage depicts a single horse, often with a human head, whilst the charioteer who was usually present on the chariot itself, was often excluded from the design (Creighton 2000, 26). In addition, other elements can frequently be found added to the reverse design of the coinage. For example, in the case of the *Coriosolitae* tribe (living in modern day Brittany) there is often evidence of a lyre or boar underneath the horse design as shown in Figure 2.1-4 below.

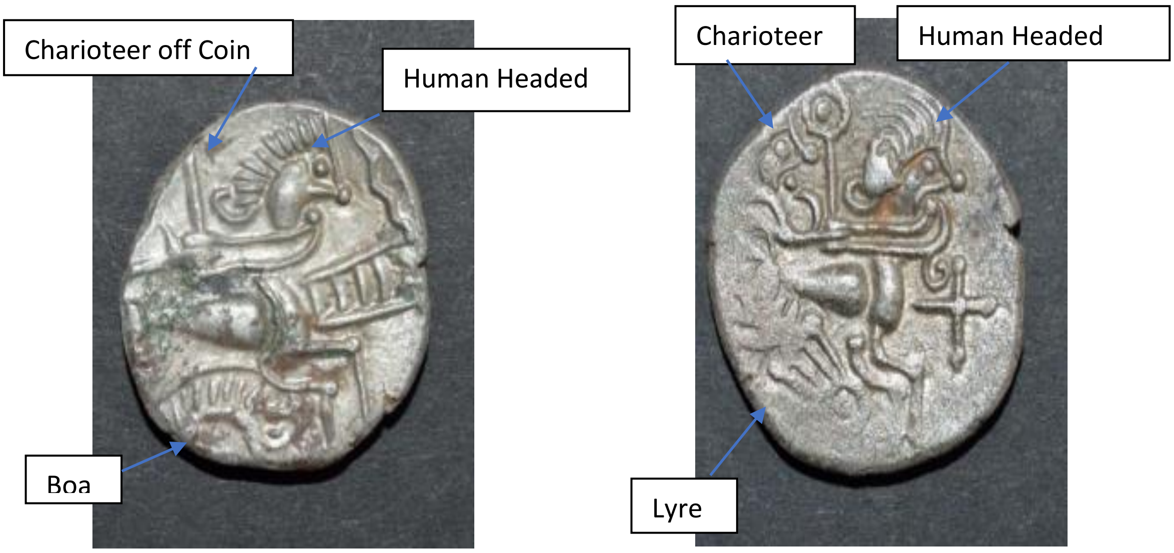


Figure 2.1-4   Images of two Coriosolitae Coins to show the reverse design differences

It is impossible to know the extent to which Iron Age coinage was used for a monetary economy in the manner that it is in modern society. However, it is probable that the imagery chosen for coinage in this period would have projected ideologies or evoked feeling amongst the audiences that were exposed to them. This can be implied when we consider the authority attributed to the horse as a symbol of power. Creighton (2000, 22) highlights that the relationship between horse and man was fundamental to the notion of kingship and authority. As such, the presence of the horse on coinage may serve to perpetuate the concept of control, influence and the elite amongst Iron Age populations. Current archaeological evidence surrounding Iron Age coinage in Britain suggests that following the import of coinage from Gaul, coin production in Britain began in earnest in the middle of the first century BC. This led to the development of a series of regional styles, whereby the horse and chariot design was replaced to feature just a horse (Creighton 1995, 286). Furthermore, as the influence of Rome grew, there was an influx of Roman influenced imagery being portrayed on the coinage of Iron Age Britain.

Whilst little may be understood regarding the use of coinage in this period, the consistency in quality of the coins produced suggests their production may have been influenced by a central tribal authority (Allen 2007, 9). However, it is possible that the role of the individual may have played a greater part in the stylistic variance in comparison to the centralised production of Roman coinage. It is following the arrival of Commius in 55 BC as a middleman between the natives and Caesar that we first begin to see deviation from the more traditional Celtic coin designs as they begin to incorporate letters, individual names and legitimation titles such as that of Rex (akin to the term king) (Creighton 1995, 289). The example below (Figure 2.1-5) is a gold stater produced in the east of Britain by the Catuvellauni and Trinovantes tribe, struck under Cunobelinus. The obverse depicts a corn ear with the letters CAMV and the reverse depicts a horse with ladder mane and a horizontal branch above, with the letters CVN below the horse. Although minted in the Eastern region of Britain, the coin was discovered in Yorkshire and the Humber in the North of England and is thought to be associated with the Silsden hoard, one of three hoards found in the territory of the Brigantes (PAS, 2019*).* The exact reason for the presence of Southern Iron Age coins in sparsely inhabited Northern territories is unknown, though it may indicate that their presence demonstrates mobility of native communities attempting to flee Roman control.

Figure 2.1-5 SWYOR-4EDC75. An example of an Iron Age Gold Stater Recorded on the PAS. Portable Antiquities Scheme. 2019.

The northern most evidence for coinage production in Iron Age Britain is attributed to the Corieltauvi tribe (located in modern day East Midlands) (De Jersey 2007, 2). The imagery portrayed on the coinage of the Corieltauvi follows the common reverse depiction of a horse, whilst the obverse is thought to portray a boar (see Figure 2.1-6), rather than the stylised Apollo depicted on the Iron Age coins of Gaul.

Figure 2.1-6 NLM-62D9D7. An example of an Iron Age Silver coin Recorded on the PAS. Portable Antiquities Scheme. 2022.

The absence of coin evidence further north of this area would suggest that the inhabitants north of the Corieltavi were not exchanging coinage, which is in keeping with current knowledge of Iron Age Lancashire and the lack of evidence of populations in the region. However, regarding the North West more broadly, Hodgson (2006, 57) highlights that there is evidence of coins in the region, specifically at the possible port of Meols, Wirral peninsula. At this site numerous coins dating to the first century BC have been uncovered, suggesting organised exchange was taking place between local elites and foreign traders. However, the scope of this evidence is limited, as the majority of the evidence is unstratified having been uncovered in the 19th century (Hodgson 2006, 54) and the fact that the evidence is limited to the Wirral peninsula does little to suggest that a widespread coin-using society was in operation during this period.

From the brief analysis above, it would be possible to suggest that Iron Age communities in the North West were smaller disparate communities. Due to the lack of archaeological evidence currently uncovered, it could be argued that Roman and Post-Roman texts have a significant impact on our interpretations of the period, something which Hodgson (2006) implies cannot be taken as a reflection of the communities and their identities. It would appear that Iron Age coin use is limited in the North West and may reflect communities that lacked pre-existing interaction with the Romans prior to Roman invasion and therefore had no use for coins as a means of exchange.

2.2 Roman Britain

Prior to the successful Roman invasion of Britain in AD 43, it is important to note that Iron Age tribes already had pre-existing contact with the Roman elite and in fact, there had been failed attempts by the Romans to conquer Britain before any successful invasion occurred. An example of this can be seen in Caesar's aim to conquer the South East of Britain in 55 BC. It is argued that the initial expedition from Gaul to Britain proved difficult for the Roman army who were not used to the seas and tides of the Channel and had no experience of fighting in the shallows compared with native Iron Age tribes (Creighton 2000, 56). Classical texts imply the changing attitudes of Iron Age Britons, with tribes submitting to Roman rule only to later revolt against it. For example, Caesar's *Gallic Wars* describes Iron Age tribes first being overcome in battle during the initial landing in Britain, only to then band together and renew the war following four days of peace (*Gallic Wars 4.30).* This event led to Caesar mounting a larger scale campaign against Britain in 54 BC. Classical texts would suggest that the initial landing of this campaign was more successful than that of 55 BC due to the sheer number of Roman vessels involved in the conquest (*Gallic Wars 5.8*). Caesar's *Gallic Wars* refer to Roman armies defeating the Trinovantes tribe with other surrounding Iron Age tribes surrendering to Roman control because of Caesar's fair treatment of them (*Gallic Wars 5.20).* Whilst Caesar's invasion of Britain may not have involved a Roman dominance in the landscape, and instead can be viewed as an alliance between Iron Age tribes of Southern Britain and the Roman senate, it should not be underestimated. This initial contact between Iron Age Britain and the Roman world can be seen as providing the groundwork for the large-scale Roman invasion of Britain in AD 43, despite the North West tribes being largely unaffected by these efforts.

2.2.1 Invasion and Post Conquest

The exact reason for the invasion of Britain in AD 43 is still open to much debate. The accounts written by Dio suggest that Claudius was persuaded by an exiled British Prince, Adminius, to attack the island (Dio RH 60.19, Black 2000, 3). Suetonius alleges that the Emperor Claudius was moved by the need to celebrate a great victory to legitimise his power, whilst Collingwood's interpretations of Tacitus implies that it was the mineral wealth in Britain that provided an incentive for conquest (Collingwood and Myers 1936).

The invasion of Britain was led by Aulus Plautius with four legions of citizen troops (II *Augusta,* XIV *Gemina,* IX *Hispana* and XX) leading the conquest (Salway 2001, 59). The exact landing place of these troops during the invasion has been the subject of much debate. Webster (1993, 94) interprets passages from Dio when discussing the nature of the landing party; from the written sources it could be suggested that the invasion forces sailed in three divisions so that they could not be prevented from landing. Alternatively, it could imply that there were three different landing places, or three different groups of ships so that they could not all be defeated by the natives at once. Fulford and Frere (2001, 48) suggest that this traditional model saw the Roman army land in Kent, and defeat Caratacus and Togodubnus before the battle at the Medway. Archaeological evidence in favour of this traditional model may be seen in the hoard of 46 aurei near Sittingbourne, which were minted in AD 41 (Fulford and Frere 2001, 48), as well as the evidence for a campaign camp at Richboroughwhich is taken to be associated with the initial landing (Webster 1993, 95). Furthermore, the presence of two probably forts at Canterbury and Faversham are also thought to date to the invasion period (Fulford and Frere 2001, 48), with the fort locations perhaps providing necessary protection and supplies to the advancing Roman troops. Following this more northly route from Canterbury to Rochester, would have strategically allowed Plautius to receive supplies by sea throughout the advance, whilst the presence of the Thames Estuary may have added an element of protection, meaning that military efforts would have only had to focus on the left side. Contrastingly, Black (2000, 4) suggests that the Claudian ditches present at Richborough were to protect the landing ships, with the campaign camp being at a more strategic location further inland at Fishbourne. Sauer (2002, 337) offers alternative models to the invasion of Britain in AD 43, suggesting that perhaps instead of sailing from Boulogne to Richborough, there were alternative routes from the mouth of the Seine to Chichester or Southampton. Evidence in favour of this can also be found in the historical passages from Dio, who suggests that soldiers who were becoming disillusioned with the invasion, regained their courage when the light arose from the east and shot over the sky to the west, in the same direction in which they were sailing (Dio 60, 19, 4), which would be possible following this alternative route from the Seine (Sauer 2002, 337). Sauer (2002, 358) implies that the route via the south coast, through the territory of the Doubunni, and onto the Thames Estuary is more likely, and that, after learning of the Roman army's victories en route, had surrendered before they had reached their territory, which may explain the lack of archaeological evidence in the area. Regardless of the exact landing place of the Roman army in AD 43 it is likely that many Iron Age communities in these southern regions may have been communicating and trading with Rome, prior to the invasion, and that the structure of these communities as smaller groups may have made it easier for the Romans to take the landscape by force if necessary.

As discussed previously, it is thought that the native Britons were made up of smaller disparate tribes, which can be exemplified when investigating the Dobunni tribe. Dio suggests that part of the tribe was ruled by the Catuvellauni (Dio RH 20.1) and this is supported archaeologically through coin analysis, which implies there were two rulers for the Dobunni tribe, with the northern half being ruled by Cunobelin (Webster 1993, 97). Previously, it has been held that broader tribal groups would have designed and minted their own coinage for local trade and exchange. However, the Dobunni provides an excellent example of how these broad distinctions can no longer be upheld. By analysing the presence of coinage with inscriptions dedicated to known kings in this territory, we can begin to see patterns emerging. For example, coins of BODVOC seem to be concentrated to the east of the region (east of the Severn and north of the Avon), whereas coins of CORIO seem to be concentrated to the west (both sides of the Severn Estuary, in Wales and Somerset) (Leins 2008, 107). Consequently, it can be suggested that the broader tribal name of the Dobunni may be an umbrella term for smaller tribal units operating within the same area. Whilst the coin evidence is more easily traceable archaeologically for the Dobunni tribe, it can be argued that interpretation would be similar across the entirety of Britain, including the North West region.

Moreover, pottery evidence in the form of amphorae and wheel-thrown vessels (Morris 1994, 383) suggests that the South East of Britain may have already been trading with Rome (Dannell 1977, 231) and as such, it was assumed that the two were allies (Webster 1993, 97). For example, at Little Waltham in Essex, detailed examination of pottery has suggested an increase in the use of non-local handmade pottery spanning from the mid Iron Age into the early Roman period (Morris 1994, 383). The subsequent death of Cunobelin appears to have been a catalyst for the surrounding tribes buckling under the pressure of Roman advancement. This implies that, with force, the native tribes would crumble and surrender, encouraging a policy of divide and rule (Webster 1998, 97). This therefore suggests that more recent archaeological evidence reinforces traditional arguments. For example, it is Collingwood (1936, 5) who suggests that the conquest of lowland Britain was only able to take a stable hold due to the assimilation of the pre-existing cultures of the Iron Age tribes and the invading Romans.

By the summer of AD 43, Camulodunum had fallen, and an arch was constructed in Rome to commemorate the victory, stating that 11 British Kings had surrendered to Claudius (CIL vi, 920). Following this victory, the XXth legion were left to establish a permanent base whilst the other three legions pushed on to conquer the rest of Britain (Potter and Johns 1992, 40). Dendrochronological evidence from London around this period, suggests that the road system between Verulamium, the Walbrook Crossing and Rutupiae was constructed as part of the wider changes in the area and the foundations of Londinium, and was finalised around AD 47/48 (Wallace 2015, 14). This suggests that either the roads were intentionally constructed around an already existing city, or that they converged on the site where Londinium was being constructed (Wallace 2015, 15). The strategic advantages of Londinium as a central hub are crucial, with some scholars arguing that a trading-port model was central to its importance, due to the easy access to the Continental trade routes via the Thames and the Channel, and its position near the road and trade network (Wallace 2015, 19). The lack of archaeological evidence for pre-Roman structures and communities (Hingley 2018, 9), also suggests that Londinium provided neutral ground for the establishment of an important Roman settlement as it was unhindered by pre-existing communities who may have had little or no allegiance to the Roman armies (Wallace 2015, 19). Hingley (2018, 25) highlights that there is little archaeological evidence to suggest a military contribution to the foundations of Londinium and instead supports the idea that the trading-port model of merchants wishing to exploit the benefits of the port and the central location of the city appears most likely. Excavations of Roman London suggest that the core area of the initial occupation was centred around Cornhill. A large, gravelled surface has been identified just north of the two main roads, suggesting the location of an early market area for the city, Hingley (2018, 31) suggests that the laying, resurfacing and maintenance of such a large area may also imply its significance as an early administrative centre. Pitts (2015,) supports this, by suggesting that the evidence in the area from Roman pottery fits the same patterns as early military sites and therefore may imply that the city was settled by civilian communities as well as urban traders. The second phase of this marketplace saw the construction of three large buildings aligned east-west (Hingley 2018, 31). The southernmost building is interpreted as being a timber-earth structure with a veranda facing outwards onto the main east-west street (Hingley 2018, 31) and therefore may represent a shop front. The easternmost room contained large quantities of charred grain (Hingley 2018, 31) and therefore may indicate that the store was supplying grain for the urban population. A small fragment of water pipe has also been identified to the south of the southernmost building (Hingley 2018, 31) which may suggest that an aqueduct had already been constructed in this area to supply water to the core area of the new Roman London. To the south of these buildings at the modern-day Fenchurch Street, an aisled hall has been identified, which following reassessment is thought to pre-date the Boudican uprising of AD 60/61 and has been compared to the market halls at places like Verulamium (Hingley 2018, 32). Londinium because a significant location during the Boudician revolt, following the death of Prasutagus the leader of the Iceni, and abuses against Boudica, her family and her people (Hingley 2018, 51). Her forces contained people from tribes across the southeast of Britain, and saw Camulodunum, Londinium and Verulamium ransacked and burned. Archaeologically, the evidence for the Boudican revolt can be seen in the burn deposits found in the urban stratigraphy throughout London and this was followed by periods of consolidation after the revolt where London and other effected areas were rebuilt. For example, an early Roman fort at Plantation Place was erected shortly after the Boudican revolt took place in around AD 63 (Dunwoodie *et al.* 2015, 39), the archaeology of Plantation Place is discussed in more detail in Chapters 9.1 and 9.10.3. The conquest of Britain merely represents the beginning of Roman intervention, which would last over 400 years and see a changing dominance in the social, political, economic, and religious landscape. One such way of measuring the spread of Roman control across Britain is to explore the introduction of Roman-styled towns. Previously, archaeology has focused on two conflicting strands. Firstly, whether the introduction of these new town blueprints represents acceptance of Roman rule. Secondly, whether the continued military reoccupation caused the local Roman elites to fear losing their power and therefore needed to be seen to play a larger role in spreading acceptance of Roman rule in order to consolidate their own personal positions (Wacher 1975, 37).

Gosden (2005, 198) proposes that whilst Roman material culture from nearby Gaul had been traded with the Britons for a century before the invasion, the invasion itself acted as a catalyst for the influx of culture immediately post-conquest. He suggests that these imports invoked subtle and fundamental shifts in societal expression through bodily ornaments, food and pottery, public and domestic architecture, and the exchange of coins. Contrastingly, King (1984) highlights that whilst Roman material culture did see an influx into Britain, this concept relies on the adoption of culture being a one-way flow. Therefore, the contra-flow to this (i.e., the diffusion of native British cultural markers to the Roman army) is defined as 'Barbarization'. King (1984) suggests that one way of tracking the flow and contra-flow of cultural ideals is through the examination of food, with Goody (1982) arguing that food fulfils functional needs as well as enabling cultural and ethnic identities to be projected.

King's (1984) study shows that Romano-British military sites, towns, and villas with seemingly heavily 'Romanised' culture have high proportions of cattle bones, suggesting a diet high in beef. Contrastingly, 'unromanised' rural sites have higher proportions of sheep or goat. More recent studies, such as Albarella (2008), suggest that the change in animal husbandry from Iron Age to Roman is a much more complicated picture than the frequency of animal bones found on sites. Using the example of Elms Farm and Colchester, Albarella (2008) is able to demonstrate the change in the size of cattle and sheep identified, providing a much broader view for the changing nature of domesticates across the Roman period. For example, the gradual increase in the size of cattle at Colchester occurred across the span of the Roman period, and the presence of large cattle at some south-eastern sites suggests that the changes in animal importation and, ultimately the change in diet of Romano-British populations, was not just a consequence of the Roman invasion (Albarella at al 2008, 1844). Instead, the transition in animal size is suggestive of a much more complex picture, which goes beyond whether a site is considered more or less 'Romanised' than another. Rather, the change in domesticates is a consequence of a more complicated social, political, and economic series of negotiations between two cultures.

The introduction of new plant-based components offers another avenue to assess the extent of Roman influence in Britain. It has been implied that the presence of exotics alludes to a willingness to assimilate with Roman culture, whereas an absence would indicate the inability or unwillingness to adopt new foodways (van der Veen *et al.* 2008, 12). Moreover, it has been suggested that as a result of Roman invasion, food usage changed dramatically, highlighting that there is a transition from Iron Age practices of personal consumption and small-scale tributes to chiefs, to a larger scale and more technical food based economic market. However, it is possible that in a similar manner to the early considerations of animal husbandry summarised above, we may be oversimplifying the patterns in order to fit into the widely used model of Roman and Native comparatives (outlined in Chapter 3). As such, more recent studies have aimed to look at the transition from the early to late Roman period in order to ascertain why the changes in consumption may have occurred at a political, social and economic level. Using archaeobotanical data from London, Livarda and Orengo (2016, 249) have identified that the distribution of sites featuring new plant-based components supports their widespread presence across the town and their surrounding areas. This suggests that increased consumption, rather than advancements in the means of distribution, was the main factor in introducing these plant-based materials. By the middle Roman phase there appears to be a transition as to where these new materials are found, with a heavy focus on port areas (Livarda and Orengo 2016, 250) thus suggesting that London was changing from an area of high consumption to an area of wide scale redistribution. Conversely, the late Roman phase suggests a similar distribution to the early Roman phase. However, there are less shared species and varieties of exotics present (Livarda and Orengo 2016, 251). It is important to consider the tenuous state of political control during the late Romano-British period, which could have had repercussions on favoured distribution sites and trade networks.

As can be seen from the brief introduction of the Roman invasion provided above, the invasion itself was a complex web of tactical advancement, leading to a break down in the disparate Iron Age tribes of the South.

However, as demonstrated by the food production evidence alone, the introduction of Roman culture was not a widespread phenomenon. Rural areas and the unconquered north retained their Iron Age culture until they were occupied in AD 70s (see Chapter 2.2.3) and, whilst the conquered began to introduce aspect of Roman culture, it is clear that elements of their native heritage were retained.

2.2.2 Mid to Late Roman Britain

Following the initial period of occupation in Britain, Roman control moved northwards, with dendrochronological evidence from Carlisle suggesting Roman activity in the form of a timber fort as early as AD 73 (Hingley 2012, 14). This was the result of an increased need for consolidation in the north, possibly brought about as a result of the Boudican revolt, and the need to prevent an uprising in the north of Britain. As such the construction of a fortified military road, the Stanegate, just south of the line where Hadrian's Wall would later be constructed (Hingley 2012, 14) took place during the reign of Trajan sometime between AD 81 and 117. This route used a pre-existing road built under Agricola, through a natural gap formed by the valleys of the Tyne and Irthing, and connected two important forts, Corbridge on the east and Carlisle on the west (Breeze and Dobson 2000). It is thought that this route acted as a strategic road rather than an official frontier, as it provided key points, of one day marching intervals, which would protect the movement of troops and supplies between official locations (Breeze and Dobson 2000).

Further strategic and defensive would be constructed in the North of Britain over the course of the century. Beginning with the construction of Hadrian's Wall (Figure 2.2.2-1) which was undertaken in the AD 120s and remained in use until the fifth century.

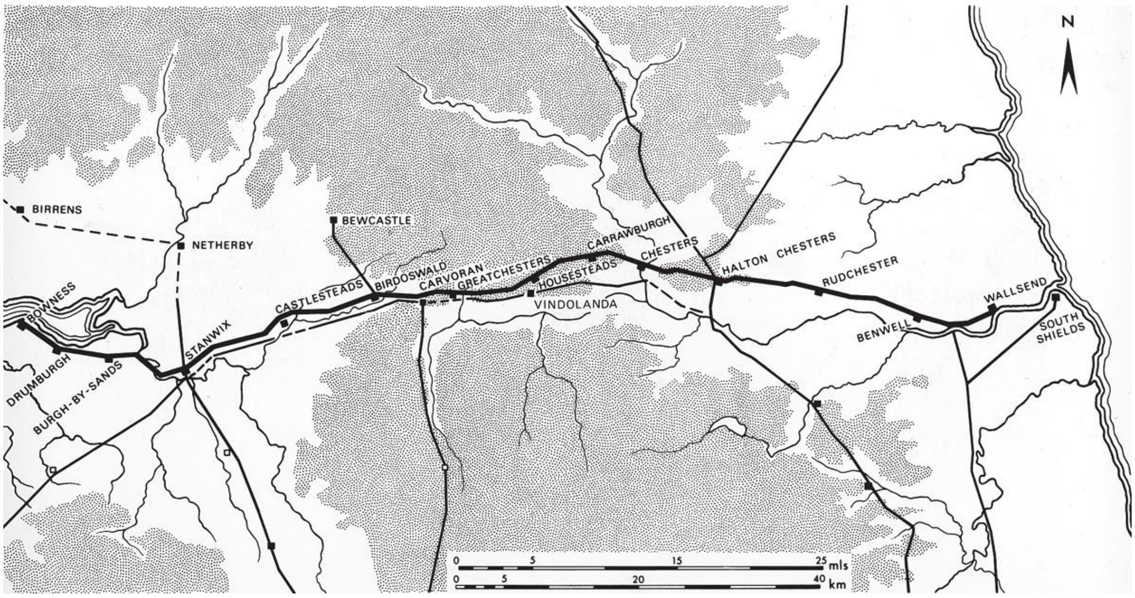


Figure 2.2.2-1. Breeze 2017, 22. A Map to show the location of Hadrian's Wall and the location of its Roman forts

Hadrian's Wall followed the same route as the Stanegate from the mouth of the River Tyne to the Solway Firth and was comprised of a stone rampart and V-shaped ditch running 60 miles from east to west (Hingley 2010, 227). From the Medieval period until the 19th century Hadrian's Wall was thought to be built to defend the civilised occupants of the lowlands from the barbarians, the Picts of the Scots, to the north of the wall, with Hingley (2010, 227) suggesting that the physical embodiment of the wall has acted as a spatial signifier for the boundary between England and Scotland. The wall was a physical signifier of Hadrian's policy of bringing the expansion of the Roman Empire to an end, with fortifications also being built along the German frontier during the same period (Birley 1977, 130). In terms of its physicality, it is thought that the wall would have been approximately 3.6 metres in height, though there are no surviving areas of its full elevation anywhere along its line (Hingley 2012, 18). The wall was constructed by soldiers from three Roman legions the *II Augusta,* the *VI Victrix* and the *XX Valeria Victrix,* with 211 centurial stones uncovered across the length of the wall attesting to its construction by Roman legionary detachments (Hingley 2012, 20). The wall was maintained throughout its lifecycle, with periods of substantial rebuilding being associated with the Severan period (Birley 2005, 183). At intervals of one Roman mile, milecastles were constructed along the wall, and contained two entrances to allow passage through the line of the frontier (Hingley 2012, 23). This may indicate that the function of the wall itself was less about keeping people out of Britain, but instead about controlling their movement across the boundary. The most significant feature of Hadrian's Wall are the 12 wall forts positioned along its length (Hodgson 2017, 60) where soldiers were garrisoned possibly to protect Britain from invaders and also keep those under Roman rule within their territory. If the mile castles were for the control of social mobility then the forts might be an indication of the force that could be used to maintain control if necessary. The wall forts are thought to be spaced at approximately every seven to eight Roman miles (Breeze 2017, 21), with forts that were not in their exact expected location explained as being moved to defend specific locations. For example, the fort of Chesters is located a mile east of where it is expected, and this is thought to be to enable the crossing of the North Tyne and Stanwix to be protected (Breeze 2017, 21). Alternative explanations for forts that deviate from this distance can be seen due to the nature of the topography, for example in the case of Halton Chesters which may have been moved to avoid the slope of Down Hill, and Housesteads moved occupy higher ground, giving a strategic advantage (Breeze 2017, 21). Consequently, the construction of Hadrian's Wall and the strategic positions of the forts stationed along it, suggest that the first century was a period of consolidation, where significant efforts were placed on protecting and maintaining control of a broader Roman Britain.

By AD 200, Roman Britain had been part of the wider Empire for nearly two centuries and was a crucial member of the political, military, social and economic fabric that held the Empire together (Cleary 1990, 1). However, this period sees a wide scale shift in the control of Rome over its Empire. This shift occurs amongst a backdrop of political upheaval with the period referred to as the "3rd century crisis" (Cleary 1990, 1). The Roman Empire's long-standing tradition of geographical advancement as a means to legitimise the power of the Emperor could be considered as the beginning of its own downfall. Watson (1999, 5) supports this notion, stating that geographically the Roman Empire had become too large to be ruled by a single individual for any significant length of time. Evidence from this can be found in the chronology of the Emperors themselves, where 60 different individuals ruled the Empire (either solely or jointly) during the third century (*Portable Antiquities Scheme, Emperor Guide 2019).* Johnson (2014, 70) highlights the fragile state of the Roman Empire following the death of Gordian III in AD 244, when both Diocletian and Maximian were appointed Emperors, and the Empire was divided into two halves. Subsequently, frontier armies favoured their own commanding officer as candidates for full imperial power, even threatening civil war. It is possible that the lack of control over the imperial armies only serves to highlight the disunity of the period (Johnson 2014, 70).

This dissent and lack of political control began to filter into other aspects of Roman life. For example, economically, the third century saw greater monetisation, with the commercialisation of exchange and higher levels of urbanisation. Hopkins (1980, 102) describes this period of monetisation as a series of small-scale changes in the production, distribution and consumption of goods. For example, in less sophisticated regions, centres of agricultural production were forced to sell an increasing amount of their primary products in local markets in order to meet increasing tax demands. This produce was consumed by local artisans who crafted smaller quantities of higher value goods to be traded or locally consumed. This system led to ever increasing agricultural demands, an increase in labour, the growth of town sizes and the development of local markets and long-distance trade (Hopkins 1980, 102). Furthermore, the decrease in governmental wealth meant that tax money was used to pay the military factions, money that they could then input back into the economic cycle through personal purchases.

However, Reece (1973, 236) highlights that the third century saw either a shortage in coin supply or a restricted use of coinage. From this, it is possible to reason that the cycle of paid taxes subsequently being used to pay the military suggests that the Roman government were in a period of crisis during the third century and as such, were not acquiring enough money to retain control over the Empire at large. Moreover, the periods of debasement scattered across the Roman period, indicates an effort to regain some control of the economy. Evidence of debasement can be seen when tracking the extent of silver content of silver denarii. By decree of Caesar Augustus in 15 BC, silver denarii were expected to have a silver content of approximately 95% and be produced to fit into a set weight range (Pense 1992, 213). This was perhaps to allow the rigid economic system to be upheld, where one gold aureus would be the equivalent of 25 silver denarii. However, the silver content rapidly declined over the course of Romano-British occupation, particularly in the third century, from 50% in AD 196 to below 5% towards the end of the third century. It is possible to suggest that these periods of debasement did little to rectify the Empire's financial situation with Harl (1996, 152) highlighting that debasement during the reign of Diocletian was a rapid failure. It is suggested that the introduction of the nummus (a low value bronze issue) encountered a public reluctance to accept the coin based on its value. It is possible that this was because its market value was much higher than the value of its metal, and whilst this made them more profitable to mint (which was a centralised commodity), it may not have encouraged widespread acceptance (Harl 1996, 154).

In addition to political and economic upheaval, the third century also saw substantial spiritual shifts. Immediately post conquest, the native Britons were able to continue to worship their own gods, with Watts (1998, 1) suggesting they were frequently animistic and associated with nature, war, and fertility. However, as Roman culture began to spread across Britain, so did their religious practices, with temples erected in a new Romano-Celtic style and the introduction of gods as human representations. This acceptance of new religious practices enabled the Imperial cult to be introduced as an official part of religious life (Tacitus *Ann.* 14.31). Watts (1998, 2) suggests examples for this acceptance is exhibited in the presence of gods such as Jupiter, Juno, and Minerva. Archaeological evidence for the worship of traditional deities, combined with the introduction of Roman gods, can be seen at the temple of Sulis Minerva in Bath, Somerset (Gerrard 2007, 148). Here Sulis, an indigenous deity associated with life-giving, was fused with Minerva, a Roman goddess associated with wisdom and warfare. Archaeological excavations of the site have produced coins dating to the fourth century, suggesting that the temple was continuously used from its early conception through the entirety of the Roman period. It is likely that the political and economic crises facing the population throughout the third century had an impact on religious practices. Watts (1998, 10) highlights the increased popularity of cults, such as those associated with Bacchus (saviour god), which were most common in towns and on the sites of villas (Hutchinson 1986). This is fitting with the implication that these areas were where the economic and political strife would have had the most impact.

Watt's (1998, 12) suggests that the first archaeological evidence of Christianity in Britain comes after Constantine's edict, calling for an end to the persecution of Christians in the 4th century. Examples of Christian expression in Roman Britain can be seen at Colchester, where a church at Butt Road was built, and burials orientated west-east (Crummy *et al.*, 1993, 60). Additionally, there is a cemetery at Ancaster which also appears in the early 4th century (Wilson, 1968), and by the mid-4th century a small chapel and baptistery had been built on what is considered to have previously been a pagan site in Witham (Watts 1998, 13). Moreover, it is around the mid-4th century in which pagan temples seemingly begin to fall out of use. An example of this can be seen at Gosbeck's Farm, where a temple and associated theatre, thought to be dedicated to Mercury, was abandoned by AD 350 (Hull 1958, 229). The evidence from Colchester may suggest that there are the beginnings of decline in the Roman town during the fourth century, although the Saxon raids reported by Ammianus provide evidence of fourth century coin hoards. Additional evidence of the construction of a Saxon sunken floor hut constructed in the mid-5th century (Faulkner 1994, 118) may indicate that Colchester was still an inhabited town - a town that exemplifies the effects of diminishing Roman control and the influx of Saxon influence.

On a broader scale, Esmonde Cleary (2011, 21) highlights that the Roman empire provided internal and external security, a political system and structures at several levels, a judicial system, a civil administration, political and religious ideologies, and economic frameworks including currency. Therefore, following the collapse of the Roman Empire in Britain, the withdrawal of direct administration in AD 410 (Petts 2013, 318) and the ending of official Roman coinage being supplied to the province, we can see the collapse 'Roman-ness' in Britain (Esmonde Cleary 2011, 21). Archaeologically, these events have often led to a definitive end of Roman Britain being accredited to approximately AD 410. Feasibly, the end of official intervention may have left a power vacuum, leading to the collapse of financial, civil and judicial administration. However, Esmonde Cleary (2011, 22) highlights that this process is unlikely to have occurred instantaneously, with those in positions of power trying to maintain their control and status for as long as possible. However, it would have been difficult to maintain a social, economic and political system without the power that is behind an official and widespread empire. These changes to the fabric of social order may be more difficult to pick up in the archaeological landscape and have potentially led to more subtle changes never being acknowledged, in favour of trying to identify what is Roman and what is Post-Roman. Reece (1980, 84) discusses the evidence from Wroxeter, when suggesting that the construction of timber buildings around AD 370, post-date the presence of 'Roman' style stone-built houses and administrative areas. This suggests that the landscape was being repurposed at the point of the Empires decline in the province. Whilst, these buildings may have followed a Roman organisational design, they seem to have been confined to the areas of earliest Roman occupation of the city (Reece 1980, 84). Due to its location on the Welsh border, it may be implied that Wroxeter would have fallen out of the Empire early on and by the late fourth century was re-established as a 'small administrative village' (Reece 1980, 84). Reece argues that this repurposing of the landscape cannot be considered to be culturally Roman as it was likely constructed after Roman rule in the area had ceased (Reece 1980, 84), and therefore it perhaps falls into this new dichotomy of social organisation which is neither Roman nor Medieval and instead exists between the distinct chronological boundaries assigned by archaeology as a discipline. This may be supported through the evidence provided by small finds, which can show a change in use of artefacts through the decline of the Roman Empire and into the fifth century. Cool (2014, 14) demonstrates this through the changing use of glass vessels, which arrived in Britain at the time of the invasion forces around AD 43. Flavio-Trajanic assemblages demonstrate the widest variety of glass vessels, from cups and beakers, to jars and jugs, to larger bottles and toilet and general-purpose flasks (Cool 2014, 15). However, by the later second and early third century half of a glass vessel assemblage was focused on drinking cups, and by the fourth century this proportion had increased further. This suggests that glass has gone from being a common material for all types of containers in the early Roman period, to being almost solely reserved for tablewares, and more specifically drinking vessels, by the early fifth century (Cool 2014, 14). If we consider the trajectory of change in the use of glass vessels throughout the Roman period, then it is perhaps unsurprising that Anglo-Saxon glass using continues this pattern. Therefore, this should not be taken to reflect a change from Roman to Anglo-Saxon but as part of a much more complex change in social organisation.

As such, it can be argued that the third century saw a concurrence of economic, political, social, and spiritual changes, which may have accelerated the process whereby one system could be replaced by another (Alföldy 1974). Consequently, this set into motion a set of circumstances, which would later become the undoing of Roman control in Britain.

2.2.3 Roman North West

Outside of the evidence produced by archaeological excavations, much of our knowledge of this period is reliant on classical texts, such as Tacitus' the *Life of Agricola* written in AD 98. This biographical account retains a strong focus on the barbarian nature of native Britons and their willingness to conform to Roman ways of life. For example, *Agricola 21* discusses that native Britons were 'rude and dispersed' and that Agricola introduced them to the 'pleasures of quiet and rest' and helped them build 'temples and houses.' This interpretation places a significant emphasis on the role of the Romans as the conquerors to provide civility to the pre-Roman communities, and the use of language suggests that these communities were willing and grateful to conform to Roman societal patterns. It is possible that this is the beginnings of what would later be known as Romanisation (see chapter 3.1 for discussion of Romanisation), whereby the conquered communities are introduced to Roman societal structures, material culture and religion and adopt these as the new social norm. However, as the rebellion of Boudicca would suggest, not all native Britons may have been as accepting of Roman control as the classical accounts would suggest and consequently actively resisted the imposed cultural changes.

It is crucial to recognise the possible bias of Tacitus, and how this bias may have affected contemporary records. For example, Tacitus was married to Agricola's daughter and therefore his account of the *Agricola* represents a biographical account of his own father-in-law. This may go some way to explain the lack of critical writing concerning Agricola's campaigns and instead the strong focus upon the failings of others (Birley 2000, 234). Moreover, when considering another of Tacitus' contemporary works - the *Histories* regarding the Flavian dynasty - it is essential to acknowledge that Vespasian provided his rank as senator, and he was subsequently promoted by both Titus and Domitian respectively (Birley 2000, 234).

It is important to remember that this biographical account of the life of Agricola was not intended to be taken as gospel by archaeologists and historians. It was created merely as an account of the time, from the point of view of Tacitus. However, due to the scarcity of classical texts and, in some cases archaeological evidence, the lack of context for the period has meant that these texts have often been used, interpreted and perpetuated throughout archaeological discussion (Shotter 2004, 26). The inherent biases of Tacitus and our reliance upon these classical texts could be considered a detriment to archaeological interpretation of Roman presence within Britain.

If we consider the archaeological evidence for this period, it is apparent that, whilst Britain was conquered in AD 43, the advance north did not begin in earnest until the AD 70s. Smaller groups of troops had entered the North West through the 50s and 60s to keep the peace and quash small-scale uprisings. However, few permanent military sites were erected during this period (Shotter 2004, 28). This is supported archaeologically through the dating of fort sites and the use of dendrochronology. Archaeological data suggests that the initial turf and timber fort at Carlisle was constructed around AD 72, with the dendrochronology supporting this assertion (McCarthy 1995, 492). Moreover, evidence from Ribchester indicates that the early turf and timber fort was constructed in AD 74 (Howard-Davis and Buxton 2000). It is therefore possible to suggest that Roman control in terms of occupation did not occur in the North West until this period, in line with previous assumptions from contemporary texts.

The North West Archaeological Research Framework indicates that on the surface, the data set in this area is well studied, with a reasonably widespread distribution of sites across the region. However, when we consider the work undertaken by the *Rural Settlements of Roman Britain* (Allen *et al.* 2018) project, we can begin to identify the shortcomings in the evidence available from the North. Looking at the regional distributions in rural settlement evidence, it is noticeable that the North is severely lacking in sites compared to other regions in the country (graph 2.2.3-1 below).

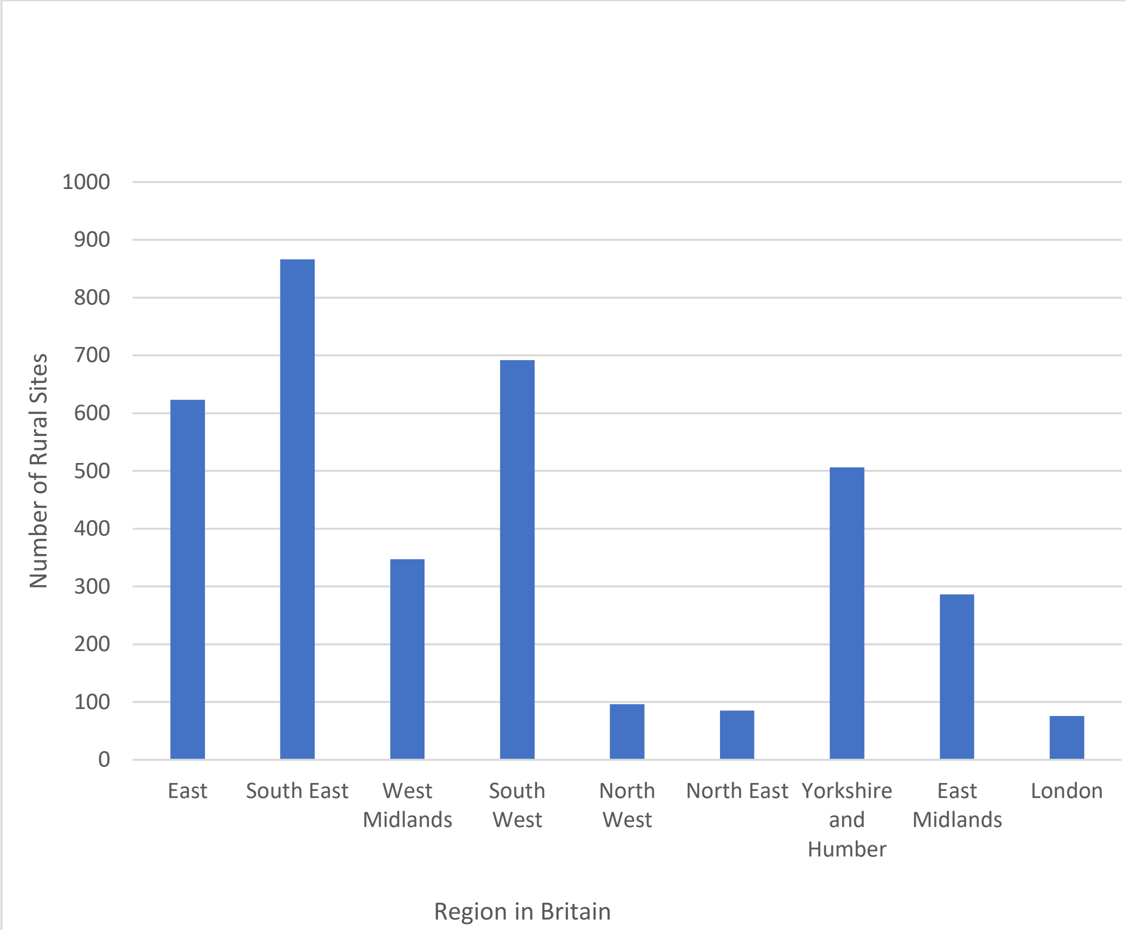


Figure 2.2.3-1 Regional Distribution of Rural Sites in Britain

The Roman sites we are aware of are well excavated and published, such as those at Lancaster and Ribchester, but the wider Roman landscape of North West Britain is poorly understood due to a lack of widespread excavation. Furthermore, there is a lack of publication of some sites in Lancashire and importantly, new sites are being discovered all the time, for example the Roman fort at Burscough (Baldwin, S pers.comm July 2018). The following sections outline the most documented military, industrial, rural and funerary evidence for Lancashire, with locations highlighted in Figure 2.2.3-2.

Figure 2.2.3-2 map to show the location of known Roman sites in Lancashire

2.2.3.1 Military Evidence

The best archaeological evidence available for the Roman occupation of the North West is perhaps that which is focused around both the presence and activities of the military. Philpott (2006) supports this by highlighting that this is the most recognised aspect of the Roman period in the North West, due to the amount of attention devoted to understanding it. He notes for example that, between 1811 and 2003, Ribchester had approximately 100 archaeological interventions in the form of excavations, evaluations and watching briefs that have often focused heavily upon the military presence (Philpott 2006, 62). Furthermore, whilst there are many identified forts in the North West (the *Roman Rural Settlement Project* indicates 23 records across Lancashire and Cumbria), Philpott (2006) argues that our understanding is still somewhat limited, due to the small scale of the excavations that have been carried out. The largest and perhaps most famous military installation, which extends through the North West, is Hadrian's Wall (Breeze 2019, Hingley 2012, de la Bedoyere 2010, Breeze and Dobson 2000).

Published excavations in Lancashire suggest that there are three distinct fort sites in the county: Ribchester, Kirkham and Lancaster. A further possible fort has been identified in Burscough, West Lancashire by the presence of earthwork traces indicated on Lidar analysis (Historic England 2020), though this site is not fully excavated and remains largely unpublished. Of the three sites, Ribchester could be considered the most detailed and understood, due to the extensive excavation in the area (Figure 2.2.3.1-1).

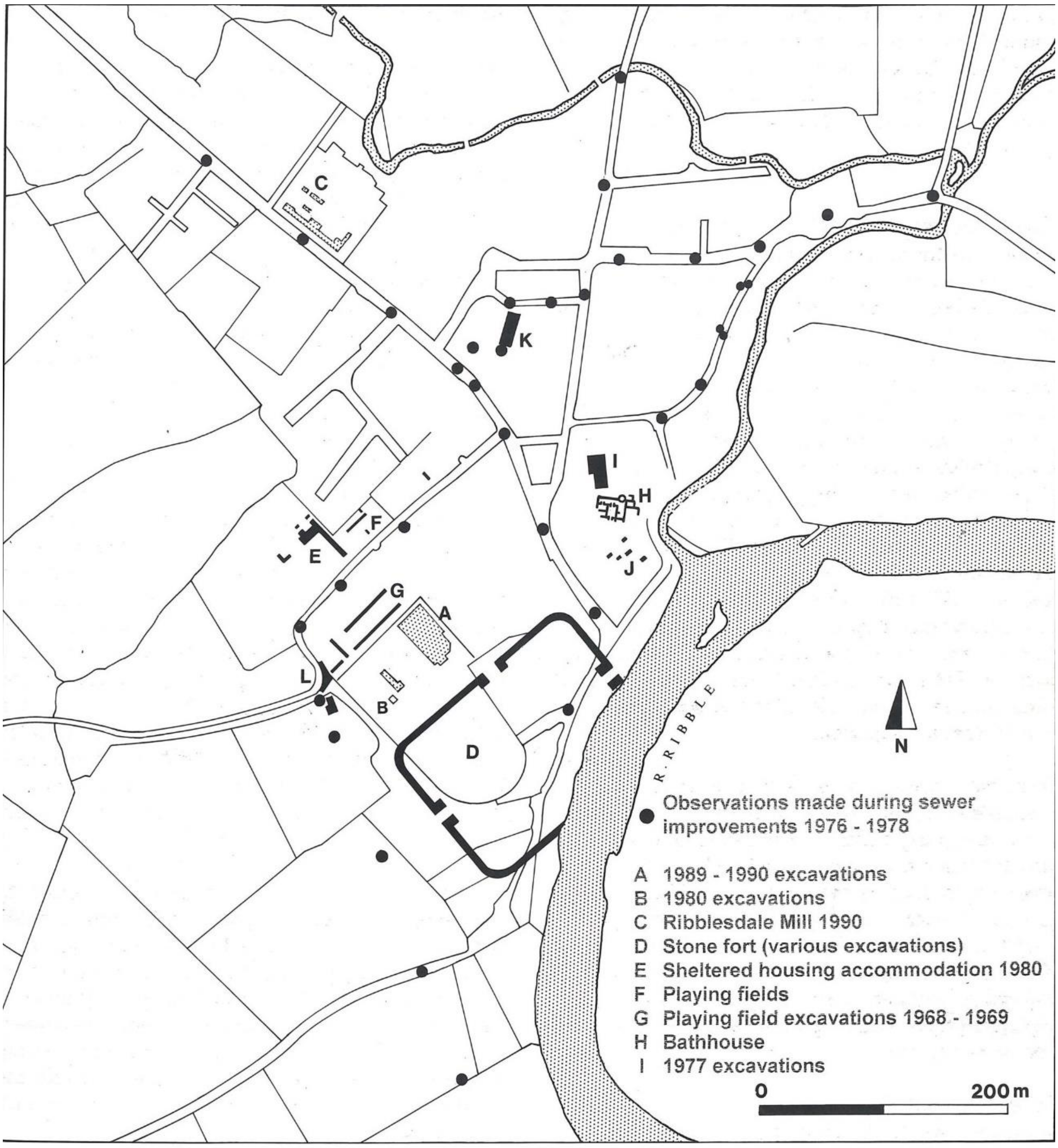


Figure 2.2.3.1-1 A map to show the various excavations that have occurred at Ribchester, Buxton and Howard-Davis 2000

The Roman fort at Ribchester is often understood as having two distinct phases, with the first phase focused on the establishment of a timber fort during AD 72-73 (Howard-Davis and Buxton 2000). However, re-evaluation by Webster (2017, 23) suggests that this should be expanded to the early to mid-70s to mid-80s AD. Archaeological excavations of the site indicate that this first phase of construction consisted of a timber strapped turf rampart built on a corduroy foundation and incorporating a tower (Howard-Davis and Buxton 2000). Evidence for three large ditches, which merged into one towards the site gates of the fort, were also uncovered. A secondary phase of construction was undertaken, which saw the demolition of the early timber fort, and the reconstruction of the fort in stone.

Archaeological evidence also depicts an increase in metalworking activity during the early second century, with reports suggesting that the fort fell into decay during AD 135 (which coincides with Webster's (2017, 23) assessment), possibly around the time soldiers were advancing further North into Scotland, ahead of the construction of the Antonine Wall (Howard-Davis and Buxton 2000). However, recent excavations by the University of Central Lancashire within the interior of the fort have revealed features such as a wicker lined well, which radiocarbon dates indicate was constructed in calAD 131 (pers. Comm. Morris, J. 15/06/21). This suggests some activity may have continued at the fort site during this time. The subsequent withdrawal from the Antonine Wall in AD 163 appears to have led to a reoccupation of some of the abandoned forts in the North West. It is suggested that the construction of the stone fort at Ribchester may relate to this phase (Potter 1979, 179), with evidence for the reoccupation of Ribchester after AD 175 by a Sarmatian cavalry unit (Hopkinson 1928, 10), where it is thought that the Roman fort space transformed from a military function to became a urban settlement for veteran soldiers.

Evidence from the 1970 and 1978 excavations suggests the rebuilding and subsequent demolition of barrack blocks during the third century, with the remodelling of defences and blocking of the west gate (Edwards and Webster 1988, 6). Thus, implying that the fort space continued to be used in some form well into the fourth century. This is supported by the evidence of late Roman pottery identified by Thomas May in the granary excavations (Edwards and Webster 1988, 14). Furthermore, Webster (2017, 25) highlights that, from the published evidence so far, the evidence north of the granaries suggests activity continued at the site into the late fourth century. Whilst it remains difficult to provide an accurate end date for occupation at Ribchester, Webster (2017, 25) emphasises that occupation continuing into the early fifth century cannot be ruled out. Excavations by the University of Central Lancashire have suggested that the presence of possible structures on the site have provided evidence of Huntcliffe and Crambeck ware, which also suggests continued activity into the fifth century (pers com. Morris,

J. 10/01/2022). Edwards and Webster (1988, 14) point out that the late Roman defences of Britain are heavily concentrated on the Saxon Shore of the east and south. However, the evidence provided by continued excavation at Ribchester, as well as the forts along Hadrians Wall, like the extensively excavated Vindolanda, which has been continually explored since 1970, implies that occupation and/or reoccupation of forts in the North West continued until the end of the Roman period, consequently having an important effect on the archaeological record..

The University of Central Lancashire also excavated at Ribchester Roman fort between 2015 and 2019, examining the North Eastern gatehouse and the area to the east of the granaries (see figure 2.2.3.1-2). The aim of the excavations was to examine the later Roman activity that was taking place on the site, as well as investigate the changing use of the fort throughout its occupation. Whilst post-excavation analysis from the excavations is still ongoing, it is possible to outline some of the main features uncovered. The northern ditch of the stone fort was identified, along with the wall of the stone fort and the eastern guardhouse. Additionally, the excavations uncovered a section of the interior east-west intervallum road. In the southern parts of the trench a number of phases of activity were identified, including late fourth and early fifth century postpads, thought to be associated with a late furnace which contained evidence of glass and metal working. Below this feature was a fourth century timber building, identified through the presence of beamslots and postholes. Second century layers in this southern part of the trench also revealed at least four kilns and a timber lined well was identified in the northern part of the trench, thought to be associated with the construction of the stone fort.

Figure 2.2.3.1-2 Aerial photo of the Ribchester Revisited Trench in 2018, Birtles, M

The evidence of military activity at Kirkham is less well understood than at its Ribchester counterpart. The earliest phases of military occupation at the site are evidenced through three parallel 'military-type' ditches of Roman date (Buxton and Howard Davis 2000b, 9). The evidence suggests that the southernmost ditch would have had the shortest life span and was deliberately backfilled. The remaining two ditches provide evidence of silting and re-cuts which would have prolonged their use. Pottery evidence from the ditches shows several fragments of hand-made, hand-fired vessels, which may imply interaction with the local 'native' population. Additionally, there were: 62 sherds of Samian Ware, 39 sherds of Coarse ware vessels, four sherds of amphorae associated with South Spanish olive oil vessels, six sherds of Wilderspool mortaria, 16 sherds of rustic ware and sherds of Black Burnished Ware 1 also identified (Buxton and Howard Davis 2000b, 16). The lack of evidence of distinct structures and the relatively short lifespans of the three early ditches may suggest that this phase was part of a temporary camp at Kirkham (Buxton and Howard Davis 2000b, 9).

The second phase of activity at Kirkham is associated with a small, square defended enclosure. The presence of postholes inside this enclosure suggests a possible timber structure however, due to its size, it is unlikely to represent a fort space. Instead, this enclosure is thought to correspond to a signal station or fortlet, associated with costal signalling (Buxton and Howard Davis 2000b, 25). The dating of this phase is more complex, as the stratigraphic relationship between phase one and two is unclear. However, the two phases there is a clear chronological distinction between these earlier phases and the third phase of occupation at the site. This third phase of activity at Kirkham is linked to the construction of a fort itself, due to the presence of a stone-revetted rampart fronted with red sandstone and defended by a large ditch (Buxton and Howard Davis 2000b, 27). Internally, there was evidence of a cobbled surface and building structures. This phase of the fort is thought to be constructed during the late first or early second century. The pottery assemblage from phase three is consistent with earlier occupation on the site and provided evidence of Samian ware, amphorae, mortaria, Black Burnished Ware, with the addition of some Greyware. Other finds included two fragments of medieval pottery, an irregular melon bead, a copper alloy brooch, fired clay from potential kilns, a small amount of tile and brick, and fragments of worked wood (Buxton and Howard Davis 2000b, 35).

Additional excavations at Kirkham have identified a possible bathhouse associated with the fort. In 2009, Oxford Archaeology North conducted excavations at 46 St Michael's Road, Kirkham. The excavations took place approximately 70 metres northeast of the fort site, where a substantial Romano-British masonry building, furnished with heating system, was discovered (See Figure 2.2.3.1-3). Additionally, there were the remains of wooden structures at the site in the form of posts and stakes, preserved by waterlogging (Zant 2010, 2).

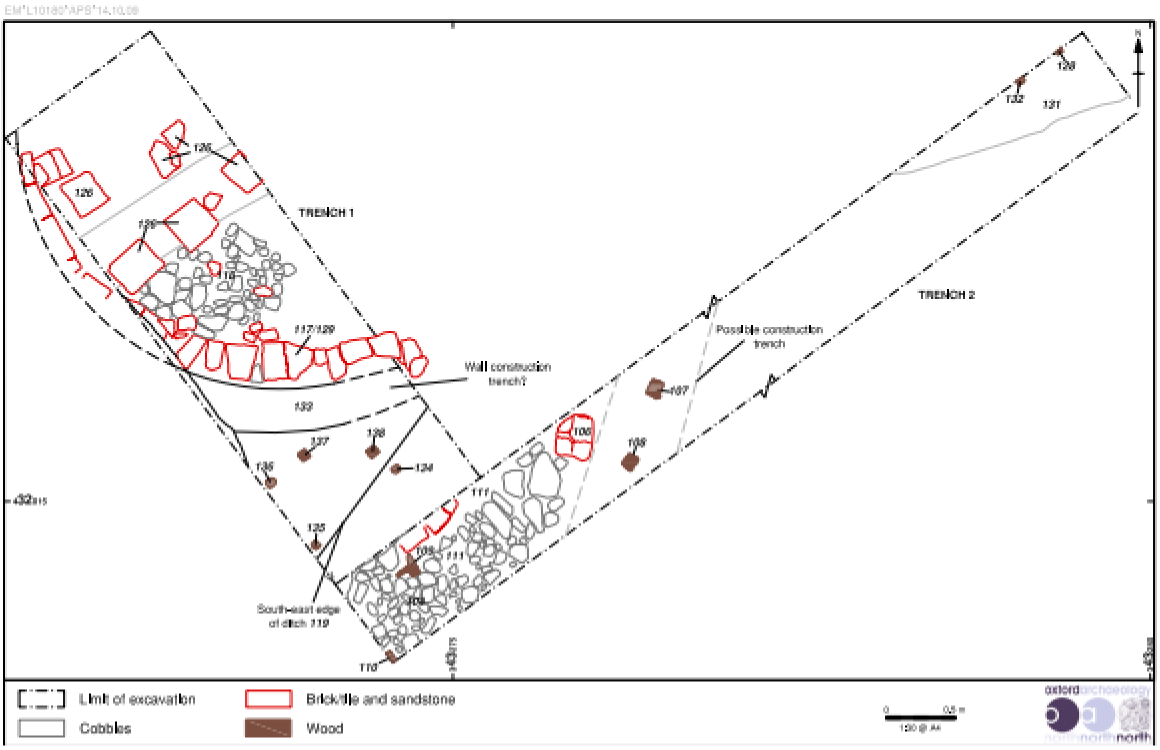


Figure 2.2.3.1-3 Oxford Archaeology North, 2010. Plan to show the two trenches excavated at 46 St Michael's Road, Kirkham. P21.

The only datable artefactual evidence from the site was a single sherd of Black Burnished Ware Fabric I, dating to after AD 120.

The lifespan of the fort and associated buildings at Kirkham are open to much debate due to the lack of clear archaeological structures at the site and the limited excavation that has been conducted. The lack of evidence for later periods suggests that the fort had a short period of occupation and was likely to have been abandoned around the mid second century AD.

Excavations at Lancaster show many phases of activity, with periods of occupation and abandonment over the centuries (Shotter and White 1990, 16). However, evidence of a detailed chronology at this site remains harder to pinpoint. Excavations in Lancaster suggest that the fort site was situated on Castle Hill, which may have been due to its proximity to the river, which would have been closer during the Roman period. The first to early fourth century fort was on the summit of the hill and was laid out in the traditional playing card format. From the mid fourth century onwards however, a new fort with external bastions was constructed and appears to have more similarity to the Saxon Shore fort type (Shotter and White 1990, 16). This later fort would have extended further down the north and east slopes of the hill. Whilst few large-scale excavations of the fort at Lancaster make it difficult to pinpoint exact dates for construction, it appears that the first permanent fort at Lancaster has its construction in the late third century (70s to mid-80s AD). Typically, as with the fort at Ribchester, these early constructions were square or rectangular with clay and turf ramparts and were surrounded by V-shaped ditches, with an intervallum road around the outside (Shotter and White 1990, 18). Elements of these features have been uncovered at Lancaster, with east, west and north sides of the fort identified through a two-phase turf-and-timber fort. On the northern side of the fort were the remains of two phases of timber buildings, potentially barrack blocks, which had been destroyed by fire (Shotter and White 1990, 19). The presence of an early second century inscription indicates occupation during the Trajanic period and excavations have identified the presence of a stone revetment added to the outer phase of the turf-and-clay rampart.

By the late second and early third century, there appears to be a phase of abandonment at Lancaster, with considerable silty deposits being found during excavations. This ties in with the advances to Scotland and may indicate the movement of stationed troops northward. It appears the Roman fort at Lancaster sees a resurgence in occupation during the mid-third century, with the evidence of dedication slab suggesting a reconstruction of the fort by the *Ala Sebosiana* around the bathhouse and basilica (Shotter and White 1990, 23). The translation of the dedication slab reads:

'[For the Emperor … Postumus …] on account of the bath-house rebuilt and the basilica restored from ground-level, when fallen in through age, for the troopers of the Sebosian Cavalry Regiment, Postumus' Own, under Octavius Sabinus, of senatorial rank, our governor, and under the charge of Flavius Ammausius, prefect of cavalry; dedicated on August 22nd in the consulship of Censor and Lepidus, both for the second time.' RIB605.

However, no recovered architectural evidence has been dated to this period. Finally, by the fourth century there is evidence for a major new military construction at Wery Wall, with surviving masonry representing the core of a polygonal external bastion (Shotter and White 1990, 23). Whilst there is evidence of multiple phases of military occupation at Lancaster between the first and fourth centuries, the structural evidence makes it hard to interpret. The predominant evidence for occupation comes in the form of artefacts with coins, pottery and the dedication slab all providing more fixed dates than the minimal structural evidence.

2.2.3.2 Industrial Evidence

In the context of this analysis, industrial sites are limited to those whose main purpose appear to be in the mass production of Romano-British goods (pottery, metalworking etc.). To date, evidence of industrial activity in Lancashire has been limited to one key site, Walton-le-Dale, with minimal evidence being found elsewhere in the county, such as a possible kiln at Quernmore.

Walton-le-Dale is located in the modern borough of South Ribble, south of Preston. The area has seen many small-scale excavations, starting with Ernest Pickering in 1957. However, Lancaster

University Archaeological Unit conducted the largest-scale excavation in 1981-83, with follow up work in 1996. The majority of information about the site comes from an unpublished site report from these later excavations. Pre-Roman activity at Walton-le-Dale suggests an open agricultural landscape, which transitions into a grid of rectangular plots facing onto a significant road scheme in the Roman period (Gibbons and Howard-Davis 2001, 15; Burnham *et al.* 1998, 389). There is evidence of a possible roadside burial due to a sub-circular feature containing box fittings and pottery (two Greyware jars and a Samian ware plate). However, no human remains were recovered (Gibbons and Howard-Davis 2001, 18). The presence of a large round building structure measuring eight meters in diameter and isolated from the rest of the development in the southern most area of excavation, implies that industrial activities would have taken place at the location. Within this structure, a succession of hearths was identified, which have been associated with iron working due to the presence of hammerscale (Gibbons and Howard-Davis 2001, 22). Stratigraphically, the two hearths could have been used at the same time. The layout of the structure is such that the entrances would have been positioned to allow maximum airflow through the building (Gibbons and Howard-Davis 2001, 163).

Wild (2002, 271) suggests a military function for Walton-le-Dale due to the layout of the site, with the quantities of coin and pottery excavated suggesting an occupation date after AD 90 (Wild 2002, 271). Furthermore, one of the buildings identified to the west of the road provides evidence of multiple small rooms and internal wells - this coupled with its isolation from the rest of the complex, may point toward an official use (Gibbons and Howard-Davis 2001, 164; Cleary 1998, 390). The implication of any official use of the site could suggest that this industrial complex would have transported crucial supplies to military bases in the North West. This is a concept further supported by the presence of Walton-le-Dale on major transport routes - easily accessible from Chester, Manchester, Ribchester, and Lancaster. Whilst there are signs that the site was damaged by fire, the archaeological evidence implies that the site was continually used for industrial processes into the third century, where erosion at the site makes late Roman activity difficult to ascertain (Murray 2010, 7). There is some evidence at the North Eastern part of the site for reorientation or reoccupation away from the Roman road, which may signal a change of use towards the end of the Roman period. (Gibbons and Howard-Davis 2001, 165).

The only other possible industrial evidence can be seen from identified kilns at Quernmore. It is believed that pottery made in these kilns has been found at the fort in Lancaster (Webster 1991, 11). Excavations at Quernmore by Leather in the 1970s provided evidence of kilns and kiln waste, suggesting pottery was being made at the site. The excavations uncovered a mortarium maker stamp 'TRITV', flanged and carinated bowls, everted rim jars and simple dishes (Webster 1991, 11). Further evidence at Quernmore suggests that this site was one of the only places in the area producing stamped tiles, which implies an official involvement at the site (Webster 1991, 11). Additional evidence for kilns at Quernmore was found during the installation of a new pipeline by British Gas. Site notes by Robert Bellis identified a kiln 2m x 1m x 50cm on an east-west orientation and there were traces of silt at the western open end (Hudson 1993, 30). The kiln appeared to be constructed from discarded tiles, with a narrow flue offset from the kiln centre and extending 1m into the fire area (Hudson 1993, 30). A second kiln was also identified, which was not a solid permanent structure like the first kiln, instead it would have needed to be rebuilt after each use. Box excavations from this second kiln uncovered broken tiles, one example containing the imprint of a fox's paw, as well as 17 fragments of Roman pottery, including the lip of a 12" pot in red fabric (Hudson 1993, 30). Published material provides little other evidence of industrial activity at Quernmore outside of these kilns. Therefore, whilst it is clear some level of industrial activity was being undertaken, it is unclear as to the nature and degree of this operation. The evidence here provides some proof of small-scale industrial activity, with the potential for centralised involvement originating from the stamped tiles produced. As some examples of this pottery have been found at the fort at Lancaster, it may be implied that the industrial activity occurring in Quernmore was focused on local supply and demand rather than long distance trade.

Whilst the Walton-le-Dale and Quernmore evidence suggests that Lancashire did have a small number of sites where industrial activity was prominent, it is also important to note that there is evidence of industrial activity elsewhere in the county. For example, the Roman fort excavations at Ribchester conducted by the University of Central Lancashire between 2015 and 2019 have provided evidence of the use of kilns within the fort space. Post excavation analysis from these excavations is ongoing but stratigraphically, these kiln features appear to be later than the well excavated onsite and therefore it is possible these date to the late second century (pers. Comm. Morris, J 06/08/21).

The above outline of industrial sites in Lancashire suggests that our knowledge of these spaces is limited by the small scale of excavations that have occurred, with many of these sites also remaining unpublished. The best understood archaeological evidence for Roman North West Britain comes from known military sites within the region, which have a much longer occupation than can be seen through the industrial evidence outlined above. Consequently, this raises questions as to where goods such as pottery and glass may have been manufactured and transported from during the third and fourth centuries when the use of known industrial sites such as Walton-le-Dale is thought to have declined.

2.2.3.3 Rural Settlements

Rural settlements are defined here as those spaces that contain settlement evidence but are far enough removed from military spaces to be considered their own entity.

The evidence for rural settlements in Lancashire is minimal, and to a degree, inconclusive. The *Roman Rural Settlement Project (*2015) highlights the potential for four development led sites identified in the county: two in Lancaster, one in Lathom and a yet unpublished site in Poulton-le-Fylde.

A potential rural settlement site located in the South West Campus at Lancaster University was excavated by Oxford Archaeology North (OAN) between 2002 and 2003. In 2002, OAN excavated 99 trial trenches in the area, six of which revealed a boundary ditch, with radiocarbon dates suggesting it was in use from AD 136-379, as well as pits and a hearth dating from AD 261-423 (Bagwell 2004, 10). This initial evaluation was followed by a geophysical survey produced by GSB Prospection in 2002, to explore the potential for a Roman settlement at the site of the boundary ditch. The unpublished geophysical survey identified the potential for a circular enclosure (Bagwell 2004, 10), resulting in further excavations before development. A circular gully was identified containing ten possible postholes, associated with the construction of a roundhouse. (Bagwell 2004, 15). The lack of artefactual evidence makes dating the possible roundhouse structure difficult, with only one posthole containing a single sherd of Romano-British pottery (Bagwell 2004, 15). Within the potential roundhouse space, to the south-west of the building, was an oval feature containing a large fragment of beehive-type quern stone, signifying that cereal production and processing was taking place at the site (Bagwell 2004, 15). Excavations of the circular enclosure also identified another fragment of a beehive-type quern stone from the ditch structure (Bagwell 2004, 16).

Limited dating evidence for the site has made it difficult to identify when the farmstead would have been occupied. The presence of the beehive-type quern stone suggests a late Iron Age or early Roman occupation is most likely, but the lack of other artefactual evidence makes this difficult to confirm. A series of radiocarbon dates were taken from environmental samples, with the primary enclosure ditch suggesting a date of AD 78-316 (Bagwell 2004, 20). Carbonised grains from the lower fill of one of the postholes returned a date of AD 86-236, whilst the upper fill of a different posthole provided a date range from AD 127 to 322. The charred remains from the boundary ditch specified a final date from AD 136-379 (Bagwell 2004, 20), suggesting occupation for the farmstead could be between AD 79 and 379. The presence of Iron Age or Romano-British quern stone may imply initial occupation in the earlier part of this date range and represents the transition from Iron Age to Romano-British occupation phases. Perhaps the most interesting evidence from this site comes from the environmental samples collected during excavation. The presence of blackberry, elderberry, sloes or wild cherry and a hazelnut shell indicates local plants were being used as a food source. Additionally, the lack of chaff in the samples suggests that cereals were not being processed around the main enclosure (Bagwell 2004, 29). However, cereal grains such as barley, wheat and oats were identified in the ditch fill and roundhouse indicating they were being consumed at the site. Late prehistoric information from sites in the region are virtually non-existent and Roman and Early Medieval plant records from North Lancashire are also rare (Bagwell 2004, 29). The presence of this range of plant material therefore implies that the site is of regional significance.

Further excavations in Lancaster were undertaken at Lancaster Business Park, Cottam's Farm by Lancaster University Archaeology Unit (LUAU) in 1997. Fifty-two trenches 30m x 1.5m were excavated in order to highlight areas of archaeological importance (LUAU 1997, 5). Only one of these trenches seemed to be significant, Trench 47. This trench contained a hollow that provided evidence of charcoal, slag and burnt stone, which may be linked to small-scale industrial activity such as the smelting of metal ores or small-scale salt making (LUAU 1997, 10). Targeted trenching carried out on the earthwork complex on the south-eastern boundary of the site produced small amounts of Roman pottery. Trench 57 produced the largest concentration of pottery, with fragments of amphora, Grey ware and two vessel fragments of a soft sandy oxidised fabric (LUAU 1997, 36). Trench 58 also produced a small amount of pottery evidence in the form of calcite-gritted (possibly Huntcliffe Ware, which would suggest a late Romano-British date), and an oxidised fabric vessel fragment (LUAU 1997, 36). The presence of pottery in the make-up and subsequent collapse of the earthwork indicates the feature was in use during the Romano-British period (LUAU 1997, 10). Furthermore, two cut features in the south-western enclosure may also imply the presence of a structure on the site. A spread of dark soil between these two cut features has been interpreted as evidence for intact floor layers (LUAU 1997, 11). Whilst the function of the site is unclear, the site map represents a 'native' style enclosure dating to the Roman period - possibly an extended family group living an Iron Age lifestyle under Roman administration (LUAU 1997, 11). This interpretation is supported by sites that have been identified in the Mersey valley through aerial photography and excavation, and therefore sites in the Lune valley may be interpreted in a similar manner (LUAU 1997, 11). For example, a number of single enclosures have been identified on the Wirral and at Halewood, which are generally more oval in shape with some having the more rectilinear form associated with Romano-British dates (Cowell and Innes 1994, 177).

Excavations were undertaken at Dutton House farm, Lathom by the National Museum Liverpool Field Archaeology Unit (NMLFAU) between 1998 and 2002. Six trenches were excavated, providing evidence of a possible Romano-British Farmstead, as well as five possible roundhouses dating from the Iron Age to the early Roman period (Cowell 2003, 1). However, the main evidence from these excavations that is considered to be solely Roman, comes from Trench IX, which demonstrated the presence of trackways and field boundaries. The trackways showed distinct linear depressions, which have been interpreted as being ruts left by carts travelling through the area (Cowell 2003, 6). It is believed that movement along the trackway had caused a series of hollowed-out areas. The presence of Romano-British Orange Ware and Black Burnished Ware in one of these hollows suggests that the occupants of the farmstead had access to Roman objects (Cowell 2003, 7). Further evidence from Trench IV indicates that the roundhouses were abandoned in the early Roman period. A second trackway was also identified at the site, slightly south-west of roundhouse 4, which also contained Roman pottery. However, this second trackway was truncated by a medical ditch and therefore it is difficult to identify whether the two features (roundhouse 4 and the second trackway) were in use at the same time (Cowell 2003, 8). The presence of a series of roundhouses indicates that a farmstead was likely to be located in Lathom during the Iron Age period. The later evidence for Roman pottery on the site provides some indication that the use of the site continued into the Romano-British period, with the roundhouse structures being abandoned during this phase of occupation and possibly replaced by new building structures following more Roman architectural design.

Perhaps the most obvious form of rural settlement in the Romano-British period is that of villas. Collingwood (1930, 208) defines villas as isolated farmhouses on their own land which are 'Romanised' in design and decoration. However, villas are more commonly found in southern Britain than in the north, with analysis by Burroughs (2003, 16) regarding Roman Villas in Northern Britain, providing little evidence of such structures, with no known villas north of Cheshire. This is supported by the evidence provided by the *Roman Rural Settlement Project* (2015), which suggests that the most northern villas can be associated with Cheshire, few villas found in either Lancashire or Cumbria. The possible villas in Windermere and the Eden valley do not correspond to our broader knowledge of Romano-British villas and as such, are no longer believed to fit into the prevalent villa model (Burroughs 2003,16).

Whilst there is evidence for the construction and tenancy of an extra-mural settlement at Ribchester and a large-scale timber building at the Ribblesdale Mill site (Buxton and Howard-Davis, 2000), these sites appear to be connected to the military through their construction and design. This is due to the interpretation that the evidence from Ribblesdale Mill may represent a local market or commercial activity at which the auxiliary and cavalry soldiers may have traded, supported by the paleoenvironmental evidence for cereal production at the site (Howard-Davis and Buxton 2000, 147). The concept of extra-mural and commercial settlement at Ribchester coincides with a theme that appears to be increasingly common when looking for evidence of civilian settlement in the North West of Britain (Philpott, 2006, 72). This is supported by James (2001), who suggests that the military as a unit were not self-sufficient and therefore the presence of civilian material at and surrounding military sites should be a future consideration when undertaking research. This is perhaps especially crucial in the North West region where there is little other evidence for civilian settlements, other than those with military influences.

2.2.3.4 Funerary Evidence

Funerary archaeology often provides another key mechanism for understanding the social, political and economic practices of past societies. By exploring the relationship communities have with their dead and the associated rites and practices that occur, we can begin to understand key aspects of social organisation. Evidence of distinct cemeteries in the North West are severely lacking, with few well excavated examples coming from this region - those that have been excavated are usually restricted to Cumbria. The Romano-British cemeteries from Brougham (Cool 2004) and Low Borrowbridge (Hair and Howard-Davis 1996) are among the few to have received major publications, with other examples at Birdoswald, Brough-under-Stainmore and Beckfoot providing limited evidence (Iles and Shotter 2009, 93). In Lancashire however, there are even fewer examples of Romano-British burial practices, with the Rural Settlement of Roman Britain Project (2015) highlighting only three possible and distinct sites; Aldcliffe Road, King Street and Penny Street, all located in Lancaster. Due to the wealth of published material indicating military activity in Lancashire as noted above, it seems surprising that there is not more significant archaeological evidence of cemeteries in the county.

The excavations at Penny Street, Lancaster occurred between 1995 and 2003, by the former Lancaster University Archaeology Unit (which had become Oxford Archaeology North by the time of the 2003 excavations). This work revealed a number of Romano-British burials across the different phases of excavation. These sites have been reported in Iles and Shotter's (2009) edited volume by Zant *et al*. Therefore, the data below is reliant upon this report.

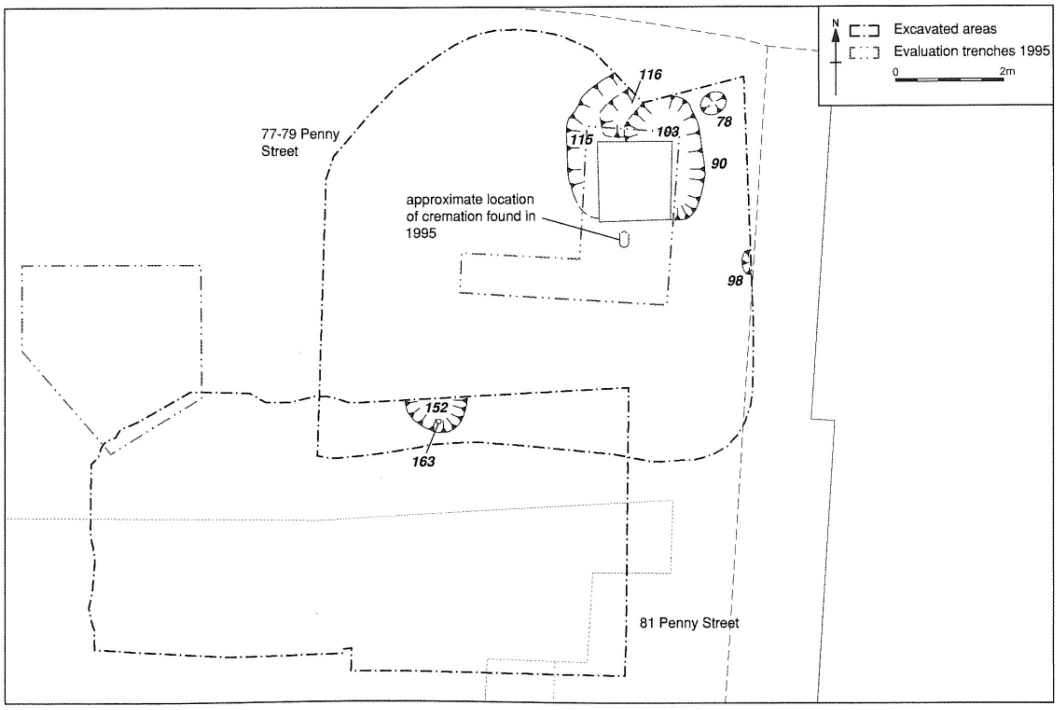


Figure 2.2.3.4-1 A Plan of the 1995/96 excavations at Penny Street, Lancaster, Zant et al. 2009, p24.

Excavations at 77-79 Penny Street in 1995/6 (Figure 2.2.3.4-1) provide evidence of a single distinct cremation burial in a Black Burnished Ware jar (Zant *et al.* 2009, 21). The jar appears to have been smashed in antiquity with the sherds scattered. Bone fragments recovered from the feature were generally too poorly preserved to identify, however there was one fragment from a human radius. An additional 17 sherds of pottery were also identified within this feature, five of which are thought to belong to a 3rd to 4th century calcite-gritted vessel.

Two large intercutting features were also characterised on the site. The first of these was largely destroyed but provided some evidence of small, calcined bone fragments and 10 sherds of pottery; seven of which were the same type of calcite-gritted pottery identified within the cremation feature discussed above (Zant *et al*. 2009, 22). A small cut at the bottom of this feature also displayed some evidence of bone; however, this material could not be recovered due to its poor preservation. The latter of the two intercutting features provided further evidence of burnt bone and three sherds of pottery, with its upper fill containing calcined bone and 22 pottery fragments - a sherd of which is associated with a third century Nene Valley colour-coated beaker (Zant *et al*. 2009, 23). The sherds identified in this feature appear to represent backfill and it remains unclear what they may represent. Further layers overlying these two intercutting features provide evidence of burnt bone fragments and 49 sherds of pottery, the majority of which is undiagnostic and can be dated between the second and fourth centuries.

Two small pits identified on the site may provide evidence of further potential disturbed cremation burials. One of the pits contained fragments of calcined bone and five sherds of oxidised and grey wares, whilst the second pit contained few small fragments of burnt bone, which was too poorly preserved for identification (Zant *et al.* 2009, 24). The features identified at 77-79 Penny Street during the 1995 and 1996 excavations suggest that some form of cremation practices may have been taking place at the site. The archaeological findings provide minimal evidence for human bone; the small amounts that have been discovered are largely undiagnostic, making it difficult to identify how many individuals were present. It is clear some burials were taking place, but whether these were an intimate burial for a known individual or a cemetery for the wider community in Lancaster is open to interpretation. Following the demolition of a building in 2003, 81 Penny Street was also excavated. The excavation area overlapped slightly with the northern extent of the 77-79 Penny Street excavations (Zant *et al*. 2009, 24). Only one possible burial was identified at the site, where a small pit contained evidence of deliberate packing. Subsequent analysis of the soil sample collected from the pit provided evidence of three small fragments of burnt bone, two were likely human and one fragment was likely bird bone. Also contained within the pit was a single hobnail and a sherd of undiagnostic grey ware and the base of the pit provided evidence of a stake hole likely to be from an earlier feature (Zant *et al*. 2009, 25). Between the two trenches excavated in 1995, the 60m^2 area excavated in 1996 and the additional trench in 2003, a large area of Penny Street has been excavated and the evidence for a Romano-British cemetery at the site is minimal. However, the evidence that is present does suggest that some forms of burial practices were occurring at the location, with a single disturbed cremation site being identified.

The site of Streamline Grange, King Street, Lancaster was excavated in 2001 and is considered to be the largest excavation in the area. The development-led project covered an area of 4336m^2, however only 600m^2 was considered an area of archaeological interest and was therefore excavated (Zant *et al*. 2009, 25). The site was comprised of two distinct stages. Firstly, a Romano-British ditched enclosure dating to the early second century and secondly, a potential Romano-British cemetery dating to the mid second to third century. Ten cremation burials were identified along with six larger rectangular to sub-rectangular features, which were interpreted as being inhumations. Whilst not all of the features contain human remains or artefacts, they are interpreted as graves due to their shape. The evidence for these burials or potential burials are outlined in Table 2.2.3.4-1 below.

Cremation/ Inhumation	Feature Number	Location on Site	Human Remains	Artefacts
Inhumation	142	Eastern arm of Phase 1a enclosure ditch	None Present	None Present
Inhumation	147	Eastern arm of Phase 1a enclosure ditch	None Present	34 Hobnails 84 Pottery Sherds
Inhumation	155	Southern Ditch	Small quantities of cremated bone – adult/sub-adult 13 years old +	2 Iron Nails Black Burnished Ware Fragments
Inhumation	152	Southern Ditch	Small quantities of burnt bone – Adult over 18	9 Iron Nails Several Abraded Black Burnished Ware Fragments
Inhumation	132	South of Enclosure Ditch	None Present	Small Fragments of a Grey Ware jar (AD 250-340)
Inhumation	WB5	Watching Brief	None Present	7 Iron Nails
Cremation	103	Phase 1a Enclosure Ditch	Remains of possible female aged 20-35	Wilderspool rough-case beaker (mid to late second century) Fragmentary remains of two Black Burnished Ware Fabric I jars (mid second century) 93 Hobnails
Cremation	156	Centre of earlier ditch	Burnt Bone – probable two individuals – 1 sub-adult 16-18 and 1 immature individual (represented by a few skull fragments)	Few pottery sherds – including Black Burnished Ware Fabric I

Cremation	104	Eastern arm of Enclosure Ditch	Cremated Bone – Possible female over 18	Grey Ware Jar (Second Century)
Cremation	162	Extreme South East of Enclosure Ditch	Adult – probably Female – Aged 18-25 (likely under 23) Remains of a young infant and the remains of a young adult/sub-adult (16-20)	51 Iron nails Possible fragment of burnt animal bone
Cremation	105	Southern arm of Enclosure Ditch	Small amounts of burnt bone – unsexed individual over 18	Black Burnished Ware Fabric I jar (late second to late third century) 2 iron nails
Cremation	113	Adjacent to the north western edge of 105	Small amounts of cremated bone – unsexed adult over 18	2 fragments of Black Burnished Ware Fabric I jar (mid second to mid third century)
Cremation	150	Southern Enclosure Ditch	Little to no burnt bone	None Present
Cremation	112	Outside South East Corner of Enclosure Ditch	Fragments of burnt bone – unsexed adult over 18	fragments of Black Burnished Ware Fabric I jar (AD 120-160)
Cremation	120	Outside South East Corner of Enclosure Ditch	None Present	None Present
Cremation	E112	Evaluation Phase	Small fragments of burnt bone – unsexed probable adult	Some fragments of animal bone 2 corroded nails

				1 small fragment of Black Burnished Ware Fabric I (Hadrianic or later date)
Cremation	WB3	30m South of Enclosure	Calcined bone fragments – possible female adult aged 20-40	6 nails 1 burnt animal bone fragment (likely pig/sheep)
Cremation	WB9	30m South of Enclosure	Calcined bone	11 iron nails 4 fragments of Black Burnished Ware Fabric I (second century)

Table 2.2.3.4-1 Information from Zant et al. 2009. P21-29. Table collated by Victoria Le Quelenec

From the inhumation evidence from King Street, it is perhaps Feature 147 that is the most interesting. No human remains were identified within the feature, but it did contain 84 sherds of pottery, representing the largest pottery assemblage from the site. This includes 40 sherds from a small (nearly complete) Wilderspool Flagon dating to the late first to second centuries, a fragment of a northern Gaulish colour-coated indented beaker (late first to early second centuries) and part of a cornice-rim beaker, dating to AD 80-130 (Zant *et al*. 2009, 33). The latest ceramic material from the site comes from Feature 132, which contained small fragments of a Grey Ware jar, dating to AD 250-340 (Zant *et al.* 2009 35). This suggests that the site could have been potentially in use for at least four centuries, with the presence of six sherds of Black Burnished Ware indicating a date from the Hadrianic period onwards. In addition, the 37 examples of calcite-gritted fabrics suggest a late third to fourth century date for many of the contexts (Howard-Davis 2009,37). Together, these two pottery types make up 30% of the pottery assemblage from the site. However, four out of a possible six inhumations provided no evidence of human remains, with the remaining two inhumations only containing small quantities of burnt and cremated bone. The evidence from the cremation burials provides a more substantial insight into the burial practices taking place in Lancaster during the Romano-British period. From the 12 possible cremation features, four could be assigned sex, all of which were female. Furthermore, there is evidence to indicate that three individuals were under the age of 18.

Thompson *et al*. (2016, 830) suggests that many auxiliary units came from the Rhine and Danube areas. As such, the Roman army was not a single unified entity but instead comprised of culturally and ethnically diverse groups that were embedded in a larger community of non-military personnel located within larger indigenous populations. Evidence from cemeteries outside the North West indicate the presence of women and children being buried in cemeteries outside of military installations (Anderson 2009, 123; Stylegar 1993, 230). This suggests that family units were moving together to the military installations at which the soldiers were stationed. The evidence provided from the cremation features may therefore represent family members of stationed military personnel or those individuals associated with the vicus.

There appears to be a distinct change in funerary practices throughout the Romano-British period, with early, more native, styles of cremation being replaced by inhumation burials towards the early third century (Isles and Shotter 2009, 91). This is supported by the work of Smith *et al*. (2018) who have explored the *Life and Death in the Countryside of Roman Britain* and mapped the proportions of cremation and inhumation burials from the late Iron Age to the Late Roman periods (Figure 2.2.3.4-2).

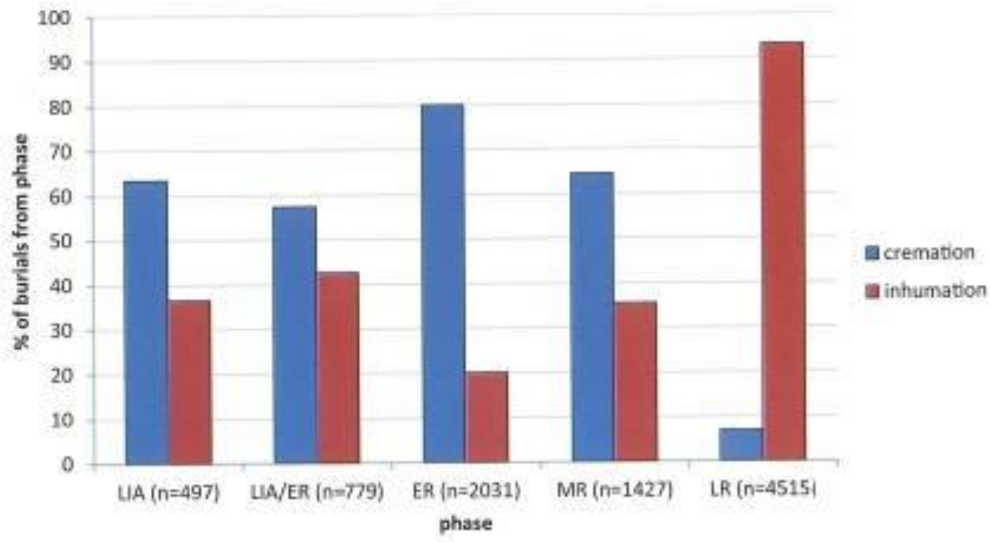


Figure 2.2.3.4-2. Graph taken from Smith, A. 2018. Proportion of cremation and inhumation burials over time. p218.

In contrast to the general Romano-British pattern of cremation and inhumation, the evidence presented from Lancaster suggests that cremation remained the dominant burial rite in Northern England throughout the Roman Period (Isles and Shotter 2009, 91). It is important to note that the soil conditions at the funerary sites in Lancaster may not be conducive for good bone preservation (Isles and Shotter 2009, 91) and therefore the survival of human bone material from any potential inhumation burials, such as those from King Street, may be minimal at best. This has potentially skewed interpretations of Romano-British funerary rites in Lancashire towards cremation burials. If we consider a more extensively published Romano-British cemetery site from nearby Cumbria, we can find further evidence to support this claim. The Romano-British cemetery at Brougham was uncovered during rescue excavations in 1966-67 by the Ministry of Public Buildings and Works due to road improvements in the area.

There is also evidence of alternative funerary rites taking place in Lancashire that do not feature any human remains. These come in the form of monuments erected for the dead, as demonstrated by the presence of an early Roman cavalry tombstone at the Arla Foods Depot site in Lancaster (See Figure 2.2.3.4-3).

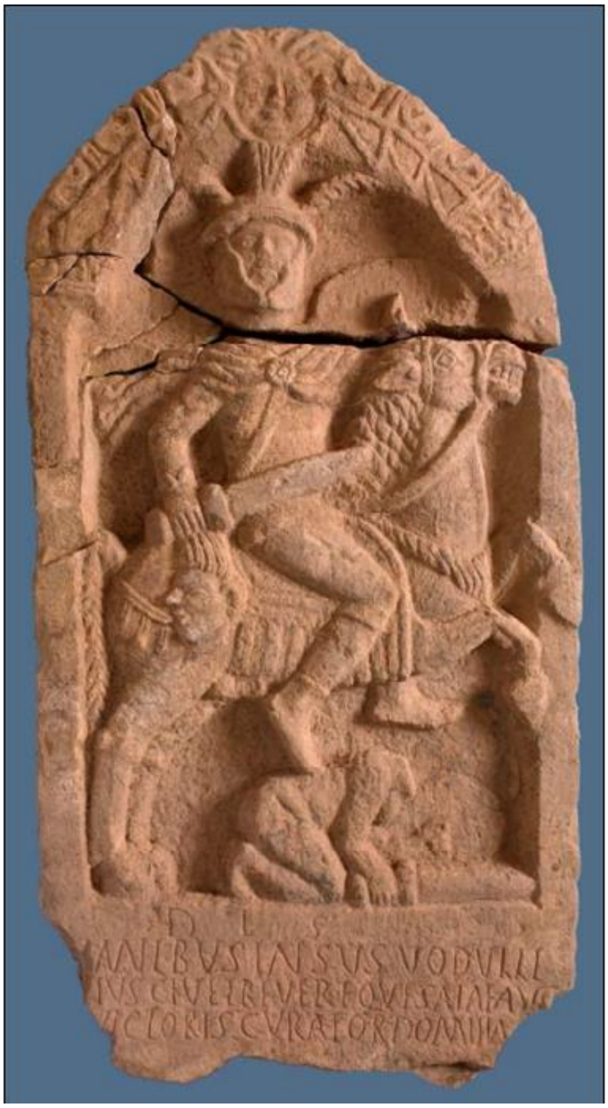


Figure 2.2.3.4-3 Roman Cavalry Tombstone from Lancaster. University of Manchester Archaeology Unit Report, 2007.p1.

The site was excavated by the University of Manchester Archaeological Unit (UMAU) between 2003 and 2006 and provided evidence of a road, which served as an access point from the south to Lancaster in the north and two associated ditches (Noble 2007, 32). Stylistically the tombstone suggests a date from the late first to early second century AD, indicating it was erected within a 24-year period, occurring between the construction of the Roman fort at Lancaster and the development of the road system (Noble 2007, 33). It is believed that the tombstone itself was moved from its original location to a new setting in a later phase of the development. This may be due to the raising of the ground surface level causing the tombstone to be partly obscured in its original setting (Noble 2007, 32). In this new location, another fragment of an inscribed stone was found in the packing used to hold the original tombstone in place. The interpretation is that this fragment represents another unrelated tombstone, which is thought to have been broken before this fragment was used as packing material (Noble 2007, 39). The inscription on the original tombstone reads:

Dis

[M] ANIBVS INSVS VODVLLI

[FIL] IVS CIVE(S) TREVER EQVES ALAE AVG

[T] VICTORIS CVRATOR DOMITIA [H F C]

This translates to 'The Gods of the Underworld: Insus, son of Vodullius, a Treveran, a trooper in the *Ala Augusta, Curator* of the squadron of Victor. Domitia, his heir, saw to the erection of this monument' (Shotter 2007, 89). As such, an alternative interpretation for the fragmentary inscription found in the packing material could be that it represents information that was omitted from the inscription on the cavalry tombstone. This is because it is unusual for an inscription to omit the age of the deceased and the number of campaigns on which they served (Noble 2007, 91). The fragmentary inscription reads '**]I O X V',** which could be translated as 'on his fifteenth campaign' or 'in his fifteenth year' (Shotter 2007, 94). If this inscription relates to the number of campaigns, it could be argued that it is an addendum to the original tombstone, supported by the fact that the two inscriptions were both made from sandstone derived from the Lancaster area (Shotter 2007, 94). However, if this fragmentary inscription is related to the age of the individual then it is unlikely to be part of the original tombstone.

The cavalry tombstone itself is highly decorated and is thought to be one of the most striking Roman tombstones to have been found in Britain (Shotter 2007, 87). From the inscription we can see that the individual commemorated belonged to the Treveraii, who were considered to be formidable warriors. The cult of the human head was considered especially important to the Celtic tribes. The presence of this depiction may indicate that, whilst the Treveraii who served in Roman auxiliary units had become more 'Romanised', their traditions still remained ingrained in their practice and were not outlawed by Roman authorities (Isles and Noble 2009, 74). Perhaps the most interesting evidence from this tombstone comes from the juxtaposition between the highly decorated tombstone and the inscription. The suggestion is that the already-sculptured stone may have been purchased, with the inscription being added subsequently by a second individual (Shotter 2007, 87).

Importantly, no human remains were identified during the excavations at the Arla Food Depot site. Therefore, whilst the erection of a tombstone does indicate a funerary practice, there is no evidence of where the individual commemorated was buried. The presence of a highly decorated tombstone with associations to military successes may suggest that the individual was killed in battle and therefore the family member (in this case Domitia, his heir) did not have a body to bury. Alternatively, as the tombstone indicates the specific Celtic tribe that the commemorated individual was from, it may be instead that his body was returned to be buried with his ancestors rather than remain with his garrison unit in Britain.

The Heritage Gateway references an additional Roman 'burial ground' of four cists, each containing fragments of food and amphora enclosing charcoaled human remains, was excavated in Ribchester in 1967 (Historic England Research Records, Monument Number 43676). However, these burials appear to never have been officially published and there is little further evidence to corroborate or expand upon this discovery.

The funerary evidence from Lancashire is minimal at best, with only Lancaster providing clear evidence of a cemetery location. The evidence for inhumation burials in Lancashire is open to much debate with soil conditions leading to poor preservation of bone. The proof of cremation burials seems more conclusive with possible cemetery locations at Penny Street and King Street, Lancaster. The evidence for military presence in Lancashire during the Romano-British period seems overwhelming with the existence of forts in Lancaster, Ribchester and Kirkham. Therefore, it can be implied that the lack of development led and research excavations in Lancashire compared to elsewhere in the country means that we are yet to find extensive evidence of the lives and funerary practices of individuals from the period.

2.3 Summary

The evidence outlined above illustrates that there is a wealth of archaeology relating to Roman occupation in Lancashire. This occupation is largely focused on military presence with known forts at Lancaster, Ribchester and Kirkham, with new sites being identified such as the possible fort at Burscough. However, there are gaps in our understanding, relating to rural and civilian settlements, with those known sites being outlined above. It has already been argued here that this may be due to a lack of structured development led and research excavations in Lancashire compared to elsewhere. However, this apparent gap in our knowledge could also be related to the ways in which archaeological disciplines are interpreting the evidence based on traditional theoretical models of Romans versus natives. Roman archaeological discourses are often very military dominated spheres and traditionally there has been a focus on the ways in which non-Roman spaces became Roman and the dichotomy between the two identities. Chapter 3 aims to explore these theoretical models in more detail in order to understand how they have changed and adapted over time, and the ways in which these continue to influence interpretations of Roman archaeological evidence.

3 Romanisation

As demonstrated in Chapter Two, Roman Lancashire is dominated by military activity, which poses interesting questions with regard to the interaction between individuals in the Roman military and those who inhabited Lancashire prior to the Roman invasion. It is therefore important to consider the role that theoretical archaeology has played in understanding these relationships, before we can begin to consider the role an object biographical approach may have in furthering our understanding. The key theoretical concepts which attempt to explore these relationships are Romanisation, Globalisation and Creolisation. Perhaps the most important, yet most contentious of these, is Romanisation. The term ‘Romanisation’ has a long and complex past, and has been widely debated in archaeological discourses since the early 1900’s.

The adoption and use of the term alone is widely disputed in Roman archaeology (see for example Millett 1990, Hingley 1996, Hill 2001, Laurence 2001 and Heeren 2013). There are clear divides within the discipline surrounding the use of the term and whether its implementation in archaeological discourse holds any relevance to the subject. The apparent disparities and the large body of literature concerning the theory make it difficult to identify an all-encompassing definition. However, it can be suggested that other theoretical concepts used in the Romano-British world are often amalgamated into the ‘Romanisation’ debate. For example, Woolf (1998, 7) highlights that Romanisation has and continues to be used as ‘an umbrella term to conceal a multitude of separate processes.’

It can be argued that Romanisation is a product of twentieth century archaeological thinking. However, similar processes and approaches to Roman archaeology were being conceived during the Elizabethan and Jacobean period, under the guise of a different buzzword, ‘civility studies’ (Hingley 2008, 428).

Civility studies focuses on the ‘result of Roman control on the indigenous populations’ (Hingley, 2008, 428), and is a concept originating from the work of William Camden, a sixteenth century antiquarian. He suggested that, as Britain was incorporated into the Roman Empire, it went ‘from being a remote and barbarous island’ to having the ‘full honours of antique civilisation’ (Parry, 1995, 34). As such, civility studies were used to justify how the Romans were able to conquer Britain and mapped the pathway for their expansion across the island, providing them with new moral concepts that affected every aspect of daily life (Hingley 2008, 428). The notion of civility studies laid out by William Camden is something that prevails in archaeological thinking up to the twentieth century, remaining in line with nationalistic and Imperial motives of Britain during these periods. A classic example is the work of Edward Gibbon, an eighteenth-century historian and politician, who wrote six influential volumes titled *The History of the Decline and Fall of the Roman Empire.* These volumes were heavily influenced by his privileged upbringing and political aspirations, which supported the rights of societal elites and the benefits that advanced nations could bring to conquered territories (Rogers and Hingley 2010, 3). It is important to consider that Gibbon was writing against a backdrop of the creation of Britain's Empire and therefore any comparison with previous successful empires would ultimately legitimise Britain's position. Consequently, writings of the time were less concerned with interrogating archaeological data as opposed to justifying current political expansion. This notion of empire was not solely restricted to British archaeologists. For example, Mommsen's (1845) first three volumes of *Römische Geschichte* drew upon the work of A. Keine and defined a unified model of the Republic of Italy in order to explain why indigenous communities decided to integrate into an expanding Roman Empire. Hingley (2005, 31) argues that Mommsen's appreciation for this process was born from his desire for a unified Germany. This is another crucial example of archaeological theories being impacted by the nature of contemporary politics.

As can be seen, pre-twentieth century theories were based around nationalistic motives, thus enabling modern imperial desires to be likened to the Roman Empire and becoming a justification for expansion. This theoretical concept following a cultural historical approach continues throughout the early and mid-twentieth century, and ultimately is the framework for the creation of Romanisation as a theorem. It is important to establish the development and motives of culture history as a broad archaeological theory before we can home in on the Romanisation model with an emphasis on Romano-British archaeology. This is because these two models are intrinsically linked, with culture history greatly influencing the development of Romanisation.

Shennan (2000, 811) highlights that the fundamental aim of culture history was to characterise cultural traditions, focusing on spatial distributions and development through time. Furthermore, the most important assumption made when using a culture historical approach was that chronological changes represented social traditions, suggesting that these traditions can only be changed when one group is replaced by another. Archaeologists following a culture history approach would therefore see changes in architecture, material culture, or social and religious practices, as changes in groups. For example, Willey (1945) suggests that studies of Peruvian pottery styles and traditions are interesting for a student of culture history, because of the distinct stylistic differences between the North and South. Northern Peruvian wares are focused on simplistic colour combinations of red on white, whilst the southern traditions place a greater emphasis on multiple colour combinations (Willey 1945, 56). In the 1940s, these differences were interpreted in terms of the resilience of regional cultural patterns and implied that these traditions would remain steadfast until changed or replaced by emerging societies or groups. Culture history as an approach links to the political backdrop of the period in which it was created, taking on a more nationalistic view of people as 'historical actors' and acting out their destinies (Jones 1997). It could be argued that this outlook helped shape the conception of Romanisation during the same period.

The concept of 'Romanisation' within Romano-British archaeology has origins in the work of Francis Haverfield (1905, 1915). Haverfield ultimately viewed Romanisation as a period of progressive change and development, whereby native social groups in Britain became increasingly Roman post-conquest (Hingley 1996, 39). In this context, Roman is considered as 'the definite and coherent civilisation of Italy' (Haverfield 1905, 188). Therefore, following a Romanisation model, the changing material culture, social practices and religious beliefs can be seen to be caused by the desire of pre-existing local populations to become more "Roman". Haverfield also notes that it is the tolerance of Rome, which did not forcibly demand conquered nations to conform, which made adopting the culture even more attractive (Haverfield 1905, 188).

Throughout the 1930s, Collingwood, a student of Haverfield, developed an alternative interpretation of Romanisation, placing a greater importance on the fusion of ideas and culture between the 'Romans' and the 'Natives'. He argues that what can be seen through the process of Romanisation is a hybrid culture that is a 'combination of two things into a single thing different from either' (Collingwood, 1932, 32). Creighton (2006, 9) refers to this line of enquiry as 'discrepant experience'. This concept first developed through the work of Said (1994, 35-50) which suggests that an individual's perspective depends on where they live and the social discourses that are in place, essentially that our perspective is based on environment. This approach led to new explorations of archaeological landscapes, focusing on the communities who inhabited places, as opposed to those who ruled them (Fincham 2000, 30). Mattingly (2015, 9) suggests that this theory can be developed into discrepant identity which looks to identify differences in the use of material culture within the archaeological record, and then assesses whether these represent distinct expressions of identity. For example, the fact that the Romano-Celtic temples in rural areas do not provide evidence for inscriptions, specifically inscribed altars, suggests that the practice of religion may have been very different in these communities, which goes beyond levels of literacy (Mattingly 2015, 19). However, whilst Collingwood highlighted in the 1930s that Romanisation was a process of cultural amalgamation, it can be argued that he still viewed Roman culture as a homogenous whole, with conquered nations ultimately becoming 'Roman'.

The concept of Romanisation has been the subject of ongoing archaeological debates since the time of Collingwood. For example, Brendel (1979) proposes that Roman culture itself was a combination of cosmopolitan influences from diverse origins, rather than a 'pure' culture. Creighton (2006, 9) highlights that Collingwood's line of analysis places a strong emphasis on the towns being 'educated' and people living in rural areas being 'unromanised', perhaps being influenced by contemporary preconceptions and biases of urban versus rural. The evidence for this is based upon population estimates and primitive agricultural methods due to a lack of cultivable geology. It can be suggested that the cultivable areas in Roman Britain were inferior to those elsewhere in the Empire, and therefore there was little financial gain for the Romans to overhaul native British farming methods (Collingwood 1929, 266). In contrast, archaeologists of the early 1900s believed that towns were purely of Roman creation and therefore owed their successes and origins to Romanisation (Collingwood 1929, 266). This infers that people living in rural areas were uneducated natives, as opposed to the Romanised communities that inhabited towns, and ignored the concept of a hybrid culture that manifests differently dependent on social, political and economic conditions of an area.

Alternatively, Rivet (1958) implies that it was the countryside that demonstrated a more civilised cultural identity, with 'civilised' (in the context of the mid twentieth century archaeological discourse) equating to mean 'Romanised'. In this example, the Romanisation of rural areas was seen through an increased use of Roman artefacts as well as in the adoption of Roman architecture (such as villas) but fails to recognise or consider the fact that agricultural methods remained traditional (Hingley 2000, 139). Debatably, this places a heavy emphasis on the role of villas in rural areas, and as such normalises their presence. This is not necessarily supported archaeologically, as shown by data from the more recent *Rural Settlement of Roman Britain* project (Allen *et al*. 2018) which identified 327 villas, as opposed to over 2000 farmsteads. One reason for this contrast may be geographic in nature. Villas as a phenomenon seem to be largely restricted to central, south and eastern Britain, which Sargent (2002, 225) suggests could be indicative of native elites responding to Roman rule in different ways. Sargent (2002, 225) highlights that each province within the Roman Empire would adopt imperial culture in different ways, in a process of two-way acculturation. The south of Britain had been introduced to Roman culture frequently pre-conquest during peaceful acts of trade, and therefore were perhaps more open to adopting elements of Roman architectural design. In contrast, the north of Britain was introduced to Roman culture more through the process of military occupation, and the negative connotations associated with this. Therefore, it is possible to suggest that the role of villas in rural Roman Britain were not as significant as purported by Rivet, with villas only composing a small percentage of rural settlement types found in the archaeological record in Britain, and only becoming more common into the fourth century. Moreover, and crucially to the Romanisation debate, this argument still maintains sixteenth century constructs of civility and the duality of 'Roman' and 'Native', as well as culture historical approaches of one group being replaced by another.

Millett (1992, 2) reimagines the concept of Romanisation in his publication *The Romanisation of Britain*. Here he argues that if we are to understand the concept of Romanisation, we need to begin to appreciate the different societies within Britain and how their interactions with Roman culture produced a Romano-British province. Millett (1992, 2) argues that Romanisation was always a two-way process of acculturation, seeing the interaction of two different cultures and the information, and traits that passed between the two. Therefore, the process of Romanisation was not something that was initiated by an 'elite' Roman society onto a 'native' British community, but instead was an ongoing negotiation by groups of people, with other groups of people. Thus, allowing the pre-Roman population of Britain to be active participants in their adoption of 'Roman' culture, choosing which elements to adopt and the scale of which this adoption took place. Consequently, the approach to Romanisation was different depending on the specific culture groups that were interacting with each other. Millett (1992, 66) accepts that in general, Rome would adapt the pre-existing social groupings of conquered nations, with Rome accepting that by winning over native leadership more or less automatically guaranteed support for Roman rule amongst the wider populations of conquered societies (Fulford 1991, 307).

Woolf (1997, 340) suggests that throughout archaeological discussion, the reimaginings of Romanisation all share the same flawed and fundamental assumption. Whether explicitly or implicitly, they all accept that Romanisation is based around the conflict between two peoples and that this conflict inadvertently leads to clashes between cultures. To move past these traditional views of Romanisation, we instead need to reject ideas of 'conflict, competition or interaction between two cultures' and instead explore the concept of the 'creation of a new imperial culture', one which superseded earlier Roman cultures as much as it supersedes the earlier cultures of indigenous communities (Woolf 1997, 341).

In fact, the idea of a 'Roman' culture at all is something that requires clarification, as Woolf argues that the system of Roman imperial culture was 'differentiated by region, class, social locale, age and gender amongst other dimensions of variability' (Woolf 1997, 341). Thus, implying that 'native' communities could not become more or less 'Romanised' as cultural expression was based heavily on an individual's overall social environment. Instead, each end of the spectrum had microenvironments, which may have shared broader patterns but were still culturally unique, such as the militarised Lancashire region. For example, cultures in Iron Age Britain may not have had a centralised system of power, however, they shared broad similarities (Woolf 1997, 343), including the lack of formal burial rites, or the presence of roundhouses which transcended tribal boundaries. In contrast, 'Roman' cultures may have been ruled by a centralised power, with governing similarities such as town layout and cemetery locations. However, regional variations were more abundant, such as the presence of villas being restricted to the central, south and east of Britain. Furthermore, local traditions were maintained, as can been seen at Lankhills cemetery, where one adult male was buried in a wooden coffin with a pottery vessel at his feet (Eckardt *et al*. 2014, 540). This would suggest that, whilst there were similarities and differences between both Iron Age communities and Roman communities, it is the scale of these differences that has changed, with variation amongst Roman communities covering a wider geographic area and conquered territories only adopting broad associations such as town layout. However, this does not equate to personal intrinsic belief systems and suggests that the fundamental argument of communities becoming 'Romanised' is void, as communities only become 'Romanised' to a point, embracing the elements they choose to embrace whilst still maintaining elements of their traditional beliefs.

Webster (2001, 211), highlights that neither Haverfield nor Collingwood have considered that the adoption or fusion of culture cannot occur in isolation. In the case of Haverfield's more narrow view that the population of Briton adopted Roman culture exclusively, there is a failure to recognise the resilience of already established societies. Whereas Collingwood's 'hybrid culture' fails to recognise the power of the conqueror over the conquered. Webster (2001, 212) again highlights a further criticism of the early scholars. It is argued that Collingwood's hybridity model presents a problem free process across all aspects of society, which suggests that whilst different community groups may become Romanised at different times, 'Romanisation' manifests in the same way across these groups.

The theories developed by earlier scholars such as those mentioned above have received wide criticism in recent years, however Hingley (2005, 35) argues that it is the theories developed by both Mommsen and Haverfield that proved to be more popular in the proceeding discourse, as it conformed to the political climate of the twentieth century.

As such, an important emphasis should be made regarding the contextual political background of the origins of both 'civility' and 'Romanisation' theories and their subsequent development. Hingley (2014) implies that approaches to Romanisation in the archaeological world were intertwined with concepts of Imperial British rule during the early 1900's. Additionally, approaches to civility can be linked to the consolidation of control in Ireland and aspirations involving land in America (Hingley, 2008). These political backdrops intensify a modern desire to justify political positions by appropriating the past. In this instance, this justification is achieved by emphasising the Roman models on which English foreign expansion practices were based (Armitage 2000 and Hingley 2008). It has been argued that these concepts are essentialist in nature (Barrett 1992, van Dommelen 2001 and Slofstra 2002), and have become an uninformed construct that relies on predefined historical 'facts' being taken as truth. Hingley (2005, 31) expands upon this in his definitions of modernity, suggesting that it is a 'conceptual schema', which is a thought process from which the world can be imagined and manipulated.

It can be seen from the discussion above that culture historical approaches have become intertwined with that of Romanisation, and the need to justify modern imperial expansions has inherently influenced the way in which we interpret the archaeological record. As such, Romanisation (and many of its other guises) has been in use within archaeological discussions for over four centuries.

Versluys (2014a, 5) underlines that attitudes towards the concept of Romanisation suggest that scholars are shrouded by the dogma of the term rather than focusing on the discussions and debates the concept can allow us to engage in. For example, Versluys notes that presenters at the *Theoretical Roman Archaeology Conference* in Oxford, 2010, seemed almost apologetic when using the term, referring to it as the 'R-word' or between inverted commas. In order to move away from continued attempts at re-defining past conceptualisations of Romanisation with limited success, Versluys (2014, 5) suggests that we should reclaim the term from a new starting point, instead focusing on what we mean when we say 'Rome' - a conversation which should transcend disciplines and scholarly traditions, and instead be fuelled by the progress and new developments in other fields of study. He argues that we should explore the role that material culture can play in our understanding of the Roman past and consider that objects are active participants in the negotiations between themselves and human agents, and thus should be considered as objects in motion rather than being static entities.

The discussions raised by Versluys (2014) can be seen to have reignited the debate not only surrounding Romanisation, but also our approaches to archaeology more generally. For example, Hingley (2014, 22) discusses the work of Katherine Lafrenz Samuels when exploring how archaeology makes use of contemporary influences to reconstruct the past. Lafrenz Samuels (2008, 88) observes that if we are to observe the past without making reference to the present then we are restricting the tools that we have available to us for analysis. Therefore, Hingley argues that regardless of the approach used whether post-colonial theory, Romanisation or globalisation (see below) we should have a focus on the types of past society these theories help us create (Hingley 2014, 23). In this way, we can then continue to explore the connections between the past and the present, whilst also ensuring there is room to discuss their differences.

The above brief history of the rise and development of Romanisation theory has demonstrated the changing nature of the term over time and highlights a significant contradiction within archaeology when using the term as a framework for understanding the past. Stek (2014, 31) summaries this when suggesting that the problem with Romanisation as a model, is that it has come to mean and has meant many different things to many different people. Therefore, it can no longer be considered a conceptual framework but merely a term that has been used in many different ways, with varying success and acceptance. Instead of being a useful methodology, Romanisation has been relegated to terminology that we are still struggling to define. Woolf (2014, 47) expands on this by suggesting that, in many cases rejection of Romanisation has become a habit, and that its replacement with other terminologies such as globalisation or creolisation merely provide a new descriptive framework.

In order to move away from this, Woolf (2014, 48) suggests that perhaps the emphasis needs to shift from an overall definition, focusing instead on understanding smaller targeted areas of the past. An example of this can be seen in the exploration of civic coin use in Syria (Butcher 2005, 153). Here, no civic coins were issued in Apamea after the reign of Claudius, suggesting that coinage itself was not an important component of civic identity. However, the increase in the number of coin issuing communities suggests that for unknown reasons, these objects were being increasingly adopted. Whilst this may have been considered as an indication that these communities were becoming increasingly 'Romanised' under previous theoretical models, Butcher (2005, 153) highlights that this may not be the explicit expression of acculturation that we traditionally would assume. Instead, it could indicate a level of practical consciousness within society, whereby individuals are using and trading coinage without necessarily knowing the fine details of the economic system. In this scenario, individuals are not using coins because they are Romanised, native or a mixture of the two, they are using them as a means to an end and merely represent a social process which could be manipulated by either party.

Similarly, Woolf (2014, 48) suggests an alternative approach which focuses on understanding change in past societies, without their need to be a dominant power. Using this methodology, we can begin to explore how things were made, used, exchanged and consumed and let the emerging patterns dictate our understanding of the past. Gosden (2005, 209) highlights this with the example of Samian pottery. The presence of a Samian pot suggests 'Roman' connotations on first glance to the archaeologist, but would that have been the same for those who encountered the object in the past? Gosden uses the example of rural settlements when suggesting that Samian pottery may have represented something exotic to these communities, but this may not have equated to Rome itself (Gosden 2005, 209). Therefore, the debate should not be whether places, peoples or objects were Roman or Native, but instead look for methodologies to explore these things in context. This thesis aims to explore this in more detail by applying object biographical approaches to the coinage of Roman Lancashire in order to understand how the production, use and deposition of these objects can inform our understanding.

The ongoing debate regarding the usefulness of Romanisation is one that transcends geographic boundaries and is not limited to British scholars. Le Roux (2004) suggests that the ongoing challenge Romanisation receives in French archaeological discourses has led to a rejection of the term outright. However, he argues that the term has contributed to the progression of our archaeological understanding, and it would be naïve to reject it solely on its past connotations. Instead, Le Roux calls for a re-evaluation of the term, with each use seeking to improve its definition, as Romanisation still has much it can contribute to our understanding of the Roman past, provided it is not taken as a summary of Roman history in itself (Le Roux 2004, 287).

3.1 Romanisation 2.0

Woolf (2014) has advocated from a move away from overarching descriptive frameworks and the ongoing debate surrounding Romanisation has led to the introduction of "Romanisation 2.0". This model has abandoned 'Roman' and 'Native' dichotomies and instead uses globalisation perspectives to understand the past (Pitts 2021. 117). Globalisation is a multi-disciplinary term focusing on the processes that allow people and territories to become interconnected (Pitts and Versluys 2014, 11).

The study of Globalisation began in the 1990s in an attempt to move away from world systems theories (Pitts and Versluys 2014, 14). World systems theory focuses on societies across the globe being brought into one structure, and explores the emergence of capitalism (Johnson 1999, 85). Archaeologically, this is concerned with explaining ancient social networks, exploring the relationships between core state and peripheries, a notion that would arguably be attractive to explorations of Roman archaeology and is in keeping with the core of traditional Romanisation debates. Contrastingly, Globalisation views cultural change as multi-directional (Pitts and Versluys 2014, 19), and therefore does not favour the invaders as being more important or dominant over natives, in the same way as Romanisation and world systems theory. As such, the way in which Globalisation differs from the many theories that came before it, is that it does not require every society within the Roman Empire to be Romanised, in order to be considered a part of the Empire. Archaeologically, this can imply that the presence of Roman material culture does not mean that a society considered themselves Roman, and that the absence of Roman material culture does not equate to a lack of Roman identity (Witcher 2015, 217). Thus, by intertwining Globalisation and concepts from post-colonial studies, we can begin to move beyond static debates of Romanisation (Gardner 2013). Whilst post-colonial theory corresponds with aspects of Collingwood's (1932) work by considering cultures as fragmentary hybrid entities, it also places a larger emphasis on the process of fusion.

Globalisation acknowledges that these processes are composed of multiple social, economic, and political factors, and thus allows the adoption of a more variable culture depending on location and circumstance. Furthermore, the extent of power and the dynamics between the contrasting communities means that the globalising influence of the colonizer may have affected the variation in power dynamics that would have occurred in different parts of Britain (Mattingly, 2006, 525). Globalisation can be considered a step forward from Haverfield and Collingwood's Romanisation, as it considers cultural changes to be a product of fusion between societies and therefore not a uniform process, and instead can occur to different degrees and at different times across a landscape. However, it is possible to argue that whilst Globalisation may be a more appropriate theory aligned with modern day thinking, the caveat of not underestimating the globalising influence of the coloniser debatably maintains deep-rooted connotations of a powerful elite (Heeren 2013). Therefore, it is possible to question how far from Romanisation theories (and the constant dualism of Roman and Native) Globalisation takes us.

Further problems with the current utilisation of Globalisation revolve around the distinct lack of a framework for applying the theory, leading to Globalisation being considered as more of a descriptive term, in its current state (Gardner 2013). Consequently, the Globalisation framework differs little to others, and proposes a worldview as opposed to an applicable research method (Stek 2014). It can be argued that this is cemented by the lack of definition that can be applied to Globalisation, meaning that the models are interpreted in different ways by different people to fit their own agendas. For example, it accentuates modern models of global powers, which has enabled it to become an attractive schema in modern archaeological discourses (Mattingly 2006, 17). In this way, it can be seen to differ little to Romanisation. This is supported when considering the ways in which Romanisation and Globalisation can be interchangeable constructs, and therefore it is questionable as to whether Globalisation can increase our understanding of the Roman archaeological record, or whether it is merely a synonym for Romanisation and the two terms are interchangeable (Witcher 2014, 200).

Mattingly (2006, 17) argues that what is required is a greater focus on diversity. It can be suggested that in order to focus on diversity, we need to move away from umbrella definition terms and begin to look at multiple aspects. By considering a biographical approach to objects, this may enable an understanding of cultural representation of multiple different groups.

Pitts' (2021) Romanisation 2.0 methodology mirrors these core elements of globalisation theory and involves taking well defined assemblages that would usually from the basis of a detailed site analysis and instead evaluating it on a pan-regional scale. By comparing a single site assemblage with hundreds of contemporaneous assemblages, a bigger picture can be formed without sacrificing site level detail (Pitts 2021, 119). This methodology allows an exploration of whether a particular site is more aligned to local, regional, or international patterns. For example, when considering the rural cemetery at Alton, Hampshire, Pitts (2021, 127) discusses the contents of grave seven. In this example, Pitts (2021) notes that a large grave good assemblage would indicate an elite burial, however, many of the objects found indicate local manufacture and are of an inferior quality than would usually be associated with elite graves. The only object that appears to not be of local manufacture is a single fibula brooch, which is a more universal design seen across the Roman period in many geographic areas. At the time of the Alton cemetery publication, no other examples of this brooch had been found in pre-Conquest contexts, further emphasising a Roman date for the object (Millett 1986, 72). Finally, the quantity of animal bone also found associated with the graves would suggest a continuation of Iron Age practices taking place during the Flavian period. Contrastingly, in Grave Two, many objects are associated with Roman origins. For example, a Samian Stamped pot reading REGENVS originating from La Graufesenque, France as well as two mould linked blown glass vessels, with the single circle and central dot motif being a rare form. Finally, 11 glass gaming counters are also associated with this grave and are commonly found within the early Roman Empire, with a strong possibility that they are continental imports (Millett 1986, 56). Several other artefacts are also associated with this grave, though their whereabouts are unknown, with these examples also tending to be linked to typically 'Roman' origins. For example, an onyx signet ring set in gold with images associated with Fortuna, Hercules, Ceres, and Diana evoking protection, salvation, and fecundity (Millett 1986, 57). Whilst the whereabouts of the ring are unknown, the wax impression suggests that the onyx gem was cut neatly, and the shape is attributed to the styles seen from the second half of the first century BC, the Augustan Age and Julio-Claudian period (Millett 1986, 57). Moreover, there is note of a wooden tray associated with the burial, though its whereabouts are unknown. This, along with the gaming counters, may suggest the presence of a gaming-board (Millett 1986, 58). If the presence of animal bone and inferior quality objects in Grave Seven suggests a continuation of Iron Age practices, then the presence of high-quality, high-status objects in Grave Seven, such as the signet ring, may imply the presence of elite individuals whose grave goods are more heavily associated with Roman practices. This therefore emphasises Pitts' (2021) approach to Romanisation 2.0, suggesting that we should look for similarities and differences across a wider geographic range. Grave Two and Grave Seven demonstrate a range of practices at place in a single cemetery, and it can be argued that this can only be understood fully in a wider geographic context.

3.2 Creolisation

Whilst Romanisation debates are still dominating the discipline today, with the field having progressed from the definitions of Haverfield and Collingwood to include globalisation and post-colonial concepts, it is important to consider other theoretical approaches to understanding the Roman past. Creolisation is one such approach originating in Caribbean historical archaeology (Webster 2001). The term itself is linguistic in nature and revolves around two languages merging into one new language, creating a 'process of multicultural adjustment' (Webster, 2001, 209). It is argued that due to the legacy of Romanisation, we are likely to perceive 'Roman' artefacts found in 'Native' settings as Romanised (Ferguson 1992). However, this ignores broader archaeological advancements in theory and fails to consider the active negotiations that agents and objects share and as such, fails to consider the ability of individuals to 'adapt Roman styles to serve indigenous ends' (Webster 2001, 219). When considering Roman Britain, it is possible to suggest that a Creolisation model enables the native voice to be understood, something that has been underrepresented in previous theoretical models (Carr 2007, 112). As such, we can begin to see the creation of new cultures that are neither wholly Roman or wholly native and instead are new hybrid cultures comprising elements of both (Heeren 2013, 161).

In this way, Creolisation models have enabled a greater consideration of indigenous contributions to Romano-British material culture, and as such the wider identity of the population (Sanchez 2016, 60). For example, Witt (2013, 94) uses the example of the temple of Icovellauna to the south of Metz, dating to the second century AD. The temple itself is dedicated to a Celtic goddess and is octagonal in shape with a circular interior similar to other Celtic temples. However, its construction in cut stone suggests a Roman style of construction, thus suggesting that this example took a Celtic institution and combined it with 'the Roman expectation of how a temple ought to be constructed' (Witt 3012, 95). In this sense, the temple took Celtic and Roman elements and combined them to form something that was strictly neither of the original cultures, but instead a new fused entity and it is this process that forms the basis of creolisation theory. However, Creolisation still requires an unequal power balance between the fused cultures (Carr 2007, 112), with one still exerting dominance over the other.

Whilst creolisation does allow for two different cultures coming together to create a new third culture that is uniquely different from its origins, the reliance on a dominant culture likens it to Romanisation and Globalisation models. The issue is that this model also focuses heavily on defining cultures rather than looking at the expressions of those cultures in order to investigate diversity (Mattingly, 2006, 17). If Creolisation is considered as a reciprocal process of absorption of one culture by another (Hawkes 1999, 89), then it can be argued that Creolisation merely functions as another buzzword (Hitchcock 2011). As such, the extent to which Creolisation moves us away from Civility or Romanisation is debateable. On one hand, whichever framework is utilised does enable the archaeological discourse to interpret whilst still being governed by an underlying principle. On the other hand, however, these frameworks rarely receive adequate elaboration (Hitchcock 2011, 271), to make them applicable across the discipline.

3.3 Materiality

Many of the examples above have focused on the use of material objects in understanding the adoption and fusion of cultures and therefore it is important to understand the theoretical conversations around materiality if we are to fully embrace an object biographical approach.

Materiality in archaeological theory is focused on the importance of the material world and the active negotiations that this material participates in within society (Johnson 1999, 224). This shift in archaeological thinking is one that has been in discussion since the 1990s (Shanks 1992), which sees a greater emphasis being placed on materialist understandings, incorporating notions of subjectivity, material culture and archaeological texts (Shanks 1992, 249). Shanks (1992, 250) also implies that objects themselves are merely raw materials and they can only hold a meaningful significance if they are to be turned into discursive materials. For example, Derrick (2018, 33) highlights the use of glass unguentaria which are more commonly associated with cosmetics and perfumes. However, in some cases such as the Flavian timber basilica at Silchester, these items can be associated with more ritualistic connotations. Here, one of the glass unguentarias was found within the floor surface and one interpretation is that it was filled with a substance or group of substances that held magical properties perhaps to purify or bless the grounds of the building. If this is the case, then it can be argued the vessel itself is just that, a blown glass vessel. Its significance comes from the negotiations that it is involved in, requiring interactions between the object and human agents, allowing it to have different meanings depending on what it is used for.

Tilley (2007, 18), who suggests that if we discuss and compare artefacts, we are automatically considering their landscapes, contexts, movements, social and political strategies, and the effects they had on people, the way they were perceived and understood. As such, materiality is concerned with the ways in which humans interact with the world around them (Gosden 1994, 82). The term materiality has been widely adopted in academic theory with multiple, often conflicting meanings. The two main points of view can be summarised by the arguments expressed by Latour (1996) and Lemonnier (1996) in the pro-gun and anti-gun lobbies (Knappett 2007, 20). Latour argues that the active agent is neither the gun nor the human, rather it is the human with the gun, and you cannot isolate the two individual components from each other (Latour 1996). In contrast, Lemonnier (1996) argues that materials and human action can be examined independently before exploring how the two elements come together. However, Jones (2004, 329) suggests that the foundations of materiality as a concept can help to bridge the gap between archaeological science and archaeological theory, as materiality focusing on all aspects of an object's biography and thus offering a fusion between raw material and social negotiation. For example, Boivin (2008, 167) implies that considering materiality as simply material relations is no longer appropriate, and therefore we should consider the coming together of materiality and embodied humans engaging in activities. This redefinition of materiality may allow us to move beyond simplistic conversations of whether objects themselves do or do not have agency, and instead interpret how the material world interacts with living agents. It is this concept that is adopted in the biographical approaches outlined in subsequent chapters of this thesis. Here it is acknowledged that both objects and people must play different parts in the negotiation and display of cultures, rather than considering these individual elements in isolation, for one cannot necessarily exist without the other.

With regards to Roman archaeology specifically, Witcher *et al.* (2010, 2) uses materiality theory to interrogate the perception of Hadrian's wall as a monument of and to Ancient Rome. He argues that encounters with this monument (be it living there, trading there, or being native Briton) have generated numerous materialities both dominant, conflicting, and undefined. Witcher *et al.* (2010, 5) uses the example of modern commercial photography at Hadrian's Wall, which is often concentrated on the curtain wall as it dominates the landscape. He suggests that this demonstrates and reinforces the idea of the Wall being a defensive boundary. Whilst the wall itself is no longer used for such purposes in modern day times, it is easy to see why commercial photography may still invoke such connotations (Figure 3.3-1).

Figure 3.3-1 Birdoswald Landscape. English Heritage. 2020.

This implies that whilst the monuments usage and modern experience of the monument have undergone a transformative relationship, this relationship has enabled humans to continue to engage with the monument despite changing social and environmental considerations.

When considering the fabric of the Wall itself, it is possible to suggest that the de-construction and rearrangement of materials to be used nearby in castles and churches (Whitworth 2000), implies the changing interactions between humans and material culture dependent on changing social circumstances or belief systems (Witcher *et al*. 2010, 6). Bell (2005) suggests that reuse implies multiple meanings, from the recycling itself to the cultural connotations that are associated with objects. Witcher *et al.* (2010, 6) therefore suggests that because of this, the Wall itself cannot be considered as a static monument, its materiality proposes that the implicit meanings bound up with the physical materials are both mutable and mobile.

Moreover, the Wall itself does not have materiality without the associated landscape it exists within. For example, returning to the relationship between the commercial photographer and the Wall today highlights another change in its materiality, which occurred in the nineteenth century. Land improvements during this period, such as changing field boundaries and drainage systems, have irreversibly changed the wider landscape, which arguably has considerations for our modern interpretations of its function. Richards and Clegg (2008) argue that the landscape of Hadrian's Wall is timeless, but this is refuted by Witcher (2010, 7) who suggests that the changing materiality of the Wall over time has meant that what we see today is no more than 150 years old. Therefore, it can be argued that we are not interacting with the Wall itself, but rather the altered perception of the Wall due to these changes.

The above example, whilst concerned with landscape changes, also has repercussions on how we consider interactions with material culture. For example, when analysing Roman coins, it is possible to suggest that archaeological investigations tend to superimpose current models of financial and economic systems onto the archaeology. As such, conversations surrounding coinage tend to focus on economy and circulation, or rather, coins as money, as opposed to coins as artefacts in their own right. It is important to contemplate that Roman and modern-day coinage ought to be considered within the backdrop of the periods within which they represent, periods with differing social, political, and economic circumstances and impacts.

3.4 Conclusion

Whilst archaeological theory has adapted enormously over the last century, there is still a heavy focus on providing a framework within which to understand Romano-British archaeology. More recently, concepts such as Globalisation and Creolisation have begun to incorporate the roles of natives within the discourse in order to better understand these blended identities. However, when put into practice it can be argued that these frameworks fail to consider regional variations, and as such, their dominance in the discipline undermines the wealth of excavated evidence. Moreover, it has been suggested that each framework discussed focuses more on the linguistic disparities between 'Roman' and 'Native', and therefore representations of identity within the Roman world have had the potential to lack depth and focus. This has an influence on the creation of a biographical approach to objects, as it creates a chasm whereby objects are no longer functional existing and being used freely, but instead they are either 'Roman' objects perpetuating 'Roman' ideals, or 'Native' objects perpetuating 'older, Native' ways of being.

In order to fully understand the usefulness of a biographical approach to commodities, such as coinage, and how they were perceived across the transition from the Iron Age period to the Roman period it is important to consider the role and acceptance of the Roman economy. The Roman system of exchange, whilst more standardised and sophisticated, still to a degree required the acceptance of local communities in order for it to be upheld within Romano-British society. As such it can be seen as a significant tool in examining how tokens of Roman exchange were adopted in these newly forming landscapes.

4 Understanding Economies

The economy is an integral part of a societal structure, providing a core set of values for the governing of production, consumption and exchange of goods and services. To this end, studies of the economy have often focused on understanding the ways in which production and consumption activities are related to each other, in order to determine how resources are allocated. Temin (2001, 169) highlights that most economic models assume the existence of a market economy, whereby the production and value of products is unrestricted and constantly being negotiated. Many types of economies exist but perhaps the most well understood is that of a monetary economy, focused on the exchange of coinage.

Coinage and money are intertwined concepts within modern day western discourses and their ubiquitous nature has often meant that they colour our view of the use and value of coinage when discussing societies in the past. When considering the interpretations of Roman coin hoards, Bland *et al*. (2020, 56) highlight that 'all too often evidence is understood through the lens of modern expectation and normative assumptions, whereby hoards are considered only in relation to practical and functional aspects.' The same too can be said for coinage and monetary economies more generally. When trying to understand economies in the past, particularly within the backdrop of archaeological discourses, it is important to acknowledge that we are often interpreting the evidence we have against our preconceived notion of what constitutes economy, money, and coinage. In fact, coinage is merely one mechanism through which exchange can take place within a wider society, for example cowrie shells were exchanges in India as early as the fourth century. Cowrie shells were considered by East India Trading Company official Robert Lindsay as an 'answer to all the purposes of commerce' and were used by Indian society in the purchase of goods (Yang 2018). In this society, the exchange of cowrie shells was fundamental to the maintenance of their economic system, with the shells being exchanged for goods of perceived equal value. This example highlights that an economy system may be reliant on many different tokens of exchange. In addition, there are other methods of exchange that result in consumers being able to obtain goods, without the use of currency at all. For example, pre-Roman economies are often associated with bartering, which does not require a distinct separate currency. This form of exchange is centred around individuals 'who wish to engage in the direct exchange of goods' (Collis 2003, 18).

Understanding the economic system of the Roman Empire can be viewed as a complex web of interactions. The Empire itself was composed of large disparate societies, both in terms of their geography and societal beliefs, who were all being drawn into the wider control of the Roman Emperor. In the archaeological discourses of the 1920s, it was felt that the early Roman Empire maintained a conscious policy whereby the government did not get involved with the free market (Rostovtzeff 1926). This might suggest that pre-Roman economic systems continued without disturbance or introduction of any new methods of exchange. As our understanding of the Roman past has changed and developed, this could be considered a naive approach, particularly when considering the evidence for the military being paid in coinage. By the 1950s there was a shift in archaeological thinking concerning the Roman economy, with researchers such as Polanyi (1957) considering a multifaceted economic system that explored the role of the government. As a result, the approach to a 'Roman' economic system took on a three-fold approach of reciprocity, redistribution, and exchange (Temin 2001). This approach acknowledged that some elements of exchange were interlinked with social obligation and tradition, with people aiming to find balance between the goods they received and goods they gave (reciprocity). Alongside this, there were elements of redistribution, whereby goods would be collected and distributed based on laws or a central decision – thus incorporating the existence of a political economy, or a political impact on the economy (Garnsey and Saller 1987). Indeed Polyani (1957, 57) highlights this through the 'redistribution of grain by the Roman administration within an otherwise householding economy'. In essence, Polyani's definition of householding is the process by which a community's production is based on their own use (Polanyi 2001). However, the idea that the Roman administration was able to centrally redistribute grain suggests that overall people may have been willing to operate with the intrinsic rules of the economic system in order to maintain the status quo. Within this, there is a further element of exchange whereby people voluntarily exchange goods for other goods of perceived equal value in monetary terms (Temin 2001), but without the need of any money to change hands.

In terms of monetary exchange, an example can be seen in the Vindolanda Tablet 181 (dating to AD 104-120), which appears to display a cash account of money received for specific items, and money still owed. The translation of the tablet is as follows:

"…Candidus, denarii 2 (?), For timbers purchased, denarii 7 (?), a tunic, denarii 3 (?), from Tetricus, denarii .., from Primus, denarii 2 ½ (?), from Alio the veterinary doctor, denarii 10 (plus), from Vitalis the bathman, denarii 3 (?), total, denarii 34 ½. The rest owe: Ingennus, denarii 7, Acranius, denarii 3, the Vardullian cavalrymen denarii 7, the companion of Tagamatis the flag-bearer, denarii 3. Total, denarii 20." (Vindolanda Tablets Online 2019).

In the 1970s, Frederick Pryor (1977) expanded this further by including an additional category, coinciding with exchange and transfers. Pryor (1977) argues that exchange represents balanced transactions, where goods are exchanged for an equal value, whereas transfers represent a one-way transaction such as the paying of taxes, where there is no direct return gained from the payment. Further to this, Temin (2001) highlights that transfers are split into centric and non-centric, with centric perhaps the most important as it emphasises the transfer of goods from an individual to an institution.

When considered in tandem, this multi-faceted approach would suggest the operation of an enhanced market economy, which undoubtedly would have elements which are centrally controlled (Peacock and Williams 1986) and also affected by the motivations of individual agents (Lo Cascio 2006). For example, individual economic wealth provided a benchmark for joining the elites, which may have been negotiated by the state itself (Perkins 2013). This is further supported by Bang (2007, 18), who highlights that continued economic growth lies in the administration's ability to generate urban development, new capitals, and new provincial headquarters such as those as seen at Trier and Milan.

The effects of this centralised control on the economy can be seen explicitly in the edicts of Diocletian, with edict 301 specifically showing an attempt at price control (Temin 2001). Edict 301 or 'the Price Edict' specifies how much unskilled workers should be paid for their labour, that is 25 denarii per day, plus maintenance (Allen 2007, 3). This implies a centralised influence over the monetary value of transactions. Furthermore, the abundance of coinage would suggest that it came to be used as one of the dominant forms of payment in everyday exchange (Temin 2001).

Hitchner (2009) highlights that there are multiple strands of political control on the economic system, which involve the production, iconography, and usage of coinage. Firstly, Hitchner (2009) discusses the concept of monetary manipulation which is focused on the state's desire to regulate the supply of money available within general circulation. This is supported by Howgego (2009), who suggests that the Empire managed to maintain the fixed bimetallic system, despite changes in the metal content of some coins (debasement) - meaning that one gold aureus would still be the equivalent of 25 silver denarii. Secondly, Hitchner (2009) refers to metallurgical manipulation, which focuses on the increase or decrease in the precious metal composition of coinage and is usually attributed to the government's need to fulfil their public obligation, collect taxes, and prevent a deficit. Thirdly, there is visual manipulation that sees a change in the iconography displayed on coinage to depict particular messages. An example of this can be seen in some of the oldest iconography depicting Romulus and Remus suckling the she-wolf (Mitchell 1976, 69). This imagery is entangled with the foundations of Rome, the Empire, and more broadly the identity of a 'Romanised' community; as such they can be seen on silver coinage as early as 269 BC (Mitchell 1976, 69). Moreover, the she-wolf is also considered to be an important symbol of perseverance and overcoming adversity and reappears at moments of crisis throughout Rome's history as a reminder of this symbolism (Eidinow 1993). Finally, Hitchner (2009) discusses the concept of non-physical monetary manipulation, such as that of state loans, debt cancellations and tax remissions, and highlights that the Roman state appears to have injected money into different provinces on an irregular basis. This irregularity serves to highlight the difficulty facing the Roman government when trying to control such a vast and geographically widespread empire.

Roman coinage is abundant in the archaeological record across the empire and therefore suggests that it was commonly used as a method of payment (Temin 2001, 173). Howgego (1991, 1) highlights that money is also relevant to social and political change. In the case of the Roman world, the use of coinage enabled the creation of an army and city officials who were all salaried by the Empire. As this brief introduction has shown, the Roman economy and the use of coinage is multifaceted and links to both how the Empire and individual provinces were being governed. Before we can begin to explore this further is it important to first consider how the Roman monetary system developed.

4.1 The Roman Coinage System

Coinage and money have become entities bound up with one another through modern discourses and the terms are often used interchangeably or considered to be one and the same. As Kim (2001, 7) notes coins can be considered a new form of money, which was used for civic, commercial, and impersonal activities. Unlike other forms, coins offer a glimpse into a very specific form of money, defined by a piece of stamped metal, usually issued by an authority and fitting within a weight standard. Furthermore, unlike other forms of money, coinage can be seen to have a more well understood beginning, with the first coins made of electrum being minted in Lydia somewhere between the middle seventh to early sixth century BC (Kim 2001, 8). The earliest evidence for Roman coinage begins around 300 BC, with a struck bronze issue likely to have been minted in Naples (Bernard 2018, 4). Followed by four heavy silver didrachms featuring the Latin legend ROMANO, hoard evidence has been used to date these issues of Mars to approximately 300 BC, with subsequent issues of Apollo/Horse type around 250 BC leading to a break in minting (Bernard 2018, 4). From around the 230s BC, we see the legend on coinage change from ROMANO to ROMA, with some arguing that this was due to the mint location changing from Naples to Rome (Pedroni 1993, 46). The dating of these issues is supported by a hoard from Sardinia which contains newly minted examples of ROMA types, with some issues displaying evidence of linked dies used in their production. Therefore, the burial of this hoard must postdate when Rome took control of Sardinia in 238 BC (Bernard 2018, 5). The evidence suggests that the initial use of Roman coinage was sporadic with issues being struck at a rate equivalent to one series a decade (Bernard 2018, 5), this is supported by the lack of die linkages which have been made between the ROMANO issues, implying that there was an inconsistent minting across these early periods of the republic. Evidence of early bronze issues suggests a wide denominational structure, from larger issues such as the *as* to smaller fractional coins, with the implication that coinage was expected to cover a wide range of transactional needs (Kim 2001). The introduction of the Quadrigati around 269 BC, demonstrates a shift in coin production, with these issues being produced in a larger scale than any of the previous issues discussed and find spots of these issues have been linked to the military activity of the Second Punic War (Bernard 2018, 6). This suggests a shift in the way coinage may have been used or relied upon in times of military movement and consolidation of power. As this shift transpired it may have led to an increased awareness of coins as a tool of monetary exchange, which was then harnessed as the republic and later the Empire grew. The reason for the adoption of coinage on a wider scale is open to much debate; traditional arguments may rely on its use in order to pay the military or navy, pay for the building of monuments, or even due to the contact with other civilisations who were already coin-using societies. However, as Bernard (2018) notes, the Romans were already financing these activities before coins specifically were used. Therefore, the introduction of coinage may be aligned to the changing structure of political power, and the introduction of elite classes who were more inclined to adopt coinage as a form of currency in rising levels of elite participation in trade, or perhaps to align themselves with more advanced civilisations such as the Greeks. Furthermore, by encouraging the use and distribution of Roman coinage, it enabled the same system to be upheld across the republic and later the Empire. Once the use of coinage had become cemented into economic activities then the design of the coins themselves enabled a key propaganda tool to also be distributed at the same time. Therefore, it is important to explore the ever-changing coin-based economy of the Roman period.

The value of Roman coinage was in a constant state of flux, depending on the stability of the political situation at the time. By the end of the 3rd Century BC, the Roman Republic found itself retaining control of Italy following the Second Punic War and the defeat of the Carthaginian general Hannibal. Following this, there was a complete restructure of the Roman economic system, with new denominations being introduced which would last into the Imperial period. One such example was the silver denarius, which replaced the previous silver issue *quadrigatus-*

didrachm. The denarius was smaller and lighter than previous silver issues and was valued at 10 *asses,* this was re-tariffed at 16 *assess* seven decades later, with this value lasting until the imperial period (Sear 2014, 17).

The denarius lasted until the third century AD before being replaced with the *antoninianus (van Heesch 2007, 88).* High value gold coinage was rarely struck in the Republican period and did not form part of the regular coinage in circulation. Rare Republican examples of gold coinage were associated with periods of military emergency, for example following the assassination of Julius Caesar on the Ides of March in 44 BC. (Sear 2014, 19) During this period, gold coins were produced representing the contenders for political power, including Triumvirs Mark Antony, Octavian, Brutus and Cassius. The gold issues of Octavian (later Augustus, the first Emperor of the Roman Empire) evolved into the first Imperial gold coinage. In addition, no regular bronze coinage was struck after 82 BC due to inflation making them worthless (Bay 1972, 112). Once Augustus had come to power the large-scale production of the bronze *aes* resumed as part of his reorganisation of the monetary system in 18 BC. Emperor Augustus retained the production of gold and silver units, but the production of brass and copper coinage was under control of the Senate and was represented as S C on coinage – *senatus Consulto* (Mattingly 1917, 61). Following the establishment of the Roman Empire the values of Roman coins were reset (Crawford 1970) (Table 4.1-1)

	Aureus (Gold)	***Denarius (Sliver)***	***Sestertius (Brass)***	***Dupondius (Brass)***	***As (Copper)***	***Semis (Bronze)***	***Quadrans (Bronze)***
Aureus	1	25	100	200	400	800	1600
Denarius		1	4	8	16	32	64
Sestertius			1	2	4	8	16
Dupondius				1	2	4	8
As					1	2	4
Semis						1	2
Quadrans							1

Table 4.1-1 The value of coins in the Roman Empire (First to Third Centuries AD)

However, whilst these ratios may have remained fairly stable, periods of political instability and the need to produce more coinage often meant that the metal content of each individual denomination was subject to decline. For example, the weight and fineness of the denarius was greatly reduced from the reign of Nero in AD 64. Prior to this period, analysis by Butcher and Ponting (2005, 175) suggests that the silver content for denarii was around 98%, this decreased to about 95% under Nero and continued under successive Emperors until by the reign of Caracalla AD 198-217 the denarius contained barely 40% silver (Sear 2014, 21). Butcher (2015, 181) suggests that the reasons behind these periods of debasement were due to the Roman state 'recklessly issuing worthless currency to cover state debts.' This implies that whilst the Empire maintained a tight control over where could issue coinage and what was to be displayed on the coinage, an effective system of monetary policy was lacking. Therefore, when the state found itself in times of crisis they would produce more money, sometimes of lower quality due to resources, debasing their own coinage, without an understanding of what this would mean for the wider economy: essentially, flushing the economy with poorer quality coinage and leading to low value issues being worthless. Due to continuing expansion of the Empire, the survival of the state became reliant on its ability to pay for its army (Butcher 2015, 182). During periods where this became difficult, Emperors could manipulate the quality of the coinage rather than increase income by other means. This can be seen through the periods of significant debasement under Nero and Caracalla as outlined above.

During the third century there was additional monetary reforms (Alföldy 1974*)* which saw the introduction of an additional denomination, the antoninianus, representing the equivalent of two denarii, which only physically weighed the equivalent of one and a half denarii. By the middle of the third century, the antoninianus had driven the denarius out of circulation, with these coins then also becoming significantly debased until by the reign of Gallienus AD 260-268, they contained barely any silver. The monetary reforms of Aurelian (AD 273) saw the silver content of the antoninianus restored to 5%, the revival of the silver denarius and an attempt to reintroduce the *as* to combat the introduction of local imitations during the reigns of Claudius II Gothicus and Tetricus (AD 278-273), in Gaul and Britain (Sear 2014, 22).

Further reforms under Dicoletian began around AD 294 and saw the introduction of the silver siliqua and the billon follis (containing around 5% silver), as well as the discontinuation of the antoninianus (Sear 2014, 5). Constantine the Great made further changes to the monetary system between AD 307-37, which saw the aureus replaced by the solidus in the west (Hines 2010, 157), weighing approximately 4.5 grams. Two gold fractional coins were also introduced around the same time, the semissis (the equivalent of half of a solidus) and the 9-siliqua piece (which was the equivalent of three eighths of a solidus). However, these were no longer in use by the end of the fourth century (Sears 2014, 23). As demonstrated above, the monetary system in place at the beginning of the Roman Empire was vastly different to the monetary system in place into the fourth century.

4.2 Economy and Coinage in Roman Britain

Following the Roman invasion of Britain in AD 43, the establishment of new organisational structures was underway. By AD 53, under the governorship of Publius Ostorius Scapula, most of modern-day England had been subjected to Roman rule (Korporowicz 2014, 235). Therefore, as with the other provinces under Roman control, Britain was now required to pay taxes to Rome. It is possible that this appeared less of an imposition to the people of Britain than one would assume. Some historical sources point to Britain paying taxes to Rome following Caesar's failed attempts to conquer in 55 and 54 BC. In fact, Caesar's own accounts mention an annual payment for the Britain's to Rome (Caesar Gallic Wars, V 22.4). The term used by Caesar was *vectigal*, which was normally taken to mean indirect tax (Korporowicz 2014, 230). Korporowicz (2014, 236) indicates at least four different types of taxation were required following the successful invasion of Britain in AD 43: *tributum soli, tributum capitis, vectigalia* and *Annona militaris*.

Tribiutum Soli and tributum capitis were introduced to the Roman tax system by Augustus and were designed to replace earlier Republican taxation systems. The first is considered as a land tax placed on everyone in areas under Roman control, the second was a poll tax imposed directly on the conquered population (Korporowicz 2014, 237). It might be implied that in a coin using society such as that of the Roman period, that taxes were expected to be paid using coinage. However, in some areas of the province, coins were not commonly used in exchange. For example, in Wales large areas of the central highlands and coast have limited evidence for early coinage, suggesting that tax payments may have been made in kind, by directly exchanging a perceived equal value of goods instead of using coins (Guest 2008, 55). Mattingly (2006, 496) indicates that this is likely to have been the same for parts of Britain during the early years of occupation. This would be particularly likely for areas of northern Britain, which previously may have had little contact with the Romans before invasion, and therefore were less likely to have coinage to use for payments. Alternatively, Guest (2008, 55) suggests that perhaps goods were traded for coins elsewhere and then the coins were then used to pay the centralised Roman government.

Vectigalia, or the revenue derived from public land, included *portoria* which is based on tax entering or leaving ports. Korporowicz (2014, 239) highlights that there is not a wealth of evidence of this type of payment in Britain. Holder (2007, 23) suggests there is a large body of inscriptions concerning the import of goods into Roman London, with regard to *portoria,* the most important are lead labels which are likely to have been attached to goods. The labels refer to the merchant or exporter, the export office, the weight or volume, or an imperial seal. In London, one label was found still attached to its amphora, and is described as globular, suggesting it was used to transport wine or oil (Holder 2007, 23).

Finally, the *Annona militaris* was designed to support the governor and his civil and military staff (Korporowicz (2014, 240). This tax was not related to the movement of coinage but instead would allow the distribution of food rations or supplies from spaces under imperial control in order to feed and maintain the army (Kelemen 2015, 103 and Develin 1971, 692). This is supported by Stallibrass (2009, 101) who suggests that large quantities of butchered animal bone (particularly cattle) at military sites along Hadrian's Wall implies regular large-scale movement of supplies such as beef over three centuries. Due to the lack of rural evidence, it is difficult to make the link between the production of meat at rural sites and the consumption of meat at military sites (Stallibrass 2009, 103). However, the lack of neonatal animal bones at military sites does go some way to suggest that they were not producing their own livestock in these spaces on a large scale. Therefore, the movement of significant quantities of animals into military spaces and the presence of butchery marks on the remains of these animals may provide evidence for the movement of food and supplies for the maintenance of the army.

Although the use of coins could be seen as a necessity in order for taxes to be paid, it is also apparent that coins were circulating amongst local populations throughout the Romano-British period. The influx of Roman coins into the province can be seen to be linked to the movement of the military, who were paid in coin and subsequently led to an increase in the use and loss of these objects, which is identified in the archaeological record. Indeed, Casey (1994, 7) highlights that the manner by which coinage reached the population of Britain is not fully understood, however, he credits the army as being the main driver. An army of around 30,000 soldiers would have been paid approximately 7,750,000 denarii annually, with a lot of this coinage being redistributed into the civilian economy through purchase of goods (Casey 1994,7). Furthermore, the state would purchase essential provisions such as grain from native producers at a fixed price that would be paid in coinage, again introducing coins into the lives of the population of Britain (Casey 1994, 7). If coinage was an accepted form of payment for goods and services, then this would suggest that civilian populations in turn would then be able to use the coinage in their day-to-day transactions. As a consequence, it was not uncommon to see civilian communities associated with military dominated areas, providing a mechanism by which the use and exchange of coins would become common practice through the purchasing of goods. This concept is supported by Howgego (1994, 6) who suggests that the state was a main driver of the redistribution of coinage across the provinces of the Empire. Coinage would be distributed by the state in order to pay the wages of the military and salaries for officials in administrative centres, as well as to purchase food and equipment, and construction of official buildings. The state would then recover its wealth through taxation and rents (Burnett 1987 and Howgego 1994), and as previously discussed, these looked different for different communities, not always being reliant on the exchange of coinage.

Whilst the movement of coinage can be seen to be linked to military use, this does not necessarily suggest a wide scale acceptance of coinage in the areas surrounding military installations. For example, Reece (2012, 10) highlighting coin evidence from the fort at Exeter, suggests there was a healthy coin supply until AD 60 when the army left. However, the evidence demonstrates that coin use did not appear to spread to surrounding areas until into the second century. This may imply that coinage was an accepted method of payment when the military installations were present, but when they moved on, local rural settlements went back to pre-Roman methods of exchange as opposed to maintaining coinage as the dominant method. If coinage was introduced to these communities by the military, then it may be argued that a coin-based system of exchange was forced upon them, and it is only with the establishment of Roman towns in the second century that begin to see the usage of coins resurface. Reece (2012, 10) suggests this may because rural farmers were not exchanging with ‘state coin-users’ or that the act of using coinage did not take hold without a more ‘Roman’ supportive community, either in the form of the military or official towns.

It is also important to consider that some Romano-British communities may not have come into contact with coinage before military occupation of the landscape. For example, Reece (2012, 10) highlights that in Colchester or Lincoln, the army were using coins in spaces which had been exposed to them pre-invasion, however, when these forces moved upwards into Cumbria or the lowlands of Scotland, they were introducing coinage to areas where it was previously absent. This is supported by Creighton (1992, 47) who suggests that coins may have circulated faster in areas that were central to the circulation system, and more slowly in areas that were on the periphery. The Iron Age and Roman Coin Hoards in Britain (IARCH) project has identified that coin hoards are more common in the South East, south west the midlands representing over 50% of the total number of hoards (3302) included in the project (Bland *et al.* 2020, 19).

Reece (2012, 11) has also considered hoard evidence when discussing the use and adoption of coinage in Roman Britain. The average hoard of the first two centuries AD in France is typically composed of bronze and copper issues, with hoards of denarii being much rarer. In contrast, the typical British hoard of the same period tends to be composed of denarii, with bronze and copper hoards being rarer. This is supported by the work of Bland *et al.* (2020, 52), which demonstrates that denarii in hoards containing denarii peaks between Reece Periods nine and twelve (AD 180 – AD 260), before being almost absent from period fourteen onwards (AD 275). If coinage was being used in everyday transaction amongst the wider population, one might expect a larger proportion of bronze and copper alloy issues to be found. The fact that this is not the case may imply that coinage was less likely to be used in every day small-scale transactions, and instead exchange or accumulation of silver coinage may be linked to larger payments.

This picture seems to change from the third century onwards, by this time the denarii had been replaced with the radiate, and the silver content was diminishing over the course of the century from 48% in the late second century, to less than one percent by the mid to late third century (Reece 2012, 12). There is a distinct peak in the number of sestertii and other low value denomination coins in hoards around Period thirteen (AD 260-275) and the introduction of the nummus seems to dominate coin hoards from periods fifteen to twenty-one (AD 296-402) as demonstrated by Bland *et al.* (2020, 53).

The production of unofficial coinage during the third century appears to coincide with the decline of official coinage making its way into Britain during the third century. Reece (2012, 15-16) highlights that these unofficial issues are copies of regular issues in design, usually copying pre-reform coins of Victorinus, Claudius and the Tetrici. Due to the widespread nature of these copies across towns, villas, villages and farmsteads in third century Britain (Reece 2012, 16) this may suggest that the nature of the economy had shifted dramatically from coinage being concentrated to military zones. If a strong coin-using economy had not been established in Britain by a large proportion of people by the late third century, then there would be little reason for them to produce their own unofficial coinage. Whilst, army production may be responsible for the production of unofficial coinage, their presence across towns and villages suggests that the wider population were still willing to accept coinage as form of payment and were therefore ascribing to this form of economic system.

Fourth century Roman Britain sees an increase in hoarding practices, with the province being considered to have the highest number of hoards from this date in the Empire (Guest 2005, 28). Moorhead and Walton suggest there are 232 known coin hoards with a terminus post quem of AD 388 (Moorhead and Walton 2014, 99) with 39% of them being composed of silver issues. By tracking hoards containing the clipped siliquae of Reece Period 21 (AD 388-402), we can see that a large proportion of finds come from the lowland zone to the east of the Fosse Way, with an extension into parts of North Yorkshire (Moorhead and Walton 2014, 104). In contrast, Wales, Devon, Cornwall the West Midlands and the North West have low numbers of these coins, contrary to Reece (2012), suggesting that the use of Roman coinage had not changed much from its introduction in the first and second centuries. Furthermore, the evidence from hoards of bronze nummi of the period also demonstrate a similar pattern, often being associated with military and urban centres such as those at Richborough and Canterbury (Moorhead and Walton 2014, 104). However, the evidence would suggest that this changes throughout the fourth century, with bronze coinage occurring with an increasing frequency in remote rural sites during the mid-fourth century, before shrinking again by the end of the fourth century (Walton 2012, 103).

The lack of unofficial coinage by the end of the fourth century, coinciding with official units of the House of Theodosius no longer being sent to Britain seems to mark the end of Roman coin use in the province (Casey 1994 and Reece 2012). Therefore, despite unofficial coin production previously being used to account for the shortfall in circulating currency in periods of economic instability, this period appears to mark an abandonment or rejection of Roman economic systems.

During the Republic, the responsibility of coin production was held by the Senate and annually they would appoint monetary magistrates to oversee mint operations (Sear 2004, 65). In the final half century of the Roman Republic, smaller mobile coin production units were authorised by the senate, allowing senior military officials to produce coinage. By 49 BC, the senate fled Rome during the war with Pompey and coin production was under the control of Caesar, and later Octavian, following the Ides of March (Sear 2004, 65). For the first three centuries of the Roman Empire, official coin production was centred around two main mints, the imperial mint in Rome and the provincial mint in Egypt, with these coin production centres being almost permanently active during this period (Heuchert 2005, 32). In fact, it was the mint in Rome that had the monopoly on official Roman coin production during the second century (Sear 2004, 66). Political unrest during the last second century saw temporary mints open such as that at Antioch, Alexandria, Caesarea and Lugdunum during the civil war caused by rivalry between Septimus Severus, Pescennius Niger and Clodius Albinus (Sear 2004, 66). However, following the end of the civil war, Rome then went back to having sole responsibility for coin production.

From the late third century onwards, further Roman mints were opened across the empire (see Fig 4.2-1 below) and began to incorporate mintmarks onto coins as an identifier of where the coin was made. These further Imperial mints were thought to be a response to the economic crisis and the need to produce vast numbers of coinage in a short time span (Carradice and Cowell 1987, 26).

Figure 4.2-1 A map to show the location of the official mints in the Roman Empire

Official coinage was produced at these authorised mints, and an inscription of the place of origin is marked on the coin itself (see Figures 4.2-2).

Figure 4.2-2 an example of a mint mark on a coin. PTR representing the mint in Trier (Left) and PLG representing the mint in Lyon (right)

Carradice and Cowell (1987, 26) argue that, whilst the issue of a series of coinage can be identified from this, it is much more difficult to pinpoint the exact location of the mint. Noreña (2011, 248) suggests that there is evidence of local mints producing bronze coinage, however, the organisation of these local mints varied according to location. It is thought that the manufacture of new coins was authorised by local councils with evidence from Asia Minor highlighting extensive evidence for die sharing between the cities, thus inferring that smaller private workshops were in place for the production of civic coins (Noreña 2011, 248). In regard to coin production in Britain, the PAS (2019) identifies two potential locations: Londinium and C Mint (location uncertain, though references have been made in old catalogues to the site of Colchester). With regards to the mint at Londinium, the PAS records 3,188 examples ranging in date from AD 284-499, whereas C Mint provides a further 655 examples ranging in date from AD 193-305. However overall, the PAS demonstrates records for over 273,001 coins and as such, British mints only represent 1.4% of records on the database. This implies evidence for long distance trade of coinage from other official mints within the empire into Britain, as well as local production.

In the 1970s, Crawford argued that the reason for striking coinage was for the purpose of state payments. This is a crucial shift in the study of numismatics away from the previous focus on political agendas and towards the understanding of a broader economy. However, subsequent studies suggest that the patterns of coin production cannot be explained merely by state expenditure (Howgego 1990, 1), thus the manufacture of coinage has a much wider impact that can be seen in the archaeological record through the recovery of coins in broad contexts.

In the main, coinage was produced centrally at governmentally approved mints and disseminated across the wider Empire. Duncan-Jones (1998, 106) highlights that this was achieved through public spending. This spending generally began in two ways; firstly, through payment to the army, which allowed coins to be spread over greater distances across the provinces. Secondly, through the Emperors' own spending in Rome and Italy, usually in the instalment of new buildings, statues and temples. Therefore, the location of the mint itself can be seen to influence the distribution of coinage. For example, the decision under the Julio-Claudians to move the central mint to Lugdunum (modern day Lyon), caused a significant decrease in the number of coins circulating in Italy (Duncan-Jones 1998, 108). Additionally, regional differences can be seen in the distribution of bronze coinage, where coins under Nero struck in Lugdunum are only found in large quantities in the northern provinces; contrastingly, those bronze issues struck in Rome are only found in large quantities in Italy (MacDowall 1979).

From the brief outline above, it is possible to suggest that the identification and exploration of coin mints themselves can play a significant part in archaeological interpretations. The technological, economic and political importance of these institutions provides a crucial insight into the biography of these objects, through the centralisation and distribution of coinage as whole.

In terms of the physical production of official coins, archaeological evidence suggests that coins were produced by either striking blank pieces of metal using two dies or through the use of clay moulds. In order to produce coins from a die, both an upper (obverse) and lower (reverse) die are needed, a blank coin flan would be placed in between and struck. Howgego (1995, 26) suggests that this method would be the most effective for mass production. It is thought that coin dies were typically made from hard bronze, though there are some examples of iron or hardened steel dies (Hartmann *et al*. 2019, 499). It is believed that due to the frequency of coins with the same design images but slight stylistic differences, it is unlikely that early Roman coins would have been made from steel dies (Hartmann *et al.* 2019, 499). This is because hardened steel would be less likely to produce mis-struck or variably struck coins. Evidence of official Roman coin production is hard to identify within the archaeological record. Howgego (1995, 27) suggests that this may be due to the sporadic nature of coin production, meaning that, in many cities dedicated buildings would not necessarily have been needed to produce coins. Furthermore, when official mints were closed in a routine way they may be harder to identify within the archaeological record, as all of the components would have been systematically removed. For example, if a mint was closed it is unlikely that precious metal would remain at the site to be uncovered by an archaeologist centuries later, it is much more likely that the archaeological evidence may indicate some metal working activity without any diagnostic traces of what that metal working would entail. Coin blanks are associated with the production of coinage, but their presence may not be indicative of mint location, as demonstrated at the temple at Argos, where it is just as feasible that blank coins were taken there to be deposited, rather than produced at the site (Howgego 1995, 28).

It is thought that the official mint in Rome started out on the Capitoline during the Roman Republic, however following a fire in AD 80 it is thought to have been moved, with remains of a building identified under the now San Clemente Church (Howgego 1995, 27; Melville Jones 2015, 137). The identified remains represent a structure approximately 30 metres wide,; the full extent of the length is unknown. The archaeological evidence suggests a building of two floors, with the lower floor being divided into two parts during its initial phases, and the exterior formed by a substantial wall with only one entrance into the building (Howgego 1995, 27). In addition to the evidence of a structure, there were also three inscriptions identified in the sixteenth century near the site at San Clemente. The first was paid for by Felix (who is credited as the optio and exactor of the building, suggesting a position of authority), the second by Felix and Albanus (also credited as optio) and 25 officinatores, and a third by Felix and 17 signatores, 11 suppostores, and 35 malliatores which were a combination of freedmen and slaves (Melville Jones 2015, 138). This suggests that Felix and Albanus had at least 88 men working under them at the time these inscriptions were created. A fourth inscription was also identified with a statue honouring the Emperor and dedicated by the contractors, though no specific named individuals are mentioned. Melville Jones (2015, 140) also sites two literary sources which also indicate that the mint at Rome was in this location. Firstly, the war of monetarii indicates that after Aurelian became Emperor in AD 270, the combatants met over the Caelian Hill and secondly the Regionary Catalogues suggest that the mint was located near the Colosseum. Finally, a sixteenth century drawing of the now lost fragment of the *Forma Urbis Romae* (a marble plan of the city dating to the time of Septimus Severus) indicates the presence of a building near the location of San Clemente, labelled MON, which Melville Jones (2015, 140) suggests can only represent MONETA. Therefore, suggesting the presence of a building associated with money. However, until targeted excavation can take place to identify any distinct archaeological evidence for coin production, it remains unclear as to whether this can definitively be credited as the site of the mint at Rome.

4.3 Unofficial Coinage

The rise of unofficial coinage in the third and fourth centuries may be associated with periods of economic instability and provide an example of unofficial mints being created in order to deal with the shortfall of circulating coinage. It seems that, whilst these coins are deemed 'unofficial' as they were not made at authorised Roman mints, and often appear crude in appearance, they seem to be found within archaeological records at Roman sites. This suggests that they were at least tolerated as coinage amongst coin-using societies, despite their creation being illegal under Roman law. Sutherland (1935) argues that Claudian Copies struck at military centres may have been considered semi-official and used as a means of supplementing the army's pay, particularly at points when official mints were failing to supply official coinage in necessary quantities. Kenyon (1992, 31) conducted an in-depth study of the production and find locations of Claudian copies in England. Whilst the study identified different levels of skill in the production of these coins, with some being at least close to official standard, he highlights that their manufacture and circulation cannot be considered as evidence of official authorisation (Kenyon 1992, 315), despite no obvious punishments for producing imitation coins having been identified. These coins are found in different types and referred to in multiple different ways and have been termed barbarous radiates, radiate copies and imitation coins to name a few. These coins are thought to be produced at unofficial mints; however, Davies (1988) cites the work of Blanchet (1940) when suggesting that they were not made always made as part of a counterfeit operation. Instead, regional production was taking place across the empire to provide coins for smaller scale day-to-day transactions. However, Hall (2014, 165) highlights that the counterfeiting of coins in the Roman period was rife. In fact, there were laws (such as the *Lex Cornelia de falsis* or Sulla's Law*)* criminalising the act of counterfeiting coins as far back as the Roman Republic in 81 BC (Boon 1974, 124). This was further update by an Imperial law, meaning anyone found to be forging coins in gold would receive the death penalty, and those forging silver coins could face exile (Boon, 1974, 124), though there appears to be no equivalent law for bronze or copper alloy issues. However, surveys of PAS data by Walton (2011) suggest that around a third of early third century denarii were likely to be fake. This suggests that, even though it was illegal to reproduce counterfeit coinage, it was occurring at an alarming rate. The fact that this was happening in the third century may coincide with periods of consistent economic change, meaning that official coinage was either not readily available or the levels of inflation meant that the coinage in circulation was not enough to meet demand (Hall 2014, 168).

Reece (1973, 238) identifies that these coins are common in Britain with evidence for production at sites such as Fenny Stratford and London. Unofficial coinage has also been identified elsewhere, such as in France and Italy, in smaller quantities, which may indicate that the proximity to the production of official coinage plays a part in the role of unofficial coinage. If you are closer to the source of production, there is more likely to be a healthy supply of official coinage, and therefore less need to produce locally made copies. The term barbarous is related to the design and finish of this coin type, which is usually on smaller flans with irregular designs. Shotter (2011, 8) expands upon this further by suggesting that these copies hardly resembled the official Roman coinage in circulation due to their abstract designs with the obverse heads failing to accurately resemble imperial portraits. Moreover, the legends were patchy, illiterate or absent altogether (See Figure 4.3-1).

Figure 4.3-1. SUR-2503AE. A Copper Alloy Barbarous Radiate of Tetricus II. PAS 2019.

It is apparent that the reverse designs were an attempt to maintain the common themes on official coinage and show deities and imperial virtues. However, Shotter (2011, 8) highlights that these designs were often reduced to stick figures that were unrecognisable. It's plausible that the only feature to associate these as monetary artefacts is the presence of a radiate crown on the obverse bust (Shotter 2011, 8). Shotter (1994, 10) highlights that radiate copies make up around 30% of the coin samples produced by sites in the North-West. However, Lockyear (2012) implies that the presence of these coins in large quantities would suggest that at some point they ceased to be an acceptable unit of exchange. This in turn leading to them being discarded and therefore being more common in the archaeological record. However, this is difficult to prove as due to the illegality of these unofficial issues and the lack of written sources there is little evidence to explain their presence and/or absence.

Despite the presence of unofficial coins in large quantities, few studies have aimed to quantify them in any useful way. Davies (1988) highlights that these coins usually imitate a range of official coinage dating from the AD 260-270s. He suggests that the large numbers produced, the diversity in the engraving styles and the number of variations recovered have hampered a more systematic study of this vast type of coinage. In fact, the available literature concerning contemporary copies from the late 19th and early 20th centuries seem to be concentrated around whether these coins represented an early or a late Roman chronology, which emphasises the discipline's focus on using coins as dating tools. For example, the British trend tends to suggest that these coins represent a late chronology, whereas the French archaeological trends tend to place the chronology much earlier. The report for the imitation hoard from Richborough in 1931 was arguing for these coins having a later production date. Blanchet (1910) was more inclined to suggest that unofficial coinage was occurring in circulation alongside their official counterparts, therefore ascribing a much earlier date to the coins. Alternatively, Mattingly and Stebbing (1938) concluded that the engravings presented on the radiate copies showed a relationship with those found on fourth century coins, such as the ‘Emperor dragging a captive’ design, and therefore the earliest date for the hoard was assigned as AD 380-390. Davies (1988) highlights that it was not until 1950s with the work of Kent that archaeologists and numismatists began to adopt the idea of an earlier date for unofficial coinage. Kent (1959) argued that the reason to produce these coins was due to monetary shortage, and that the evidence from hoards showed an association between unofficial issues and regular antoninani.

The production of unofficial coinage has often been the focus of the discipline, concentrating on the ways in which they were made, either using dies or moulds and where they were made (see Figure 4.3-2 for the archaeological evidence for dies and moulds in Britain).

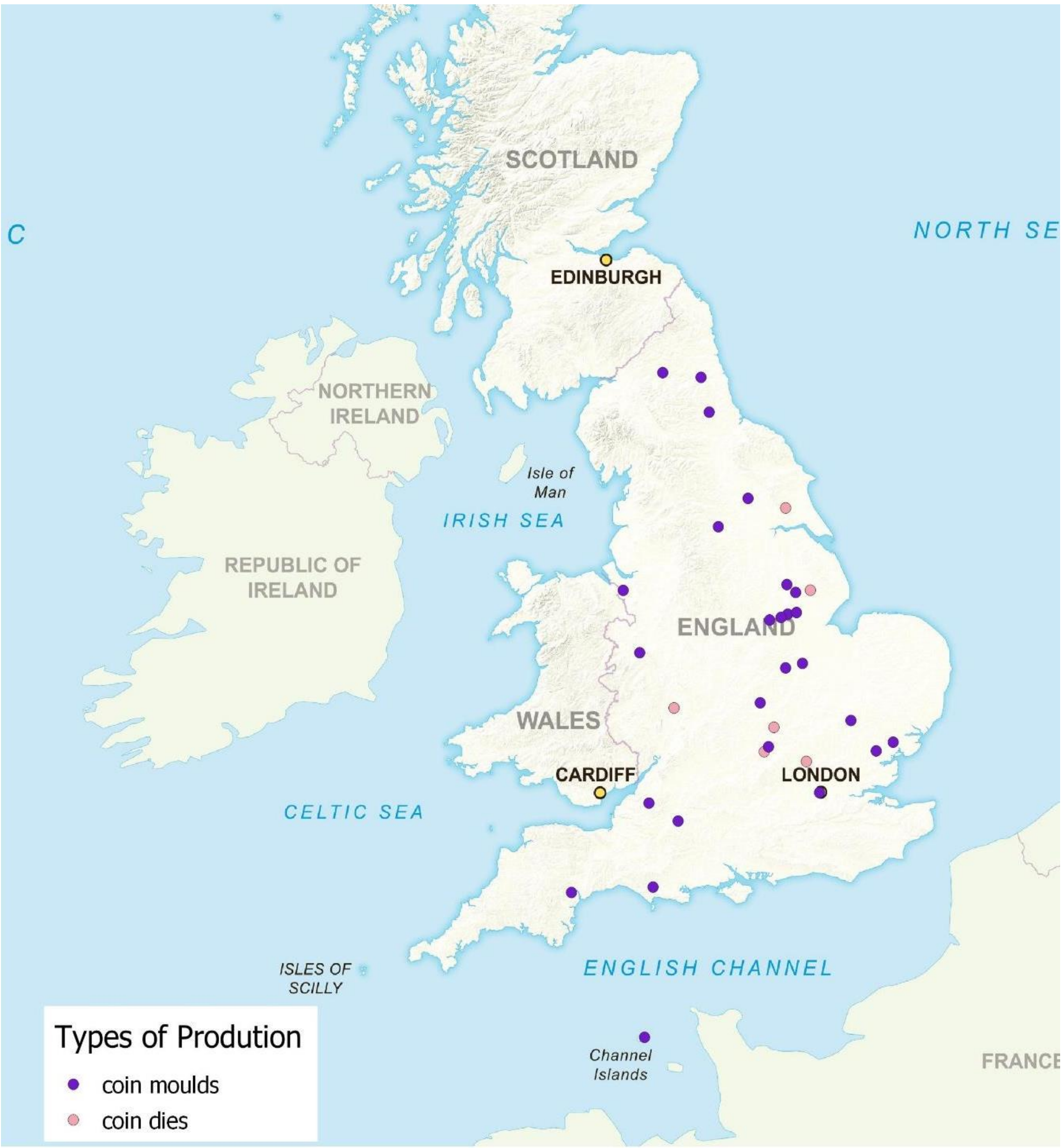


Figure 4.3-2. Map to show the location of coin moulds and coin dies in Britain. Data from the PAS and Boon

Following analysis of the unofficial coins from the Paternoster Row hoard, Mattingly (1967, 67) suggested that many of these 'mints' must have been in or near important towns, though no meaningful patterns had been established. However, the fact that they were circulating alongside official counterparts suggests a decrease in the availability of material or official coins from authorised mints (Johnson 1970, 247). Therefore, their circulation in important towns amongst official coinage suggests that these societies were to some degree reliant on coinage, as otherwise there would be no reason to produce and circulate unofficial coinage. In order for these coin 'mints' to exist, there must have been knowledge about the manufacturing process, with Marsden (2011, 1) highlighting the access to resources to create dies. It is inferred that the reason these dies are seemingly absent from the archaeological record is that they are made from iron, with the possible examples being too degraded to ascribe to a specific use or time period. Using the PAS database, there are only six recorded Roman coin dies in the whole of England, five of which come from Buckinghamshire (PAS 2019). These six examples only represent dies from metal detector finds, and it is important to note that examples from structured excavations is also minimal. In the example from Buckinghamshire, the striking surface appears to be rectangular with the corners removed, however, there is no visible detail on the striking surface to identify what the coin would have looked like or whether it is in fact a die at all (Figure 4.3-3).

Figure 4.3-3. BUC-D08867 An Example of a Possible Roman Coin Die from Buckinghamshire. PAS, 2010.

Marsden (2012, 371) recognises two methods when considering the location of mints for unofficial coins. Firstly, is to group together copies based on shared dies, or common styles and then try to analyse whether these groups occur within concentrated locations. However, this methodology requires a sample of many coins with a known provenance and the results will still only provide speculative and approximate locations for a mint. The alternative method relies on analysing multiple aspects of an assemblage in tandem, in order to ascertain whether they could equal a production centre for irregular coinage. Marsden (2012, 372) suggests one method for this would be to analyse the find spots for coin blanks, of which the PAS (2019) only records 72 for the entirety of the Romano-British period. Though, anomalies may occur, Marsden (2012) argues that multiple finds in a location make it almost certain that a production centre would have been present there.

Though evidence of mints is rare, Ponting (1992, 52) highlights the unique example of Fenny Stratford, Buckinghamshire. At this site, three ceramic vessels and two iron dies were identified by metal detectorists on the 'line of the Fenny Stratford bypass' which was being constructed south of Milton Keynes (Zeepvat *et al*. 1994, 1). The assemblage has been considered as a hoard, likely to represent an individual collection as opposed to a larger scale forgery process. The first vessel contained 352-coin blanks, the second contained 246 partially hammered flans, and the final vessel contained 1250 cut lengths of copper alloy and some waste off-cuts (Ponting 1992, 52). The interpretation of this material would suggest that each of the vessel's contents would represent a stage in the manufacturing process of imitation coins. The lengths of copper alloy could be melted down to produce the partially hammered flans, which would then be transformed into finished blanks. The presence of the two dies gives an indication of how the finished flan would be converted into a functioning radiate copy. However, it is important to note that there is a distinct absence of any struck examples, something which Zeepvat *et al.* (1994, 18) notes is surprising when compared with other similar assemblages. For example, the Mere Heath hoard contained 869 unofficial coins, 150 blank flans and 385 official issues dating to AD 260-274 (Zeepvat *et al.* 1994, 18*).* Another surprising problem presented by this example is the blank striking faces, and not the obverse and reverse of a coin, which would be expected if this hoard indeed represented unofficial coin production. Although, there is little archaeological evidence to support the claim, it has been suggested that the actual coin die faces were separate pieces that could be attached to the main die (Davies 1988, 5-7). Although, there is some confusion over the exact purpose of this hoard, local unofficial coin manufacturing does seem to be the most likely interpretation due to the hoard containing all of the core elements required for this function.

Evidence for coin blanks may be slight from the PAS, with more evidence originating from excavations such as the example above. But two records on the PAS point to evidence for more official looking forgeries of Imperial Roman issues, whilst these do not represent a systematic sample, and are few in number, they do allow for discussion of a different type of forgery and demonstrate that unofficial coins offer a vast array of production techniques and interpretations of use, perhaps representing a biography of their own. These types of imitation are usually better quality in terms of design and therefore are possibly a result of a more organised attempt to increase the coin supply. The PAS has two examples of coin dies thought to be associated with the production of forgeries. Firstly, LIN-8217C4 from Lincolnshire (Figure 4.3-4), which represents half of an obverse die made from copper alloy. The design from this die suggests it would have produced commemorative coins of Faustina the Elder, dating to AD 141-61, as coins of this type were officially struck under Antoninus Pius (PAS 2022). The diameter of the imagery has been measured at 19mm, which suggests that this coin die would have been used to produce silver denarii. The irregularity to the beading on the outer edge suggests that this coin would have been used to produce forgeries (PAS 2022). It would be very unlikely for an official coin die to be transported from an official Roman mint to Britain, adding weight to the argument that this die was used in the production of unofficial issues. Analysis of the broken edge has suggested that the coin was deliberately broken, meaning the object could not be used to create any further coinage.

Figure 4.3-4. LIN-8217C4 Obverse Die of Faustina the Elder, PAS 2022

The second PAS example associated with forgery is LVPL-AA6A55, which is a Roman copper alloy die of Marcus Aurelius (Figure 4.3-5). This object was found in East Riding of Yorkshire and is currently held at the British Museum (PAS 2022). It is believed that this coin die was also used to produce imitation denarii in Britain, as with the Faustina example above, and was the first example of an obverse die in Britain (PAS 2022).

Figure 4.3-5. LVPL-AA6A55, Copper Alloy die of Marcus Aurelius

In addition to creating unofficial issues with dies, there is also some evidence in Britain for the use of coin moulds. These moulds were produced either singularly or double-sided and were created by pressing struck coins into the clay leaving the impression behind. Firstly, a coin would be pressed into a disc of clay, then an additional disk of clay would be placed on top of the coin and pressed down, then a second coin would be placed on top of the second clay disk, see figure 4.3-6 (Hall 2014, 172). This would produce a mould with an obverse head of one coin and the reverse design of the second coin.

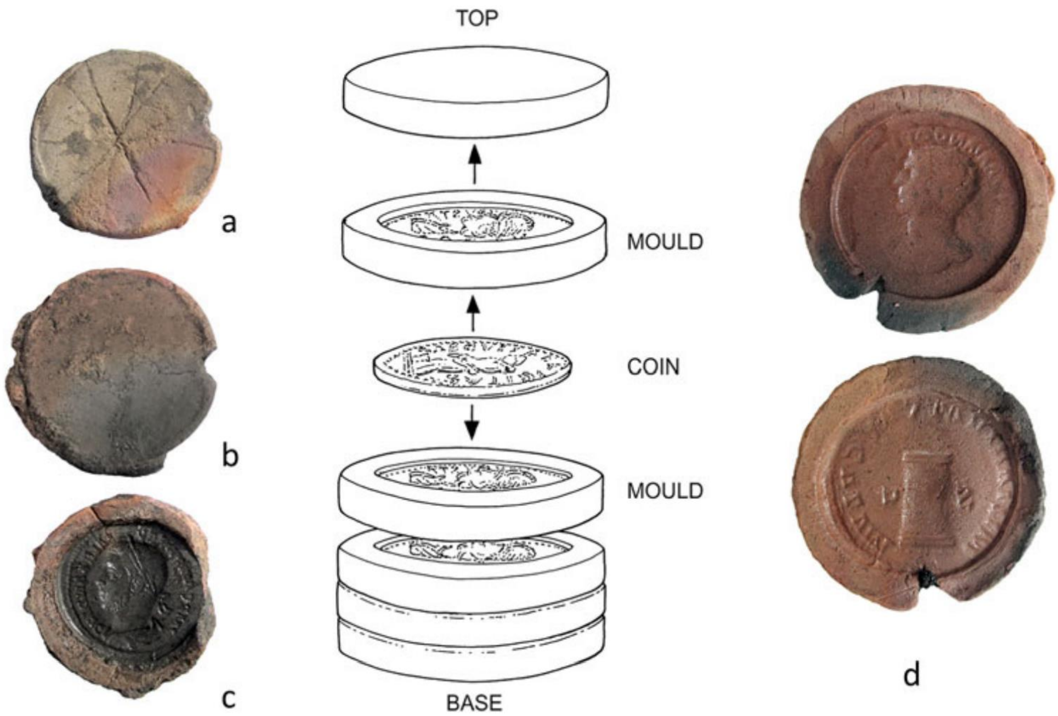


Figure 4.3-6. Hall 2014. Image to show the creation of coin moulds

Once the coins and clay were stacked the edges would have been smoothed, and a v-shaped gutter would have been cut into the clay whilst the coins were still in place to give the column more rigidity (Hall 2014 173). Once the clay had dried, the coins would be removed and then a more porous clay containing plant material and charcoal would be used to encase the original mould, this would strengthen the original mould. Hall (2014, 173) highlights that many of the London examples still have this attached to the mould, and in some cases, it was up to 6 mm thick. Several columns of moulds would be placed together with the gutters facing a central cavity, from this more clay would be packed around the columns to create a container (see figure 4.3-7). This would allow the molten metal to be poured in (Hall, 2014, 176). Once the metal has been poured in and the coins cast, the clay outer container would then be smashed in order to remove the newly created coins. During this process the moulds themselves would often become damaged, suggesting that moulds may have only been used to make single coins (Hall 2014, 177).

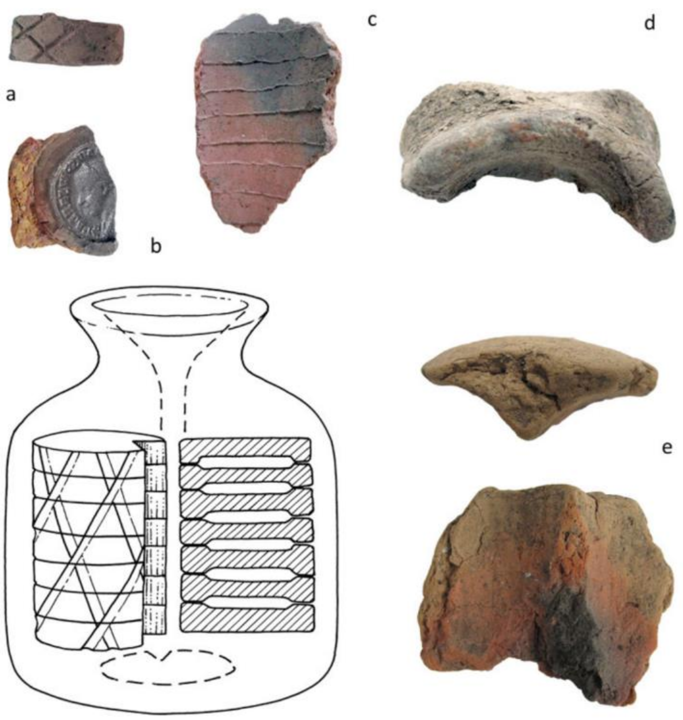


Figure 4.3-7. Hall 2014. Image to show the placement of coins within a container to allow for the pouring of the molten metal

Analysis by Boon (1988) suggests that 26 sites in Britain had produced evidence for coin moulds. Nineteen of these sites have moulds dating to the early third century, all of which would have been used to produce denarii. However, there is also evidence for the production of imitation bronze issues, with Whitchurch in Somerset producing 350 moulds, consisting of early aes and third century aes and radiates (Boon and Rahtz 1965). Duston in Northamptonshire had 175 moulds of copper alloy folles from the early fourth century. The production of unofficial coins using moulds is not restricted to Britain, with production centres also known from the continent (Lallemand 1994). For example, at Saint Mard in Belgium 699 moulds were excavated from the site, which also had evidence of bronze working.

At 85 London Wall, 800 clay moulds were excavated in 1988 from the ditch of Londinium's defensive wall (Hall 2014, 165). In addition, a further 34 moulds were acquired by the Museum of London in 2001, which were found by construction workers. Of the 800 moulds from the London Wall excavation, 473 would have been used to produce denarius, 16 for dupondii and 291 for asses. The dupondii moulds were mainly to produce coins of Maximinus with 12 out of the 16 moulds belonging to this Emperor. 59 of the aes moulds would have produced coins of Herennia Etruscilla, with 50 producing aes of Otacilia Severa and another 50 only producing reverse designs. From the denarii, the most common Emperor represented was Elagabalus, with 94 moulds and Severus Alexander with 84 moulds (Hall 2014, 179), with the date range of these coins ranging from AD 194-244.

The evidence from London Wall suggests a largescale counterfeiting operation was occurring, that they needed a supply of coins for copying, metalworking facilities and the raw materials to make the moulds - we have a sample of 800 surviving moulds from the site, but it is likely that many more would have been used. Hall (2014, 182) notes that to produce just the moulds found at the site, they would have needed 61 silver denarii and 16 copper allot coins, which is likely to have been quite a large sum for the forger themselves to have in their possession. Therefore, the presence of these moulds, particularly those to create copper alloy coins, suggests that the economic climate was such that smaller transactions were taking place and there was not enough official coinage supply to cope with the demand. Indeed, Reece (2002, 45) suggests that the quality of the early third century denarii was such that they were made to look like official issues, and therefore there was an intent to deceive those who received them into thinking they were official issues. Interpreting the issue of intent within the archaeological record is often a difficult one to prove, as it is impossible to understand individual motives. On the one hand, it may be that these forgeries were intended to be as close to official issues as possible as a way of bolstering the coin supply due to lack of official coinage in circulation. However, it may also represent the presence of criminal activity akin to the printing of modern money as understood in today's society, which may not be of the benefit to a whole community but merely to the individuals producing it.

The distribution of these coins has often been assumed to be the result of local production to be used in the areas surrounding where they were made. However, Reece (2012, 17) suggests that the widespread nature of counterfeiting coins may have meant that their production actually belonged to a few different sites. He uses the example of Winchester when highlighting that there were few die-links connecting the unofficial issues from the site, instead suggesting that almost all of the ones from Winchester actually came from a different die. Though it is difficult to pinpoint the location of workshops producing unofficial coins, it is clear from the evidence outlined above that some of this production is likely to have taken place throughout Britain.

4.4 The Nature of Hoarding in Roman Britain

Coins that make their way into circulation are commonly found individually, lost in time and space as stray finds never recovered. However, another key element of a coin's lifecycle is created when they are deposited as a collective, in a hoard. Grierson (1975) identified four types of hoarding practice: accidental losses, emergency hoards, savings hoards and abandoned hoards. In essence, accidental losses would be composed of an individual's wealth (perhaps by losing a purse), emergency hoards were buried in response to outside factors and might include items other than coinage, savings hoards may represent money collected over time and therefore be more likely to show a spread of denominations, and abandoned hoards may be associated with burials or rituals (Bland *et al*. 2020, 56). Aitchison (1988, 271) suggests that hoards are thought to be comprised of currency which has been withdrawn from circulation quickly and temporarily, and therefore are bound up with the intention of recovery. Reece (1988, 263) upholds this concept by suggesting that hoards containing gold or silver appear to us in the western world to hold a greater value, which would have transferable significance to past societies. For this reason, archaeological discourses often apply a 'limited set of reasons' to explain hoards, which is only understood through the 'lens of modern expectation' where hoards are only interpreted based on practicality or functionality (Bland *et al.* 2020, 56). This contemporary significance suggests that it only makes sense to bury wealth if there was an intent to recover. However, if this is the case, it would suggest there is a direct relationship between the coins deposited and those in circulation at the time of deposition (Aitchison 1988, 272). The archaeological evidence suggests that this is not always the case, and it is often common to see exotic or antique coins represented in coin hoards (Robertson 1956, 270). For example, there are a multitude of hoards that are comprised of Roman and Greek coins, or Roman and Celtic coins such as those at Jerbourg, Guernsey (Robinson 1937) and Shover, Derbyshire (Peck 1924). Aitchison (1988, 272) highlights that it is unlikely these coins were buried with the intent of recovery as Greek and Celtic coinage did not operate within the Roman monetary system and therefore, they could not have been used in monetary transactions as they held no official economic value within this system. Furthermore, Roman coins were often recalled for recoining during periods of economic or political crisis, however hoards often cover a wide date range which should not be possible if earlier issues had been recalled (Aitchison 1988, 272). This highlights the importance of context in archaeological interpretation and emphasises the need to consider coinage as more than a symbolic monetary value, but as artefacts that are linked to cultural practice.

Whilst the burial of wealth with an intent on recovery is one of the most accepted reasons for the burial of coin hoards, alternative motives for the burial of coins in a hoard have also been explored. For example, the Thorngrafton hoard, Northumberland, is composed of three aureui and sixty denarii ranging from Nero to Hadrian (AD 54-138) and each of the sixty-three coins had a different reverse design (Robertson 1956, 274) suggesting an intentional collection of different coins. Indeed, Robertston (1956, 274) highlights that this is one of only four hoards which demonstrates an explicit form of selectivity in its contents. There is also evidence for hoards that feature coins of a single Emperor, again suggesting a deliberate act of selection, indicating that monetary value was not always the sole basis for coin selection. Moreover, from the middle of the third century onwards, coin hoards are dominated by the presence of low value radiates and unofficial coinage (Aitchison 1988, 273). This period represents a time of inflation and therefore large hoards of radiates are often seen as a method of removing coins from circulation, which no longer had any economic value (Greene 1986). Alternatively, it could be that there was originally an intent to recover these hoards, but their demonetisation had meant that they had been rendered worthless, so the effort of recovery was no longer worthwhile (Mattingly 1932, Casey 1980 and Reece 1981). Aitchison (1988, 274) considers this a paradox of interpretations, due to the fact that hoards of high value coins are seen as savings, but hoards of low value coins are often seen as a method of disposal.

Reece (1988, 263) discusses ‘cult deposits’ with reference to Hayling Island, Hampshire when suggesting that the collection of coins found at the site represent offerings to the gods which were never recovered. Aitchsion (1988, 274) uses the example of Coventina’s Well, Northumberland, where excavations revealed approximately 16,000 coins (Allason-Jones and McKay 1985), to suggest that a separate category of coin find is required to distinguish these accumulations of coins over time, from traditional hoards representing closed groups of artefacts buried at the same time. The coin assemblage from Coventina’s Well dated from the reign of Hadrian to Honorius (AD 117-423), suggesting that deposition must have continued until the late fourth or early fifth century. The evidence above for closed hoards of low denomination coins being deliberately discarded seems to contradict the evidence of accumulation hoards at votive sites. However, at Coventina's Well, 99% of the coins are low value denominations. Additionally, at Lydney, Gloucestershire, all of the coins (including two hoards) are also of low value denominations (Wheeler and Wheeler 1932), which suggests that the criteria for abandoned coins versus deliberately deposited is down to the context of the finds (Aitchison 1988, 275). This would suggest that it is naive to consider hoards of low value coins outside of religious contexts as merely an act of disposing of unwanted coinage, as a ritual motive may have been undetected due to the lack of obvious religious significance at the find spot (Aitchison 1988, 275). As such, it is important to highlight that, whilst there is much debate around the purpose of, or reason for hoarded coins, we can never know the real reasons for their deposition.

As demonstrated, there are many different theories regarding ancient motivations for burying hoards of objects. However, as Aarts (2000, 19) highlights, hoards uncovered before the 1970s were usually chance finds, which were not discovered during structured archaeological excavation and in the present are often found by metal detectorists who have a varying relationship with archaeologists. Johns (1996b, 6) highlights that between 1988 and 1993, 88 Roman coin hoards were found in Britain and 85 of those were found by metal detectorists. The publication of these finds often leads to increased searching in these areas and leaves archaeology vulnerable to being destroyed. These issues often mean that we cannot fully understand the archaeological context from which these objects were discovered and makes interpretation more difficult. Where hoards are uncovered within a container, there is an argument that can at least be made for this being a closed context. However, hoards without containers, or perceived to have no container due to the decay of the material (Johns 1996b, 4) make these interpretations more problematic.

Very few ancient sources discuss the concept of hoarding, and where hoarding is mentioned or even alluded to, it is difficult to understand the accuracy of the source, and how well the writers understood the communities and cultures they were writing about (Bland *et al*. 2020, 57). Two examples included Plato's Republic, written in approximately 380 BC which describes hoarders of wealth who were not willing to help fund warfare, and also Appians Historia Romana (IV.73) from the second century AD, which suggests that Cassius' demanded the surrender of all valuables, which led to individuals retrieving hidden treasures from holes in the ground, wells and graves. Bland *et al*. (2020, 58) note the evidence from the Vindolanda writing tablets and the wooden tablets identified in Roman London, as providing evidence for the individuals and communities needing to store their wealth. The examples are focused around the exchange of coinage for paying accounts, cash transactions and loans (Tomlin 2016). If this is the case, then it suggests that individuals were storing collections of coins on their person, in their houses or concealed in other 'safe' spaces (Bland *et al.* 2020, 58). This highlights the importance of context in interpreting ancient coin hoards as hoards found within these contexts may represent daily monetary supply rather than a structured and purposeful deposition, such as the hoard at Plantation Place (see Chapter 9).

As demonstrated in Chapter 4.4 much of the debate around hoarding is focused on the external political and economic environment of the time, which relies on the evidence we have of these events. This often has led to coin hoards being considered in isolation, with focus on their contents being the main area of discussion (Bland *et al* 2020, 319). However, the research project *Crisis or Continuity: Hoarding in Iron Age and Roman Britain with Special Reference to the Third Century AD (IARCH)* (Bland *et al.* 2020) has aimed to reassess the corpus of Iron Age and Roman coin hoards in Britain and incorporate the archival material and contextual information of these finds against their contents. This has meant that two-fifths of coin hoards analysed by the project have been associated with known-sites, with almost half coming from archaeological excavations (Bland *et al.* 2020, 137). The analysis has looked at hoards which were buried inside and outside functioning and abandoned buildings, as well as those deposited out in the landscape or within ditches. The contextual analysis of coin hoards in this way has led to the suggestion that peaks in hoarding correlating with periods of crisis is outdated, with few hoards analysed by the project corresponding to these periods in time (Bland *et al.* 2020, 206). Instead, the most abundant evidence of hoarding comes from spaces occupied by military communities and those associated with major urban centres, which may be expected as these areas would have been more heavily monetised for a longer period of time that more rural zones. This may suggest that hoarding was more commonly an act of savings, whereby individuals were storing wealth with the intention to come back and retrieve it. However, Bland *et al. (*2020,206), suggest that hoards located within building superstructures (walls, roof spaces etc) may have been much more easily accessed and therefore represent deposits which could be accessed quickly, or even daily, to provide the coin needed for transactions. In contrast, coin hoards which were located under floorboards, would be much more difficult to access frequently, and may be more representative of coins that were being stored as savings. Collections of coins found within foundations of buildings may have been considered as ritual deposits, or an offering to the gods for success, and therefore there was never any intention to retrieve the objects at all. This is also assumed to be the case at sites with religious significance such as temples. Bland *et al. (*2020, 206) note that collections of coins of this type are often omitted from studies of coin hoards, as it is felt that they were collected at the site over a period of time, rather than during a single event. However, by exploring hoards in context, it allows associations to be made between hoards themselves. For example, multiple hoards from different time periods but found within the same space may be indicative of continuing behaviour in the location. Hoards with a ritual significance being buried across time in sacred locations, may demonstrate areas of continued religious significant across multiple generations or centuries. The work of IARCH has demonstrated the need to place objects within their contextual backdrop, rather than consider them in isolation, if we are to understand the motives and nature of deposition. This methodological approach is something this thesis will explore when considering coins from the Ribchester Revisited project (Chapter 8.4) and Planation Place (Chapter 9.10).

Regardless of the nature of hoard deposition, it may be argued that hoarding as a practice is something that is commonly identified in Britain. For example, the PAS database records nearly 500 hoards throughout Britain, as well as the Roman Rural Settlement Project providing evidence of a further 169 examples as coming from rural settlements. The IARCH project (Bland *et al.* 2020) also records 3302 Iron Age and Roman coin hoards from England, Wales and Scotland. Furthermore, whilst it has been demonstrated that Iron Age and Roman Lancashire may be significantly understudied due to the nature of distinct archaeological excavation in the county (see Chapter 2.2.3), evidence for 110 hoards have been compiled from synthesised materials. This might suggest that the hoarding of coins is a common occurrence, and due to the vast number of coin hoards found in Britain as a whole, may represent a series of activities and deposits that cannot fit into neatly defined categories of storages of wealth or votive offerings. Instead, hoarding may be intertwined with the agency of human action and the unpredictability of the human condition.

4.5 Understanding the Romano-British Economy – Applied Numismatics

The role of numismatics in archaeological interpretation has wavered throughout the development of the discipline, often being relegated to the back of site publications as an appendix. Walton (2011, 17) suggests that this marginalisation may be due to the lack of archaeological evidence at the beginning of the 20th century, with the discipline instead relying on ancient literary sources over material evidence. She argues that by the late 20th century, the number of excavations may have increased, but the attitudes towards material evidence remained largely unchanged. In fact, only 35 years ago Frere (1987, 296) argued that analysis of Romanisation in Britain could only ever be imprecise due to our reliance on material remains 'rather than upon the much more revealing evidence of contemporary testimony'.

This disregard of numismatics in the wider archaeological community, has often led to the assumption that the function and use of coinage is already well understood and therefore there is little else that can be learned (Walton 2011, 18). This may be due to the comparisons made between coin-using societies in the past and coin-using societies today. The assumption is that we already know how money works, because we ourselves operate within a coin-using society. However, this chapter has demonstrated that coin-using economies in the past worked very differently and in a multi-faceted way. This thesis aims to address these misconceptions around coinage and coin-using societies, by implementing a biographical approach to coins in order to ascertain if more can be learned from this valuable artefact group, if they are approached in a different way. Analysis of coins is often only considered important if it is based on classification (denominations/mint types/reverse types/dating etc.) (Walton 2011, 19). Therefore, they are often not considered as artefacts in their own right, with their own stories to tell through the negotiations of their production, use and deposition.

John Casey and Richard Reece have identified that the coins found on a site will reflect the coin supply to that area, and on a lesser scale the coin loss at the individual site (Reece 1995, 863). By understanding changes in coin supply in different regions, we may be able to identify changing behaviours with regard to coin use. In Reece's (1993) analysis of coin loss at different types of sites, he identifies that all towns regardless of location, or whether they follow the pattern of a 'good' or 'bad' town (with 'good' town following the traditional urban coin loss model and 'bad' town following a more rural coin loss model) show a decrease in coin loss from Reece Period three to Reece Period five. Though evidence for coin loss in contemporary times and our understanding of coin use in the Roman period is difficult to connect, Reece (1995, 867) argues that this may show the shifting focus of coin use from the south into the north. This would coincide with the movement of the military northwards and may indicate that coin use was focused on military personal during the early periods of occupation.

In order to analyse the fluctuations in coin loss over time and across different sites, Reece (1972) recognised that every coin profile had to be comparable and also needed to be measured against a benchmark of what coin loss in Britain 'should' look like. To this end, various statistical means have been produced based on coin samples from Britain. The most commonly used is the British Mean (See table 4.5-1) and has been developed by Richard Reece using samples of increasing size. Firstly, coin totals from 14 different sites (1972), which was then expanded to incorporate 88 sites (1987) and later 140 sites (1995). By comparing the number of coins per period found on a site to the British Mean, it is possible to see whether the site in question fits the coin profile of Britain as a whole. Reece (2005) takes this further by suggesting that coin profiles which differ vastly to the British Mean are evidence for periods of abnormal coin loss, as seen at Reculver, Kent (Reece 2005, 104).

The use of Reece's British Mean is not without problem. Walton (2011, 28) notes that many of the sites chosen to develop the British Mean were high status military, urban, temple or villa sites from South East and central Britain. Therefore, the British Mean may not accurately represent a true cross section of coin loss across Britain as a whole, particularly when you consider there is limited evidence of villas and temples in the North West. Furthermore, it is also important to consider the size of the assemblages uses to compose the British mean, and how some sites demonstrated unusually high numbers of coins from particular periods, which may have skewed the resulting mean for that period. For example, the Roman Fort at Richborough had 22,822 coins from Period 21. This seems unusual as the PAS data shows that out of 286,247 Roman coin records, only 8,624 of them are assigned to period 21 (Data correct as of March 2022) which would give a per mill value of 30.1.

Reece Period	Dates	Reece's British Mean
1	Before AD 41	6.47
2	AD 41-54	11.73
3	AD 54-69	5.93
4	AD 69-96	30.85
5	AD 96-117	19.9
6	AD 117-138	15.79
7	AD 138-161	18.67
8	AD 161-180	11.52
9	AD 180-193	4.66
10	AD 193-222	15.18
11	AD 222-238	7.29
12	AD 238-260	8.08
13	AD 260-275	144.3
14	AD 275 – 296	121.24
15	AD 296- 317	17.49
16	AD 317-330	44.13
17	AD 330-348	245.54
18	AD 348-364	98.22
19	AD 364-378	118
20	AD 378-388	4.8
21	AD 388-402	50.25

Table 4.5-1. Table to show the British Mean for each Reece Period, Reece 1972

The British Mean is not the only coin profiling system that has been developed. For her PhD thesis, Philippa Walton (2011) developed the PAS Mean, which utilises 38,167 coins from 447 parishes. Eleven parish assemblages were excluded as they are thought to represent hoarding activity. In addition. 'Stray losses' were excluded, this being single coin loss or collections of fewer than 20 coins from a single parish (Walton 2011, 68). Their exclusions means that the data will be comparable to Reece's British Mean and that the mean values will represent a parish average. A comparison of Reece's British Mean and the PAS Mean suggests a broadly similar pattern for both. However, it can be argued that the dataset used for the PAS Mean is less biased towards high status sites than the British Mean, as the data is composed of objects found by members of the public, rather than through targeted excavation of a specific archaeological site. Walton (2011, 72) expands on this by introducing Walton's British Mean.

This uses the combined totals of the PAS data and comparative datasets, looking at 262,272 coin records from 814 sites or parishes. Walton argues that this provides the most accurate data set regardless of the sites function or geography. However, these fail to account for regional variation that may be at play.

As demonstrated above, applied numismatics has allowed for the development of different statistical approaches to understand the distribution of coins identified within the archaeological record. These approaches have focused on understanding how sites deviated from the expected average number of coins per chronological period. In Reece's (1972, 273) study of 14 sites, this suggested that the majority of coins found on British sites show continuous occupation between AD 259 and 402, with AD 259-294 and AD 330-360 providing particularly strong evidence of coin loss. Analysis of different site types shows that the patterns of use and loss also varies depending on what type of occupation is occurring. Reece (1993, 867) highlights that the patterns of coin loss for temples have low coin profiles to the end of the third centuries, whereas villas show a rise in the same period. Small settlements in the east see an increase in coinage from Reece Period five to Reece Period nine before a steady decline that lasts until the end of the fourth century. In contrast, western small settlements show an increase during the radiate period following Diocletian's reforms which lasts until the end of the fourth century (Reece 1993, 867). 'Good towns' in the east level out and hover around the British Mean until Diocletian's reforms where there is an increase, whereas 'good towns' in the west continue to decline until the radiate period. 'Bad towns' also decrease in coin use through the second and third centuries, but these do not show a rise during the radiate period (Reece 1993, 867). The Roman Rural Settlement Project (Brindle 2017) has also analysed the distribution of coins across 1349 sites and has broken down the concept of rural sites into smaller categories: villages, roadside settlements, villas, military vici, complex farmsteads, enclosed farmsteads and open farmsteads. Broadly, the data demonstrates that over 80% of villages, roadside settlements and villas have produced coinage, whereas less than 40% of enclosed farmsteads and complex farmsteads have evidence for coins (Brindle *et al.* 2017, 238). This project has used five broad dating phases for the coinage (see table 4.5-2 below), based on those from Reece's earlier publications (1972).

Phase	Date Range
Iron Age	Pre-Roman Coinage
A	Roman Coins to AD 260 (Republican and Augustan System)
B	AD 260 – 296 (Radiate Period)
C	AD 296 – 330 (The Tetrarchy and Early Constantinian Period)
Di	AD 330 – 364 (Mid- and Late Constantinian Period)
Dii	AD 364 – 402 (Houses of Valentinian and Theodosius)

Table 4.5-2 Table to show the five broad dating phases for coinage, Brindle et al 2017

The evidence from the 1349 sites demonstrates that coin loss at the military vici dominates, with early Roman coins accounting for 70% of the coins from these sites (Brindle *et al.* 2017, 240). In contrast, early coins make up under 25% of the assemblages from all other site types. This conceivably fits in with the notion of a coin-based economy beginning in earnest following military occupation, and that it was the military settlements that were most likely to be exchanging using coins (Boon 1974, 118; Guest 2008, 139). The presence of Roman coins increases slightly in more rural settlements, such as villas and farmsteads, with around 30% of all coinage from these sites being dated to the mid to late third century, in accordance with Reece (1993). Phase C shows a dramatic decrease in the presence of coins from this period, with less than 8% of all coins from these sites dating to the early fourth century. This then increases again to around 30% around the mid fourth century in all recorded site types, apart from military vici and decreases to about half the amount by the late fourth century. By the end of Phase Dii, less than 4% of coinage found on military vici date to this period, whereas over 16% of coins from complex farmsteads and villages have the same date (Brindle *et al.* 2017, 241). This might suggest that, as the dominance of military occupation declined, so did the use of coinage in these areas, or that the structures required to exchange in coinage were being abandoned. In contrast, more rural communities showed a more even spread of coinage across the periods, suggesting that whilst coinage may only have been exchanged to an extent, it was much more consistent across the four centuries of Roman rule in the province. Walton and Moorhead (2016) suggest that this signals the transition from a pre-monetary to a monetary economy across the whole of Britain, which remained until the collapse of Roman Britain in the early fifth century AD.

The establishment of the British Mean has meant that average coin profiles can be considered; by comparing similar sites in different regions, broad patterns can be understood. By comparing the coin loss profiles from new sites, we can understand whether the coin use and loss on these sites follow or deviate from the British trends, allowing a fuller interpretation of the site at an individual level. Furthermore, this provides an applied method that can be used in other provinces of the Roman Empire, enabling comparisons in coin use and loss with areas outside of Britain.

Studies of coin use and loss are not the only area that applied numismatics has furthered our understanding of the Roman attitudes to coinage. There have also been developments focused on the use of coin dies. From the 1950s, studies of coin dies have been undertaken, looking at whether we can link coins from different sites to the same coin die, in order to understand how many coins a single die may have produced. As a result, we now have complete die studies of the coins of Claudius I, several gold issues of second century AD and of many of the shorter reign emperors such as Galba, Nerva and Otho (Kraay 1956, von Kanel 1986, Metcalf 1993 and Beckmann 2007). Beckmann's (2007) study of 947 aurei of Trajan demonstrated that suggested that each coin die could produce 4.6 coins on average. However, van Heesch (2011, 322) highlights that gold is much more malleable than other materials, and therefore the blank gold flans would have behaved differently when struck by a die. He also suggests that caution needs to be taken when trying to extrapolate results in order to ascertain the number of coins produced per die, as some dies would have been used to strike both gold and silver issues. However, studies of the gold and silver coinage of Claudius suggests there are around 450 known obverse dies and only four of these were used to produce coins in gold and silver (Giard 2000). Due to the nature of circulation, it is expected that coins from the same reign at one site would have been produced from multiple different dies.

However, there is an example from France where a hoard of 2,531 antoninaini of Valerian I dating to AD 258, all appear to have been struck from the same obverse die (Schaad 1992, 180). This may suggest that large numbers of coins were produced from a single die at any one time, and that dies may not have been used until they had become worn (van Heesch 2011, 323). Furthermore, the size and denomination of the coins produced, the quality of the coin dies, the skill of the people producing the coins and whether each die was used until it broke would also affect the output from any individual die (Howgego 1992, 3). From the two examples above, we can recognise that not all dies would produce the same number of coins (Carter 1983, 196) and therefore we cannot rely on data extrapolations alone in order to answer these questions. There are no known records from mints, regarding the number of outputs from dies, even if we had surviving archives, it can be argued that they would only be relevant for the mint they came from, as this would have varied from coinage to coinage (Carter 1983 and Howgego 1992). Experimental work by Sellwood (1963) demonstrated that a punch die can strike up to 10,000 coins if used carefully. Reece (1984, 201) highlights that this figure has now become enshrined into archaeological debate, such that this figure of 10,000 coins per die is widely upheld. Further work, by Moesta and Franke (1995) expands upon this concept, suggesting that one coin die would produce between 3,000 and 10,000 coins.

4.6 From economies to biographies

Traditionally, Roman coins have been considered within the framework of understanding the economic system of the period. As demonstrated throughout this chapter, this system is complex and multi-faceted, with coinage being produced in many different ways and transported over vast distances. Coinage was in a constant state of flux, and whilst there was a general system in place, this was fluid and constantly being re-negotiated, depending on the conditions of the period in which it was operating. For example, if there was not enough coinage more would be produced rapidly, flooding the market and leading to periods of debasement. At these points, the quality and finesse of a coin could be dramatically reduced causing instability and leading to changes into the values of coins over time (Chapter 1.1).

Furthermore, it seems that a coinage-based economy was not something that was 'forced' upon the societies within which it operated. The archaeological evidence for coin loss implies a degree of fluctuation in the way coins were used across different core societal groups. For example, until the middle of the third century, coin loss was higher in military sites, associated with the movement of these groups in attempts to control the surrounding population. However, by the mid third century onwards, this diminished, but the use of coinage can be seen to increase slightly in villa and rural zones. The lack of coins in more rural areas until the third century may imply continuation of traditional methods of exchange, all of which did not require coinage to operate and include exchange in kind and that of a barter economy. Ancient sources provide evidence of the Roman elites also accepting other forms of payments, not related to coinage. For example, the Annona (which was essentially a tax paid in grain or other food products), that could be transported to the military (Chapter 4.2). Although 'official' coinage was produced at authorised mints, an increase in 'unofficial' or locally made coinage occurred around the third century (Chapter 4.3). These issues, whilst cruder in appearance than their authorised counterparts, are found in large quantities within the archaeological record, particularly in Britain. This implies that coinage had become an important part of the economic system within the province, and that these issues, whilst not condoned by the State, were still considered to be a coin by those who exchanged them.

By exploring the concept of object biographies, we can begin to add another layer to the interpretation of these objects. Although, traditional discourses have focused on what coins can tell us about the structure of the economy and the way it changed over time, an object biographical approach can begin to explore the intersection between coins as objects and the humans who were coming into contact with them every day. This thesis aims to devise a methodology, focused on an object biographical approach, in order to explore this intersection in more detail, moving away from coinage as having a purely economic function and considering them as artefacts of and in themselves.

5 Object Biographies

An object biographical approach can be used as a key analytical tool in understanding how past communities operated. The fundamental notion of this approach is that similarly to humans, objects have a life course ‘in the sense of having social relations with the world around it’ (Burström 2014, 66). Biographical approaches have their origins in social anthropological disciplines, focusing on the life stages of human actors. However, in the more recent past, these approaches have transcended across to archaeology, and more specifically been adopted in discussions of archaeological material. Hoskins (1998, 2), highlights that you cannot ‘collect the histories of objects and the life histories of persons separately. People and the things they valued were so completely intertwined they could not be disentangled’. The concept of object biographies is not new for example, processual archaeologists have been trying to develop new approaches to objects using concepts of use-life (Gosden and Marshall 1999, 169).

Use-life approaches focus on the functional and structural characteristics of the objects and buildings in question, with the object being a passive material, where things happen or are done to change it (Binford 1982, Gosden and Marshall 1999). Gosden and Marshall (1999, 169) uses the example of the reduction of a stone tool, when considering a use-life approach. Here, episodes of flaking and grinding are recorded in order to consider how the object would have changed shape and use as it became smaller. Use-life approaches, however, do not consider the active interactions between human an object, which is something adopted through object biographies.

Tringham (1994) adapts a use-life approach when considering Neolithic houses in Opovo, considering the houses to be more active objects in a set of social and cultural negotiations. Instead of use-life, the term life-history is adopted to consider the humanistic interactions between house and people. In their study, the use- life of the houses was considered; that is planning, construction, occupation, maintenance, abandonment, destruction, and replacement (Tringham 1994, 177). In order to conduct this research, the team considered each house as its own social and economic entity, excavating each with the assumption that they would provide different information regarding the construction, use and abandonment of the structures (Tringham 1994, 180). The study identified that there was a significant lack of burned material between the houses, suggesting that the houses burned in separate fires, rather than the mass burning of the entire village. The evidence also suggested that fires were burning at a high temperature, which is unlikely to be associated with accidental fires for these types of structures

(Tringham 1994, 178). Instead, individual houses were burnt deliberately and, by considering this element of the house's abandonment or destruction, allows for interpretations as to why single deliberate burning may be the case. For example, Tringham (1994, 179) puts forward ideas of 'pests, insects, disease, ghosts or to signify the death of the household head as a symbolic end of the household cycle'.

Use-life and life-history approaches enable the consideration of an object or building through each of their life stages, from production, through to use and culminating in their deposition. However, they often fail to take into account the active roles that humans play in the creation of these histories. By considering an object biographical approach we can begin to explore these interactions between human and object.

BjØrnevad *et al.* (2019), expand on a more traditional approach to object biographies in their research on an Estonian Mesolithic slotted bone dagger, by considering an extended biographical approach. Using this approach, the team consider the production, use and deposition of an object as is the traditional method, as well as the post-depositional life of the object (BjØrnevad *et al.* 2019, 104). An extended biographical approach takes into account the continued social and cultural interactions of an object after it has been rediscovered. The Ulbi dagger was made from a long tubular bone from a large mammal that was then split, and then shaped into the existing dagger using a variety of tools (BjØrnevad *et al.* 2019, 108). Use-wear analysis of the object suggest that it was used for whittling or slicing, and therefore it has become known as the Ulbi knife, and no longer considered a dagger (BjØrnevad *et al* 2019, 113). There is little contextual information to explain the deposition of the dagger, but it is thought that the knife was deposited off the island of Lake Võrtsjärv in southern Estonia (BjØrnevad *et al*. 2019, 113). Often traditional approaches to object biographies would stop at this stage, having reconstructed the production, use and deposition of the Ulbi knife. However, using an extended biographical approach it becomes important to consider the post-depositional life of the object. BjØrnevad *et al*. (2019, 114), highlight that little is known about the discovery of the knife, other than it was thought to have been discovered between 1924 and 1926 during peat exaction, and was thought to have been found at a depth of 1.2 - 1.5 meters. After discovery it was held in the archaeological collection of the University of Tartu and moved to the Institute of History in Tallin in the 1950's when the former department closed (BjØrnevad *et al*. 2019, 114). By following excavation and collection records, it is possible to see that the Ulbi knife has experienced damage and repair since it was excavated. Traditional approaches to object biographies may have then acquainted this damage with use or contemporary deposition. However, due to the nature of the records it is possible to use images of the object to see how the effects of modern curation have impacted the artefact. In this example, an extended biographical approach was able to be conducted due to the in-depth nature of the records, and the fact that the modern archives were very detailed, including multiple images and drawings at different stages since the collection had been discovered. It is important to note that this is often not the case when objects have been held in private collections throughout antiquity before being donated to a professional body, and therefore an extended biographical approach may only be fully explored in a more limited number of cases.

Other alternative approaches to traditional object biography discourses include concepts of multiple object and object itineraries. Using the decorated plaques from the Isle of Man, Meirion Jones *et al*. (2016), explores the notion of multiple objects in depth. The concept of multiple objects enables discussions of the coproduction of things and people (Shanks 1998, 15) as well as accepting that nothing (including objects) is stable overtime, and instead everything is in a continued state of becoming (Holtorf 2008, 423). The concept of multiple objects has its origins in science studies and was first employed by Mol (2002), in her work on lower-limb atherosclerosis. *The Body Multiple* (2002), considers that one medical condition, atherosclerosis, may have a simple definition, as the gradual obstruction of the arteries. However, this one condition manifests itself differently across patients, place, apparatus, speciality, treatment etc. and therefore one disease becomes multiple. In archaeological discourses, it is recognised that a single person can have multiple different personas based on the relationships they have with different people (Fowler 2004). One person can be a husband, a father, a son etc., and these personas manifest differently depending on who they are talking to. The multiple objects approach argues that this too can be implied of objects, which also have 'multiple and overlapping relationships' (Merion Jones *et al.* 2016, 127).

Merion Jones *et al.* (2016, 128) highlight how the Manx plaques fit into this concept of multiple. For example, the slate they are made from forms the bedrock of the Isle of Man, connecting them to the physical landscape in which there were found. The motif on the surface have links to Grooved Ware pottery, but the organisation of the motifs has links to Iberia. The practice of marking and erasing is reminiscent of practices associated with northern Wales and eastern Ireland. Therefore, the Manx plaques are 'multiple objects precisely because they are composed of a series of different and overlapping relations' (Merion Jones *et al.* 2016, 128). The objects have been continually changeable, with markings becoming worn and others drawn in their place. This has been exemplified on the Ballavarry plaque where the 'top incised zig-zag cuts over an incised horizontal line which crosses over another worn zig-zag' (Figure 5-1 below, Merion Jones *et al.* 2016, 117).

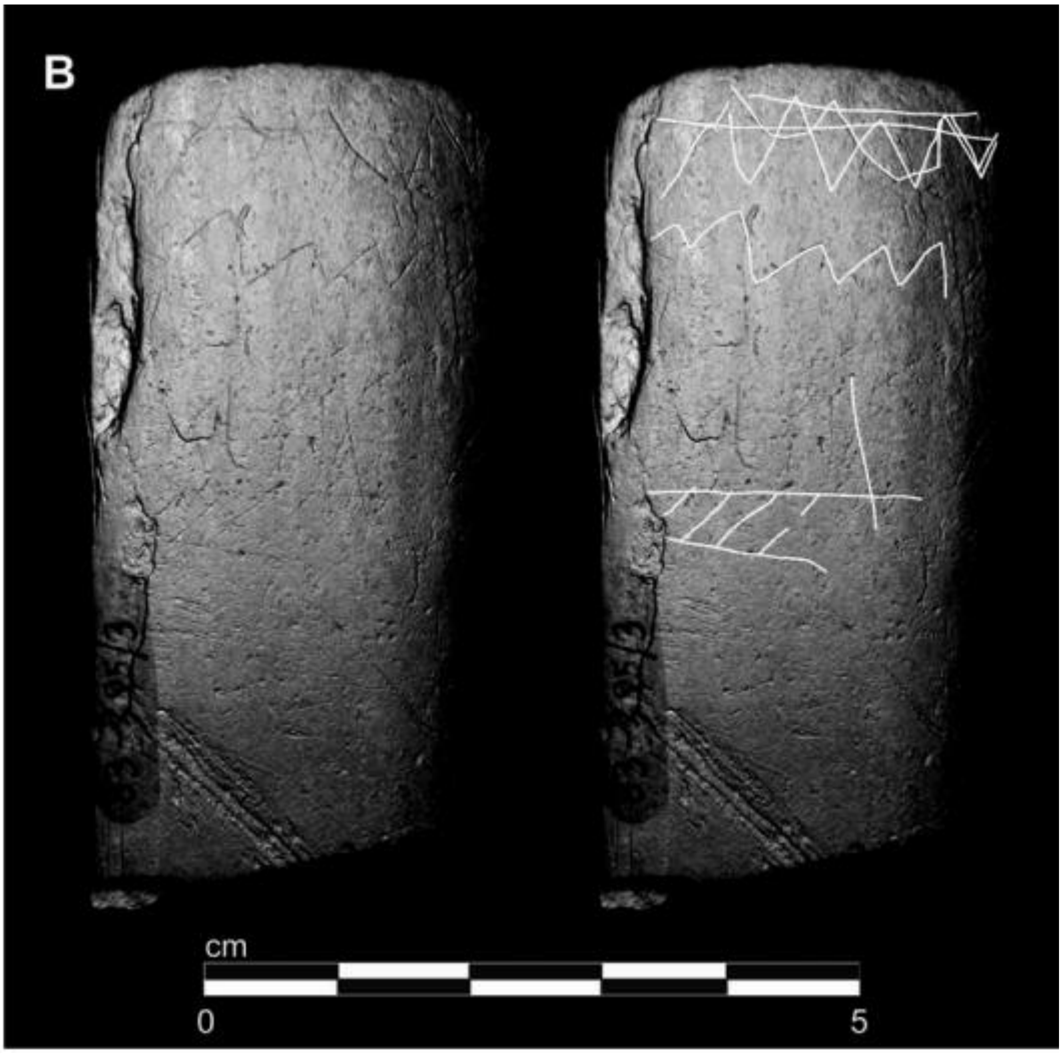


Figure 5-1 Image to show the design on the Ballavarry plaque, Merion Jones et al. 2016

This coupled with the fact that the majority of the plaques are broken, suggests that at different points in time they were reworked, or their function changed dependent on who was using them. This serves to emphasise that like people, objects can take on different meanings depending on the relationships they have, and which can also be multiple.

Object itineraries deviates slightly from the linearity of object biographies. Biographies suggests a birth, life, and death phase, whereas an itinerary in contrast, considers the 'social relationships and spatiality that link people, objects and places' (Blair 2015, 81). Object itineraries were first proposed in 2012 by Rosemary Joyce and aims to trace 'the strings of places where objects come to rest or are active, the routes through which things circulate, and the means by which they are moved' (Joyce and Gillespie 2015). That is that the object itinerary approach, unlike object biographies, considers objects to have no real beginning or end (life or death) but that these stages are continually renegotiated depending on who encounters them and when in time they are encountered. This approach considers that the archaeological narratives we construct are part of the ongoing engagement between objects and humans (Joyce and Gillespie 2015, 5). Blair (2015) considers the concept of an object itinerary for glass beads recovered from Mission Santa Catalina de Guale, a seventeenth century Spanish mission, from St Catherine's Island, Georgia. At this site, nearly 70,000 glass beads have been recovered. Evidence from the site suggests that alongside the complex process of manufacturing the glass and then forming them into beads to be transported to St Catherine's Island, there is also a process of renegotiation when the strung beads arrive at the site. Here it appears that the jewellery was subsequently separated into individual beads and then restrung into new objects, becoming composites of multiple points of origin (Blair 2015, 91). Evidence of this can be seen in three burials at the site, whereby three near identical necklaces composed of Venetian and Spanish beads, were formed and distributed amongst the three individuals buried (Blair 2015, 91). Evidence for the ongoing renegotiation of objects, people and place, can be seen as beads were moved and displaced as new burials cut into earlier graves, and also through the act of excavation and curation (Blair 2015, 92). Beads were restrung during excavation and curated by the American Museum of Natural History, and at the time of Blair's publication were curated by the Fernbank Museum of Natural History in Atlanta. Blair (2015, 93) argues that during these processes the place, skill, knowledge and experience of those who studied them structured how the beads themselves were organised and displayed. Through this example, we can see that an objects life course is constantly being renegotiated through time and place. The notion of an object itinerary allows interpretations to move beyond a linear route and instead consider the multiplicity underlying objects, place and people.

Whilst use-life, life-history, extended biographies, multiple objects and object itinerary examples have been provided above, it can be argued that these are all minor variations on a theme. The crux of this approach is to move beyond objects as static components of the archaeological record and begin to see them as entities in their own right. By considering the life stages of artefacts as well as how they facilitate social, economic and political interactions, we can begin to build a fuller picture of past societies.

5.1 Object Biographies of Commodities

Integral to this thesis is the concept of object biographies for artefacts considered to be commodities. Commodities are considered to be objects of impersonal consumer transaction, with these transactions being based on the rules of cost equivalence – that is one object being worth a perceived value in another object, which is a constantly negotiated value based on supply and demand (Bell 1991,157). In these situations, objects act as a form of currency, where things can be traded for other things. One form of currency is money, in societies where money is used as a measure of the value of work efforts of others (Bell 1991, 158). Coinage forms one aspect of money, and this is where a specific value or number of coins is considered the equivalent value to the object, service or process being bought.

Simmel (1978) highlights that an economic object does not have an absolute value based on demand. Instead, the demand for an object, whether this is based on real or imagined exchange, endows the object with value. Therefore, it can be argued a coin's value is not necessarily in its physical properties as a coin, but instead in the continued use of coins to purchase things of socially determined equal value. Appadurai (1986, 5), supports this by highlighting that even though it is actors who encode objects with their meaning, from a methodological point of view, it is the objects-in-motion that illuminate their human and social context.

Kopytoff (1986, 64) highlights that commodities are things which are 'produced, exist and can be seen to circulate through the economic system as they are being exchanged for other things', and are items which have a 'use value that also has exchange value'. Taking coinage as an example, these objects circulate through a monetary economic system, governed by a distinct series of rules depending on the society within which they are being used. However, an object biography approach allows us to go beyond a structured economic system and begin to explore the production, use and deposition of these objects as a 'cultural and cognitive process' (Kopytoff 1986, 64). Kopytoff (1986, 64) highlights that only certain objects are considered commodities, that the same object may be considered as a commodity in one moment of time and not another and that something seen as a commodity by one individual may not be considered a commodity by another individual.

Considering these arguments with regard to Roman coins, a coin may be seen to have a perceived monetary value at one point during the Roman period, but this value may change throughout the course of the same period. For example, during the Roman Republic the *As* was worth 1/10th of a denarius, and by the second century BC the value of the *As* had fallen to 1/16th of a denarius (Crawford 1970, 40). Furthermore, a Roman coin of a certain monetary value and used in monetary exchanges may not always retain this monetary value in future social negotiations, where an object's initial purpose at production can change and transform during the object lifecycle. This can be demonstrated through the reuse of Roman coins in subsequent periods as pendants, where the coin is taken out of circulation and transformed into a new object associated with dress (e.g., a necklace).

When considering the 'social life' of commodities, it is in 'the mundane, day-to-day, small-scale exchanges of things in ordinary life' which appear to be routine, that can highlight significant social constructs determined by human actors Appadurai (1986, 57). Taking these concepts, and considering a biographical approach to coinage, it may be possible to explore what the production, use and deposition of these objects can tell us about the people who used them.

5.2 Object Biographies in the Roman World

As demonstrated, object biographical approaches are an established theoretical model applied to archaeological evidence. This perspective has also often been used in studies of Roman material culture, such as that outlined in this thesis. For example, Swift (2012) uses an object biographical approach when considering the reuse of Roman bracelets into rings in the post-Roman period. Swift's (2012) study identified 179 examples of Roman bracelets that had been visibly bent out of their original shape at one or more points on the circumference and had at least one of the terminal ends cut off (Swift 2012, 168). The benefit of the object biographical approach here is that it is possible to explore the multiple phases of interaction with the object, from its original creation as a Roman bracelet, through to the technical processes of its reuse and its eventual deposition in an Anglo-Saxon grave. This allowed Swift (2012, 203) to outline the possible life histories of the objects in question (see Figure 5.2-1 below).

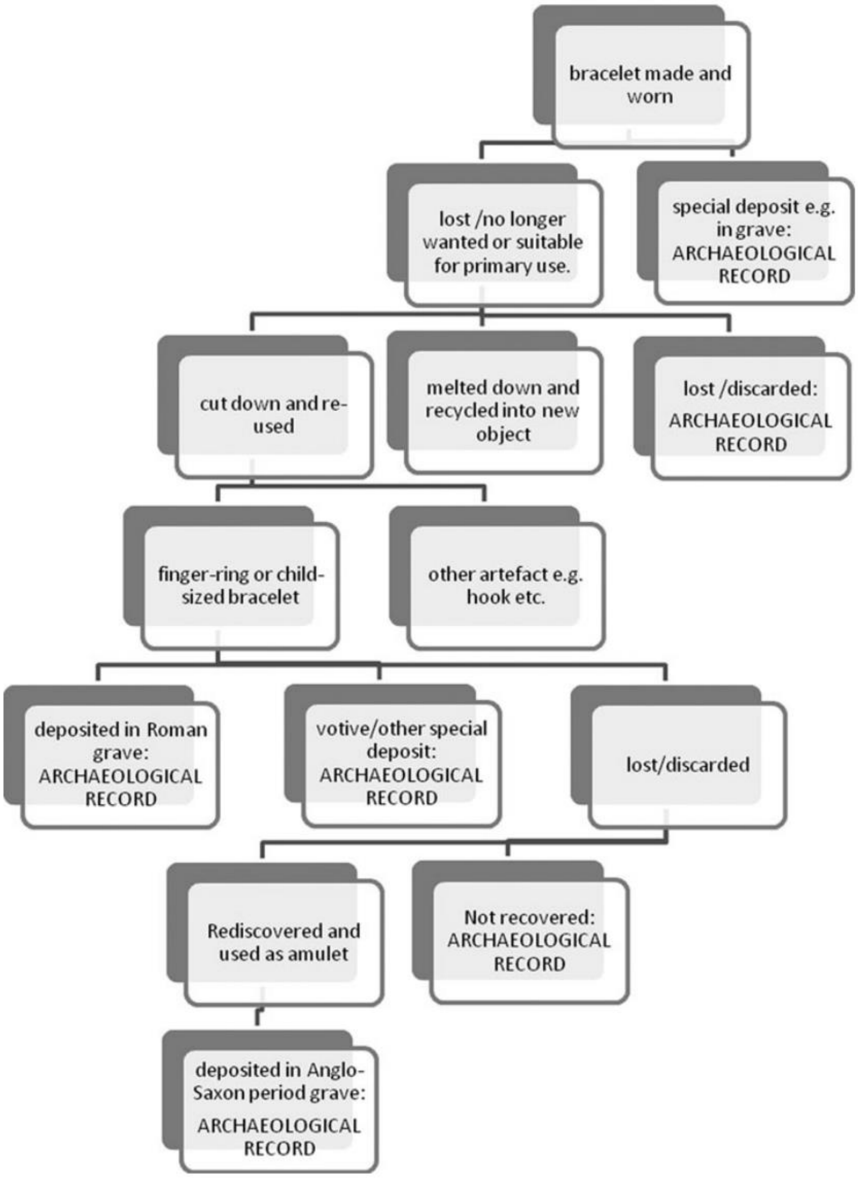


Figure 5.2-1. flowchart outlining the object biography of reused Roman bracelets, Swift 2012

Swift's (2012) research highlights that when constructing a biography for a group of objects as opposed to a single object, it will not be a linear process from the primary context (production) through to the tertiary context (deposition). As figure 5.2-1 demonstrates there are multiple stages at which the object can enter its tertiary context by being lost, discarded, deposited or not recovered. In this case, some bracelets will enter tertiary phases long before other objects and emphasises that biographies are not static, even when objects are in the same category, with the same primary context or production processes. The same can be said for object biographies of coins. It is suggested that one coin die could produce up to 30,000 coins (de Callataÿ 1995, 298), each of these 30,000 coins could end up having a different use by being used in exchanges in different geographic locations, or for different purposes (purchasing goods, deposited as offerings for the gods etc.). Some of these issues may remain in circulation longer than others or may become transformed into a new object and reused, for example perforated coins becoming pendants (see Chapter 10.4). In essence, the construction of a biographical approach is the beginning of the debate rather than the end. By constructing an overarching biography for groups of objects we can assess the similarities and differences between the objects within that group and begin to explore the subtle differences in the social interactions they have been a part of.

Campbell (2012, 16) highlights that the reuse of an object forms a critical part of a biographical approach and applies this concept to Roman pottery sherds that have been transformed either through trimming or rubbing down into new objects, including spindle whorls, weights or playing counters. Campbell's study provides evidence of 107 Roman pottery sherds which have been transformed in this way from 29 sites. Alongside this, there are a further 143 instances of deliberate deposition of Roman ceramics being included in ritual deposition practices (Campbell 2012, 19). The inclusion of Samian sherds within Anglo-Saxon graves, such as those at Whithorn, Dumfries and Galloway, suggests a reuse of Roman Samian ware within post-Roman contexts.

These examples highlight that biographies for objects are not frameworks which are set in stone, they are constantly changing and bound up with the social relationships with which they are a part. By applying these methodologies to objects we can begin to explore these social relationships, investigating how evidence for production, use and deposition can inform on changing social values and the way objects change over time can be seen as a manifestation of this social change and changing beliefs and values.

5.3 Constructing an Object Biography

The beginning sections of this chapter have outlined the development of an object biographical approach from its conception as a use-life model, through to the ways in which this theoretical concept has been applied to Roman artefacts more recently. However, it is important to consider the methodology of *how* a biography is actually constructed. Myberg (2009, 157-158) considers there are three main phases of a life biography of objects; a primary context concerned with the object production, a secondary context concerned with the use of an object, and a tertiary context which is focused on the deposition of the object. This follows the generic phases of the majority of biological models by considering the birth, life and death phases of the subject in question. However, Joy (2009, 543) highlights that in archaeological discourses it is this secondary use context which is often the most difficult to interpret. The nature of archaeological material is that it is discovered after the final biographical phases has ended and the object has been lost or deposited. Therefore, when found in context, we can make inferences regarding the processes of deposition. In many cases it may also be possible to make inferences regarding the primary or birth phases of the subject matter at hand, due to contextual understanding of modes of production for different objects.

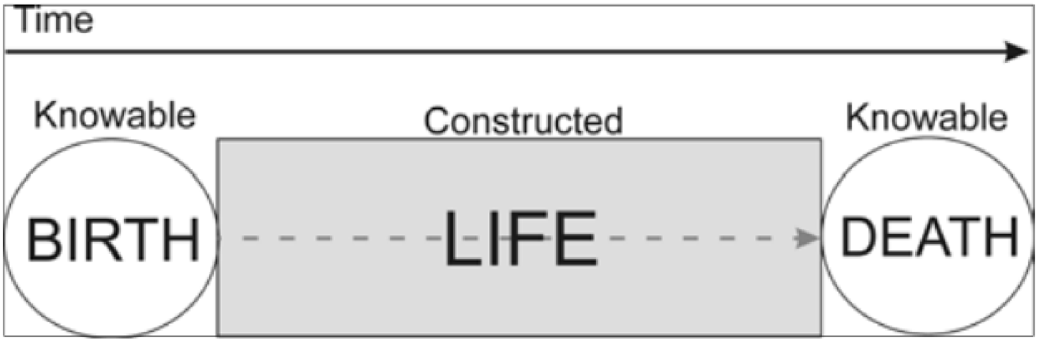


Figure 5.3-1 diagram outlining the stages of an object's life, Joy 2010

It is often the secondary context/life phases of objects which are more difficult to interpret, with this phase being the most uncertain of the three biographical stages (See figure 5.3-1 below). Firstly, because there may be little evidence regarding the ways in which objects were used, leading to interpretations heavily based on our understanding of these objects within modern contexts. Additionally, Joy (2009, 543) highlights that the secondary context of an object, its life phase, is not always a linear process as an object can live out multiple different 'life' stages. This can happen in many different ways. For example, an object can be reinterpreted or reincarnated several times in its life by being adapted and used in different ways, as outlined by the transition of Roman bracelets into finger rings in the post-Roman period outlined above (Swift 2012). Alternatively, as demonstrated through the biographies of ancient monuments, the object in question can outlive multiple human generations, and hold different meanings for different communities, altering its biography each time (Joy 2009, 543).

Joy's (2009, 436) reconstruction of the biography of a British Iron Age mirror found at Portesham, Dorset, provides an excellent example of methodological process that underpins the construction of biographies for objects. In this example, the mirror is thought to have been produced in Southern England during the first century AD. The object is inscribed, which is likely to have occurred at its point of production and is an object that would have been made from multiple bronze components. Joy (2009, 547) breaks down the different elements of the mirror's construction using the flowchart in Figure 5.3-2 below.

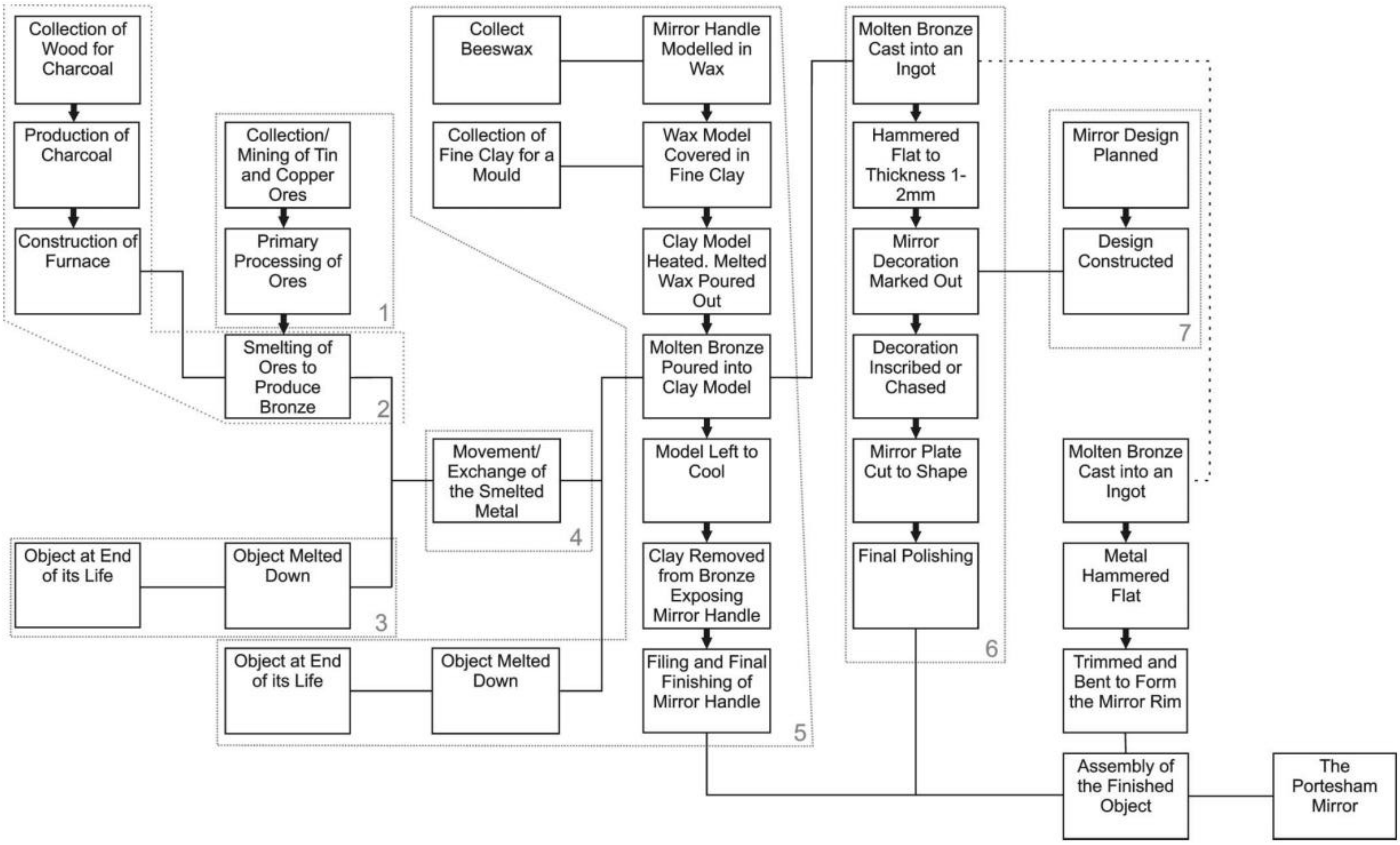


Figure 5.3-2 Joy 2009. Flowchart outlining the production processes of the Portesham mirror

From the different components, which together form the final object, (i.e., the Portesham mirror) there are assumptions that can be made in regard to the secondary context, or life phase, of the object. For example, the mirror has a handle and reflective plate, which is what allows it to function as a mirror. The handle suggests that the mirror was intended to be held by this, which would leave the reflective plate free of obstruction (Joy 2009, 550). The reflective qualities of the plate and the fact that the mirror could be held by an individual suggests that it was used as a tool to allow an individual to inspect their own physical appearance without relying on others to tell them how they looked (Joy 2009, 550). Furthermore, at some point during the use of this mirror, the terminal loop of the handle had a brooch attached to it, and other examples have demonstrated that this was to allow for a covering to be placed over the mirror (Parfitt 1998). Joy (2009) highlights that this could indicate that as with humans, the mirror itself was also dressed, which may have had more significance than merely to protect the mirror for damage. The lack of wear associated with the object may indicate that its covering protected it from damage and may indicate that it was a well-cared for and looked after object. Alternatively, it may imply that it was an object that was not used often or was used in a particular set of circumstances whereby it was not carried around routinely. For example, if somebody uses the mirror at a table in the morning and it is left there until the following morning, the object is less likely to incur damage as it is not constantly being used throughout the day in multiple different environments. The tertiary context of the Portesham mirror is easier to understand as it was found in an archaeological context, deposited in a female grave buried in a crouched position and associated with many other objects, including animal bones, brooches, pottery and a bronze pan of Roman import (Joy 2009, 551). The burial is thought to date to around AD 43, in line with the Roman conquest of southern England (Fitzpatrick 1997, 61).

A biographical approach can therefore make use of specific archaeological contexts, such as the deposition of the Portesham mirror, but the importance of wider cultural context in understanding object biographies remains important. Especially if we are to use this methodology to explore the ways in which objects may inform on social relationships, cultures and identities. Eckardt (2014) provides an important example of the significance of context when discussing gold-in-glass beads in Britain. These finds appear to be much more common in fifth to seventh century contexts in Britain, but are much rarer in Roman contexts, appearing at around 30 sites (Eckardt 2014, 46). The evidence for these objects suggests they are found on the Rhine-Danube frontier and are common in southern Russia and east of the Oder, which has led to the interpretation that they were introduced into Britain by military personnel, such as the Sarmatians (Eckardt 2014, 47). Other objects have been identified within Britain relating to the Sarmatians, including a horse's eye shield typical of the Sarmatian calvary at Chesters, Northumberland (Eckardt 2014, 47). Furthermore, it is believed that Sarmatian veterans settled at Ribchester (Richmond 1945; 22), so the introduction of gold-in-glass beads by these troops would not be unfeasible. In terms of a biographical approach an interesting interpretation was proposed by Cool (2010) when considered these finds in context, which relies on considering the gold-in-glass beads in relation to the entire necklace. An example of these beads can be seen from Baldock, where the necklace is made entirely of this type and therefore suggests that it may have originated from outside of Britain. However, necklaces with one or two gold-in-glass beads should be considered against the wider context of the rest of the necklace. In these cases, necklaces could have been strung and restrung multiple times over the course of a beads lifecycle and therefore may have lost any cultural affiliation with the societies within which it originated (Eckardt 2014, 49). The biography of the beads themselves have involved many transformations between objects reflecting different social identities and the cultural elements it was endowed with at production may have changed multiple times before its eventual deposition. By considering object biographies in context, we can begin to piece together a bigger picture, exploring the ways in which an objects properties may affect its lifecycle and how this can be reflected and interpreted against the backdrop of where it was uncovered (See Chapter 9.10 and 10.5).

5.4 Summary

The chapter above has aimed to outline the different approaches to the construction of an object biography, and the ways in which these methodologies can deepen our understanding of the social relations in which they were apart. The underlying principles of this approach are to consider an objects journey in a similar way to a human's biography; they are born or created, they live or are used, and they die or are deposited.

Many examples of constructed biographies for objects found in archaeological contexts are focused on the specific biography of the individual object (see the summary of the Portesham mirror in Chapter 5.3). However, this approach can also be used to construct biographies of multiple objects in order to look at more general trends in the use of objects from collective factors found across the artefact type (See Chapter 5.2 and the example of re-used Roman bracelets). This is the approach that this thesis aims to adopt in order to breakdown the traditional model of wear analysis for Roman coins. It is argued in this thesis that by creating a methodology to analyse the components that make up wear, we can begin to strengthen our understanding of the social relations involved in the production, use and deposition of coinage. Traditional constructs of wear rarely consider whether the object becomes worn during use, through consistent handling and exchange, or through the taphonomic processes associated with its deposition. Therefore, these methodologies can tell us little about the use of coinage. In contrast, a biographical approach allows us to break wear down into its constituent parts and try to pinpoint observable factors on coins at the different stages of its biography to ascertain when the object underwent specific changes. The following chapters outline the methodology used in this thesis and the results which can be ascertained by the adoption of a biographical approach to understand Roman coinage in Lancashire.

6 METHODOLOGY

Object biographies allow for a more detailed and nuanced understanding of human interactions through the evidence provided by material culture. However, their role and significance of has been the subject of much debate in archaeological discourses (see chapter 5).

As previously stated, the main aim of this project is;

"*To analyse coinage in more depth than has previously been granted by traditional narratives, allowing for the exploration of a coin's object biography from the artefact's production all the way through its lifecycle to its deposition. This will enable an understanding of the value of an object biographical approach to Roman coinage, and how valuable this might be in the field of Roman archaeology.*"

As discussed in previous chapters, the dominant numismatic methodologies involve recording aspects concerned with chronology. These are important and provide a wealth of information about archaeological sites. However, it is also crucial that we consider how additional methods can provide a more well-rounded analysis, where context and intrinsic evidence can work together to improve interpretation. Therefore, this thesis proposes the addition of a more nuanced biographical approach, specifically concerned with coin wear and other factors associated with it, whereby relevant data can be stored, presented and interrogated. The second aim of this project is therefore;

"*To interrogate the validity of a new methodology, analysing the factors that constitute coin wear using the Lancashire dataset with supporting evidence from a site outside of Lancashire (Plantation Place)".* This is to ensure that the methodology can be applied outside of the main study area and contextual area, and that the factors are also factors present on Roman coinage more generally, not just those associated with Lancashire.

6.1 Data Collection

The data collection aspect of this project is two-fold. Initial data collection is concerned with synthesising the data for known Roman coins in Lancashire, using the archaeological site reports identified, Historic Environment Records, and data from the Portable Antiquities Scheme (PAS). The dataset enables interrogation of the use of wear recording as is currently conducted in traditional publications (See Chapter 14), highlighting the inconsistent nature and the limited interpretation this allows archaeologists to make regarding the use of Roman coins in Lancashire. Data from archaeological units and site reports represent those coins found through distinct archaeological interrogation of the landscape, whereas the data collected from the PAS represents objects found by metal detectorists and recorded by dedicated Finds Liaison Officers on the PAS database. An analysis of both coins from known archaeological sites and those found by metal detectorists will provide a cross section for the presence of Roman coins in Lancashire. In order to provide a geographical remit for this thesis the modern-day boundaries of Lancashire have been used. However, it is important to highlight that author is aware that these boundaries would not have existed in the same format within the Roman period but are used as a sampling tool.

In order to obtain the most accurate level of data from the PAS, researcher access was obtained. This allowed more detailed information to be collected, regarding the location of the coins findspot. Where possible, individual site reports, archaeological unit evaluations and data from the Historic Environment Records have been obtained and used. These have been cross-checked against the Roman coin synthesis for the North West compiled by David Shotter, with the third edition covering up to 2011. Any additional coins or data have then been taken from these three editions.

Through the analysis of Roman coins in Lancashire, both quantitative and qualitative data will be analysed. The sites/location of these coins will be separated into a 'site type' category (military, industrial, settlement, religious) in order to ascertain any patterns associated with specific sites. Moreover, the study aims to examine sites across a wide date range in order to highlight how time may affect biography. For example, are there more or less coins in a particular time period, and if any of the physical properties of the coins coincide with known historical periods.

This initial investigation will provide a synthesis of the Roman coin collection in this area of the North West of England; it highlights the diverse and previously understudied evidence for the Romans in this region and provides a catalogue of coins for further data collection.

<table>
<tr><td>Context Number:</td><td>Object Number:</td><td>Coin ID from DB:</td><td colspan="2">Site:</td></tr>
<tr><td colspan="2">Name of Emperor:</td><td colspan="3">Date of Issue:</td></tr>
<tr><td colspan="2">Mint:</td><td colspan="3">Date of Issue:</td></tr>
<tr><td>Metal:</td><td>Denomination:</td><td>Diameter (mm):</td><td>Weight (gms):</td><td>Die Axis:</td></tr>
<tr><td rowspan="2">Obverse (heads):</td><td colspan="4">Inscription:</td></tr>
<tr><td colspan="4">Design:</td></tr>
<tr><td rowspan="2">Reverse (tails):</td><td colspan="4">Inscription:</td></tr>
<tr><td colspan="4">Design:</td></tr>
<tr><td colspan="2">References:</td><td>Location of coin (museum/unit):</td><td>Collection:</td><td>Wear:</td></tr>
<tr><td colspan="3">Photo Number:</td><td></td><td></td></tr>
<tr><td colspan="3"></td><td></td><td></td></tr>
</table>

Figure 6.1-1. Data Collection Sheet for museum visits

This catalogue informed the primary data collection, allowing targeted museum visits to analyse physical coin samples, and to access the PAS coin collection for Lancashire. In order to collate the data, a data collection table was created and filled out for each coin whilst visiting the relevant organisations to analyse the coin samples. The table (as shown in Figure 6.1-1 above), allowed all the primary data to be collected and then inputted into the database. This enabled all of the data pertaining to imagery on the coins and the reading of the legends to be double-checked as it was inputted into the database to ensure the most accurate level of data collection during this initial stage.

Although the main sample for this thesis comes from Roman coins found in Lancashire, it was important to interrogate the validity of the object biographical methodology proposed in this thesis. This is to ensure that the methodology could be applied to Roman coinage in more general terms, rather than just Roman coinage found specifically in Lancashire. Therefore, the site of Plantation Place in London was chosen as a comparative dataset. This sample was chosen as it included both site coins and a coin hoard and included a large enough quantity of coins (423 in total) that it could provide meaningful results when the biographical methodology was applied to it. The known archaeology of Roman Lancashire suggests a military dominated landscape, and therefore whilst Plantation Place has an early Roman fort at the location, there is also a wider urban development on the site. Plantation Places provides evidence of a developer funded archaeological excavation, which differs from the more research focus of sites identified in Lancashire and therefore provides a completely different dataset and set of circumstances to Lancashire sites both in the past and in the present. Its inclusion as a comparative study has enabled the methodology to be tested not only geographically but also on the basis of the types of communities engaging in coin exchange, and therefore demonstrates any similarities or differences that can be seen in biographical approaches in these spheres.

6.2 Database Construction

All data was recorded into a Microsoft Access database. This allowed for storage, checking and analysis of the data. The database holds both the synthesised coin catalogue and the primary data (see appendix for database access and metadata). The constructed database is focused around three main levels of data, outlined in Figure 6.2-1 below:

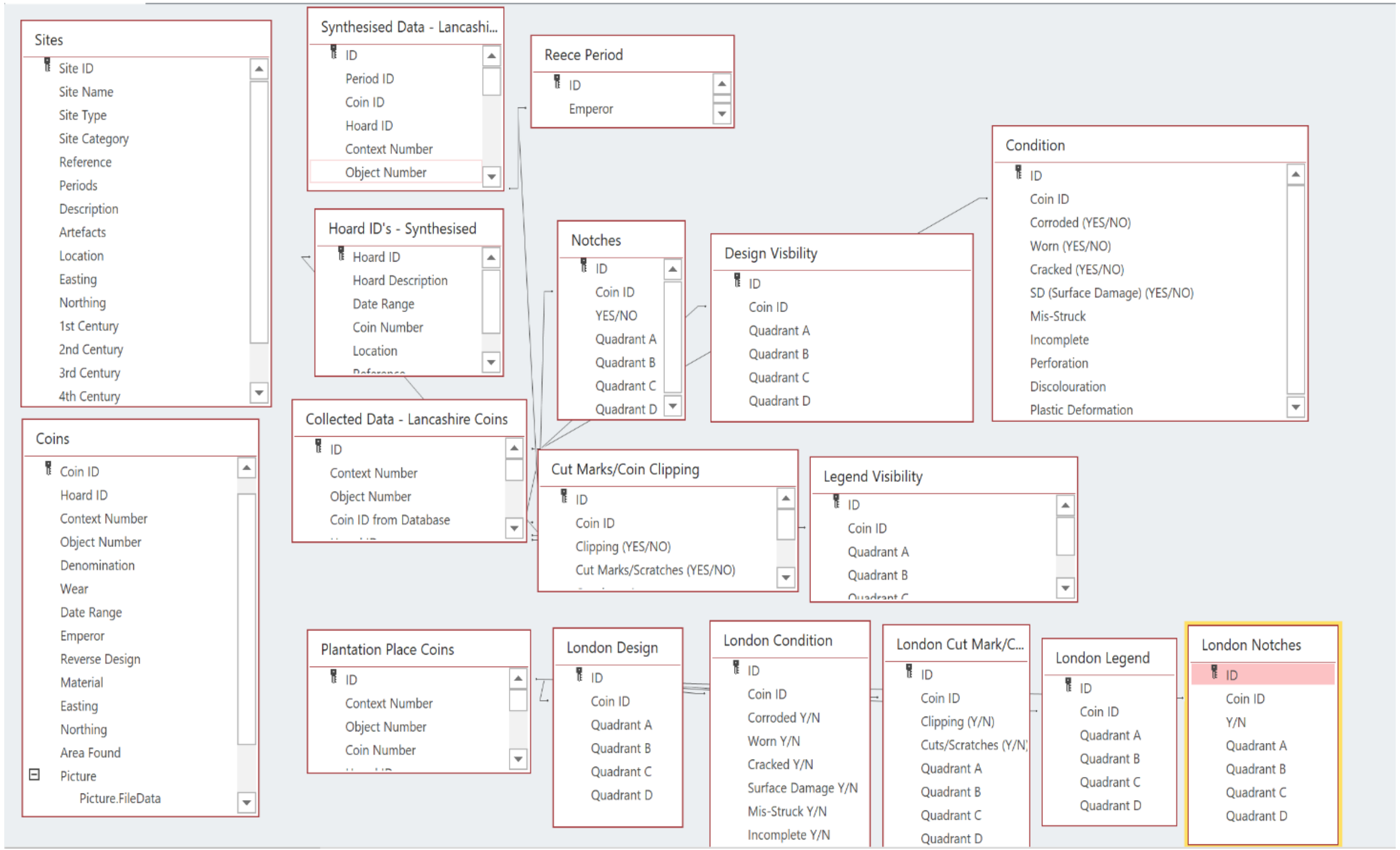


Figure 6.2-1. Screenshot of Database to show relationships between data

The first level of data revolves around the site level information for known sites. This section records basic information about the individual sites;

- Site Name
- Site Type – Fort, Vicus, Bathhouse, Industrial
- Site Category – Military, Industrial, Settlement
- Publication reference
- Description of site
- Site Location
- Eastings
- Northings
- Occupation by Century

The second level of data is dedicated to generic coin information. This is focused on the type of information currently recorded in coin reports and records;

- Context and Object Number
- Hoard ID (where applicable)
- Site
- Name of Emperor
- Date of Emperor
- Mint
- Date of Issue (where known)
- Reece Periods
- Material Type
- Denomination
- Diameter
- Weight
- Die Axis
- Obverse Inscription
- Obverse Description
- Reverse Inscription
- Reverse Description
- Location of Coin
- Collection
- Condition
- Image

Although many of these descriptions are self-explanatory in terms of the information recorded, it is necessary to highlight the importance of the inclusion of Reece Periods. Reece Periods are a chronological system created by Richard Reece in order to group together coinage for the purpose of comparing different sites (Reece 1972, 271). There are 21 periods in total, with a date range spanning from 509 BC to AD 402 (with Sam Moorhead of the PAS adding an additional two periods, taking the chronology to AD 498). Broadly, these periods can be seen to split coinage chronologically by dynasty. For example, Period Two covers the Claudian era, and Period Three the Neronian (See Table 6.2-1). Reece Periods have been a particularly useful tool as, in some cases, it can be difficult to ascertain the exact production date of an issue due to the condition of the coin. However, it is much more likely that an Emperor can be identified allowing the relevant Reece Period to be assigned. It is important to note that other chronological systems in line with the Reece Period strategy exist, such as that created by Casey, which has 27 periods ranging chronologically from AD 43 to AD 402 (Lockyear 2002, 398). Nevertheless, it is apparent that the Reece Period has been the most widely adopted, including its use by the PAS. As such, it is felt that Reece Periods would allow the most useful chronological method to compare the coin finds from different areas of Lancashire.

Period	Date Range	Dynasty	
1	Pre AD 41	Pre Claudian	
2	AD 41-54	Claudian	
3	AD 54-68	Neronian	
4	AD 69-96	Flavian	
5	AD 96-117	Trajanic	
6	AD 117-138	Hadrianic	
7	AD 138-161	Antonine I	
8	AD 161-180	Antonine II	
9	AD 180-193	Antonine III	
10	AD 193-222	Severus to Elagabalus	
11	AD 222-238	Later Severan	
12	AD 239-260	Gordian III to Valerian	
13	AD 260-275	Gallienus (sole reign) to Aurelian	
14	AD 275-296	Tacitus to Allectus	
15	AD 296-317	The Tetrarchy	
16	AD 317-330	Constantinian I	
17	AD 330-348	Constantinian II	
18	AD 348-364	Constantinian III	
19	AD 364-378	Valentinianic	
20	AD 378-388	Theodosian I	
21	AD 388-402	Theodosian II	
22	AD 402-445	Fifth Century I	
23	AD 445-498	Fifth Century II	Moorhead's Periods

Table 6.2-1. The Chronological Distribution of Reece Periods. Data Taken from the PAS

The third level of data is based around the components of wear, which inform the biographical approach to coins and thus form the basis of this investigation (see chapter 8);

- Wear
- Notches
- Scratches
- Clipping
- Design Visibility
- Legend Visibility
- Corroded
- Cracked
- Surface Damage
- Mis-Struck
- Incomplete
- Perforated
- Plastic Deformation
- Discolouration

6.3 Wear Analysis

One aspect of the primary data collection is wear analysis, which forms the basis of this investigation. As previously discussed, traditional methodologies often focus on the wear of an individual coin, with this being taken as a measure of distribution and circulation. Coin wear is a widely adopted and accepted technique in numismatic research, which is often when documenting coinage and producing catalogues for sites as outlined in the ten examples from Chapter 1. There are multiple different systems used to assign wear, and each of these breaks wear down into multiple parts. For example, Casey's (1986, 150) wear system considers wear a five-stage system: unworn, slightly worn, worn, very worn, and extremely worn. However, these categories have little to no definition. Contrastingly, Brickstocks (2004) system breaks wear into seven stages (unworn, slightly worn, worn, very worn, extremely worn, corroded, not struck up), allowing for differentiation between coins that are worn and corroded. Wear is also considered in different categories depending on the geographical location of coinage, with the *Inventory of Swiss Coin Finds* considering wear as a five-stage system for Roman coins developed in 1988 (not slightly worn, slightly worn, worn, heavily worn, crude) (Inventory of Swiss Coin Finds 2020). Interestingly, the *Inventory of Swiss Coin Finds* (2022) distinguishes between coin wear and coin corrosion, by providing an additional six system for assigning levels of corrosion (Indeterminate, not or hardly corroded, slightly corroded, corroded, heavily corroded, very heavily corroded to completely corroded).

The different systems of recording wear make it a a highly subjective task, allowing one person's use of the system to differ vastly to another's, as the lack of definition to each grouping means that individuals may be inclined to put the same coin into different categories based on a variety of different factors (e.g., familiarity and experience with Roman coins).

Whilst it is argued here that the current system of coin wear does little to inform archaeological interpretation, and in fact may hinder our understanding of the intrinsic value of this important archaeological object, it remains important to examine the data in this way. As such, the dataset will now be examined in order to ascertain any general differences between site finds and hoards, official vs unofficial coinage, and also the distribution of coin wear amongst the area categories discussed in the other sections of this chapter. It is hoped from this that we can begin to understand the broad patterns displayed by the data. Furthermore, following the investigation of the primary data collected in this thesis, and in-depth analysis of the additional wear factors recorded throughout this process, we can begin to break down these broad observations and ascertain the extent to which coinage can be used to inform the archaeological record about coin-using economies/societies.

This is supported by Lockyear (2007, 215), who highlights that coin wear categories can only provide very broad observations and therefore it is argued that an interrogation of their meaning is both highly subjective and perhaps unevaluable. However, wear analysis continues to be a widely recorded aspect of coin studies, withthis thesis moving beyond generalised wear categories and instead considering components which maybe be incorporated under the umberalla of 'wear'. This may enable further insights into coin production and circulation.

When collecting the data for this thesis, the coin wear descriptors have been recorded into the database using a four-stage system outlined in Table 6.3-1 below.

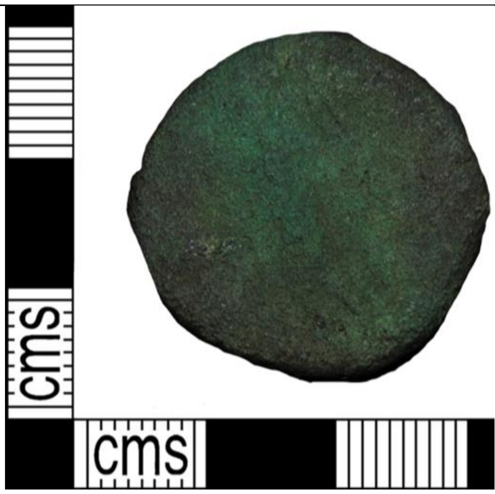
Category	Meaning	Example
0	Physical coin not able to be analysed – information comes from records only	
1	Unworn – majority of design or inscription visible	
2	Slight wear - parts of the design or inscription still visible	
3	Worn – majority of the design or inscription not visible	

Table 6.3-1. Definitions and Examples of Wear Categories. Images from own collection and PAS 2020

As a further measure of wear, the primary data collected for this project has also recorded the design and legend visibility of the coins. From this analysis, trends can be assessed regarding the production of the coins themselves as well as analysis of the role of the individual in this production. For example, some parts of a coin may be completely void of information, suggesting an incomplete die or mis-striking at the point of production. This might indicate that, due to the demand of coinage, the process of making the coins had become rapid and therefore the overall fineness of the coin became less important. This could have implications for the construction of a coin's object biography, as it may suggest that coins were merely an essential commodity (rapid production critical). In contrast, if the fineness or overall appearance of the coin appears to be important, then it may demonstrate that coins were considered as a significant object in their own right and had to maintain certain standards in order to be functioning objects.

6.4 Recording Object Biographies

If the object biography of a coin is to be utilised fully, then it is important to deconstruct the broad category of wear into its constituent parts whilst still considering the concept in full in order to understand coinage in the traditional sense. One way of doing this is to consider the factors that alter the appearance of a coin and the stages in a coin's lifecycle where these factors may occur. These stages have been considered as primary, secondary and tertiary contexts of a coin's lifecycle (Myberg 2009). Fourteen different criteria have been selected based on the sample of coins analysed for this investigation. The designated criteria will allow for an in-depth analysis of the types of coin wear that are prevalent in Lancashire and allow a fuller object biography to be constructed based on the general frequency and specific location of the wear on the individual coins. These criteria are separated into five distinct categories: coin clipping, scratches, notches, design visibility and legend visibility, and condition. Condition is broken down into eight subsections (wear, plastic deformation, mis-struck, cracked, perforated, corroded, incomplete/fragmentary and surface damage), with answers being recorded as 'YES' or 'NO' for the presence or absence of these factors. The remaining factors are recorded to quadrant level in order to allow for more detailed interpretations to be made as to whether location on a coin can further our understanding of its biography.

In order to assist in the data gathering process and produce a simple and repeatable method, over 1000 coins were examined via photographs of the coins taken as part of this research. The obverse and reverse of each coin are photographed and it is the obverse image that will be used during wear analysis for the purposes of this study. The orientation of the coin was based around the imagery being the correct way up. For example, with the top of the Emperor's bust at 12 o'clock. Where coins were too worn for the Emperor's bust to be clearly identified, a best assumption was made. Each photograph is divided into quadrants labelled A, B, C and D to thoroughly analyse types of wear and the locations that the wear occurs on the coin (See Figure 6.4-1).

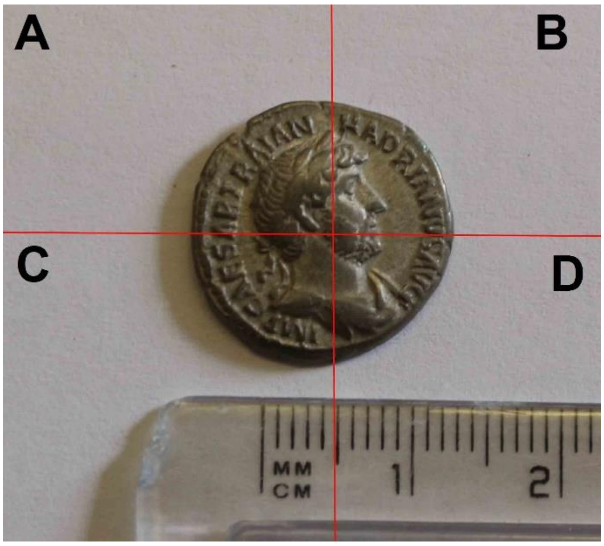


Figure 6.4-1 Quadrant System for coin recording

In order to understand how these categories are able to help construct an object biography for coinage it is important to discuss each heading in more detail.

6.5 Beyond Wear

6.5.1 Primary Context:

A coin's primary context revolves around the first stage of its biography; birth. Therefore, the recorded factors are based around evidence which may occur on a coin at its point of production. For the purpose of this investigation, notches, plastic deformation, mis-striking and cracking have all been selected as evidence of production.

Notches:

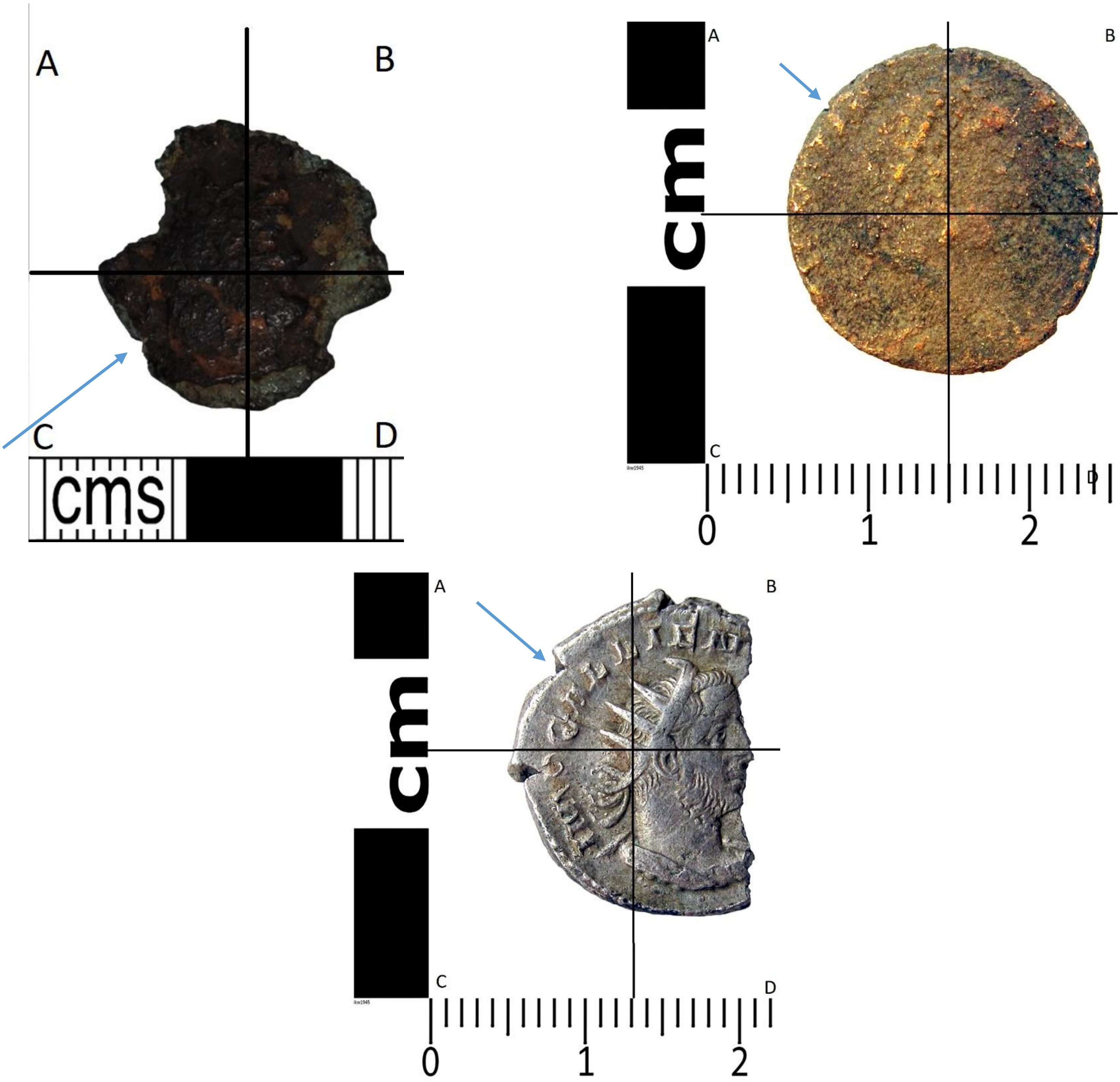


Figure 6.5.1-1. Examples of coins with notches on the outer edge

Notches on the outer edge of coins are one method by which coins can become irregular in shape (Figure 6.5.1-1). For the purpose of this thesis, notches are considered as V-shaped indentations on the outside of the coin, with this type of coin damage being associated with the production phase of a coin. However, it may also be possible that this type of factor has occurred intentionally through cutting the edge of the coin and would therefore fall into the use phase of a coin's lifecycle.

Research in this area is currently extremely limited nevertheless, experimental archaeology, looking at the production of coinage has highlighted why this factor is most likely to be associated with coin production rather than deposition. For example, during production, a blank coin (flan) will be heated before striking, notches can occur both when the flan is too hot, or too cool at the time of striking. If the flan is too hot when struck, then the metal spreads out; too cool and it is possible that the flan may crack and produce angular notches (as shown in Figure 6.5.1-1 above) (Kraft *et al.* 2006, 609). The work of Kraft *et al.* (2006) also considers the idea that notches were intentionally produced on the blank coin flans before striking the blank flan with the die, which is often seen on a particular subset of denarii, the serrati. Ingo *et al.* (2002, 329) suggest that these coins were favoured in Germany as the serrated edges made it possible to tell to tell if the coins were genuine silver rather than plated, as the silver would be present in the cross-section of the coin). In these issues the coins have notches all the way around the outer edge of the coin, whereas the examples identified in this thesis are less commonly occurring on a single coin. However, the analysis conducted by Ingo *et al.* (2002) using SEM shows that silver blanks were ductile at the moment of strike and therefore may have become slightly brittle. This may suggest that due to the process of heating, cooling and striking, the more brittle nature of coins may have led to the notching of the outer edge of the coins as a process of production, outside the intentional notching of serrati.

Due to the distinct lack of Roman coin dies found in the archaeological record, experimental archaeology has played a crucial role in our understanding of coin production processes. Ponting (2009, 272) highlights that coin blanks could have been left in a furnace at a red heat for a prolonged period of time and then soaked in acid before striking. The soaking of the blank in acid removes any tarnish to the surface metal from the heating process. The need for this process is due to the increasing debasement of Roman coinage, leading to a decrease in the quality silver content of coins. Ponting (2009, 272) argues that the coins left in moulds or exposed to air would become tarnished, and once this tarnish was removed, coins with lower silver content would appear to be more silvered. This may not provide evidence for the production of notches themselves, however it does support the theory of flans being heated before striking or moulding into official coinage. The arguments above outline possible evidence for notches occurring during in the production phase of a coin. As previously mentioned, the research in this area is currently limited and therefore further experimental work is needed to explore this argument more fully and prove or disprove the working argument made with regard to notches throughout this thesis.

If these coins are then found in archaeological contexts as evidence of coin circulation, it could suggest that quality control of individual coins was not important and supports the concept of coin making and dissemination being an essential commodity rather than an ideological token.

Notches are recorded as present or absent using the quadrant system and are focused on a V-shaped indentation on the outer edge of the coin (see Figure 6.5.1-1 above). At this stage notches are focused on shape; however width and length will be considered in future experimental work outside of this thesis in order to see if the types of implement used to make these marks can be ascertained

Plastic Deformation:

Figure 6.5.1-2 An example of Plastic Deformation. Coin ID 897 on Database. Photo by Harris Museum 2019.

Plastic Deformation also occurs during a coin's primary context, at the point of production. This feature is the opposite of notches as it occurs when the coin's flan is too hot prior to striking, causing the blank flan to spread out following contact with the coin die, in the same way as a wax seal expands when stamped. An example of this can be seen in Figure 6.5.1-2 above, here we can see the circular outline of the coin die (emphasised in red), representing the true shape of the coin. In addition to this, we can see where the warm metal has spread out beyond the point of the die when the coin has been struck. As with notches, the presence of coins with this 'flaw' in archaeological contexts suggests that coin production and circulation are representative of coinage being an accepted commodity. As such, the presence of coins which are less than perfect holds implications for what makes a coin a coin, and therefore acceptable to distribute.

Plastic Deformation is recorded as presence or absence.

Mis-Struck:

Figure 6.5.1-3 . PUBLIC-60572C. Image of a Coin Brockage. Photo from PAS database

The mis-striking of a coin is thought to happen during the primary context of a coin's biography, at the point of production. Mis-striking includes the design being struck off the centre of the flan causing half of the design details to be absent, or brockages where the obverse or reverse designs end up on both sides of the coin. Brockages occur when a coin has stuck to the reverse or obverse die at the point of striking and has not been removed before the next blank flan is struck. Consequently, this second coin is left with the impression from the previous coin (Figure 6.5.1-3), instead of fresh obverse and reverse imagery (Sear 2014, 8). Brockages are more common on the obverse, as a reverse brockage would require the second blank coin to be placed on top of the original mis-strike (Sear 2014, 9).

As with notches and plastic deformation, the presence of mis-struck coins in the archaeological record may hold implications surrounding the fundamental requirements of a coin. As such, this thesis aims to analysing the presence of mis-struck coins in the Lancashire and Plantation Place datasets in order to explore whether they are treated differently in their use life and/or deposition. One example of this can be seen in obverse brockages, which are more common than brockages of reverse designs. This may imply that in order for a coin to be circulated it is required to display the imperial portrait and therefore and imperial portraits on the obverse and reverse is more accepted than no imperial portrait on either coin face.

Mis-striking has been recorded based on its presence or absence.

Cracked:

Figure 6.5.1-4. An example of a cracked coin

The presence or absence of cracking on a coin's surface (Figure 6.5.1-4) has been recorded as a measure of the primary context of the object, the production phase. It is thought that radial cracking (that is cracking that does not go all the way through the coin as to break it) occurs during the striking process, due to the pressure of the coin die hitting the blank coin flan (See Chapter 8.1.4 on the Kalkirese). Whereas cracking which goes all the way through the flan (Figure 6.5.1-4 above) may suggest an additional layer to a coin's object biography, occurring after deposition and when a coin is entering a new life phase as an object of archaeological examination.

For the purpose of this investigation, cracking has been recorded as presence or absence. This is due to cracking being a less obvious form of production damage, as it is possible for cracking to occur during post-deposition and excavation.

6.5.2 Secondary Context

The secondary context of a coin is focused around its ‘life’ phase; circulation (see Chapter 5.2). Therefore, for the purpose of this investigation clipping and perforation have been considered as evidence of the coin being used within society.

<u>Coin Clipping:</u>

Figure 6.5.2-1 Image of a Clipped Coin. Photograph taken from Harris Museum Records.

Archaeological literature suggests that coin clipping was a widespread phenomenon throughout Britain, with Burnett’s (1984) popular study highlighting the presence of clipping within coin hoards. ‘Clipping’ of coins refers to the extraction of a portion of metal from a coin’s surface, which can then be collected and used as raw material, this is demonstrated in Figure 6.5.2-1.

By analysing the presence and precise location of coin clipping, interpretations can be made surrounding the intrinsic value of a coin. For example, if clipping always occurs on the same part of the coin, it could indicate a uniform process by which raw materials were being obtained, with certain sections of the legend or design being deemed less important than others are. If the portrait of the Emperor, or aspects of the legend pertaining to the Emperor’s name are rarely clipped it could suggest a passive acceptance of imperial rule and an active choice in choosing to retain this imagery, further suggesting acceptance or sympathy of or with an imperial identity.

Coin clipping is recorded to quadrant level, as well as presence and absence on the coin more generally. This is to allow these more detailed interpretations to be ascertained.

Perforation:

Figure 6.5.2-2 Image of a Perforated Coin. Coin ID 449 From Database. Photo by PAS.

Perforated coinage revolves around the secondary context of a coin's biography and symbolises the repurposing of a coin into a new object (Figure 6.5.2-2), most likely a pendant. By recording the presence of perforations, we can begin to explore the attitudes to coinage and its imagery by the people who would use them in day-to-day life. This provides a deeper level of understanding of the acceptance of Roman coins, as it is one of few aspects that relies on the user's association with imagery, as opposed to the connotations that the producer is trying to enforce.

This factor is recorded only to presence or absence level as the perforations may overlap the quadrant level. Where necessary, further investigation into the location of perforations in relation to the coin's imagery has been conducted (see Chapters 8.2.2 and 10.4).

6.5.3 Tertiary Context

Finally, the tertiary context of a coin is focused around the 'death' or deposition of the object. As such, four factors have been selected which could demonstrate the effects of deposition on the object; cut marks/scratches, corrosion, surface damage and incomplete. When analysing a coin's object biography, it is felt that recording factors relating to deposition is crucial, as it allows us to ascertain whether the things we are recording as wear are merely a result of deposition and therefore have no bearing on interpretations of a coin's circulation.

Cut Marks/Scratch-Marks

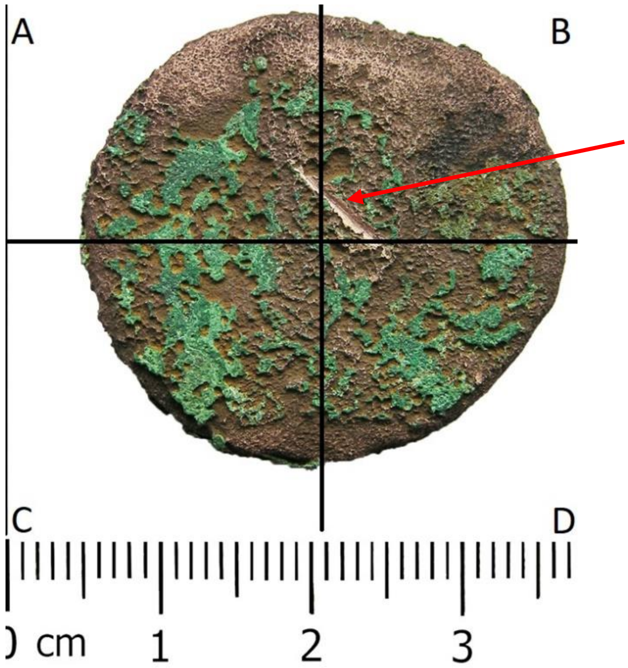


Figure 6.5.3-1. An example of a scratch mark on a coin's surface

The presence of cuts and scratches on coins could be indicative of circulation and/or the secondary stages of a coin's object biography, which are concerned with its lifecycle and distribution (as discussed below using Figure 6.5.3-2) but also may occur during modern excavations or collection procedures (as is possibly the case in Figure 6.5.3-1). As previously mentioned, the measure of coin circulation is often associated with how 'worn' or 'unworn' a coin is, with no indicator of what comprises a worn coin. It is suggested here that the small scratches on coins may be caused by individual coins rubbing together, or against other objects during in circulation. Furthermore, scratches and cuts may be present on coins as a consequence of a coin's tertiary context (or deposition phase). For example, accidental coin loss leaves individual coins exposed to the elements and therefore more prone to being moved across the landscape and scratched or marked by the surrounding geology. Therefore, it is maintained that analysing individual aspects of coin wear can provide a greater analysis of a coin's lifecycle than a simple umbrella term.

Cut-marks/scratches are recorded in the same way as coin clipping, with presence or absence for each quadrant recorded (as shown above in Figure 6.5.3-1).

It is assumed that many of the scratches that occur on coinage will be accidental in nature, and therefore there would be no statistical significance as to the quadrant they are located in. However, if this study proves this is not the case, then it highlights the significance of scratch marks on coins as an unexplored process within the archaeological record and suggests uniform practice of coin mutilation occurring during the Roman period. Several studies have been carried out on coin mutilation, and the significance of the act of mutilating a coin. However, the definition of 'clear, intentional damage' is often hard to ascertain. For example, Kiernan (2001, 21) discusses the ritual mutilation of coins found at Romano-British sites, and highlights that many of the smaller scratches may be acts of intentional mutilation. In addition, Myberg and Kemmers (2011, 98) use the example of the Kalkriese battlefield, where three Roman legions were ambushed by Germanic troops and defeated in AD 9. A number of stray Roman *aes* of the Lugdunum altar type have been identified all over the battlefield, all with cuts and piercings (See figure 6.5.3-2).

Figure 6.5.3-2 Myberg and Kemmers 2011. Copper Aes, Lugdunum altar type, showing deliberate cuts and piercings. Original Image from Museum and Park Kalkriese

Berger (1996, 55) suggests that these marks were created by individual Roman soldiers as an expression of their unhappiness with their ruler. In contrast, Myberg and Kemmers (2011, 98) propose that it is instead the Germanic troops who deliberately mutilated the coins of their enemies, as an expression of defiance against iconography which represented the defeat of conquered people.

Alternatively, scratches on the coin can be generated after deposition, during the coin's recovery and conservation. For example, any mechanical cleaning of a coin using specific tools (e.g., a dremmel), can cause bevelling on the coins surface if used over zealously.

For the purpose of this thesis, scratches remain assigned to the object's tertiary context, as it is felt that stray finds, lost in archaeological contexts have a much wider opportunity to become scratched in post-deposition. However, analysis of the frequency of scratches on the sample will be discussed in more detail throughout.

Corrosion:

Figure 6.5.3-3 Examples of coins with varying degrees of corrosion on their surface

Corrosion has been recorded with regards to the presence or absence of any corrosion products on the surface of the coin.

As demonstrated in Figure 6.5.3-3, this does not have to cover the entire coin's surface but can be small amounts in certain areas of the coin. The presence of corrosion occurs differently on coins of different chemical compositions, as a result of interactions with the chemical-physical properties of the soil in which it is buried (Di Francia *et al.* 2022, 1). For example, coins made of a silver and copper alloy are likely to demonstrate a green patina on their surface, as shown in the examples in Figure 6.5.3-2. This is due to the leeching of the copper, combined with the silver becoming more enriched at the surface of the coin (Mantler and Schreiner 2001, 641). In bronze and copper coins it is also not unusual to see a more red or brown rust like patina on the surface of coins. By recording corrosion, it is possible to analyse whether factors associated with deposition are affecting the interpretations of Roman artefacts. For example, coins which are heavily corroded can have an additional sub-millimetre thickness of corrosion by-products, which results in the legend and design of the coins being barely visible (Salem and Mohamed 2019, 249). This may lead to coins being considered worn, when it is merely the corrosion products obscuring the design details (this is demonstrated in Chapter 11.1.2 with an example from the Le Catillon II Iron Age hoard). If this is the case then wear (associated with the secondary context and use and trade of a coin) is linked to its deposition (associated with an object's tertiary phase, when factors affecting the artefact occur when it is no longer in circulation or use).

<u>Surface Damage:</u>

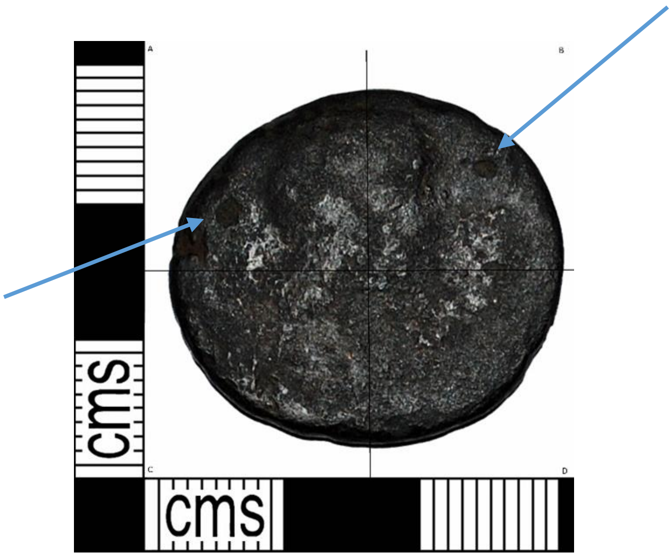


Figure 6.5.3-4. Example of a coin with surface damage

Surface damage has been recorded as an all-encompassing term for any type of damage to the coins surface which is not defined by one of the other recorded factors (e.g., scratches). As such, surface damage can take multiple forms, including but not limited to pitting on the surface (Figure 6.5.3-4) of the coin, as well as delamination where layers of the coins surface are missing.

Surface damage would be assumed to be most likely a result of the post-depositional process, whereby the interactions with the surrounding environment both physically and chemically would influence the finish and look of coins that are excavated. As such, it is hoped that by exploring this factor in detail we can begin to examine the effects of the tertiary context of a coin on the interpretations we as archaeologists make from the object as found.

Surface damage is recorded as presence or absence.

<u>Incomplete:</u>

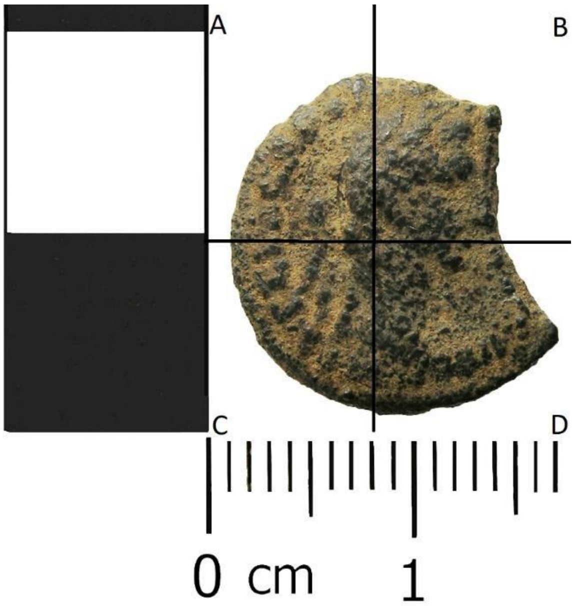


Figure 6.5.3-5 Example of an Incomplete Coin. Coin ID 221 from Database. Photograph taken from the PAS Records.

Incomplete represents those coins where only fragment or fragments have been recovered (Figure 6.5.3-5). It is thought that this factor is most likely to occur during the tertiary context of a coin's biography following deposition, as accidental fragmentation of a coin would arguably no longer serve any monetary function. This methodology has considered incomplete coins to fall into the tertiary context category, however it is important to note that there is some evidence for fractional coinage being its own currency, with these deliberate fractions serving as small change alongside official coin units. This would therefore put these objects into the second context of use. The presence of fractional or cut coinage can be seen across time periods, for example the silver dirhams, minted under Caliphate in the middle East, became prevalent in Nordic Europe in the 9th century AD (Myrberg and Kemmers 2011, 100). The Viking system was based on the value of ingots and rings, with these objects being of fixed weight and calibrated against gold and silver coins of the Merovingian and Carolingian. However, the dirham worked in the opposite way, with the silver coins being cut up in order to reach the desired equivalent weight (Myrberg and Kemmers 2011, 100). This example highlights that cut up coinage may have had its use in exchange practices, as some coins would be transported geographically already in their cut-up form.

There is an example from the PAS database (NLM-B33691) which is recorded as being a 'Fractional nummus: a neatly defined quarter coin' (Figure 6.5.3-6). The coin is defined as a fraction due to the neatness of the cuts and the fact that it represents almost a perfect quarter of a coin. Therefore, it may be possible this coin represents a cut unit that would still be used in exchange, with some literary sources suggesting that halved coins could be used as tokens between friends (Buttrey 1972, 31). Marsden (2012b, 58) highlights that there is evidence for fractional units, which seems to date most commonly to the AD 350s and are usually the large bronzes of Constantius II, Constans, Magentius and Decentius.

Figure 6.5.3-6 NLM-B33691 Example of a possible fractional coin, PAS 2022

However, in terms of this methodology incomplete has been considered to come under the tertiary or deposition stage, as the definition of incomplete here is a non-structured imperfection, based on visual analysis.

Incomplete is recorded as yes or no.

6.6 Issues with Data Collection

As with any investigation, it is crucial to recognise the problems and potential biases with the sample analysed. The data collected provides a large representative sample of the Lancashire evidence, however it is important to acknowledge that it is not exhaustive.

Although the synthesis phase produced a catalogue of coins, it was not possible to revisit all of the coins for primary data collection. In some instances, particularly where old reports or accounts have been used, the location of the physical coin collection is unknown. Often due to the antiquarian nature of coin collecting, and particularly coin hoards, the collection had been divided across multiple benefactors and these rarely end up in museums. Where some coins in a hoard are donated, it is also rare for the whole collection to be deposited, purely because a single individual only possesses a proportion of the entire hoard. For example, the Worden hoard, discovered in 1850, was said to contain 126 coins, with 108 of these later donated to the Harris Museum. These 108 coins have been studied for this thesis. However, it is unknown where the remaining 18 coins from this hoard are now located. As such, the Worden hoard used in this investigation can be considered a representative sample of the original hoard.

The time between a hoard being recovered and the time it is deposited with a museum is a further difficulty, as it can lead to discrepancies in accounts. This is exemplified in the case of the Rossall Fleetwood hoard, included in this thesis. The original reports of this hoard suggest that it is composed of 400 silver denarii, whereas the deposited hoard at the Harris Museum (recorded as the Rossall Fleetwood hoard) is composed of 400 silver siliquae. It is unknown whether these coins represent the original hoard, which was perhaps initially misidentified, or whether they represent two separate hoards from Rossall Fleetwood, or whether the Rossall Fleetwood hoard data collected from the Harris Museum actually represents a hoard from elsewhere (see Chapter 10.3).

In addition, it was not possible to visit all museum collections during the data collection phase of this project. This is largely due to the increasing pressure on the museums service leading to the closure of some sites, as well as the required collections often being on loan to sites for satellite exhibitions and subsequently inaccessible.

Finally, in some cases, coin collections were available for analysis, but the precise location of the find is unknown due to a lack of published material. For example, 57 coins were recorded from Ribchester Roman Museum. However, whilst the coins themselves are known to come from Ribchester, their precise find location is unknown.

The Plantation Place sample posed less issues with regard to data collection, due to the extensive nature of the publication and coin report, as well as the opportunity to talk to the author of the coin report, MOLA's numismatist, Julian Bowsher. The fact that these coins were excavated during a more recent developer-funded excavation meant that the coins were easier to locate and access, and negated some of the issues that had been experienced with regards to the Lancashire sample.

The limitations of the sample have been outlined above, however it is important to highlight that 1466 coins have been analysed using the proposed methodology. As such, the sample size is considered large enough to be representative and provide a wealth of data, as well as being substantial enough to test new methodologies for the construction of object biographies and allow an investigation into the role and usefulness of this method to the study of coinage in the future.

7 PRIMARY DATA RESULTS

7.1 Introduction

The primary data collected for this thesis records 1466 coins associated with the modern boundaries of Lancashire (outlined in Chapter 6). The sample comprises coin evidence from excavation finds, casual finds and evidence from 13 coin hoards associated with Lancashire (see Figure 7.1-1).

Figure 7.1-1 A map to show where the Lancashire coins are located, Road data taken from McCormick, M. et al. 2013

This chapter represents a detailed analysis of the more 'traditional' coin features which are currently used in the majority of finds reports and therefore provides a platform for the biographical approach which follows in Chapter Eight.

7.1.1 Breakdown of Primary Dataset

	Museum	PAS	Oxford Archaeology North	Total	Total (%)
Ribchester	212	12	0	224	15%
Walton-le-Dale	0	0	48	48	3%
Lancaster	90	13	0	103	7%
Kirkham	36	6	0	42	3%
PAS	0	361	0	361	25%
Rossall Fleetwood Hoard	391	0	0	391	27%
Waddington Hoard	29	0	0	29	2%
Brindle Hoard	21	0	0	21	1%
Fishergate Hill Hoard	8	0	0	8	1%
Hackensall Hoard	46	0	0	46	3%
Worden Hoard	108	0	0	108	7%
Unknown	85	0	0	85	6%
Total	1026	392	48	1466	-
Total %	70%	27%	3%	-	100%

Table 7.1.1-1 Breakdown of the Primary Data by Site and Type

The primary dataset is predominantly composed of data collected from museum collections (70%), with the Portable Antiquities Scheme (PAS) accounting for 27% of the sample, and the remaining 3% from Oxford Archaeology North (Table 7.1.1-1). If we stratify the information further, into individual areas and hoards, over half of the sample is from two collections combined, the Rossall Fleetwood Hoard (27%) and the PAS (25%), with the highest area proportion of coins originating from Ribchester, with 15% of the overall sample.

7.1.2 Differences between Primary and Synthesised Datasets

It is important to note that there are some differences between the primary and synthesised datasets (Table 7.1.2-1). This table represents the coins that are in the primary sample only, the coins from the synthesised sample only and the coins that are in both the primary and synthesised.

	Primary	Synthesised	Both
Ribchester	58	309	166
Walton-le-Dale	41	165	7
Lancaster	91	374	12
Kirkham	36	17	6
Burrow in Lonsdale	2	37	2
PAS	343	0	0
Rossall Fleetwood Hoard	391	0	0
Waddington Hoard	29	0	0
Brindle Hoard	21	0	0
Fishergate Hill Hoard	8	0	0
Hackensall Hoard	46	0	0
Worden Hoard	108	0	0
Unknown	85	0	0

Table 7.1.2-1 Difference in Datasets Across the Primary and Synthesised

All of the larger hoards collected at the Harris Museum are part of the primary datasets but could not be recorded in the synthesised sample, as publications that detailed the coins individually were not available (Table 7.1.2-1). Furthermore, across the main areas discussed in this thesis there are limited discrepancies between the primary and synthesised datasets, whereby the coins were documented but were not physically available for analysis at their respective museums or their location was unknown. In the case of Ribchester, there is additional data from the bathhouse material, which has not yet been published, but the collection could be analysed at the Museum of Lancashire, whereas a portion of the Ribchester synthesised data regarding casual finds could not be located for primary analysis.

As such, it is important to view the synthesised dataset as a representative sample of the available publications for Lancashire, and the primary dataset as a representative sample of the available coin collections in Lancashire museums.

7.2 Denomination

The first factor to be discussed regarding the primary data is denomination.

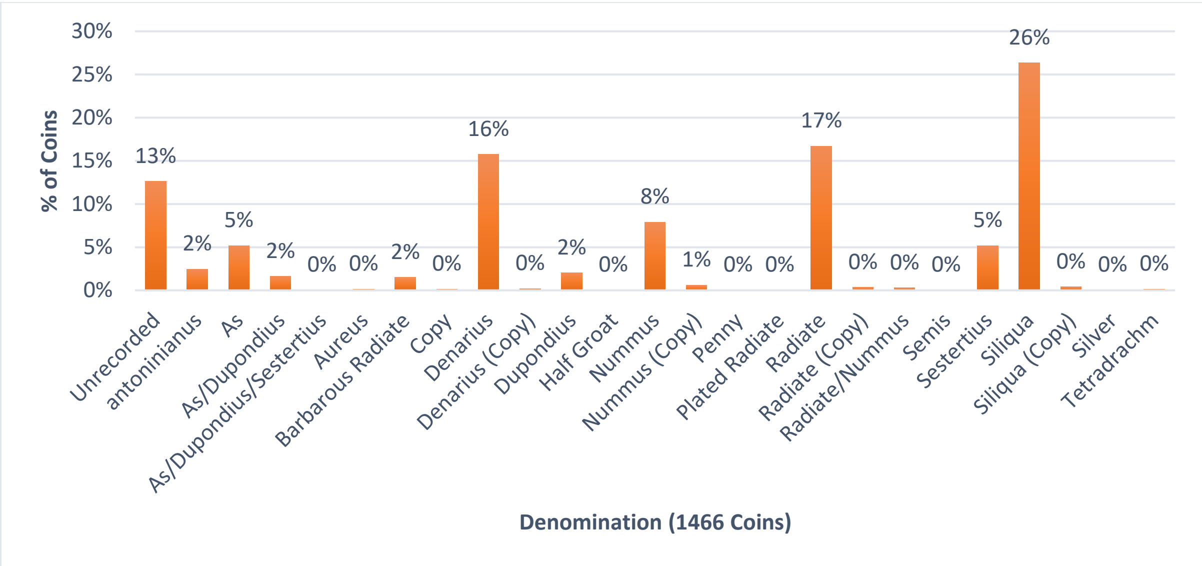


Figure 7.2-1 Proportion of Denominations in Primary Dataset

One hundred and eighty-five coins out of the 1466 (13%) could not be assigned a denomination (Figure 7.2-1). This is significantly less than the 899 coins that had no denomination recorded in the synthesised data set (Appendix Two).

Of the 1281 coins with denomination recorded, only three contained over 200 coins. Siliqua composed 26% (386 coins) of the sample and is the largest denomination group represented. However, it is important to note that this prominence is due to the inclusion of the Rossall Fleetwood hoard, which is made up of 385 siliqua and six siliqua copies. The Rossall Fleetwood hoard proved to be a conundrum, with the hoard originally identified in 1840 as a hoard of 400 silver denarii belonging to the early Empire and containing coins of Emperors such as Vespasian and Titus (Watkin 1887, 49). However, the ownership of the hoard was transferred to the Harris Museum, Preston, but it turned out to be a hoard of different date and type (401 siliquae of the fourth century), unlike any that had been associated with Lancashire previously (Watkin 1887, 50) (see chapter 10.3 for further discussion). It is believed that the hoard currently at the Harris

Museum (and used in this analysis) is either a second hoard from the site (with the early denarius hoard being kept by the family), or a hoard that may have come from elsewhere in the country (due to such a late chronology). The idea of the hoard having come from elsewhere in the country may be supported by the presence of just a single siliqua being assigned elsewhere in Lancashire, implying that these later denominations are not something frequently found in the area (see Chapter 9.3 for further discussion).

The other two denominations to reach a sample of over 200 coins is the denarius and the radiate, with 231 and 245 coins respectively. On the surface, this may imply a system of high value exchange taking place in Lancashire, with Roman forts at Ribchester and Lancaster, and potentially another smaller scale fort at Kirkham, it is possible that the emphasis on military presence in Lancashire may go some way to explain the abundance of silver issues in the county.

When looking at denominations in the synthesised dataset (see Appendix Two), there are no aureui present. However, the material analysis of the synthesised data, suggests there are 11 gold coins from Lancashire, which almost certainly would have to be aureui. Contrastingly, the primary data only provides evidence for two of these highest value coins. This further highlights the lack of consistency in reporting, between recording denomination and recording primary material type.

When analysing the primary sample, we can see that only 116 out of the 1466 coins (8%) are assigned to the nummus group. This may suggest that the available evidence stored at the museums represent the higher denomination groups, and that available samples may be skewed towards this. It seems likely that this is due to the acquisition process of museum collections. For example, coins of higher denominations like denarius and radiates (which are more common in the primary sample) are usually in better condition for display and require less conservation costs and work. Furthermore, if the nummus is a frequently found coin in the North West, as the synthesised sample would have us believe, then museum bias may also play a role in this aspect, with coins that are rare being chosen for acquisition over those that are commonly occurring, due to the lack of museum budgets with regard to new acquisitions. Finally, the museum sector is under increased pressure and a lack of funding and as such cannot acquire everything into their collection. This thereforemay go some way to explain why the ratios of the third century, low value nummus is different between the synthesised and primary datasets.

7.2.1 Site vs Hoards

Detailed information was gathered for 13 hoards, which equates to 741 (51%) of the collected coins. Through analysing denomination by hoard and site breakdown, we may be able to make more detailed assertions as to the process of hoarding in Lancashire, compared with the synthesised data, which only contained information for five hoards.

It is apparent that coins from hoards compose the majority of the siliqua and radiate denominations, with 385 and 207 coins respectively (Figure 7.2.1-1). Hoard coins can also be found in several other denomination groups; denarius (80 coins), as (12 coins), dupondius (two coins), nummus (33 coins), semis (one coin), sestertius (seven coins) and tetradrachm (two coins) as well as two hoard coins with unrecorded denomination.

The two tetradrachm coins are interesting as they are ancient Greek silver units, which are relatively rare in Britain, with only 57 in total being recorded by the Portable Antiquities Scheme (PAS 2019). However, the PAS evidence does suggest that there is further evidence for tetradrachm in the North of England, with examples also found in South Tyneside (NCL-AE9AE1) and Yorkshire and the Humber (YORYM-14EDD8). Although, the majority of the PAS data would suggest these denominations are more common in the Midlands, South East and South West. The two issues from the Lancashire dataset are associated with the Fishergate Hill hoard from Preston, which is a small hoard of only eight coins, discovered in 1939 by a child digging an air-raid shelter at Beech Street near the old railway station (Harris Museum 2010).

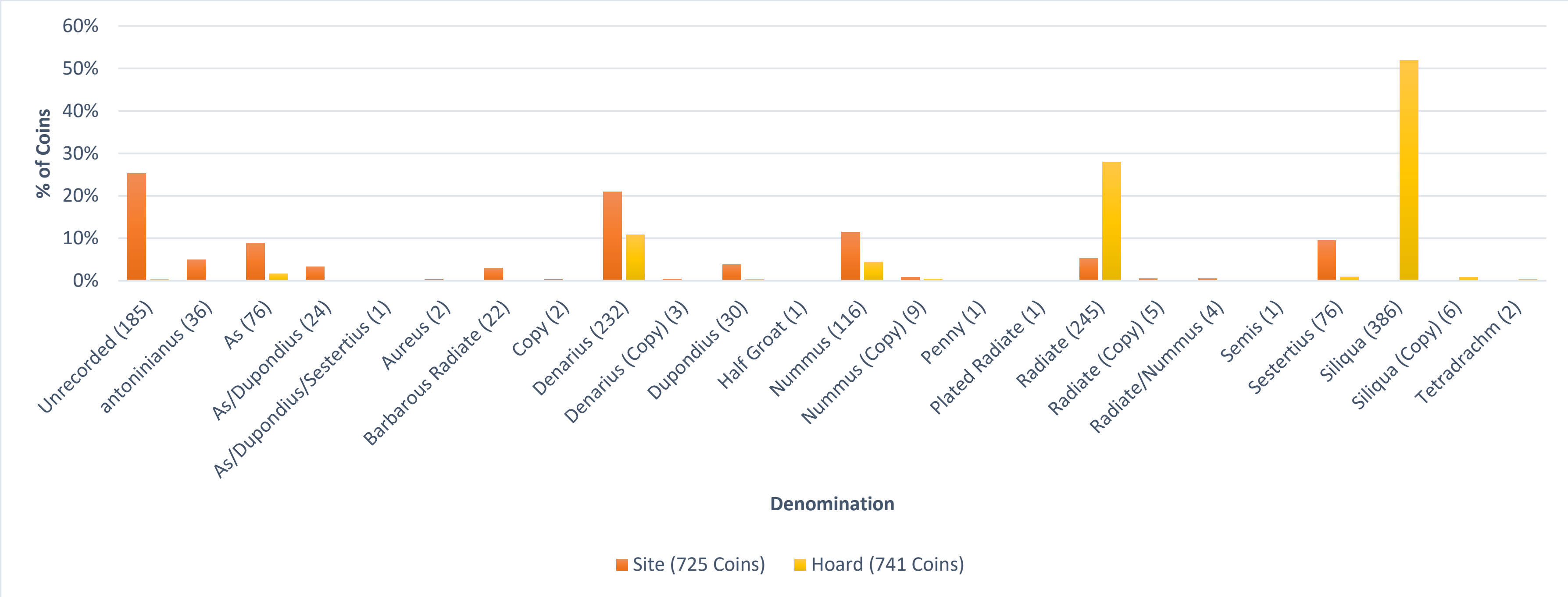


Figure 7.2.1-1 Distribution of Denominations in Individual Coins and Hoard Coins

The hoard evidence from the synthesised dataset (See Appendix Two: 14.2) showed that no coins from hoards belonged to any of the unofficial groups. Contrastingly, the primary data provides evidence of 10 unofficial coins making their way into hoards; the denominations represented by the unofficial coinage are nummus (copy), radiate (copy) and siliqua (copy), with evidence for three, one and six coins per denomination respectively. When considered as a whole, these unofficial issues represent only 1% of the overall hoard sample, thus suggesting that official denominations were more likely to be hoarded. This may be due to the standardising of metal content that is associated with Imperial coinage and as such, hoarded coins could be associated with a known value. However, the small evidence of unofficial coins making their way into hoards is important, as it allows us to re-evaluate how coinage was accepted in society and poses questions as to whether the people hoarding were aware that these ten coins were unofficial copies.

When comparing the denominations of both the hoard and site evidence, we can also see that the denominations antoninianus, aureus and barbarous radiate do not appear in hoards at all. This is interesting, as it suggests that the highest value coins (aureui) and potentially the lowest value coins are excluded from hoards. One reason for this could be due to the lack of gold coins in circulation, indeed only 11 gold coins from the whole Lancashire dataset were identified, suggesting that gold issues were not likely to be circulating freely amongst the population. Furthermore, unofficial issues, that are likely to be locally made copies potentially used to account for the shortfall in circulation, would be unlikely to be produced only to be buried. In addition, the variable design quality of these issues may mean they would be less likely to be hoarded, as they would not hold much value when recovered. At least, official issues would still hold value in their physical metal content, even if their economic value had diminished since they had been buried in a hoard.

In addition, the groups recorded where denomination is not certain (e.g., as/dupondius) do not appear in hoards, implying that hoarded coins tend to be either well preserved enough for full record, or that hoards themselves are more likely to undergo a more detailed recording process.

If we analyse this further, we can begin to interpret the compositions of individual hoards within Lancashire in order to ascertain how denominations may be distributed between them. The evidence supplied from the synthesised hoards (Appendix Two) suggested that the vast majority tend to be composed of a single denomination, apart from the Carnforth hoard. However, the primary data from Lancashire coins provides information for 13 hoards, as opposed to just five from the synthesised sample.

	Unrecorded	As	Denarius	Dupondius	Nummus	Nummus (Copy)	Radiate	Radiate (Copy)	Semis	Sestertius	Siliqua	Siliqua (Copy)	Tetradrachm
Kelbrook	-	-	8	-	-	-	-	-	-	-	-	-	-
Preesall	1	-	-	-	-	-	45	-	-	-	-	-	-
Lytham	-	-	-	-	16	-	-	-	-	-	-	-	-
Brindle	1	-	-	-	17	3	-	-	-	-	-	-	-
Dolphinholme	-	-	3	-	-	-	-	-	-	-	-	-	-
Rossall Fleetwood	-	-	-	-	-	-	-	-	-	-	385	6	-
Worden	-	-	-	-	-	-	107	1	-	-	-	-	-
Carnforth	-	6	-	1	-	-	-	-	-	3	-	-	-
Fishergate Hill	-	-	-	-	-	-	6	-	-	-	-	-	2
Kirkham	-	-	35	-	-	-	-	-	1	-	-	-	-
Thurnham	-	-	4	-	-	-	-	-	-	-	-	-	-
Silverdale	-	-	-	-	-	-	49	-	-	1	-	-	-
Waddington	-	-	30	-	-	-	-	-	-	-	-	-	-

Table 7.2.1-1. A Table to Show the Distribution of Denomination across the Hoards

Before an investigation into the denomination distributions for hoards can take place in depth, it is important to note that some of the hoards in the primary dataset arediscussed in Appendix 2, due to their presence in the synthesised dataset.

The distribution of denominations in hoards are more varied than would be assumed from the synthesised hoard data (Table 7.2.1-1). The primary data shows that only six of the thirteen hoards (46%) are composed of just a single denomination (Kellbrook, Preesall, Lytham, Dolphinholme, Thurnham and Waddington). However, of the seven hoards that are composed of more than one denomination, three of them (Brindle, Rossall Fleetwood and Worden) are composed of a single denomination and unofficial copies of those official denominations. For example, the Rossall Fleetwood hoard is composed of 385 sSiliqua, and six siliqua (Copies).

This suggests that only four hoards identified in the primary data for Lancashire provide evidence for hoards with multiple denominations present in the group (Carnforth, Fishergate Hill, Kirkham and Silverdale).

7.2.2 Official versus Unofficial:

Before a full analysis of the data by area within Lancashire, it is important to consider the presence and quantities of official versus unofficial coin issues as a whole in order to ascertain whether any general trends may exist for the county (see Chapter 4.3 on unofficial coinage).

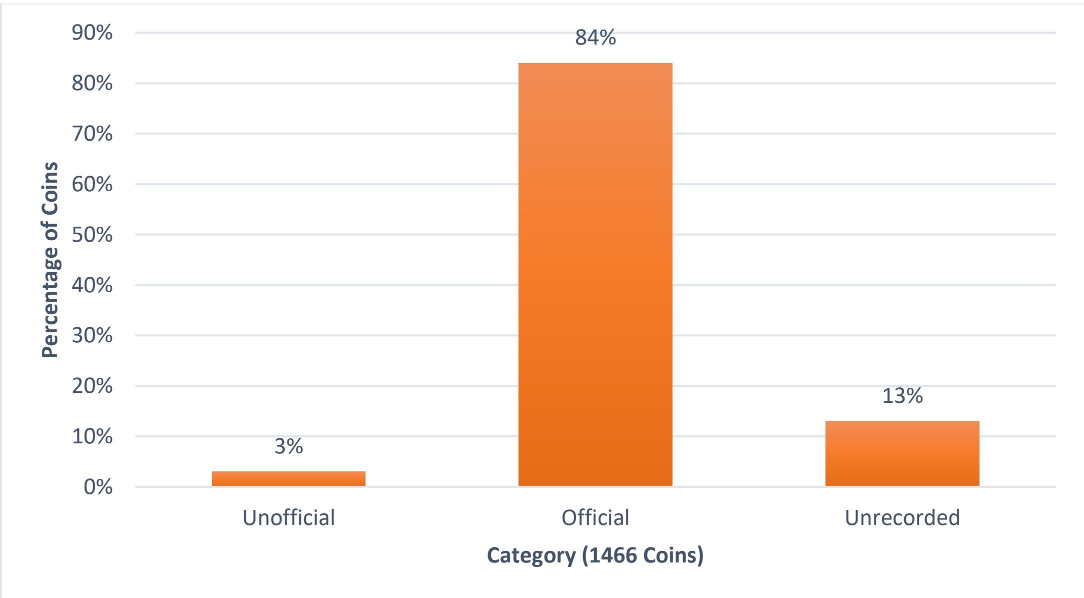


Figure 7.2.2-1. Proportions of Official vs Unofficial coins in the Primary Dataset.

As we can see from the primary data (Figure 7.2.2-1), the number of unofficial coins in the primary sample is only 3%, which is the same as the unofficial coins in the synthesised sample discussed in Appendix 2. This is interesting, as none of the synthesised coins were available for primary analysis, and some coins that were available for primary analysis were not present in synthesised information. The sample for both sets of data are slightly different, yet the proportion of unofficial issues remains the same in both groups. This may confirm that unofficial issues are not as frequently occurring as one might expect in Lancashire.

Furthermore, the proportion of unrecorded denominations in the primary sample is much less at just 13% compared with the synthesised data set, which had 57% of coins with unrecorded denomination. As such, it can be argued that the conclusions reached in this chapter are perhaps more accurate, as denomination has been recorded more consistently. Consequently, this means the proportions of official issues are much higher in the primary dataset (84%), compared with the synthesised dataset (40%). This suggests that the proportion of coins that are unrecorded are more likely to fall into the official category than the unofficial category.

To allow the synthesised data results to be compared with the primary results outlined in this chapter, the sample will be stratified into significant key areas within Lancashire, in order to understand what the coin data may be able to tell us about coin uses in these geographical areas.

7.2.3 Denomination vs Material Type

Denomination	Unrecorded	Billon	Copper Alloy	Silver	Gold
Unrecorded	1		151	34	
antoninianus			35	1	
As			76		
As/Dupondius			24		
As/Dupondius/Sestertius			1		
Aureus					2
Barbarous Radiate			22		
Copy			2		
Denarius				232	
Denarius (Copy)			1	2	
Dupondius			30		
Half Groat				1	
Nummus			116		
Nummus (Copy)			9		
Penny			1		
Plated Radiate			1		
Radiate			182	63	
Radiate (Copy)			3	1	
Radiate/Nummus			4		
Semis			1		
Sestertius			76		
Siliqua					386
Siliqua (Copy)					6
Tetradrachm		2			

Table 7.2.3-1 Denomination vs Material Type in Primary Dataset..

When comparing denomination against material type, we can see a significant similarity with the synthesised data, in that material type appears to be much more likely to be recorded than denomination. This is demonstrated in the unrecorded denomination category. Here, there is a single coin which is unrecorded in terms of both denomination and material type, whilst other coins in the category have only material type recorded, either as copper alloy (151 coins) or silver (20 coins).

If we disregard the unrecorded category, we can see that silver units compose 48% of the overall sample, copper alloy units make up 46%, gold units only represent 0.1% of the overall sample, 7% of coins are unassigned with regard to material type, and there are 0.1% of units assigned as billon.

7.3 Material Type

As we can see from the comparison between material type and denomination above, material type is more frequently recorded. This may be because there can be such subtle differences in denomination (e.g., between Dupondius and Aes), that if a coin has few design characteristics, it can be much more difficult to assign conclusively. By contrast, there are fewer broad material type labels making it easier to assign this aspect.

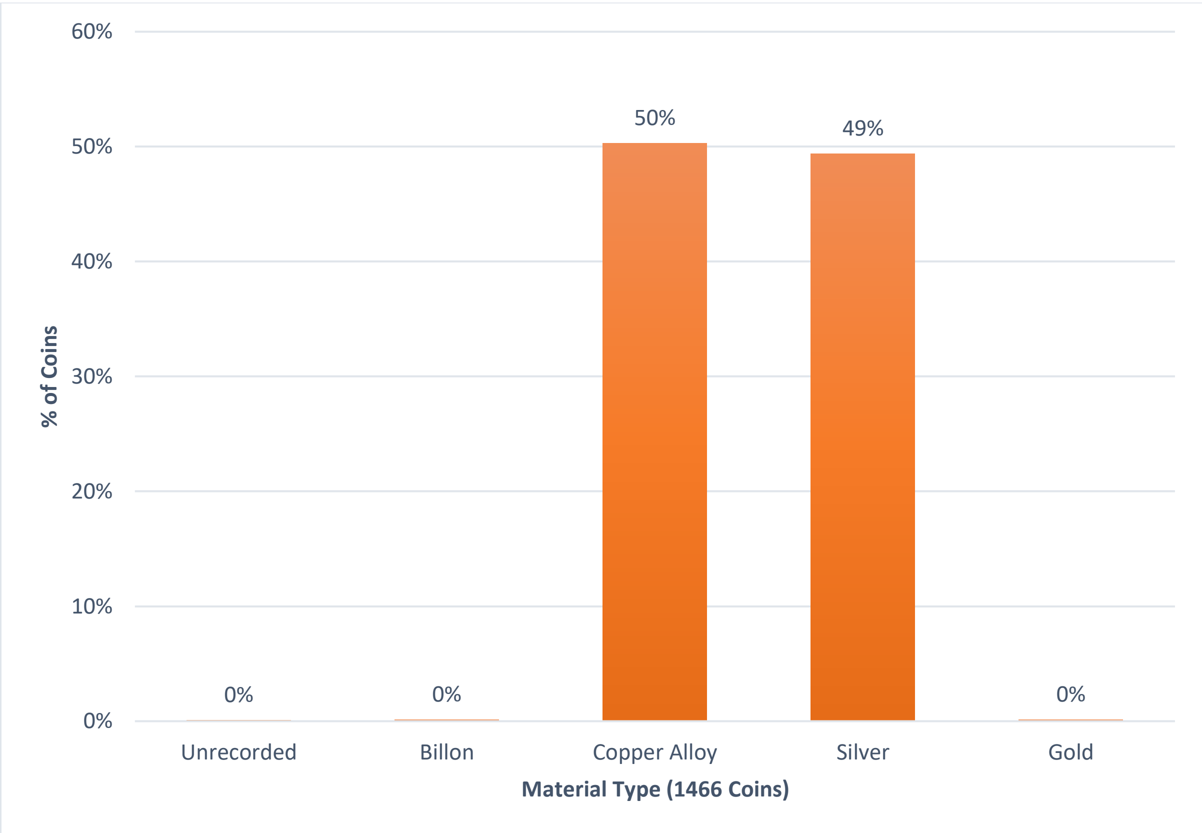


Figure 7.3-1 A Graph to show the Distribution of Material Type.

As we can see from a broad analysis of the whole sample, zero coins have an unassigned material type from the primary sample, which is significantly less than those with unassigned denominations (185 coins).

724 coins (49%) belong to silver units, and 737 coins (50%) belong to copper alloy units (Figure 7.3-1). If we compare this to the synthesised data, 266 coins belonged to silver units, and 1160 coins belonged to copper alloy units. The stark contrast in distributions of the two datasets can be explained by the number of large coin hoard assemblages in the primary sample that contain a higher number of silver units. For example, the synthesised data provided evidence of five hoards, made up of 40 coins. Whereas, the primary data provides information for 13 hoards, which provides evidence for 741 coins (approximately 50% of the primary sample).

7.3.1 Site Finds vs Hoards

The trends outlined above when considering the material type assemblages and the differences between site finds and hoard finds can be explained in more depth using Figure 7.3.1-1 below.

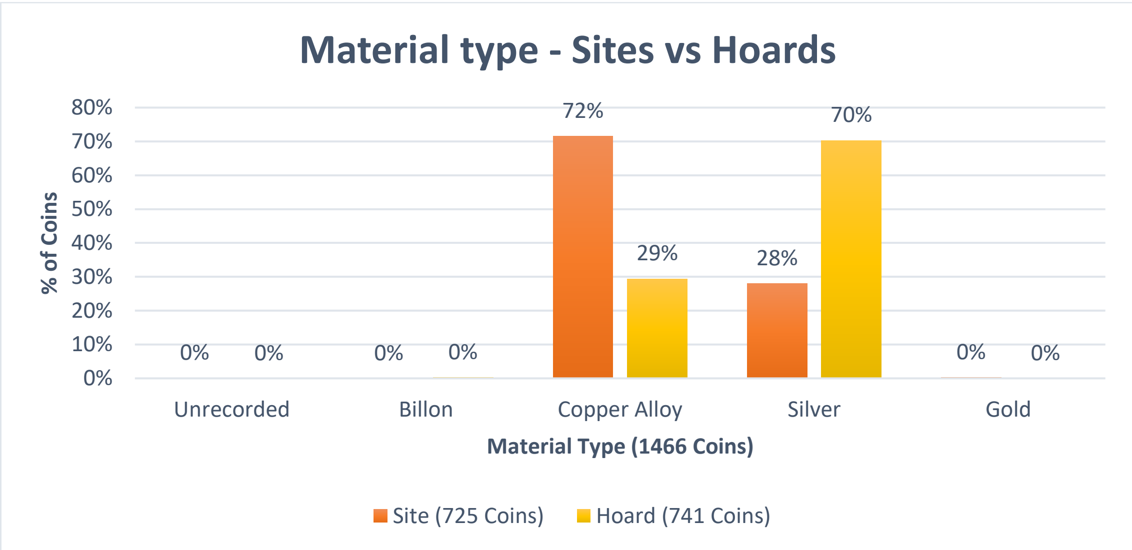


Figure 7.3.1-1 A Graph to Show the Distribution of Material Type in Site Coins vs Hoards.

If we firstly consider the category of unrecorded, we can see that 0% of the sample is unrecorded in terms of material type for both site coins and hoard coins.

Furthermore, we can see the majority of the copper alloy sample is from site finds (519 coins) as opposed to coins found in hoards (218 coins). This suggests that it is less frequent for lower value denominations to be hoarded, possibly because their monetary value is so limited in an increasingly debased economy, and their raw material value is not worth saving.

In contrast, we can see that the vast majority of silver units are associated with hoards (521 coins as opposed to 203 silver units from site finds). Perhaps this is to be expected, as the nature of hoarding practices would imply that it is much more valuable to preserve high value units. If the monetary value of these silver units were unstable, the raw material silver would still be of high value.

It is therefore interesting that the only two examples of gold units are associated with site finds as opposed to being found in a hoard, one would assume both the monetary and intrinsic value of gold would be much higher than any other of the other material types.

There are also two examples of billon units, which would be predominantly made of copper mixtures, with either traces of gold or silver alloyed with it to form the coin. These units are often associated with earlier non-Roman coinage, such as that of the Iron Age or Ancient Greece.

If we examine this further, we can see that most silver units associated with hoards belong to a single hoard (Table 7.3.1-1 below), with all 391 coins of the Rossall Fleetwood hoard being silver.

Furthermore, by separating the hoard data into individual hoards, we can see that the majority of hoards are made up of units of one distinct material type, with the exception of the Fishergate Hill hoard which contains silver, billon, copper alloy and silver units (five, two, and one coin respectively).

Hoard ID	Unrecorded	Billon	Copper Alloy	Silver	Gold
Kelbrook				8	
Preesall with Hackensall			1	45	
Lytham			16		
Brindle			21		
Dolphinholme				3	
Rossall/Fleetwood				391	
Worden			108		
Carnforth			10		
Fishergate Hill		2	1	5	
Kirkham			1	35	
Thurnham				4	
Silverdale			50		
Waddington			26		

Table 7.3.1-1. Distribution of Material Type in Individual Hoards

7.3.2 Official vs Unofficial

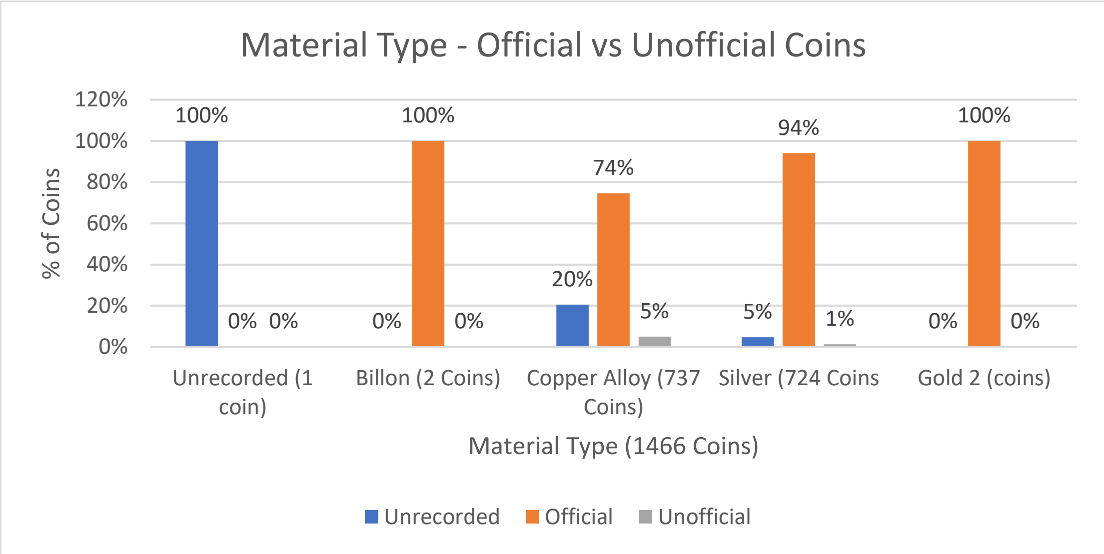


Figure 7.3.2-1. A Graph to Show the Distribution of Material Type in Official vs Unofficial Coins.

If we look at the primary dataset with regards to official and unofficial coins (Figure 7.3.2-1), we can see that the single coin with unrecorded material type was also unrecorded with regard to denomination. The two billon issues and two gold were official mint coins. As far as silver issues are concerned, only 1% (9 coins) are unofficial, with 94% being official issue coins, the remaining 5% were of unknown denomination (681 coins). This may indicate that local coin makers had access to old official silver units that could be melted down and made into unofficial coinage. If this was the case, then it was happening on a very small scale. The most common material type for unofficial issues is copper alloy, with 20% of the copper alloy sample representing unofficial coinage, but this only equates to 37 coins and as such, may suggest that unofficial coinage and the production of these locally made issues was at a small scale in Lancashire.

7.4 Chronology

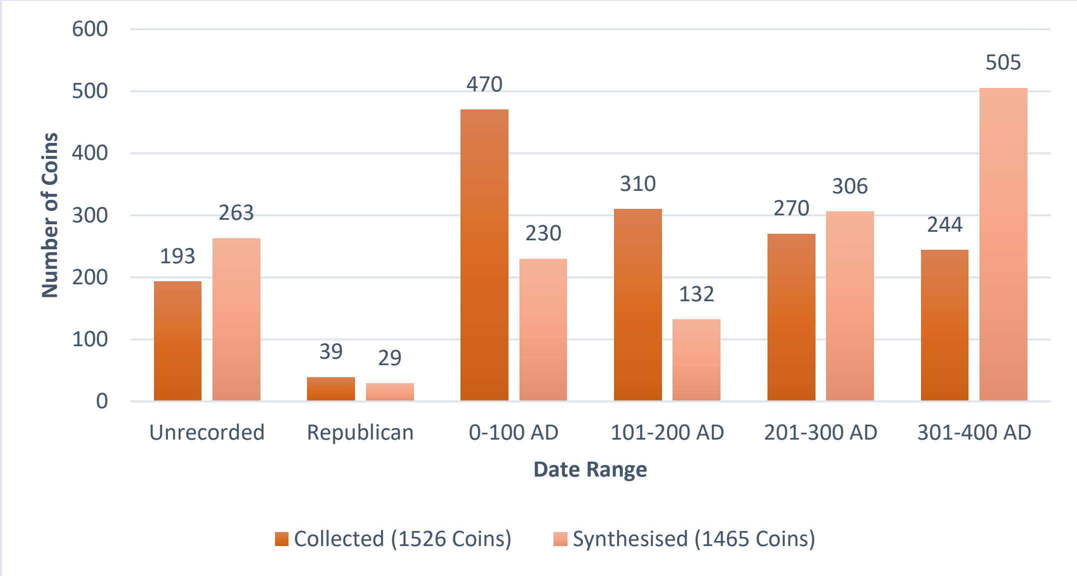


Figure 7.4-1 A Graph to Show the Chronological Comparison by Century for the Primary and Synthesised Datasets.

Arguably, the dating evidence from the primary sample provides a stark contrast with the synthesised results discussed in Appendix 2. Only two categories in the primary dataset contained over 300 coins, and that is during the third century (306 coins) and the fourth century (505 coins). In contrast, the only periods to reach over 300 coins in the synthesised data were the first (470 coins) and second (310 coins) centuries. Arguably, this may be due to the predominance of coin hoards in the primary sample, with hoard coins making up 51% of the overall sample. However, it is important to note that hoards are composed of individual coins that were later gathered and buried as a unified entity. As such, whilst the increase in later coins may be due to the frequency of later coin hoards in the sample, they would have initially circulated as individual coins.

In order to collate the dating information, the earliest date of the Emperor was used, as that is the earliest date in which the coins would have come into existence. Consequently, the primary data set may suggest an initial occupation phase in the first century in Lancashire, followed by a period of decline in the second century. This decline later saw a resurgence in coin use during the third and fourth centuries (Figure 7.4-1). However, following the fourth century, we can potentially see that no new coins were being circulated as far as Lancashire. It is impossible to calculate how long individual coins were circulated for before they ended up in Lancashire, or how long they were circulated within Lancashire before they were buried, however this data can provide some broad evidence towards the changing state and acceptance of a coin-based economy. For example, no Emperors are represented by official issues after Honorius, with convention suggesting an abandonment of Britain by Rome in 410 AD. This indicates that no new official Roman issues would have made their way into Britain during this time, and instead the economy would rely on pre-existing issues already in circulation.

As with the synthesised data, if we categorise the primary data set into Reece periods, we can begin to go beyond broad century groupings and compare the frequency of coin issues in more specific chronological periods, that will enable us to compare the data on a site-by-site basis.

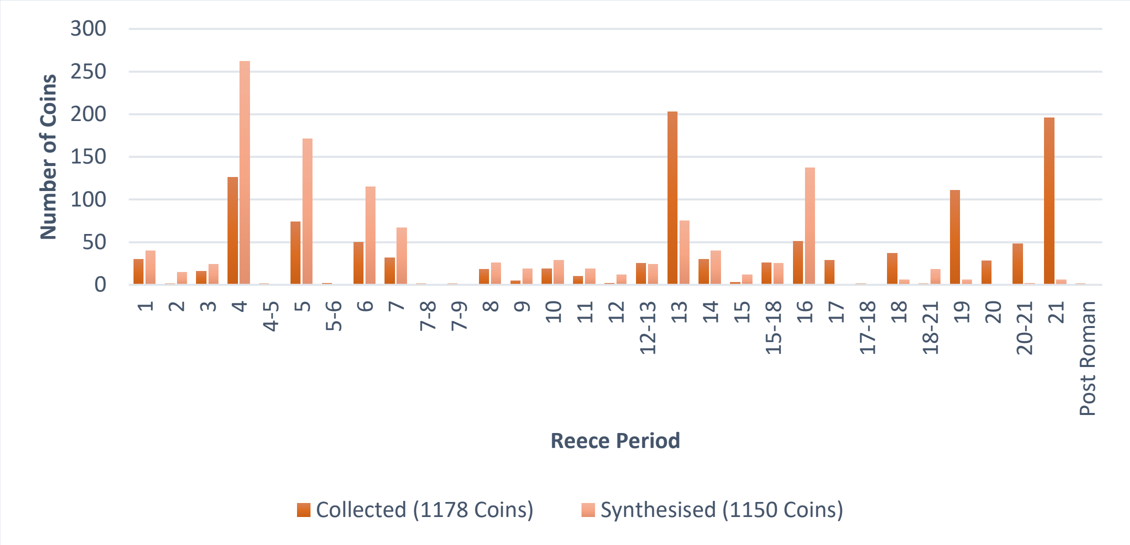


Figure 7.4-2. A Graph to Show the Chronological Comparison by Reece Period for the Primary and Synthesised Datasets.

By looking at more precise chronological groupings, such as that of Reece Period, we can begin to see more specific trends in the data available for the whole of Lancashire. For example, only two categories contain a sample of over 150 coins; period 13 and period 21, which represent dating groups 260-275 AD and 388-402 AD. This is a stark contrast to the results displayed in the synthesised section of this thesis (Appendix 2), which showed a predominance of much earlier coinage, ranging from periods four to six (69-138 AD). Furthermore, the synthesised data only displayed six coins associated with period 21, which contrasts with the primary sample represented above which contains 196 coins for this period (Figure 7.4-2). These coins are from three distinct areas: single units in Garstang and the Brindle hoard, and 194 issues from the Rossall Fleetwood hoard, suggesting that the high proportion of coins associated with hoard finds in the primary sample may account for this contrast between synthesised and primary samples. A comparison between hoard and site coins for the primary sample is to follow in this chapter, and this breakdown may enable further interpretations as to the disparity in chronological groupings between the two datasets.

By comparing this data to Reece's British Mean we can begin to look at any similarities or differences between the Lancashire data and the British average. To do this, the Lancashire data set was converted into its *per mill* value, by dividing the number of coins in the Reece Period by the number of coins in the dated assemblage (1526), and then multiplied by 1000 (See Figure 7.4-3).

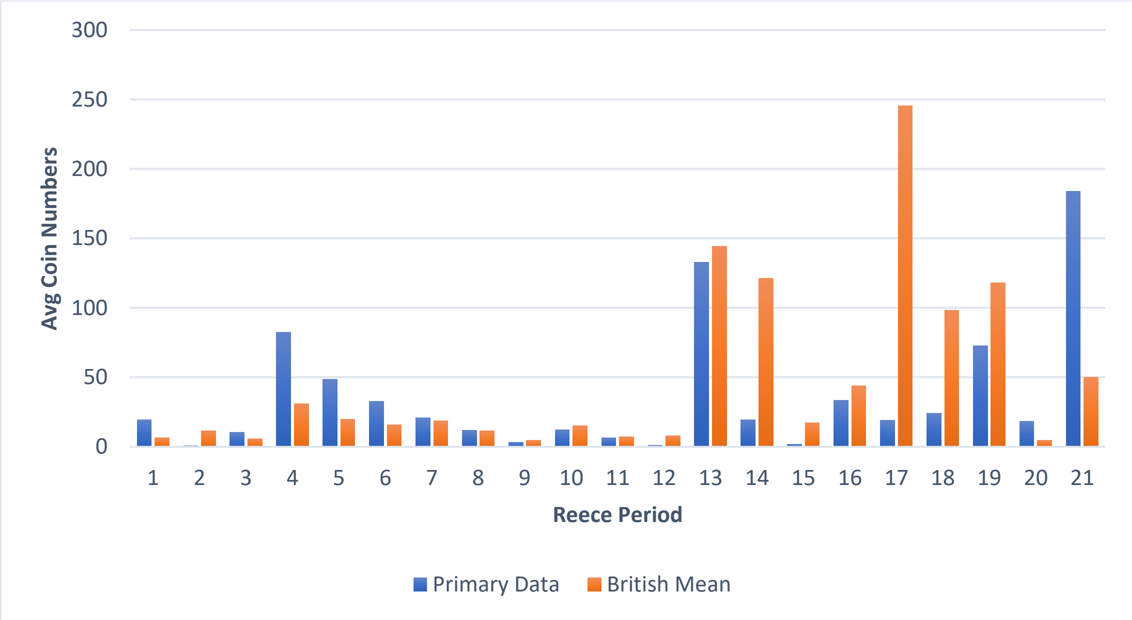


Figure 7.4-3 Comparison between Primary data set (coins per mill) and Reece's British Mean

As demonstrated above, there is slightly higher coin loss in the Lancashire data for the early periods (one to six) compared with the British Mean, becoming particularly apparent in periods four to six (AD 69-138). This coincides with the movement of soldiers to the north of England and may represent higher proportions of coinage making their way to Lancashire as a result of this. For example, the current interpretations for the Roman fort at Ribchester suggests an initial occupation in AD 72, as we know soldiers were paid in coin, the increase in Lancashire compared to the British Mean may represent a larger amount of coinage in the area, leading to higher levels of coin loss.

Between periods thirteen and nineteen (AD 260-378) we can see that the British Mean remains higher than the coins found in Lancashire for these periods, suggesting that the average British coin loss for these periods is slightly higher than this data would have us believe. This might be associated with the movement of the military out of these northern zones over the course of the third and fourth centuries and coincides with the abandonment of the fort areas. This may imply coinage was being used less during these periods and instead indicates the potential for other forms of exchange to be more dominant.

Compared to the British Mean there are substantially more coins associated with period 21 in the Lancashire data, and again this is due to the presence of the Rossall Fleetwood hoard. This can be seen to skew the data for this period and cannot be considered an accurate representation of a difference in coin loss between Lancashire and the rest of Britain for this period.

7.4.1 Sites vs Hoard

As can be seen above, by comparing the number of coins per Reece Period we can begin to explore key time periods and analyse whether particular political, social or economic factors may have influenced coin production and use across the lifespan of the Romano-British period. By analysing this further and considering the distribution of site finds compared to the distribution of coins in hoards, we can begin to look for key time periods which may be linked to an increase in hoarding activities.

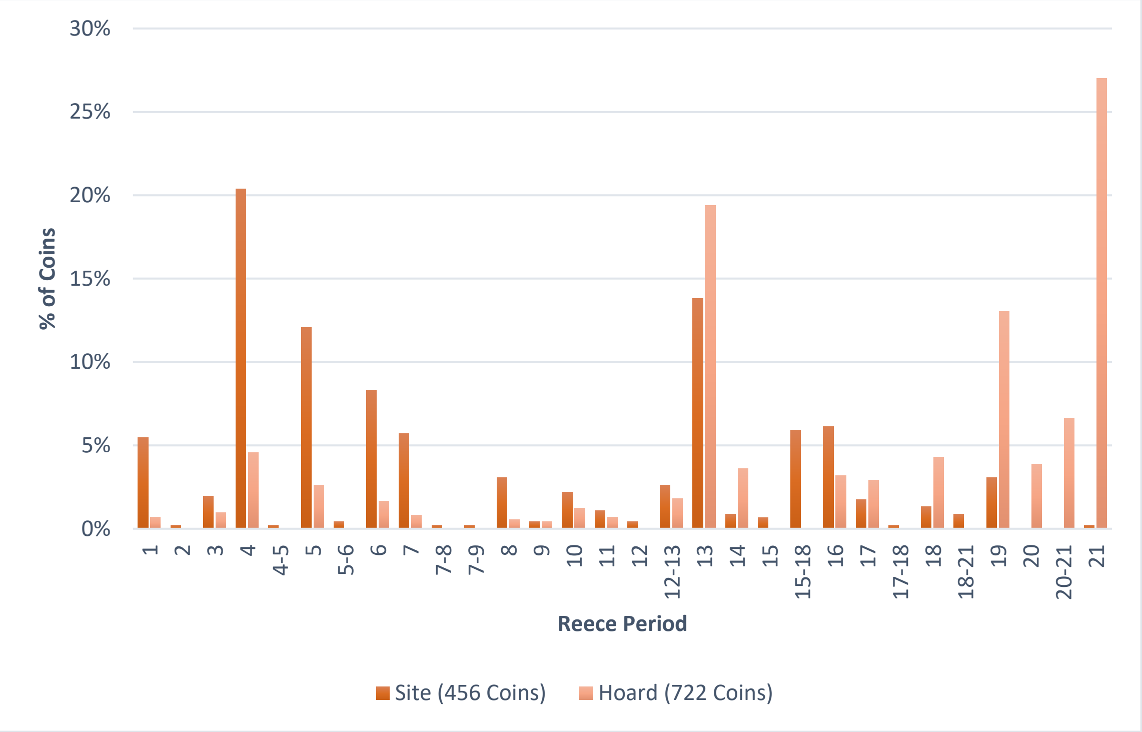


Figure 7.4.1-1 A Graph to Show the Chronological Distribution in Site vs Hoards Coins

Figure 7.4.1-1 above, offers an initial insight into this line of questioning. As can be seen from period 13 onwards, there are more likely to be more hoard coins associated with later periods than site finds. However, if we consider the earlier periods, whilst there generally seems to be an increase in site find quantities compared with hoard finds, the middle periods (periods 8-13) seem to have consistent numbers of both groups.

The nature of hoarding has been a consistent subject in archaeological debate, with the earliest systematic discussion of Roman hoards being considered by Blanchett in 1900. This discussion occurred during a time of increased political tensions between France and Germany, and therefore the review may have been influenced by the political sensitives of the time (Guest 2015, 101). As a result, hoarding became associated with hiding wealth in the face of danger, with the assumption being it would be retrieved when the perceived threat had passes. The failure to retrieve the hoard was taken as a sign that the hoarder had become incapacitated due to the threat and was therefore unable to recover the hoard. Blanchett's hypothesis for the deposition of hoarding can be seen to be influential in the development of our understanding of Roman chronology. For example, the Bulgarian scholar Gerov (1977) used the archaeological evidence of Roman coin hoards from the second and third centuries as indicators of multiple barbarian invasions from Bulgaria to Romania (Guest 2015, 102). From the 1970s these interpretations were expanded, with hoards associated with 'peaceful' periods used to explore alternative motives for hoarding practices. These were considered as savings hoards and tended to focus on the phenomenon being associated with periods of economic crisis or tax avoidance (Aitchison 1988, 273, Haselgrove and Krmnicek 2012, 238, Bland *et al.* 2020, 59), as such deposition of hoards became linked to later periods of Romano-British chronology, particularly the third century. However, it has become increasingly recognised that perhaps hoards were also buried without the intent of recovery. This is exemplified by the Frome hoard, where it is noted that the thin nature of the pot containing the coins, could not have held the 160kg of coins buried within it (Bland 2015, 12). This suggests that the pot would have had to have been placed in the ground first, with the coins then added (Bland 2020, 68). The careful excavation of the hoard suggests that the coins were then added in ten layers, with most of the Carausian coins (the latest coins in the hoard) being found more than halfway down the vessel, and the Carausian coins that were located near the top, were amongst earlier coins within the hoard, this suggests that the hoard was buried within a single event (Bland 2015, 12). Furthermore, a hoard of silver siliquae was also found in the same field, dating to 100 years later than the Frome hoard, which may suggest that this was a scared field, with the hoards taking on a religious or votive nature, and therefore were not intended on being recovered at all (Bland 2015, 12). As demonstrated the motive for burial has been open to much debate through archaeological discourse and therefore it is also important to consider the nature of a hoard's composition. For example, savings hoards are thought to be more likely to contain coinage of high denomination of earlier periods, as the quality of the metal is much higher than coins of later periods, and therefore they would be more valuable as precious metal (Aitchison 1988, 272). However, looking at the general distribution of coins associated with hoards, it has already been suggested that the majority of hoarded coins belong to later periods, where debasement would have had an impact on the quality of the metal content. Bland *et al.* (2020, 69) suggests that in these instances the hoard would have become economically valueless and therefore it wasn't worthwhile retrieving the hoard at all, which may explain why some hoards were not recovered when buildings were demolished or rebuilt. The fact that many of the Lancashire hoards are of later date, associated with these periods of debasement, may imply that they are less likely to be associated with savings hoards but may represent an entirely different social phenomenon. Alternatively, this broad observation of hoarding, and savings hoards is ill founded. Guest (2015, 104) highlights that the academic study of Roman coin hoards has proven 'to be remarkably resilient to change', with Bland *et al.* (2020, 59) suggesting that interpretations of hoards tend to 'over-rely on a limited range of explanations.' Therefore, hoards are still often being perceived as being buried with the intent to recover, and the lack of recovery taken to mean that the 'threat' prevailed. In order to test this theory further we can break down these general chronological observations and consider the Reece period distributions of each hoard separately (Table 7.4.1-1).

The data suggests that whilst there is a broad range of periods represented by the 13 hoards in the primary dataset for this study, the predominance of later coinage is noteworthy. Periods 10-21 (193-402 AD) contain 635 coins out of 735 hoard coins, with Period 21 containing the most coinage of these groups (195 coins). This result is due to the Rossall Fleetwood hoard containing 410 coins all belonging to the fourth century. The predominance of later coinage would suggest that at least eight of these hoards have deposition dates from the third century onwards. The third century is credited with being a significant period for the debasement of coinage. This would indicate that the intrinsic metal quality of the hoards is not as high as coin hoards of an earlier date. Consequently, this may change the way we look at the context behind the burial of hoards as it suggests that later coin hoards actually held little value and would be less useful as savings, which may indicate why they were not recovered.

	Unrecorded	1	2	3	4	4-5	5	5-6	6	7	7-8	7-9	8	9	10	11	12	12-13	13	14	15	15-18	16	17	17-18	18	18-21	19	20	20-21	21
Site Coins	262	25	1	9	93	1	55	2	38	26	1	1	14	2	10	5	2	12	63	4	3	27	28	8	1	6	4	14	0	0	1
Kelbrook				2	3		2						1																		
Lytham																							4	2		4					
Dolpinholme		3																													
Carnforth					10																										
Thurnham		1			1					1				1																	
Silverdale	4						1												1	23											
Carnforth					10																										
Waddington				3	5		12		10																						
Preesall							1											5	40												
Brindle	1																						5	5				1		13	1
Rossall Fleetwood	7																						13	13		27		93	28	35	194
Worden																		8	97	3											
Fishergate Hill																			2		1		1	1		1					
Kirkham		1		2	4		3		2	5			3	2	9s	5															

Table 7.4.1-1 Chronological Breakdown between Hoards

7.4.2 Official versus Unofficial Coinage

If we consider the official versus unofficial coinage from the primary sample, we can also make some interpretations regarding the chronology for the coins. The traditional interpretation for unofficial coinage is that they were produced in higher quantities during the late third and early fourth centuries, due to a dwindling supply of official coinage in Britain as a direct result of diminishing military dominance in the province (Reece 2012, 16).

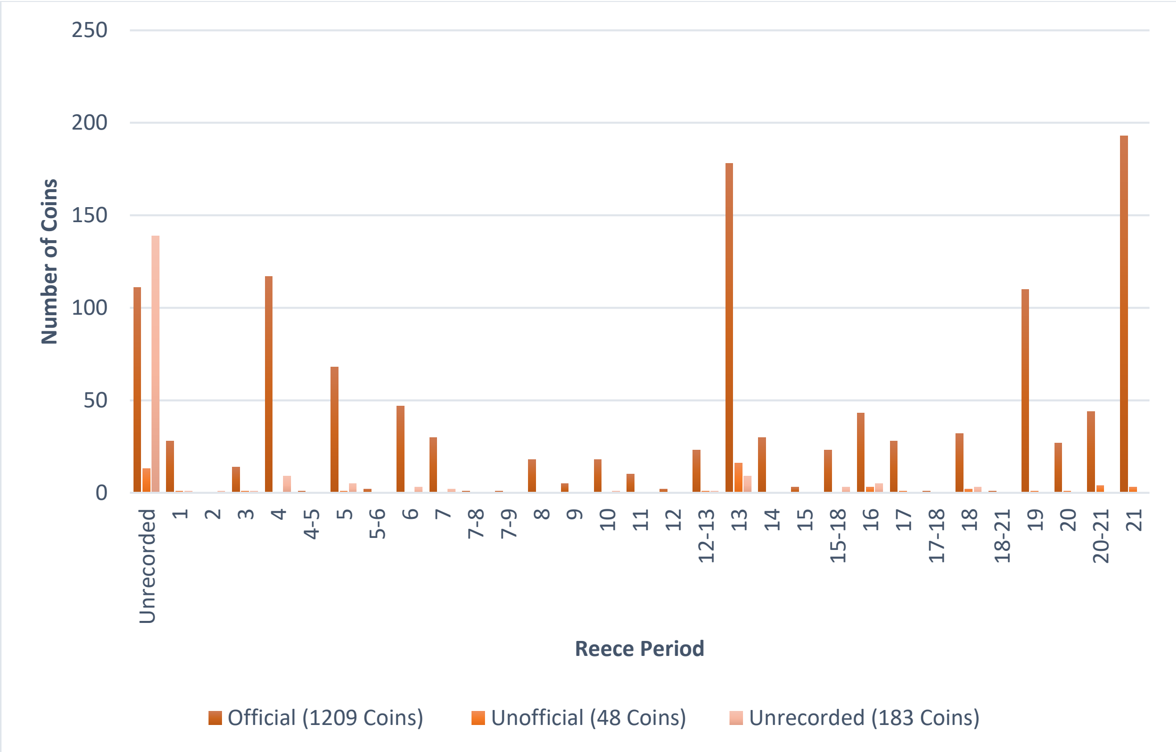


Figure 7.4.2-1. A Graph to Show the Chronological Distribution Between Official and Unofficial Coins.

For the unofficial coin sample, 27% are unrecorded with regards to their dating and cannot be assigned a Reece period (Figure 7.4.2-1). The dating of unofficial coins (or lack thereof) is something that may hinder interpretations of the role of unofficial coinage and the periods in which they were most common. However, the largest known Reece Period containing unofficial coins is Period 13 (260-275 AD), which contains 16 out of 48 coins (33%). Furthermore, if we consider Periods 10-21 (193-402 AD), which span the third century onwards, there are 32 out of 48 unofficial coins (67%). Although there is some evidence of unofficial coins prior to these periods, the predominance of the third century onwards is noteworthy and seems to fit in with the expected trend of the increase in production of this type of coinage.

7.5 Wear

As with the synthesised sample, coin-wear has been a dominant focal point for discussions regarding the circulation of coinage and the Roman economy within archaeological discourses.

The subsequent chapters of this thesis aim to extrapolate the evidence that can be provided by coin wear, by assessing what elements compose this term. However, before this can be undertaken, it is important to consider what the more generalised 'wear' evidence may be indicating about the presence and state of Roman coins found in Lancashire.

For this dataset, the author has assigned a numerical wear value based on the criteria outlined in Chapter 6.3. This enables a level of consistency regarding the definitions of 'wear' used for the recording.

Firstly, it is important to consider what the sample suggests about the condition of coins uncovered in Lancashire, in order to try to ascertain any broad trends within the county.

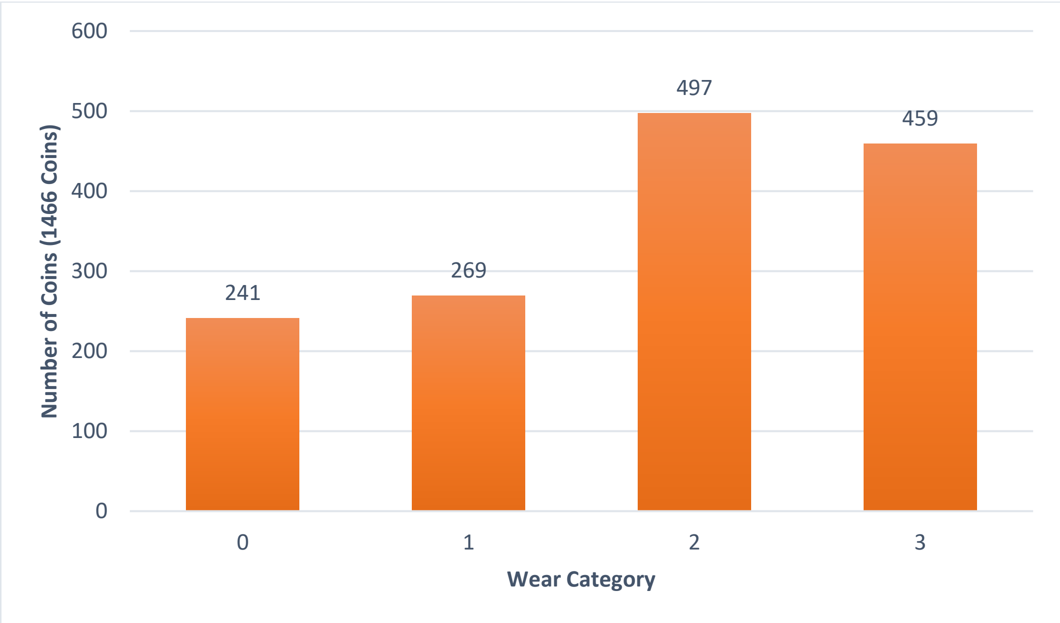


Figure 7.5-1 Distribution of Wear for Whole Sample

Only two wear categories contain over 400 coins, those being category 2 with 497 coins and category 3 with 459 coins (figure 7.5-1). These two categories represent the most worn coins, with category two being slightly worn and category three being worn.

The results for wear during this primary data phase has allowed a much more accurate picture of coin wear in Lancashire to be produced, when compared with the synthesised sample. If we compare the results from the primary and synthesised datasets, we can begin to explore why this might be the case (Figure 7.5-2).

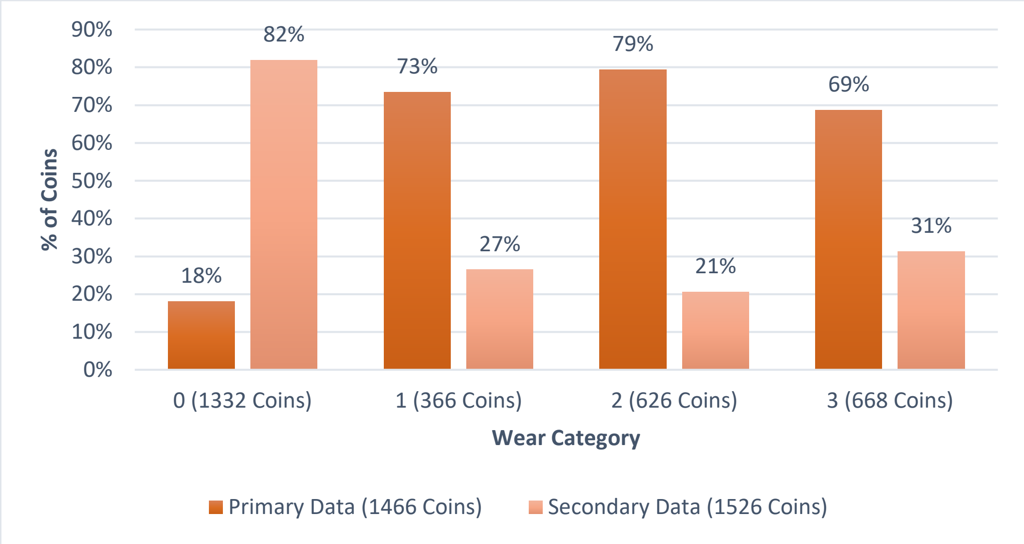


Figure 7.5-2. A Graph to Show the Comparison of Wear between Primary and Synthesised Dataset.

The first initial observation is that the primary dataset provides a much more even distribution of coins between all four wear categories. Additionally, the nature of collection for the primary dataset meant that the majority of the coins represented in the sample could be analysed by the author (with the exception of PAS data, or individual coins missing from a museum collection), and therefore the same standard of recording could be used across the sample. Contrastingly, we can see the effect that the discrepancies in coin reports have on our knowledge, particularly when it comes to wear patterns, by looking at the results provided by the synthesised data. From the synthesised dataset, we can see that the highest wear category is 0, which means that wear is unrecorded as discussed in chapter 6.3. As such, it can be suggested that the more even distribution of wear provided by the primary dataset, with less coins falling into the unknown category, may provide a more accurate depiction of the general state of coin wear across the county of Lancashire.

7.5.1 Site vs Hoard

As with the synthesised data, it is important to consider the differences between individual coins and the coins that compose hoards, in order to ascertain any evidence for the differences in use of coins across these phenomena. It is important to reemphasise that the coins that are uncovered as hoards in archaeological contexts are not produced as a hoard collective, as evidenced by hoards containing coins of different Emperors and time periods. As such, it is the biography of the coin itself and the ways in which human agents interact with individual coins, which leads to them being deposited as a hoard and this may affect the level of wear on these coins when uncovered.

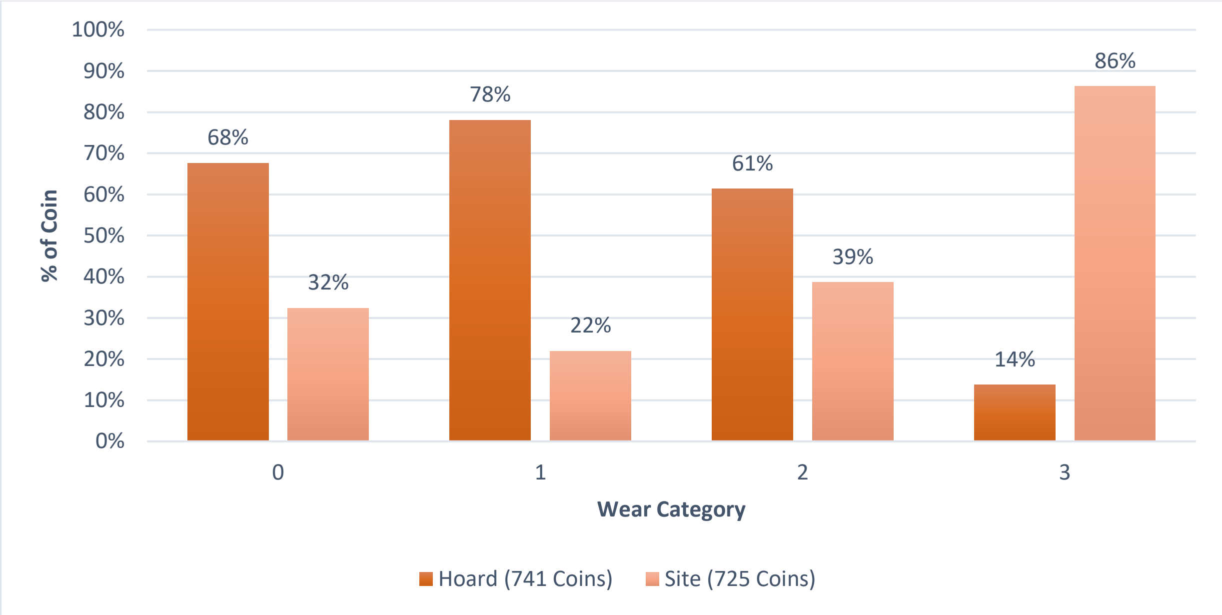


Figure 7.5.1-1 A Graph to Show the Distribution of Wear in Site vs Hoard Coins.

If we look at the evidence provided by the primary sample, we can see that there are some major differences between individual coins, and coins belonging to a hoard (Figure 7.5.1-1). Firstly, individual coins (in this instance referred to as site coins) are much more likely to have a wear category of three than coins found in hoards. Wear category three represents the most worn category, which consequently may uphold the current assumption that coins belonging to hoards are less worn as they have been removed from circulation and are involved in fewer individual transactions.

In contrast, hoard coins are much more likely to belong to wear categories one and two. Categories one and two refer to coins that are unworn and slightly worn. Again, this further solidifies arguments that coins associated with hoards are less worn as they have been involved in fewer transactions than individual coins.

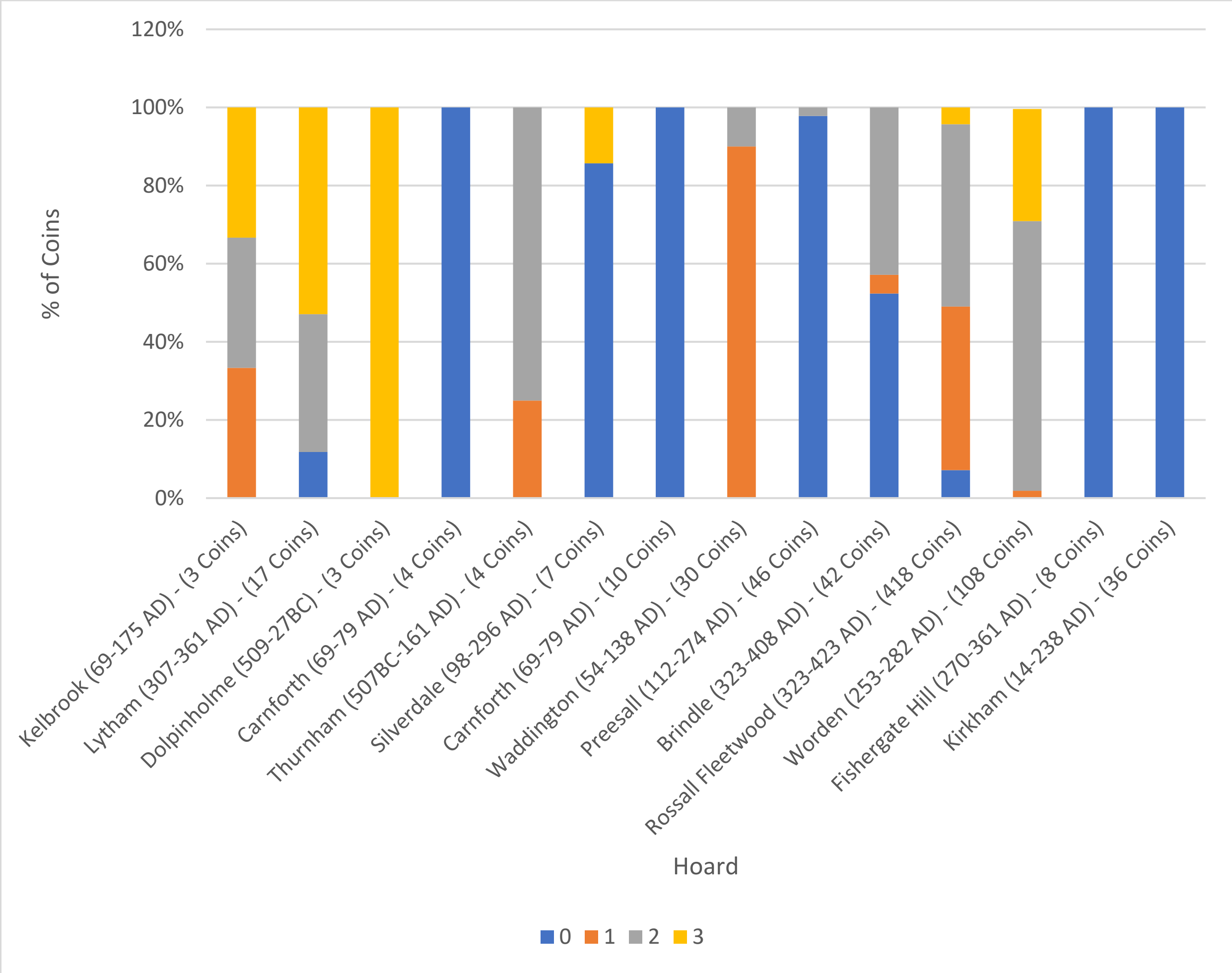


Figure 7.5.1-2. A Graph to Show the Comparison of Wear in Individual Hoards.

Figure 7.5.1-2 provides a breakdown of each hoard in regard to its wear category, in order to ascertain whether older coins are more worn as expected. For example, in the Waddington hoard, the earliest coin remained in circulation for at least 80 years before burial. However, the general wear for this hoard suggests the coins are unworn. This may represent coins that are no longer considered to be legal tender that were kept and later buried as part of a hoard. This can be seen with the Rossall Fleetwood hoard, with the earliest coins being in circulation for at least 100 years before the hoard was buried. Again, the majority of the coins associated with the Rossall Fleetwood hoard fall into the unworn or slightly worn category. Perhaps the most interesting example comes from the Thurnham hoard. The Republican issue has a production date of 125 BC; however, the oldest coin in the hoard dates to AD 192, thus suggesting a potential circulation period of at least 317 years for the Republican issue before the hoard could have been deposited. However, the coins from this hoard are all in the unworn or slightly worn category, with the Republican issues specifically demonstrating only slight wear despite the potential for an over 300 year circulation period. This may suggest an element of choice when it comes to which coins are buried in the hoard, with only high-quality Republican issues being selected. On the other hand, this may also imply that older coinage was not considered legal tender and was therefore involved in fewer transactions. However, the high value of the coin due to its silver content and finesse may have meant it was kept as even if the coin was no longer considered legal currency upon retrieval, the value of its base metal made it worth keeping.

7.5.2 Official vs Unofficial

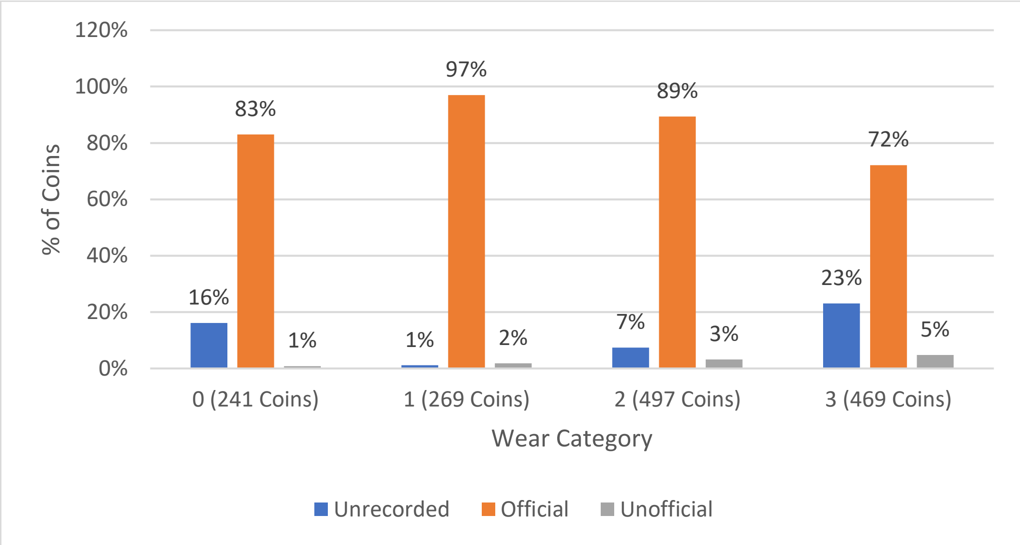


Figure 7.5.2-1. A Graph to Show the Distribution of Wear in Official vs Unofficial Coins.

When compared with the synthesised data the primary sample provides a much more detailed picture of distribution of coin wear in official and unofficial coinage. The synthesised dataset was plagued by a lack of recording with regard to wear. Additionally, the lack of denomination recording also played a part in the significantly high sample of unrecorded coins.

When looking at the primary dataset, we can see a more even distribution of wear patterns across official and unofficial coin denominations when compared with the synthesised results from Appendix Two. The majority of the unofficial coinage falls into category three (the most worn category) with 22 out of the 45 unofficial coins belonging to this group (Figure 7.5.2-1). Contrastingly, only 5 of the 45 unofficial coins belong to category one (being unworn). If we consider the chronological distribution for unofficial coinage (previously discussed in this chapter), we can see that the majority of unofficial coins belong to the third and fourth centuries. As such, by looking at wear alone as the distinct categories used in this part of the analysis, this would suggest that these coins would have been involved in many transactions in order for them to become worn, despite having a much shorter circulation span than coins belonging to the first and second centuries. Consequently, this may imply that by the time unofficial coinage production was occurring in earnest, a coin-using economy had become prominent within Roman Lancashire and as such, their production in order to combat shortfalls in circulation meant that they were being used much more frequently than previous official coinage. However, it is important to highlight that unofficial coinage only composes 3% of the overall dataset from Lancashire.

By extrapolating the concept of wear to encompass what components actually constitute wear, we can begin to look at more detailed and specific trends, regarding the different occurrences of wear between official and unofficial coinage (See Chapter 8).

7.6 Sites

Tables 7.6-1 to 7.6-4 below classifies the 778 site coins from the primary dataset into specific key sites and outlines the proportions of the samples.

	Ribchester (224 coins)	Walton-le-Dale (48 coins)	Lancaster (103 coins)	Kirkham (42 coins)
Unrecorded	32%	62%	22%	6%
antoninianus	0%	0%	32%	0%
As	19%	18%	11%	0%
As/Dupondius	7%	0%	2%	0%
As/Dupondius/Sestertius	0%	0%	0%	0%
Aureus	1%	0%	0%	0%
Barbarous Radiate	2%	0%	0%	0%
Copy	1%	0%	0%	0%
Denarius	12%	10%	17%	86%
Dupondius	6%	4%	3%	2%
Half Groat	0%	0%	0%	0%
Nummus	7%	0%	2%	2%
Penny	0%	0%	0%	0%
Plated Radiate	0%	0%	0%	0%
Radiate	4%	0%	5%	0%
Radiate (Copy)	0%	0%	1%	0%
Semis	0%	0%	0%	2%
Sestertius	9%	6%	5%	2%

Table 7.6-1. Denomination distribution by site

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	Unrecorded	Copper Alloy	Silver	Gold
Ribchester (224 coins)	2	190	30	2
Walton-Le-Dale (48 coins)	0	40	8	0
Lancaster (103 coins)	0	70	34	0
Kirkham (42 coins)	1	5	36	

Table 7.6-2. Distribution of Material Type Across Main Lancashire Sites

	0	1	2	3
Ribchester (224 coins)	17%	4%	17%	63%
Walton-Le-Dale (48 coins)	0%	0%	31%	69%
Lancaster (103 coins)	4%	4%	30%	63%
Kirkham (42 coins)	86%	0%	10%	5%

Table 7.6-3. Distribution of Wear Across Main Lancashire Sites

Reece Period	Ribchester (224 coins)	Walton-le-Dale (48 coins)	Lancaster (103 coins)	Kirkham (42 coins)
Unrecorded	121	32	21	2
1	8	0	1	2
2	0	0	1	0
3	1	2	0	2
4	49	5	10	4
5	15	5	6	4
5-6	0	0	1	0
6	9	3	5	2
7	4	1	4	6
8	1	0	0	3
9	1	0	0	2
10	1	0	0	9
11	1	0	1	5
12	0	0	2	0
12-13	0	0	7	0
13	6	0	29	0
15	0	0	2	0
15-18	1	0	1	0
16	1	0	7	0
18	1	0	1	0
18-21	1	0	0	0
19	3	0	5	1

Table 7.6-4. Distribution of Reece Period Across Main Lancashire Sites

7.6.1 Ribchester

Before conducting an in-depth analysis of the Ribchester data, it is important to note that an additional 56 coins were recorded at Ribchester Roman Museum, which are thought to be associated with the village. However, no distinct contextual information was available for these coins and as such, they could not be definitively assigned to the area. Consequently, they have been excluded from the discussions of Ribchester at this time. For this reason, the primary sample from Ribchester totals 224 coins, and is composed of information from the 1989 fort excavations, the University of Central Lancashire fort excavations, the Bathhouse excavations, as well as information regarding casual finds predominantly recorded on the PAS.

The largest category is the unrecorded category (Table 7.6-1); one reason for this is that the coins from the University of Central Lancashire fort excavations have not yet been fully processed, therefore denomination has not been assigned to the majority of this sample. However, proportionally a much smaller percentage of coins are unrecorded in the primary sample (32%) compared with the synthesised sample (66%), this may again suggest the primary data is likely to provide a more detailed picture of coin distributions at Ribchester.

Where denomination is assigned, only one category contains over 30 coins, that being the as. This is consistent with the data collected from the synthesised sample where the as made up the largest known denomination group. Interestingly, the proportion of sestertius in the primary sample (9%) is three times higher than in the synthesised sample (3%), suggesting a predominance of lower value coins, whilst the proportions of silver denarii are reasonably consistent across the two datasets.

Overall, it can be argued that the primary data is consistent with the synthesised data, despite the individual coins in both datasets not necessarily being the same. For example, some coins from reports were not available for primary data collection, and in the case of the bathhouse where primary data is collected, the report is not yet published and as such does not feature in the synthesised data.

If we look at the Ribchester samples as a single area, we can see that much less of the data falls into the unrecorded category when we consider the coins by material type (two unrecorded coins), compared with 72 coins that were unrecorded by denomination.

The majority of the Ribchester sample are made of copper alloy (190 out of 224 coins; Table 7.6-2). This may imply that more of the data set constitutes lower value denominations than would be suggested by the denomination distribution alone. This is because copper alloy is usually associated with these low value denominations, or unofficial coinage. However, only 3% of the sample from Lancashire has been ascribed as unofficial, which may mean that copper alloy coins with unrecorded denomination are more likely to be official issues.

There are only 30 silver units associated with Ribchester, which represents 13% of the overall sample. This perhaps suggests more frequent day-to-day exchange, which would account for the high proportion of copper alloy (lower value) units. Perhaps in contrast to this, are the two gold units associated with Ribchester. Though it is possible to argue that two high value units are not likely to be representative of frequent high value exchange in the area, it is interesting that these two units represent the only gold coinage in the primary sample from the whole of Lancashire. It is emphasised here that the primary sample is not an exhaustive list of all coins excavated or found in Lancashire, however it does represent a broad cross section of over 1400 coins and as such is taken to be a representative sample.

The broad observations outlined above have allowed us to make interpretations regarding Lancashire as a whole, however it is important to consider the area breakdowns in regard to chronology, to see if there are any indications of area occupation and fluctuations over time.

Chronologically, it is possible that the majority of coins are unrecorded concerning the date (Table 7.6-4). From the data that is available, we can see a predominance of coinage between periods one and seven (509 BC to 161 AD), with a combined total of 86 coins distributed across these categories. Current published interpretations suggest that the fort of Ribchester was established in 69 AD (Buxton and Howard Davis 2000, 46) when the Roman army began to move northwards through England after the initial invasion in 43 AD. As such, it may be suggested that the coins predating Roman occupation of Ribchester may occur as a result of this initial occupation phase, whereby soldiers stationed in this area would be paid in coin, and therefore perpetuating a coin-based economy model.

Following the mid second century, there is a steep decline in coinage, with only 17 coins assigned to Reece periods between Period 8 and Period 21. In this grouping, the highest proportion is assigned to Period 13 (260-275), with six coins attributed to this group. This may demonstrate continued occupation, particularly at the site of the Roman fort, but the extent of this is difficult to establish through the coin evidence alone.

Finally, it is important to consider the impact and significance of wear from coins found in different areas of Lancashire, to establish if we can analyse the more specific trends outlined thus far in this section. Before splitting Ribchester into different sites, and its different phases of fort excavation, it is important to consider how Ribchester as an area fits into the broader picture of Lancashire. Consequently, it is the consideration of this section to look at the evidence from Ribchester as a whole.

A smaller proportion of coins belong in the unrecorded category and subsequently this provides a greater understanding of the general wear trend of the remaining coins which are split between categories one to three (unworn, slightly worn, worn) (Figure 7.6-3). The largest proportion of coins belong to category three (141 out of 224 coins; 63%) and this is conceivably due to Ribchester being the location of one of the most prominent forts in Lancashire. Considering the traditional models of military communities being reliant on coin-using economies, it is perhaps understandable that the wear evidence provided by Ribchester supports this idea; implying that the coins uncovered at Ribchester may have been involved in a more frequent number of transactions than elsewhere in the county. It may be possible to prove or disprove this concept of the military zones having more worn coins when Ribchester is divided into individual sites later in this chapter.

7.6.2 Ribchester in Depth

So far, this chapter has aimed to explore coin denomination in Ribchester as a whole sample, in order to ascertain how the presence of a monetary economy is spread across the county, and how the primary evidence may support or contrast the available published material for Ribchester.

This section aims to explore the area of Ribchester, by considering the denominations from the different excavations and sites that can be found within the village (Table 7.6.2-1), in order to establish how the use and acceptance of the economy is visible in the archaeological record. A further 56 coins were documented and analysed at Ribchester Roman Museum. This assemblage is thought to have been found in Ribchester. However, due to a lack of distinct context for these coins confirming their location they have been excluded from analysis, as they cannot be definitively assigned a location.

The Denomination distributions for the 1989 excavations show the largest proportion of coins belonging to the Aes (37 Coins). Interestingly, there is a Victorian Penny from the 1989 excavations (Buxton and Howard Davis 2000) and a Medieval Half Groat also present in the sample from Ribchester Bathhouse. However, whilst the exact context and findspot of these issues is unknown, it is expected they come from unstratified areas of the excavations.

	1989 Excavations (83 coins)	Bathhouse Excavations (48 coins)	UCLAN Excavations (76 coins)	Casual Finds (18 coins)
Unrecorded	3	12	55	2
As	37	1	1	1
As/Dupondius		15		
As/Dupondius/Sestertius		1		
Aureus				2
Barbarous Radiate			1	3
Copy	2			
Denarius	15	3	3	5
Dupondius			12	1
Half Groat		1		
Nummus		6	9	1
Victorian Penny	1			
Plated Radiate		1		
Radiate			6	3
Radiate (Copy)			1	
Sestertius	13	6		1

Table 7.6.2-1 Distribution of Coin Denominations across the Different Excavations at Ribchester

The coins discussed below represent the coins excavated during the University of Central Lancashire's Ribchester Revisited project. The majority of coins are yet to be assigned denomination as excavations are still ongoing, and extensive post-excavation has yet to take place. Initial examination of the coins for this research have shown that 21 coins can be assigned denomination. Of those 21 coins, the most frequently occurring, with samples of greater than 5 coins, are the nummus (9 coins) and the radiate (6 coins). There is only evidence thus far of two unofficial issues in this sample: the barbarous radiate (1 coin) and a radiate copy (1 coin). 55 coins may have no denomination attached, however it is possible to suggest that many of them may fall into the as, dupondius, and sestertius denomination types, based on the samples from other excavations at Ribchester.

New data for Ribchester from the primary sample comes from the excavations of the Roman Bathhouse in Ribchester that took place in 1979 and revealed 47 coins from the site. Twelve of these coins are unrecorded with regard to denomination (Table 7.6.2-1). A larger number of the coins that have been assigned denomination fall into the lower value copper alloy issues: as, dupondius, nummus, sestertius. The majority of issues fall into the less well defined as/dupondius category, as well as one issue which is recorded as as/dupondius/sestertius due to the relatively poor preservation of the coinage. The frequency of low value denominations may be expected at a bathhouse site, where low levels of exchange or payment would be taking place. This appears to be the case at a number of bathhouses, for example the bathhouse site at Beauport Park, East Sussex (Brodribb *et al.* 1988, 256), where 12 of the 15 coins excavated were of the low value copper alloy denominations as has been found at Ribchester.

The remaining material from the Ribchester sample consists of 15 casual finds. These coins are a combination of objects recorded on the PAS as well as individual finds from elsewhere in Ribchester that cannot be linked to any of the aforementioned sites specifically. From this sample, the most frequently occurring denomination is that of the denarius, with five coins (34%). Interestingly, there are only three unofficial issues, all of which fall into the barbarous radiate category (14% of overall sample). Furthermore, the only evidence of gold aurei issues coming from Lancashire in the collected dataset are both associated with Ribchester casual finds, with two coins being assigned to this denomination. No other aurei have been recorded during the collection of data for this research from the sample selected. As such, it is interesting that the examples all come from this location, though a more precise find spot for these two issues is unknown. Bland and Loriot (2010, 189-190) reference three gold aurei as coming from Ribchester; however these issues are of Probus, Valens and Gratian and therefore cannot be the two issues analysed in this thesis. Interestingly, all three issues mentioned by Bland and Loriot (2010, 189-190) are thought to have been found around the site of the Roman fort, and are all chances finds of the 1800s. Therefore, it may be possible that the two gold aurei analysed in the collected data may also have been located within the for space.

Although the evidence provided by the casual finds is minimal (15 coins), it is possible to argue that the sample suggests the highest quantities for higher value denominations, with the aureus and denarius composing 33% of the overall sample.

If we consider the Ribchester evidence with regard to material type, we can begin to see how this factor can influence and expand upon the evidence provided by denomination.

	Unrecorded	Copper Alloy	Silver	Gold
1989 Excavations (83 coins)	1%	81%	18%	0%
Bathhouse (48 coins)	2%	87%	11%	0%
UCLAN Excavations (76 coins)	0%	94%	6%	0%
Casual Finds (18 coins)	0%	61%	28%	11%

Table 7.6.2-2. Distribution of Material Type Across Ribchester Excavations

The general assumptions of higher proportions of copper alloy coins in an assemblage can be maintained, with the 1989 Roman fort excavations providing evidence of 67 copper alloy units out of a total assemblage of 83 coins (Figure 7.6.2-2). However, it is important to note that the 1989 excavations also produced the largest collection of silver issues from any of the Ribchester data sets included within this study, with 15 silver issues excavated. On the surface, this suggests that the Roman fort is likely to have been a site of low value exchange, which is arguably expected at a military location, where soldiers would have been paid in coin and thus circulated this coinage around and outside the fort space.

The 1976 Roman bathhouse excavations at Ribchester revealed a similar and expected pattern of material type distribution, with copper alloy issues composing 41 out of 47 coins that make up the assemblage. It can be implied that with the bathhouse in close proximity to the fort itself, it is likely the same populations using both areas and as such, the coin supply provided to the soldiers stationed at the fort was circulated around the village as individuals participated in these wider activities.

Supporting the evidence from the 1989 fort excavations, the University of Central Lancashire's fort excavations also demonstrate a high proportion of copper alloy issues inside the fort space itself (94%). Contrastingly, the lowest proportions of silver coins have been associated with these excavations (5%).

The casual finds from Ribchester perhaps provide the most interesting source of information when the assemblages are considered by material type. Here we still see a predominance of copper alloy issues. However, proportionally it is in the casual finds that we see the highest percentage of silver units present in any Ribchester collection, with 28% of coins belonging to this category. Furthermore, the casual finds from the village provide the only two examples of gold coins from Ribchester, and the whole of Lancashire more broadly. As such, it is possible to suggest that exchanges of high value were taking place in the village of Ribchester. The data predominantly focuses on low value exchange, but this data may actually represent two different economies operating alongside each other - one centred around low value everyday exchange (which may be associated with the extramural settlement alongside the fort) and the other focusing on higher value exchange and perhaps representing the military presence within the area.

Chronologically, the data is relatively mixed across all four excavations due to the wealth of data to collect.

	1989 Excavations (83 Coins)	Bathhouse (48 Coins)	UCLAN Excavations (76 Coins)	Casual Finds (18 Coins)
Unrecorded	6%	75%	93%	50%
1	5%	4%	0%	11%
3	1%	0%	0%	0%
4	59%	2%	1%	17%
5	10%	8%	0%	0%
6	8%	4%	0%	0%
7	5%	0%	0%	0%
8	1%	0%	0%	0%
9	1%	0%	0%	0%
10	1%	0%	0%	0%
11	0%	0%	0%	6%
13	2%	0%	0%	17%
15-18	0%	0%	1%	0%
16	0%	2%	0%	0%
18	0%	0%	1%	0%
18-21	0%	0%	1%	0%
19	0%	4%	1%	0%

Table 7.6.2-3. Chronological Comparison Between Main Ribchester Excavations.

The chronological distribution of coins from the 1980 and 1989-1990 excavations of the Ribchester Roman fort show the similar predominance of period four coins that is seen across

Lancashire areas (Table 7.6.2-3). Periods four to six (69-138 AD) contain the most coins from this excavation, equating to 77% of the sample. This would suggest that these excavations captured the earliest stages of fort construction and use with regard to coin evidence. There is minimal coin evidence from later periods, with only nine coins being identified between 138-275 AD. From this evidence alone it may be suggested that a coin-based economy was more prevalent during the initial occuaption phases of the site.

The majority of the bathhouse collection is undated due to the high levels of wear on the coins. As with the 1989 excavations, the dated coins tend to have predominance of belonging to the earlier periods, and as such may also be associated with the early occupation of Ribchester and the establishment of the Roman fort.

The majority of the coins from this excavation have no Reece Period assigned; currently a large proportion of the coins are being analysed off site and have not been able to be physically re-examined for this thesis. As such, only five coins have been assigned to a specific Reece Period. The sample sizes may be exceptionally small, with only one coin assigned to each group and no way of knowing how the other 71 coins would be distributed, however it would seem that there is a focus on later periods, with four out of five coins being assigned between Reece Period 15 and 19 (296-378 AD). If the remaining 71 coins also produced high concentrations in these periods when dated, it may imply that the focus of the University of Central Lancashire fort excavations is on later occupation than the work undertaken during the 1980 and 1989-1990 excavations.

The casual finds from Ribchester show that there are nine coins with an unrecorded Reece Period. The distribution of the remaining nine coins are shown in Table 7.6.2-3 above. Interestingly, four of the nine coins are distributed between Periods 11 and 13 (222-275 AD). With such a small sample size, it is difficult to interpret what these coins contribute to our understanding of occupation periods in Roman Ribchester. However, it is important to emphasise that two of the early coins are the only two gold aurei from the whole of Lancashire, which may suggest some degree of affluence in Ribchester during the initial occupation phases.

Finally, it is important to consider what impact coin wear has on our understanding of Roman Ribchester.

	0	1	2	3
1989 excavations (83 coins)	0%	1%	25%	73%
Bathhouse (48 coins)	0%	4%	13%	83%
UCLAN Excavations (76 coins)	45%	1%	12%	42%
Casual Finds (18 coins)	17%	28%	6%	50%

Table 7.6.2-4. Distribution of Wear Across the Ribchester Excavations.

The coins excavated during the 1989-90 excavations of the Roman fort at Ribchester provide an interesting case study in the distribution of wear across a military site. 99% of the coins from this excavation fall into wear categories two and three (slightly worn and worn), with only a single coin being assigned as unworn (category one) (Table 7.6.2-4) The single unworn coin from this excavation is a silver denarius of Geta dating to 200 AD. Significantly, this example unlike the examples from Lancaster and the PAS, is from a closed context on a structured archaeological excavation. As such, this may allow a more accurate interpretation of the usefulness of coin wear in understanding circulation. The coin itself is associated with Phase 5, or the decline and decay of the fort at Ribchester (Buxton and Howard-Davis 2000, 127), and it has been argued that this phase represents the end of significant activity on this part of the site soon after 200 AD. With the silver denarius being assigned a production date of the same year, it is possible to suggest that it was lost in or around 200 AD and therefore was only in circulation for a very short time before the site was abandoned and it would have been lost in this area, only recovered through archaeological excavation. As such, this would imply that a short lifespan for the coin is a good indicator as to why there is minimal wear to the object.

With regard to the UCLAN sample, it is important to note that the high proportion of coins in wear category 0 (no wear assigned) is due to the 2016 coins currently being examined by David Shotter at the time of analysis and writing, and therefore this group has not been available for analysis during this study. If we consider the remaining coins from the site, we can see a similar distribution to that of the 1989 fort excavations. Wear categories two and three have the most coins of the known groups (56%). Whereas (as with the 1989 excavations) there is only a single example of a coin in wear category one. As such, it is possible to suggest that the coins found on the fort site in Ribchester display evidence of a high monetary economy, whereby coins were being used in multiple transactions leading to them resurfacing in the archaeological record as worn units. As with all previous discussions of wear in this thesis, it is crucial that we caveat this by highlighting the subjective nature of the current wear recording systems and the flaws that are apparent with this method.

Similarly to the Roman fort at Ribchester, the evidence from the Bathhouse provides similar patterns with regards to coin wear. From Table 7.6.2-4 above, we can see that categories two and three are the most commonly occurring, with category one being in the minority with just two coins. The soldiers stationed in the fort may have made up the bulk of bathhouse users and as such, this result can be expected. Visitors to the bathhouse would be using their wages from working in the fort and therefore the same mix of coins would be expected at both sites, and consequently accounts for the similarity in wear patterns shown. This may be supported from the evidence at the fortress baths at Caerleon, where Boon (1986, 29) has suggested that worn aes rarely travel too far from where they are first transacted, first being issued in military pay and then being used to make smaller purchases at markets or in taverns. Therefore, the fact the majority of coins are more worn may further imply frequent visitation to the baths, with these issues being used in small scale day-to-day purchases. However, as previously mentioned in this chapter, discussions of wear cannot exist in isolation, and it is crucial that we take into account the context in which the coins are found on particular sites if we are to understand more about their lifecycles. Unfortunately, Lancashire appears to be plagued by a lack of extensive publication with regards to its excavations, and the bathhouse at Ribchester does not appear to be an exception to this rule. An interim report is available; however, this appears to be out of print. It is argued that coin studies will continue to be understudied and undervalued until we can begin to consider these important artefacts as objects in their own right and explore the impact that an archaeological context has on the coin, rather than just using coinage to date a context.

The only difference we see in the general wear trend at Ribchester occurs when looking at the casual finds that are not associated with a distinct phase of excavation. From the data discussed above, we can see that out of the four wear categories, only two contain over five coins; that being wear categories one and three (unworn and worn). This grouping of coins from Ribchester is unusual as it also contains the only two gold aurei identified in the entire primary sample from Lancashire, which happen to make up two of the coins in the unworn/category one group.

7.6.3 Walton-le-Dale

The primary sample from Walton-le-Dale is significantly less than the data compiled in the synthesised database, with just 48 coins as opposed to 165. However, the results are relatively similar. The largest sample from the primary data was unrecorded with regards to denomination, with 63% of the coins falling into this category. Proportionally, this is somewhat less than in the synthesised data, where 88% of the coins had unrecorded denomination. Where denomination is recorded, the groupings are comparable to the synthesised data, with only the as, denarius, dupondius and sestertius being present. The main contrast between the primary and synthesised data is the absence of any radiates and radiate copies in the primary data associated with Walton-le-Dale, and the primary sample provides evidence of more denarii on the site (five coins in the primary sample, compared to only two in the synthesised sample). The sample from Walton-le-Dale where denomination is known tends to focus on lower value copper alloy issues, which may be indicative of everyday spending activities (Table 7.6-1). There are only 18 coins that have been assigned denomination from the Walton-le-Dale sample, and 13 of those (72%) are made up of these lower value groups: as, dupondius and sestertius. Subsequently, only five coins belong to the higher value silver issue, the denarius. If the assumption that Walton-le-Dale was an industrial site is to be maintained, this kind of division between coinage may be expected as it represents smaller scale everyday exchange.

As far as material type is concerned, we only have two material types associated with the assemblage, copper alloy and silver (Table 7.6-2). There are no units with unassigned denomination, which is in contrast to the 30 units that had no denomination assigned due to poor preservation. As such, it can be argued that the majority of the unrecorded denomination issues are assigned to the copper alloy material type category, implying that they are low value units. The frequency of lower value units at military sites (such as Ribchester discussed above) and industrial sites (Walton-le-Dale) implies some levels of low value, everyday exchange between the two different groups. As discussed in Chapter 2.2.3.2, there does appear to be pre-Roman occupation at Walton-le-Dale which may imply that the industrial activity was conducted and managed by the local, pre-Roman population, who have adopted coinage as a way of exchanging within a military dominated landscape. The fact that the site was also on a major transport route between forts, may also imply that movement was military dominant and therefore coinage became an important method of payment.

If we consider the industrial site of Walton-le-Dale, the majority of coins (32 out of 48) have no dating assigned to them (Table 7.6-4). This is arguably due to the high levels of wear on the coins from this site, meaning an identification of Emperor and as such Reece period could not be assigned. From the remaining 16 coins, we can see that chronologically only early periods are represented, ranging from Period three to Period seven (54-161 AD). The lack of later coins suggests that whilst the known sample distribution is small, there is likely to have been abandonment at the site by the end of the second century. Interestingly, the sample of known dates from Walton-le-Dale, matches the dominant Periods at Ribchester, and as such it can be suggested that trade between the industrial site at Walton-le-Dale and the military site at Ribchester may have been likely.

The evidence provided by Walton–le-Dale may diverge from the normally expected wear pattern for the area. If we consider Walton-le-Dale as a prominent industrial site in Lancashire, rather than a military zone, the evidence is perhaps surprising. The entire primary sample from Walton-le-Dale belongs to categories two and three, with zero coins falling into category one (Table 7.6-3). However, if we consider that a large proportion of trade could have been with military communities then we may expect a larger degree of worn coins, as payments were made in coinage and therefore more money was transferring in these spaces. This could lead to an increase in the circulation of any given coin, which has a subsequent effect on the wear profile at this site.

7.6.4 Lancaster

The primary sample of coins from Lancaster may be significantly smaller than the synthesised data would have us believe (103 coins, as opposed to 477 in synthesised), however much less of the primary sample falls into the unrecorded category (22% primary vs 81% synthesised). Therefore, it is possible to argue that the primary sample, though smaller in coin number, may allow a much more detailed interrogation of the assumptions outlined by the synthesised data. Interestingly, the synthesised data only provides a single example of an antoninianus coin, whereas the primary sample provides evidence for 34 coins of this specific issue. These issues are thought to be the equivalent of two denarii and would be considered a high value coin during the mid-Roman period. Furthermore, this denomination has a very specific chronology, being introduced during the early 200s AD and discontinued by 270 AD. As such, they provide evidence of third century occupation of sites in Lancaster, and the fact that these form the largest denomination group from the area may further imply occupation and acceptance of a coin-based economy during this period. Furthermore, the second largest denomination represented by the synthesised data is that of the denarius, with 17 out of 103 coins (17%) belonging to this group. On the other hand, the synthesised data only provided evidence of 15 out of 477 coins (3%) being denarius. The prevalence of both the antoninianus and the denarius in the primary dataset may suggest a prevalence of higher value issues at Lancaster sites. This is perhaps to be expected of an area with associations with military occupation and activity, as it can be implied that the main populations that would widely accept coin-based economies were those associated with the military who were paid in coin by the Imperial government. The largest denomination group represented in the synthesised data from Lancaster were 18 radiate copies. In contrast, the primary data provides evidence of only one radiate copy associated with the site, and no other imitation issues have been noted as coming from Lancaster in either the primary or synthesised datasets. On the surface, this may suggest that the coin supply in this area was sufficient to meet demand, as locally made imitation issues were not required in Lancaster to the same extent as elsewhere in the country. The evidence also suggests a high proportion of lower value copper alloy issues, with the as, as/dupondius, dupondius, nummus and sestertius equating to 22% (23) of coins when combined. The presence of higher value silver issues and lower value bronze issues indicates that a coin-based economy was likely to be prevalent in the area of Lancaster, with everyday exchanges taking place across the area.

In regard to material types at Lancaster it appears that copper alloy issues are the largest material type of the whole sample, with 70 out of 104 coins belonging to this category. However, in contrast to the evidence from Walton-le-Dale, silver units appear to be present in much higher proportions composing 33% of the sample, as opposed to 17% of the Walton-le-Dale assemblage. This may suggest that whilst all areas of Lancashire see a predominance of copper alloy issues, military sites see a higher proportion of silver units than other areas of daily life (e.g. industrial in Walton-le-Dale).

Chronologically, the results from Lancaster offer quite a contrast to those previously explored at Ribchester and Walton-le-Dale. The evidence where Reece Period can be recorded seems to suggest two distinct phases of coin-based activities occurring in the area. Small-scale activity may be attributed to Periods one to seven (509 BC-161 AD), with 28 out of 104 coins falling within this section. There is evidence of a tombstone in Lancaster dating to the late first century, which may indicate a military presence in this area during this initial occupation phase, which alludes to the *alla Augusta* (Jarrett 1991 ,40). However, the lack of coinage between Periods eight and ten may suggest a period of abandonment during the late second and early third centuries. Following this abandonment, a period of reoccupation seems to occur between Periods eleven and nineteen (222-378 AD), where the majority of the coins found in Lancaster seem to fall, with 55 coins being distributed across these Periods. By the end of the fourth century, the presence of coins decreases possibly suggesting a final period of abandonment in Lancaster during this time.

The sample collected from Lancaster during the primary data phase only contains 104 coins, but wear has been recorded much more consistently based on the author being able to analyse the physical coins as opposed to only the records. Consequently, whilst the sample size may be smaller, the interpretations of the data are much more detailed. Only one category contains over 50 coins, that being wear category three (worn) with a sample of 65 out of 104 (63%) (Figure 7.6-3). This may be expected due to the long-standing militaristic nature of Lancaster, and the presence of a Roman fort at this location.

Interestingly, only four coins from the site belong to category one (unworn). If we consider the dates for these coins using the date of the Emperor represented on the obverse (Table 7.6.4-1).

Condition	Date of Emperor	Number of Coins
1	69-79 AD	1
1	117-138 AD	1
1	138-161 AD	1
1	235-238 AD	1

Table 7.6.4-1 Chronology for Four Unworn Coins from Lancaster.

From this, we can see that one of the unworn coins from the Lancaster sample is dated to the first century AD. It may be possible to argue that early coins such as this would be expected to have higher degrees of wear, based on the potential for a longer circulation period. However, it is important to consider the context of the individual coin, in this instance the museum packaging for the coin, associates it to Bridge Lane with a date of 1856. The only published information that could be identified with this date and location is a reference made by David Shotter (1973), to a hoard uncovered in near Wery Wall, Bridge Lane. The hoard is believed to be composed of over 100 silver denarii, covering a period up to the reign of Marcus Aurelius. Consequently, whilst there is no exact find spot for this coin, the date of discovery, denomination, material type, broad location and Emperor seem to fit the coin in question as belonging to the Wery Wall hoard. Shotter (1973) notes that entries in Dio Cassius (58.15.3) indicate that Trajan recalls old silver coins for processing during his reign. As the coin in question is unworn, it is possible to suggest that after this recall, earlier issues could no longer be used in official transactions.

Although the interpretations that could be made about this coin are far from conclusive, it does serve as another excellent example highlighting the need for coins to be considered as artefacts in their own right. By analysing the information provided by the coin itself, and ensuring in depth publication of these artefacts with regard to context, it is possible to builda much more detailed picture of what is happening in Lancaster and Lancashire more generally.

Furthermore, this example also demonstrates that using a wear category alone as a measurement of the condition of a coin after excavation may not be that useful in allowing archaeologists to interpret the lifecycle of that coin. Particularly, if wear data is then extrapolated and used as an indication of circulation.

7.6.5 Kirkham

In contrast to the previous areas discussed in this chapter, Kirkham is the only example where the sample in the primary database is higher in number than the synthesised data, with 42 coins compared to 23 coins. This is due to the inclusion of the Kirkham hoard where a distinct coin report could not be found for its inclusion in the synthesised sample. Furthermore, the frequency of unrecorded denomination is significantly smaller in the primary sample with only two coins, as opposed to 15 unrecorded coins in the synthesised sample.

The largest denomination represented by the primary data from Kirkham is that of the denarius, which represents 36 out of the 42 coins (86%). This contrasts with the synthesised data, which only provided evidence for two denarii out of the 23 coins (9%). This may imply that there is evidence for wide scale high value exchange in Kirkham. However, it is important to note that 35 of the denarii and the single semis issue were found in Kirkham as part of a hoard, and this may explain the frequency of the denarius in this area sample. The hoard was found in a Samian ware pot in 1853 during road works in Poulton Street (Shotter 1990, Harris Museum 2010). The date ranges for the hoard span from 14 AD to 238 AD (Harris Museum 2019), and therefore the hoard could not have been buried in Kirkham until after 238 AD. The earliest coin in the hoard is a silver denarius of Tiberius, dating from 14-37AD, which provides a good example of a coin being in circulation for over 200 years. Unfortunately, this coin was on display and was unable to be photographed and examined for wear, as it would have been very interesting to see the impact of time on the wear profile of the coin. It is possible that the denarii that compose this hoard may have found their way to Kirkham through circulation and coin-based economic activities, and as such are indicative of acceptance of a coin-using society in this area. Alternatively, they could indicate the activity of collecting, with people keeping coins as personal objects, passed down along familial lines, with support for this argument coming from the relatively low numbers of denarii found in Lancashire as a whole. Brown (2008) has conducted analysis on coins found in burials, predominantly in Roman Britain. This investigation suggests that most coins follow the expected circulation average of 30 to 50 years, outlined by Sutherland

and Carson (1984, 10). However, there are burials dating to the late second and early third centuries whose coins have a broader chronological range, with much earlier coins being placed in these graves (Brown 2008, 126). This may imply that these older coins hold a sentimental value and are being kept for reasons outside of everyday circulation, with Brown (2008, 126) suggesting this sentimental value may see them being used or considered as heirlooms. This may also be supported by evidence from Danish Roman burials, which suggests that most coins in burials were buried centuries after they were produced, and therefore may have had a long biography before their final deposition (Brown 2008, 127). Like with Roman burial evidence, it is possible that coins were being collected over long chronological periods, before ending up as part of a hoard, with the sheer chronological range indicating that these coins may have been passed down through generations. The only other evidence for coin presence in Kirkham is provided by three coins of lower value bronze denominations (dupondius, nummus and sestertius with a single coin representing each issue). Furthermore, as with the synthesised sample, there is no evidence of unofficial coinage being found or associated with Kirkham. It has been previously argued in this section that a coin-based economy is likely in Kirkham due to the high proportions of high value silver issues, however the lack of unofficial coinage calls into question the extent to which this economy was accepted by the wider community. As is the case with Lancaster, it can be argued that the lack of unofficial issues suggests that coin supply was sufficient in the area to meet the needs of coin-using populations.

In regard to material type, Kirkham perhaps deviates from the expected pattern outlined in the previous three area examples, as there is a larger proportion of silver coins than copper alloy. However, it is important to note here that the example of Kirkham is skewed due to the presence of a coin hoard associated with this area. The hoard is composed of 36 coins, with a material breakdown of 35 silver units and one copper alloy unit. As such, the coins outside of the hoard provide information for one unrecorded unit, four copper alloy units and one silver unit. Therefore, when the hoard data is removed from the overall assemblage, we can see a higher proportion of copper alloy coins (67% of the six remaining coins), further reinforcing the pattern of low value exchange occurring in Lancashire, albeit at a small scale in the case of Kirkham.

The chronological evidence from Kirkham also differs between that of Ribchester and Walton-le-Dale. The site shows a concentration of coin data between Periods one and eleven (509 BC-238 AD), which is a much longer chronology for a single concentration of coin activity than any of the other areas explored in this section (Table 7.6-4). From the coin evidence alone, it can be suggested that the occupation of Kirkham spanned from the first century initial Roman contact in the north to the midthird century, with little break in occupation demonstrated in the other areas discussed. After this we can see the abandonment of occupation in Kirkham, with only a single coin being assigned a date after this period. That is one coin belonging to Period 19 (364-378 AD). Excavations at Dowbridge, Kirkham have indicated the potential for an early Roman fort in this area. Three defensive ditches have been identified and each associated with temporary camps in the area (Buxton and Howard Davis 2000b). The third of these defensive ditches has a very distinct profile with the southern side being considerably more vertical than the northern side, matching that of the Punic ditch at Ribchester, interpreted as delineating a temporary fort boundary during periods of reconstruction (Buxton and Howard Davis 2000b, 13). The finds from the potential fort site were few, however the presence of hand-made pottery may indicate interaction between Iron Age populations and the incoming Roman military (Buxton and Howard Davis 2000b, 16). As such, this may represent the initial phases in the adoption of a coin-based economy. A total of 81 sherds of Samian Ware were also uncovered across the three excavated defensive ditches, as well as four amphorae and six mortaria (Buxton and Howard Davis 2000b, 16), all indicative of extensive occupation of the area.

With regards to wear, the evidence from Kirkham is that 36 out of 42 coins have no wear recorded. This is due to a hoard of 36 coins that could not be examined in close detail because they were on display in the Harris Museum, Preston. Much of the contextual evidence could be provided by the museum, which has detailed records regarding each coin in the hoard. However, pictures of these coins were not available and as such, a wear category could not be assigned to them. Only six coins in the sample from Kirkham could be assigned a wear group, and therefore the dataset for this area is perhaps too small to make any solid conclusions. However, it is interesting that all of the coins that could be assigned wear, fall into category two and three (slightly worn and worn). This perhaps fits into broad interpretations that could be made about the area, due to the presence of a potential Roman fort in Kirkham.

7.6.6 PAS

One of the main benefits of using data from the Portable Antiquities Scheme, is that there is a much more detailed level of recording, and consistency across the records. In contrast to the rest of the data for Lancashire, only 10 out of the 361 coins are in the ‘unrecorded’ category for denomination (Figure 7.6.6-1). This only serves to emphasise the effect that a more standardised recording process can have on our understanding and knowledge of Roman coins.

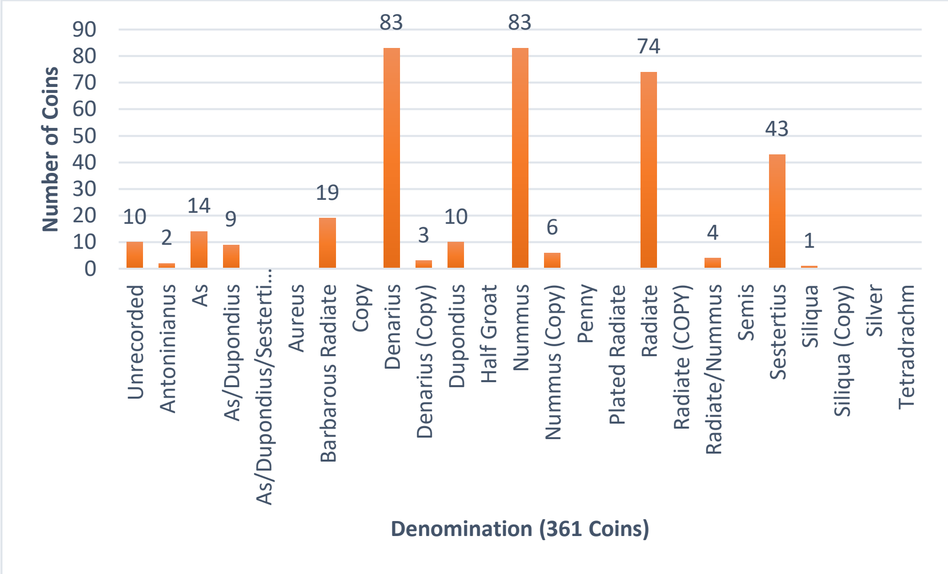

Figure 7.6.6-1. Denomination Distribution in PAS Data

With 340 coins from the PAS database, this source forms the third largest sample in the database (after Ribchester and Lancaster), and therefore its value to this research is considerable.

Only three denominations reach over 50 coins: denarius, nummus and radiate. Interestingly, the denarius and nummus have the same assemblage size with 83 in each category. The contrast between the higher value silver denarius with a much longer production span, and the lower value copper alloy nummus, which was not produced until the third century onwards, is arguably significant. This dataset is from Lancashire as a whole and suggests a long-standing embedded acceptance of a coin-based economy due to the broad time span possible from this evidence.

The dataset from the PAS also provides the most detailed and frequent account for unofficial coinage in presence in Lancashire, featuring barbarous radiates, denarius copies, and nummus copies making up 28 coins (8%) of the overall sample. This is proportionally the largest sample of unofficial coinage we have across the six areas discussed in this thesis, and may suggest that unofficial coinage is rare across Lancashire.

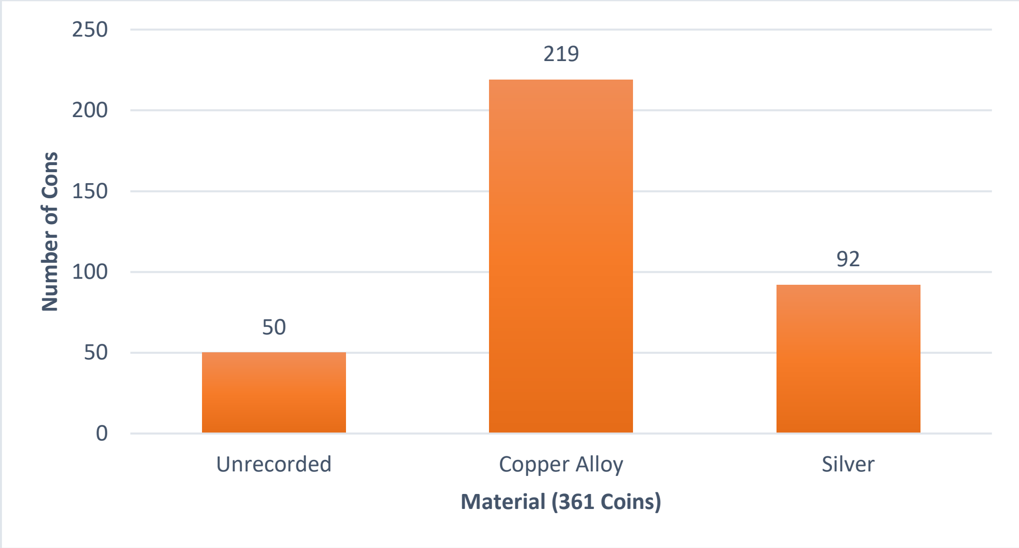

Figure 7.6.6-2 A Graph to Show the Distribution of Material Type in PAS Coins.

Looking at the PAS data, we can see that copper alloy issues make up the largest proportion of the sample, with 61% of coins belonging to this material type (Figure 7.6.6-2). Thus, suggesting that other areas of Lancashire that are not known through distinct archaeological excavation also demonstrate low value exchange, or a low uptake of a monetary economy.

The evidence from the PAS also provides the highest proportion of silver coins with 92 out of 361 coins (25%). However, it is difficult to assess by looking at the PAS data as a whole how these are distributed, so as with denomination it is important to analyse this by specific area in order to understand distributions across Lancashire as a whole.

Zero coins fall into the gold material type category, which suggests that there is not any distinct high value exchange taking place in other parts of the county, which have not currently been uncovered through distinct archaeological excavation.

Interestingly, the PAS evidence provides the only example where material type is less likely to be recorded than denomination and perhaps this is due to the links between denomination and material. For example, if the coin is a dupondius then it is most likely to have copper alloy and tend not to repeat this information in a separate material type category. In contrast to the other areas of Lancashire outlined in this chapter, the PAS data also provides the highest proportion of unrecorded coins at 14%. It is important to note here that in the case of PAS data, the unrecorded category represents any coin records that are currently under review, or in the case of coin hoard records on the PAS, may not include individual coin records. As the previous trends outlined in this section would suggest, it may be possible to imply that the bulk of the unrecorded data is likely to form copper alloy issues. However, as has been demonstrated in the example of Kirkham, there is a reluctance to make this assumption based on the presence of coin hoard data in the PAS assemblage, which may mean this assumption is not to be upheld.

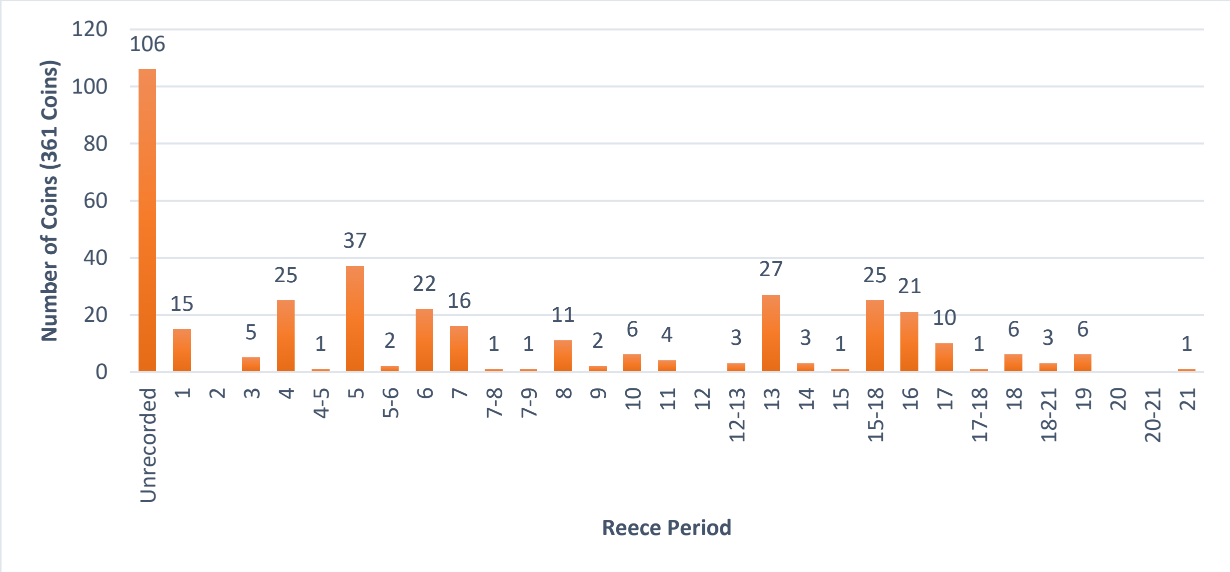

Figure 7.6.6-3. Chronological Distribution of PAS Finds.

Unlike the relatively tight chronologies demonstrated by specific areas in Lancashire, the PAS data shows a consecutive distribution of coins across each Reece Period (Figure 7.6.6-3). The presence of earlier currency, particularly coins from Reece Period one, may suggest that Republican coinage was making its way to Britain and being circulated amongst the population sooner than we may have expected. Alternatively, it could mean that earlier issues were still legal tender being used to pay the military occupying forces following the invasion of Britain. This could prove to be interesting, as the area case studies chosen for this chapter (Ribchester, Walton-le-Dale, Lancaster and Kirkham) are thought to represent the most distinct archaeological evidence for Roman occupation in Lancashire. If the PAS data is to be believed, then it may be suggested that wider occupation is occurring in the county, in distinct archaeological areas that have not yet been explored.

Period five has the largest quantity of coins at 37 out of 361 (19%), which is something that is generally seen within the Lancashire data. Interestingly, following the peak of periods four to seven (69-161 AD) there is an increase in the quantity of coins associated with periods 13-18 (260-364 AD). These six periods combined account for 41% of the entire PAS sample, thus suggesting that an increase in coin use was possibly occurring at this time. The spread of data from the PAS is much more varied than the individual areas discussed above.

If we compare the Lancashire PAS data with the PAS data from the rest of the UK, we can begin to unpick the periods of coin use in Lancashire and how they differ from the wider UK model.

The PAS data only contains data where a specific Reece Period can be assigned, in the Lancashire data there are some Reece Period ranges (e.g., 15-18), where an individual period was not assigned in the PAS record and the author had to use the broad date ranges to estimate the period a coin may have belonged to. As such, for the comparison between Lancashire and the UK only entries with a specific Reece Period have been used to allow for a better comparison and remove any methodological error from the results (Figure 7.6.6-4).

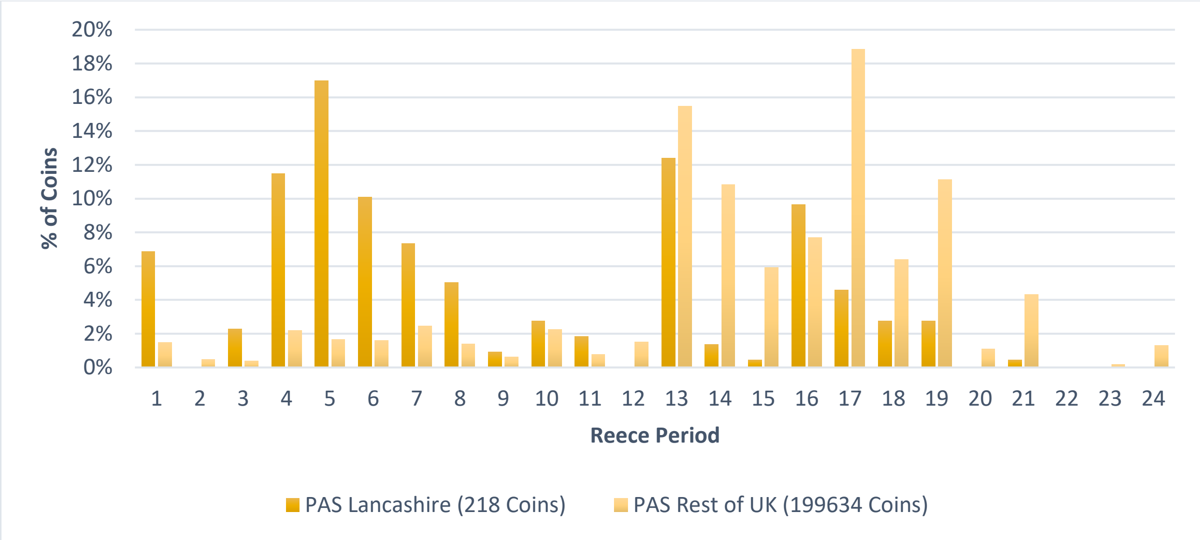

Figure 7.6.6-4. Chronological Distribution of Lancashire PAS Coins vs PAS Finds from the Rest of the UK by Reece Period

From this, we can see that the Lancashire data appears to differ proportionally from the data from the remainder of the UK (Figure 7.6.6-4). For example, there seems to be a distinct peak in Lancashire for periods four to seven, particularly in period five which sees 17% of the Lancashire data assigned to this period compared with the rest of the UK which sits at 2%. Period 16 is of note in the analysis of Lancashire, particularly with regard to specific sites such as Lancaster. As can be seen from the above comparison, this period is proportionally on par with the remainder of the UK. However, where the rest of the UK appears to continue to demonstrate coin finds from the subsequent period (17-24), Lancashire seems to have minimal data. Perhaps the most noteworthy is the high proportion of UK coins assigned to period 17, with 19% of coins belonging to this category, whereas Lancashire demonstrates only 5% of coins as being assigned to this range (330-348 AD).

Interestingly, if we consider all of the data entries in the PAS for the whole of Britain (200,259 records with Reece period recorded), the most commonly recorded Reece periods range from period 13 to period 19, chronologically spanning from 260-378 AD. For the PAS data from Britain, these seven periods make up 75% of all Roman coin entries with Reece period recorded. On the other hand, for the Lancashire synthesised data these seven periods only represent 30% of the overall sample. This could imply a greater presence and influence of earlier coins in Lancashire compared with other areas in Britain. This may be due to the increased occupation and social organisation of military spaces in Lancashire during the second half of the first century AD. As a result, earlier coins already circulating in the southern regions would likely be moving up with soldiers to the North West, as opposed to newly minted coins circulated to the North West from elsewhere in the Empire.

In order to unpick these results further, three key regional areas have been chosen for comparison. Firstly Northumberland, which allows for comparison between military zones on different sides of the country. Secondly, Hampshire to allow comparison between a military zone and a more rurally dominated region, in order to ascertain whether the results from Lancashire are due to the military community. Finally, Cumbria has also been selected in order to ascertain whether any of the Lancashire findings could be due to a North West phenomenon (Figure 7.6.6-5).

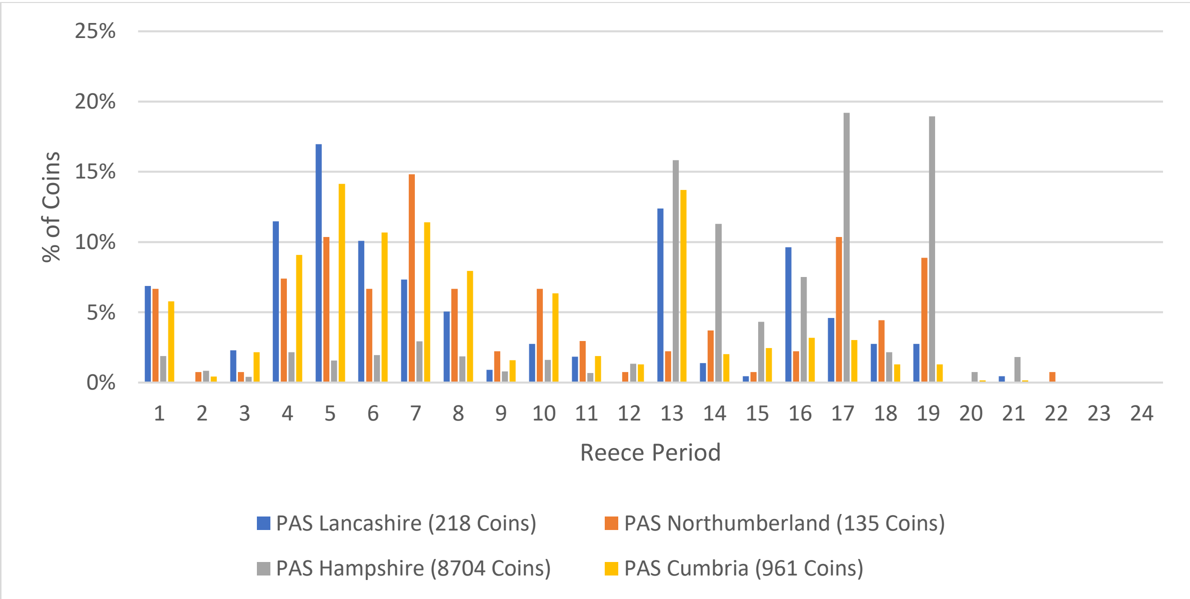

Figure 7.6.6-5. Chronological Distribution of PAS Finds from Lancashire, Hampshire, Northumberland and Cumbria by Reece Period.

As can be seen in Figure 7.6.6-5, the earlier periods (one to six) show similarities with Cumbria, which is perhaps to be expected due to the militaristic nature of both regions and their locations within the North West of England. However, period four offers a stark contrast to this expected pattern. In fact, the Lancashire data shows a significantly higher proportion of coins assigned to period four, than any of the other three chosen comparison regions. Period four ranges in date from 69-96 AD and can be accredited as the period in which many of the Roman fortifications and general occupation of Lancashire would have taken place. Although the same could be said for Cumbria, it may perhaps indicate a staggered pattern of occupation for the North of England, with Cumbria being occupied later than Lancashire, following a successful occupation of the latter region. This may be supported by the higher proportion of coins in Cumbria from phase six and seven, when compared with Lancashire.

Throughout the chronological analysis of Lancashire, period 16 has been considered as being of interest in areas such as Lancaster and Kirkham. Interestingly, when compared with the other areas chosen for analysis Lancashire does not show a distinctly higher proportion of coins in period 16 than elsewhere.

Periods 17-19 (330-378 AD) show a distinct lack of coinage in Lancashire compared to other regions in the UK, suggesting that coin use was no longer a popular method of transaction during this period. In fact, coin use as a whole seems to become almost non-existent in the UK after period 20 (378 AD onwards), perhaps suggesting that Britain had reverted to pre-Roman forms of transaction that did not involve or rely on a coin-based economy.

As with Kirkham, a proportion of the sample from the PAS dataset could not be assigned wear due to there being no image associated with the record. However, this only accounts for 24% of the overall PAS sample (Figure 7.6.6-6).

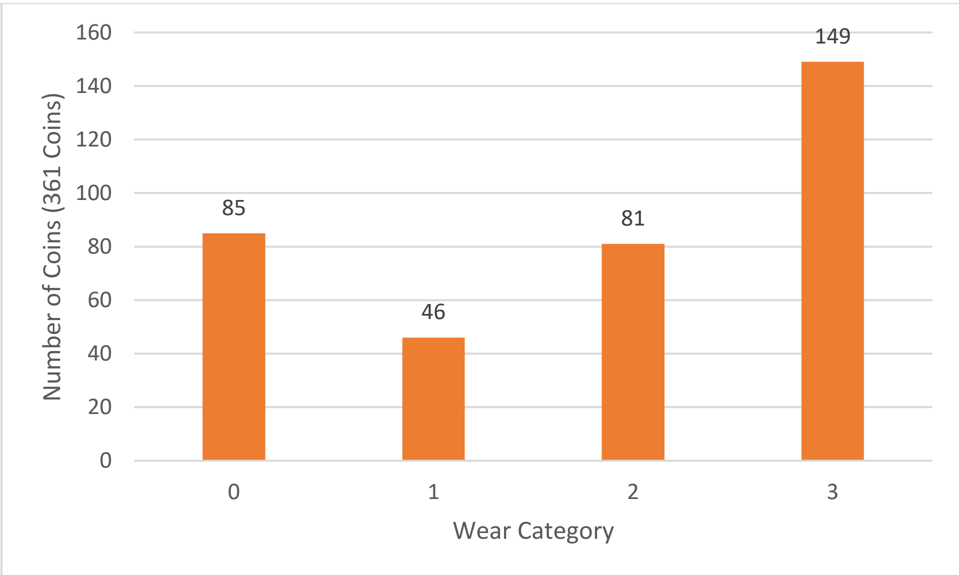

Figure 7.6.6-6. A Graph to Show the Wear Distribution in PAS Coins

The residual coins are distributed amongst the remaining three categories, with category three (worn) being the only group to contain over 100 coins. In fact, 64% of the PAS sample are either slightly worn or worn. On the surface, this may suggest that people in Lancashire were adopting and facilitating a coin-based economy. Furthermore, if traditional models of coin wear as an indicator of circulation are to be believed, this may also solidify this argument by implying that the coins present in Lancashire had undergone many transactions, with over half of the sample indicating signs of wear.

As with the Lancaster example above, it is important that we go beyond generalisations of the evidence and look at specific examples. In this case, one coin from category one (unworn) and one coin from category three (worn), will be chosen for a more in-depth analysis.

If we take the example of a wear category one (unworn) coin, LANCUM-AECDC3 from Bashall Eaves (Figure 7.6.6-7) we can begin to unpick the wear information from this coin using the contextual information provided by the detailed PAS records.

Figure 7.6.6-7. Coin LANCUM-AECDC3 from Bashall Eaves. Coin ID 553 on Database. Photo by PAS 2018.

This example is a silver Roman denarius of Domitian, assigned as being minted in Rome. The date of issue for this coin is set at 93 AD. As with the Lancaster example, this coin would predate Trajan and as such, if Dio Cassius is to be believed, may have been part of a wider network of coins that should have been recalled for reprocessing. If this is the case, then it is possible this coin could have been lost before this process could have happened or would no longer be considered official tender, leading to this object being used in fewer transactions and thus appearing less worn. However, if the recalling of coinage under Trajan is to be believed, it is important to consider the time that decrees issued in Rome may take to reach Britain, and whether the coin-using people of Britain would have known who was Emperor at any single point in time, or received the knowledge of the decree at all.

The Stanford Geospatial Network Model of the Roman World (ORBIS 2019) aims to explore this issue by simulating movements along known Roman transport networks between chosen geographical locations. For example, we can analyse the time taken to travel between Roma and Eburacum (modern day York), which is the only destination for northern Britannia, to see how many days of travel would be required during different seasons and across different routes. In this instance, the quickest route may have been 30 days if travelling during the autumn, whereas the longest route may likely to have taken 102.2 days if travelling in winter (ORBIS 2019). If this is the case (and potentially the best-case scenario as few factors can be fully accounted for), then would Briton's have been aware of this decree? If they were aware of the ruling, would coinage still be recalled up to three months after the decree was announced? In addition, what lengths would those in charge have gone to, to try and enforce the ruling? This coin was found in Bashall Eaves, four miles west of Clitheroe, and whilst near the military centre of Ribchester, may have been occupied by rural settlements, which may have made it more difficult to account for all recalled coinage being collected.

Due to the nature of PAS data, it can be difficult to provide archaeological context to the finds, and again as with the case of the Lancaster example, it is therefore difficult to interpret the impact of a broad wear analysis with any degree of accuracy.

If we now move to the opposite end of the wear scale and consider a coin in wear category three (worn) we can begin to dissect other problems with a singular and broad wear category system.

For example, LANCUM-7D6932 (Figure 7.6.6-8) is a copper alloy barbarous radiate found in Croston, Chorley. This coin has been assigned a wear category of three as there are no visible design details on both the obverse and reverse surfaces. A date range of 270-300 AD has been assigned to the coin, but the lack of contextual information regarding the coins precise location makes it difficult to date the area in which it was discovered. It may be expected later coins would generally be less worn, as they would potentially have less time to circulate. Where barbarous radiates and other unofficial coinage are concerned, it is possible that the production quality and metal quality may be reduced impacting the speed at which the coins would wear.

Figure 7.6.6-8. An Image of LANCUM-7D6932, Coin ID 470 on database. Photo by PAS 2019.

7.7 Summary

This chapter has aimed to demonstrate the information available from Roman coins, when they have been recorded to the same standard across a large sample. Therefore, this determines the need for a coherent system of analysis when considering these artefacts in order to allow an increased potential in the interpretations made.

As demonstrated, consistent recording enables us to provide bigger samples to support interpretations. This chapter has established that significantly more data can be assigned to their specific group than publications would indicate. Table 7.7-1 below highlights this by demonstrating the proportion of the sample that is unrecorded from the synthesised data (Appendix 2) compared with the data recorded in the primary dataset.

	Synthesised Data	Primary Data
Denomination	76%	13%
Material Type	3%	0%
Chronology	88%	13%
Wear	84%	16%

Table 7.7-1 A table to show the difference in the unrecorded categories for the synthesised dataset vs the primary dataset.

The lack of consistent recording is detrimental to archaeological interpretation. Where research is being conducted and the original coin samples cannot be physically examined, all the information that can be used comes from the coin reports themselves. If these reports do not contain all of the basic information, then interpretations begin to build a very different picture to what the physical evidence is trying to tell us.

For example, if we consider the chronology of the samples, the synthesised data indicates that the chronological peaks for Lancashire occur at period 4, which is the only period to contain over 20% of the sample. However, what this primary analysis has demonstrated is that there are chronological peaks much later in the Romano-British period at period 13 (AD 260-275) and period 21 (AD 388-402). This completely changes the chronological narrative of coins in Lancashire from being largely restricted to an early chronology around the time of initial invasion, to being a much lengthier phenomenon representing an acceptance of a coin-based economy that spans the length of the Romano-British period.

Furthermore, if we consider the coin samples by denomination, the highest recorded denominations in the synthesised samples are the as at 6% and the nummus at 4%, with 76% of the sample being unrecorded. On the surface, if the only data available for this category comes from 24% of the sample then this would suggest a prevalence of low value denominations being present in Lancashire, implying that the coin use in this area was restricted to low value exchange. Contrastingly, the primary dataset paints a much different picture. Here, 13% of the sample is unrecorded, so there is a much bigger sample of known denomination to interpret. In the primary dataset the most common denominations are the siliquae (26%), the radiate (17%) and the denarius (16%), which are all higher value issues. This evidence would suggest that there is high value exchange taking place in Lancashire.

Finally, if we consider the nature of wear patterns, which have become a dominant focus of conversations surrounding the circulation of Roman coins, then the synthesised dataset, when wear has been recorded, would suggest that the coins in Lancashire have a relatively even distribution between the three wear categories. This would imply that there is little evidence for frequent circulation. However, 84% of the synthesised material had not recorded the wear of the coin. In contrast, the primary dataset only shows 16% of the sample as having no wear assigned (largely this is due to a lack of images on some PAS records so the author could not assign a wear group). This dataset demonstrates that there is a larger proportion of coins in wear categories two and three. Following traditional interpretative models, this would imply that the coins in Lancashire were well circulated before deposition.

If we are to begin to unravel this issue and provide any kind of synergy to coin recording systems, then we must begin to overhaul the way in which we consider coins. It is important to move beyond the current narrative of coins being sources of dating for excavations (Lockyear 2007, 214) and instead begin to contemplate the role coins could play in archaeological interpretation when considered as artefacts in their own right, with their own biographies, and their own unique power in assisting our understanding of the Roman world. For this to have any impact on the archaeological discipline, we need to focus our energy on providing a new all-encompassing standard of recording, where consistency is employed across the analysis and publication divide.

However, by taking this one step further and breaking down wear patterns into their constituent parts we can begin to build an object biography for coinage, which allows for an in-depth analysis of the production, circulation and deposition of these valuable artefacts, further emphasising the need for an adopted standard to be developed and used at the coin recording stage.

8 EXPLORING BIOGRAPHIES

By considering coins as objects, we can begin to move beyond examining coins as merely a vehicle for understanding the economy, but instead explore what their biographies can tell us about multiple aspects of Roman life. The object-biographical approach relies on the notion that objects, like humans, have their own individual biography. Consequently, they undergo a 'life' phase, whereby individual objects are involved and bound up with social relations (Burström 2014, 65) (see chapter 5 for further discussion). By exploring an object's biography, we can begin to explore and understand these social relationships, and how they affect the societies and individuals who use them. As with human biographies, object biographies have often been considered regarding individual artefacts (see Chapter 5.3 for Joys (2009), excellent example, reconstructing the object biography for an Iron Age mirror from Portesham, Dorset). However, by grouping biographies and considering the three main lifecycles they are involved in, we can begin to combine data from a much larger dataset.

As shown in Chapter 7.1, the collected sample for this thesis numbered 1466 coins. It was possible to utilise the biographical methods proposed on 1073 of the coins. This analysis requires images of the coins to be available, and therefore 394 could not be included (either because images were not attached to the record, in the case of PAS data, or some of the coins from the museum collections were not available for analysis). Even though each of these coins would have their own individual biography based on traditional object-biographical approaches, it is the aim of this thesis to explore all 1000+ objects and synthesise those biographies in order to explore the patterns which may occur.

As previously mentioned, one method to fully explore an object's complete biography is to consider the three main contexts involved in its lifecycle (Myberg 2009, 157). For the purposes of this research, this will be considered as distinct phases of the lifecycle (Figure 8-1).

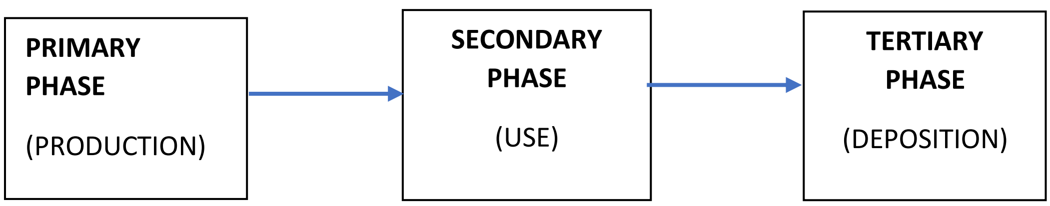

Figure 8-1 Diagram to illustrate the stages of an object's biography

8.1 Primary Stage

The primary context focuses on the manufacturing processes, including the production and minting of individual coins (see Chapter 6.5.1). Four key factors inform on this first phase of a coin's biography: notches on the outer edge of the coin, plastic deformation, mis-struck coins and cracking. Combined, they contribute to our understanding of an individual coin's production and synthesising the results together can highlight patterns and trends in the manufacture of coins destined for eventual deposition in Lancashire.

8.1.1 Notches

It is argued here that notches occur on the outer edge of coins during the production process. Although there is some evidence of unofficial coins being made in coin moulds, such as radiate imitations from Sporle with Palgrave (Marsden 2012, 380), the majority of Roman coins underwent the striking process (Zeepvat *et al*. 1994). This involves blank coins being heated and then struck with a coin die to leave an imprint of the image on the flan (Pense 1992, 216). However, the striking process does not always create the 'perfect' coin. If the blank flan has cooled down before striking a v-shaped notch can result (See Chapter 6.5.1 for a more detailed definition). The notch therefore informs on the production techniques, but also affects the visual quality of the coin. This raises interesting questions about the intrinsic value the coin is embodying during its lifecycle and how 'flaws' may have been viewed.

Notches on coins specifically are not discussed in detail in the numismatics or archaeological literature, however the visual differences they create can help us further understand how coinage was viewed and used in Roman Britain. For example, notch presence may be inconsequential in how a coin was accepted and exchanged.

Of the 1072 coins analysed, there is a slightly higher proportion of coins with notches (51%), versus those coins without notches (49%). This would suggest that if notches are created at the point of production as described above, that these potentially 'flawed' coins are making their way into circulation and are common in the archaeological record. This raises questions about whether this feature would be considered a flaw in the Roman coin-using societies (as there is a majority of coins with them, it can be assumed not). Furthermore, regardless of whether notches are considered to be a flaw, it may shed some light onto the intrinsic value of a coin beyond its monetary worth, more specifically, the fact that their presence did not seem to affect their acceptance, use and circulation.

As has already been discussed in Chapter 6.4, the images of the coins used for this analysis were divided into quadrants, enabling a more detailed analysis to occur of precisely where on a coin some of the recorded factors occur (Figure 8.1.1-1).

Figure 8.1.1-1. Examples of Notched Coins. (1) Notched in a single quadrant (Coin ID 308), (2) Notched in two quadrants (Coin ID 547), (3) Notched in all four quadrants (Coin ID 215).

The Lancashire dataset shows that it is most common to have either notches in just a single quadrant, or in all four quadrants, as opposed to in just two or three areas (Figure 8.1.1-2). If this factor occurs across multiple quadrants, then this would suggest that a single coin is likely to have several notches, and as such impacts the overall look of the finished coin. Where the coin has notches in all four quadrants this may be indicative of the fact that the coin flan had cooled even more on these coins, then in coins where just one notch is present, leading to more notches being present on the outside of the coin.

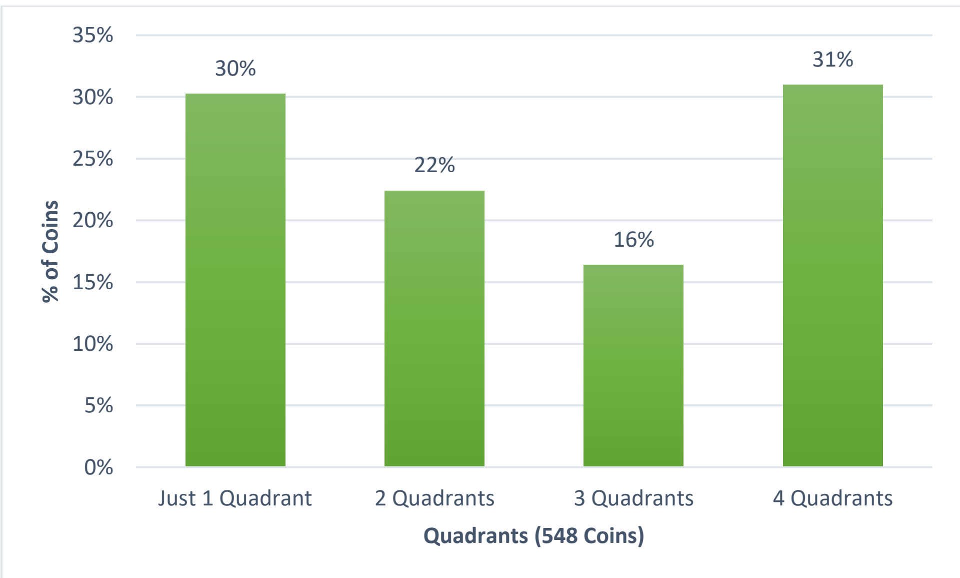

Figure 8.1.1-2 Frequency of Notches in Multiple Quadrants

Of the 548 coins with notches, 70% display notches in multiple quadrants as opposed to just one single quadrant. However, we can see there is little difference between having notches in just one quadrant (30%) or having notches in all four quadrants (31%). Nevertheless, what this does show is, it is much less likely to have notches in only two or three quadrants (22% and 16% respectively), suggesting the flaw either occurs once or multiple times, which may impact the way in which we view the striking process.

Again, if we accept the notion that notches occur during the striking of the coin, then it can be argued that the role of the individual is crucial to this process. For example, notches may be more likely to occur if coins are being produced more rapidly meaning the overall finesse of individual coins decreases.

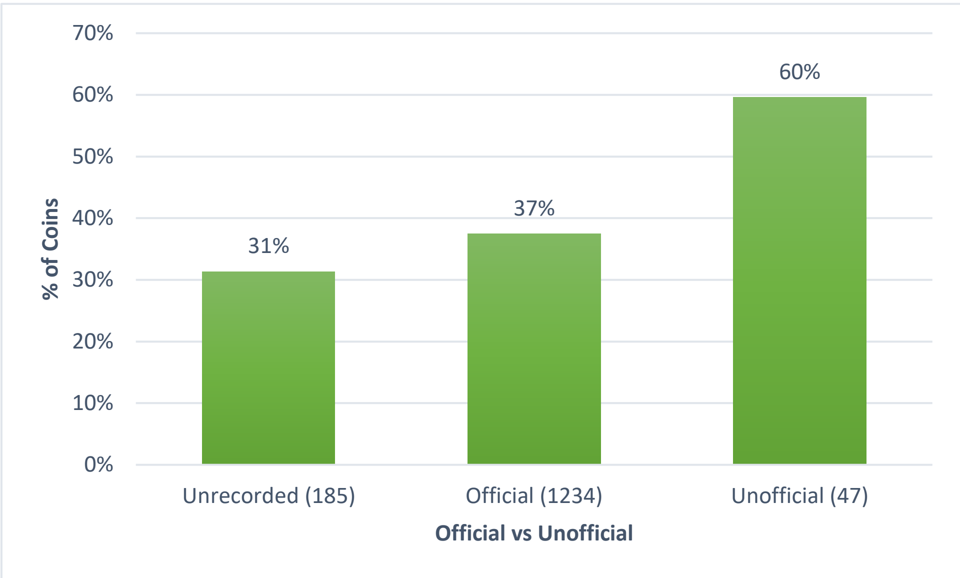

Figure 8.1.1-3. Proportion of Unrecorded, Official and Unofficial Coins with Notches

As demonstrated, the total proportion of unofficial coins with notches is the highest at 60%, whereas the total proportion of official coins with notches is 37% (Figure 8.1.1-3). This may provide further support for the notion that unofficial, locally made copies were more likely to be struck, in order for this type of defect to occur. Furthermore, this also supports the assumption that notches are more frequently found in unofficial coinage where, whilst the skill of the labourer may have an effect on the finesse of a coin, it is likely to be further reduced in unofficial issues, when compared with coinage produced by the official mints which would have had longstanding processes and greater scrutiny of the end product. This can be demonstrated further if we look at unofficial and official issues with regards to notches in a single quadrant against notches in all quadrants (Figure 8.1.1-4).

This shows that unofficial issues are more likely to have notches in all four quadrants, whereas official issues are more likely to have notches in only a single quadrant. Again, this could be due to the quality of the metal in unofficial issues being significantly reduced in comparison to official issues, meaning they are more prone to multiple notches as a result of the striking process. Alternatively, this may relate to the production processes of the coins themselves and the differences between official and unofficial coin production. For example, official coin production would have happened at a larger scale and perhaps with more resources and therefore the differences in the furnaces used to heat the blank metal flan may have caused a difference in the frequency of notches. If official coin production centres could reach higher temperatures than the production sites of unofficial coinage, we would expect a higher frequency of notching in unofficial coins.

However, it is important to note that as it stands, just over a third (37%) of official coins display evidence of notches on the outer edge of the coin, suggesting that one in three coins in circulation were likely to have this defect. This may imply that regardless of skill or production tools notches were likely to occur.

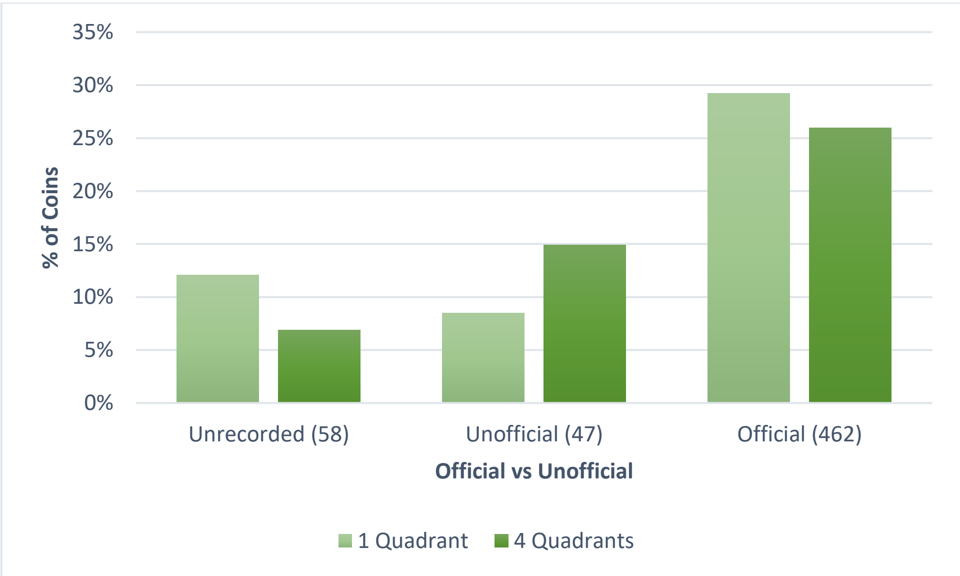

Figure 8.1.1-4 Comparison of Notch Frequency in Official vs Unofficial Coins

Finally, it is also important to note that just under a third of unrecorded coins also display evidence of notches, and it is argued here that if all 185 unrecorded coins could have been assigned denomination, then this may influence the results outlined above. For example, if all 185 coins were official issues, that would change the presence of official coins with notches from 37% to 52%, narrowing the gap between notch frequency in official and unofficial issues.

Thus far, it has been implied that the presence of notches on the outer edge of a coin may not be considered as a design flaw during the Roman period. In fact, with a higher proportion of coins having notches present, compared to those that do not have notches, it does seem to suggest that their presence in circulation would not have been visually unusual. However, by exploring the difference between site and hoard coins we can begin to explore this in more detail. If notches were not considered to be a flaw, it may be expected that there should be little difference in their presence between sites and hoards.

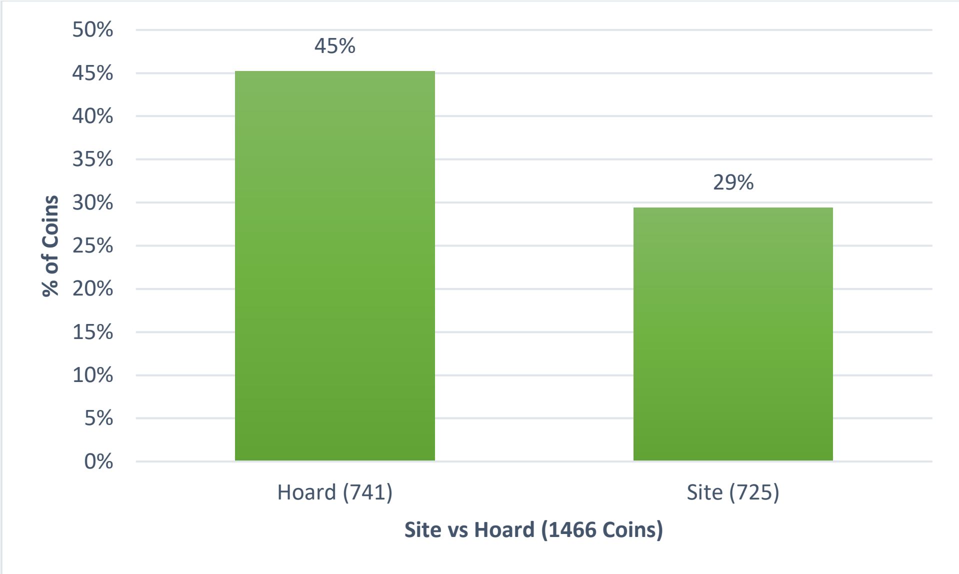

Figure 8.1.1-5 Proportion of all Site and Hoard Coins with Notches

Of the 741 coins from hoards, 45% (333) have notches recorded, whereas only 29% (210) of all site coins have notches (Figure 8.1.1-5). If we break this down further, we can begin to explore whether hoard coins are more or less likely to have multiple notches than site coins.

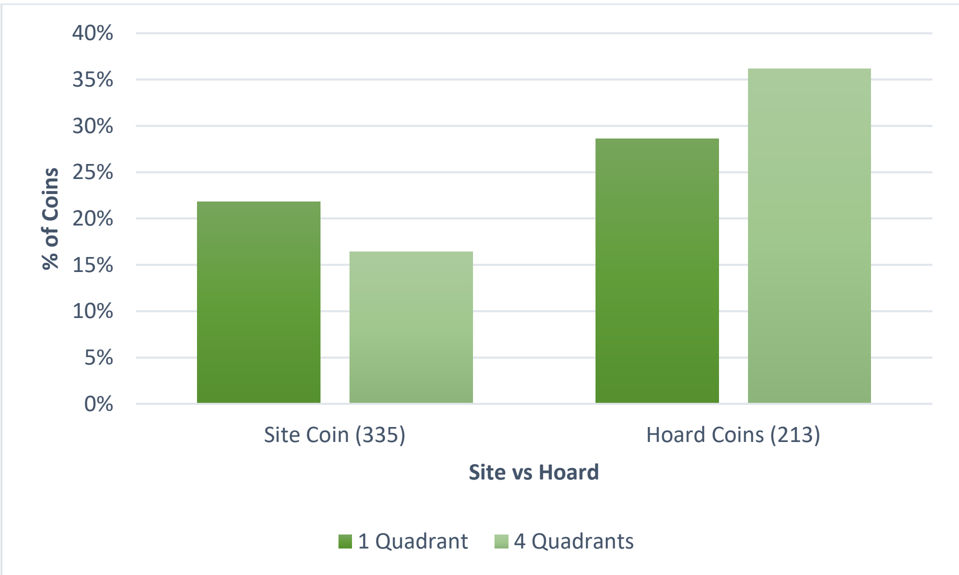

Figure 8.1.1-6 Notches in a Single Quadrant and Notches in all Four Quadrants in Site vs Hoards

As demonstrated, site coins are more likely to have notches in a single quadrant, whereas hoard coins are more likely to have notches in all four quadrants (Figure 8.1.1-6). This furthers the notion tha,t whilst notches are produced during the primary phase of a coin's lifecycle, they have little impact on how the coin is viewed during a coin's secondary phase as they are still being accepted and circulated as currency to be found by archaeologists following deposition.

If hoards are indeed to be viewed as stores of wealth, it may be possible to argue that the presence of notches on coins has no influence on their intrinsic value (how they are viewed by coin-using populations), and consequently their monetary value. On the surface this result may imply that there was less structure to coin hoard deposition than previously thought, suggesting that the need for storing or depositing coins outweighs the element of choice in the finesse of what was being deposited. The data suggests that 45% of hoard coins display evidence of notches, however notches are not evenly distributed amongst hoards (Figure 8.1.1-7).

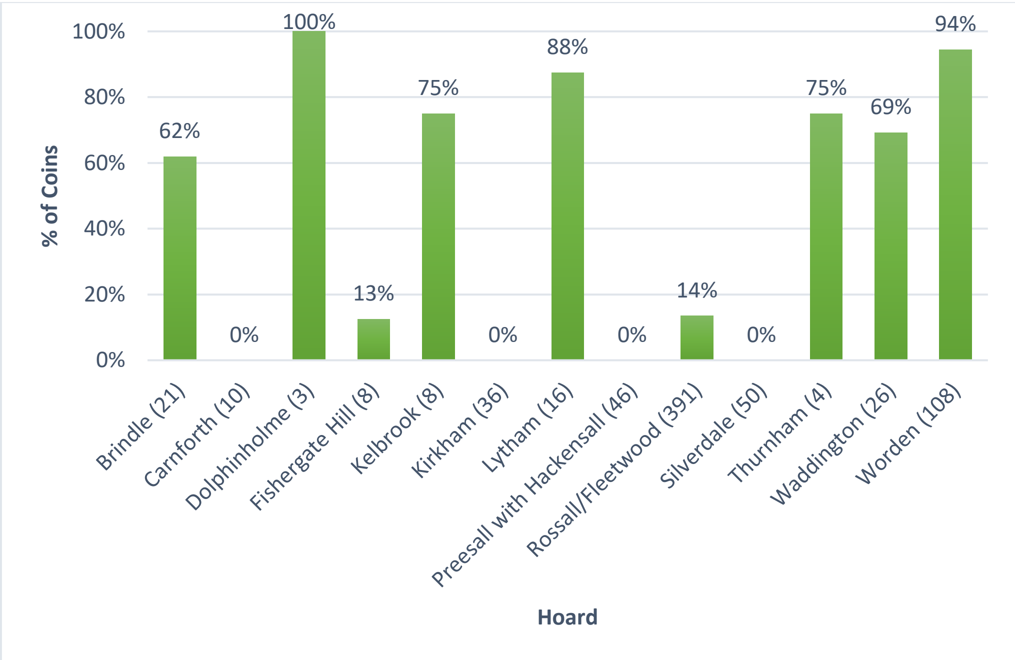

Figure 8.1.1-7. Percentage of coins with Notches from Individual Hoards

As can be seen, there are only four hoards that display no evidence of notches at all (Preesall with Hackensall, Carnforth, Kirkham and Silverdale), these four hoards have sample sizes of 50 or less coins. The evidence suggests that the remaining nine hoards display notches at a frequency of 60% or more, with the exception of two additional hoards, the Rossall Fleetwood hoard of 391 silver siliqua and the Fishergate Hill hoard of eight Roman silver coins (two tetradrachm and six radiates). On the surface, this may suggest that silver hoards are less likely to have notches on the outer edge. However, if we discount the hoards with no notched coins, and the two hoards where notches occur in less than 20% of the coins, we can see that the remaining seven hoards have notches in high proportions. Four of these seven hoards are silver hoards, as silver is a softer metal than copper alloy this may account for an increase in notches, with the flan having to cool less before a notch could occur during the striking process. Previous interpretations of Roman coin hoards would have us believe that they are usually of higher denomination (gold and silver) and of earlier chronology (before third century debasement) (Robertson 1956, Laing 1970 and Aitchison 1988). However, in the case of Lancashire, three of the seven hoards associated with high proportions of notches are copper alloy hoards of 238-402 AD.

When considered in tandem, this evidence may suggest that, notches are more likely to occur in high proportions in hoards regardless of material type or date range, and that hoarding as a phenomenon is much more complicated than it has previously been thought.

If we now explore the site evidence in more detail, we can begin to ascertain where in Lancashire the evidence for notches comes from.

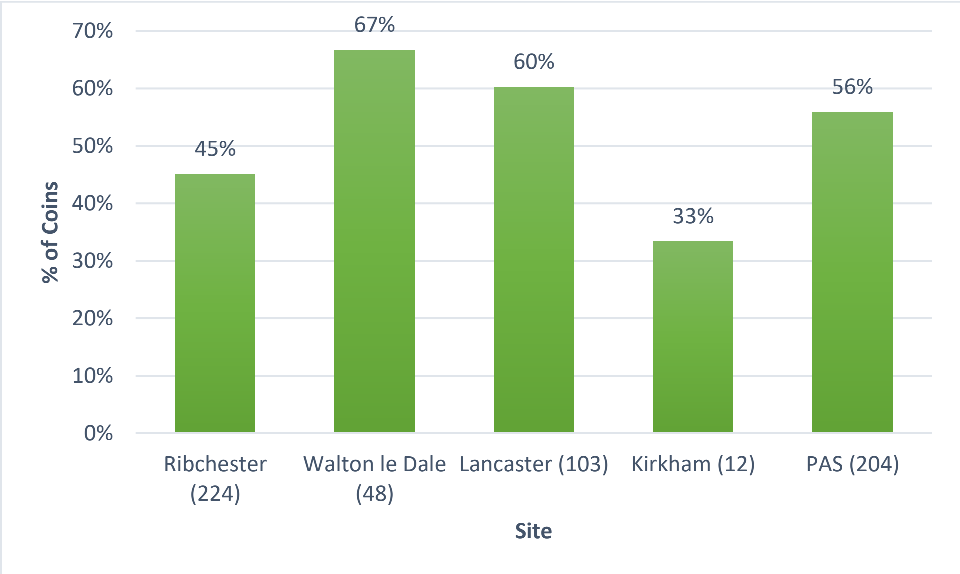

Figure 8.1.1-8 Proportions of Notched Coins from Main Sites

Three of the four main sites each show that over 40% of the coins coming from these areas have notches (Figure 8.1.1-8), with the highest being at Walton-le-Dale 32 out of 48 coins displaying evidence of notches on the outer edge of the coin.

Interestingly, the PAS demonstrates that 56% of the Lancashire coins recorded on the platform displayed evidence of notches. As the PAS data represents one of the largest samples at 204 coins, this may indicate that notches are more prevalent at sites where distinct archaeological excavations have occurred (Lancaster and Walton-le-Dale). Contrastingly, the PAS data is composed of small samples of coins from a multitude of different areas within Lancashire. Although some of this evidence may cluster in particular areas, suggesting that there is potential for more areas of Roman occupation than has previously been discussed archaeologically, many cases demonstrate just one or two coins from an individual area, and as such it is difficult to ascertain how present proportionally notches are in the rest of Lancashire.

Chronologically, one would expect notches to occur on coins more frequently in the third century, having been affected by periods of debasement and the need for rapid production of coin to help alleviate the shortfall in the current circulation. The reduced quality of the base metal of coins and the rapid nature of production aligns itself to an increase in the presence and frequency of notches on coins.

However, if we explore the temporality of notched coins using Reece periods as a chronological indicator (see Chapter 6.2 for discussion on Reece periods), we see a pattern that does not fit the above assumptions (see figure 8.1.1-9).

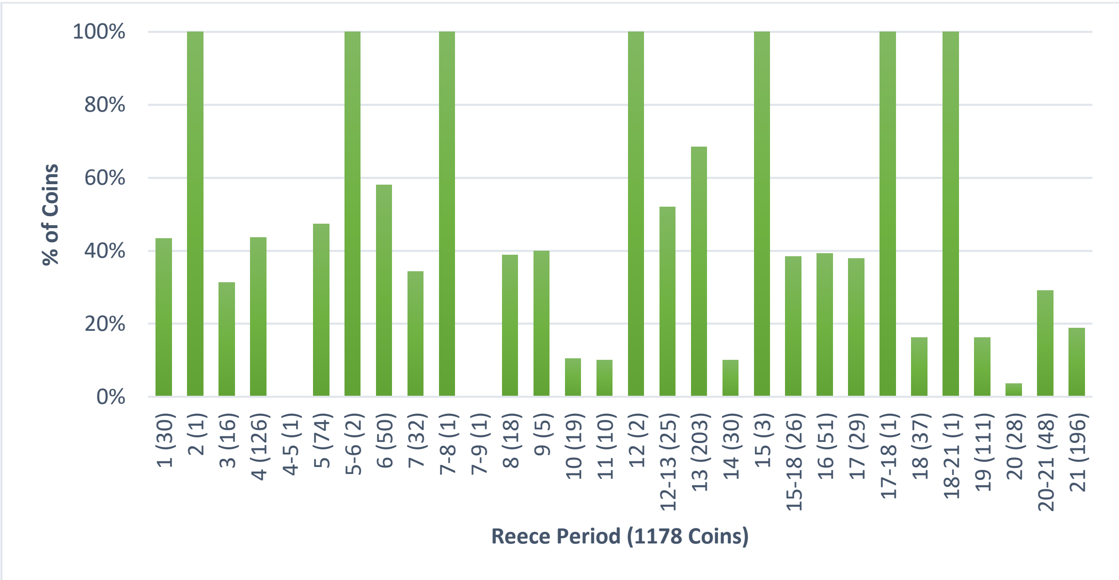

Figure 8.1.1-9 Percentage of Coins from Reece Period with Notches

For seven Reece periods, 100% of the coins have notches. However, it is important to note that the sample sizes from these Reece periods ranges from a single coin to three coins. Two Reece period categories have no notches assigned to their coins (Reece periods four to five, and seven to nine), however these periods also only have a sample size of one.

The only Reece Period with a significant sample size to reach over 60% is Period 13 (260-275 AD), where 139 out of 203 display evidence for notches. This perhaps supports the above interpretations regarding the increased production of coinage, both official and unofficial, to compensate for economic unrest.

If we compare the evidence from coins with notches in a single quadrant to those coins with notches in all quadrants, we can begin to explore whether chronology affects the frequency of notches more closely (Figure 8.1.1-10).

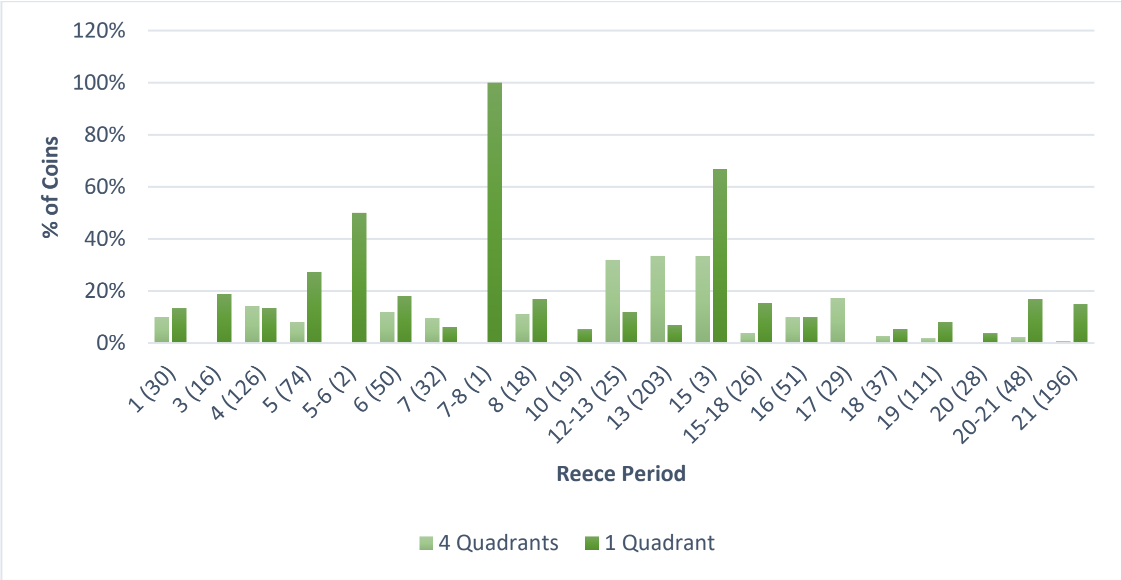

Figure 8.1.1-10. A Chronological Comparison of Notches in a Single Quadrant, with Notches in all Four Quadrants

As demonstrated, where notches occur in all four quadrants this tends to concentrate around Reece Periods 12-15 (238-317 AD). This may coincide with those periods where debasement of official coinage is occurring in the third and fourth century. As such, the increase in notches may be due to the decrease in the quality of the metal content of these coins, making them more prone to acquiring notches multiple times.

Contrastingly, where notches occur in a single quadrant the only period (with a significant sample size) to reach over 20% is Period five (96-117 AD). During this period, under the reign of Trajan, the Empire reached its greatest size and as such, an increase in coin production was necessary to meet the demand of an ever-growing empire. As a result, coins were more prone to notches. However, due to this period coming before significant debasement of coinage, the coin quality was high enough that notches, when they occurred, occurred to a lesser degree than those later Periods.

Overall, this suggests that notches in a single quadrant are more likely to have a much earlier chronology than those coins where notches occur in all four quadrants.

The presence of coins with notches in over half the sample may indicate they were not considered as a flaw in the Roman period and, therefore, their intrinsic value or ability to be circulated in a coin-using society was unaffected. This is supported by the fact that notches occur most commonly in all four quadrants (31%) of a coin, meaning that a single coin is most likely to have multiple notches on its outer edge. It has also been possible to assess their occurrence in official and unofficial issues, which has shown that unofficial issues are more likely to have notches than official issues. This may support interpretations regarding the production of unofficial issues and the poorer quality of the coins produced. It has also been demonstrated that hoard coins are just as likely to contain notches as site coins, and arguably, this informs on the practice of hoarding and further strengthens arguments that notches were not seen as flaw that affect the intrinsic value of the coins stored. Finally, chronological comparisons have allowed an exploration of when notches are most likely to occur on coins, and both peaks have allowed a demonstration of the political and economic backgrounds and the ways in which these affect the coins produced. Consequently, irrespective of whether notches are considered a flaw or not, their presence can lead to interpretations regarding the production, use and intrinsic value of coins, which is not something that can be explored through traditional wear methods.

It has been demonstrated here that notches are most likely to occur at the point of production, the very first phase of a coin's biography, as a result of the flan cooling significantly before striking. Another aspect which may affect a coin during this phase is a consequence of the opposite striking problem, when the flan is too hot before striking occurs, resulting in plastic deformation.

8.1.2 Plastic Deformation (PD)

For the purposes of this study, plastic deformation is used to explain the effect caused on a coin flan when the blank flan is too hot before striking, causing the metal to spread out and be misshapen (see Figure 8.1.2-1).

Figure 8.1.2-1 Example of a coin with plastic deformation

As with the other factors outlined in this analysis the first step in understanding plastic deformation of Roman coins from Lancashire, is to consider how widespread the presence of it is.

Only 2% of all coins from the Lancashire dataset appear to show any evidence of plastic deformation (20 coins), suggesting that this factor is not a common occurrence during the coin production phase. If both notches and plastic deformation occur as a result of production, then this may imply that the blank flan being too hot (leading to plastic deformation) was less of a problem than the flan cooling too much before striking (leading to notches). Consequently, this may inform on the overall coin production process, and the temperatures that were reached at mint sites.

It may be expected, as with the other factors analysed in this chapter, that unofficial issues would be more prone to plastic deformation than official issues perhaps due to the nature of small-scale localised production, and to the poorer metal quality of the issues. As such, it is important to analyse the frequency in which plastic deformation occurs in both groups.

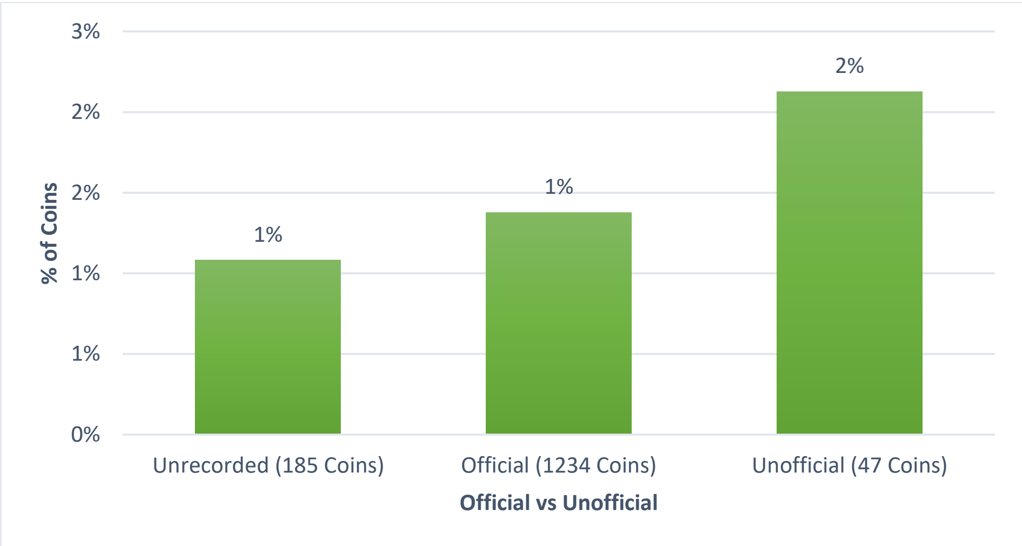

Figure 8.1.2-2 Proportions of Official and Unofficial Coins with Plastic Deformation

As shown in Figure 8.1.2-2 above, unofficial coinage seems to display a higher proportion of plastic deformation than official coinage. However, it is important to note that such low proportions of plastic deformation (2% and 1% respectively), suggest it is not a commonly occurring issue in the Lancashire assemblage. This is interesting if we consider the low proportions of unofficial issues that display evidence for plastic deformation (just a single issue).

It is thought that unofficial coins were produced locally in order to account for the shortfall in supply (as discussed elsewhere in this thesis). The design of these coins is often considered crude in nature, it does appear that the fundamentals of the coin (such as the shape) were maintained, due to the lack of plastic deformation and notches shown in the Lancashire dataset. If this is the case, then it may imply that there were intrinsic ideas about what a coin should and should not be, and that these notions were maintained regardless of the officiality of the coin in question.

Chronologically, Periods 10 and 13 show the highest proportion of plastic deformation with 5% of the coins belonging to each category (Figure 8.1.2-3).

Period 10, represents the chronological period 193-222 AD. Again, this period shows a high political turnover with 17-coin issuers being associated with the 29-year periods, thus suggesting an average reign of just under two years.

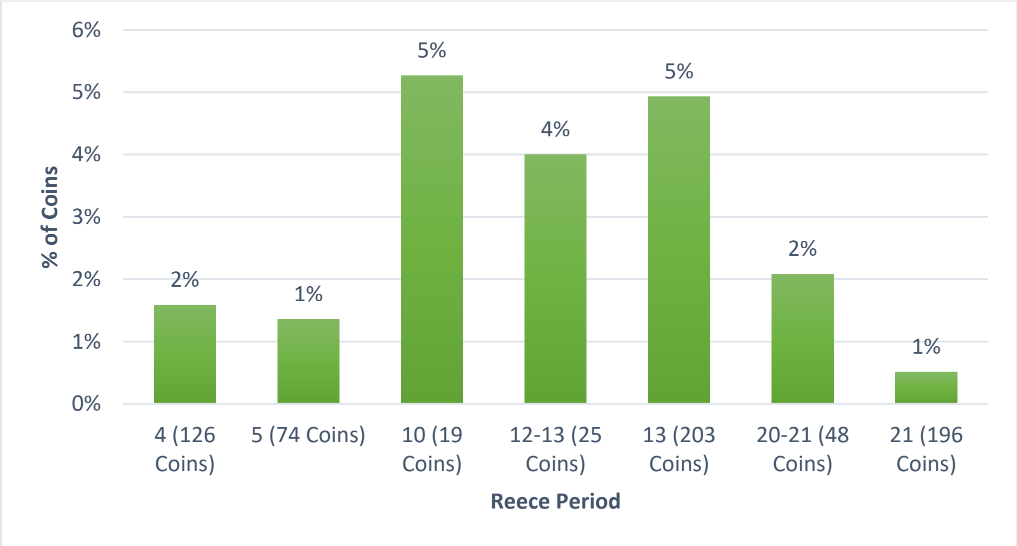

Figure 8.1.2-3 Chronological Distribution of Plastic Deformation

As stated previously in this chapter, Period 13 represents a period of political upheaval and as a consequence, economic instability, with the changeover of Emperor and debasement of official coinage happening at a rapid pace. As such, it is perhaps unsurprising to see a higher proportion of plastic deformation during this period, due to the decrease in coin quality, and increase in coin production rate leading to a larger amount of poorer quality product entering circulation.

It is important to note that with such a small sample size distributed amongst the Reece periods (17 coins, amongst 7 period groups), it is difficult to make any significant inferences regarding the association between chronology and plastic deformation.

As demonstrated, plastic deformation occurs at much lower proportions than notches. This may suggest that whilst the appearance of notches may not affect the intrinsic value of a coin, the misshapen nature of plastic deformation does affect the intrinsic value and potential use of coins. As such, for the purpose of this research, plastic deformation is being considered a flaw, because such low proportions were found in the Lancashire dataset.

8.1.3 Mis-Struck Coins

For the purpose of this discussion, mis-striking refers to those coins where the design is struck off centre, elements of the design are double struck or brockages (Figure 8.1.3-1), which occur where the obverse or reverse design end up struck on both sides of the coin (see Chapter 6.5.1). Again, as this factor refers to faults that occur when a coin is created, it is an element of a coin's primary phase.

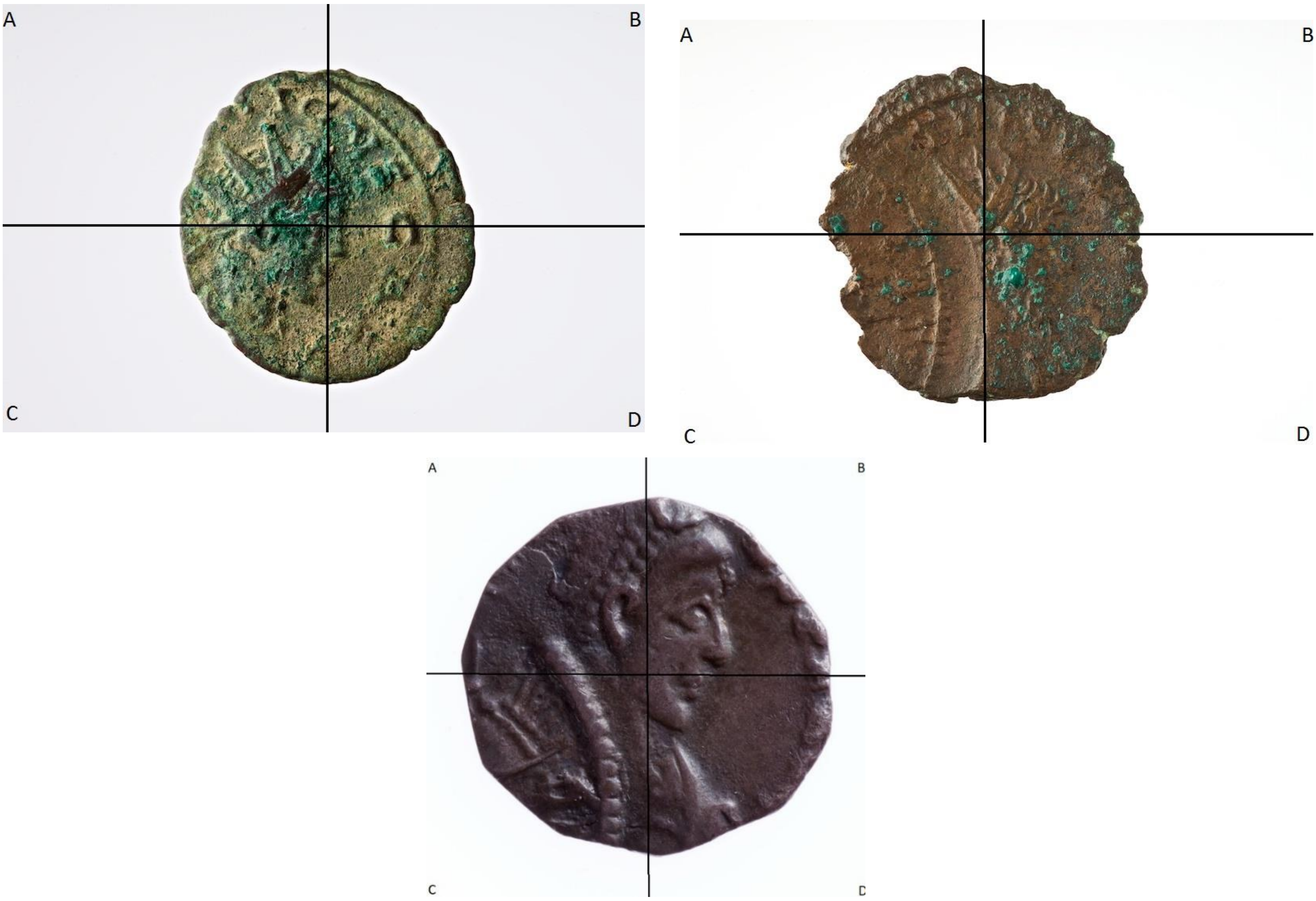

Figure 8.1.3-1. An example of a coin which has been struck off centre, Coin ID 1077 (Top Right), An Example of a coin which has been double-struck, Coin ID 1040 (Top Left), An example of a brockage, Coin ID 1457 (Bottom Centre)

Mis-struck coins appear to be relatively uncommon in the Lancashire sample, with only 2% (23 coins) displaying signs of the phenomenon, suggesting that notches and plastic deformation only really effect the outer edges of the coins, whereas mis-striking effects the visual display of the design elements. The rarity of these features in the Lancashire dataset may suggest that errors in this way were not acceptable, and that mis-striking has an effect on the intrinsic value and acceptance of a coin.

It could be expected that unofficial coinage would be more susceptible to mis-striking as they were locally made imitations, of poorer quality. Particularly if we consider the abstract nature of the imagery portrayed it may be possible to imply that the overall finish of the coin was of little consequence, in comparison to the need to supply coinage to meet demand. However, out of the 23 mis-struck coins only a single issue is unofficial, with the remaining 22 coins all being official issues.

Chronologically, we can begin to look for periods where this type of striking error may be the most common, which may further inform on our understanding of the economic, political and social climate of the periods in question.

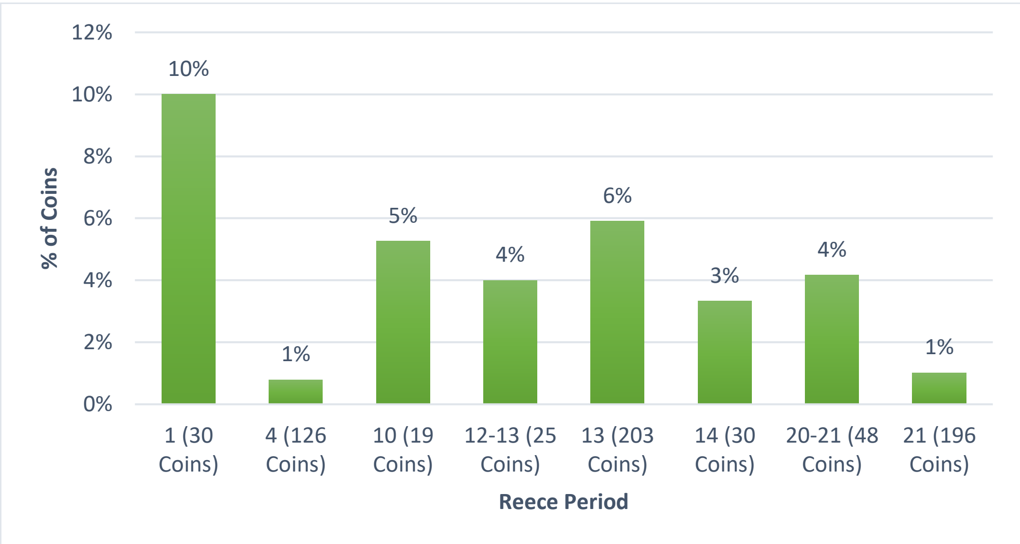

Figure 8.1.3-1 Chronological Distribution of Mis-Struck Coins.

Again, we can see that the peaks occur at Periods 1 and 13, with both groups displaying the only evidence reaching over 5% (Figure 8.1.3-2). However, in this instance it is Period one that displays the highest proportions of mis-struck coins at 10%. This suggests that, whilst Period 13 displays the highest number of mis-struck coins, mis-striking is more likely to appear in Period one when we consider the chronological distribution of the entire dataset. Period one encapsulates the chronological period of Republican coinage up until 41 AD. It may be possible to argue that the production of coin during this period was increased, due to the nature of geographical expansion that was taking place during the creation of the Empire, and as such, a high frequency of flaws was being displayed.

On the surface, these results may suggest that the official nature and intrinsic value of a coin were such that any factors that would affect the way in which the portrait and legends were displayed were not acceptable. This coincides with the evidence from clipped coins, whereby the legend and design elements were rarely clipped. Combined, this evidence (along with the evidence from clipping), implies that there was a great deal of respect towards the imperial power and that the intrinsic value of coins was crucial in their creation. However, it must also be highlighted that official coins were produced by approved mints and were therefore employed by the imperial powers to create the imagery and coinage.

8.1.4 Cracked

Kotoula and Kyraonoudi (2013, 81) suggest that cracking has a strong correlation to the minting process, with radial cracking occurring when the flan itself is hammered into shape and other cracking occurring due to the pressure of striking the coin with the die. Therefore, coins displaying evidence of surface cracking are more likely to have been cracked during the production process (Figure 8.1.4-1, left), whereas coins that are cracked all the way through the flan are more likely a result of circulation or post-depositional factors (where we only have a fragment of the coin) (Figure 8.1.4-1, centre), or excavation (where cracking has occurred, but all fragments are recovered) (Figure 8.1.4-1, right).

Figure 8.1.4-1. Images to show the different types of coin cracking. Coin ID 1386, possibly produced during production (left). Coin ID 1138, possibly during circulation or post-deposition (centre). Coin ID 1328, possibly during excavation or recovery (right).

If these assumptions are upheld then it can be suggested that the evidence of cracking, as well as comparisons to incomplete coins, allows us to explore elements of the primary and tertiary contexts of coinage.

Of the 1072 coins, only 4% (42) show evidence of cracking. It can be implied that cracking a coin would take a large force due to the rigidity of the metal, and therefore we can begin to question how coins would have become cracked. As mentioned above it could be that coins become cracked during the striking process at production, which may be an indication of how these coins were viewed within society, as they still ended up in circulation. Alternatively, where coins have become so cracked that they are incomplete, we can begin to ask questions about how these coins ended up in circulation or whether this type of cracking is due to an intentional act or because of post-depositional force.

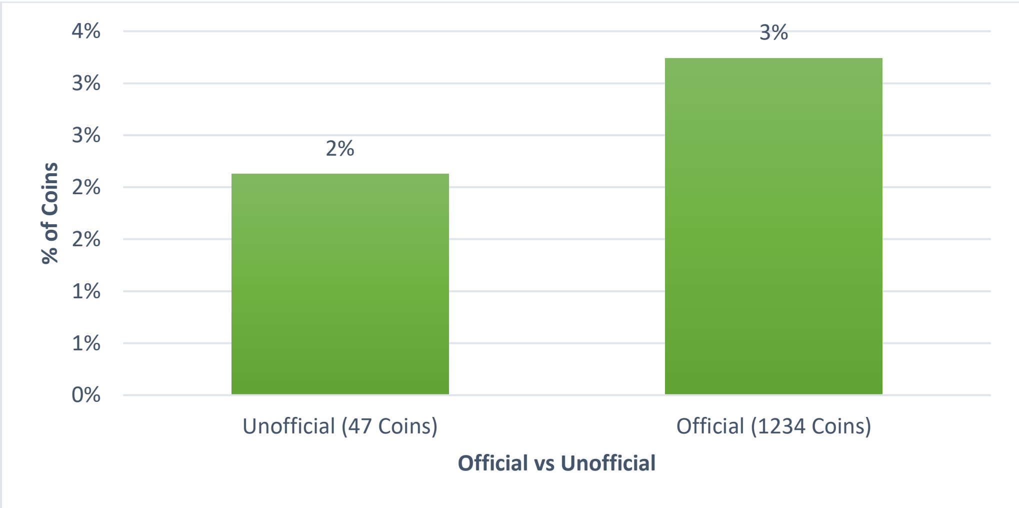

Figure 8.1.4-2 Proportion of Cracked Coins against the Total Official and Unofficial Samples

There is very little difference between those coins that are cracked, with official issues being only 1% more likely than unofficial issues to be cracked (see Figure 8.1.4-2). This would suggest that cracking is not affected by this variable.

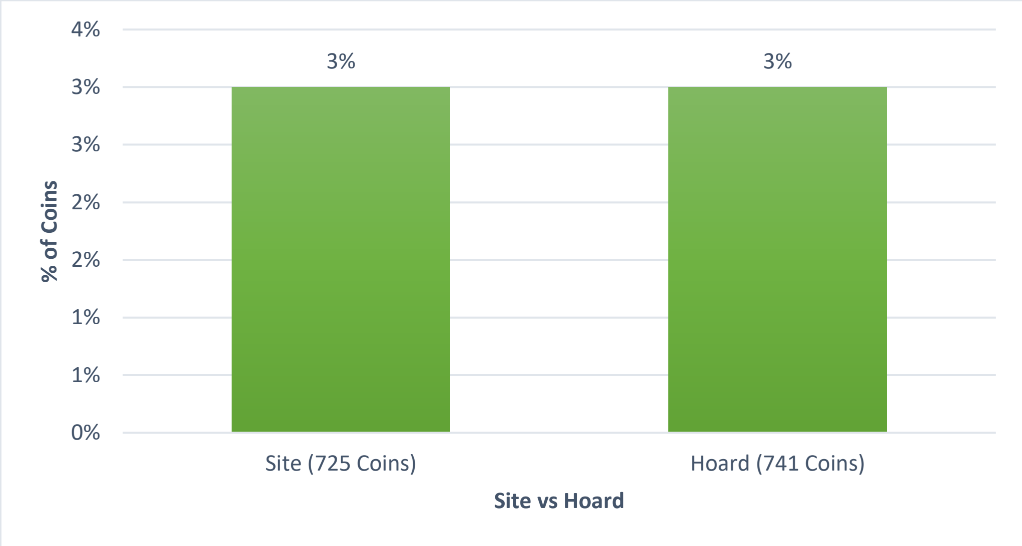

Figure 8.1.4-3 Proportions of Cracked Coins against the Total Site and Hoard Samples

If we then consider the data for site vs hoard coins, the proportions of coins associated with hoards and individual finds is the same at 3% (Figure 8.1.4-3), suggesting that coins that show cracks on the surface may not have been considered as being damaged compared to coins without cracks. If the assumption that radial cracking is likely to occur during the production process is upheld, then arguably the evidence provided above (Figure 8.1.4-3) supports this. As such, radial cracking on coins may have been seen as an everyday occurrence on the currency that was being exchanged, as the evidence implies it has no impact on the types of coins that were selected for hoarding.

Chronologically, we can look for any distinct patterns which may imply when cracking may be more commonly occurring (Figure 8.1.4-4).

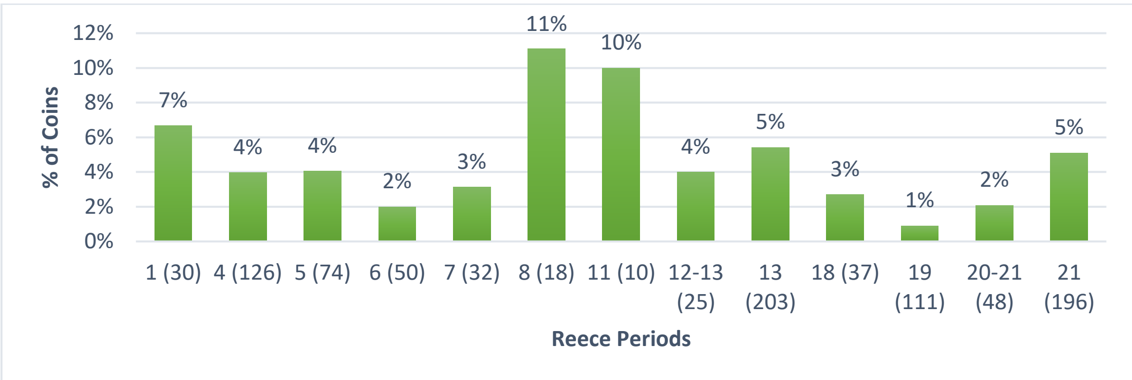

Figure 8.1.4-4 Proportions of Coins per Reece Period which are Cracked

As shown, the peaks for cracks against the whole chronological sample occur at periods eight and 11 (161-180 AD and 222-238 AD respectively). Period eight represents the Antonine period, during which time, forts along Hadrian's Wall and its hinterland were facing reduced garrison sizes as troops moved northward in a bid to occupy Scotland around 140 AD. This occupation ended during the reign of Marcus Aurelius at the end of Period eight between 161-180 AD (Hodgson 1995, 29). As such, England and more specifically Lancashire, demonstrates a reduced number of coins associated with this period, and an increase in coins in the subsequent periods. It is possible to suggest that an increase in coin production may be associated with Period 8, due to the need to fund the campaigns in Scotland and as such, radial cracking became more common on coinage due to the speed of the production process. However, with a sample of just 18, the higher proportions of coins associated with this period, actually only represents two out of 18 coins (Figure 8.1.4-4), arguably supporting the notion that fewer coins were present in the North of England due to the reduced garrisons stationed there.

The second peak occurs at Period 11 (222-238 AD), and during this 16-year period, there are 10 different coin issues. From this alone, it may be possible to suggest that coins were being made at a more rapid rate than other periods due to the fast turnover of Imperial power and the need for design changes. For example, the Primary dataset provides evidence of a coin of Balbinus associated with the Kirkham hoard; he was only in power for three months during period 11. The need to produce coinage to legitimise the rulers' position may have been increasingly important during this period, particularly as during Period 11, AD 238 has been associated as being the year of the six Emperors (PAS 2019). This more hurried manufacturing would lend itself to production flaws (such as cracks) being more frequent during these periods.

An additional factor recorded for this thesis is whether the coin is considered to be incomplete or fragmentary, and whether there is an association between cracked and incomplete coinage. For example, do we consider a coin to be cracked if it is incomplete because it is broken, and whether these assumptions influence the way in which we view these categories?

It is more likely for a coin to show evidence of being cracked whilst still being a complete unit (79%). This implies that the cracking of the coin is something that appears on the surface and again may further emphasise cracking as a production flaw. If this is to be accepted, and it appears the most plausible conclusion, then this may go some way to explain why there is little association between cracked and incomplete coins. If a coin becomes fragmented at production, then it is less likely to make its way into circulation, as it would be recast and remade into a new coin.

8.1.5 Summary of Primary Context

The above results have shown information by individual specific aspects that inform on production. Throughout the results of the issues of production speed, quality and how these effects the aesthetic of the coin has been raised. It is important to consider how many coins display multiple variations of these factors (Table 8.1.5-1).

Notches	Plastic Deformation	Cracked	Mis-Struck	Number of Coins
NO	NO	NO	NO	490
NO	NO	NO	YES	9
NO	NO	YES	NO	17
NO	YES	NO	NO	7
NO	YES	YES	YES	1
YES	NO	NO	NO	498
YES	NO	NO	YES	13
YES	NO	YES	NO	24
YES	YES	NO	NO	12

Table 8.1.5-1 A Comparison of All Primary Phase Factors.

As demonstrated, it is most common for a single coin to have no notches, with 524 coins being absent of this factor. Where a combination of factors are considered, it is most common for none of the recorded factors to be visible on the coins surface, this might suggest that these 490 coins were visually optimum with regards to production. The most abundant category is coins showing evidence of notches but an absence of any other production 'flaws', at 498 coins. Although notches and plastic deformation are considered as a whole to appear on opposite ends of the production spectrum (one being associated with a flan which is too hot before striking, and one when the flan is too cool), there are 12 examples where both factors seem to be present on the same coin (See Figure 8.1.5-1 for an example (Coin ID 1068), remaining 11 coins IDs as follows: 33, 469, 992, 1012, 1032, 1041, 1042, 1043, 1071, 1051, 1057 .

Figure 8.1.5-1. Example of a coin with both a notch on the outer edge of the coin (quadrant A), and plastic deformation across the top of the coin (across Quadrants A and B), Coin ID 1068.

This may represent these factors occurring at different points in the production process, one when the blank flan is produced and one when the flan is heated and struck with the coin die. Alternatively, as the quantity of coins with both factors are so low, it may be implied that the notches present on these specific examples may be a result of circulation and deposition. Therefore, moving forward it is essential to look more closely at the types and shapes of notches on the outer edge in order to understand whether a difference can be ascertained.

By exploring the Primary context of the Lancashire Roman coin sample, there are multiple conclusions that can be reached. Firstly, notches on the outer edge of the coin are the most common production 'flaw' recorded for this thesis, with just over half of the entire sample demonstrating evidence for this. Furthermore, notches are more commonly found in coins associated with hoards, as opposed to single site finds. In turn, this may imply that the overall finesse of the coin is not an important factor when it comes to selecting coins for hoards and implying that hoarding is more likely to be storage of wealth, than due to the intrinsic value of coinage amongst the populations. The results in Chapter 8, suggesting that 70% of hoard coins are silver issues, may imply that their monetary or material value was the most important factor in deposition. However, it is important to consider that we are viewing these coins through our own relationship with coinage, where we are used to seeing 'perfect' coins due to standardised production.

Secondly, the factors recorded for this thesis suggest there is little difference between official and unofficial issues. This may further our understanding of the production of unofficial issues by suggesting that they were likely to follow traditional striking techniques, as opposed to alternative suggestions of being produced in moulds. If unofficial issues were more commonly produced in moulds, then the recorded factors (many of which occur as a result of striking) would be expected to show a greater difference between official and unofficial issues. Using evidence from the PAS, it is shown that there are only five records available for Roman coin dies (PAS 2020). However, all are too worn to be able to accurately identify whether they are official or unofficial. As such, more research needs to be conducted into Roman coin dies, and their provenance.

Through the analysis of these four factors, it can be seen that they most commonly occur in Reece periods 1, 8, 10 and 13, with period 13 being the largest chronological group for two independent factors (notches and plastic deformation). All of these chronological groups may represent periods of economic instability; period one with the beginnings of Roman expansion in earnest (meaning that the coinage was being spread further and thus needed in higher quantities than ever before), right through to period 13 which sees a reduction in coin quality due to heavy debasement. However, it is crucial to note that these chronological periods merely represent production and not the periods of deposition.

Perhaps the most important thing this analysis has shown, is that when we consider coins as objects in their own right it is possible to look for factors that link to their primary context (production), which is still displayed on the coin's surface after recovery in archaeological contexts. Furthermore, by exploring coins in this way we are able to move beyond simplistic and traditional wear methods, which would leave these factors ignored and unexplored.

8.2 Secondary Stage

The secondary context can be seen to focus on the use of a product, including the ways in which coins could be reused as new objects, or their visual properties altered whilst still retaining the essence of what a coin is (see Chapter 6.5.2). This phase is focused on the use of coins. The Vindolanda tablet 327 gives us an important insight into coins, *'and they are bringing (?) it with them in small change because..'* (Vindolanda Tablets Online 2019); we can see that coinage was being used as a method of exchange within Roman Britain. One of the important elements of exchange can be seen in understanding the contexts of where they were found (see Chapter 7.6.2 for a discussion of the context regarding the Ribchester Revisited coins).

The factors pertaining to the secondary phase of a coin's biography are associated with use and circulation such as clipping and perforations. These offer perspectives on two different ends of the biographical spectrum (i.e., still a coin vs a new object), providing a valuable insight into construction of acceptance, and alternative approaches in order to ascertain when a coin stops being a coin.

8.2.1 Clipping

Coin clipping has often been attributed as being a Romano-British phenomenon, associated with the breakdown of Roman rule in Britannia, and the termination of official coinage entering Britain (Abdy 2009, 395). This would imply that the process of removing parts of the coin (Figure 8.2.1-1), possibly with the intention of using the waste metal to create new local copies of coins was an unofficial process (Burnett 1984, 165; Guest 2013, 96-100), exacerbated by the need to produce more coinage, when a lack of official coinage was entering Britain (see Chapter 4.3). It is often assumed that where coin clipping occurs, it rarely obscures the legend or obverse design (Guest 2014), which has led to clipping being considered as a semi-official process (King 1981).

Figure 8.2.1-1. An example of a clipped coin, Coin ID 1133

However, the nature of clipping appears to show little standardisation, occurring with an increased frequency during the later periods, suggesting that the process represents a sign of desperation from the populations of Britain, and is a response to the withdrawal of Rome. (Johns and Bland 1994, 168).

From the 1073 coins that could be analysed, 37% (391 coins) show signs of clipping. The large proportion of coins that show signs of clipping arguably coincides with this being a British phenomenon (See Chapter 10.3 for further discussion). In order to understand the process of clipping in more detail, it is important to unpick this data further and look at the evidence chronologically, by area, and focus on the parts of the coin that are clipped.

As discussed, clipping is considered to be associated with the later periods, as a response to a lack of official coinage being introduced into Britain. By considering the evidence for clipping chronologically (Figure 8.2.1-2), we can begin to explore if this previously held assumption is correct.

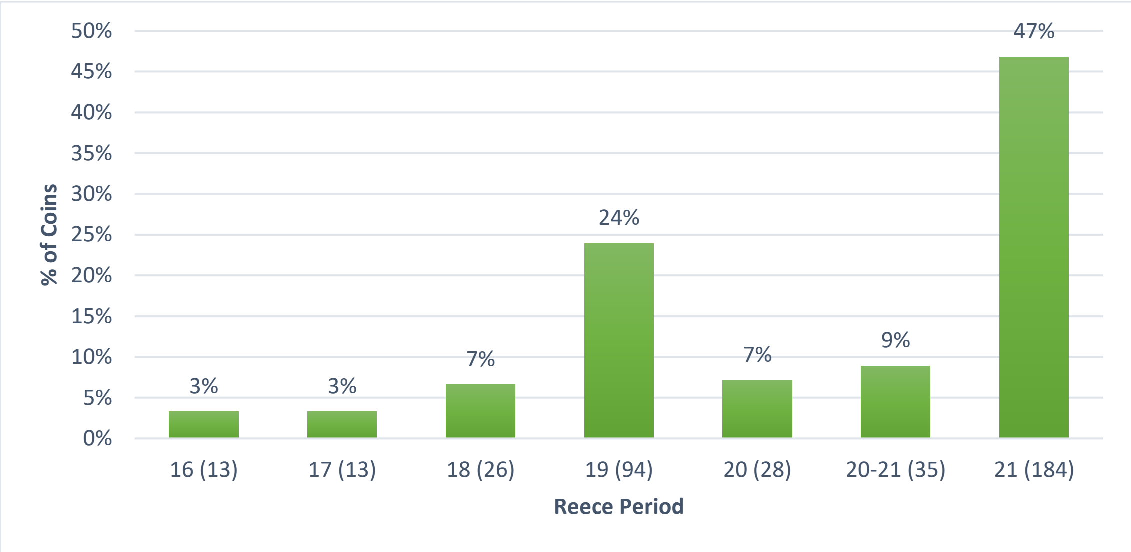

Figure 8.2.1-2 Proportion of Clipped Coins against the Total Sample for Each Reece Period

As shown, when the chronological distribution of clipped coins is considered, Reece Periods 18-21 (348-402 AD) demonstrate that over 70% of the coins associated with that period are clipped (Figure 8.2.1-2). Furthermore, the evidence provided from Periods 16-20, shows a gradual increase in the frequency of the phenomenon over time suggesting that clipping became increasingly common as the presence of Roman rule in Britain, and subsequent lack of official coins decreased. The increase in clipping may coincide with the increase in circulation of unofficial coinage, where people were checking the quality of coins in circulation. The consensus suggests that the clippings from these coins were used to produce raw metal for the manufacturing of other silver objects including locally produced silver coins (Guest 2005, 113). However, as only fifteen out of 502 coins from Periods 16-20 were unofficial, this suggests that unofficial coins were less likely to be clipped and perhaps this is due to the sheer difference in visual quality of the coins, with unofficial issues being clearly such and therefore it is assumed that the metal quality is not high enough to warrant clipping.

390 out of 391 clipped coins are associated with hoards, specifically the Rossall Fleetwood hoard, where all of the clipped hoard coins originate. This hoard is composed of 391 silver

siliquae. Contrastingly, the only other evidence of clipping in Lancashire is a single issue from Kelbrook and Sough and is the only evidence of a clipped coin coming from site finds, again highlighting that despite its appearance this coin may not actually be clipped in the traditional sense. Although the data was considered chronologically above, the fact that the majority of clipped examples come from a single hoard, with questionable provenance, may imply that clipping is a rare occurrence in Lancashire and may instead be limited to other areas of social activity elsewhere in Roman Britain.

If coin clipping is a rare occurrence in Lancashire, then it can be implied that clipping tells us little about coin use in Lancashire. However, the absence of clipping in the county is interesting, as it implies that Lancashire may not have been confined by the economic and social pressures of the late Romano-British period, implying that additional methods of exchange were in operation outside of coin-using societies. Irrespective of whether the Rossall Fleetwood hoard is from Lancashire or not, coin clipping as a process has much to offer with regard to interpretations of the intrinsic values of coins in circulation and assists in explorations of what makes a coin a coin (a concept which will be further explored in Chapter 10 when considering those areas of a coin which are clipped and those which are not).

8.2.2 Perforations

Another factor associated with the life phase of a coin is that of perforation, and whether coins that contain these holes in the flan have been intentionally perforated for reuse as a new object, or whether the damage is due to random post-depositional activities. Roman coins that display perforations near their edge are considered to be evidence of reuse as a new object. This changes the life phase of the coin into a new object, bound up with a new set of social interactions and negotiations. Moving away from being used for exchange, these coins are interpreted as being repurposed to become adornments for the body, often in the form of necklaces or amulets (Fulghum 2001, 139).

Only three out of 1073 coins show signs of a hole through the flan, which could be linked to intentional perforation, suggesting that the perforation of Roman coins may have been a rare phenomenon, at least in Lancashire. As the number of perforated coins is so small, it is the intention here to discuss each one in turn to explore whether the perforation is intentional or accidental.

Firstly, there is a Roman Republican denarius copy from Whalley recorded on the PAS (Figure 8.2.2-1). This coin shows evidence for two perforations through the coin flan, just below the reverse figures of the lictors and Brutus. This coin could have been reused as a pendant due to the uniform nature of the perforations on the flan, suggesting an element of intentionality in the transformation of the object's biography. Interestingly, however, when strung, the reverse image would be upside down to the outside world and would only look the correct way for the wearer (PAS 2019). This suggests that the function and therefore biography of this individual coin changed over time. The coin dates to 54 BC and is possibly a copy of official issues by the Moneyer Junius Brutus from Rome. It cannot be ascertained whether the coin came to Britain as a coin or in its reused form, possibly as a pendant. However, upon its deposition (either accidentally or intentionally) it displayed the appearance of perforations and elements of reuse. The only additional factors noted on this specific coin are associated with the tertiary phase of a coin's biography, small amounts of surface damage on the obverse, as well as scratches on the coin's surface.

Chronologically, this issue would have been created in Reece Period one (54 BC) but it is unknown when the perforation and subsequent change in the coin's biography could have occurred. Due to the nature of the find being recorded by the PAS as coming from Whalley, and little other contextual knowledge through distinct excavation, it is difficult to ascertain whether perforation would have happened at the time of creation, as the coin made its way to Britain through circulation, or once it was already circulating in Lancashire.

Figure 8.2.2-1 An Image of Perforated Coin, ID 449 from Database, photo by Boughton, D. 2016.

Secondly, a silver siliqua of Eugenius from the Rossall Fleetwood hoard (Harris Museum 2019). This coin (Figure 8.2.2-2) shows evidence for a single elongated perforation in the bottom left quadrant of the coin when looking at the obverse. As with the Republican example above, this coin shows intentional display of reuse. Where coins are perforated the reuse tends to be assumed to be for personal adornment, i.e. for a pendant or amulet. If that were the case with this coin, then it would be strung through the perforation, with the viewer seeing the obverse and reverse imagery at a 90-degree angle to the image below.

Figure 8.2.2-2 silver siliqua from the Rossall Fleetwood hoard

The final coin showing evidence of a hole through the flan is a second silver siliqua from the Rossall Fleetwood hoard (Figure 8.2.2-3). Two small perforations are visible on the bottom right quadrant of the coin. However, in contrast to the previous two examples it is unknown whether the perforations on this coin were intentional or accidental. In the previous two examples, there is evidence of bevelling around the perforations. However, in this example such evidence is absent, and also due to the varying shapes and sizes of the two perforations, as well as the worn and incomplete nature of the coin it is difficult to ascertain whether the holes produced were intentional or a consequence of deposition. If the perforations are intentional, then the obverse bust would be upside down to the viewer but correct to the wearer. Contrastingly, the reverse image would have been at a 90-degree angle with the reverse figure facing downwards.

Figure 8.2.2-3 silver siliqua from the Rossall Fleetwood hoard

This issue and the one above are both units found within the Rossall Fleetwood hoard, and both dating to Reece Period 21 (392-394 AD and 393-423 AD respectively). On the surface, this may imply that the reuse of Roman coins was a process unregulated by date, with examples coming from opposite ends of the Roman chronological spectrum. However, with such a small sample and no way of ascertaining when the coins themselves were perforated it is difficult to come to any solid conclusions about what economic, social and political forces would impact the decision to change a coin's biography in such a way as to take a coin out of circulation.

8.2.3 Secondary Context Summary

Clipped	Perforated	Number of Coins
YES	YES	2
NO	YES	1
YES	NO	389

Table 8.2.3-1 Comparison of Tertiary Factors.

By exploring a coin's secondary contexts (Table 8.2.3-1), many interpretations can be made regarding its use and circulation.

Firstly, just over one third of the Lancashire dataset shows evidence of clipping on the outer edge of the coin. It is important to highlight that clipped coins predominantly come from the Rossall Fleetwood hoard, with only a single issue in the dataset being identified elsewhere. As previously discussed, the provenance of the Rossall Fleetwood hoard is highly questionable, and may in fact have not come from Lancashire at all. If this is the case then there is only a single example of a clipped coin from Lancashire, and with clipping thought to be a predominantly British phenomenon, it would suggest it must be occurring elsewhere in Britain.

However, the way in which the coins have been clipped provides an interesting insight into the intrinsic significance of a coin, which goes far beyond its monetary value. Of the clipped coins, 96% demonstrate that the obverse design of the Emperor's bust remains unclipped, suggesting that clipping was perhaps a more structured process than previously thought, and that the Imperial bust was a key part of the intrinsic value of the coin. Contrastingly, 98% of the obverse legends are clipped, suggesting that the name and ranks of the Emperors were not important. This may have some bearing on the literacy levels of coin-using populations and imply that words were not as important as the image portrayed.

With regard to perforations, there are only three examples in the Lancashire dataset, only one of which shows signs that the reverse image would be the correct way up for the wearer. This may imply that it was not the Imperial portrait that was important at all in this case, but the imagery and symbolism of the reverse. In this example the reverse represents 'Brutus, between two Lictors carrying fasces, walking left' (PAS 2019), the lictor represents an officer of the consul whose duty it was to execute sentences on offenders, whilst the fasces is a representation of an axe symbolising their power. This is very powerful imagery, and the fact this particular coin was chosen for perforation and reuse as a new object may be due to the connotations of power and punishment of guilty parties, as a message.

8.3 Tertiary Stage

The tertiary context can be seen to focus on the deposition of an object, with regards to coinage, this involves the structured or accidental deposition of coins (see Chapter 6.5.3). As such, the factors pertaining to this final phase of a coin's object biography are associated primarily with corrosion and incomplete or fragmentary coins. For the purpose of this analysis, scratches and surface damage are also most likely to be associated with the tertiary context as a result of deposition, rather than with the secondary or use phase of the coin's biography.

8.3.1 Corrosion

Perhaps the most important factor recorded in this analysis is that of corrosion. This chapter has aimed to move beyond static wear categories of worn, unworn and slightly worn, and begin to focus on what specifically constitutes wear by analysing the different factors above. In the case of corrosion, this can be considered a by-product of deposition. The presence of corrosion covers the surface of a coin, and consequently may obscure the design details on the object itself to varying degrees (Figure 8.3.1-1). If this is the case, then current methods of analysing coin wear often fail to take this into account. Subsequently, this may mean that corrosion has been used as equivalent to wear, and may have influenced interpretations regarding the acceptance, value, and use of coinage.

Figure 8.3.1-1. Image to show the varying degrees of corrosion that can appear on the surface of a coin. Coin IDs 1053 (left), 1078 (centre), 320 (right)

Corrosion is present on the surface of 48% (515 out of 1073) of the sample, with nearly 50% of all coins displaying evidence for corrosion, this is likely to have a significant impact on analysis of wear. Furthermore, it allows us to make assumptions about the effects of post-deposition on coins as an object in their own right.

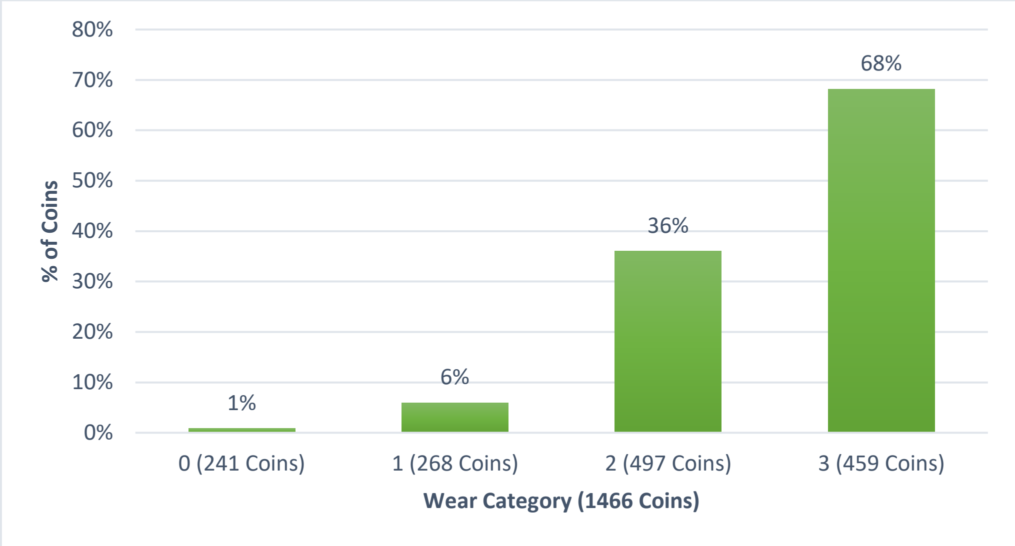

Figure 8.3.1-2 Proportions of Corroded Coins Against the Total Wear Category Sample.

One way to explore a possible relationship between wear stages and corrosion is to analyse the proportion of corroded coins per wear stage (Figure 8.3.1-2). Interestingly this shows that only a small proportion of the least worn coins are corroded, at only 6% for wear category 1. However, 68% of the coins recorded as wear stage 3 are corroded. This implies a possible relationship between corrosion and the current wear recording practices outlined above, regardless of whether corrosion is considered as a unique case or against the backdrop of wear as a whole.

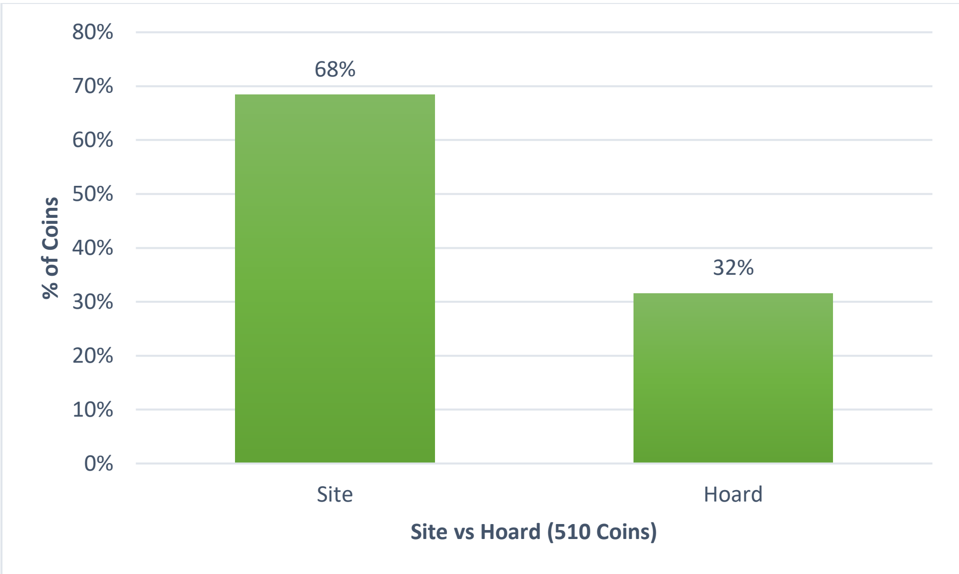

Figure 8.3.1-3 Distribution of Corrosion Amongst Site and Hoard Coins

When it comes to the presence of corrosion in site finds versus hoard finds, it may be expected that there ought to be little difference between the two, due to corrosion being a product of post-depositional environment and the presence of all of the coins within a smaller geological region. However, it appears the opposite is true, with just over double the number of site coins showing evidence of corrosion, when compared to coins from hoards (Figure 8.3.1-3). By considering this alone we can begin to determine the details of a coin's tertiary context (deposition phase) simply by looking at the differences in corrosion between individual coins and hoard coins. For example, this evidence may provide insight into the nature of deposition of hoards and imply that the reason hoard coins display a lower frequency of corrosion may be due to the fact that they are not buried in the ground loose. Rather, they are more likely to be buried in some form of container which affects the microclimate of the deposit, and therefore the process of corrosion.

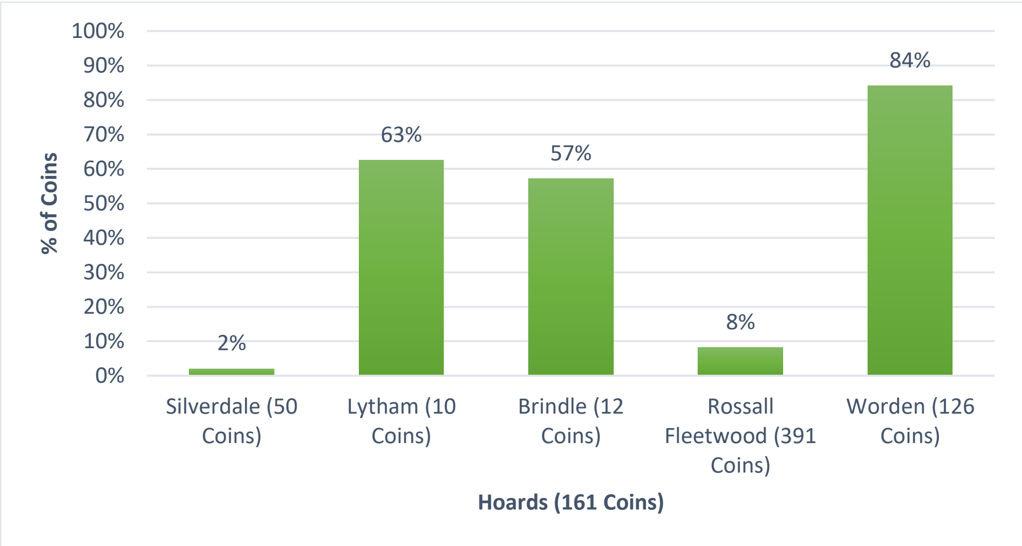

Figure 8.3.1-4 Proportion of Corroded Coins Against the Whole Coin Sample for that Hoard.

If we consider Romano-British hoards more generally, it is thought that many, especially smaller hoards, would have been buried in a container such as a pot, as is the case with Brindle hoard. This type of container, if undisturbed, is thought to survive well in the archaeological record and protect the hoard within efficiently. However, containers made from organic material, such as wooden boxes and leather purses, are more prone to being disturbed or affected by the micro-climate of the surrounding geology. With the rise in casual finds or hoards outside of distinct archaeological excavation, and the rise in archaeological hobbies such as metal-detecting and field-walking, it is thought that traces of these materials, where surviving, may be overlooked in favour of the precious metal within the hoard (Johns 1996b, 4).

The Brindle hoard is the only hoard which shows evidence of corroded coins (Figure 8.3.1-4) where the records distinctly state that it was buried in a container, in this case a pot (Shotter 1990, 150). Initially, it may be assumed that there should be a lower rate of corrosion in this example due to the sealed nature of the coins. However, Romano British hoarding and its practice has been the subject of much debate in archaeological discourses, with discussions frequently focused on the practice of deposition, and what hoards represent. For example, one argument is that many hoards would have been buried for safe keeping as an ancient banking system, and therefore may have been kept open in order to add to the collection (Johns 1996b,7). This is difficult to prove archaeologically, but the reintroduction of air and moisture to the deposit may have intensified the development of corrosion on the coins, and therefore may be one interpretation of the high levels of corrosion on the Brindle coins.

The remaining two hoards, the Rossall Fleetwood and the Worden hoard, have no mention of being found within a container, though both hoards have been passed down through private collectors, with multiple accounts of their discovery. Furthermore, if they were buried in an organic container, then this may have rotted shortly after burial, which may explain why 84% of the coins in the Worden hoard demonstrate evidence of corrosion.

Additionally, it is necessary to focus on the chemical variables of the soil, such as soil pH, and how access to water and air in the soils will impact the rate and frequency of corrosion by-products on buried objects (Nord *et al.* 2005, 311) should be considered. Regarding the Lancashire data, the Rossall Fleetwood and Worden hoards have no mention of a container associated with them in publications. However, the difference in the frequency of corrosion is clear, with only 8% of coins in the Rossall Fleetwood hoard showing signs of corrosion, compared with 84% of coins in the Worden hoard. It is important here to consider the effects of corrosion for different material types. For example, the Worden hoard is made up of copper alloy issues, whereas the Rossall Fleetwood hoard is silver issues. This highlights the importance of coin material in the way in which corrosion presents itself on the coins surface. As mentioned, one of the main characteristics of soil which will lend itself to more aggressive corrosion of metals is water (Booth *et al.* 2013). The high volumes of rainfall in Lancashire, therefore, would provide the optimum micro-environment to lend itself to increased corrosion of metals. Soils which allow access for both water and air to mix with the buried object leads to more severe corrosion, whereas fine-grained soils tend to display less corrosion due to the lack of air supply (Nord *et al*. 2005, 313). As such, the association with Leyland in South Ribble, and Fleetwood in a more coastal environment, may explain the difference in corrosion frequency between the two hoards.

However, the difference in frequency of corrosion of the two hoards, may also provide additional support for the concept that the Rossall Fleetwood hoard currently on display at the Harris Museum is not the original hoard found at the location. It may be possible to imply that the Rossall Fleetwood hoard analysed for this study may not be from Lancashire at all, due to the uncertainty of its provenance, the distinct lack of siliquae from elsewhere in Lancashire, and the presence of more unusual mint marks. As such, the lack of corrosion on these coins (8%) may represent the corrosion processes of a hoard that was buried in a different micro-environment, which features different geology and corrosion-enhancing products than the soils of Lancashire.

Both the Lytham and Silverdale hoards are thought to have been found dispersed, in the case of the Lytham hoard across the shoreline due to natural erosion, and in the case of Silverdale spread over a small area (PAS 2019). This implies that, if these two hoards were buried in a container (organic or otherwise), this may have been disturbed before they were found in the present. However, the frequency of corrosion between the two is noticeably different, with the Silverdale hoard only demonstrating 2% of coins with corrosion, as opposed to the 63% of coins in the Lytham hoard. Again, this may be due to the chemical variables in the soil (Nord *et al*. 2005, 311). If the Lytham hoard was found due to natural erosion of the coastal area, then it may imply the soil had greater exposure to water and air which increased the rate of corrosion of this hoard dramatically.

As demonstrated, by looking at the difference between corrosion in sites and hoards, and amongst individual hoards themselves we can begin to interpret the nature of burial practices, and the effects that deposition has on coins as artefacts. Furthermore, we can begin to explore the effect that corrosion has on wear and provide greater evidence as to how and why this may impact our interpretation. If corrosion is a product of post-depositional factors, then it has little to no effect on how coins would have been viewed during their lifecycle and to the people who were using them. This further reinforces the need for a greater distinction between the two factors in archaeological analysis, specifically in the ways in which we then interpret these valuable objects and the economy in which they were used.

8.3.2 Incomplete/Fragmentary Coins

As outlined in Chapter 6.5.3, incomplete coins represent those objects which are not whole (Figure 8.3.2-1). This is something which is thought to happen during the tertiary phase of the object's biography due to post-depositional processes. However, it is noted in Chapter 6.5.3 that the intentional production of fragments may have been undertaken in order to provide smaller units for exchange.

Figure 8.3.2-1. Examples of Fragmentary Coins. Coin ID 1385 (left) and 1440 (right)

As shown in section 8.1.4, there appears to be a minimal association between cracked coins and incomplete or fragmentary coins. However, it may be possible that incomplete coins are influenced by additional factors. For example, it may be expected that chronologically early coins may be more likely to be incomplete, as they have had longer to circulate, and in the case of early accidental losses, have had longer periods of deposition. Alternatively, it may be expected that later period coins would be more likely to be debased, along with unofficial issues, which have a reduced metal quality, implying that the elemental structure of the object would be weaker than earlier official issues. This is due to the melting down of clippings of official issues to produce unofficial issues, causing unofficial issues to have higher proportions of iron and lead, making the overall coin softer and more brittle thus being more prone to damage (Zeepvat *et al.* 1994, 13).

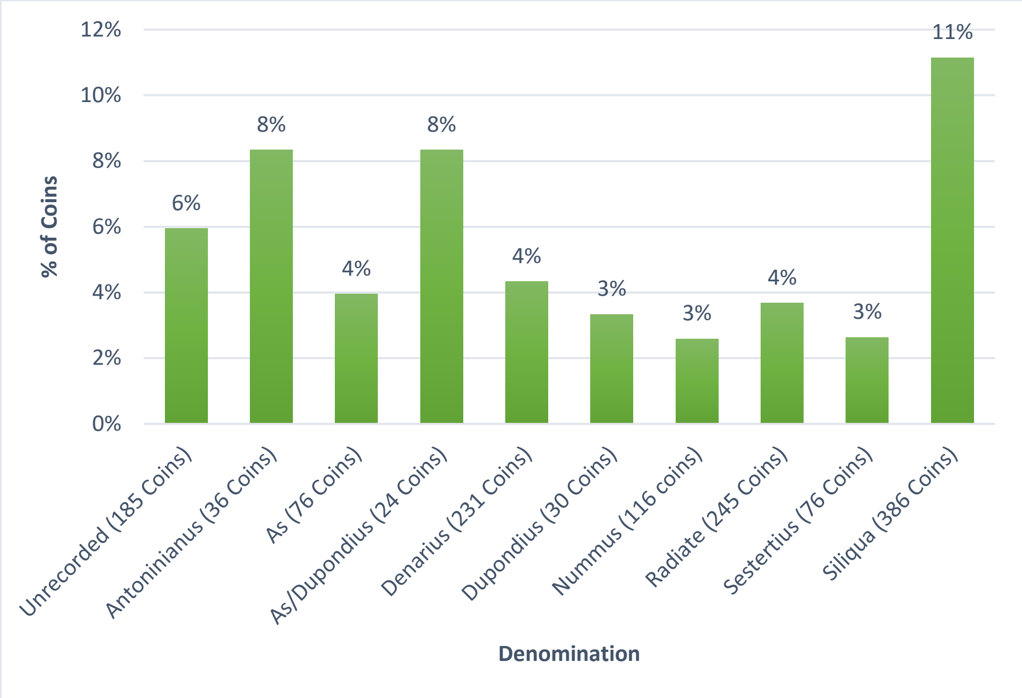

Figure 8.3.2-2 Graph to show the distribution of denominations which are incomplete

If this is the case, then it would be expected for there to be distinct patterns between denominations (Figure 8.3.2-2), presence in site vs hoards (Figure 8.3.2-3) and also chronology.

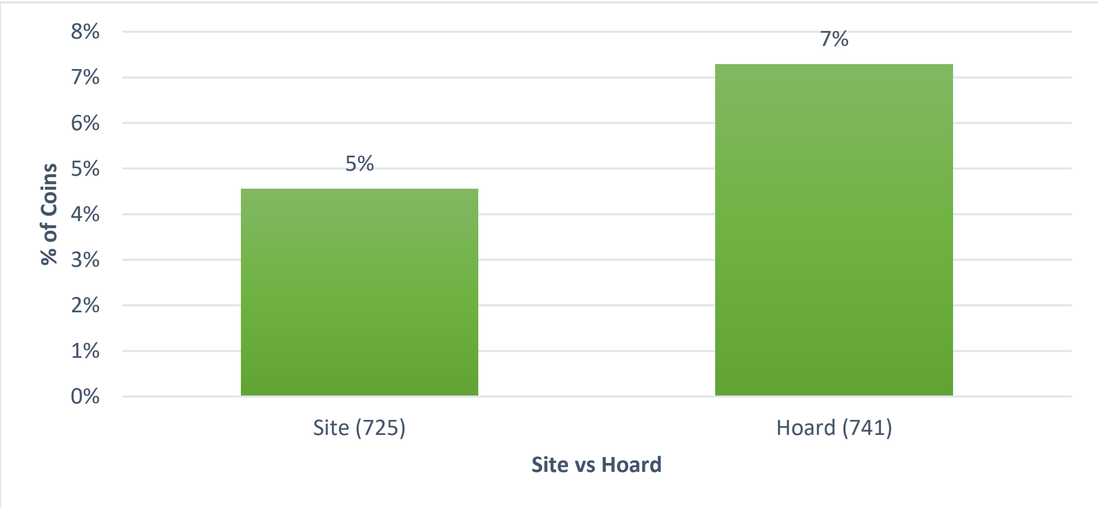

Figure 8.3.2-3 Graph to show the distribution of incomplete coins between the Site and Hoard coins

If we compare incomplete coins with denomination (Figure 8.3.2-2), we can see that Siliquae are the most likely to be incomplete at 11% (43 out of 386 coins). However, it is important to note that the majority of Siliquae come from the Rossall Fleetwood hoard which, as previously discussed, has a questionable provenance and may not be from Lancashire. This may demonstrate an increase in the proportions of incomplete coins from elsewhere in England, or perhaps demonstrate signs of damage from being moved or stored differently to other coins. If we discount the evidence provided by Siliquae, we can see that the remaining denominations show proportions of less than 10%, with copper alloy issues antoninianus and as/dupondius being the largest samples at 8%. This implies there is little significance between coins that are incomplete and denomination. Furthermore, it is important to note that, minus the 6% of incomplete coins that have unrecorded denominations, the remaining 94% represent official issues only, whilst the results do not include unofficial issues at all. However, when considered against the entire official coin sample, only 6% (76 out of 1234 coins) of these are incomplete, as opposed to zero out of 47 coins, which is perhaps not a significant enough sample to imply that incomplete coins are more likely to be official units.

The results for chronology (Figure 8.3.2-4) have been calculated as the number of incomplete or fragmentary coins against the total number of coins from that Reece Period, and it appears that Period 12 is significantly more likely to be incomplete or fragmentary. However, it is important to note that the sample size from this Reece Period is only two coins, and therefore this high proportion should be discounted from the interpretation, as it simply demonstrates that one of two coins was incomplete or fragmentary. The other Reece Periods to show proportions of higher than 10% are Periods 12-13, 18 and 21, with sample sizes of 25, 37 and 196 coins, respectively. As such, this may demonstrate that incompleteness is most likely in later periods such as Period 21, but this could again be due to the dominance of the Rossall Fleetwood hoard in this period.

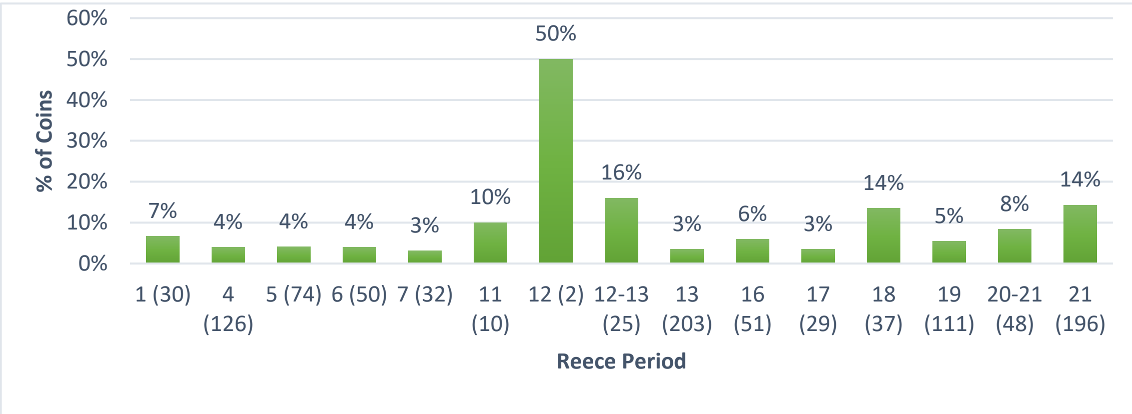

Figure 8.3.2-4 Graph to show the chronological distribution of incomplete coins

8.3.3 Scratches

The next factor to be explored in this analysis is the presence of scratches on a coin's surface, in order to ascertain whether this aspect is due to intentional and structured damage to a coin's surface, or whether it appears to be more random and therefore a consequence of post-deposition activities.

Scratches on the surface of the coin is present on 42% (450) of the sample. It is important we interrogate the data in order to ascertain where on a coin this damage occurs, how this is impacted by the type of deposition (hoards versus individual finds) and chronologically; in order to interpret whether this damage is structured or a consequent of environment.

As with notches, scratches have been considered against the quadrants in which they occur on a coin in order to understand the intentionality that may be behind this type of damage.

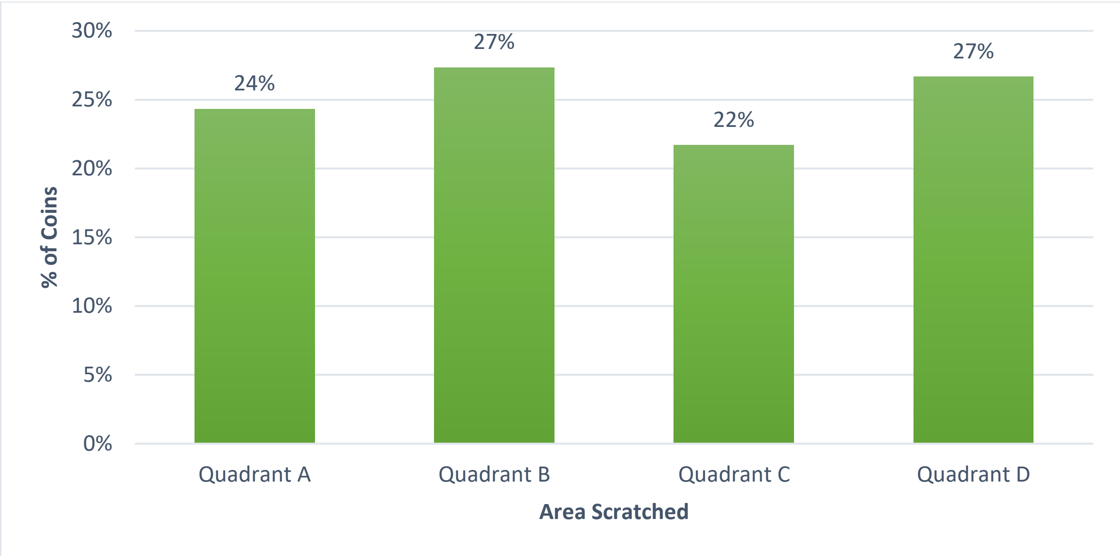

Figure 8.3.3-1 Areas on the Coin where Scratches Occur.

The presence of scratches on a coin's surface seems to be consistent across all four quadrants, with frequency ranging from 22% to 27% (Figure 8.3.3-1). It may be argued that the presence of scratches on coins may be predominantly due to post-depositional activities which occurs after a coin has been purposefully buried, or accidentally lost. One way to explore this further would be to consider whether scratches occur more frequently in hoard coins or on individual coins. It is possible that the impact of environmental damage would be more frequent on an individual coin accidentally lost, as there is only a single unit surviving outside of a structured deposition.

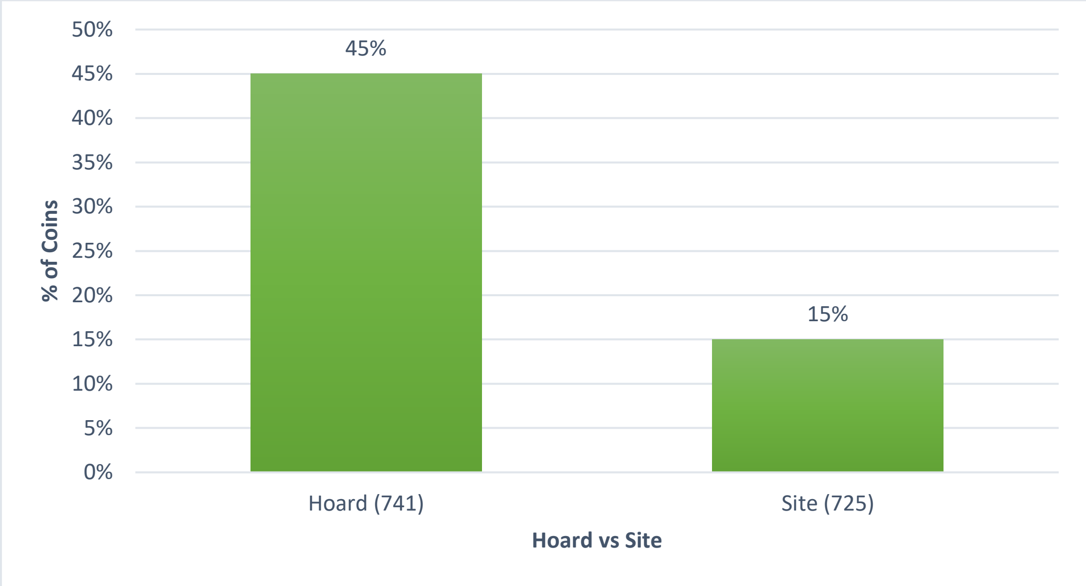

Figure 8.3.3-2 Proportion of Scratches in Hoard Coins and Casual Losses, Against the Total Number of Coins in Each Sample.

As demonstrated, 45% of all hoard coins display evidence for scratches on their surface, whereas in contrast, only 15% of site coins display scratches (Figure 8.3.3-2). Previously, it may have been assumed that because hoarded coins undergo a more structured deposition, sometimes even being deposited within a container, they would be less likely to become scratched during post-depositional movement. However, the evidence from this investigation suggests that coins associated with hoards are in fact more likely to be scratched. Therefore, it is important to consider what other factors may influence the presence of scratches on a coin's surface, and the role of intentional scratching of coins during the secondary phase of a coins object biography should be considered in more depth. As coins are carried, used, dropped and transported during their lifecycle they may be more prone to becoming scratched. If this is the case, then by comparing the presence of scratches in hoard versus site coins to the generic wear category the coins have been given, we can begin to analyse whether more worn coins are more likely to have scratches than unworn coins. Worn coins are traditionally considered to be a product of circulation and so this may be one method of understanding the presence of scratches. Additional experimental work looking at hoarded coins in different burial conditions and examined over different time intervals may also enable us to understand the effects that post-depositional contexts could have on the surface of coins.

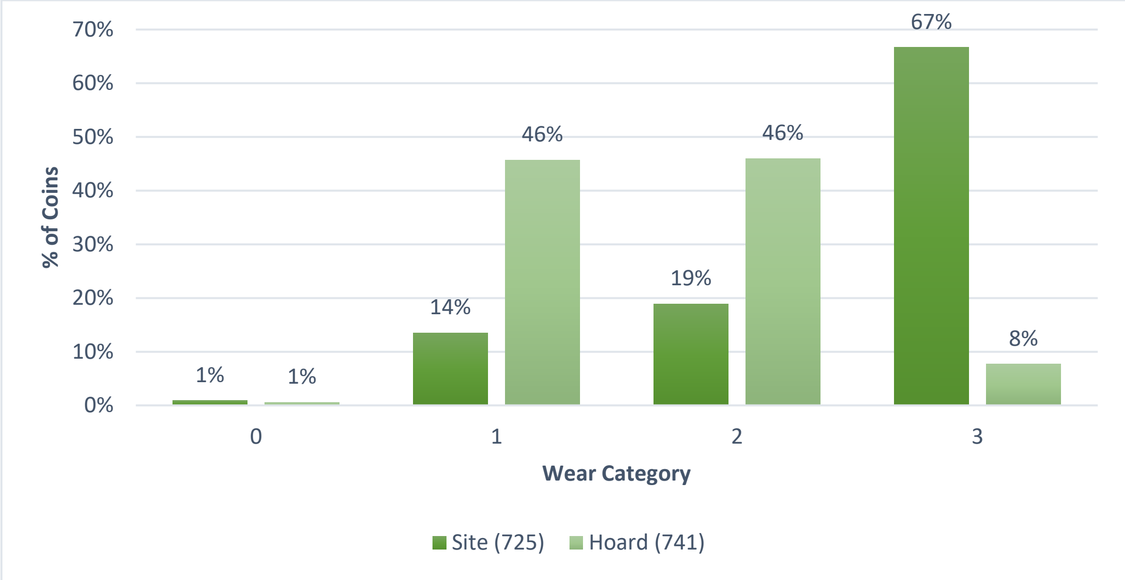

Figure 8.3.3-3 Presence of Scratches vs Wear Category, in Hoard Coins and Individual Coins.

As shown in Figure 8.3.3-3, site coins show a higher proportion of scratches on the more worn issues with wear categories two and three displaying evidence for 86% of scratches in this group. This may suggest that post-depositional environment is impacting the frequency of scratches. Furthermore, we could postulate that the presence of scratches on site coins, is more likely to be accidental than due to intentional man-made damage.

Contrastingly, scratches seem to be much more prevalent in hoard coins that are unworn or slightly worn, with wear categories one and two accounting for 91% of scratches from this sample. This may indicate that scratches to coins found in hoards may have a stronger element of structured damage. If it is accepted that current wear categories can often be muddied by other elements (such as corrosion) then an unworn coin is less likely to be corroded than a worn issue. If this is the case, then hoard coins containing more unworn and scratched issues are more likely to be scratched during the secondary phase, than the primary phase.

One interpretation could be that if hoards are buried as a method of storing wealth, as a savings hoard, that an individual may want to test the metal quality of the coins they are hoarding by making scratches on the surface. One way to test this theory may be to consider the overall chronology of scratched coins, and more specifically the chronology of the coin hoards with scratched coins. If the coins themselves are later in date we would expect fewer scratches on their surface if the scratches are produced by circulation, as a fourth century coin would likelyhave been in circulation for a shorter time period than earlier coins.

	Site Coins (725)	Brindle (21)	Dolphinholme (3)	Kelbrook (8)	Lytham (16)	Rossall Fleetwood (391)	Thurnham (4)	Waddington (30)	Worden (126)
1	1%		67%				25%		
3				13%					
4	2%			13%			25%	7%	
5	2%			13%				17%	
6	1%						25%	17%	
7	1%								
8	1%								
12-13									2%
13	1%								
14									25%
16	1%	14%			6%	3%			
17		14%			6%	3%			
18						4%			
19		5%				18%			
20						5%			
20-21		10%				7%			
21						32%			

Table 8.3.3-1 Chronological Distribution of Scratches in each Hoard

If we consider the hoard evidence chronologically (Table 8.3.3-1), we can see that the individual hoards are split reasonably evenly between those with an earlier chronology and those with a later chronology, with no scratched hoard coins falling into periods eight to twelve. Interestingly, when we divide coins up chronologically, we can identify that none of the eight hoards show 100% of coins being scratched. This may contrast with earlier arguments regarding the structured scratching of hoard coins, as if the quality of the metal needed to be tested for coins that were being deposited in hoards then it would be expected that they would all be scratched.

However, when the chronological data for scratched hoard coins is compared to the chronological data for scratched site coins it can be reiterated that hoard coins are proportionally more likely to be scratched than site coins. If it is the case that hoard coins are being deliberately scratched, then this may be because hoards are intentionally deposited, whereas site coins are more likely to be accidently lost. Conversely, if scratching happens as a consequence of post-depositional activities (which appears to be most likely based on the evidence as a whole), then it may suggest that hoard coins are more likely to scrape together during post-deposition and the movement of the soil, causing these scratches on the surface.

On the whole, periods 17-21 (330-102 AD) display the highest proportions of coins with scratches, and as such suggests that scratches were a more common phenomenon in the third century. To begin with, this may contrast assumptions about scratches, as it would be expected for earlier coins to show a higher prevalence of this type of damage, due to the longer time they may have had to circulate before deposition. However, it is important to remember that due to the severe periods of debasement during the third century that the quality of the coin may impact its ability to become scratched, as the metal quality is less pure, making each unit softer. Consequently, later coins would display a higher chance of becoming scratched.

8.3.4 Surface Damage

Surface damage refers to areas on a coin's surface which are not caused by any other factor recorded in this thesis. It is felt that surface damage is likely to occur during the tertiary context of a coin's biography, as result of post-depositional processes (See Chapter 6.5.3 for more information).

Surface damage is visible on 59% (632) of the Lancashire sample. It is important to remember that this type of damage is independent of the other factors recorded in this analysis, such as scratches, which are also displayed on the coin surface. Surface damage refers to any kind of undiagnostic abrasions, sometimes in the form of pitting and delamination of the coin's surface, where specific cause cannot be ascertained (see examples in chapter 6.5.3).

As discussed in Chapter 6.5.3 surface damage, due to its nature, often obscures details on the surface of the coin and as such, it is assumed that surface damage is often considered as being equal to wear, and additionally often confused with corrosion (Figure 9.3.4-1 highlights the differences between these categories). However, it is argued here that surface damage (post-depositional or otherwise) is its own unique category, that can be used to assist in interpretations of a coin's object biography. The link between wear and surface damage can be see when the proportion of surface damage and wear is compared.

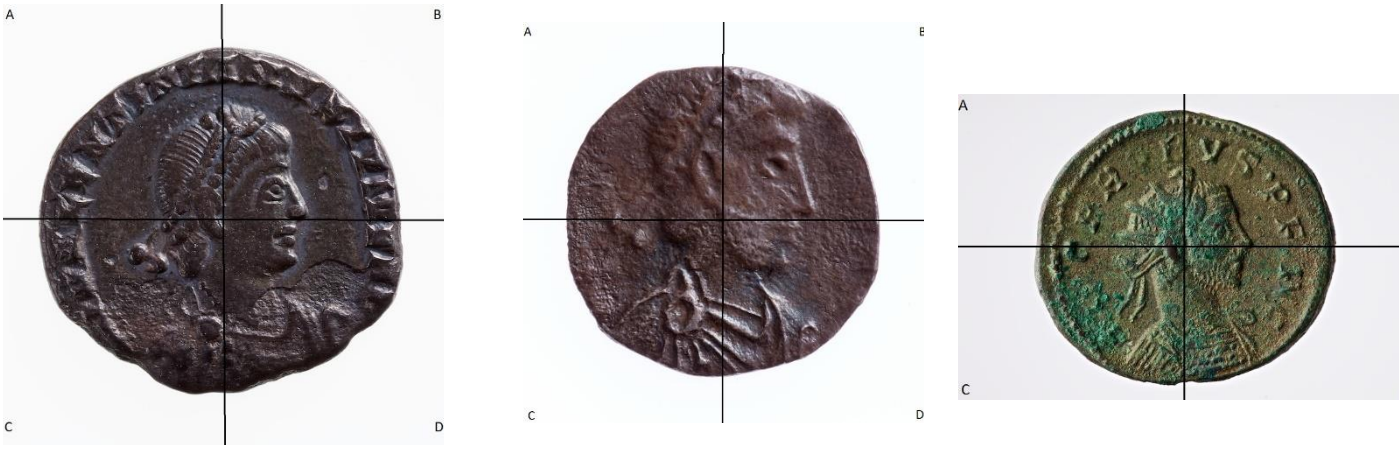

Figure 8.3.4-1. Images to show the difference between surface damage (Coin ID 1221, left), coin wear (Coin ID 1441, centre) and corrosion (Coin ID 1088, right)

If we consider the entire wear sample, we can see that the coins displaying surface damage represent 55% in both wear categories two and three (Figure 8.3.4-2). If over half of the slightly worn and worn coins demonstrate evidence of surface damage, this may be affecting how the wear category is assigned. Of course, in this instance this provides a comparison between surface damage and wear categories which have both been assigned by the author. One way to ascertain whether this is the case regardless of who ascribes wear is to consider those examples where wear was recorded in publication and compare those to surface damage ascribed by the author.

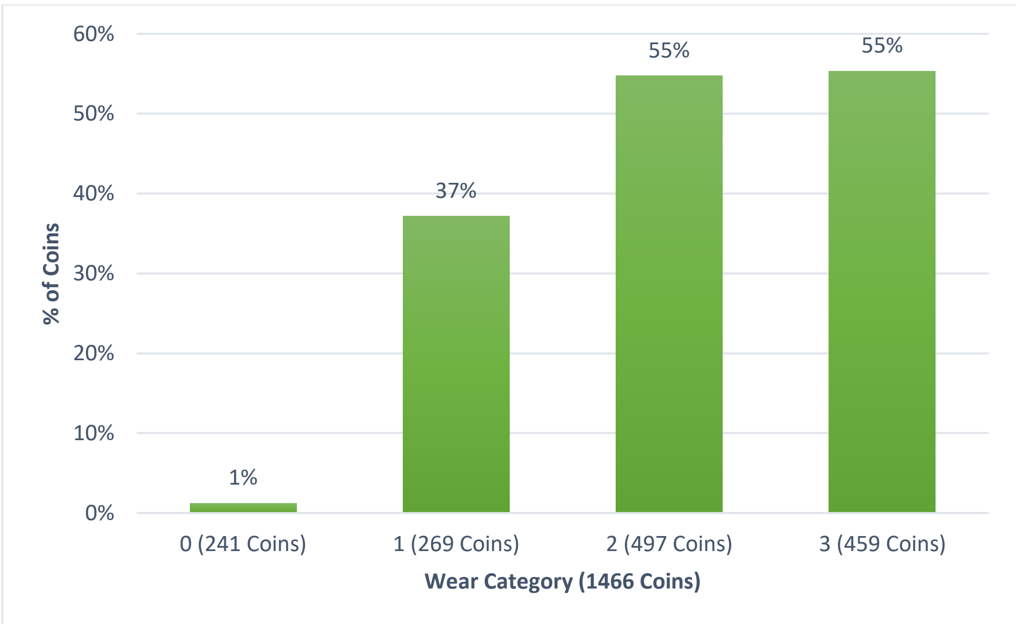

Figure 8.3.4-2 Comparison between Surface Damage and the Entire Wear Sample

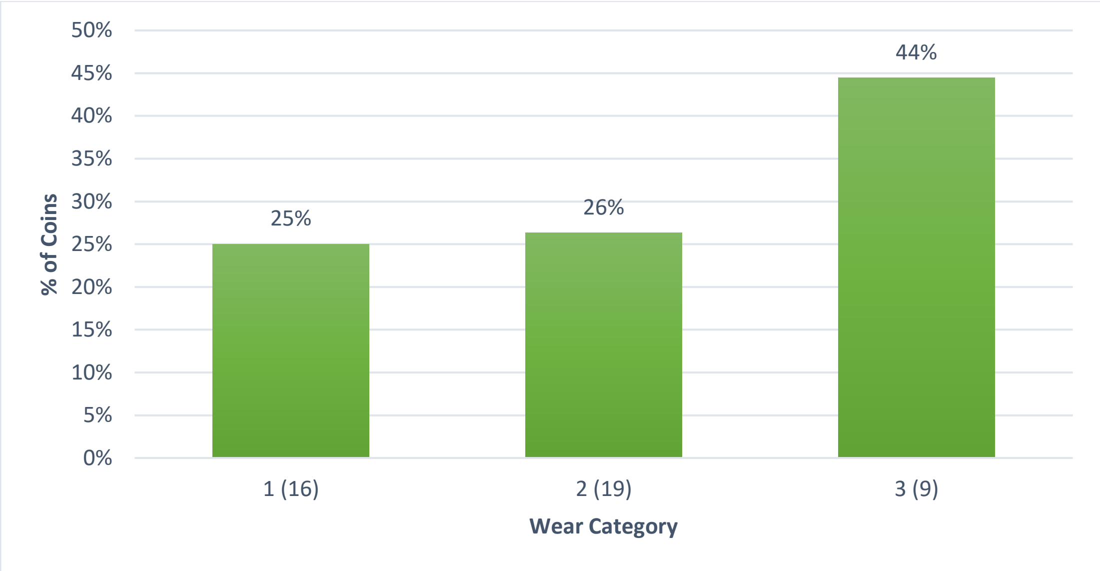

Figure 8.3.4-3 . A Comparison of Published Wear and Ascribed Surface Damage.

Here a sample of 44 coins have been considered from the Ribchester 1989 excavations. These coins had wear patterns ascribed to them in publication (Buxton and Howard Davis, 2000). These wear categories have then been compared with the surface damage attribution assigned by the author. As can be seen, wear category three still shows the highest proportion of surface damage (Figure 8.3.4-3) thus implying that surface damage and wear may be applied synonymously without clarification through the use of traditional wear methodologies.

It is important that we try to analyse any patterns in the presence of surface damage, if we are to be able to ascertain whether this factor can be associated with post-depositional activities, rather than a structured and intentional act. Therefore, surface damage will be considered against the backdrop of other categories already used in this chapter, such as, the location of the coins, the chronological evidence and whether this category is more common in hoard or site coins.

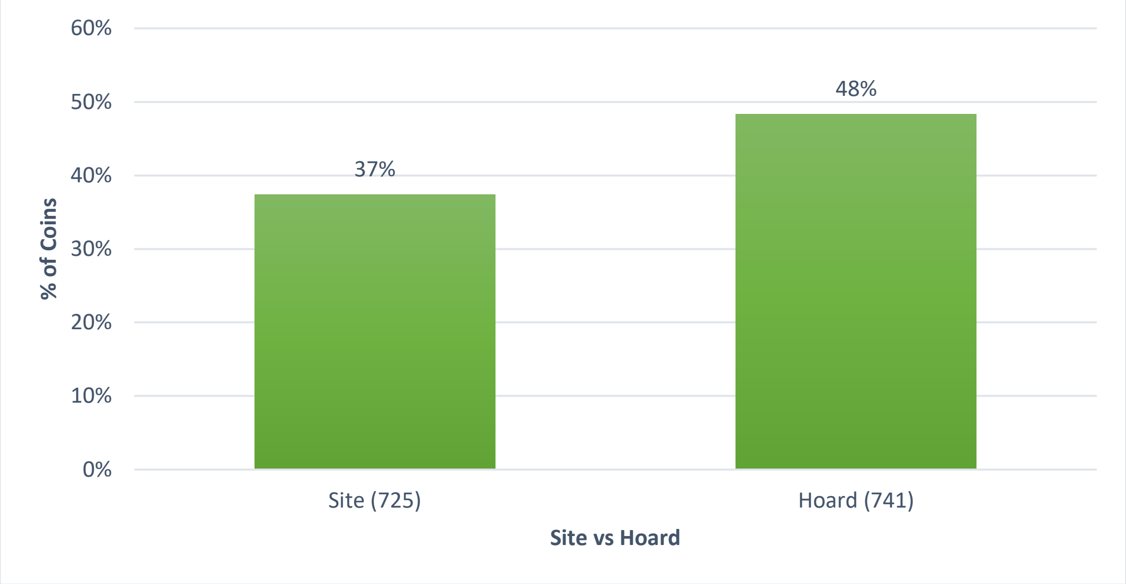

Figure 8.3.4-4 Comparison between Coins with Surface Damage in Sites vs Hoards.

Coins from hoards are more likely to display signs of surface damage than individual casual losses, by 11% (Figure 8.3.4-4). It is important to break this down further and look at the specific hoard evidence, if we are to understand why this might be the case. The assumption is that hoards undergo a structured deposition, either during a single depositional event, or if the hoard is added to over time, that there is a single event sealing the hoard context (Aitchison 1988, 271). Hoards are more likely to remain undisturbed than casual losses, and consequently would be less prone to surface damage as a result, if we consider surface damage a consequence of post-depositional activity. However, in the case of the Lancashire data, hoards appear to display a higher proportion of surface damage, and as such the context of the individual hoards and their discovery becomes crucial in assisting our interpretations of why this may be the case.

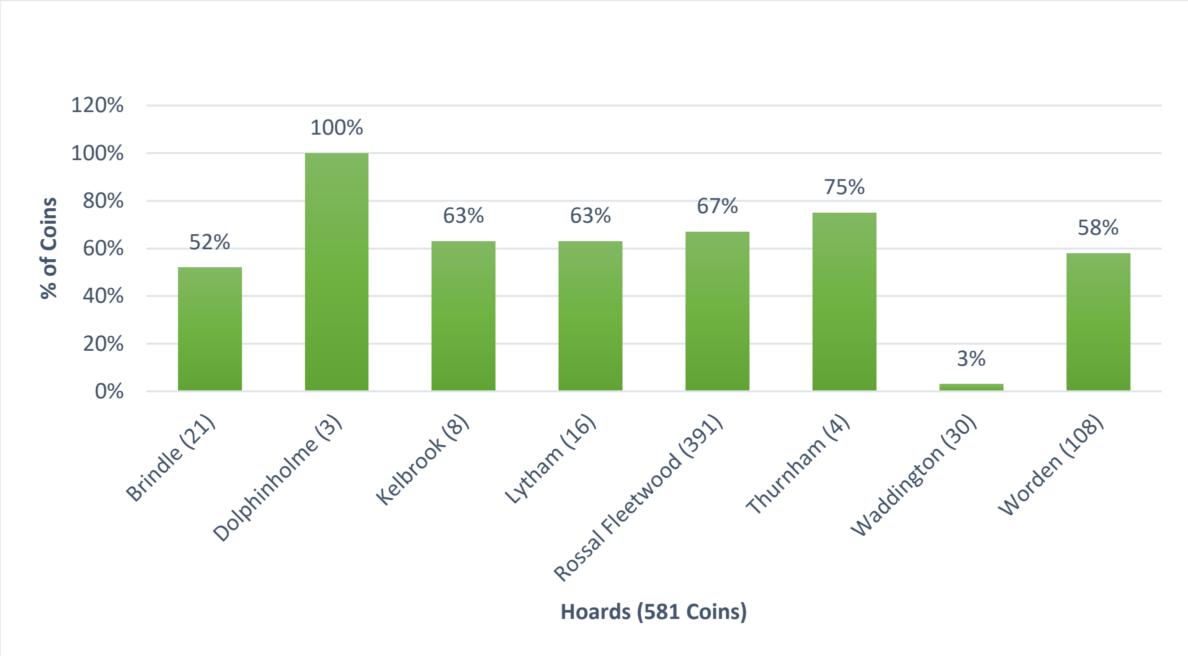

Figure 8.3.4-5 Proportion of Coins from Each Hoard that Display Surface Damage.

As demonstrated, in seven out of eight hoards, over 50% of the coins display signs of surface damage, except for the Waddington hoard where just 3% of the hoard's coins have surface damage (Figure 8.3.4-5). The Waddington hoard was found in 1989 buried at Waddow Hall contained in a pot (Shotter 1990, 165), implying that this hoard remained undisturbed from the time of burial, and consequently would have had less opportunity for the coin surfaces to become damaged during post-deposition. The coins in the hoard date from 54-138 AD, with Shotter (1990, 165) highlighting that this chronological distribution suggests it was buried shortly after the Hadrianic period. Subsequently, this may support the idea for surface damage as a consequence of day-to-day exchange or transport of the coinage following its production. It is possible that due to the hoard being buried in a container, the coins would be less likely to become damaged due to post-depositional activity and soil movement. Furthermore, some of the coins in the hoard would have been in circulation for almost 100 years, meaning they could be more prone to damage as a product of circulation.

The Dolphinholme and Thurnham hoards both display evidence of three coins having surface damage. However, the hoards themselves are comprised of only three and four coins respectively. There is little information available regarding the discovery of the Dolphinholme hoard, however it is thought the hoard from Thurnham was found as a scatter, rather than in an undisturbed archaeological context. As such, it cannot be ascertained whether this example actually represents a hoard, or rather a scatter of casual losses. If the Thurnham example does actually represent a hoard, then it is suggested that it terminates in the late second or early third century, and therefore the high proportions of surface damage 75% (three out of four coins) may actually be due to factors that occur during the coin's lifecycle prior to deposition.

The remaining five hoards display evidence for surface damage at proportions ranging between 52-67%. If we consider the sample size of the hoards, then the Rossall Fleetwood hoard provides the greatest evidence with 262 out of 391 coins displaying signs of surface damage. As previously mentioned in this thesis, the Rossall Fleetwood hoard proves an interesting example, when the mystery surrounding its provenance in considered.

It is important we also consider surface damage chronologically in order to ascertain if there are any peaks in the periods where it may be most common, and why this could be the case.

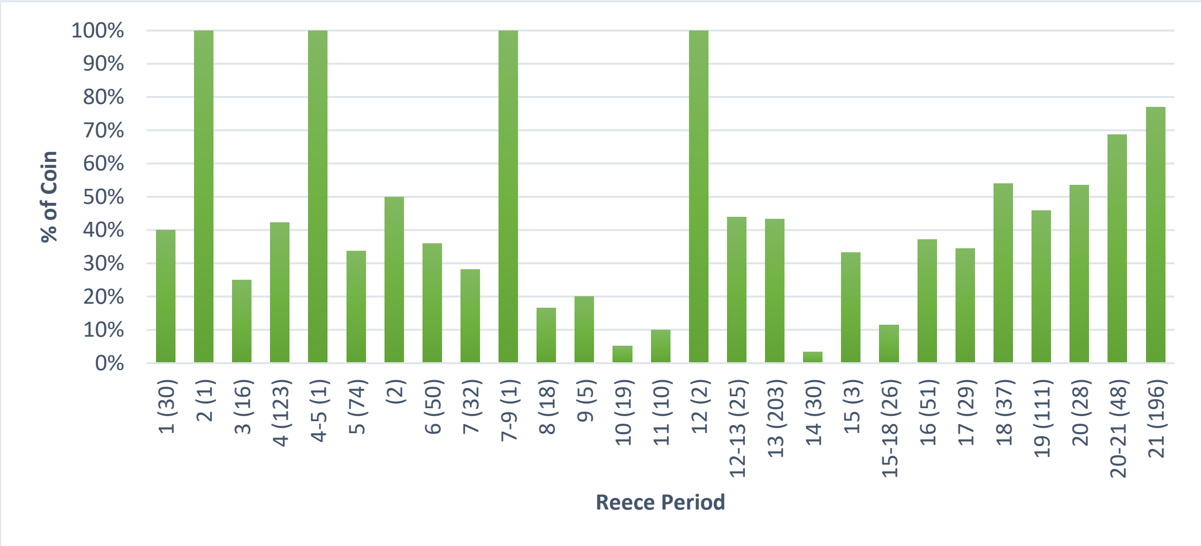

Figure 8.3.4-6 Chronological Proportions of Surface Damage Against Whole Chronological Sample.

As shown, there are four peaks where 100% of the chronological sample for Reece Periods two, four to five, seven to nine and twelve display the presence of surface damage (figure 8.3.4-6). However, it is crucial to highlight that these four categories contain an overall coin sample of one and therefore merely imply that a single coin displays surface damage. As such, Reece Periods displaying a sample of fewer than ten coins have been removed, in order to ascertain where significant peaks of surface damage may be occurring.

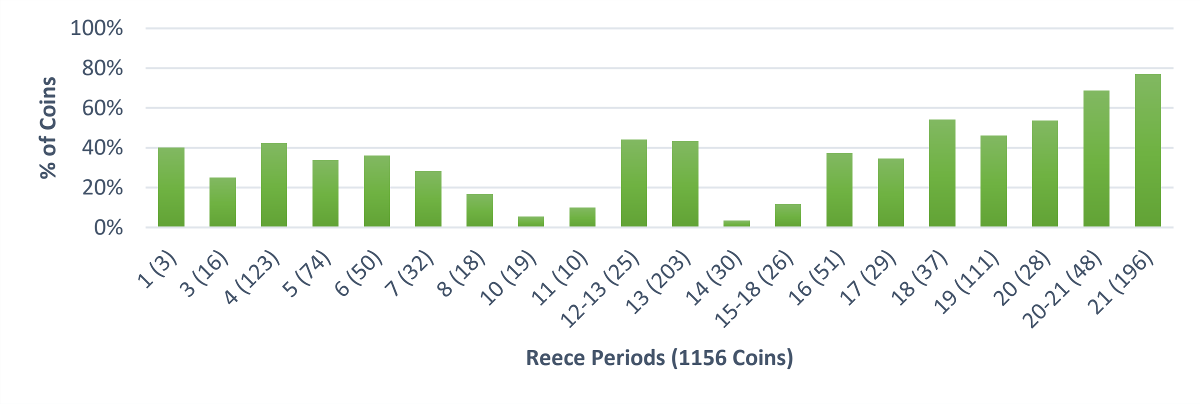

Figure 8.3.4-7 Proportions of Entire Reece Period with Surface Damage (Where Samples of <10 have been Removed).

Here it is possible to see that the highest proportions of surface damage, when compared to the whole sample, occur between Reece Periods 18 and 21 (348-402 AD). During this 54-year period, there are 24-coin issuers.

In fact, if we consider the periods where proportions of surface damage reach over 40%, we can see that periods four, thirteen and 18-21 are relevant (Figure 8.3.4-7).

If we then consider periods 18-20 in more detail, it may be possible to unpick why the results in period 21 are significantly higher. Periods 18-20 represent the chronological period 348-388 AD. During this time there is much political and economic upheaval in Roman Britain, as Rome begins to lose control of the province before final withdrawal in 410AD. As a result of periods of significant debasement, the quality of the metal content of individual coins is greatly reduced, and as such the objects themselves are more prone to surface damage due to their interactions with the environment after deposition.

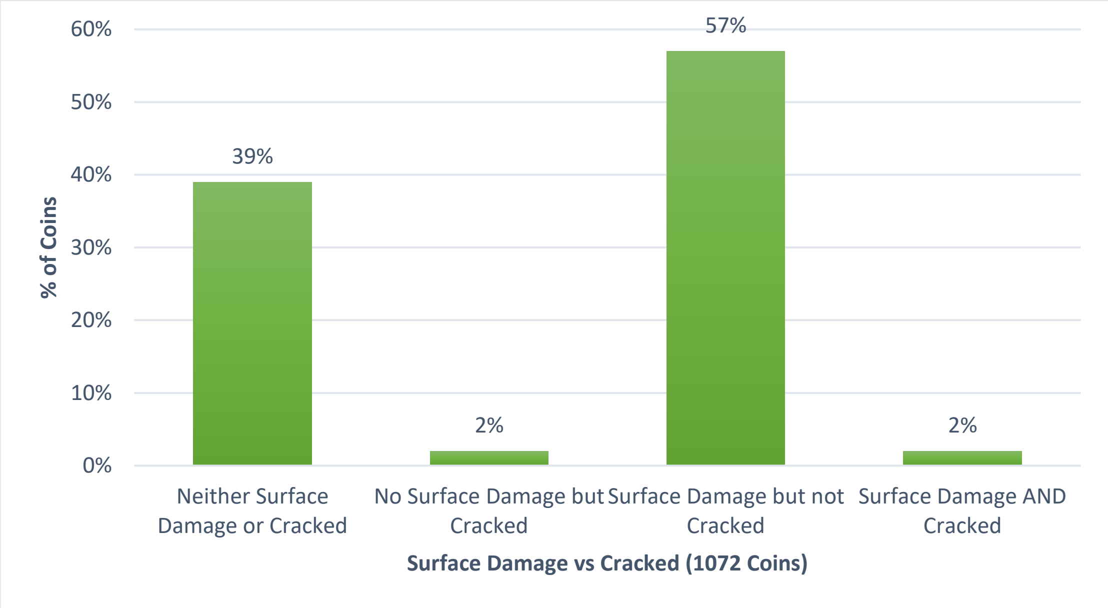

Figure 8.3.4-8 The Correlation between Surface Damage and Cracking.

The similarities between surface damage and cracking with regard to chronology have been mentioned above. However, as has been discussed, cracking appears to be part of the production process, whereas surface damage appears to be more likely during the life phase of the coin. As such, the two features have been compared together in order to ascertain whether their presence occurs due to different variables. As shown in Figure 8.3.4-8, there does seem to be little correlation between their presence on coins, with only 2% (23 coins) of the sample displaying evidence for cracking and surface damage. Consequently, whilst there may be similarities between the two groups with regard to factors such as chronology, it is implied that there is little similarity between their overall presence on a coin, and this suggests that they may be occurring for different reasons, and at different phases of a coin's lifecycle.

8.3.5 Tertiary Context Summary

Corroded	SD (Surface Damage)	Incomplete	Scratches	Number of Coins
NO	NO	NO	NO	110
NO	NO	NO	YES	140
NO	NO	YES	NO	4
NO	NO	YES	YES	7
NO	YES	NO	NO	106
NO	YES	NO	YES	159
NO	YES	YES	NO	20
NO	YES	YES	YES	16
YES	NO	NO	NO	136
YES	NO	NO	YES	34
YES	NO	YES	NO	8
YES	NO	YES	YES	3
YES	YES	NO	NO	220
YES	YES	NO	YES	80
YES	YES	YES	NO	21
YES	YES	YES	YES	8

Table 8.3.5-1 Comparison of Tertiary Factors

By considering the tertiary context of a coin, we can begin to explore the taphonomic effects of deposition on a coin's surface, and problems created by traditional methodological processes of coin recording (Table 8.3.5-1).

Firstly, 42% of the Lancashire sample demonstrated evidence for scratches on the coin's surface. There was no correlation between where a coin was scratched, which suggests the process is more random and not a product of structured damage. This may indicate that scratching is more likely to be a taphonomic by-product, with scratches more likely in worn site coins.

Two of the factors associated with the tertiary context highlight the problems with current methodological approaches. Firstly, when considering the presence of corrosion, 48% of the sample show signs of corrosion, with 67% of these coming from wear category three (worn coins). It is possible to imply that the corrosion on a coin is obscuring an otherwise crisper image, and therefore corrosion and wear are being considered as equivalent. As such, a tertiary context factor such as corrosion, cannot be associated with a secondary context factor such as circulation, and therefore the current methodologies may be providing a biased narrative towards the acceptance and use of coinage. This argument is highlighted when the prevalence of surface damage is considered on a coin's surface, which is considered to be a product of deposition (tertiary context). Over 50% of the Lancashire sample showed signs of surface damage, and the majority of these correlated to wear categories two and three (slightly worn and worn). Again, this may be a reflection of the surface damage obscuring the legend and design details required for traditional methodological approaches, but again highlights the concept of a deposition factor being juxtaposed with a use factor, which occur at completely different points of an object's biography. The visual difference between wear, corrosion and surface damage are highlighted in Figure 8.3.4-1.

Finally, one factor recorded for the tertiary context, incomplete coinage, showed little significance across denomination, site versus hoard and chronologically. However, it was useful in identifying that cracking on a coin's surface was less likely to render the coin an incomplete unit, and highlighted that cracking was more likely a consequence of production (primary context). However, now that this connection has been made, it is possible to suggest that this factor may not provide any significant benefit to our understanding of a coin's biography, and as such allows finessing of the proposed methodology to occur.

8.4 Coins in Context: A Pilot Study

The biographical approaches used within this study have been concerned with identifiable features on coins, and what these features can tell us about the lifecycle of the coins in question. Often archaeological contexts are less well understood within the biographical approach, as the observable features on the objects take precedent (see Chapter 5). In some cases, an assessment of context cannot always be applied. For example, coins such as those recorded by the PAS often do not come from a known archaeological context and therefore the virtue of the biographical approach means that we can instead look for evidence of social interactions through the evidence on the object itself. The Rossall Fleetwood hoard shows (discussed in more detail in Chapter 10.2) if coins are found outside of distinct archaeological excavation, and recovered a long time ago, it can be difficult to track the original context of discovery across multiple periods of changing ownership. In these cases, again we are left only with the knowledge provided by the objects in question, and these assessments can often be restricted to traditional approaches for consistency against other reports. For example, for coinage this would lead to the established factors of denomination, Emperor, date, iconography, legend and wear to be recorded. As this thesis has demonstrated by recording additional factors relating to a biographical approach, we can break wear down into its constituent parts and provide a more well-rounded analysis of what coins as artefacts can tell us about the social negotiations, they were involved in.

Where coins are found in context through defined archaeological excavation, we can incorporate the knowledge of context into the biographical approach to provide a more well-rounded assessment, allowing broader patterns to be discussed than when looking at these elements in isolation. Investigations incorporating contextual analysis are crucial in order to compare sites and regions, as well as explore changes and continuity during different phases of occupation (Gardner 2007, 140). An example of this has been conducted below using the coins from the University of Central Lancashire's, Ribchester Revisited (RRG) excavations which took place between 2015 and 2019 (see Chapter 2.2.3.1 for more detail). Of the excavated coin sample from the site, 79 coins have recorded location data allowing the coin's locations to be mapped alongside the archaeological features of the fort itself (see figure 8.4-1 below). The remaining 12 coins are unstratified and therefore cannot be mapped.

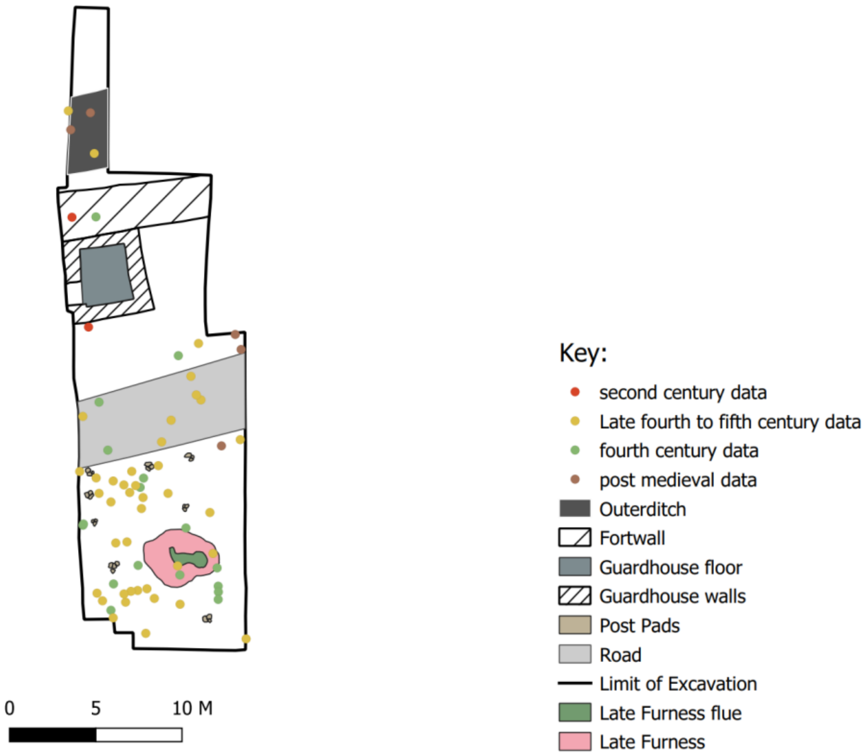

Figure 8.4-1. A map to show the locations of the coins and key features within the RRG excavations

This map allows us to consider the relationship between the coins and features at different phases of the site. To date, the post-excavation analysis is continuing on the site, and therefore the following phasing outlined in this chapter is based on initial interpretations of the site and may be subject to change as more information becomes available.

It is also possible to add in the biographical data for the 26 coins, which were available during the data collection phase of this thesis from the 2015 and 2017 seasons of excavation. The 2016 and 2018 coins were excluded from the biographical data collection as they were not available for analysis, and the data collection period ended before the 2019 season had been undertaken. Of these 26 coins six of them come from unstratified contexts and therefore they cannot be mapped, and their biographical data discussed. The remaining 20 coins are discussed in their phases below.

8.4.1 Mid Second Century Coins

The earliest coin evidence at the site comes from two issues dating to the mid second century (see figure 8.4.1-2). One of these issues is associated with the construction of the east-west stone wall of the fort, and the second is found just south of the guardhouse and associated with the foundation of the building. Due to these coins being excavated in the 2019 season of excavation, they were outside of the data collection period of this thesis and therefore biographical information is not available for interpretation. Once the full dataset is accessible, it will be possible to record these two issues in more detail in the future and therefore make it possible for the methodology to be applied and interpreted in relation to their findspots. However, the location of the coins at the foundation of the guardhouse and wall of the stone fort, suggests that coinage was being used at the initial point of occupation at Ribchester during the presence of the wooden fort and its subsequent replacement in stone and may represent losses during the construction of the fort, similarly to the examples seen at Plantation Place (see Chapter 9.10.3).

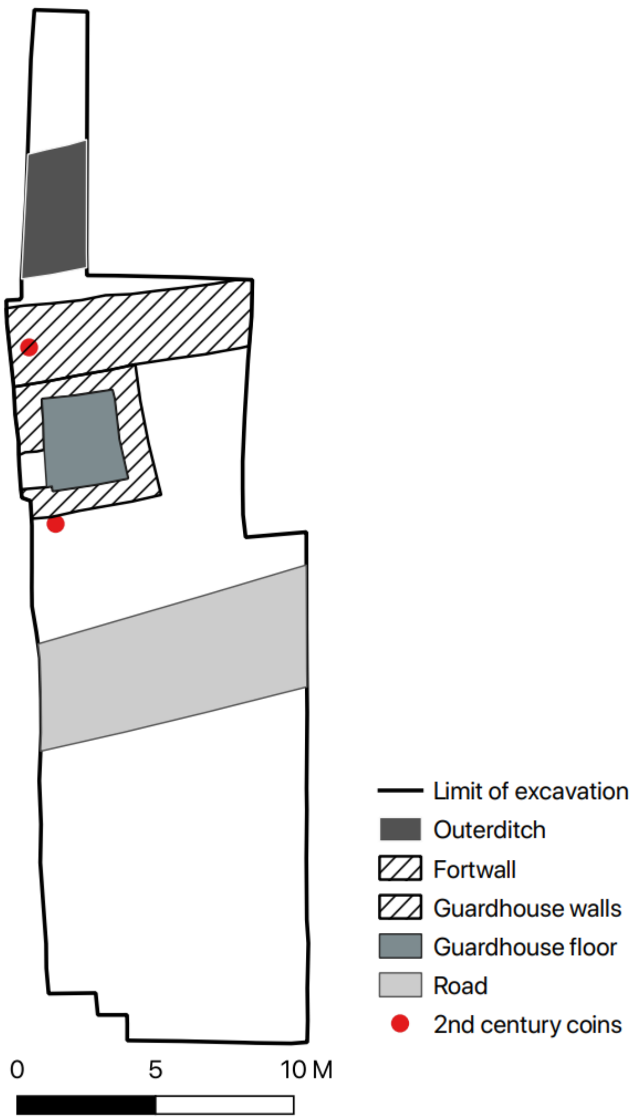

Figure 8.4.1-1. A map to show the location of the mid-second century coins against relevant archaeological features

8.4.2 Fourth Century Coins

Of the total RRG sample, 20 coins are found within the fourth century phases of the site (Figure 8.4.2-1) many of which are associated with the fourth century building in the southern extent of the trench. The building is thought to be a workshop due to the presence of multiple shallow pits containing nails, however, this may also represent storage that was being undertaken at the site. A stone structure was identified in association with the building which may indicate the entrance way, and multiple clay floor layers were also excavated.

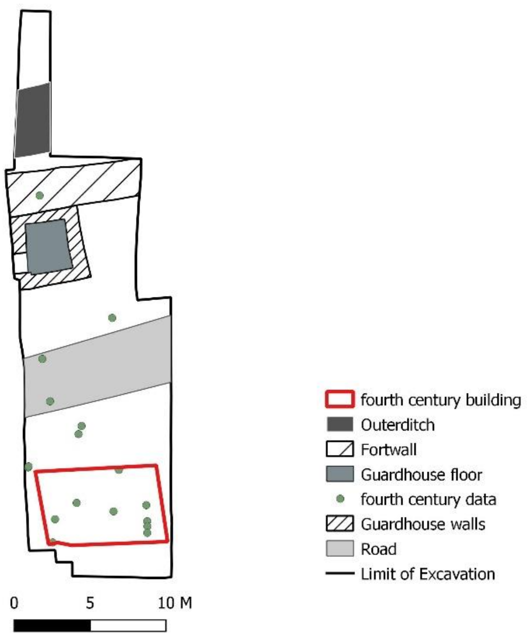

Figure 8.4.2-1 A map to show the locations of the fourth century coins in relation to the site features

Of these 20 coins, five have biographical information collected during the data collection phase of this thesis (Figure 8.4.2-2). Each of these five coins are associated with the area around and on the east-west road surface, as well as fort wall.

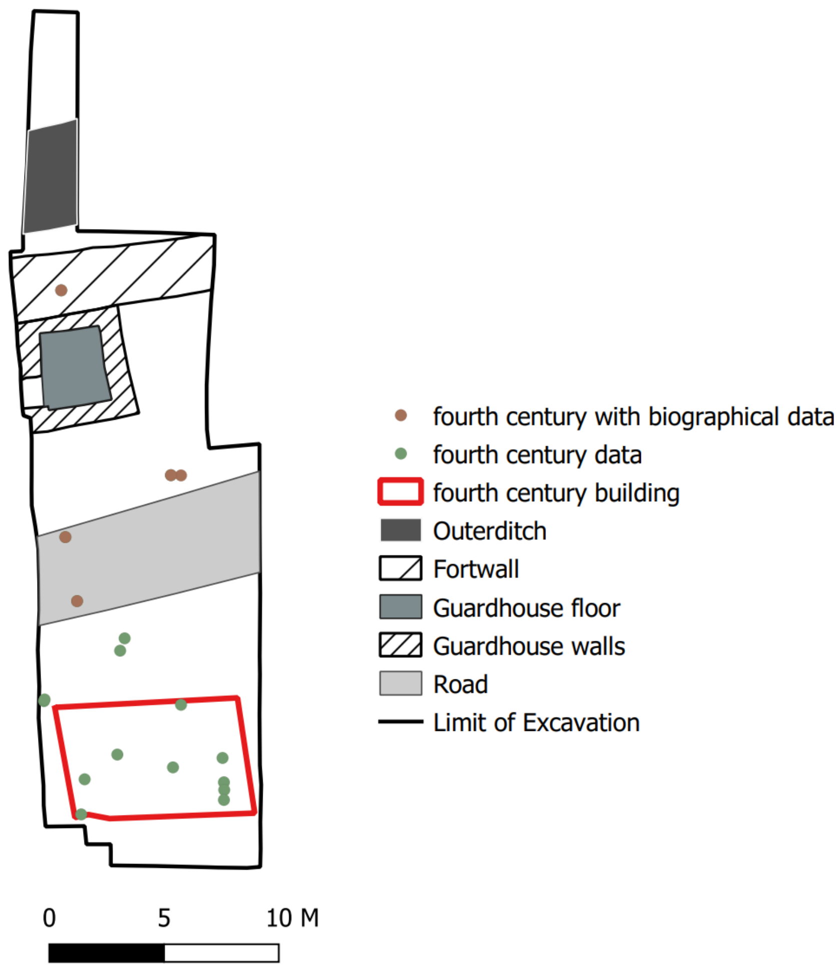

Figure 8.4.2-2 A map to show the location of the coins from the fourth century phases of excavation, including those with biographical data

None of the five coins showed any evidence of cracking or mis-striking, and none of them were incomplete, perforated, clipped or scratched. All five coins showed signs of being worn and corroded, and therefore may emphasise the ambiguous nature of current wear systems, as it raises questions as to whether the coins were worn through use or appear worn due to being corroded and are merely just obscured due to the taphonomic processes they have undergone.

Three of the five coins demonstrated evidence for surface damage (Figure 8.4.2-3 below) and these coins were excavated from the area on or near the east-west intervallum road. This may suggest that these coins were lost in areas which were likely to receive high volumes of human traffic and the movement of these issues led to the surface of the coins becoming damage during their tertiary context, or deposition phase.

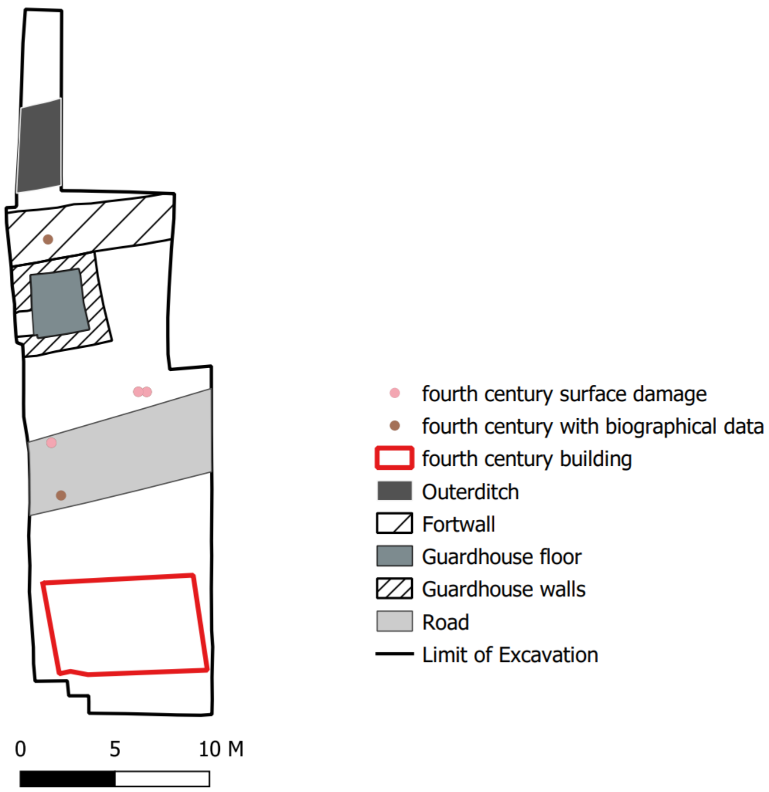

Figure 8.4.2-3. A map to show the location of the fourth century coins with surface damage

8.4.3 Late Fourth to Early Fifth Century Coins

Of the total RRG sample, 40 coins are found within the late fourth to early fifth century phases of the site (Figure 8.4.3-1 below). The phasing for these coins is indicated by the presence of Crambeck and Huntcliff Ware within these contexts. The majority of the coins are associated with the east-west road and the southern half of the trench, which is characterised through a series of post pads and a late furnace and flue, suggesting that a structure is likely to have been present in this part of the fort space towards the end of its use. The presence of the furnace and flue along with both iron and glass working slag may imply that metal and glass working was ongoing in this part of the fort during the late fourth and early fifth centuries. The location of coins on and near the road may suggest that the building represents a workshop where coinage could be exchanged for goods and could indicate why some coins may have become lost on the road surface during these exchanges. The fact that the largest sample of coins from the excavations were found in this context may suggest that the exchange of coinage was not as common within this part of the fort in earlier periods of occupation.

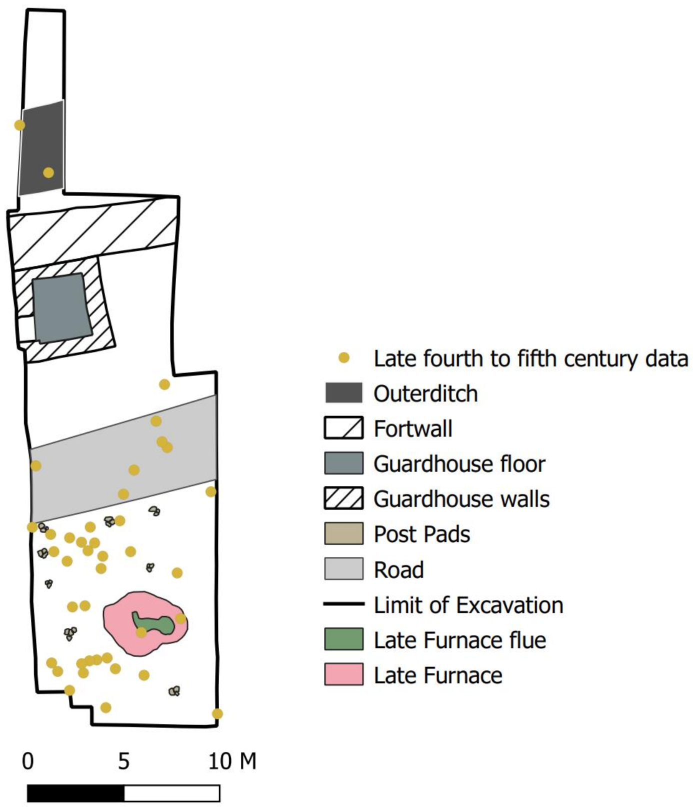

Figure 8.4.3-1 A map to show the location of the later fourth to early fifth century coins and associated features

Of these 40 coins, only 12 were assessed for biographical factors during the data collection phase of this thesis (Figure 8.4.3-2 below). None of the 12 coins that could be interrogated further displayed evidence for cracking, mis-striking, perforation, plastic deformation or clipping. There was a single coin associated with this phase that showed evidence of scratching on the surface, and this was identified in the south-eastern extent of the excavation, near the trench edge. Due to the limited evidence available for this factor, there are little conclusive arguments that can be made regarding the scratching of coins in this phase of the RRG excavations. However, all of the coins were recorded as worn when using traditional methods of analysis. This may indicate that coinage was an important part of everyday transactions during this period and therefore was more susceptible to becoming worn through everyday use. However, as argued throughout this thesis, wear is highly subjective but also underexplored and therefore it is difficult to ascertain whether coins become worn through use or through taphonomic processes.

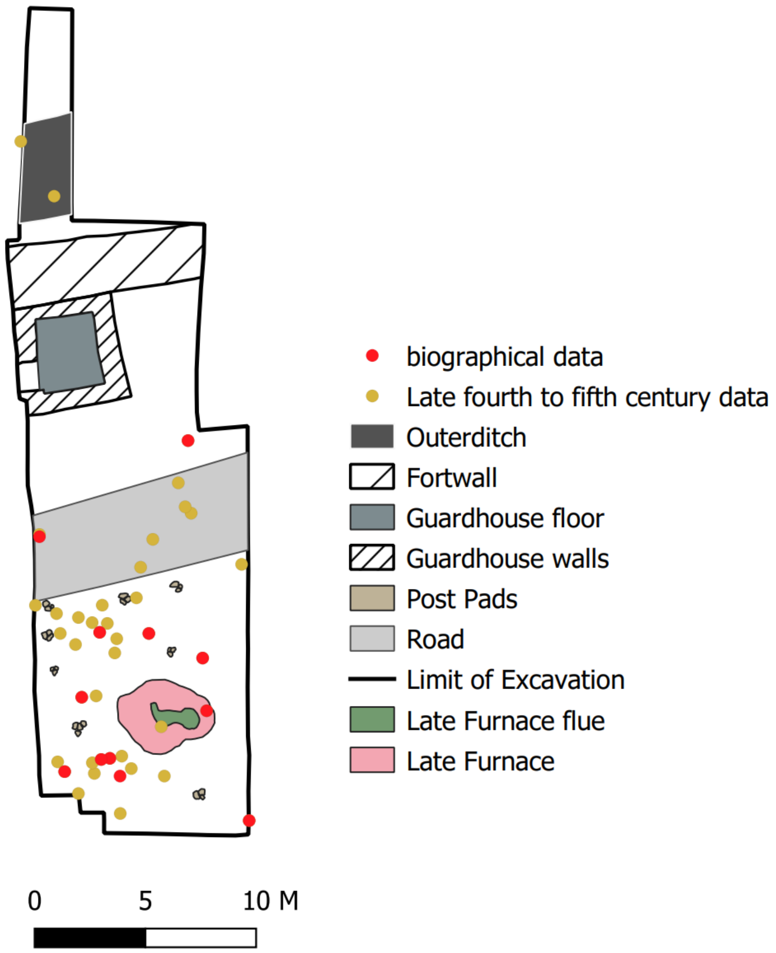

Figure 8.4.3-2 A map to show the late fourth to early fifth century coins with biographical data, and associated features

Nine of the 12 coins with biographical data display evidence of notches around the outer edge of the coin (Figure 8.4.3-3 below). Seven of these were associated with the post pad and likely structure in this area of the trench. All of the twelve notched issues were official coins, so it is unlikely that local coin production was taking place at the site. However, the fact that 58% of the coins of this period that have biographical data display notches, suggests that this feature was not something that would affect a coin’s useability or value in terms of exchange.

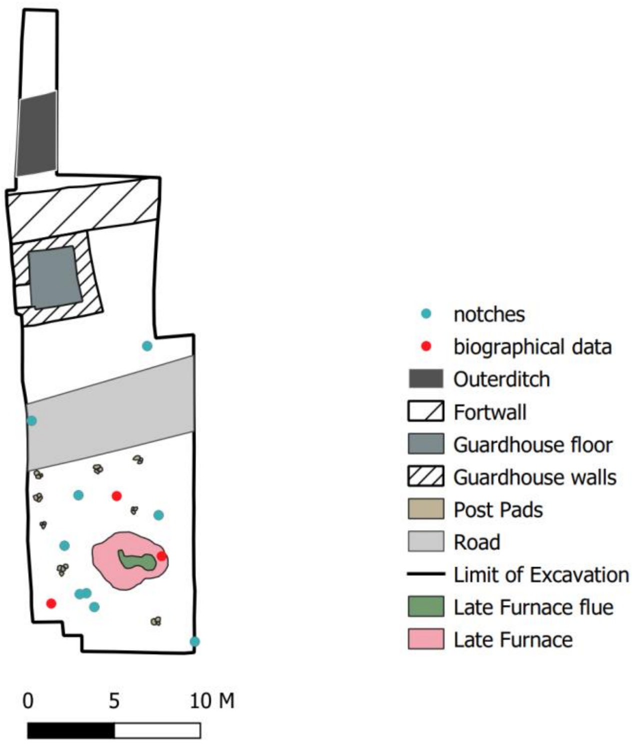

Figure 8.4.3-3 A map to show the late fourth and early fifth century coins with notches, within associated features

Elements of corrosion can be found on nine of the twelve issues from this phase (Figure 8.4.3-4). Aside from the single issue found associated with the east-west road, the other corroded issues are focused within the post pad structure, and one was found just within the eastern extent of excavation. If this building did represent a workshop, then any coins may have undergone a lot of movement within the soil due to constant activity within the building and surrounding areas, leading the coins to be churned continuously and perhaps forcing them further down into the soil, where the composition would enable taphonomic processes associated with corrosion to occur more quickly than if they had been left exposed to the air.

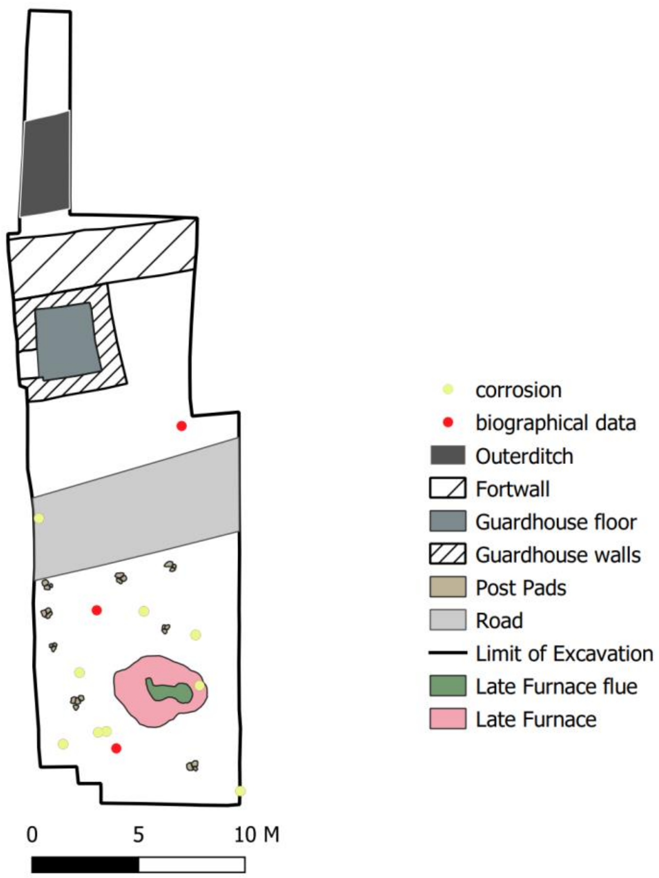

Figure 8.4.3-4 A map to show the late fourth and early fifth century coins with corrosion, within associated features

There are five examples of incomplete coins associated with the late fourth and early fifth centuries (Figure 8.4.3-5). All of these issues are focused on the post pad structures, near the furnace and may suggest that they were inside a possible building structure. This may provide further evidence for the possibility of this structure being related to a workshop or shop space which fronted onto the road. The incomplete nature of these coins may be due to intentional fractioning of official coinage in these late periods when coin supply to these areas was diminishing, but a coin-based economy was still in operation. Alternatively, the incomplete nature of these issues may be due to heavy traffic within this zone, leading to lost coin issues becoming more susceptible to damage due to constant movement. In order to test these theories further work will need to be conducted on a larger sample of fragmentary coins in order to ascertain whether their incomplete nature is deliberate or accidental.

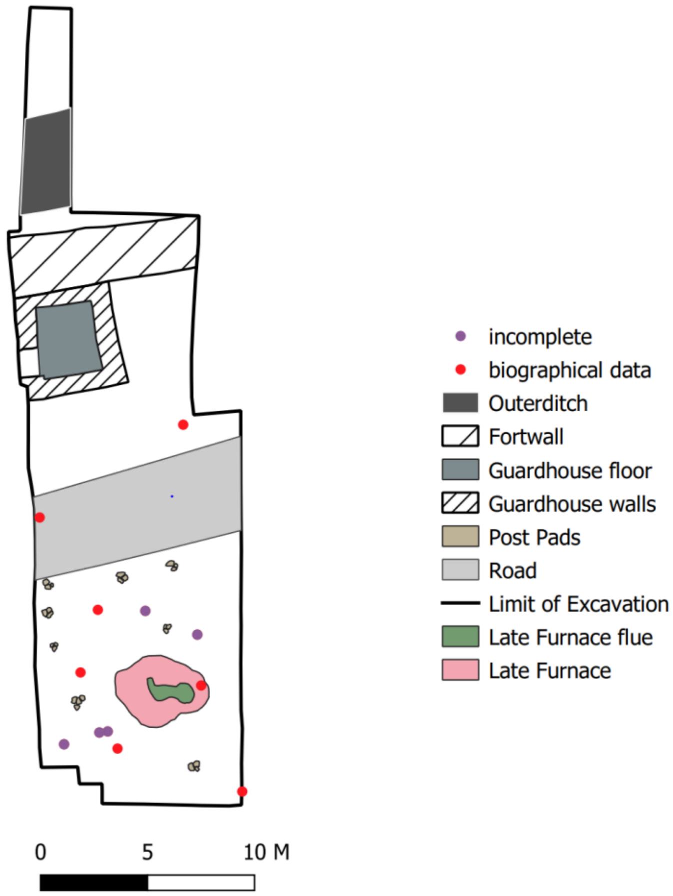

Figure 8.4.3-5 A map to show the late fourth and early fifth century coins which are incomplete, within associated features

Surface damage can be identified on eight of the twelve coins dating to the late fourth to early fifth century phases (Figure 8.4.3-6). These coins seem to be concentrated in close proximity to the furnace structure and may indicate coins which had been lost within the workshop space and become damaged due to continuous movement within the building.

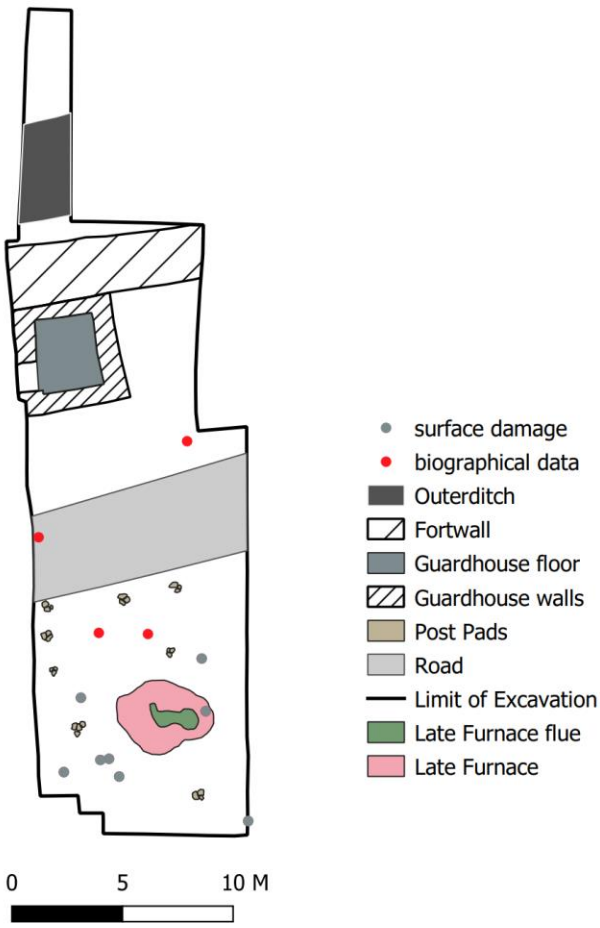

Figure 8.4.3-6 A map to show the late fourth and early fifth century coins which show signs of surface damage, within associated features

Overall, the coins associated with the late fourth to early fifth century phases suggest there is an association between coin use and the post pad structure containing the late furnace and flue. The association between these features and the east-west road may imply a change in use of the fort during these phases, transitioning from a military dominated space to a more civilian settlement of workshops and shops fronting onto the road. This may represent a change in the use of fort spaces, with more market style activity being undertaken within the fort, close to the granaries. Similar patterns are seen at the forts in Newcastle and Carlisle (Collins 2012), and therefore this may demonstrate a wider trend of fourth century forts, where activities which traditionally may have occurred outside the fort, move to within its interior. Consequently, this change in use of the fort space may indicate a breakdown in barriers between military and civilian zones. The coins displaying evidence for biographical factors associated with the tertiary context (deposition phase) are also largely centred around these features, suggesting that coins may have been used and lost in these spaces and become damaged due to taphonomic processes.

8.4.4 Coins Associated with Post Medieval Garden Soils

Three coins are associated with the post medieval garden soil phases of the site and each of these coins has biographical data associated with them (Figure 8.4.4-1 below). This data suggests that none of the three coins provided any evidence of cracking, plastic deformation or mis-striking and none of them were incomplete, perforated or clipped. All three issues were recorded as worn using traditional models of wear, and they all provided evidence for notching on the outer edge of the coin.

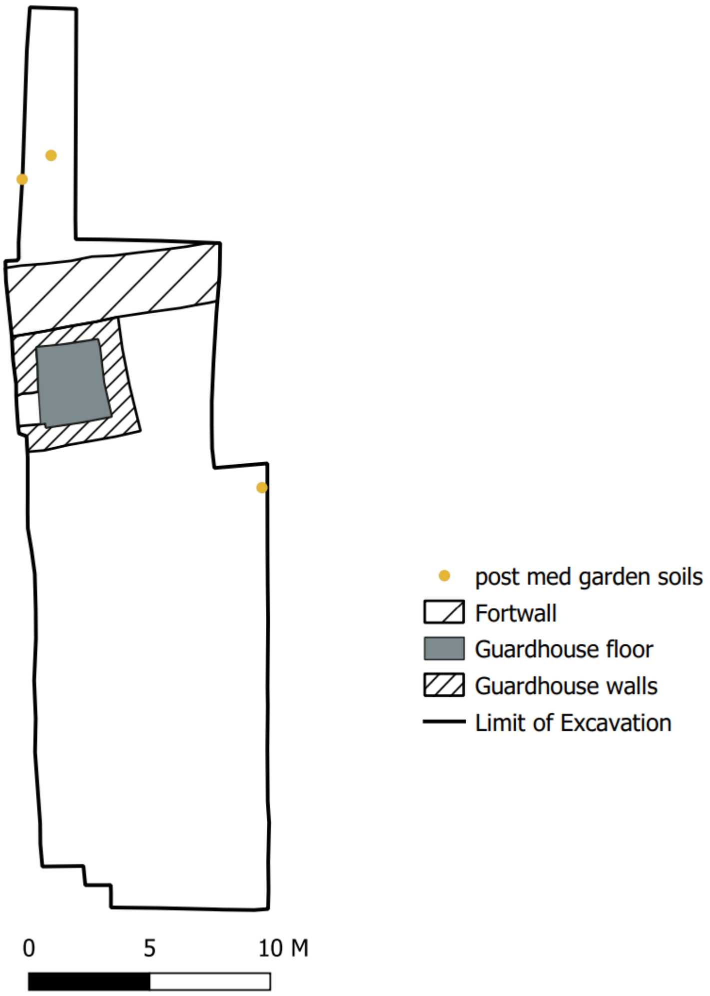

Figure 8.4.4-1 A map to show the location of the coins associated with the post medieval phases of the site

Two of the coins are found in close proximity to each other in the northern extent of the trench and are thought to be associated with a modern rubble deposit that may have been formed due to the levelling of the playing field just beyond the limit of extension in that part of the trench. Pottery found from within these contexts dates from the Roman period and post-Roman period and suggests that these layers have been disturbed in more recent history. As one of the coins found in this location displays evidence of surface damage and scratches on the surface, the movement of the soil when this modern rubble deposit was formed may provide some evidence for these factors being associated with the coin from this area.

The third coin located on the eastern extent of the trench was found during the excavation of a cleaning layer at the beginning of the excavations at Ribchester and was directly above a cobbled surface thought to be associated with the east-west road. This issue also provided evidence of surface damage which may be associated with the taphonomic processes associated with soil movement since its deposition.

8.4.5 Coins Found in the Nineteenth and Twentieth Century Layers

Two Roman coins are associated with the nineteenth and twentieth century excavations at the site and are both thought to have come from activities connected to the backfilling of Thomas May's trenches (Figure 8.4.5-2). Thomas May conducted excavations of the North West wall of the fort at Ribchester over three months between 1906 and 1907, identifying the western guardhouse (see Figure 8.4.5-1 below). The presence of a large floor layer and T-wall was taken as the presence of the principia, and underneath the wall on the north-western side a large layer of burnt timber was identified suggesting the existence of the earlier wooden fort in this location (Lancashire and Cheshire Antiquarian Society 1907, 215-217).

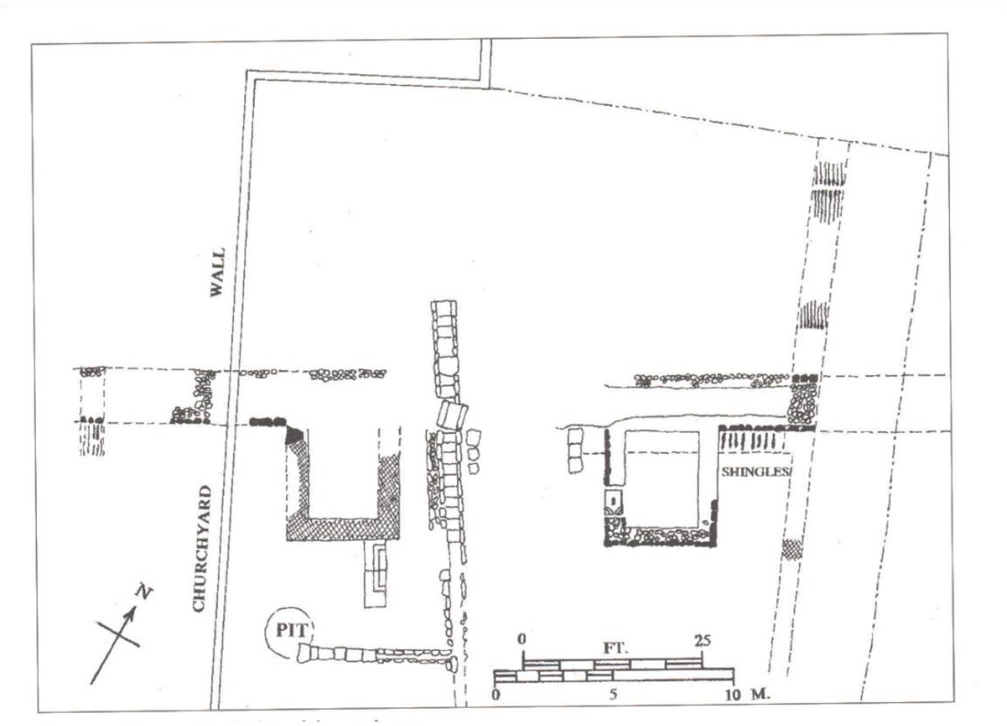

Figure 8.4.5-1 Thomas May's plan of the north gate, Edwards 2000, 52.

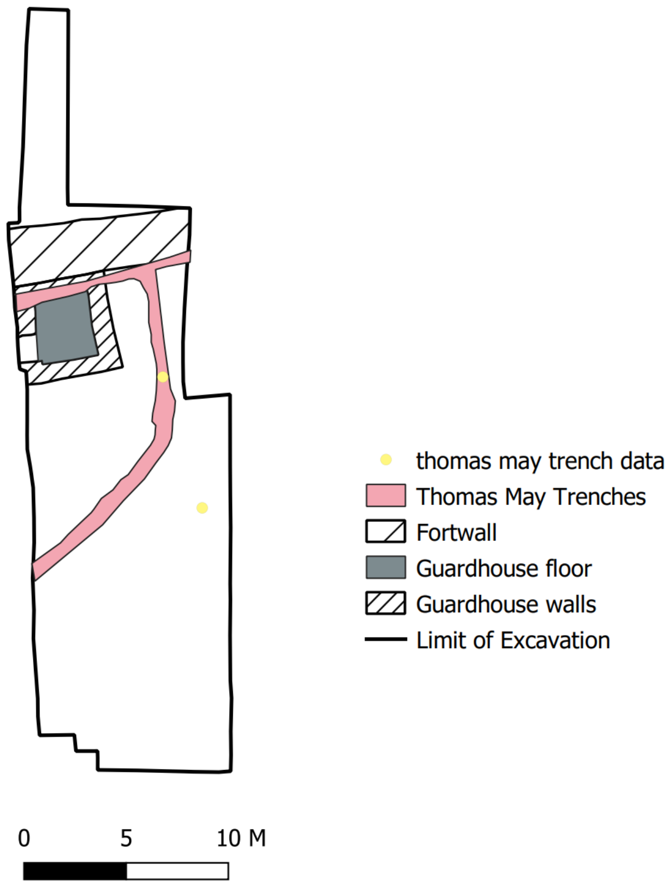

Figure 8.4.5-2 A map to show the location of the coins associated with Thomas Mays excavations

In terms of a biographical approach, these issues pose an interesting conundrum and highlight that even during extensive excavation things can be missed, and we only truly excavate a representation of what is present in the soil. The fact that these coins have been rediscovered over a century later during the 2016 phases of excavation highlight the importance of context in underpinning any analyses. This demonstrates that object biographies can provide more meaningful interpretations when considered against the contextual backdrop of the area under investigation. In this case, due to the extensive excavation and records at Ribchester we can assume that these two issues were missed during Thomas May's initial excavations during the early 1900s and therefore ended up being reintroduced into the soil in the backfilling of his trenches. This may mean that their location is different to where they originally would have been found if they had been excavated during Thomas May's excavations. However, by understanding the different phases of excavation at sites, and being able to use previous published information to inform our analysis, this prevents incorrect assumptions regarding object locations from hindering our interpretations of sites. However, neither of these coins were available for analysis during the data collection phase of this thesis, as a consequence no biographical data is available for further discussion.

8.4.6 Summary of Coins in Context

When considering the context of the RRG coins we can begin to explore patterns relating to where coinage was used or lost on the site. This can be demonstrated through the late fourth to early fifth century coins, which appear to be concentrated around the later post pads and flue which may related to a building or workshop being present at the site around this time. Additionally, these interpretations can be deepened when we begin to add in the biographical data from the coins themselves. It is recognised that the small dataset available means there is a limit to the amount of interpretation that can be made. However, it has demonstrated that by incorporating biographical and contextual elements together we can begin to expand the datasets available for archaeological interpretation.

Whilst the sample of coins from the Ribchester Revisited excavations, which were available for contextual analysis is very small, just 20 coins in total, it does provide a useful exploration into the ways in which coinage was used or lost on the site. Further work exploring the evidence from alternative sites with bigger object assemblages in the future would help to support the arguments outlined in this chapter, allowing us to test the biographical framework more thoroughly. For example, if there was a larger sample of scratched coins, and these had an association with a road surface for example, it provides further support for scratches occurring during the tertiary context of a coin's biography, due to the movement of the coins within the road surface after deposition. Alternatively, if there were a higher proportion of scratched coins found within a building structure it may indicate that coins were being deliberately defaced and may suggest that this occurs during the secondary context, or use phase of the object. Furthermore, if there were a large proportion of unofficial issues, featuring notches or plastic deformation, associated with areas of metal working it may indicate the production of local copies in the vicinity.

8.5 Conclusion

The general trend for the analysis of coinage and the production of coin reports has been focused on the names of Emperors and the dates that these can provide, as well as the analysis of wear patterns. This has allowed a picture to be constructed of how the economy functioned and how well it might have been accepted amongst the populations that used them. By using generic wear categories of worn, unworn or slightly worn the discourse has often not been explicit enough in our definitions or have simply ignored the external influences that may lead to a coin being defined in this way.

It is argued in this thesis, that it is no longer acceptable to focus solely on wear patterns in our pursuit of archaeological interpretations of coinage, use, acceptance and the economy. In order to further archaeological interpretation of coinage, and fully explore their value as objects in their own right, we must begin to unpick the physical evidence they provide with regard to their entire lifecycle. By exploring the 10 factors outlined above in detail, we can begin to look for the specifics which inform on a coin's production, such as notches and plastic deformation, and interpret what their presence or absence may tell us about the intrinsic value of a coin. Furthermore, we can look for additional factors of use, such as scratches and surface damage, to explore evidence of circulation and the treatment of coinage throughout their lifecycle. Finally, by considering the effects of post-depositional activity such as corrosion, we are opening up the discourse to enable a greater understanding of the impact this factor may have on interpretation of coins as well as hoards.

This approach has shown identified some possible patterns in the ways in which coins are produced, circulated and deposited. Although biographies are usually applied to the individual, this approach has allowed for coinage to be considered with regard to a group biography through the methodology outlined throughout this chapter. As such, by considering this evidence of the effect of the individual on this group biography, we can combine both traditional and modern applications of the term in order to maximise our interpretations. Additionally, whilst few examples of perforations and coin clipping can be seen within the Lancashire dataset, it does propose particular questions about what makes a coin a coin, and their analysis allows for an interpretation of the intrinsic value of a coin. Their presence in low quantities within Lancashire is also interesting, as it suggests that coinage was a used and accepted commodity, with little of the circulating currency being made into new objects. Finally, whilst considering these factors against the backdrop of traditional recording methods (such as chronological changes), we can construct a picture of how attitudes to coinage changes across the period of Roman occupation. For example, it was believed that surface damage should be more prominent during the earlier chronological periods, as these coins would have potentially had longer to become damaged. However, the evidence has suggested the opposite to be true, which allows interpretations to be made as to the effects that the lower quality of metal due to debasement would have had on post-depositional changes to the artefact.

The approach has provided a method through which a synthesis of individual biographical data can be considered together. As previously mentioned, traditional biographical approaches are concentrated on individual artefacts. However, this method has demonstrated that biographies can be considered as a group and in this case has allowed for data from over 1000 coins to be considered. The benefit of a group biographical approach will be explored further in the following chapters, where the wider context of these findings can be considered.

9 PLANTATION PLACE: TESTING THE METHOD

9.1 Introduction

The application of the methodology to the Lancashire dataset (see Chapter 7 and 8) has demonstrated major patterns for the ways in which coins are created, used and deposited or lost. However, it is important to test the methodology on a variety of datasets. Therefore, Plantation Place, London has been selected as an additional site. The reason for using the evidence from Plantation Place is that it was a sizeable yet manageable dataset (381 coins and one hoard consisting of 43 gold aureui) from outside of the North West. Additionally, the site has a long occupation period from the first to the fifth century. Importantly, by extending the methodology to a dataset outside Lancashire we can begin to explore whether the trends identified mean that the biographical methodology proposed in this thesis, works outside of Lancashire. In order to fully utilise and explore the data provided by Plantation Place, this chapter will first look at the assemblage over all using traditional methods, before using the biographical approach to look more in depth at the findings.

Archaeology in the area of Plantation Place, City of London has been recorded since 1836, when two tessellated pavements were identified under Fenchurch Street, and again in 1857 when a mosaic fragment was identified from a foundation trench for a building on the south side of the same street (Dunwoodie *et al.* 2015, 1).

A desk-based assessment was conducted by ARUP in the early 1990s due to proposals for expansion on the site, which demonstrated that any new developments in the area would impact on the surviving archaeology and put it at risk (ARUP Associates 1994). As such, MOLA conducted four phases of excavations at the site between 1997 and 2003 (Figure 9.1-1)

Figure 9.1-1. Dunwoodie et al. 2015, 2. Map to show the Location of Plantation Place within the City of London

The site of Plantation Place lies in the centre of the earliest occupation of Londinium (47-48 AD), on the main east-west route to Colchester in the east, and St Albans and Silchester to the West, and it is generally accepted that the location of this road had an impact on the initial layout of the Roman city of London itself (Marsden 1987, 17). An early open space was identified in excavations, which showed evidence of being destroyed in the Boudican revolt in 60-61 AD. The excavations revealed evidence for an early Roman fort at the site, with the forum and basilica being constructed in the 70s AD (around the same time as the construction of the fort at Ribchester (See Chapter 2.2.3.1)). The main themes of occupation are characterised in Table 9.1-1 below.

Time Period	Description
Before AD 47	Little evidence for pre-Roman activity
AD 47-63	Initial low-level occupation to the north and south of the main east-west road. Occupation becoming more substantial with the construction of narrow frontages on the main road for commercial purposes. All buildings made from clay and timber, with evidence of destruction by fire, likely during the Boudican revolt
AD 63-85	Construction of the fort, consisting of a rampart with a double ditch system. It appears to be well maintained until its decay and abandonment, with dates based around the end dates of the pottery assemblages identified in the area.
AD 85-130	Following the dismantling of the fort, there appears to be a re-establishment of the main road networks and store frontages. Thought to change from a military space to a commercial and residential one. Evidence of buildings being destroyed by fire to the end of this period, which is associated with the Hadrianic fires.
AD 130-400	Most of the structural remains associated with this period are thought to come from a single large masonry complex. However, due to truncation of features and possible medieval robbing the stratigraphic sequence of this period is uncertain, leading to such a wide chronological period.

Table 9.1-1. Information taken from Dunwoodie et al 2015.

9.2 Denomination

Firstly, it is important to consider the spread of denomination across the sample as a whole (Figure 9.2-1).

As can be seen, the majority of coins from Plantation place fall into the 'Contemporary Copy' group, with 153 out of 424 coins (36% of overall sample). The next largest sample comes from the 84 unrecorded coins (20%), these coins remain unrecorded largely due to corrosion and preservation of the object. Interestingly, there is the presence of a single Iron Age unit of Cunobelinus dating to 10-40 AD.

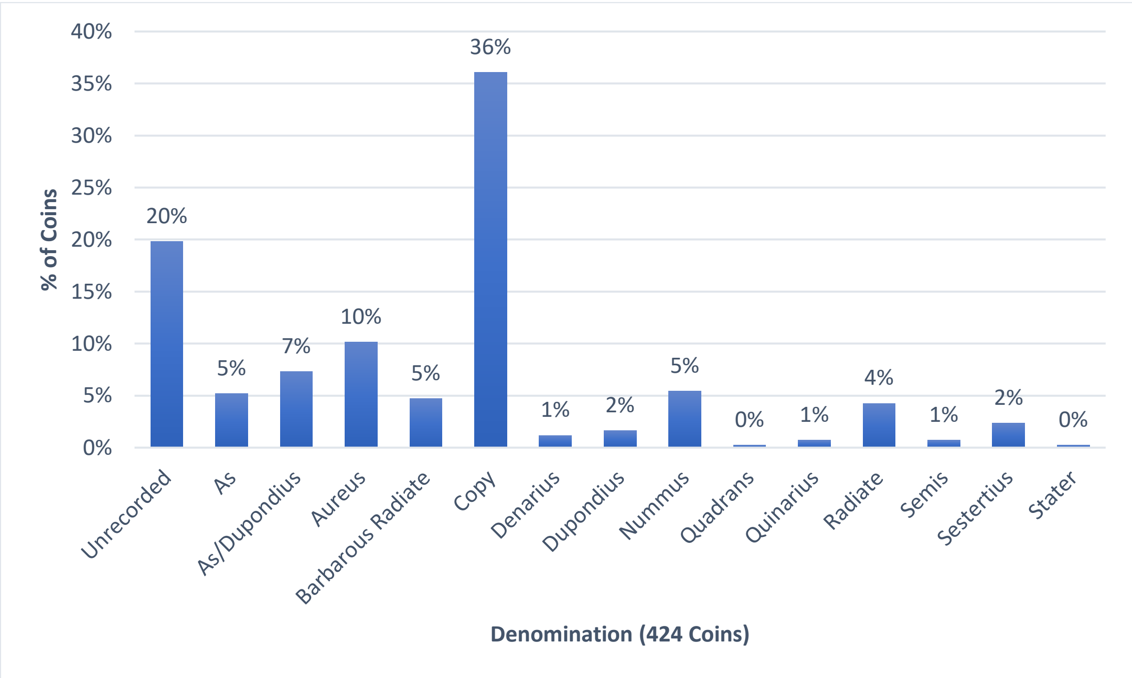

Figure 9.2-1. Proportions of Coins per Denomination Group

Official vs Unofficial Coins:

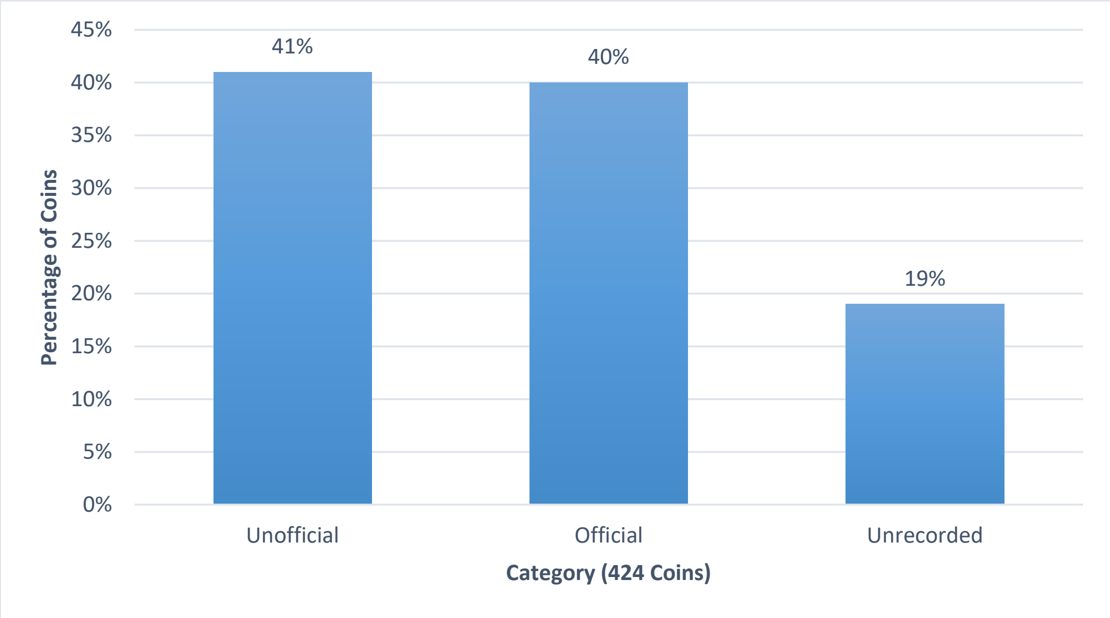

Figure 9.2-2. Distribution of Official and Unofficial Coins

The number of official and unofficial coins from the site are relatively even, 168 and 173 coins respectively. However, it is important to note that 19% of the sample (83 coins) could not be assigned a denomination group, which may have changed the results dramatically (Figure 9.2-2). The evidence from Plantation Place differs significantly from the evidence provided by Lancashire as a whole (discussed in Chapter 6.2), where only 3% (45 coins) of the sample comprised the unofficial coins group. The evidence from Plantation Place may suggest a greater conformity to the Roman style monetary economy during the period in which the site was occupied, and the populations of London were more greatly affected by the shortage of coins than those living further north in Lancashire.

Denomination by Material type:

As with the examples from Lancashire, material type appears to be a much more commonly recorded factor. Although the evidence for denomination from Plantation Place is better than many of its Lancashire counterparts, it can often be difficult to assign dependent on the preservation of the coin.

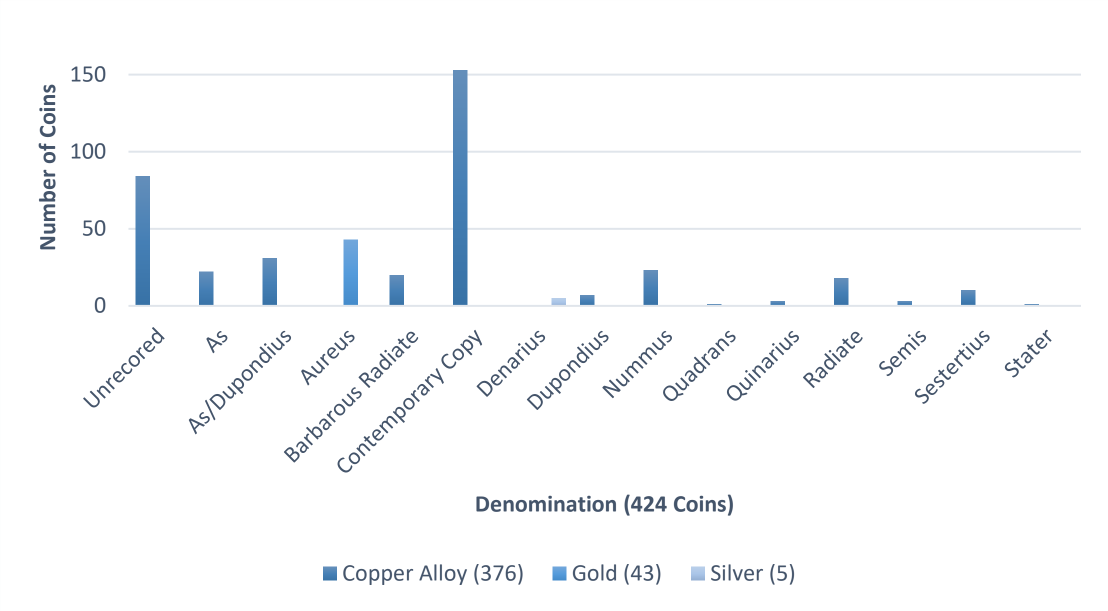

Figure 9.2-3. Proportions of Denomination vs Material Type

All the unrecorded coins fall into the copper alloy group, which would suggest that they represent the lower value denominations (Figure 9.2-3). In the case of the Plantation Place sample, the relatively low numbers of Sestertii (10 out of 424 coins) may indicate that these unrecorded coins are more likely to be Aes or Dupondii (these two groups coupled with the as/dupondius group make up 60 out of the 424 coins). However, the poor preservation and unassigned denomination could be due to local low-quality replication. This may seem more likely, as 173 out of 424 coins are unofficial coinage. Although we may not be able to assign a specific denomination from the unrecorded sample, by looking at the material type we can rule out certain denominations. For example, none of the unrecorded coins would provide an example of a gold aureus outside of the 43 hoard finds. This is interesting as there is no other evidence of this highest denomination outside of the hoard itself.

9.3 Material Type

As is the case with the Lancashire sample, material type is often more likely to be recorded, and as such by analysing the coins by material type, we can begin to make some broad assumptions about the expected wealth of the area.

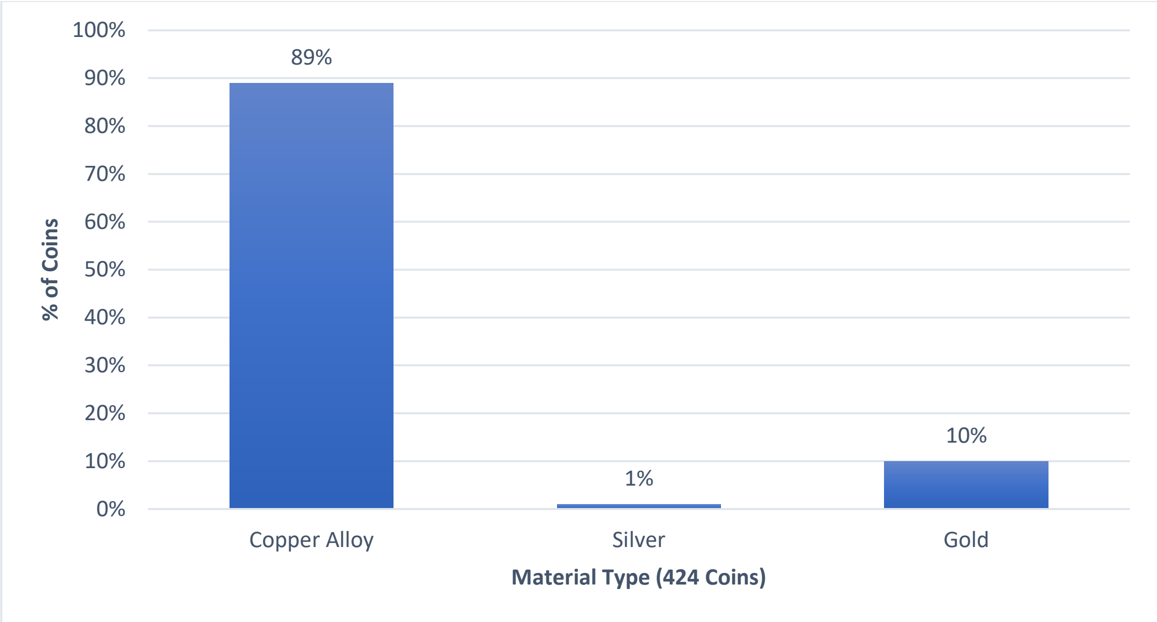

Figure 9.3-1. Distribution of Coins by Material Type

The distribution of material type across the whole sample from Plantation Place is shown above (Figure 9.3-1). As can be seen, 376 out of 424 coins (89%) are composed of copper alloy, indicating that they belong to low denomination groups. However, as we have seen from section 9.2, the Plantation Place assemblage is comprised of a large proportion of unofficial coinage, which are also made from copper alloy.

After copper alloy, neither of the two remaining material type groups reach over 50 coins. The number of gold coins from the whole assemblage is 43 out of 424 (10%), whereas the number of silver coins from the site is just 5 out of 424 (1%).

The high proportions of copper alloy coins, compared with the miniscule evidence for higher denomination coins made from gold and silver, suggests that high value exchange was limited at the site. It may also indicate that the activities taking place at the site of Plantation Place revolved around low value day to day exchanges. This contrasts with the evidence from Lancashire (see Chapter 7.3), whereby the presence of copper alloy and silver coins were reasonably even. This may suggest that there is a different level of activity occurring at Plantation Place than there is in Lancashire, which may be due to the military association of the North West and soldier's pay influencing the archaeological evidence for the higher value issues.

As can be seen from Figure 9.3-2 below, all of the coins that comprise the only known hoard from the site are gold, and as such also constitute the only sample of aureui from the site. On the surface, this might suggest the burial of wealth at a site which seems to display relatively low numbers of high value denominations. However, the nature of the hoard (only 43 gold coins) may indicate that this could be a personal wealth or savings rather than communal wealth. The hoard itself was identified within the western cellars of building 31 (townhouse), contained within a bag which was deposited within a box (Bowsher 2015, 214). The location and deposition of the hoard may further support arguments that the hoard itself was representative of personal savings.

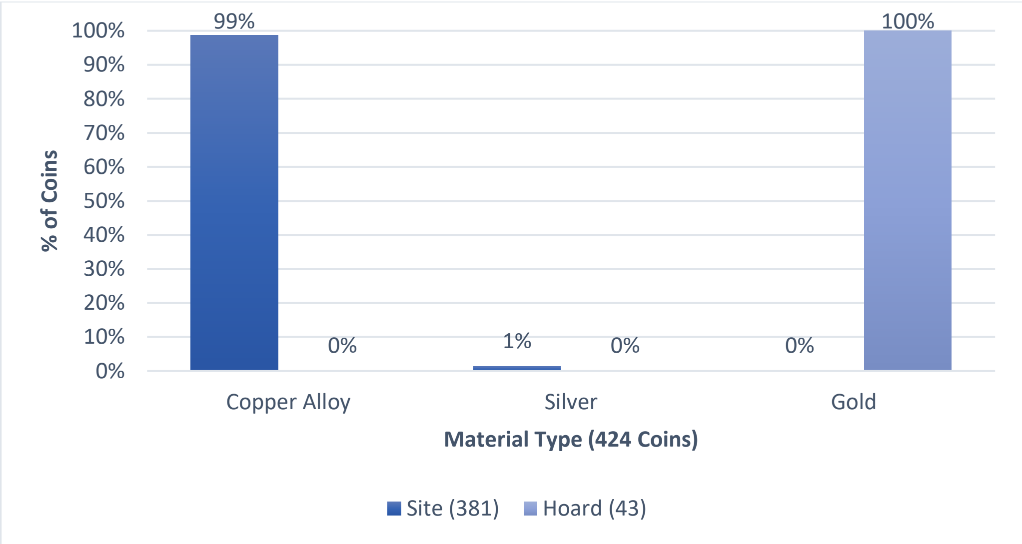

Figure 9.3-2. Distribution of Material Type in Site vs Hoard Coins

Again, by looking at the material type evidence in this way, we can see that all of the copper alloy and the few silver examples from Plantation Place compose the entire sample of site finds, and therefore may provide weight to the notion of low value day to day exchange taking place at the location.

<u>Official vs Unofficial:</u>

It can be seen that all of the unofficial and unrecorded coins are copper alloy (Figure 9.3-3), whereas, the official Imperial coins contain mainly copper alloy, with a few silver and gold coins.

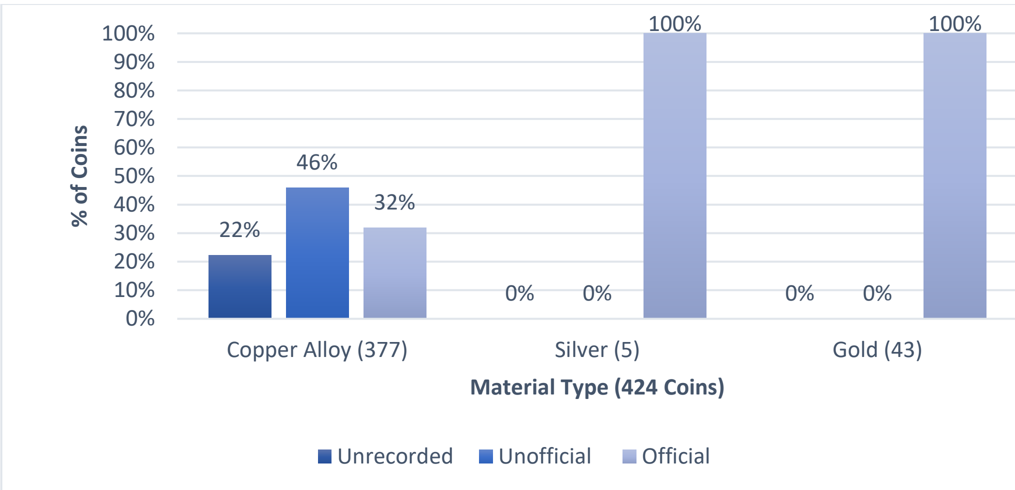

Figure 9.3-3. Distribution of Material type in Official vs Unofficial Coins

Material Type Chronologically:

The analysis so far in this chapter has focused on looking at the denomination and material types of the coins found at Plantation Place in isolation of the chronology. However, it is crucial that we consider a more well-rounded approach to analysing the Roman coin samples, if we are to begin to understand the ways in which the populations of the area interacted with the site, and how changes in the use and acceptance of a monetary economy may have occurred over time.

As with Chapter 6.3, chronology will be considered in its broadest sense, to try and identify any changes that may have occurred over the centuries across the whole sample of 424 coins.

Firstly, if we consider the Republican coinage (any coin produced before the beginning of the first century AD) category, we can see that there is only one copper alloy example of this very early official Roman coinage. Interestingly, the occupation of Londinium is associated with the period shortly after the conquest of Britain, at around AD 47-60 (Hingley 2018, 27), and therefore a higher quantity of these earlier Republican coinage may be expected on the site due to this very early occupation chronology.

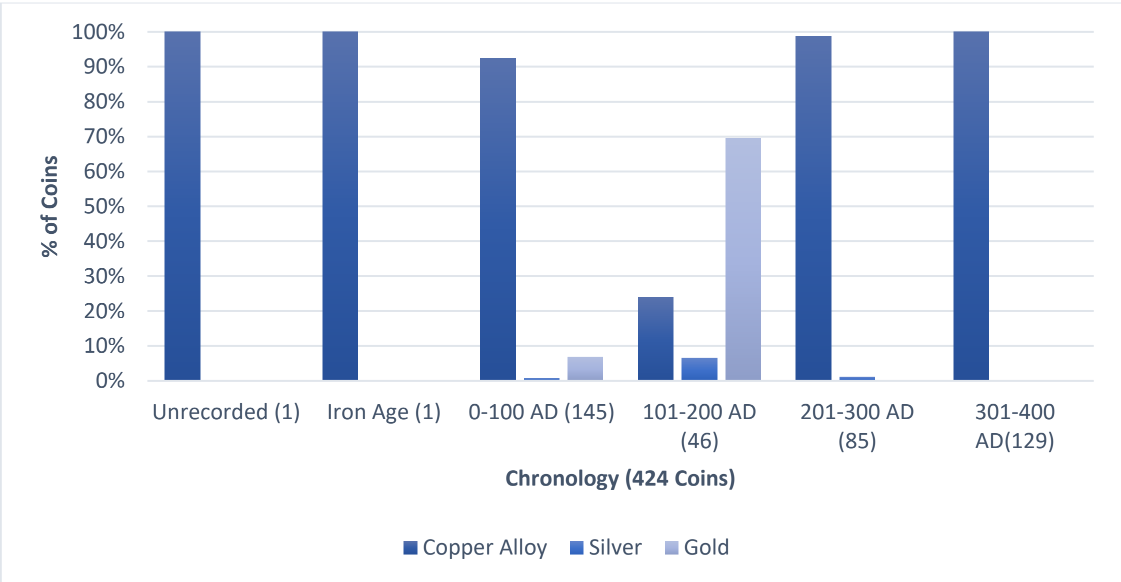

Figure 9.3-4. Chronological Distribution of Material Type

The data suggests that 34% of the coins from Plantation Place can be dated to the first century AD. The majority of the coins associated with this period (Figure 9.3-4) are made from copper alloy (134 coins), and section 9.4 will analyse this chronology in more depth, in order to understand whether the majority of these coins are official or unofficial issues. It is possible that these early copper alloy issues would belong to the official Imperial coinage, as the supply and coin quality during this period should be relatively well maintained. Interestingly, it is during the first century AD that we also see the production of the first 10 gold coins (between AD 65 and 81), which will later be buried as part of the hoard on the site (sometime after the latest coin was produced in AD 174). The fact that these 10 gold issues would have remained in circulation for nearly one hundred years before being buried, may suggest that they were collected rather than used in consistent exchange, and then were buried as a part of the hoard due to the value of their metal content. If we consider the wear of these 10 gold issues, we can see that eight are wear category two (slightly worn) and two are wear category one (unworn). If we compare this to the wear for the whole hoard, we can see that 73% of the wear category two (slightly worn) coins come from the first century AD, suggesting that these coins may have been the most active in circulation prior to the burial of the hoard.

During the second century AD, we see a significant decrease in the number of copper alloy coins associated with this period (just 11 coins in total), but we also see the remaining 32 gold coins being associated with this period, suggesting that the hoard itself could not have been buried until after 200 AD. Furthermore, it is during this century that we also see the largest proportion of silver coins being attributed (three). However, with the whole sample of silver coinage only totalling five, it is difficult to analyse the significance of three silver coins (60% of the silver sample) being associated with this period. Archaeologically, during the second century there is a immense shift in the use of the space, from a predominantly commercial and residential space with store frontages, to a space that is focused around a single masonry complex, associated with residential occupation (Dunwoodie *et al*. 2015, 145). These changes in occupational space may be reflected in the coinage, as the reduction in copper alloy coins may be due to a decrease in commercial activity and exchange taking place in the area. Furthermore, the presence of a hoard of high-status gold aureui, may also confirm the change in space use, with the area of Plantation Place becoming a more residential zone by the third century.

By the third century we see a gradual increase in the number of copper alloy coins associated with this period. In fact, between 201-300 AD, 99% of the coins are copper alloy, with the remaining 1% being composed of a single silver unit. There are no gold coins associated with this phase and this might indicate that the hoard was already buried by this point.

Finally, by the fourth century AD we see another peak in the quantity of copper units assigned to this period, with all 129 coins being composed of copper alloy. These 129 coins make up 30% of the entire 424-coin sample. Due to the date range of this period spanning from 301-400 AD, it is expected that these coins would be predominantly made up of unofficial issues - the evidence supports this, with 71% of fourth century coins identified as unofficial issues. This may suggest that, whilst the area of

Plantation Place has shifted from commercial to residential during this period, coinage was still an important commodity in Roman London, despite the general decline of the area. It is possible to suggest that copper issues are distinctly lacking during the second century, and increase gradually in the third century, and this may be considered evidence for the need to produce unofficial coinage, which appears in high numbers at this site.

9.4 Chronology

Where the Emperor or dynasty was known, it has been possible to apply Reece Periods to the data. This has allowed the analysis of Plantation Place to be comparable to the samples from Lancashire. However, it is important to recognise that Reece Period relies on knowing the Emperor or dynasty information. Therefore, the sample of coins where Reece Period can be assigned may be smaller than the sample with known date of issue.

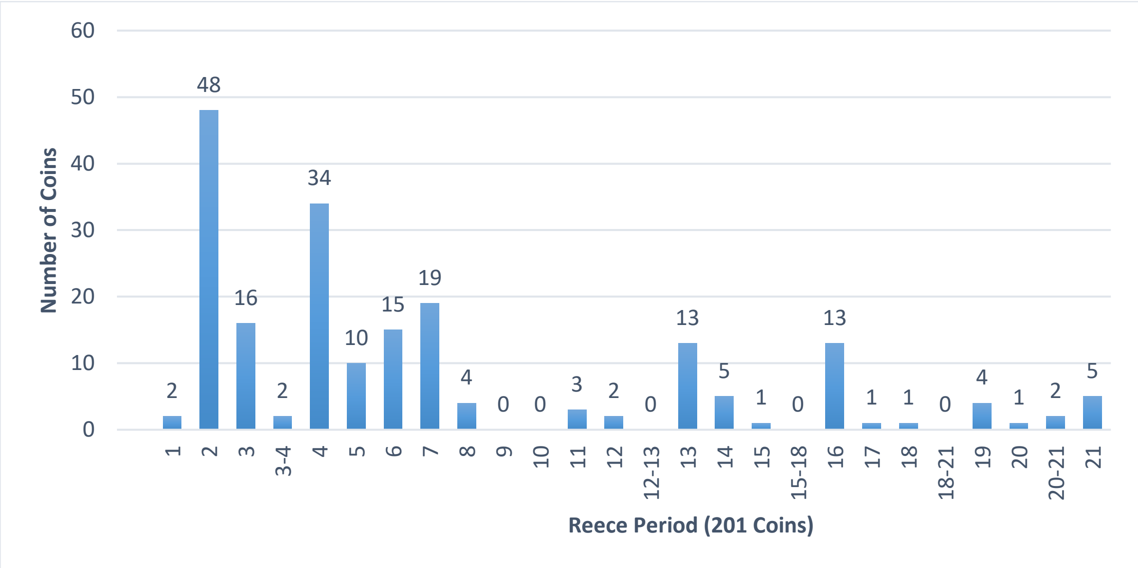

Figure 9.4-1. Distribution of the Plantation Place Assemblage by Reece Period

Only 201 coins from the Plantation Place assemblage could be assigned to a Reece Period, as an Emperor could be assigned to these coins (Figure 9.4-1).

At Plantation Place there seems to be a significant peak in Reece Period two, which consists of coins dating from 41-54 AD, with 11% of coins from the sample containing coins assigned to this period. The results from Reece Period two to seven combined, accounts for a total of 32% of the dataset for Plantation Place, and as such may suggest a predominance of early coin activity on the site. However, it is important to remember that a large proportion of the dataset could not be assigned a Reece Period and therefore this chronology is open to much debate.

Hoard vs Site:

All of the hoard coins can be assigned between the first and second century (Figure 9.4-2), emphasising that it could not have been buried before this period. In fact, the latest known coin in the hoard is that of Marcus Aurelius which dates to AD 173-174 (Bowsher 2015, 214). However, the earlier coins are issues of Nero dating to AD 54-68, suggesting that some coins found within the hoard at Plantation Place have been in circulation for over 100 years. The location of the hoard at the site can be associated with a small sunken room of a large townhouse, which is likely to have been built in the mid second century (Bowsher 2015, 214). As such, it may be possible to suggest the hoard was buried not long after the building construction sometime after 174 AD.

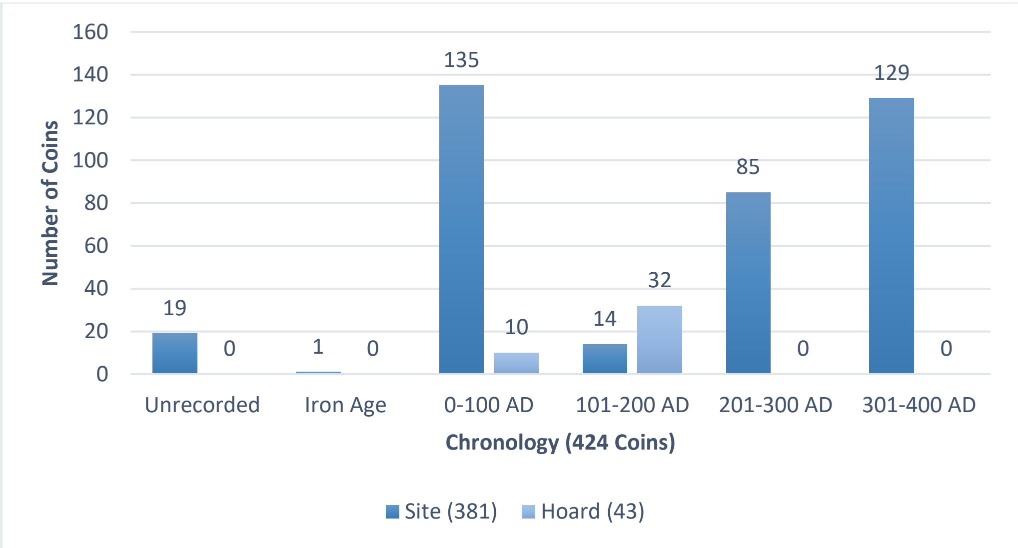

Figure 9.4-2. Chronology of Site vs Hoard Coins

From the site coins we can see two distinct peaks in their presence over the chronological periods. Firstly, in the first century AD with 135 coins being assigned to this period, and secondly in the fourth century, with 129 coins being assigned to the period. Combined, these two samples compose 264 of the 381 site coins (69%). Furthermore, this analysis suggests a drop in coin use during the second and third centuries AD, where only 94 out of 381 site coins are attributed to these two groups. However, with 19 of the site coins having an unassigned date, it is difficult to know how much this may affect chronological distribution if the date was known. However, given the small number of unrecorded coins, it is argued here that this could not affect the chronological distributions too dramatically, and as such suggests a relatively definite date range for the Plantation Place sample.

Official vs Unofficial:

The largest proportion of unrecorded coins belongs to the fourth century (Figure 9.4-3), which as has been mentioned previously in this chapter was expected. The lack of official issues in Britain during the third and fourth centuries, saw an increase in the number of local unofficial coins being produced to account for the shortfall in circulation. The Plantation Place evidence emphasises this phenomenon with 128 out of the 173 unofficial coins (74%) belonging to the fourth century.

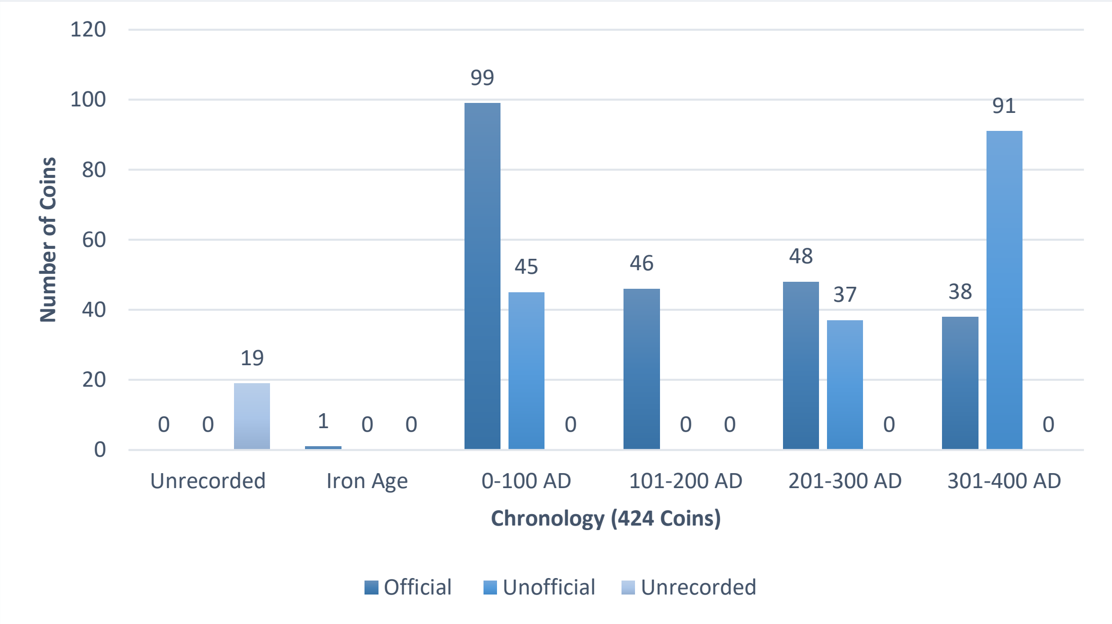

Figure 9.4-3. Chronology of Official vs Unofficial Coins

The remaining unofficial copies (45 coins) belong to the first century. The origins for Claudian copies are the subject of much debate, however, Sutherland (1973) has argued that these issues are most likely to be struck locally by military and civil centres as a means to supplement their pay when the Imperial government failed to supply adequate quantities of coins to pay the stationed troops (Kenyon 1992, 31). With the initial construction of the site at Plantation Place assigned to the first century AD, it is possible to argue that the presence of Claudian copies maysupport this assertion, implying that the construction of the fort and this initial military occupation phase at the site was crucial in the uptake of a coin-using economy in this area. The change in use of coins over time at Plantation Place is discussed in more detail, in the contextual analysis of the site in Chapter 9.10.

Examining the official coinage, we can see that the largest sample of official coins belongs to the first century with 99 out of 232 coins (43%). This may be expected, as it is during the first century that the site at Plantation Place was initially constructed, resulting in a subsequent influx of Roman coinage.

The quantities of official coinage remain fairly consistent across the second and third centuries (46 and 48 coins respectively) perhaps implying low level coin use during these periods.

By the fourth century there is a decrease in the number of official issues found (38 out of 232 coins or 16%). Interestingly, by this period the unofficial coinage represents nearly two and a half times the official issues assigned. As such, it is possible to suggest that the populations of Plantation Place had become reliant on a coin-based economy, and the failure of the Empire to supply official issues in sufficient quantities for the demand, meant a significant increase in the number of unofficial issues being produced and circulated to combat this. In order to provide more weight to the chronological evidence and interpretations from Plantation Place it is important that future works considers a broader collection of sites from London. This will enable a fuller Reece profile for London as a whole to be constructed, allowing an in depth discussion of how Plantation Place compares to the rest of the city.

9.5 Wear

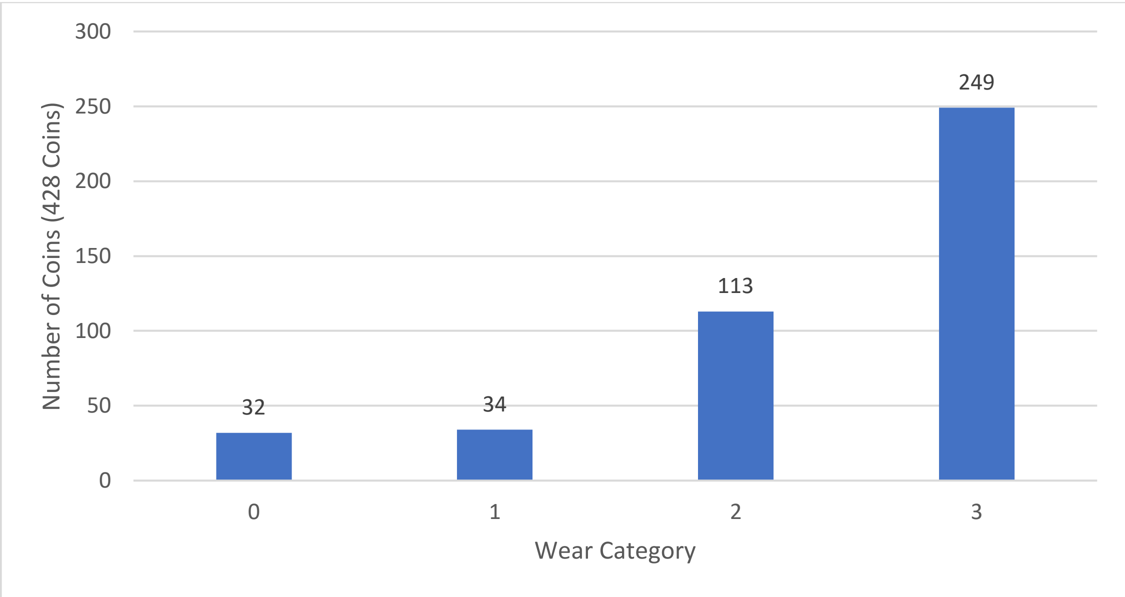

Figure 9.5-1. Distribution of Wear at Plantation Place

If we consider the wear distributions of coins across the whole sample (Figure 9.5-1) we can see that, as with the Lancashire data, the majority of coins fall into wear category two and three (slightly worn and worn), with 362 out of 428 being distributed between these two groups.

The publication from Plantation Place (Dunwoodie *et al*. 2015) uses Brickstock's (2004, 7) seven stage system. However, as the author was able to collect the data on the coins themselves, the four-stage wear system used for the Collected Lancashire sample (Chapter 7.5) has been applied to the Plantation Place collection in order for results to be comparable.

If we divide the coins into site coins and hoard coins, we can begin to look for differences between the wear patterns on coins with different types of depositional purposes.

As can be seen from Figure 9.5-2 above, all of the hoard coins fall into wear category one and two (unworn and slightly worn), whereas the site coins mainly fall into wear categories two and three (slightly worn and worn). This may suggest that the hoard coins have been deposited shortly after the last coin was produced (sometime after 169 AD) and therefore were deposited in a less worn condition having not been used for regular transaction and did not become worn post-deposition due to the closed nature of the burial within its contained. However, as previously discussed, if wear is not the best method of analysing the circulation of coins, then perhaps there is more to be added to the conversation by considering the elements that constitute wear.

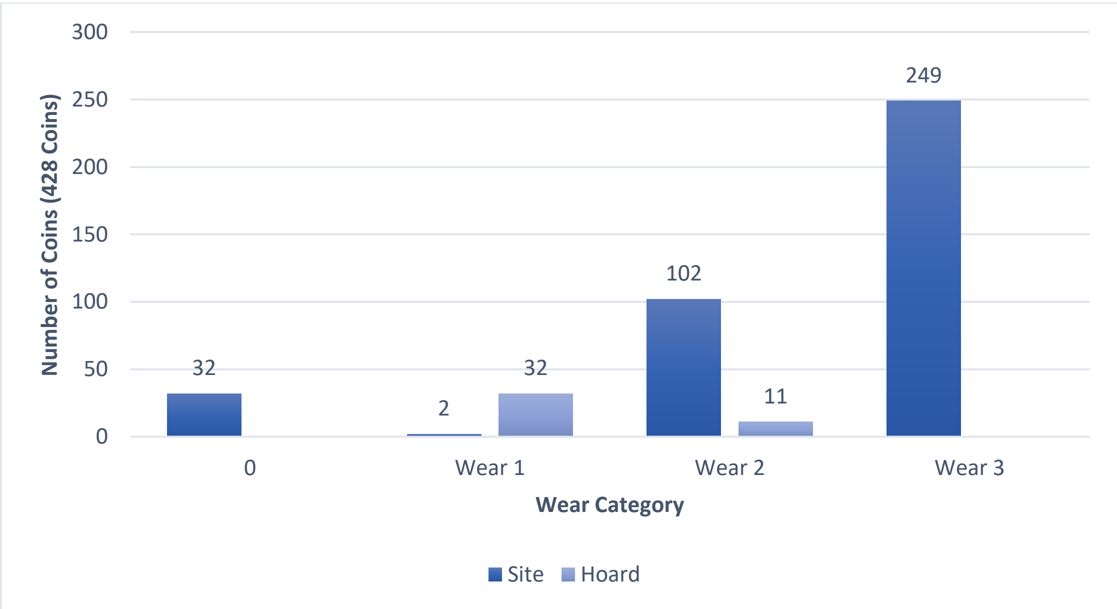

Figure 9.5-2. Distribution of Wear in Site vs Hoard Coins

The majority of individual site finds fall into categories two and three (slightly worn and worn), with only two coins being assigned as unworn. This suggests that the site finds shows evidence of a coin-based economy, whereby coins were used regularly and thus show high proportions of wear.

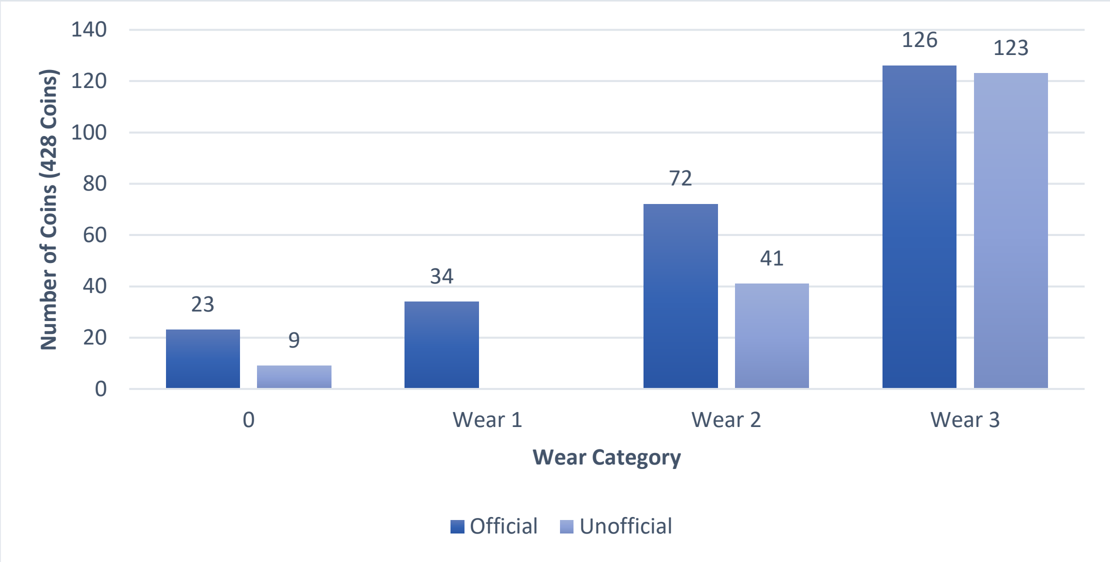

Figure 9.5-3. Wear Distributions in Official vs Unofficial Coins

Interestingly, 100% of the coins that fall into wear category one (unworn) are official issues (Figure 9.5-3), this may imply that the unofficial issues created locally were already of a lower quality than those officially made. Alternatively, this may suggest that official coinage is more likely to be lost during the early periods, meaning that it has less time to circulate and thus less time to become worn.

With regards to the most worn category, wear three, the split between official and unofficial coins is almost even, suggesting on the surface that both official and unofficial issues were used alongside each other and as such became worn at a similar rate. Therefore, this implies a similar number of transactions between the two groups.

However, as none of the unofficial coins are recorded as unworn (wear 1), then this may imply that the current wear-based system is not efficient for analysing the transactions of these coins, or that perhaps that a different system needs to be used for those unofficial issues. For example, if unofficial coins are considered as being at wear two in the overall schema, then that might imply that for unofficial coins in this category, they may effectively be unworn – because even the most well-made unofficial issue would appear this way. One reason for this could be the lower quality of unofficial issues, which make them more prone to appearing ‘worn’ more easily. However, this thesis aims to break down the current system of wear into different elements that compose it. By doing this we can begin to analyse what it is that makes individual unofficial issues worn and add more to strengthen this argument in subsequent chapters.

9.6 Exploring New Methodologies

As with the Primary data, it is important to consider the benefit of exploring the Plantation Place data using new methodologies. Firstly, in order to test these methodologies (outlined in Chapter 6) against a new data source to explore their validity; and secondly, to outline the ways in which these methodologies will allow an interrogation of other data types to explore the expansion of interpretation that can be made with their use.

9.7 Primary Context

As with the Lancashire dataset, the same recorded factors from the proposed methodology fall into the same context groups. Therefore, the evidence for primary context consists of notches, plastic deformation, mis-struck coins and cracking to the coins surface.

9.7.1 Notches

The creation of notches has already been explained in detail in Chapters 6.4 and 8.1.1, therefore this chapter begins with an interrogation of the data.

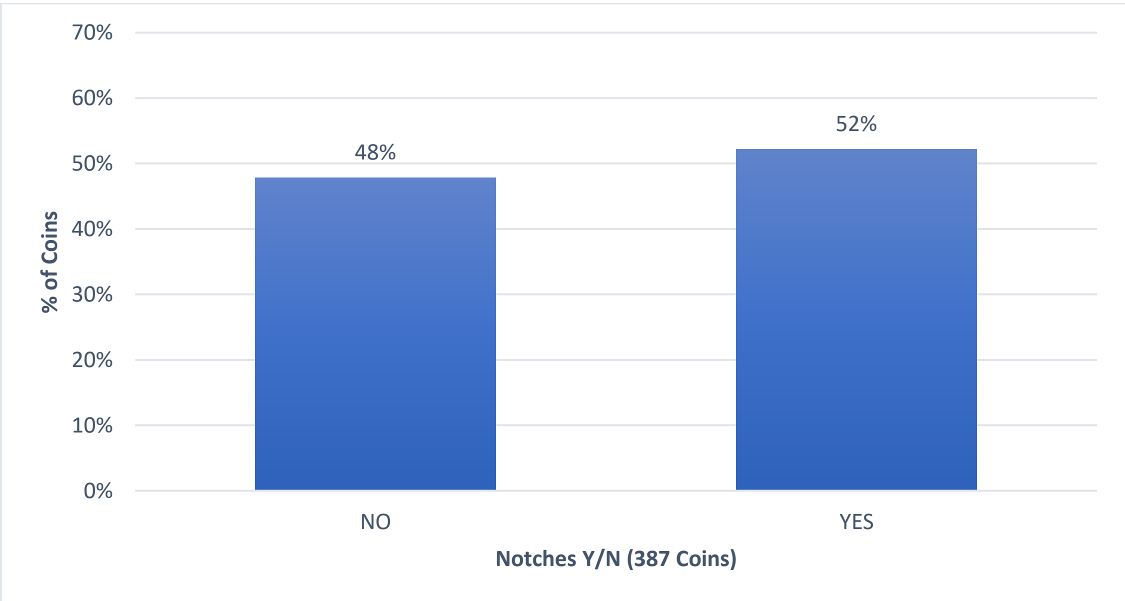

Figure 9.7.1-1 Presence and Absence of Notches in the Plantation Place Dataset

As demonstrated above (Figure 9.7.1-1), over half of the coins in the Plantation Place dataset display evidence of the presence of notches on the outer edge of the coin (202 out of 387 coins). This outcome alone suggests that notches were a common consequence of the production process and may not have been viewed by coin-using societies as a flaw. As with the results from the primary dataset (which also demonstrated over half the coins as having notches on the outer edge – See Chapter 8.1.1), the presence of notches suggests that notches do not affect a coin's intrinsic value (i.e., its acceptance and use in circulation).

If we assume that notches are a consequence of the production process, then analysing where they are most likely to occur on a coin may allow an insight into the role of the individual within this process.

Applying the same methodology (see Chapter 6) it can be suggested that, where notches occur across multiple quadrants, it is implied that a single coin would contain several notches, thus impacting a coins overall physical appearance.

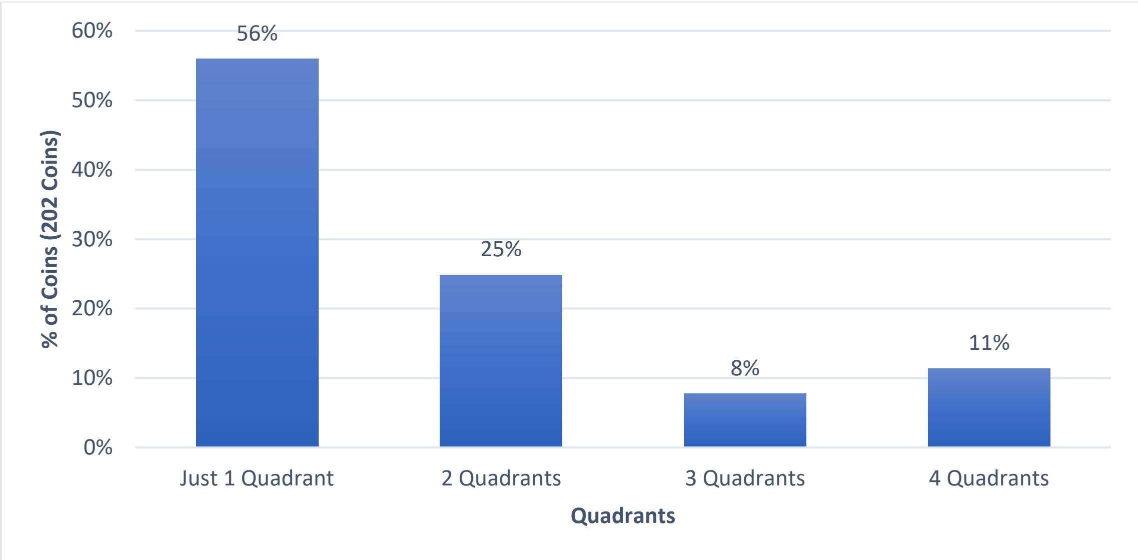

Figure 9.7.1-2 Presence of Notches across the Plantation Place Quadrants

Interestingly, the Plantation Place data (Figure 9.7.1-2) shows that it is most common for notches to occur in a single quadrant of a coin (56%) as opposed to across multiple quadrants (with multiple quadrants having a combined total of 44%). This is the opposite to the results provided by the Lancashire dataset, where the presence of notches across multiple quadrants had a combined total of 70% of the data.

As previously suggested in this thesis, it would be expected for production flaws (such as notches) to be more frequent in third century coins, due to the effects of debasement and an increased need for more rapid coin production to try and account for an Empire wide shortfall in circulating coinage.

In keeping with the chronological analyses undertaken in this study, the presence of notches across Reece Periods will be studied in order to analyse their distribution over time, in regard to key chronological stages (Figure 9.7.1-3).

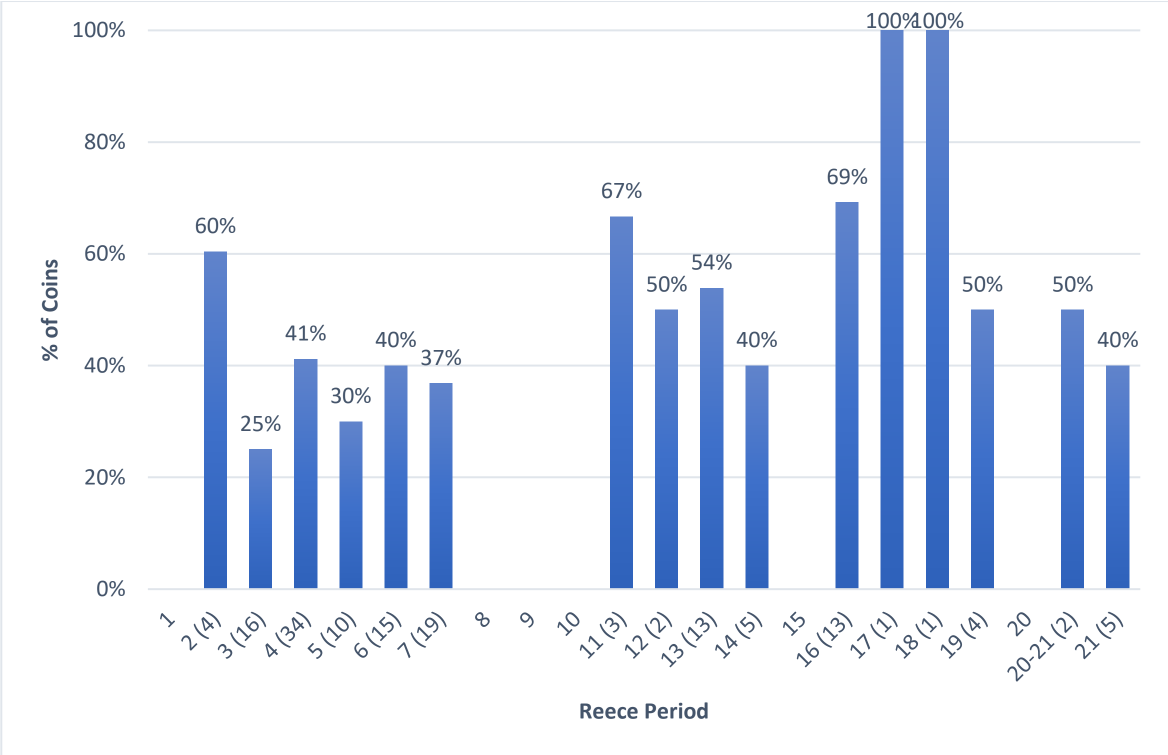

Figure 9.7.1-3 Chronological Distribution of Notches

The figure above demonstrates that when the presence of notches per Reece period is compared with the total number of coins from that Reece period, some interesting results are revealed. Two Reece period categories show that 100% of the coins belonging to that period display evidence of notches. However, it is important to highlight that Periods 17 and 18 are composed of a single coin, and this merely suggests that one individual coin has notches. If we discount the Reece Periods with sample sizes fewer than 10, then we can begin to explore the frequency of notches chronologically in a more meaningful way (Figure 9.7.1-4).

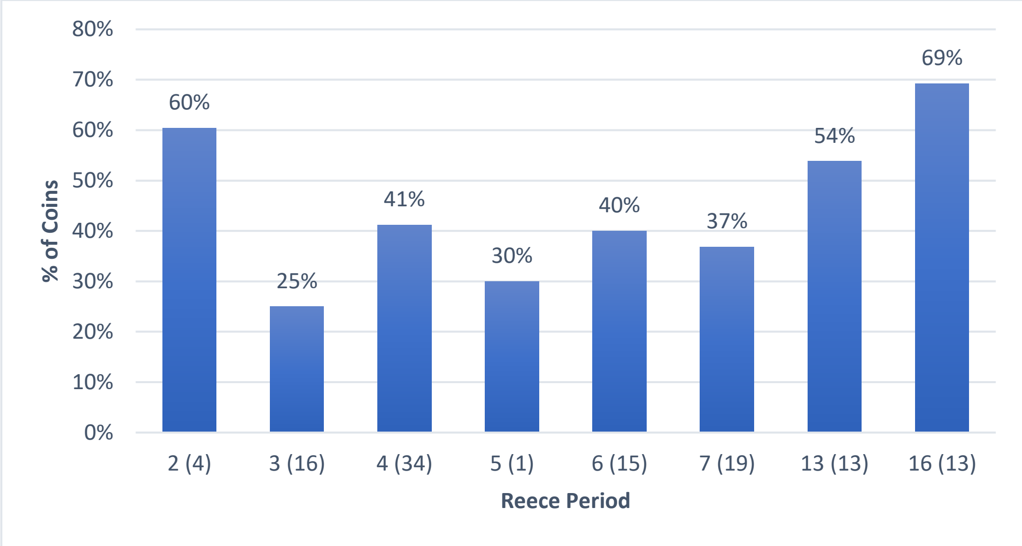

Figure 9.7.1-4 Chronological Distribution of Notches Against Reece Period Totals (Where Reece Period Total >10)

When we remove those Reece Periods with sample sizes less than 10, we can see that Period two remains one of the Periods with a high proportion of notches.

Furthermore, when measured against the total number of coins for that period, Period 16 also displays a high proportion of notches (69%). Period 16, represents the chronological period ranging from 317-330 AD. This phase would have coincided with the use of Plantation Place changing to a more residential development, and perhaps seen more locally produced unofficial issues being present in and around the area. As such, the higher frequency of notches could be due to the poorer quality unofficial issues present in this period.

If we compare the proportions of coins with notches in one quadrant from Plantation Place with the same Lancashire data we can see that notches in a single quadrant at Plantation Place are more commonly occurring during Reece Periods 18 (21), 16 (13) and 14 (20). Contrastingly, the data from Lancashire suggests that notches in a single quadrant occur more frequently in Periods 7-8 (1), 15 (3), 5-6 (2) and 6 (20). Whilst the total coin sample for these periods (in brackets) are often quite small, it does suggest that singular notches are occurring at different points in time across the different geographies represented in this thesis. This may provide support for notches occurring during the production process of the coin as it does not appear to be commonly occurring, nor does it appear to be occurring at a fixed point in time, which one might assume if a more structured creation of notches was being undertaken. If the purposeful notching of coinage was occuring, it may be expected to see this feature more commonly during the same periods, as a universal approach to testing coinage, perhaps to check the metal quality of the issues being uses in transactions. However, the evidence presented here suggests that notches were following a later chronological trajectory in London, compared with Lancashire, and therefore may be evidence of notching occurring during a coins production stage of its lifecycle.

Reece Period	Lancashire	Plantation Place
1	17%	
2		25%
3	19%	19%
4	11%	32%
5	23%	30%
5-6	50%	
6	45%	27%
7	6%	32%
7-8	100%	
9	22%	
10	5%	
11		33%
12-13	12%	
13	7%	19%
14		35%
15	67%	
15-18	12%	
16	10%	38%
17		22%
17-18		33%
18	5%	43%
18-21		
19	8%	29%
2-	4%	
20-21	17%	
21	15%	16%

Table 9.7.1-1. Table to show the chronological distribution of coins with a notch in a single quadrant at Plantation Place and Lancashire

It may be assumed that notches (and other production flaws) would be more frequent in unofficial issues due to their production being on a much smaller scale, with an assumed lack of technological knowledge in comparison with the official mints. Although the Lancashire data demonstrated that this may not always be the case, the evidence provided by the Plantation Place assemblage perhaps supports this argument (Figure 9.7.1-5).

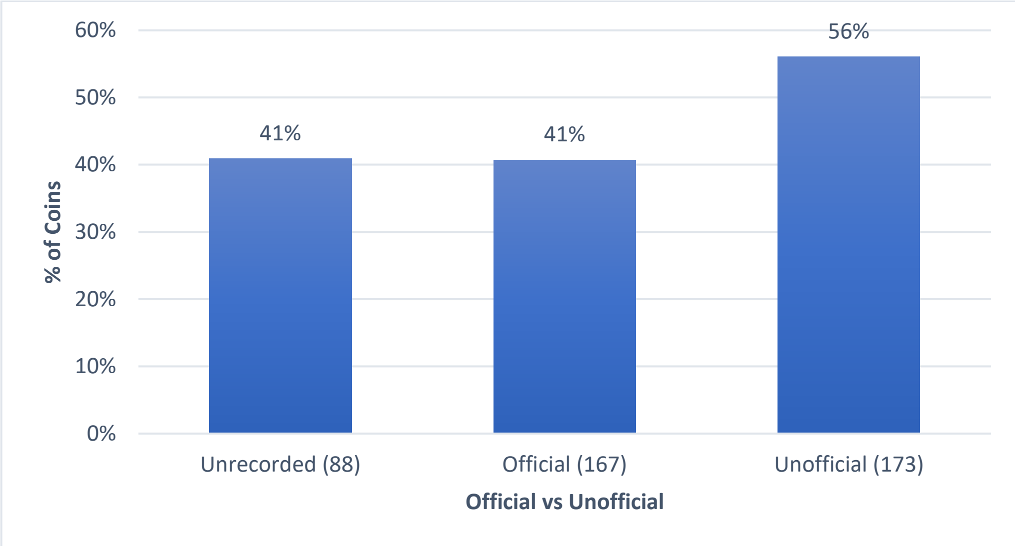

Figure 9.7.1-5 Frequency of Notches in Official vs Unofficial when Compared to the Whole Sample

Thus far it has been suggested that notches may not have been considered a production flaw affecting the intrinsic value of a coin, due to the high proportions of coins that demonstrate this characteristic. Another factor which may help explore this concept further is to consider the presence of notches on individual coins, and those coins that are found within a hoard (Figure 9.7.1-6). It may be argued that coins associated with hoards are more likely to be comprised of coins considered to be more ‘perfect’, for example, high value earlier issues. As such, the more aesthetically pleasing coins may also play a part in the selection process for hoarding practices.

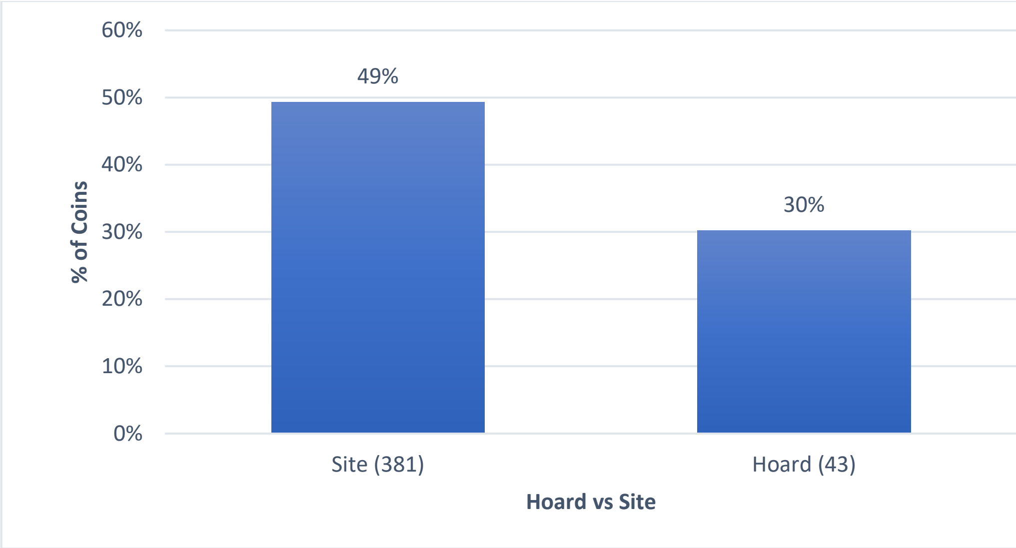

Figure 9.7.1-6 Proportion of all Site and Hoard Coins with Notches

Almost half of all site coins at Plantation Place demonstrate evidence for notches, whereas only 30% of hoard coins show signs of notches on the outer edge of the coin (Figure 9.7.1-6), examples of notches in both hoard (quadrant A) and site coins (quadrant B) are evidence below Figure 9.7.1-7.

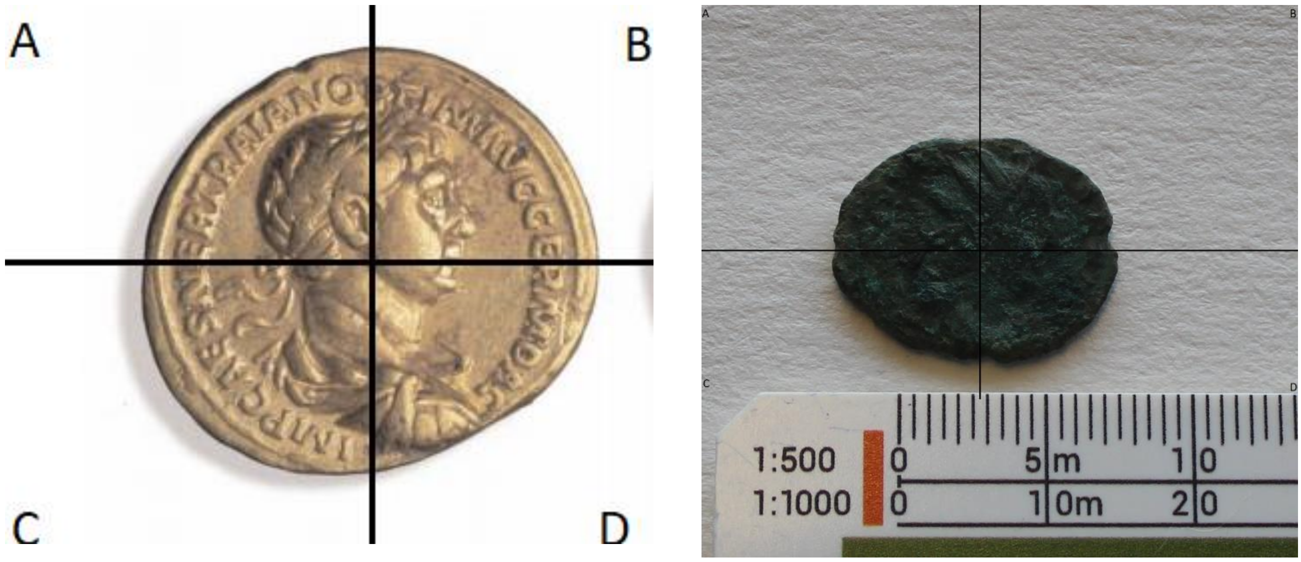

Figure 9.7.1-7. Two examples of notches from the Plantation Place Assemblage. Hoard coin, Coin ID 17*,* left. Site Coin, Coin ID 158, right.

This contrasts the Lancashire data, which shows almost the same proportions of notches in opposite categories. However, it is important to highlight that there is only a single hoard of 43 gold coins associated with Plantation Place, and overall, the site coins are lower quality issues, many of which are unofficial in nature. The presence of a single hoard at this site, as opposed to the multiple hoards associated with Lancashire may account for the difference in proportions. Therefore, it is important to expand the methodology in the future to include additional hoards outside of Lancashire to explore these results further.

9.7.2 Plastic Deformation

Plastic deformation has been outlined in Chapters 6.5.1 and 8.1.2, and as such will not be explored in depth here. However, it is important to establish how plastic deformation is displayed across the Plantation Place assemblage (Figure 9.7.2-1) in order to ascertain how this can inform on archaeological interpretation of a coin's production process.

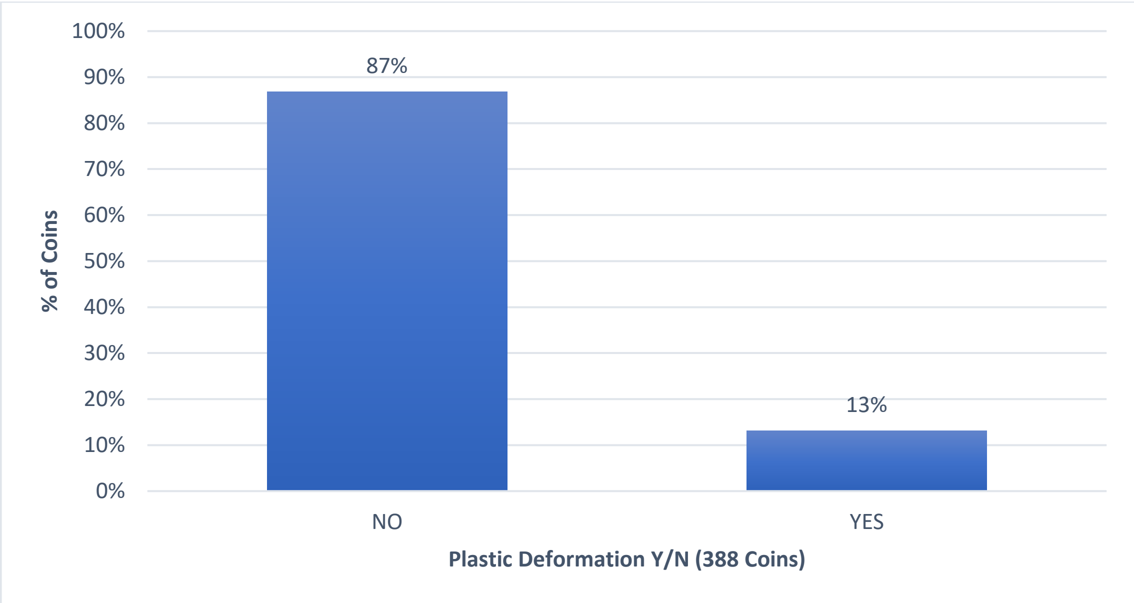

Figure 9.7.2-1 Presence vs Absence of Plastic Perforation

In comparison to the Lancashire assemblage, the Plantation Place assemblage shows a much higher proportion of plastic deformation (13%, as opposed to just 2% in Lancashire). However, it can be argued that the proportion of plastic deformation from Plantation Place is still relatively low, suggesting that this is not a common occurrence during the production phase of a coin. Nevertheless, the absence of the feature still holds implications regarding the visual finish of the object, and what may have been considered acceptable.

It may be expected, as with many of the other factors discussed in this analysis, that plastic deformation should be more common in unofficial issues.

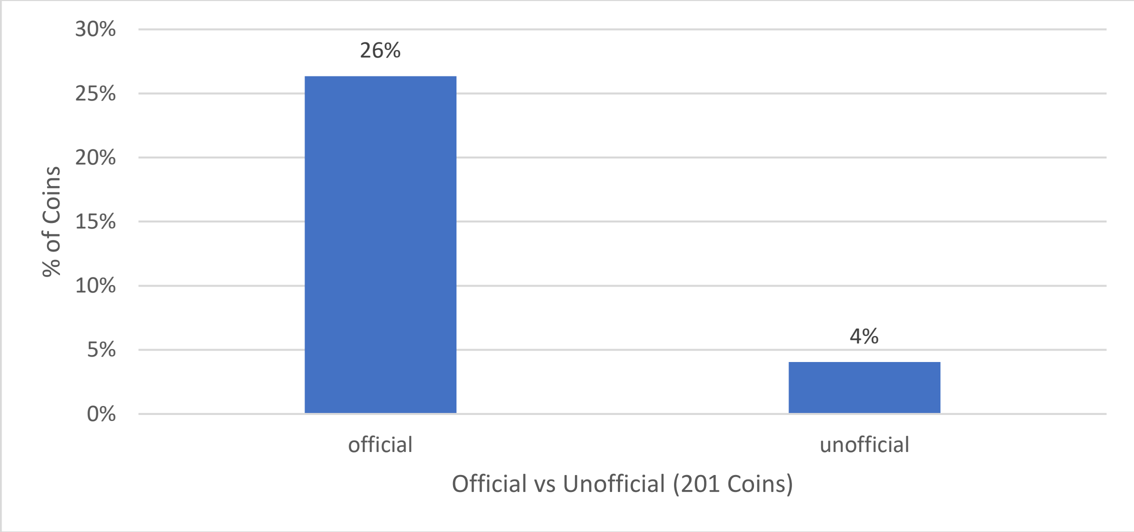

Figure 9.7.2-2 Proportions of Official and Unofficial Coins with Plastic Deformation

However, it appears that plastic deformation is much more common in official issues than unofficial issues, with 26% of the evidence of plastic deformation originating from the official coins sample (Figure 9.7.2-2). As with the Lancashire sample, this supports the notion that even if unofficial issues are considered as locally made crude versions of official units, there are some fundamental principles (including the overall shape and finish of the coin) which are maintained, and arguably provides some evidence as to what intrinsic value a coin would have had. This implies that there are certain connotations attached to a coin at its production stage, which are required for a coin to be considered to fulfil its principal monetary function.

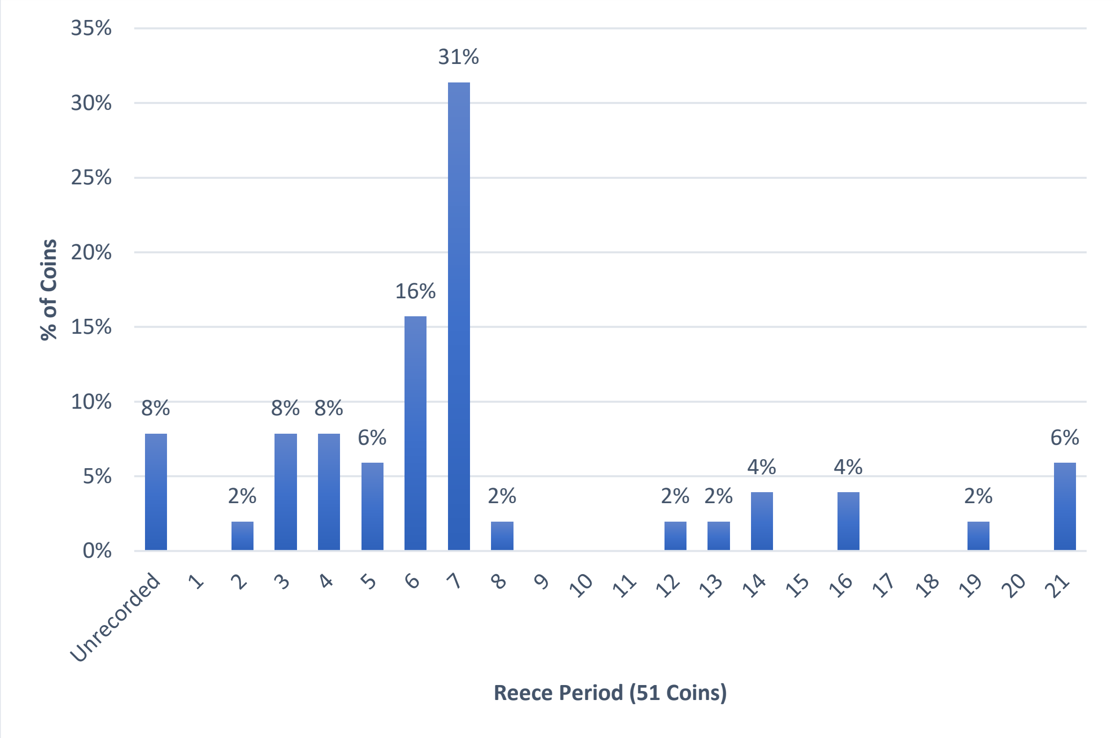

Figure 9.7.2-3 Distribution of Plastic Deformation Chronologically

If we consider the evidence for plastic deformation from Plantation Place chronologically, we can see that there is a distinct peak for this flaw at Period seven, with 31% of all coins with plastic deformation being assigned to this period (Figure 9.7.2-3). Period seven represents the chronological period 138-161 AD, with three issuers present during this 23-year span (Figure 9.7.2-3).

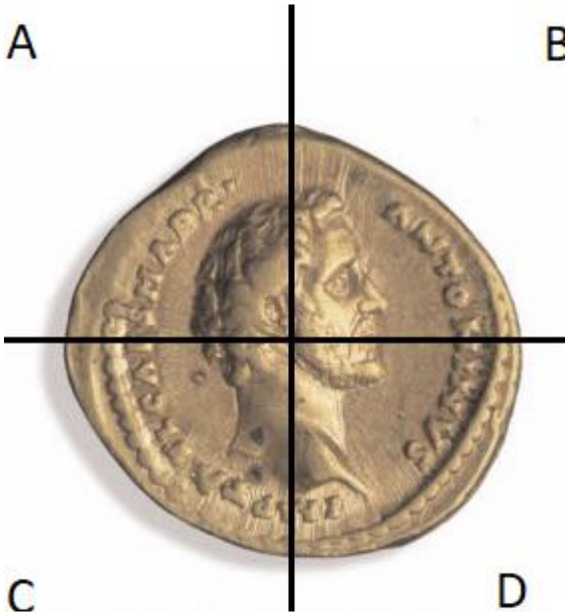

Figure 9.7.2-4. Example of a Coin with Plastic Deformation from Period 7. Coin ID 29

During this period the denarius of Marcus Aurelius, whilst not heavily debased and thus maintaining weight standards, did show a reduction in the finesse of the overall coin to around 70% (Carson 1965, 226), and perhaps it is this reduction in the overall quality and finish of the coins that accounts for an increase in plastic deformation during this period.

9.7.3 Mis-Struck

The ways in which a coin may appear mis-struck has previously been discussed in detail in Chapters 6.5.1 and 8.1.3.

As with the Lancashire sample, mis-struck coins in the Plantation Place assemblage seem to be a rare occurrence, with only 1% of the sample displaying any evidence for this factor, which is similar to the 2% of mis-struck coins present in the Lancashire sample (Figure 9.7.3-1). This suggests that striking errors on coins were a rare occurrence, or perhaps that mis-struck coins rarely made their way into circulation, perhaps instead being melted down and remade into a coin that did not display this flaw. This suggests that coins themselves were considered an important object, and perhaps an important vessel in perpetrating imperial or political messages to the outside world, and as such any flaw that may impact the ways in which the message could be interacted with were on the whole unacceptable.

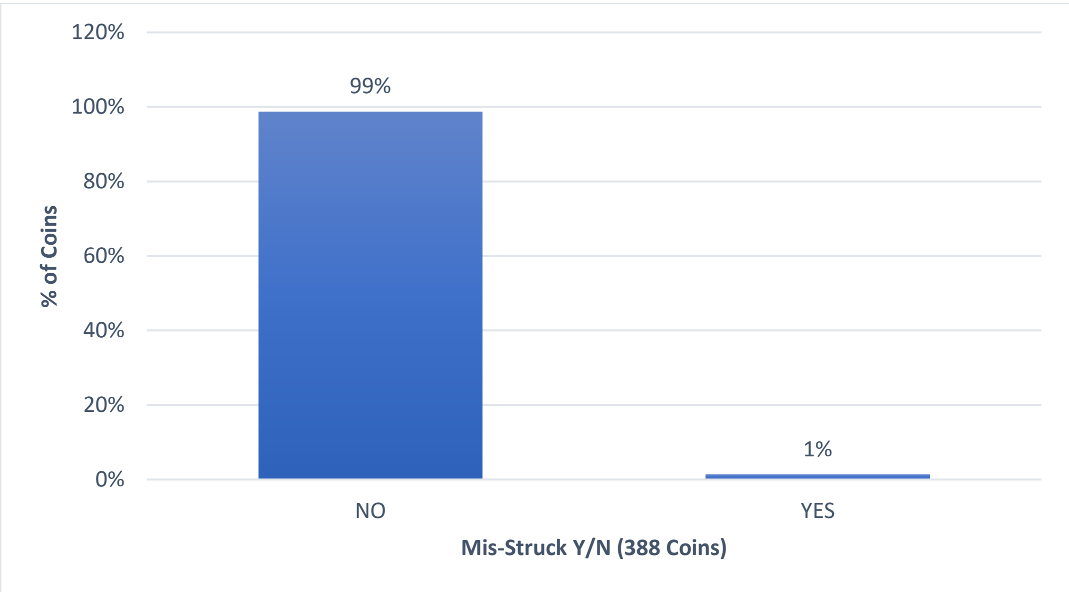

Figure 9.7.3-1 Proportions of Mis-Struck Coin.

It would be expected that mis-striking would be more likely to occur on unofficial locally made issues, as it is possible to argue that the message on the coin in these issues was less important than the physical object being inscribed with a monetary value.

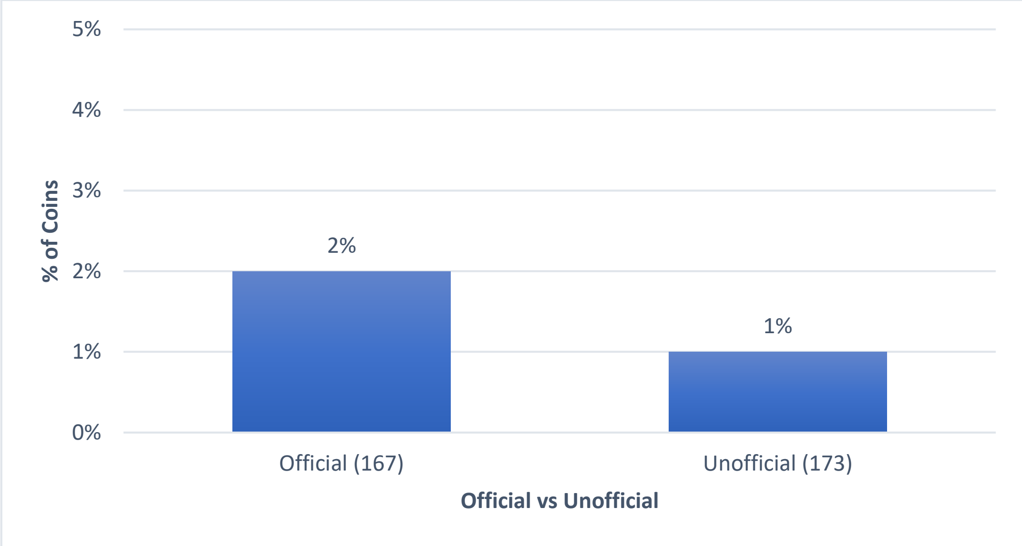

Figure 9.7.3-2 Distribution of Mis-Struck Coins in Official vs Unofficial Issues

The evidence provided by the Plantation Place assemblage (like the Lancashire assemblage) suggests that the opposite is true, with official issues being slightly more likely to be mis-struck (Figure 9.7.3-2). However, it is important to acknowledge that the sample size of mis-struck coins from the Plantation Place assemblage is only five, and as such may not be a large enough sample to accurately assess the frequency and distribution of mis-struck coins.

Chronological analysis of the mis-struck sample from Plantation Place provides evidence for three Reece Periods being present. Out of the sample, two out of five coins could not be assigned a Reece Period, with the remaining three coins being evenly distributed between Reece Periods three, four and six with a single issue belonging to each (Figure 9.7.3-3). As such, it is argued here that little can be ascertained about the chronological distribution of mis-struck coins.

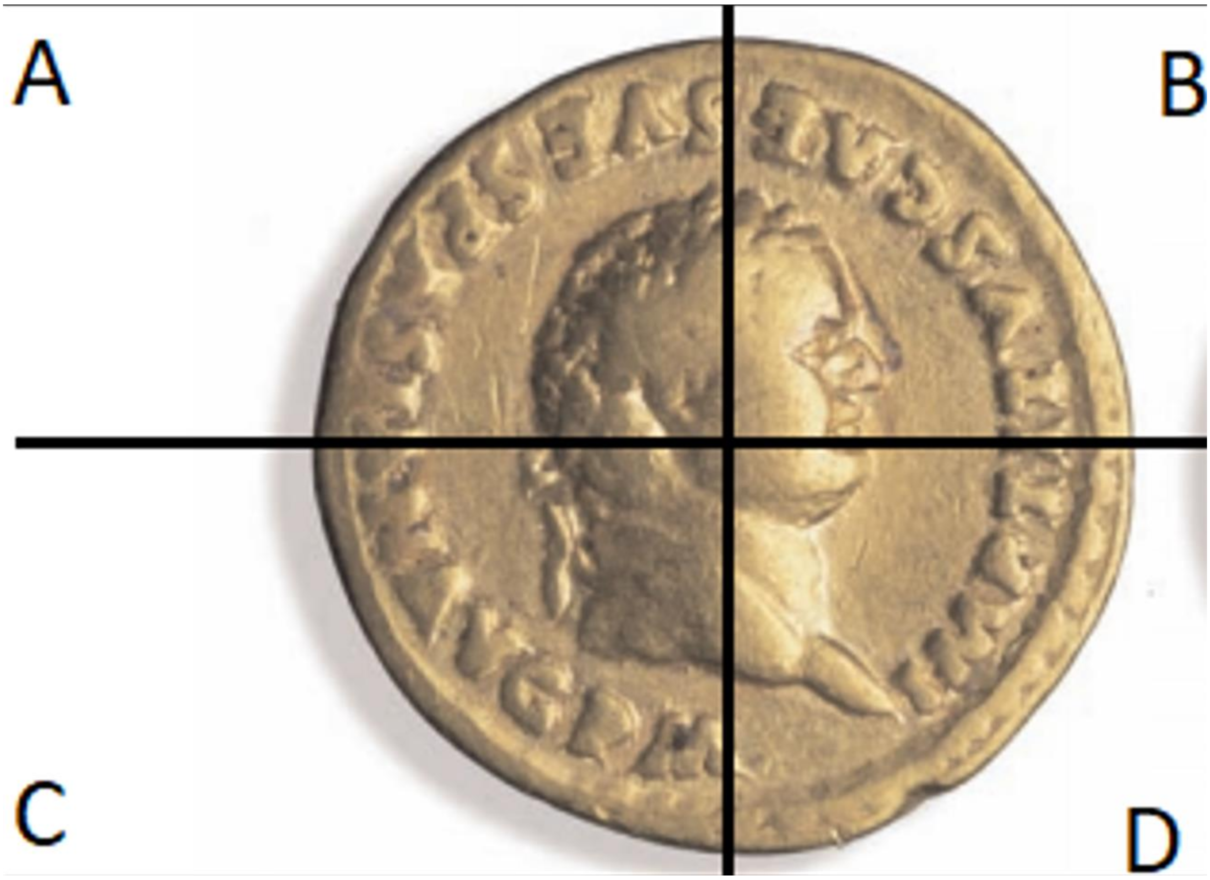

Figure 9.7.3-3. Example of a mis-struck coin from Four, where the face design appears in relief, with the nose area in quadrant B also appearing in counter relief (Coin ID 13).

9.7.4 Cracked

As with the Primary data, cracking is assumed to be another factor that occurs at the point of production, during the striking process (Kotoula and Kyraonoudi 2013, 81) (see Chapter 6.5.1). Where coins display visible cracks on an unbroken flan, it is thought that they occur during the primary context or production of the coin. Contrastingly, coins that are cracked all the way through the flan, where all fragments of the coin are found, are associated with the object's deposition phase.

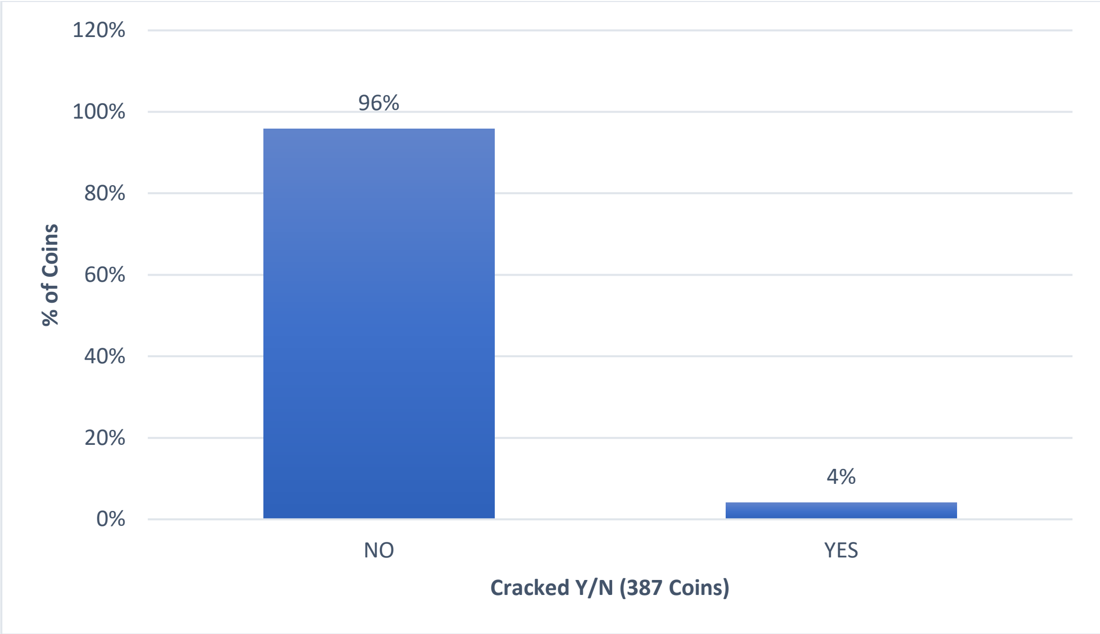

Figure 9.7.4-1 Proportions of Cracked Coins

As with the Lancashire dataset, the Plantation Place assemblage shows evidence of 4% of the coins have cracks (Figure 9.7.4-1), which equates to 16 out of the 387 coins in the Plantation Place assemblage.

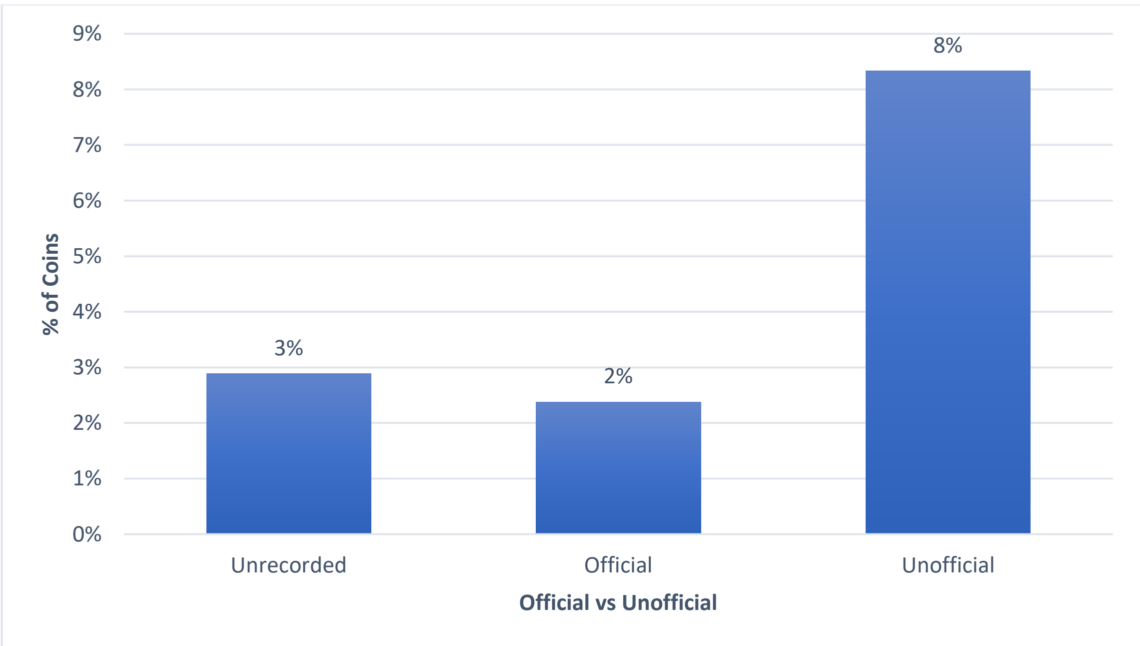

Figure 9.7.4-2 Proportion of Cracked Coins Against the Total Official and Unofficial Samples

From the graph above we can see that only 8% of the unofficial coins display evidence of cracking (Figure 9.7.4-2). However, this is significantly higher than the number of official coins displaying evidence of cracking, which is 2%. Whilst the unofficial result is significantly higher than the official, it may not be a significant enough proportion to suggest that cracking is more likely to occur on unofficial issues. A Pearson Chi-Squared Test with Yate's Continuity Correction (X^2 =3.43, df = 1), with a P value of 0.06 suggests that there is no statistical significance between cracking and unofficial issues, if we take the standard of 0.05 for p to be significant. However, it does suggest there is only a 6% probability of obtaining the result by chance suggesting there may be an association between the two factors. Unfortunately, the sample sizes from Plantation Place are very small and therefore a bigger sample may be needed for a true assessment of the statistical significance between cracking and unofficial coin issues.

Interestingly, none of the cracked coins from the Plantation Place assemblage belong to the hoard. This may imply that the cracked coins from this assemblage are due to interaction between the coin's surface and the environments in which they are lost as an effect of post-deposition. As opposed to the closed context of a hoard, which arguably would see less movement and outside interaction. This may be supported by the contents of the hoard itself, which consists of 43 gold aurei. Gold is softer than other coins of silver and copper alloy and therefore it would be expected that gold coins would fracture more easily. As all the cracked coins are associated with site coins and not the hoard, this would further suggest that the closed context of the hoards dictates less post-depositional interaction leading to cracking.

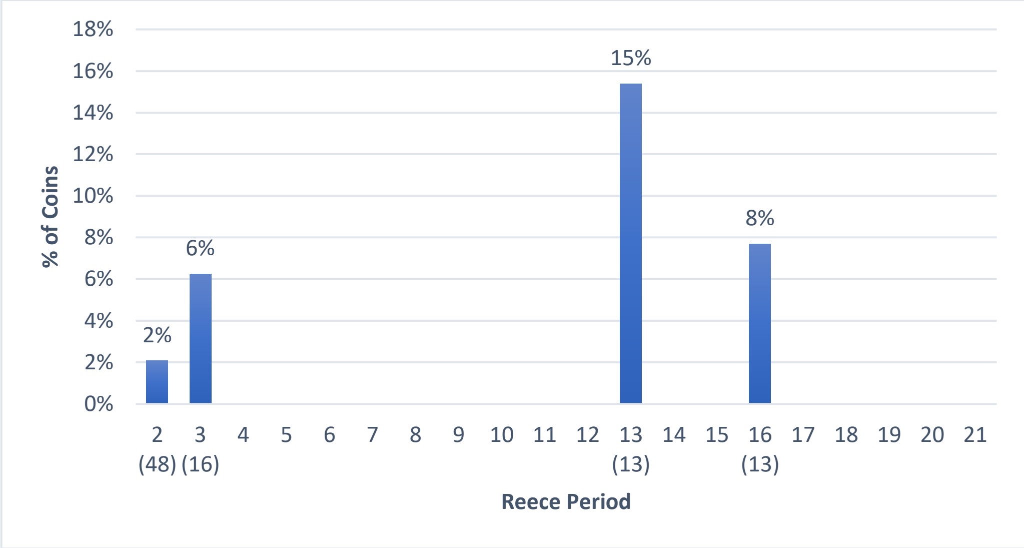

Figure 9.7.4-3 Chronological Proportions of Cracking Against Whole Chronological Sample

As shown above (Figure 9.7.4-3), the 16 cracked coins come from early Reece Periods; two three, thirteen and sixteen, with the majority being assigned to Period 13.

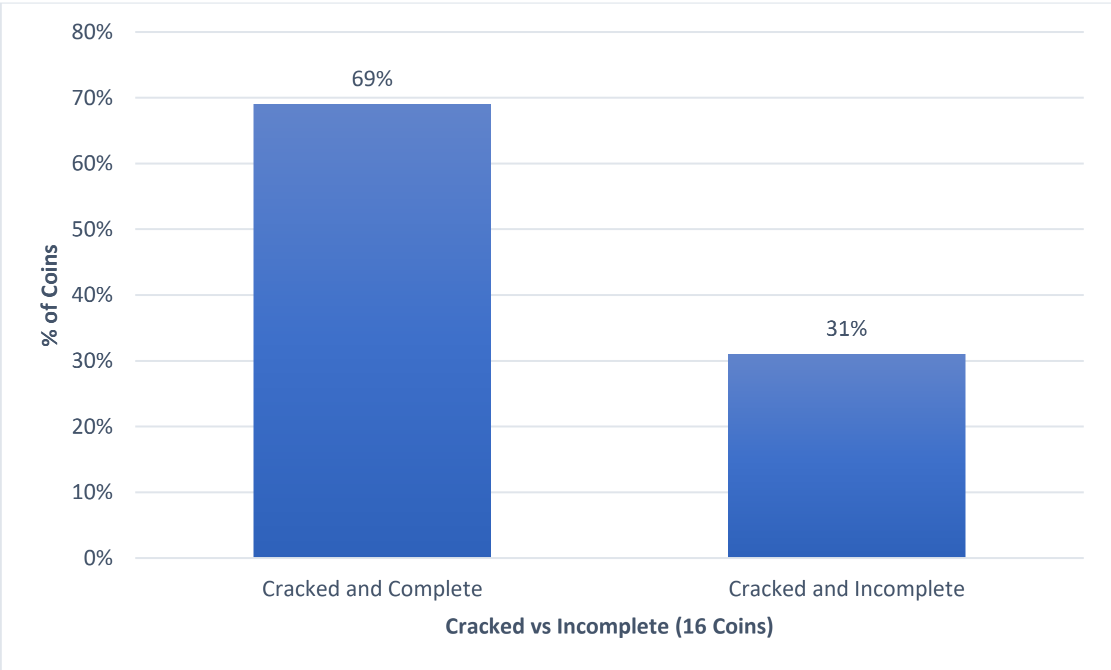

Figure 9.7.4-4 Association Between Cracked and Incomplete Coins

In order to ascertain whether cracking is more common during the production phase or the post-deposition phase, it is important to compare the proportions of cracked coins to the proportions of incomplete coins. It appears to be much more likely for a coin with evidence of cracking to be complete, with two thirds of cracked coins falling into this category (Figure 9.7.4-4). This would suggest that cracking is much more likely to be a result of production processes than occurring during post-deposition and indicates that coins displaying evidence of cracking would still be circulated (Figure 9.7.4-5). Thus, as with notches, it can be implied that radial cracks on the surface of the coin were not considered to be a flaw that would affect the secondary context of a coin (circulation).

Figure 9.7.4-5. Examples of Coins which are Cracked all the way through the flan (Coin ID 90, left) and cracked on the surface of the coin (Coin ID 270, right, Quadrant C)

9.7.5 Primary Context Summary

By analysing the primary context of coins from Plantation Place, we can begin to explore the accuracy of some of the conclusions made when using this new methodology compared with the Lancashire dataset.

Again, the Plantation Place dataset would suggest that over half of the sample display evidence of notches on the outer edge of the coin. Furthering the notion that this factor, whilst visible on the coin in archaeological contexts, may not have been considered as a flaw in Roman coin-using societies. This may impact on our understanding of the acceptance of Roman coins amongst coin-using societies, as it implies that it was the intrinsic value of the coin, as opposed to how it looked that became important. As such, perhaps the use and circulation of coins is less about the acceptance of Roman rule within Britain, and more about the value of the metal that could then be traded on, or the widespread adoption of a new economic system due to the sheer quantity of military personnel in Britain.

Secondly, the factors recorded in this thesis that are associated with production, show little to no significance between official and unofficial issues. As with Lancashire, this may further the argument for unofficial coin production in Britain more likely following traditional production methods of striking, as opposed to being produced in moulds.

Through the analysis of these four factors, it is demonstrated that Reece periods 2, 7, 13 and 16 are the most common. As with the Lancashire dataset, these periods generally represent periods of economic or political instability, with the expansion of the Empire in period two, through to reductions in coin quality in the later period which may allow these production factors to occur more frequently.

9.8 Secondary Context

9.8.1 Perforations

Of the 387-coin sample from Plantation Place, only two coins demonstrate signs of having a hole through the coin flan. For the purposes of this research, any coin with a hole through the flan has been recorded as a perforation for further analysis.

The first coin is an unidentified copper issue, dating between 0-200 AD. The perforation through the surface of the coin flan, is large and irregular (Figure 9.8.1-1). However, the edges of the perforation are not sharp or angular, which arguably is what would be expected from a accidental or post-depositional break. Therefore, it is suggested that this is an intentional perforation. Though, as with the Lancashire data, whilst it can be assumed that the role of the object is changed due to perforation, it is impossible to argue with any accuracy what the perforated coin’s new role would be. The most logical answer for the majority of perforated coins is to enable a change from an object with a monetary function to an amulet or pendant. In the case of Coin ID 321 and the nature of the perforation, it is unclear why this coin would have been chosen.

Figure 9.8.1-1 An Example of a Perforated Coins from Plantation Place. Coin ID 321.

The second example is also an unidentified copper alloy issue, coin ID 415. As shown in Figure 9.8.1-2 below, the perforation in the bottom left quadrant is much cleaner and more circular than the example above. Again, the edges of the perforation are smoother and thus interpreted as being an intentional act, suggesting that the biography of this object was intentionally changed from being a coin of monetary value, to being used for a different purpose, as a pendant or amulet. Due to the nature of deposition, and post-depositional activities, this coin (as with the previous example) remains unidentified in the modern day and as such, it is difficult to interpret why these coins would have been selected for perforation.

Figure 9.8.1-2 An Example of a Perforated Coins from Plantation Place. Coin ID 415.

9.8.2 Summary of Secondary Context

Similarly, to the Lancashire dataset, there are few examples of perforated coins, with just two cases being present in the Plantation Place assemblage. Unlike the Lancashire data there appears to be little evidence to infer why these specific issues were chosen for perforation and subsequently reused, due to the by-product of factors recorded in the tertiary context. Both examples from Plantation Place display little to no design details and when combined, the evidence from Lancashire and Plantation Place only provide five examples of perforated coinage. Nevertheless, it may be possible to infer that the reuse of coinage in this way was therefore not commonplace, though further work would need to be conducted on a wider dataset in order to investigate this. If this is the case, this may help to strengthen arguments regarding the acceptance of coinage in the Roman world by implying that for the most part, coins were just coins, and not something that could be reused. However, this may also indicate how the way in which we publish reports can affect the interpretations that can be made. In the case of the perforated coins from Plantation Place, neither are discussed contextually within the site report and may belong to one of two categories not discussed; unstratified finds or finds from post-Roman residual deposits (Bowsher 2015, 214). However, there is a possibility that these two Roman issues were reused within the post-Roman period and therefore, whilst not in keeping with the expected distribution of Roman coins at Plantation Place, may actually indicate a change in Roman coin use, though the redeposition of these issues makes interpretations more difficult.

Furthermore, unlike the Lancashire dataset, the Plantation Place assemblage provides zero examples of clipped coins. This highlights the need to consider and identify additional factors associated with a coin's secondary context (use and circulation) for a more detailed understanding of this important phase. It can be argued that the main factor in acceptance of a Roman coin-based economy would be use and circulation, and therefore this is one area of the proposed methodology that can use further work. However, the current framework can still help expand interpretations, as the focus of archaeological discourse has often been on this secondary context phase and has failed to consider the significance and importance of primary and tertiary contexts.

9.9 Tertiary Context

9.9.1 Corrosion:

The proportion of coins at Plantation Place with corrosion represents 74% of the data (Figure 9.9.1-1), much higher than the Lancashire sample which showed only 48% of the coins displaying evidence for corrosion.

With such a high proportion of coins displaying evidence of corrosion, it may be suggested that this could have a significant impact on the ways in which wear analysis has been undertaken in the past. If this is to be explored, then two things need to be accepted. Firstly, that the presence of corrosion on a coin's surface occurs due to interactions with the surrounding environment following deposition, and that these corrosion by-products may influence the overall surface of a coin. Secondly, that wear is used as a measure of a coin's circulation, but it is highly subjective and based upon the researcher's own interpretation of the coin's surface. As such, any factor that may affect the overall finish or quality of a coin's surface, may therefore impede on interpretations of wear, and make wear patterns an unrealistic component to explore a coin's biography. This is demonstrated in Figure 9.9.1-2 below where 88% of the corroded sample belongs to wear categories two and three (slightly worn and worn).

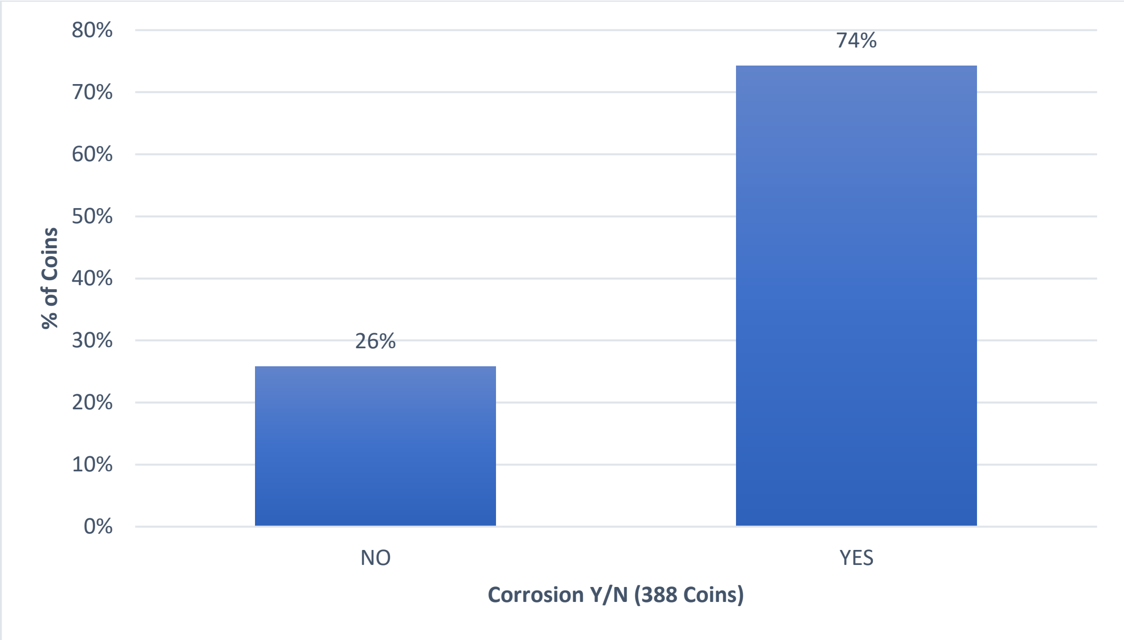

Figure 9.9.1-1 Presence vs Absence of Corrosion

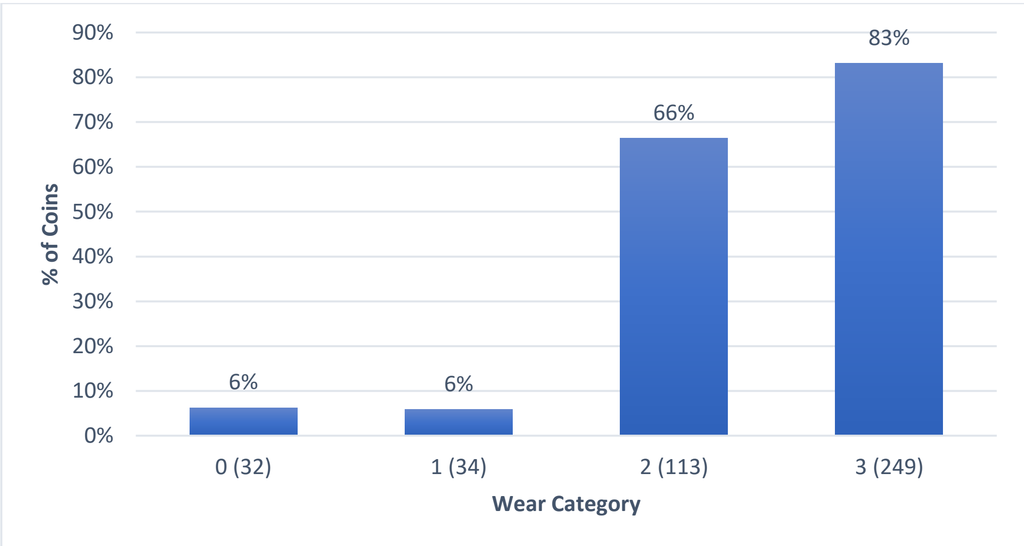

Figure 9.9.1-2 Proportion of Corroded Coins Against the Total Wear Category Sample

If it is accepted that corrosion is a by-product of post-depositional activity, and therefore dependent on the geological environment in which a coin is buried, then it may be expected that there would be little difference when comparing hoards and individual coins buried at the same site, particularly as the geographical area is so small, and the underlying geology would be the same. However, all but one of the corroded coins belongs to the individual coins from Plantation Place, with only a single coin from the Plantation Place hoard showing any signs of corrosion (Figure 9.9.1-3).

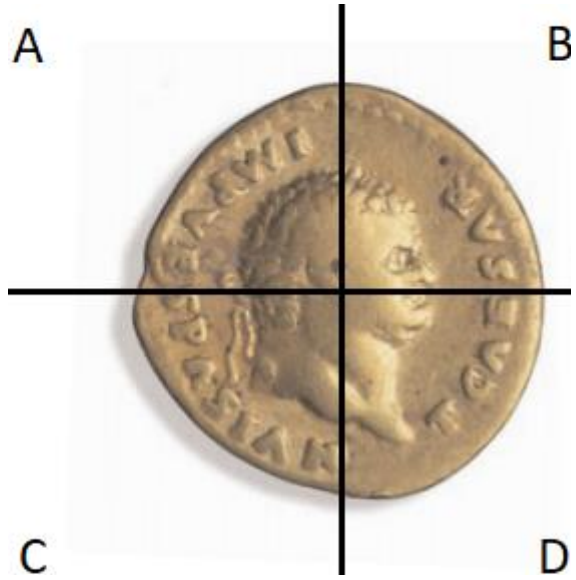

Figure 9.9.1-3. The single coin from the Plantation Place hoard, showing any signs of corrosion (quadrants B and A). Coin ID 11

This could have occurred for several reasons. Firstly, the deposition of the hoard inside a wooden box may have protected the coins from the surrounding geology and therefore the chemical reactions between the soil and the metal would not have occurred. Secondly, it is important to highlight that there is only evidence for one hoard from the site, and that is a hoard of 43 gold aurei. As such, it is important to consider the effects that corrosion would have on a gold surface, in order to ascertain why these results may show fewer signs of corrosion in hoards. It is often perceived that gold artefacts are unalterable, which may be a flawed notion as the minor elements within the object are subject to corrosion (Tissot *et al.* 2009, 389). It may therefore be implied that the lack of corrosion in the Plantation Place hoard would suggest that the gold aurei composing it, were of a high quality and high proportion of gold, leading to a general lack of corrosion compared with other coins from the same site.

9.9.2 Incomplete/Fragmentary Coins

As highlighted above, there seems to be little correlation between cracked and incomplete coins. However, it is possible that incomplete coins are influenced by some additional factors outside of cracking. As such, it is important to consider incomplete coins in their own right with regard to their chronological distribution, and the types of coins they occur more commonly in (denomination and

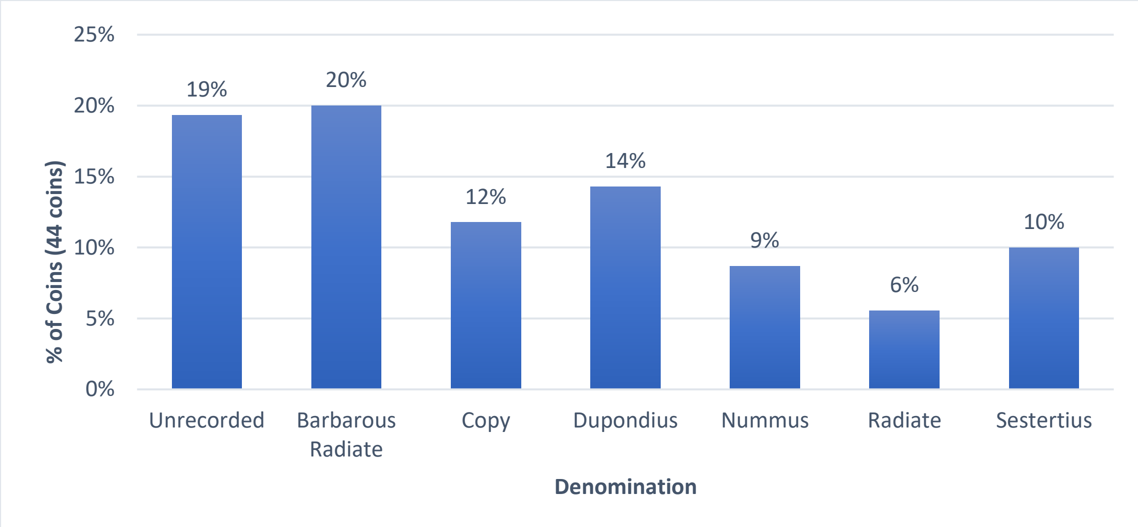

Figure 9.9.2-1 A graph to show the distribution of incomplete coins by denomination

site or hoard coins). The Plantation Place assemblage provides evidence for 44 incomplete coins, which will be explored in more detail below.

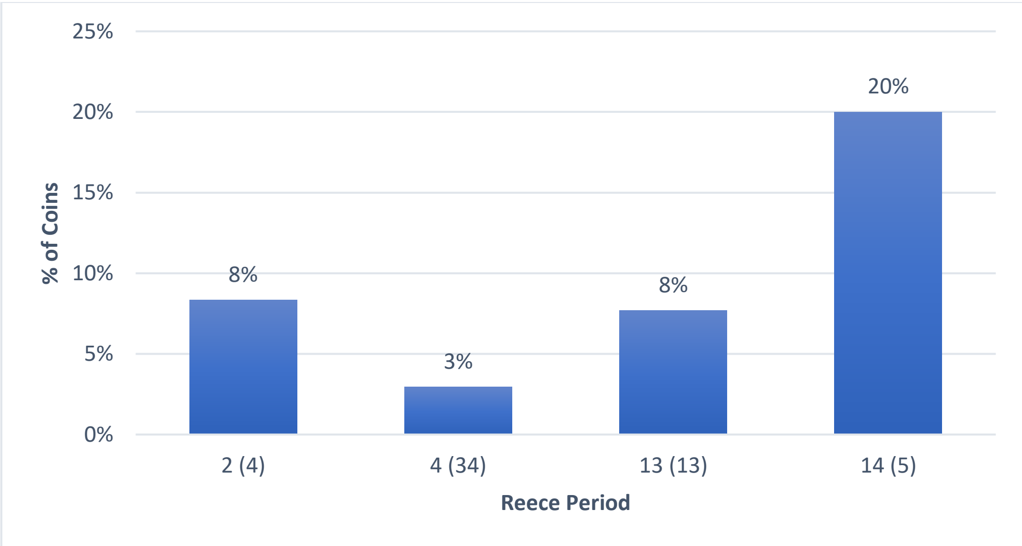

Figure 9.9.2-2 Chronological distribution of incomplete coins

Firstly, if we consider the role of denomination there seems to be little correlation between which coins are more likely to be incomplete (9.9.2-1). If we consider the barbarous radiates and copies (which would form the unofficial or locally made group), then 33% of incomplete coins would fall into this category. Comparatively, if we consider the official imperial denomination groups (dupondius, nummus, radiate and sestertius), then it can be suggested that 39% of incomplete coins are distributed amongst these groups. If we break down the official denominations further, we can see there is a slight decrease of incomplete coins within the silver radiate group (6%), compared with the copper alloy denominations; dupondius, nummus and sestertius (14%, 9% and 10%, respectively). This may imply that copper alloy issues are more likely to be incomplete than any other denominations.

Secondly, 100% of all incomplete coins are associated with individual/site finds as opposed to hoards. Suggesting that where coins are incomplete prior to deposition, they are not included in hoards, thus implying a structured methodological approach to the hoarding process. Furthermore, this may suggest that the closed context of a hoard influences whether coins can become incomplete or fragmentary in the ground due to post-depositional activities. The Plantation Place hoard was buried within a bag, within a box in a small sunken room of Building 31 (townhouse), and as such seems likely to have remained undisturbed, and possibly protected from post-depositional activity due to its container.

Finally, if we consider the evidence for incomplete or fragmentary coins chronologically (Figure 9.9.2-2), we can begin to understand whether these coins become this way during their lifecycle or following deposition. It is important to note that only seven of the 44 incomplete coins could be assigned to a Reece period. If we compare these seven coins to the Reece period totals, we can see that 20% of the Period 14 sample is incomplete or fragmentary. However, this only actually represents one incomplete coin out of five Period 14 coins, and as such it can be argued that a correlation between incomplete or fragmentary coins and chronology is inconclusive at best.

9.9.3 Scratches

Scratches will be considered in relation to the Plantation Place data in order to explore whether they are evidence of structured or intentional damage to the coin's surface, or simply a consequence of a coin's tertiary context as post-depositional activity.

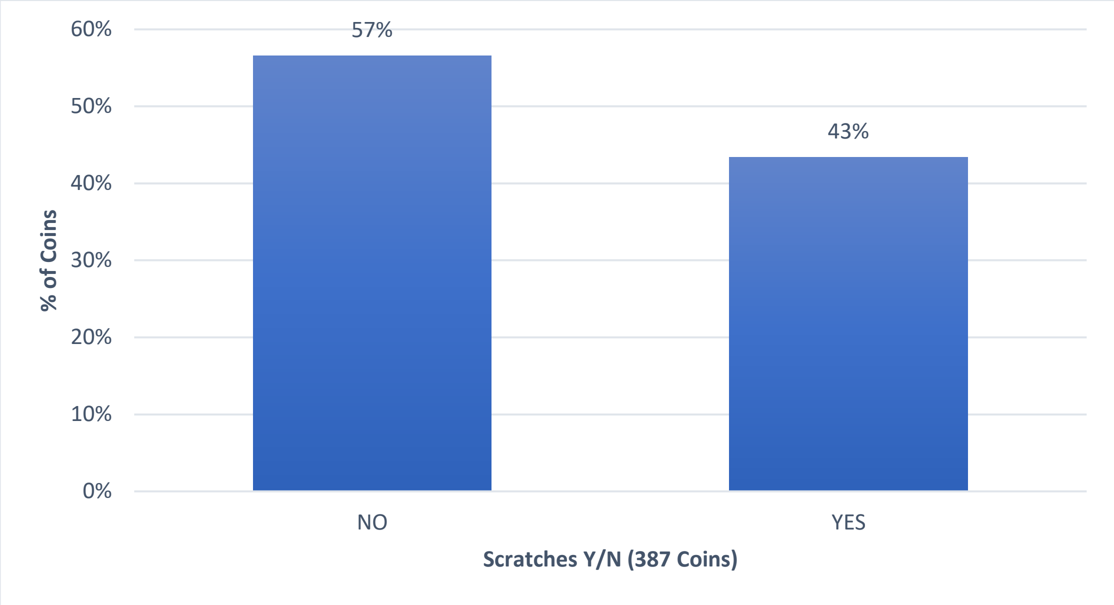

Figure 9.9.3-1 Proportion of Coins with Scratches on the Surface

As shown, 43% of coins display evidence for scratches on the surface (Figure 9.9.3-1), which is similar to the evidence provided by the Lancashire data (see Chapter 8.3.3). As with the Lancashire data, it is important to examine these results in order to ascertain whether this is due to structured practice of scratching coin surfaces, or as a consequence of post-deposition.

As with notches, the presence of scratches is broken down to allow for analysis as to where on the coin this feature is most likely to present itself.

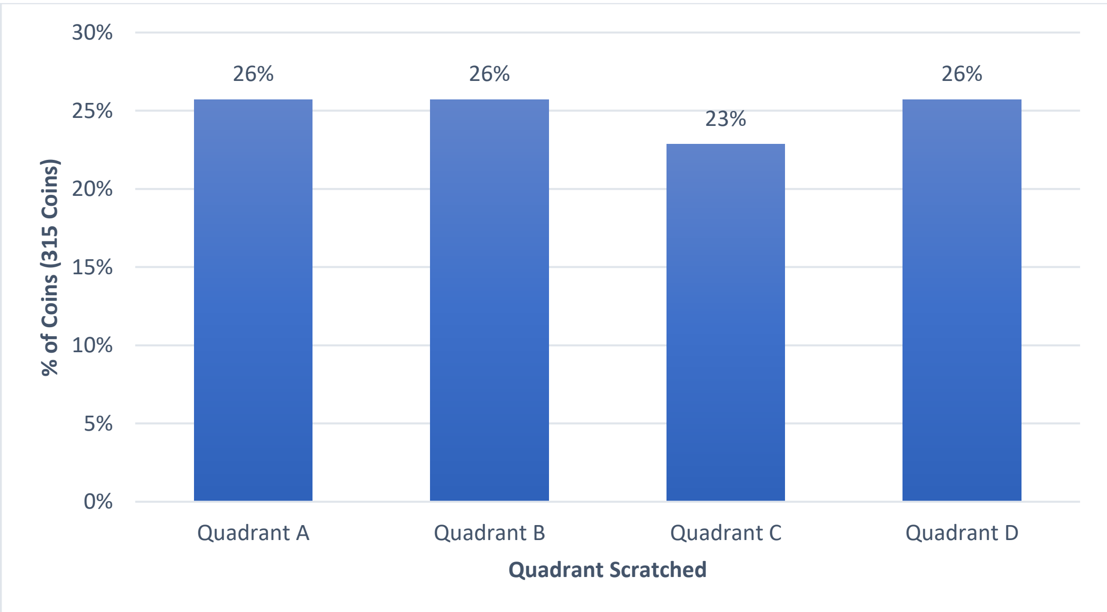

Figure 9.9.3-2 Areas on the Coin where Scratches Occur

The presence of scratches on the coin's surface appears to be fairly consistent across all four quadrants (Figure 9.9.3-2), with a slight decrease in quadrant C (the bottom left quadrant). As such, it can be implied that the presence of scratches on a coin's surface does not display any evidence of being a structured activity, and therefore is more likely a consequence of post-depositional activities.

As previously discussed, if hoarding is considered to be a structured activity whereby the more finessed coins are specifically selected due to their physical appearance, then it may be expected that individual/site coins would display a greater proportion of scratches then coins associated with hoards.

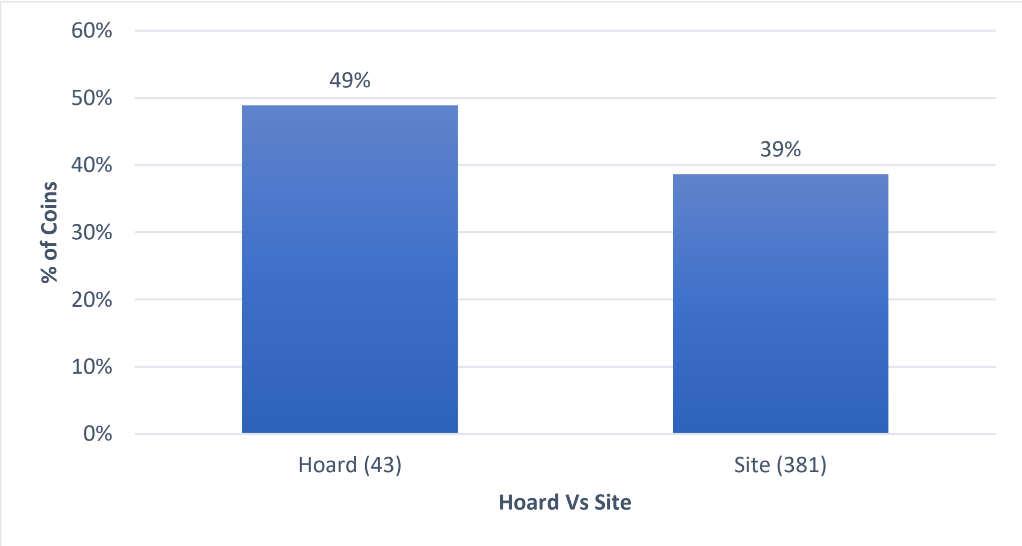

Figure 9.9.3-3 Proportion of Scratches in Hoard Coins and Casual Losses, Against the Total Number of Coins in Each Sample

Here we can see that nearly 50% of all hoard coins display evidence of scratches, whereas only 39% of all site coins display evidence of scratches (Figure 9.9.3-3). If scratches are evidence of post-depositional activity, then it is important to consider the context of the coin's deposition in order to ascertain why this may occur. For example, if circulating coins are transported, used, dropped or deposited, then these activities of daily use may make the surface more prone to appearing scratched. If this is the case, then it would be expected that more worn coins would display a higher proportion of scratches than less worn coins, and so a comparison with wear category should be investigated.

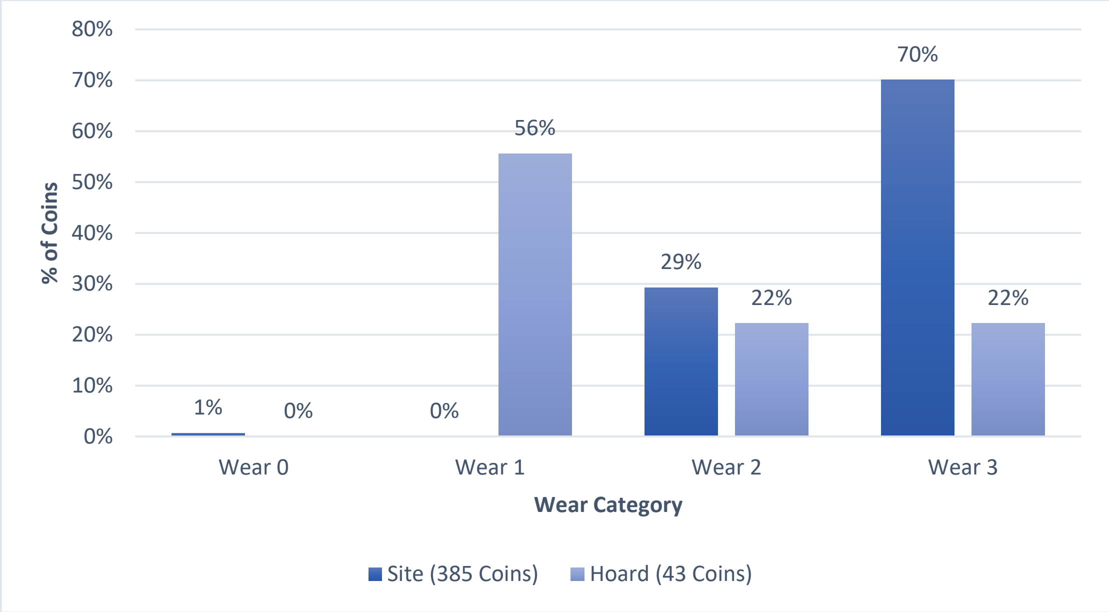

Figure 9.9.3-4 Presence of Scratches vs Wear Category, in Hoard Coins and Individual Coins

As demonstrated, site coins show a much higher proportion of scratched coins being associated with the more worn categories, with wear two and wear three accounting for a combined 99% of scratched site coins (Figure 9.9.3-4). This may imply that scratches are a result of the process of circulation and post-depositional damage. For example, if a coin has been accidentally lost on a road surface, then the amount of traffic experienced on that road surface may enable the coin to appear more worn and scratched due to it experiencing a greater amount of movement against the surface of the road.

Contrastingly, scratches seem more prevalent on unworn hoard coins, with wear category one accounting for 56% of hoard coins that show signs of scratches. This may imply that scratching and other associated damage, such as surface damage, may be the earliest stages of a coin appearing worn, and as such these hoard coins become scratched and are deposited before continued circulation alters the overall wear of their surface. If we accept that wear is a product of circulation, and assume that coins in hoards are less worn, then it is crucial to consider what other evidence of circulation (such as scratches) may be present on their surface. This will allow a more detailed interrogation of coins associated with hoards, and the ways in which their circulation may lead to them becoming deposited as a whole hoard entity.

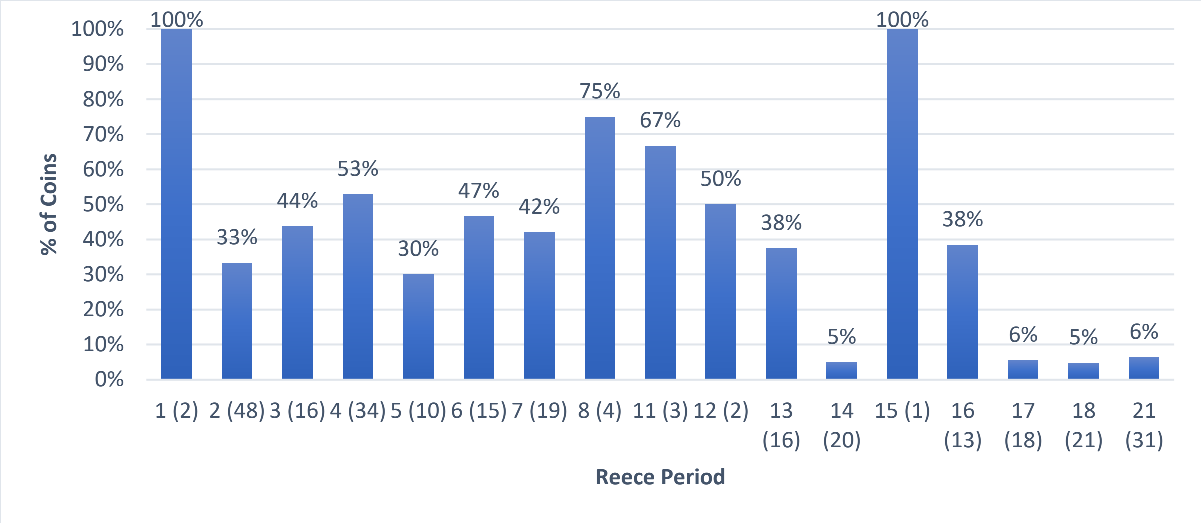

Figure 9.9.3-5 Proportions of Coins from each Reece Period with Scratches

Chronologically, there are two Reece period categories which show 100% of coins displaying evidence of scratches, Period one and Period 15 (Figure 9.9.3-5). However, it is important to acknowledge that these two periods have coin totals of two and one coins respectively, and as such this result may not be able to tell us much about the presence of scratches on the coin assemblage at Plantation Place.

However, what is interesting about the chronological results for scratches, is that so few scratches are present on later coins (Periods 17 onwards). This may highlight the impact of material type on the presence of scratches, with the coins associated with the gold hoard from this site being earlier in date, and with gold being a softer metal than silver or copper alloy may make them more prone to scratches on the surface (Figure 9.9.3-6).

Figure 9.9.3-6. Example of a hoard coin displaying scratches, in quadrant A. Coin ID 13.

9.9.4 Surface Damage

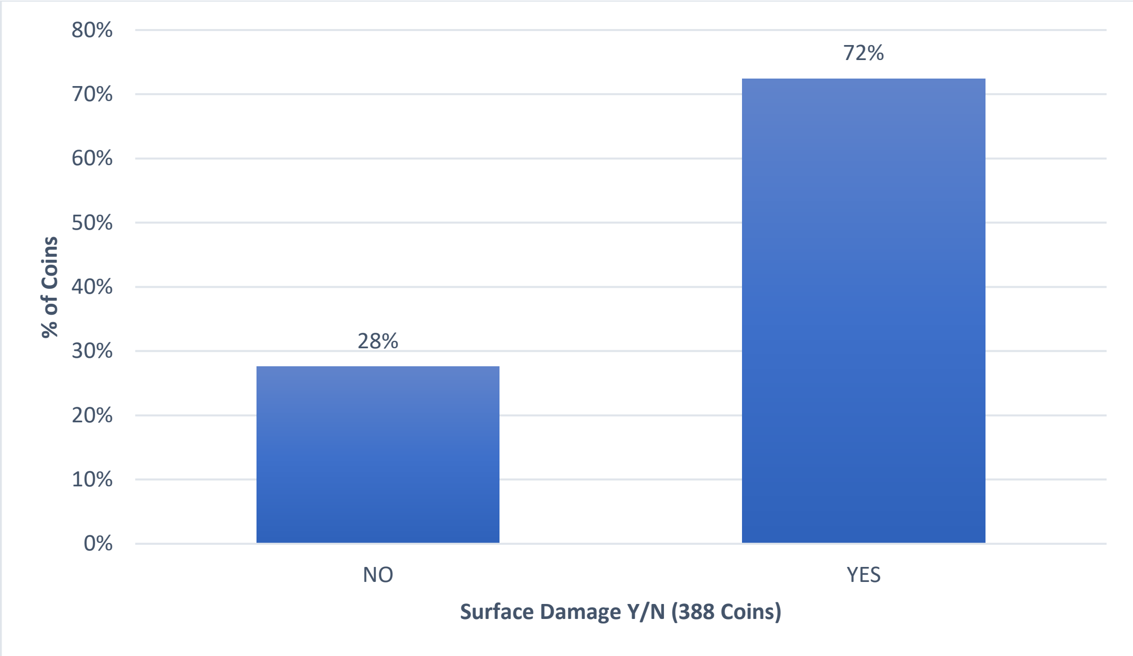

Figure 9.9.4-1 Presence vs Absence of Surface Damage

Over 70% of the Plantation Place assemblage displays evidence of surface damage on the coin's surface (Figure 9.9.4-1). It is important to reiterate that surface damage is independent of the other factors analysed in this investigation (such as cracks, scratches etc).

Due to the nature of surface damage, it is possible that this factor is often associated with and recorded as wear, as it obscures design and legend details on the surface of the coin flan. Whilst it is argued here that the two factors should be considered as separate categories, it is important to consider what correlations there may be between the two. Figure 9.9.4-2 below highlights the differences between surface damage and wear, coin ID 34 on the left shows a small pitting in quadrant C which represent surface damage as defined in this thesis. In contrast, coin ID 335 on the right demonstrates a worn coin where the design features are not visible but there is no obvious pitting to the surface that has been assigned as surface damage.

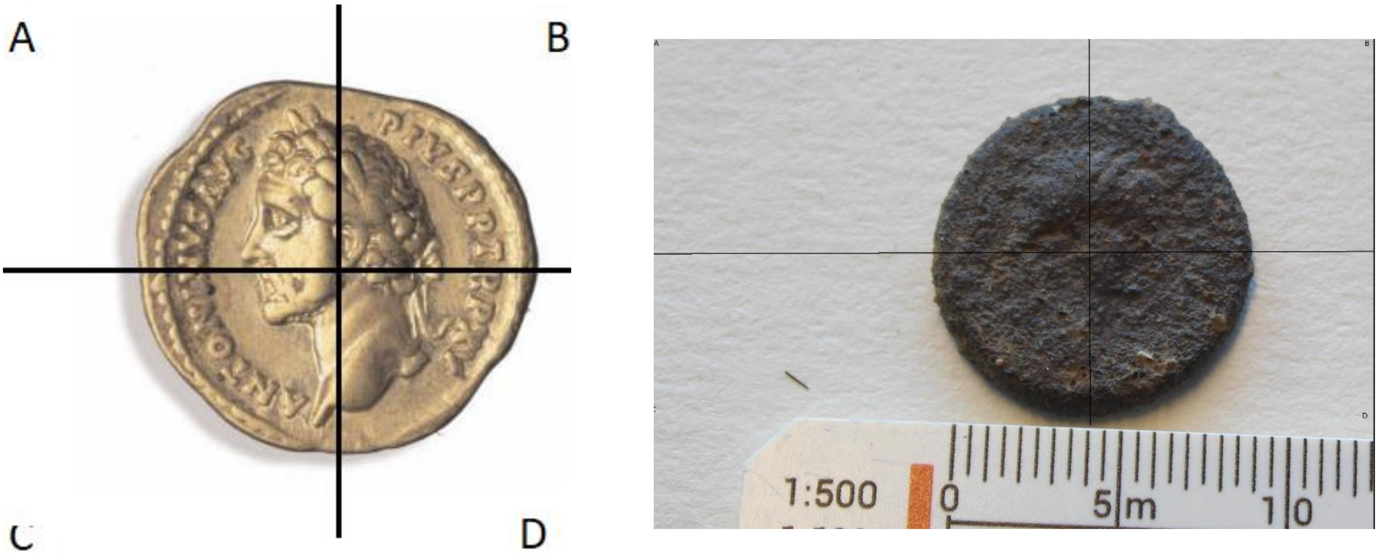

Figure 9.9.4-2. Coin to demonstrate surface damage (left, coin ID 34) versus a coin which is worn (right, coin ID 335)

Thus, surface damage will be compared against wear category in order to try to understand this association (Figure 9.9.4-3).

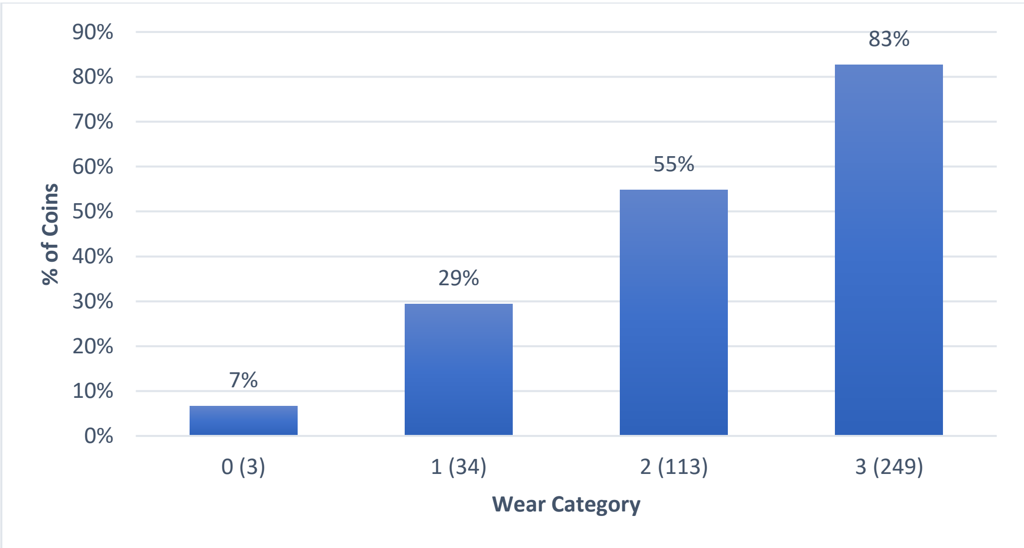

Figure 9.9.4-3 Comparison between Surface Damage and the Entire Wear Sample

From this we can see that 83% of the wear category three (worn) sample shows signs of surface damage, whereas 55% of the total wear category two (slightly worn) sample, shows signs of surface damage. It can be argued that surface damage and wear may often be taken as being the same thing. However, if surface damage is a product of a coin's tertiary context (post-deposition) then it can be argued that this is influencing our understanding of a coin's secondary context (circulation), and more care needs to be taken in developing a methodology (as with the one outlined in this thesis) whereby the issues are considered independently from each other.

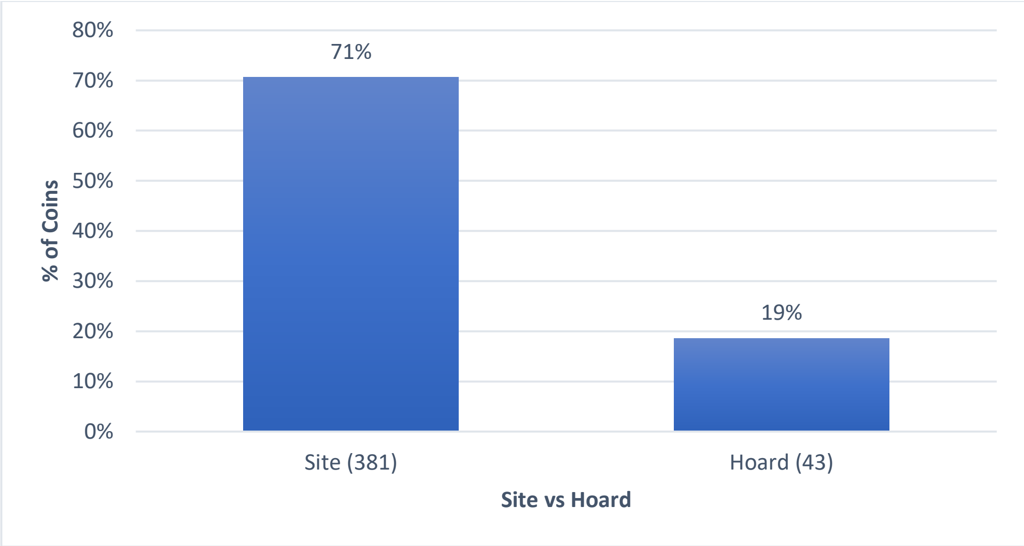

Figure 9.9.4-4 Comparison between Coins with Surface Damage in Sites vs Hoards

In contrast to the Lancashire results, we can see here that site coins from Plantation Place are more likely to display evidence of surface damage, than coins from hoards (Figure 9.9.4-4); though it is important to note that Plantation Place only provides evidence for a single hoard. This evidence may imply that surface damage is a result of circulation and post-depositional activities. Individual coins may be considered as accidental losses, found in isolation during the excavation process. Therefore, these coins may be more prone to surface damage due to being trampled, moved across the floor surface, or more movement in the soil in the deposition and as such display a great proportion of damage than those coins intentionally buried.

If surface damage may be a product of circulation and associated activities within a coin's secondary context (the use of the object), then it is important to explore the presence of this factor chronologically, to ascertain if there are any periods when it occurs more commonly. If surface damage were to appear to be independent of chronological factors, then it may support the argument for this factor occurring during a coin's tertiary context, because of post-depositional activities.

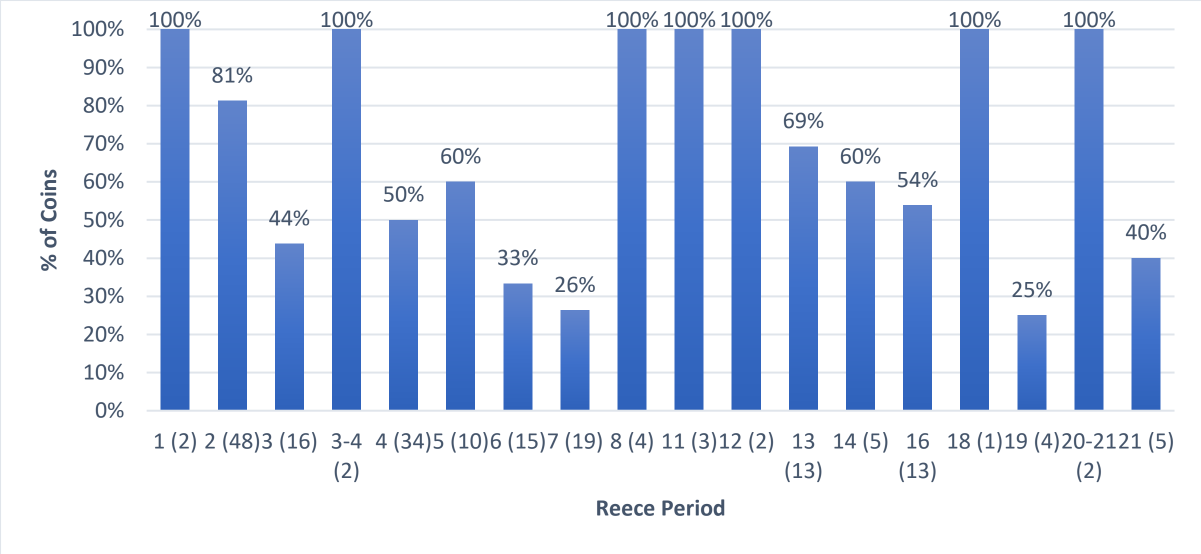

Figure 9.9.4-5 Chronological Distribution of Surface Damage Against Whole Chronological Sample

As can be seen, seven Reece Periods show that 100% of the coins associated with those periods display signs of surface damage (Figure 9.9.4-5). However, it is important to note that these periods represent small, isolated sample sizes, ranging from a single coin to four coins, and therefore this may not greatly inform on the chronological pattern of surface damage. As such, coins with a sample size of less than five have been removed, in order to ascertain where any significant peaks of surface damage may occur (Figure 9.9.4-5).

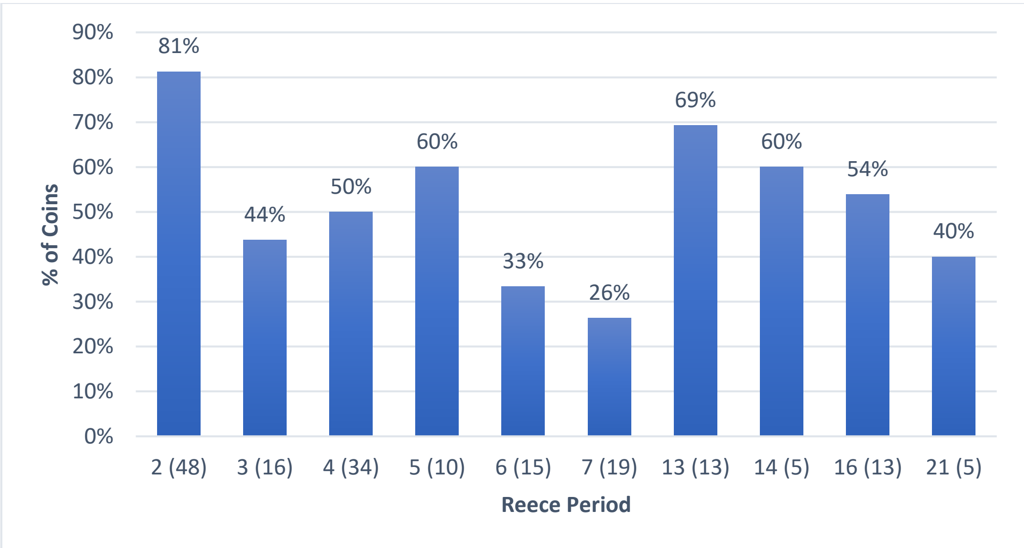

Figure 9.9.4-6 Distributions of Entire Reece Period with Surface Damage (Where Samples of >5 have been Removed)

By considering the evidence in this way, we can see that the proportions of surface damage are much more evenly spread across the remaining Reece Periods. However, there remains a peak in Period two, which shows that 81% of coins display evidence of surface damage (Figure 9.9.4-6). The next highest peak is at Period 13, where 69% of all coins have surface damage. Although there is evidence of two peaks of surface damage presence, the results themselves are relatively consistent across the time periods, which may imply that surface damage is much more likely a result of post-depositional activity than due to circulation and use. If this is the case, then it adds further weight to the arguments above regarding surface damage and wear, whereby the two factors are being considered as equivalent. However, if surface damage is a product of post-deposition, then it should not be confused with wear, which is being ascribed as measure of use, circulation, and acceptance of a Roman monetary economy.

Period two has already been discussed above, however, Period 13 represents the chronological period 260-275 AD, which is considered a period of massive political upheaval, with 17 different coin issuers ruling in the 15-year period. As such, coins were being produced at a much faster rate, and arguably may have had to be transported more quickly to replace the coinage that no longer displayed the correct ruler.

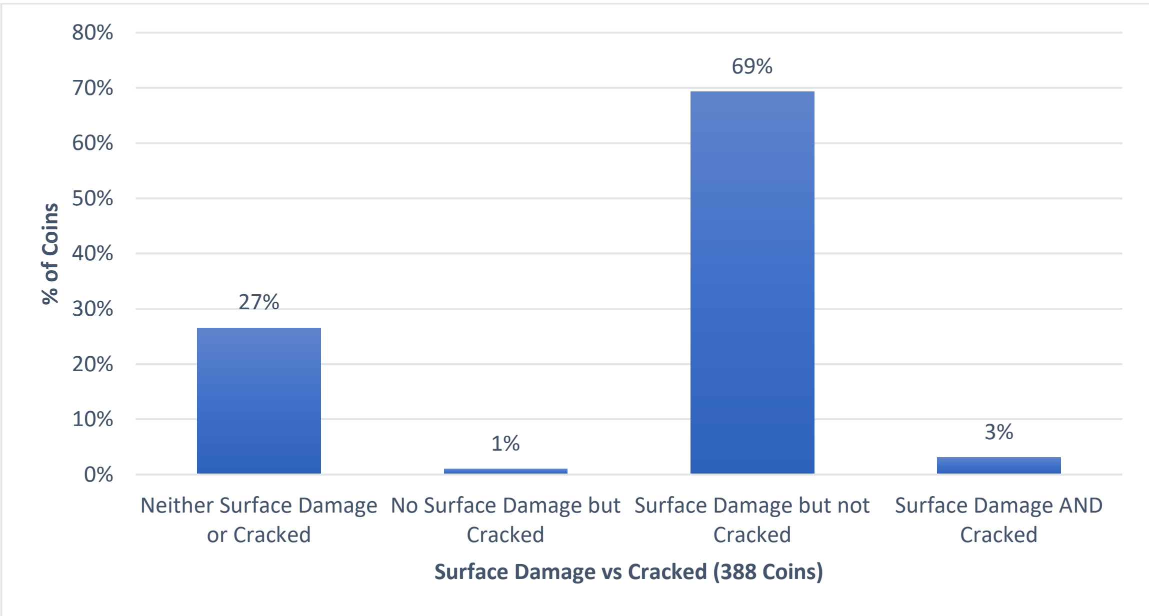

Figure 9.9.4-7 Correlation between Surface Damage and Cracking

It has been argued that cracking occurs during the production of a coin, whereas surface damage is most likely due to post-depositional activity, or the use of a coin. As such, the two features are compared together in order to ascertain whether their presence is in fact due to these different life stages (Figure 9.9.4-7). As can be seen, it is most likely that a coin will display evidence of surface damage but not be cracked (69%). Whereas the likelihood of a coin displaying evidence of surface damage and cracks is only 3% (Figure 9.9.4-7). This is similar to the Lancashire results discussed in

Chapter 9.8, and therefore further support arguments that these two factors occur for different reasons, or at different life stages of a coin.

9.9.5 Summary of Tertiary Context

By exploring the tertiary context, we are able to consider the impact of taphonomic and post-depositional processes on a coin's object biography, and the effect that these processes may be having on current understandings of a coin's lifecycle.

As with the Lancashire material, just under half of the Plantation Place assemblage (43%) show signs of scratches on the coins surface, and there was no correlation between where on the coin the scratches occurred, which again may support the theory that this factor occurs as a result of taphonomic processes at the time of deposition.

Corrosion and surface damage highlight the problems associated with traditional methodological approaches. In the instance of corrosion, 83% of wear category three (worn) coins show signs of corrosion on the surface, while 83% of wear category three (worn) coins also show evidence for surface damage. If current methodological approaches are concerned with using the visibility of design and legend details in order to assign wear for the purposes of discussing circulation, then it may be argued that these two factors alone would obscure those details. However, corrosion and surface damage appear to be due to taphonomic processes following deposition and therefore have no bearing on use, circulation, or our understanding of the acceptance of a Roman economy.

9.10 Coins in Context

Similarly, to the Ribchester Revisited example in Chapter 8.4, the coins from Plantation Place provide a useful dataset to explore context within the biographical approach. Therefore, this dataset will be discussed in more detail below to ascertain where coins may have been used or lost on the site and exploring the ways in which biographical data may enhance the interpretations.

9.10.1 Period One

Period One of Plantation Place is associated with the pre-Roman landscape of the site. However, there was little archaeological evidence to suggest extensive occupation prior to the Roman stratigraphy. The only cut feature of possible prehistoric data was a pit in the northeast corner of the excavation, containing some burnt flints, a single worked flint and a single sherd of later pre-Roman Iron Age pottery (Dunwoodie *et al.* 2015, 13).

9.10.2 Period Two

Period Two of the site is associated with the first phases of Roman occupation at Plantation Place (Figure 9.10.2-1), which highlights the period from early urban development to the aftermath of the Boudican revolt, approximately AD 47/48 to AD 63. During this period of occupation, 13 coins were uncovered, nine of which are associated with specific buildings or structures.

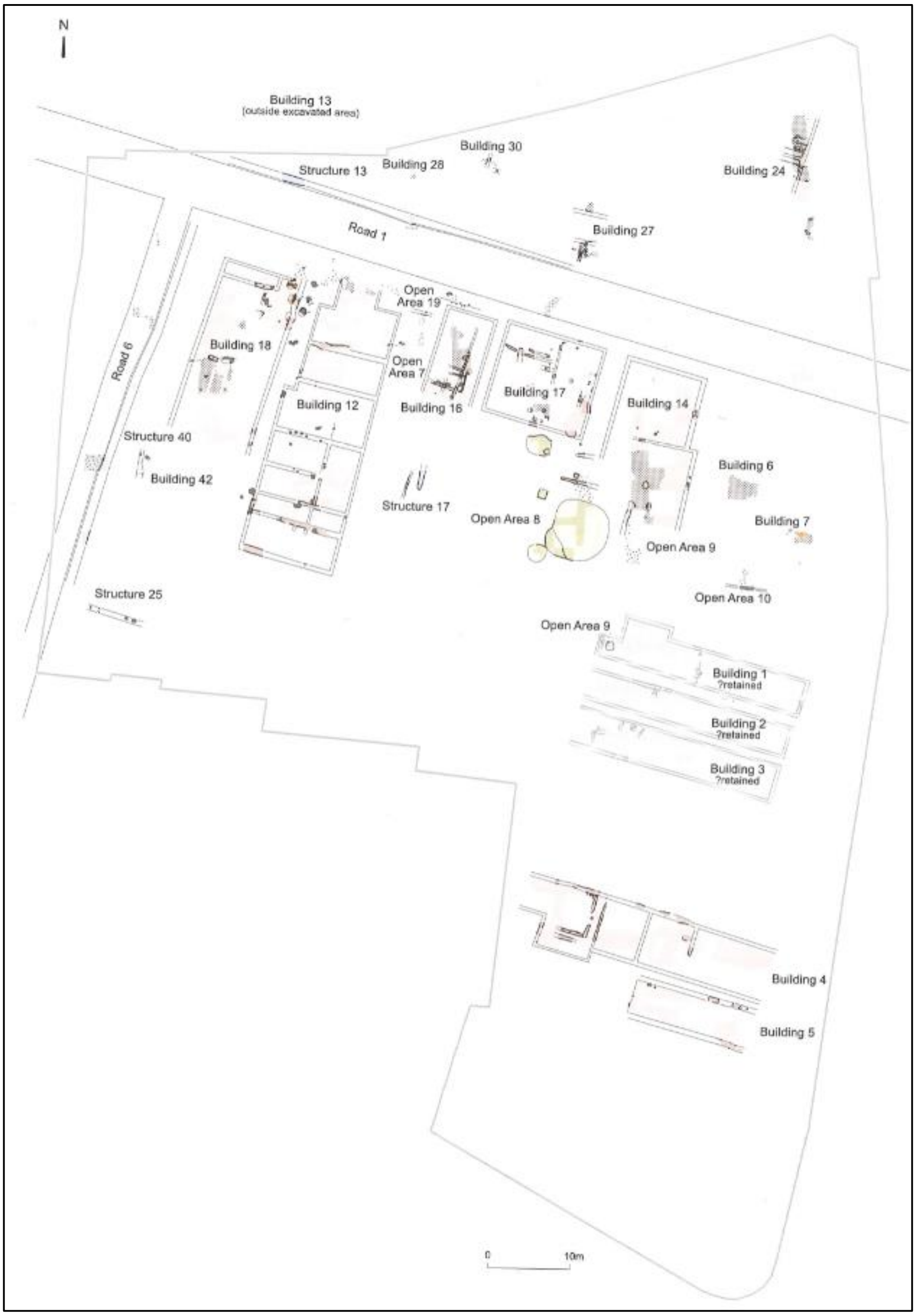

Figure 9.10.2-1 Plan to show the layout of Period Two at Plantation Place, Dunwoodie et al. 2015, 21)

Structure 18 (not pictured) was identified through a series of structural beam slots to the south of Road 1 and the west of Road 2, an extension to the main structure suggests that it would have been fronting Road 2. The presence of a hearth and internal partitions suggests that the building would likely have had a domestic use before being replaced by Building 14 (Dunwoodie *et al.* 2015, 18). One Claudian issue found within the hearth structure suggests a first century AD date.

Building 13 to the north of Road 1 represents a mud-brick building which subsequently appears to have been destroyed by fire. The pottery evidence dates the building to approximately AD 50-70, however, none of the pottery indicates evidence of burning. To the south of the building was a timber boardwalk and the evidence suggests that the southern wall of Building 13 collapsed over this boardwalk area (Dunwoodie *et al*. 2015, 30). Two coins were identified from within this structure, one Claudian issue and one illegible issue.

Structure 16, to the north of Road 1 (not pictured) represents a ditch, however, only part of the feature was uncovered, and it is suggested that this either represents a widening of the road, or a localised ditch within a single property frontage (Dunwoodie *et al.* 2015, 20). Two coins were found within this feature, one illegible and one of Nero. However, the illegible issue is thought to be intrusive, as it was found within a disuse backfill of this feature and whilst unidentifiable may not be stratigraphically correct.

Building 18 is represented by a series of robbed beamslots, stake and post holes identifying the west, east and northern walls of the structure. Within this building, the archaeological evidence indicates the presence of hearths in the northeast corner, this along with large quantities of amphorae, 404 sherds associated with vessels containing olive oil and fish oil, may imply the building represented a shop within the urban development (Dunwoodie *et al.* 2015, 22). One coin, a Claudian copy, was identified within the destruction deposits of this building.

Building 12 represents another possible shop building, defined through a series of backfilled robbed beamslots and postholes. There were no obvious internal features within the building, unlike the hearths present in Building 18. However, the front rooms appear to be narrower, opening out onto a pavement (Dunwoodie *et al*. 2015, 22). One illegible coin was identified within the construction layers of this building.

Building 17 represents a clay and timber building with a large street frontage. The presence of slag in the small front subdivisions may imply the structure represented a workshop (Dunwoodie *et al.* 2015, 25). A single Claudian copy was identified within the construction levels of the building.

Building 4 is likely to have shared a property boundary with Building 5. The structure is only identifiable through a series of beamslots and destruction upcast dumps. The building appears to have been divided into small square rooms, which has led to some interpretations suggesting they were lodgings or bedrooms (Dunwoodie *et al.* 2015, 29). One coin of Gaius was identified within the disuse deposit associated with this building.

The remaining three coins from this phase of occupation are associated with open areas. Open Area 19 represents the pavement area to the south of the Road 1. A series of post and stake holes were identified, which may have supported a raised wooden boardwalk (Dunwoodie *et al.* 2015, 20). A single Claudian copy was identified within this context. Open Area 8 represents the external yard of Building 17 and Building 14 and is characterised by a series of large quarry pits (Dunwoodie *et al.* 2015, 28). Two coins were identified from within these quarry pits, a single issue of Claudius and a single issue of Vespasian. The Vespasian issue is thought to be intrusive as it was identified within a disturbed upper fill and therefore it is unlikely to have been lost or deposited within this phase of occupation.

Of the thirteen coins associated with this phase of occupation, twelve of them have biographical data (Table 9.10.2-1). The only issue from this phase that was not available for analysis was an illegible issue from Structure 18.

	Corroded	**Worn**	**Cracked**	**Surface Damage**	**Incomplete**	**Scratched**	**Notches**
Number of Coins	11	12	1	8	2	1	3

Table 9.10.2-1 biographical factors of Period 2 coins from Plantation Place

All twelve Period 2 coins are worn, when considering the traditional methodologies of wear applied to the study of Roman coins. Initially, we could interpret this data as suggesting that all issues would have likely been used in frequent transactions, leading to the design on the surface becoming worn over time. However, by breaking down wear into constituent parts and looking at coins biographically, the interpretation may change slightly. The data collected in this thesis suggests that 67% of the Period 2 sample show signs of surface damage. Period 2 is associated with the initial Roman occupation of the site, but as the archaeological evidence outlined in the descriptions above demonstrates, this period was subject to the destruction and burning of structures and buildings. Therefore, the fact that so many of the coins appears to have damage on the surface may be due to the taphonomic processes they are subjected to following their initial loss, and therefore bears no relation to the frequency within which they were exchanged during their lifecycle. Three coins can be associated with construction layers, two of which come from the construction layers of buildings, perhaps lost when the building was being constructed. Six coins can be associated with destruction layers and the preparation of ground for new structures and buildings and may have been lost during the clearance process. As five of these were found within destruction and disuse layers of buildings themselves it may also indicate they were originally lost within the building and have been moved subsequently during clearance. The remaining four coins are associated with the ditch and quarry pits, and therefore their associations are less clear. However, the two coins from the quarry pits may be associated with the construction of the site, as the material was used within the buildings of the period. Further to this, 92% of the biographical data also shows evidence of corrosion, another factor occurring during a coin's tertiary context (deposition) and it may also be suggested that corrosion serves to obscure design detail, which may lead to a coin being considered worn when in fact it is not. The biographical data for the Period 2 sample suggests that there are two incomplete coins, one is associated with Open Area 5, an initial phase of stripping the site prior to excavation, and the second is associated with Building 18, which was found in the destruction deposits for the building. This period only provides evidence of two incomplete coins, which may indicate that incompleteness is more likely to occur during a coin's tertiary phase as a result of post-depositional damage, as opposed to the deliberate fractioning of coins, in this case.

9.10.3 Period Three

Period Three at Plantation Place is associated with the construction of a 'fortified defensive circuit' (Dunwoodie *et al.* 2015, 39), thought to be an early fort (Figure 9.10.3-1). This construction is thought to have taken place after the Boudican revolt and features a rampart, an external double ditch system, a road following the inner perimeter of the site and a series of internal structures including the granaries. During the excavation of this phase, 36 coins were identified, 21 of which were associated with open areas of excavation as opposed to within specific known building structures.

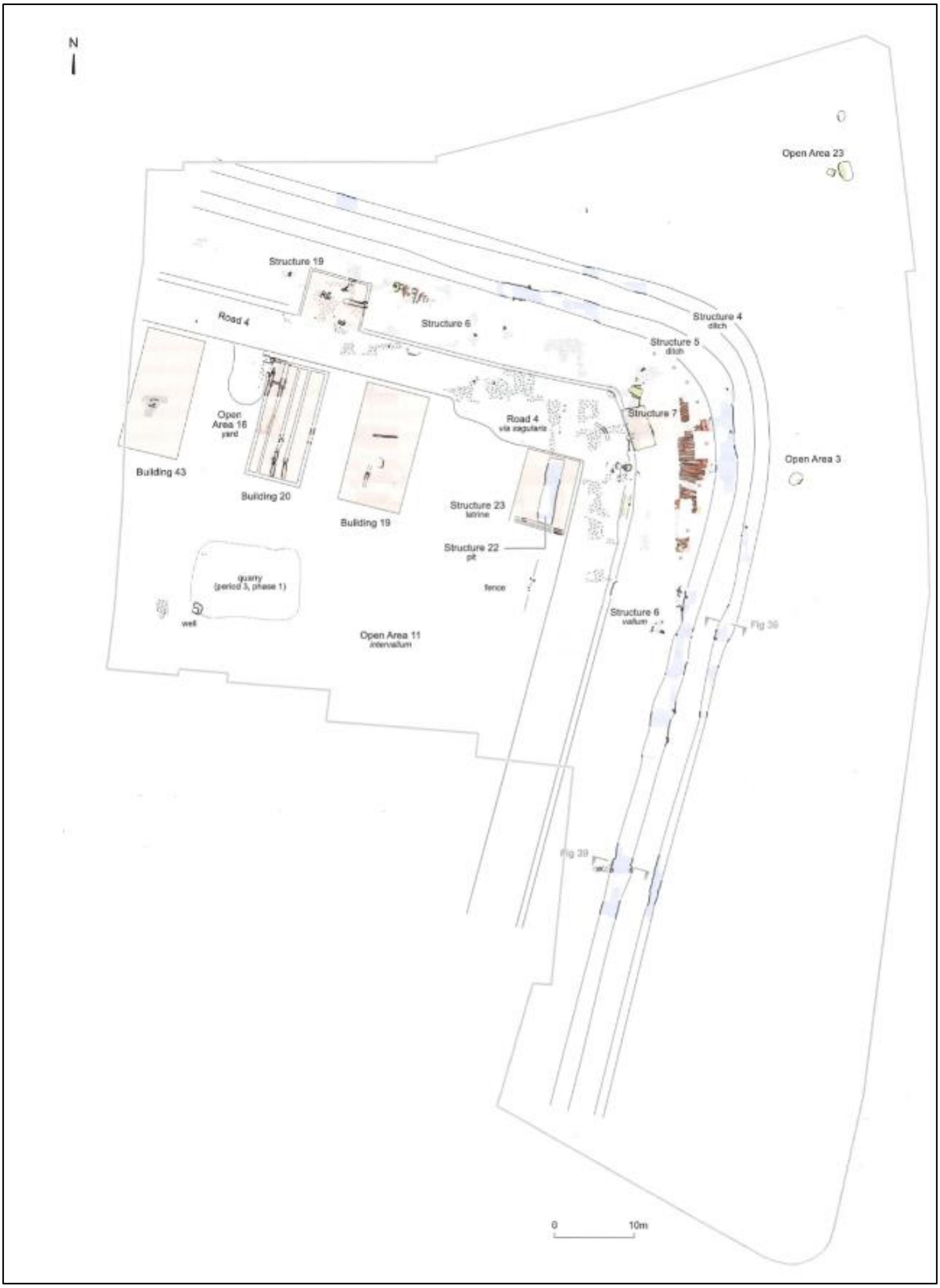

Figure 9.10.3-1 Plan to show the layout of Period Three at Plantation Place, Dunwoodie et al 2015, 42.

Open Area 11 represents a series of gravel quarry pits which follow the levelling of the earlier phases of occupation as a result of the Boudican revolt. The pits were revetted with timber posts to strengthen the sides, however, these appear to have collapsed before the pits were backfilled (Dunwoodie *et al.* 2015, 40). It is believed that the gravel was quarried and used in the construction of fort surfaces. Four coins were identified from within this area, an Iron Age stater of Cunobelinus, two Claudian copies and an illegible coin of the third century, which is thought to be intrusive and stratigraphically out of place (Dunwoodie *et al.* 2015, 41). In a later phase of Period 3 a further nine coins were found in Open Area 11. This represents the internal area of the fort, with the lack of barrack blocks suggesting the presence of temporary tents, if this is the case then perhaps the fort at Plantation Place was used as a temporary base by troops moving through London to their final destinations (Dunwoodie *et al.* 2015, 51). In this area six Claudian copies, a single coin of Nero and Vespasian respectively and a single illegible issue were uncovered, as well as two aes fused together and two third century inclusions, which are also thought to be intrusive.

Open Area 12 represents the demolition and dismantling of the defensive circuit at the end of this phase of occupation and saw the levelling and infilling of this space (Dunwoodie *et al.* 2015, 63). During the excavation of this area seven coins were identified; three Claudian copies, one issue of Vespasian and three illegible issues.

Open area 17 is characterised by a series of refuse pits and dumps, with no coherent buildings present. There are a series of identifiable stakeholes around ovens and hearths, with some pits containing botanical evidence for blackberries, raspberries, figs and elder, and have led to their interpretation as areas of squatter occupation (Dunwoodie *et al.* 2015, 59). A single illegible issue was identified within the excavation of this space.

Road Four represents the road spanning the internal perimeter of the fort space. The metalled surface appears to have been poorly constructed and maintained, with the surface containing building debris, including roofing tiles and bricks (Dunwoodie *et al.* 2015, 51). Two illegible issues were recovered from this area of the site.

The remaining 11 coins were excavated from distinct structures or buildings. Excavated evidence from Structure Six, associated with the vallum, shows layers of narrow timbers, with postholes to support the upper structures of the buildings, base plates were identified and the front and rear of the structure and there appears to have been a clay, gravel and turf core (Dunwoodie *et al.* 2015, 43). However, the evidence suggests that this structure was eventually destroyed by the end of Period 3. Seven coins were identified during the excavation of this structure, four Claudian copies and three illegible issues. However, it is thought the Claudian copies are expected from sites of pre-Boudican occupation and may represent redeposition within the rampart (Dunwoodie *et al.* 2015, 50).

Structure Five represents the inner rampart ditch which began to silt up as military presence at the site dwindled. Three coins were identified within the fills of this feature, a single Claudian issue and two illegible coins. The lack of articulation and the range of finds from within the ditches, such as tesserae, a glass bead and a ceramic spindle whorl, suggests opportunistic disposal of rubbish at the end of military occupation (Dunwoodie *et al.* 2015, 57).

Finally, Building 20 is represented by a series of robbed parallel slots forming four narrow corridors, which contain post and stake settings. Destruction evidence suggests that wattle and daub panels were present, and the evidence of keyed daub may suggest that the building would have been plastered (Dunwoodie *et al.* 2015, 53). This structure is thought to represent the granaries of the fort, which would have featured a raised floor to prevent supplies from rotting. A single Claudian issue was excavated from this location.

Of the 36 coins associated with this phase of occupation, 34 of them have biographical data (Table 9.10.3-1). None of the coins provided evidence of mis-striking or plastic deformation and none of the issues had been perforated.

	Corroded	**Worn**	**Cracked**	**Surface Damage**	**Incomplete**	**Scratched**	**Notches**
Number of Coins	33	34	1	29	5	13	22

Table 9.10.3-1 biographical factors of Period 3 coins at Plantation Place

As with the coins from Period Two, the Period Three coins demonstrate a higher proportion of corrosion and surface damage and additionally there is a larger proportion of scratched coins from this period. The majority of coins from this period are associated with Open Areas, and this may represent coinage that was being used and lost in transactions as people moved within the space itself. Furthermore, the features excavated during this period show large scale redevelopment with the levelling of the site and building of the defensive circuit, this may imply that these issues received these biographical factors due to being continuously moved around during the post-depositional phases of their lifecycle. Again, the presence of Claudian copies in Structure six was taken as a sign of redeposition from earlier contexts. The lack of barrack blocks or recognisable military lodging spaces is interesting, and the small number of coins associated with this defensive fortification stage at Plantation Place may further support the notion of the site as a temporary base, never occupied by the same troops for long periods of time.

9.10.4 Period Four

Period Four is characterised by the re-establishment of the early road network and the construction of buildings along these routes, following the demolition of the fort (Dunwoodie *et al.* 2015, 79). The evidence suggests this period was associated with residential and commercial dwellings with some evidence for glass working and production of tesserae on site. This phase is also characterised by large quantities of sealed dumps of fire debris following the Hadrianic fire that destroyed a large part of the settlement in AD 125. The final phase of Period Four is associated with a short-lived episode of activity before large scale development in Period Five.

41 coins were associated with Period Four features at Plantation Place (Figure 9.10.4-1), eight of which are associated with the two main road surfaces. Firstly, seven coins were found along Road 3, which saw Road 1 from Period Two being reinstated and widened, this covered the military ditches from Period Three and appeared to be very well maintained (Dunwoodie *et al.* 2015, 79). The seven issues identified are represented by two Claudian copies, two issues of Nero, a single coin of Vespasian and two illegible issues. Another single coin of Hadrian was found on Road 5, towards the western limit of the site, this sees a reinstatement of Road 6 from Period 2. However, the silting of the metalling suggests it was not as well maintained as Road 3 (Dunwoodie *et al.* 2015, 82).

Figure 9.10.4-1 Plan to show the layout of Period Four at Plantation Place, Dunwoodie et al 2015, 80

Aside from the road surfaces, thirteen coins were associated with open areas of Plantation Place. Single issues of Nero and Vespasian were identified in Open Area 27, which is interpreted as being a yard or alley to the east of the initial phases of building 34. This area also featured a well, which was sealed before Building 34 was extended into this space (Dunwoodie *et al.* 2015, 92). Three Claudian Copies and a single Trajanic issue were identified in dump deposits within Open Area 37, associated with the pitting and external dumping to the south and east of Building 34. This area included burnt debris from the Hadrianic fire and robbed postholes suggest an L shaped enclosure, although there was no evidence for internal surfaces (Dunwoodie *et al.* 2015, 98). Two issues of Vespasian and a single illegible issue were identified within Open Area 39, north of Road 3. Before construction, brick earth was dumped to level the area, and contained large quantities of animal bones including cattle, sheep, poultry, domestic mammal (such as roe deer), fish and game, implying this may have been the site of disposal for primary processing waste (Dunwoodie *et al.* 2015, 102). By the end of Period 4, Building 34 had been demolished and this area had been prepared for later construction, the three coins were identified in these later demolition layers. A single issue of Vespasian was identified within Open Area 14, to the north of Building 21. This area is thought to be a yard or alley between Building 21 and Building 34 and is characterised by a metalled surface (Dunwoodie *et al.* 2015, 104). Finally, Open Area 15 represents the robbing, clearance and external occupation where Building 21 and Open Area 14 were originally demolished following the Hadrianic fire. This area is associated with the preparation of the ground for the subsequent construction work in Period 5, and it was here that 2 coins of Hadrian and one illegible issue were uncovered.

The remaining eighteen coins are associated with buildings or structures dating to Period 4. Firstly, one Claudian Copy and one coin of Nerva were identified within Building 34, between Roads 3 and 5. This building represents the first structural activity following the demolition of the fort from Period 3, and the coins were identified within the construction levels of this new building (Dunwoodie *et al.* 2015, 89). Five coins were uncovered during the initial construction of Building 31, which fronted onto Road 2. This building displays evidence for many internal modifications and was constructed over the northeast corner of the defensive enclosure and extended over time (Dunwoodie *et al.* 2015, 94). Two coins of Vespasian, a single illegible issue and two intrusive later coins were identified within these initial construction layers. The building was later extended and two further issues of Vespasian and one of Domitian were identified. It is important to note that the stratigraphic sequence of Building 32 is open to debate due to the reuse of many elements from Period 3 contexts. Building 38 provides fragmentary evidence of a structure which post-dates the fort, this building was later demolished before being levelled and a hearth or oven was installed (Dunwoodie *et al,* 2015, 93). A single issue of Vespasian was associated with this context. Building 21 revealed one Claudian Copy, one coin of Nero and one of Domitian. This represents a mud-brick building fronting road 5, its good preservation is due to its destruction by fire and its collapse into an underlying pit, which has meant that a number of rooms could still be identified (Dunwoodie *et al.* 2015, 82). Structure 27 represents the southern ditch of Road 3 and is contemporary with the earliest post-fort road surfaces, this is thought to have continued in use into Period 5, with the two barbarous radiates being identified from the recutting of the ditch. A single issue of Nero was also found within structure 27. Finally, Structure 28 is represented by three robbed postholes in the northern edge of the southern roadside ditch and is interpreted as representing a localised fence (Dunwoodie *et al.* 2015, 81). A single radiate was recovered from this surface.

Of the 41 coins recovered from Period 4 contexts, 36 of them have biographical data from the data collection phase of this thesis (Table 9.10.4-1 below).

	Corroded	**Worn**	**Cracked**	**Surface Damage**	**Incomplete**	**Plastic Deformation**	**Scratches**	**Notched**
Number of Coins	35	32	2	32	2	3	18	22

Table 9.10.4-1 biographical factors of Period 4 coins at Plantation Place

As with the other periods of occupation, biographical factors related to the deposition phase of a coin's lifecycle are the most commonly found. By Period Four we are into the third distinct use of the site, which has seen multiple phases of redevelopment across each Period. Initially, the site started as an urban development, before being demolished and rebuilt as a possible fort structure, by Period Four this structure has also been demolished and replaced by civilian and commercial spaces. Due to this constant development and redevelopment at Plantation Place a higher frequency of tertiary factors would be expected to be associated with this site. Any coins already lost within the ground would be churned as the development and redevelopment occurred, leading to more opportunities for these factors to occur.

The fact that a high proportion of notched coins are also present throughout the periods at Plantation Place, with just over half the Period four coins displaying this feature, may suggest that whilst this feature is a notable part of the object physical biography, it does not affect the intrinsic value of the coin and prevent it from being considered as such.

Finally, it is interesting that just over half the coins (21 out of 36) are associated with Open Areas and road surfaces, which may indicate accidental loses as people move within the space and interact with each other. The remaining 18 coins are found within buildings and structures, with the majority of these (14 out of 18) being associated with construction layers. This may indicate accidental loss during the construction of the post fort layout, or movement of coins from the fort where materials have been reused during the initial construction of Period four contexts. Four coins can be associated with the demolition phases of period four buildings and structures, suggesting that the coins may have been lost within these spaces prior to their demolition. This may be reflected in the biographical data through the high proportions of corrosion and surface damage, which may be associated with the movement of these coins and their continued disturbance either amongst high populated areas, in the case of roads and open areas, or through their movement during construction and demolition.

9.10.5 Period Five

Period Five at the site of Plantation Place is associated with the redevelopment of the area following the Hadrianic Fires. During this period a major landscaping project was undertaken, which saw the site levelled to enable the construction of a new masonry building (Figure 9.10.5-1), with most of the structural evidence identified relating to this single building constructed after AD 150 (Dunwoodie *et al.* 2015. 119).

Figure 9.10.5-1 plan to show the layout of Period 5 at Plantation Place, Dunowoodie et al 2015, 120.

Building 31 is divided into multiple rooms, occupying different building levels and also features a courtyard space towards the rear of the complex (Dunwoodie *et al.* 2015, 121-22). Further developments to Building 31 sees additional rooms added to the east of the structure, which provides evidence of two brickearth floors, the earliest of which contained slag like material and the second suggesting further evidence of burning, thus implying possible industrial activity was also taking place within the structure (Dunwoodie *et al.* 2015, 124). Excavations at Plantation Place offered the opportunity to investigate the entire northern part of an insula (Dunwoodie *et al.* 2015, 145). Two possible interpretations for the use of the site being that the building functioned as either an important municipal building or a high-status residence on par with urban villa structures, with similarities in layout to the villa uncovered at Silchester (Dunwoodie *et al.* 2015, 146-47). However, due to the lack of surviving floor levels within Building 31, there is little evidence of occupation materials and therefore it is difficult to interpret the function of individual rooms within the building (Dunwoodie *et al.* 2015, 146). In total, 97 coins have been associated with contexts in this period and represent a wide range of dates and types. The evidence suggests that this period was dominated by changes, adaptations and redevelopments of Building 31, and this therefore makes any conclusive interpretations from the coin evidence difficult due to the uncertain stratigraphy.

A total of 25 site coins were identified from within Building 31, four of which were identified within the construction layers of the first phase of the building. These represent two later first century AD coins, an illegible late first to early second century issue and a fourth century AD coin, the former of these is thought to be intrusive. As far as the coin evidence tells us, the hoard is the only contemporary coinage associated with the first phases of use of the building, with only an intrusive third to fourth century coin also being found within the same space. Three other coins were found in building layers associated with early use; however, they were all third to fourth century in date, and are thought to be intrusive issues which have become lost in their stratigraphic sequences due to the various phases of building remodelling. Subsequent redevelopment of the building involved the disturbance of earlier levels and led to coins of Claudius I, Vespasian and a Claudian Copy to be identified. A floor surface in the remodelled eastern part of Building 31 provided a coin of Hadrian and later dumping on the site provided evidence of an early coin of Nero, though the associated pottery belonged to the third century (Dunwoodie *et al*. 2015 150). Four coins found in the area where a tower was added to Building 31 are harder to assign stratigraphically, due to post-Roman robbing on the site. However, these issues represent a coin of Vespasian, a single issue of Postumus, a mid-fourth century coin, and a late fourth century coin, whilst another construction pit contained a coin of Faustina II. In the mortar layers of the internal tower floors, four coins provide the most secure evidence for the construction of the tower; two third century radiates and two early fourth century issues. Contexts associated with reflooring in this area identified one early and one late fourth century coin. Finally, an associated robber cut also produced a coin from the mid fourth century.

Open Area 26 was partially built over as building 31 was extended and redeveloped, however part of this section remained in use until the later fourth century AD, with two third century coins being produced from rubbish dumps in this area. The majority of the coins associated with Open Area 26 were excavated from a well feature on the site, with a single second century AD issue coming from its primary fill. A further 29 coins were uncovered from this feature, but the lack of chronological pattern suggests that the fills of the feature had become disturbed and that the stratigraphy is misleading (Dunwoodie *et al.* 2015 151). The 29 issues identified represent:

- One barbarous radiate
- Four issues from the House of Constantine
- Two issues from the House of Valentinian
- Five illegible coins – almost certainly late fourth century
- Ten VICTORIA AUGG types
- Six SALUS REIPUBLICAW types
- One Uncertain issue

Activity in Open Area 38 throughout Period 5 has also provided a wealth of coin information. Firstly, a coin of Vespasian was found in the backfill of a mid-second century AD cellar. As well as a single illegible issue from overlying dumps, two mid fourth century coins from rubbish pits and a single issue of Hadrian within a later robber pit disturbed, from earlier in the stratigraphical sequence (Dunwoodie *et al.* 2015, 151). Later deposits in this area contained one barbarous radiate as well as a group of twelve coins, which were not thought to be considered a hoard upon excavation and were thought to come from the robbing of Structure 35. Of these twelve coins, two were dated to the late first and mid third centuries, the remaining ten came from the second half of the fourth century AD.

Open Area 42 produced a single unidentified coin associated with the second or third century AD, which was overlain by a dump containing an issue of Nerva, both of these contexts contained evidence of earlier fire damaged building debris. Two Flavian coins were also identified from a mid-second century AD pit, which also contained fire-damaged building debris. This pit was overlain by slumped material containing two fourth century AD coins, with a final issue, a Claudian Copy being identified within the fill of a final large pit (Dunwoodie *et al.* 2015, 151).

Out of the 97 coins excavated within the Period 5 phases of Plantation Place, 87 of them could be assigned biographical information from the data collection phase of this thesis (Table 9.10.5-1).

	Corroded	**Worn**	**Cracked**	**Surface Damage**	**Incomplete**	**Plastic Deformation**	**Scratches**	**Notched**
Number of Coins	70	81	7	65	11	8	43	52

Table 9.10.5-1 biographical factors of Period 5 coins at Plantation Place

When considering notches on the outer edge of the coins surface, 60% of the Period 5 coins display evidence of this feature. It has been argued throughout this thesis, that notching occurs at the point of a coin's production and is due to the striking techniques and the heating of the blank coin flan (See Chapter 4). It may seem unusual to have such a high proportion of notched coins from a single phase at one site, however it is important to acknowledge that Plantation Place alone had over 400 coins, whereas the dataset for the whole of Lancashire was composed of 1466 coins. This would suggest that a greater quantity of coins was being circulated in London than Lancashire, and therefore more coins displaying production flaws would be evident.

The data suggests that Period 5 coins demonstrate high proportions of factors which have been associated with a coin's deposition phase. 80% of the coins display evidence of corrosion on the coins surface, 75% of the coins display surface damage and 49% provide evidence of scratches on the surface of the coins. By considering Period 5 in context, we can see that a large degree of construction and redevelopment was taking place at the site, leading many coins to be found outside of their expected stratigraphic sequencing as intrusive issues. Whilst this may mean that there is little in the way of dating the archaeological evidence using coins at the site, it may provide a reason as to why the coins display such high proportions of damage due to the taphonomic processes that they have been subjected to following deposition. Given that a high number of coins were found in Plantation Place alone, in comparison to any of the Lancashire sites, this could suggest that coins were circulating to a higher degree in London compared to Lancashire. Therefore, the opportunities for individual coins to be lost would be higher and the urban nature of Plantation Place and its continual redevelopment would likely have seen increased populations, resulting in more opportunities for the movement of coins post-deposition. However, in terms of Period 5 itself, the high quantities of intrusive issues may indicate that coinage was changing hands less frequently than it had in previous periods, due to the nature of this period being associated with a single building. In essence, accidental losses of coinage would appear to be more likely in outside areas than within your own dwelling spaces as you would arguably be more likely to come across coins lost within spaces you frequently inhabit. Again, the frequency of intrusive issues could be related to the reuse of building materials which is seen across the occupation of Plantation Place and therefore makes analysing coins within their stratigraphic sequence more complicated. Therefore, further work is needed, incorporating more sites which have extensive and detailed context information in order to fully explore how much biographical data can add to current interpretations of coin-using societies.

9.10.6 Period Five; The Hoard

In addition to the site finds associated with this period, a hoard of 43 gold aurei were identified buried below the floor of a sunken room in Building 31 (See figure 9.10.6-1 below).

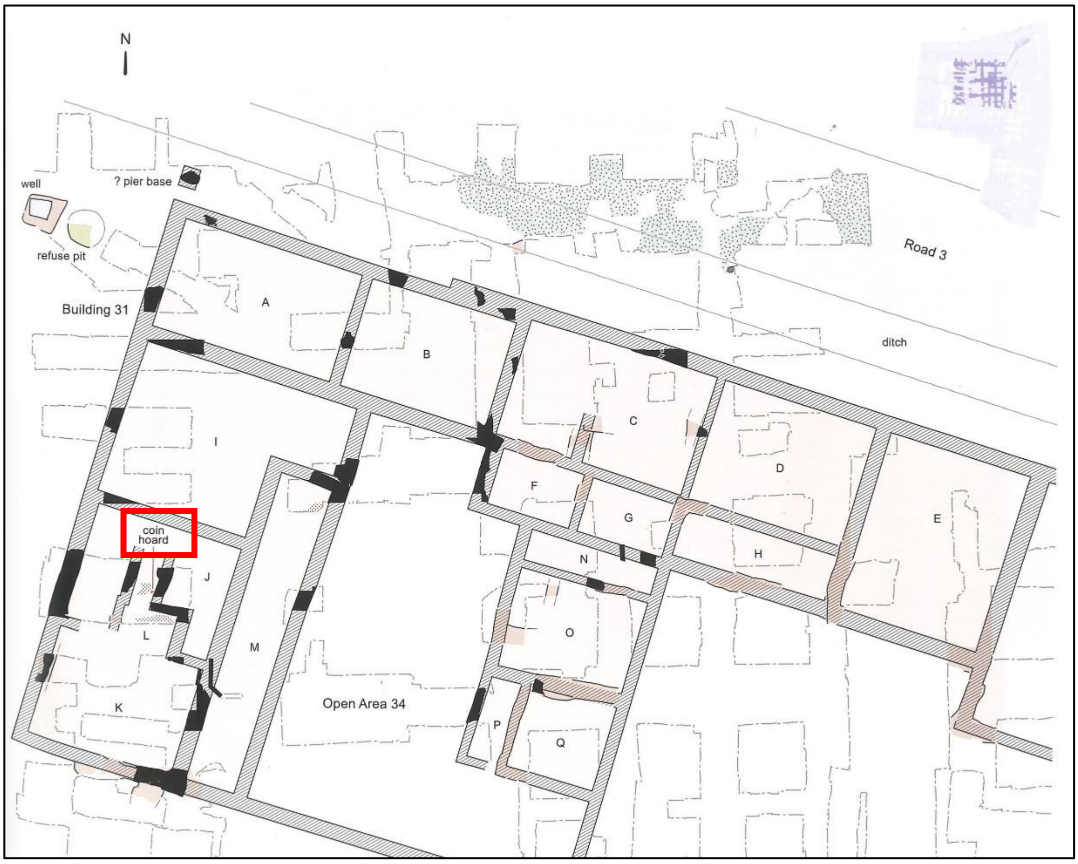

Figure 9.10.6-1 A plan to show the location of the coin hoard in relation to the rest of Building 31, Dunwoodie et al. 2015, 121.

The hoard had been buried within a bag or purse and placed within a wooden box approximately 90mm square, whilst the bag and wooden box did not survive, the presence of a box is demonstrated through a faint stain in the soil visible upon excavation (Dunwoodie *et al.* 2015, 124). The earliest coin within the hoard dated to the reign of Nero AD 65-66, whilst the latest issues were those of Marcus Aurelius dating to AD 173-74.

	Corroded	Worn	Cracked	Surface Damage	Mis-Struck	Incomplete	Plastic Deformation	Scratches	Notched
Number of Coins	1	0	0	8	2	0	32	21	13

Table 9.10.6-1 biographical factors of coin hoard coins at Plantation Place

The biographical information provided by the coin hoard at Plantation Place allows for an interesting discussion. It would be expected that if these coins had been circulated and used in transactions as their silver and copper alloy counterparts, then they may be more predisposed to factors such as surface damage or wear due to the physical nature of gold as a softer metal. However, the fact that none of these issues show signs of wear, and only 19% show signs of surface damage suggest the opposite to be true. Therefore, it may be implied that these issues were not involved in everyday transactions. Whilst a hoard of 43 gold coins would perhaps be considered very valuable, it may be reasoned that their day-to-day value as currency or individual coins, was not as valuable as the weight of the raw material they were made from. This is due to the fact that it is unlikely that you would have been able to purchase something with one gold unit. Dunwoodie *et al.* (2015, 148) suggest that gold issues were used as bullion by administrators, bankers or wealthy merchants, which may indicate the wealth of the occupants of Building 31, where the hoard was buried. The location of these coins within Building 31 and the grand nature of this structure suggest that it was built and/or occupied by wealthy individuals, and the presence of this hoard of gold coins can be seen to add further evidence to this argument. If we consider the dates provided by the coins, alongside the archaeological context within which it was buried, its date of deposition could be considered to coincide with the construction of Building 31. Even though there were pockets of political unrest at this time, such as the arrival of cavalry reinforcements from the Danube to Britain in AD 175, it is unclear how these may have directly affected Plantation Place or London more widely (Dunwoodie *et al.* 2015, 148), making it difficult to interpret why the hoard was buried. However, it may be possible that internal threats played just as much a part in acts of deposition as larger, more political, external threats, and perhaps the hoards deposition was the result of a more personal dispute amongst occupants of Building 31, or Plantation Place more widely. This may have resulted in something happening to the owner of the hoard and therefore its location was unknown, subsequently being forgotten or left behind in the sunken floor deposit of the building (see Chapter 4.4 for discussions regarding the deposition of coin hoards).

Plastic deformation occurs more frequently amongst the coins associated with the hoard than with site coins, with 74% of hoard coins displaying this feature. It has been suggested throughout this thesis that plastic deformation occurs at the point of production when the blank metal coin flan is struck with the coin die. Again, due to the physical properties of gold as a softer metal, it is expected that this factor would occur more frequently on gold issues, as it would potentially require a completely different striking technique, such as heating at lower temperatures to prevent the metal from running. The fact that 32 of the 43 coins provide evidence of this feature suggests that it does not affect the intrinsic value of the coins.

9.11 Summary

By considering the evidence provided by coins with discussed context we have been able to explore the biographical features present on the coins themselves, against the chronological backdrop of the period in question. Furthermore, it has enabled an exploration of the areas of the site where coinage was used and lost and the ways in which interactions with coinage may have affected their biography. This is approach is not always possible with archaeological material and in many cases the context of finds is unclear, this is demonstrated through the Plantation Place assemblage where contextual information is only discussed for 230 coins out of the 424 coins available. A further example can be seen in the evidence from the PAS, which provides a wealth of important data with regard to archaeological material in Britain, and the geographic areas within which this material is found. However, the wider archaeological context is often absent, as most objects are found as one off, stray finds, meaning the wider historical context of the area is unknown. Furthermore, the nature of archaeological reporting is ever changing, and sites excavated in the past may not have been recorded or published in as much detail as sites are today. This has an impact on the knowledge we are able to apply to datasets, particularly artefact assemblages. Finally, in some cases the provenance of artefact assemblages is not always straightforward, as demonstrated by the Rossall Fleetwood hoard, where the makeup of the hoard would be considered an unusual find for Lancashire. However, that is not to say that the hoard is not the original Rossall Fleetwood hoard, as assemblages may often be considered unusual against the backdrop of what we think we know about a location. This is perfectly demonstrated by the hoard of gold aureui at Plantation Place, coin hoards of this type are uncommon, and there appears to be little of similar wealth elsewhere in London. However, the detailed contextual information associated with this site and excavation, means there is no doubt that whilst unusual, the hoard was buried within the sunken floor of a small room in Building 31.

The stratigraphic data tells us how coins may have been deposited, and the human interaction with coinage through coins lost in buildings and structures as well as within the outdoor spaces. For example, the higher proportion of coins lost within buildings in Period 2 may suggest that during initial occupation coinage was more likely to be lost within interactions inside structures, which may be associated with indoor workshops and shops. However, by Period 4 a higher proportion of coins are being lost in Open Areas, which may indicate a change in coin use focused on outdoor markets for example. By incorporating biographical factors, we can begin to explore what this additional information can add to the interpretations of the site. Figure 9.11-1 below highlights the frequency of biographical factors against the proportions of coins from each Period. However, it is important to note that only 230 out of 424 coins were discussed in more contextual detail within the site report, and of these 212 could be assigned biographical data due to the availability of the sample. Therefore, this interpretation may not represent the full value that a biographical approach can add.

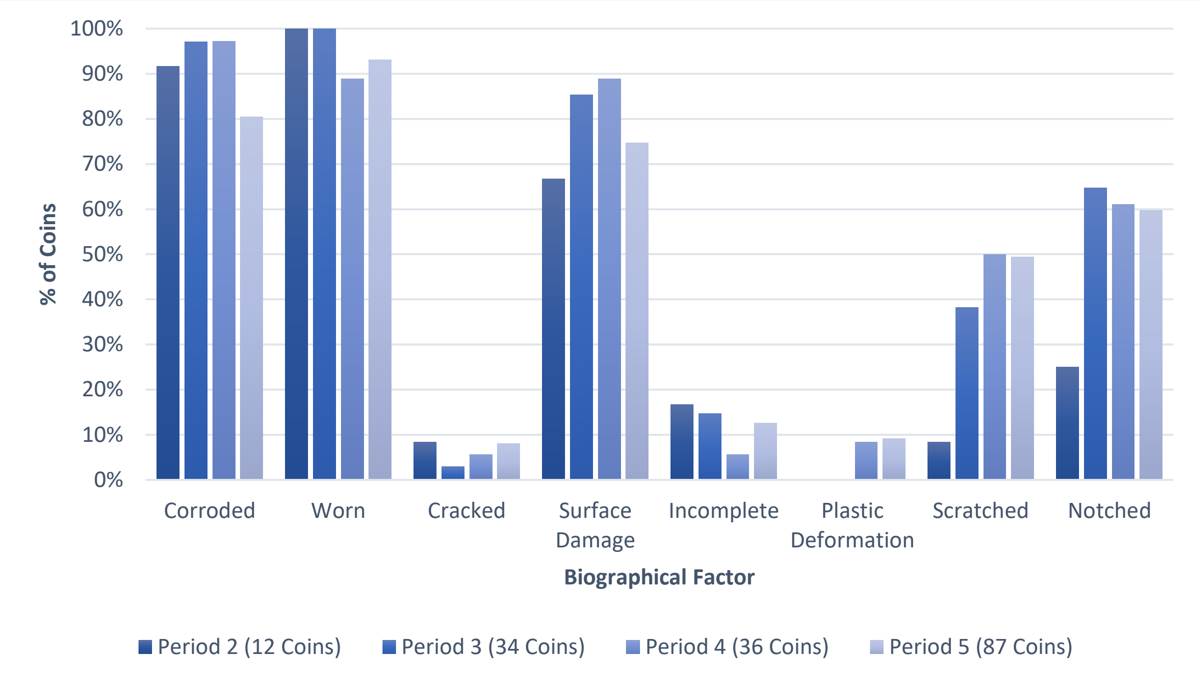

Figure 9.11-1 The proportions of biographical factors per contextual period at Plantation Place

Whilst the proportions of biographical factors associated with the tertiary context are high across all periods, we can see there is an increase in corrosion and surface damage which occurs during Periods 3 and 4. This may support the high levels of redevelopment in the area but also indicates that these factors are higher in those periods where coins are more likely to be found in Open Areas as opposed to within buildings and structures. This would suggest that coins lost within outdoor spaces and therefore more exposed to outdoor elements are less protected from these factors than coins lost in indoor spaces. In terms of surface damage, this may suggest that coins lost in outdoor spaces are therefore subjected to more movement and churning than coins lost indoors, and consequently are more prone to damage on their surface.

Coins associated with Period 5 also appear to demonstrate high levels of corrosion, surface damage and scratches, which may be indicative of the volume of intrusive issues found within the period, that perhaps were initially lost within the use of the site during Periods 3 and 4. Therefore, this cannot be taken as a true reflection of the coins lost within this phase.

From this, we may be able to suggest that the biographical data does not provide evidence for new ways in which coins were being used at the site, but instead supplements the data provided through contextual analysis by providing physical evidence to support assumptions made based on their findspot.

This demonstrates not only the importance of targeted development led and research excavations to develop understanding of this contextual data, but also the importance of using multiple methodologies, such as object biographical approaches and context analysis, in order to provide the most well-rounded interpretations of the past possible. This is explored further with another case study from the Ribchester Revisited assemblage in Chapter 10.5.

The site of Plantation Place has provided a crucial contrast to the evidence from Lancashire in order to test the validity of the methodology in other areas of Britain. Although it is acknowledged that it is difficult to compare an entire region to a single site, this analysis has provided an important example to highlight the potential for an exploration of regional in moving beyond static and outdated wear categories and instead utilising a biographical approach to inform on acceptance and use of coinage through its production, circulation and deposition.

By exploring the similarities and differences in the frequency of biographical factors across the datasets we can begin to explore how and why this acceptance may manifest differently in different parts of the province. Table 9.11-1 below outlines the proportions of each factor in both assemblages.

		Plantation Place	Lancashire
Primary Context	**Notches**	52%	51%
	Plastic Deformation	13%	2%
	Mis-Struck	1%	2%
	Cracked	4%	4%
Secondary Context	**Clipped**	0%	37%
	Perforated	0.5%	0.3%
Tertiary Context	**Corroded**	74%	48%
	Incomplete	11%	8%
	Scratched	43%	42%
	Surface Damage	72%	59%

Table 9.11-1 Similarities and Differences in Proportion of Each Factor in the Plantation Place and Lancashire Datasets

The presence of primary factors in the Plantation Place and Lancashire datasets are similar, except for a slightly higher proportion of coins showing evidence of plastic deformation at Plantation Place. On the surface this may demonstrate that factors associated with production had little impact on the acceptance of coinage as official units of exchange, thus implying that as coinage became a commodity throughout Romano-British occupation, their overall finesse had little effect on the way in which they were used and exchanged. Consequently, this may imply that modern day standards for coin production (i.e., being uniform in shape) may have meant little in the Roman period. The exception of plastic deformation is, however, interesting. The lower frequencies of this factor in the Lancashire dataset may infer that those coins with a better overall finish were more likely to be circulated in areas with a higher military dominance. The fact that the Plantation Place has a much higher proportion of copper alloy issues (89% compared to 50% in the Lancashire dataset) may also indicate that plastic deformation is much more likely in coins made from this material. As such, this may inform on the production process itself, suggesting that alloyed metals are much more likely to be prone to this factor during the heating of a blank flan for production. Expanding this methodology further to incorporate London as a region, rather than as a single site, would enable these interpretations to be tested more rigorously.

When considering the presence of secondary biographical factors, associated with use and circulation, it can be seen that perforations occur in similar proportions. This suggests that the perforation of coinage is rare. However, by exploring the imagery associated with the perforated coins it may be possible to imply that although this factor occurs infrequently there is an element of intentionality to their creation, with specific iconography and associated connotations being selected (see Chapter 10.4 for further discussion). Interestingly, the Plantation Place assemblage provided no evidence of coin clipping, compared with 37% of the Lancashire dataset. However, it is important to acknowledge that all but one of the clipped coins from Lancashire were part of the Rossall Fleetwood hoard, and that the confusion over the hoard's provenance may suggest that the hoard itself is not from Lancashire (see Chapter 8.2.1). As with the primary factors, by expanding the samples to incorporate all of the coin evidence from London as a region will allow a more in-depth analysis to be undertaken, further highlighting the importance of a regional study for Romano-British coinage.

Perhaps the most interesting comparison can be seen when considering the factors associated with a coin's tertiary stage, its deposition. Here, major contrasts in the presence of these factors can be seen between the two datasets. For example, there is a much higher proportion of coins with corrosion (74%) when compared with the Lancashire dataset (47%). As corrosion is a chemical reaction between the soil environment and the object, this may suggest that the underlying geology is more favourable for the preservation of artefacts than that in London. However, the importance of this difference in preservation is imperative in highlighting the potential failures of current methodological systems. As has been mentioned throughout this thesis, current methodologies focus on rigid wear category systems, in order to interpret the archaeological datasets with regard to circulation and use of coinage. However, corrosion can be seen to obscure surface detail on a coin, and therefore corroded coins are often placed into the most worn categories in this current system. Consequently, this may imply that corrosion is taken as a measure of wear. However, if a coin undergoes chemical cleaning to remove this corrosion, then the underlying coin itself may not be worn at all (see Chapter 12.1 for an example of this on Iron Age coins). As such, by exploring biographical factors and moving away from wear, we may be able to make more in depth interpretations regarding the production, use, acceptance and circulation of coins. The only other tertiary factor which shows pointedly different proportions between the datasets is that of surface damage (72% at Plantation Place and 59% in Lancashire). It can be argued that the increase of corrosion at Plantation Place may have weakened the overall structure of the artefact, making it more prone to surface damage following deposition or accidental loss. Furthermore, the long chronology at Plantation Place and its changing use as a site (see Chapter 9.1) may also suggest that a higher volume of traffic may have occurred through this location, providing more opportunities for post-depositional interaction to cause damage to the coin's surface. By expanding the datasets to incorporate more data from London and other regions, we may be able to explore these interpretations further. This may allow for further discussion regarding the significance of higher proportions of occupation in certain areas and the effects that this would have on a coin.

The analysis conducted on the Plantation Place assemblage and the Lancashire assemblage (See Chapter 8), has demonstrated the validity of the methodology. Consequently, by breaking down traditional wear into its constituent parts and analysing these components, it can be demonstrated that a biographical approach can help further our understanding of these objects. Through this analysis we have begun to explore the ways in which coins achieve these different stages of the biography and what they can tell us about the locations in which they were found. Furthermore, by comparing the results from different regions we can begin to build up a larger picture as to how a biographical approach may allow new conversations around the acceptance and use of Roman coins in Britain.

10 BEYOND TRADITIONAL NARRATIVES

Coinage is often taken as an indicator of the acceptance and spread of a Roman economy across the provinces. For example, Crawford (1970, 40) highlights that coined money was dominant as a means for payment, storing wealth and measuring value. However, if coinage is to be deemed as an accepted means of exchange within an economy, then an overall acceptance of a coin-based economic system is crucial. One way to measure this is to consider the frequency of lower denomination finds from sites. Where these lower value denominations have been found in high quantities, it has been argued that coinage played a significant role in everyday transactions, and if the coin dates cover the chronological period of the site, then it is suggested that they played a significant role throughout the site's occupation (Crawford 1970, 42). However, by considering coinage in these broad terms we fail to take into account the subtle intrinsic nature of acceptance as a concept (See chapter 10.3). Furthermore, this notion does not consider the evidence for coin use. If we only consider coinage as dating evidence for archaeological sites, then we end up in a circular argument. The coins date the site, which means the coin evidence will always fit the narratives of a site's context. This often fails to take into account the potential for a longer life span of coins as evidence in their own right.

Coins and money have been terms that have become interchangeable, perhaps due to their association with modern coinage which are exclusively considered as money (Guest 1999, 201). If we are to move beyond repeating these traditional narratives with the aim of exploring what other information can be garnered from Roman coins, it has become apparent throughout this research that a different approach is not only necessary, but also worthwhile. By incorporating the theoretical models of object biographies to the world of Roman coins it has been demonstrated that different aspects of a coin's lifecycle can be unpicked in greater detail. This allows for an additional depth to interpretation, which arguably is missing when only using traditional methods. By employing these biographical techniques, we can begin to see how coinage can indicate chronological changes themselves rather than chronological change being proven by coins (see chapter 10.1). Furthermore, we can begin to unpick what makes a coin a coin, beyond a definition solely focused on monetary worth, and see how a coin's biography can be influenced and altered by changing the object's structure.

10.1 Chronological Changes

Biographies cannot be understood in isolation and therefore it is important to link back to the broader context of the period in question to provide a more in-depth narrative (See Chapter 5 for discussions on the construction of object biographies). The overarching benefit of coin evidence is often considered to be its ability to provide contextual dating evidence to excavations, which in turn can be linked to contemporaneous historical documents of the Roman period. When considered in tandem, this has led to interpretation of coinage in antiquity being used as evidence for distinct periods of political and economic unrest and has resulted in these objects not being considered as artefacts in their own right. For example, Macdonald (1917, 205) uses the evidence of coin hoards in France to suggest that only a single hoard of Vespasian was known at this time, when Gaul was under settled occupation, which contrasts the evidence for 164 hoards between Gallenius and Postumus when Gaul was subject to internal political wars and the increasing threat of Frankish invasion. Consequently, coinage, and more specifically hoarding, has been seen as an indicator of unrest. Whilst this example is from an old source, it shows how these ideas developed early on in archaeological discourse and have since been difficult to overcome. A further example political unrest impacting the interpretation of coinage can be seen in the Marcomanni, a Germanic tribe, where it is believed that a possible reason for the movement of coins, particularly those of lesser value used in everyday transactions, can be interpreted as a result of Marcomanni Wars (Koovit and Kiudsoo 2015, 77). The wars occurred in the mid-to-late second century, and saw the Roman Empire challenge the Marcomanni, Quadi and Sarmatian Lazyges, during the reign of Marcus Aurelius. Therefore, the movement of money may have been associated with trying to keep their wealth out of Roman hands. At the site of Berenike harbour on the Red Sea, coins provide evidence of local trade, and the chronological differences coincide with periods of economic and political unrest. This sees coins dating to the 1st century making up 40% of the assemblage, dropping to just 6% in 2nd and 3rd centuries due to recession, before picking up to 33% of the total assemblage by the 4th century, showing a renewal of trade and commerce following the decline (Lach 2015, 730-31). These examples not only demonstrate the breadth of this interpretation across provinces outside of Britain, but also the length of time in which these concepts have remained within archaeological interpretation, highlighting how cemented they have become in archaeological thinking.

The archaeological excavation of Roman coins often centres on their value as a dating tool for the contexts from which they are retrieved and leads to the coins that provide this information to be considered as more important than those coins which are either undatable or found out of stratigraphic sequence (Lockyear 2012, 191). In turn, this has affected the nature of publication of coinage and can be seen to hinder the scope it is given by cherry picking information. For example, Lockyear (2007, 214) has demonstrated that often only a proportion of coins from a site are recorded in the catalogue, and those chosen represent evidence for key 'stratigraphic units' which assist in the phasing of the site itself. For example, the report on the Borough High Street excavations in Southwark indicates that only 15% of the coins had been cleaned and further reported on, despite x-ray images highlighting that 74% of the coins could be identified (Hammerson 2002, 233). This example is just one of many in which the entire assemblage is often unexplored to its fullest potential, in favour of a selection of coins that date the wider site context, thus emphasising the traditional narrative of coinage as dating tools.

One of the overarching themes to come out of Chapter Eight is that of the chronological patterns for the categories recorded. One of the most common methods for analysing chronological changes in coinage patterns is to adopt Reece's Period system (Reece 1991) (see chapter 6.2), which is widely used and accepted in numismatic research, and is something which has been adopted when considering the chronologies of the datasets explored in this thesis, to make it comparable to other assemblages.

Before an in-depth analysis of the chronological peaks from the Lancashire dataset is explored, it is important to highlight that none of the biographical factors recorded in this thesis demonstrate high chronological peaks dating from the Roman Republic to the first century (Reece Periods one to five). This implies that the Republic and early stages of Empire were relatively stable and unchanged with regard to coin production, economic value systems and debasement (Crawford 1970, 40). Even though Lancashire was occupied by the Romans towards the end of the first century, with military installations such as Ribchester being founded in AD 69, coins from these periods still compose 17% of the overall sample from Lancashire. The argument for a stable monetary period between the Roman Republic and the first century can be further supported when considering the chronological peaks of factors at Plantation Place, London (Dunwoodie *et al.* 2015; see chapter nine for chronological analysis). While Plantation Place has an earlier chronology than Roman Lancashire, the peaks for recorded factors predominantly occur from the second century onwards, except for surface damage.

Half of the recorded factors in the Lancashire sample demonstrate chronological peaks in Period 13 (notches, plastic deformation, mis-striking, corrosion, surface damage and incomplete coins), and interestingly these factors are divided between primary and tertiary life stages of the coins in question. Furthermore, Reece Period 13 is not influenced by the large Rossall Fleetwood assemblage, and as such does not raise any questions regarding their presence in the Lancashire sample. Period 13 represents the chronological period AD 260-275, which contains a total of 17-coin issuers.

Traditionally, Period 13 can be seen to be incorporated into a longer period ranging from AD 235-285, which has been termed the 'Third Century Crisis' (Birley 2007, 45). Watson (1999, 2) highlights that the most important aspect of the crisis was the level of political instability of the time, something which in turn would affect coinage. Between the assassination of Severus Alexander in AD 235 until the beginning of Diocletian's reign in AD 284, more than 50 individuals rose to Emperor status (Watson 1999, 2). It is important to highlight that there were some divisions within the Empire during this period, particularly with different Emperors ruling over the different provinces of the east and west. However, the PAS provides evidence for coins of 38 different Emperors being found in Britain alone. This further emphasises the rapid change of individuals rising to Emperor status and thus, implies that the average Emperor's reign was around a year. The social, political and economic backdrop of the period is crucial in understanding how the 'Third Century Crisis' would have affected the production, use and deposition phases of coinage.

Firstly, we see the changing focus of the style of Emperors to a more military authoritarian style of rule. Secondly, there is the instability of the state, due to the succession of Emperors through violence, who were then often assassinated shortly afterwards (Alföldy 1974, 99). Contemporary sources such as that of Herodian (Livius 2019) provides evidence for this when suggesting that Emperors had lost firm power over the provinces, which perpetuated these periods of political instability. As a consequence, the power of the army increased with usurpers coming to power at an alarming rate, only to be turned upon in favour of a new military figurehead.

Aside from political and military upheaval of the period, social changes also play a significant role. There was an increase in individuals with low social backgrounds rising to positions within the senate, with Dio (80.7.2) suggesting that Verus and Gellius Maximus, for example, were not 'of the best pedigree' (de Arrizabalaga y Prado 2017, 263). Furthermore, economic instability can be seen in the numerous monetary reforms and periods of debasement. For example, the antoninianus saw a reduction in silver content from 47.7% to 21.86% by AD 253-255, the production of denarii ceased by AD 250 (De La Blois 2001, 215) and the quality of the gold aurei was also greatly reduced with Bland (1993, 63) arguing that aurei weighed less than a third of their original standard by AD 253. Finally, the increasing pressure from Barbarian invasion, also impacted the control of the Emperor with contemporary sources such as Herodian seeing Persian and German invaders threatening the existence of the Empire (Alföldy 1974, 103). Thus, the third century saw a divided Roman Empire that was facing increased attack on both the East and the West. In the case of Germanic invasion, the traditional narrative implies that land was forcibly seized and extorted (Ward-Perkins 2005, 13). Whilst it is argued that the traditional models perpetuate the notion of attack and invasion, it can also be demonstrated that the Imperial powers of Rome also tried to make power plays to consolidate their control over the provinces. For example, Ward-Perkins (2005, 14) highlights that the Clermont region in France surrendered to the Visigoths, following orders from the Roman government in Italy as part of efforts to appease the Germans and save the strategically more important cities of Arles and Marseille. Whilst the threat of invasion may be a significant factor, it can be seen that the political climate of the third century Roman Empire is vastly complex, and it is instead a combination of factors that led to the changes in coin production demonstrated through chronological analysis.

The adoption of the term 'crisis' in relation to the third century may now be considered to be an embellishment of the period, particularly in Britain which is considered to be on the fringe of the Empire, however the effects of coin quality in the third century may still be significant, as well as the impact they can have on understanding a coin's full object biography. As demonstrated in Table 10.1-1, specific production factors are most common in this period, and in turn affect the presence of factors in the tertiary phase.

Primary Phase	**Tertiary Phase**
Notches (68%)	Corrosion (67%)
Plastic Deformation (5%)	Surface Damage (43%)
Mis-Struck (6%)	Incomplete (16%)

Table 10.1-1. Proportion of Period 13 coins (203 coins), which demonstrate evidence of these factors

It is argued here that notches, plastic deformation and mis-striking occurs at the point of a coin's production, with notches and plastic deformation occurring due to opposite conditions at the same stage (notches when the flan is too cool and plastic deformation when it is too hot (See Chapter 6.5.1). The third century can be seen as a period of constant monetary reforms and debasement, which arguably would have played an effect on the increasing presence of these factors throughout Period 13, due to the decreasing metal quality of coinage produced throughout the Empire. By AD 250, silver coins only contained around 5% silver and were instead a copper alloy mix; usually a mixture of copper, tin, lead and silver (Vlachou *et al.* 2002, 119.2.1), with an artificially produced silver layer on the surface to give the impression of a higher silver content (Scheidel 2010, 103). The increasing use of these alloys, and the reduction in silver content could be seen to produce a compositionally softer coin by Period 13, which following the heating and striking process, may have led to a greater increase in the factors recorded in the primary life stages associated with this thesis.

Consequently, this leads to an increase in factors associated with the tertiary phase, deposition, in the same period. For example, 67% of coins from Period 13 provide evidence for corrosion, and this may be a result of the increasing debasement of the third century. Corrosion is defined as 'an interaction between a material, usually a metal, and its environment that results in deterioration of the material, and the environment' (Grosyman 2009, 2). Where coins are concerned, it is the composition of the object that predisposes it to corrosion products forming after deposition. For example, coins produced from noble metals, such as gold and silver, are more resistant to oxidisation and therefore corrosion. In contrast, coins made from base metals, such as copper, lead and tin, are more prone to oxidisation and therefore corrosion. Due to the increasing use of base metals in coin production, particularly the increase in copper alloy issues, and the production of silver issues which were predominantly composed of copper alloys with a silver coating (Vlachou *et al.* 2002, 119.2.1), this can be seen to explain the high proportions of corroded issues in Period 13.

Furthermore, the alloying of base metals producing a softer coin may account for the increase in surface damage also displayed in this period, as coins would be more prone to damage following interaction in a post-depositional environment. This is demonstrated in Figure 10.1-1 below, where an increase in surface damage can be seen in silver coins from the end of the third century onwards.

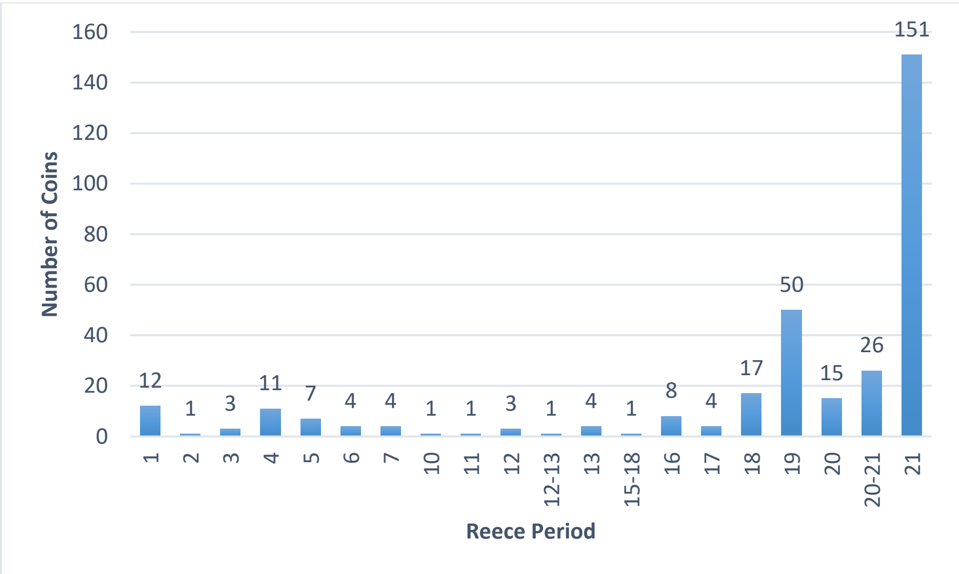

Figure 10.1-1 Chronological Distribution of Silver Coins with Surface Damage

Finally, the proportions of incomplete coins also appear to peak around Periods 12-13. Again, this may be a product of the debasement of the third century meaning that the coins produced were softer in composition, and more prone to post-depositional disturbance and consequently becoming fragmented. The fact that chronologically, three of the four tertiary factors peak in the same period, may suggest that the high turnover of political authority during the third century means that coins are being produced and discarded within a similar time frame, suggesting that coins of the third century have a shorter shelf life than their predecessors. If we also incorporate traditional wear assessments into the analysis of the silver coins with surface damage (figure 10.1-2), we can begin to see how wear plays a role in interpretation.

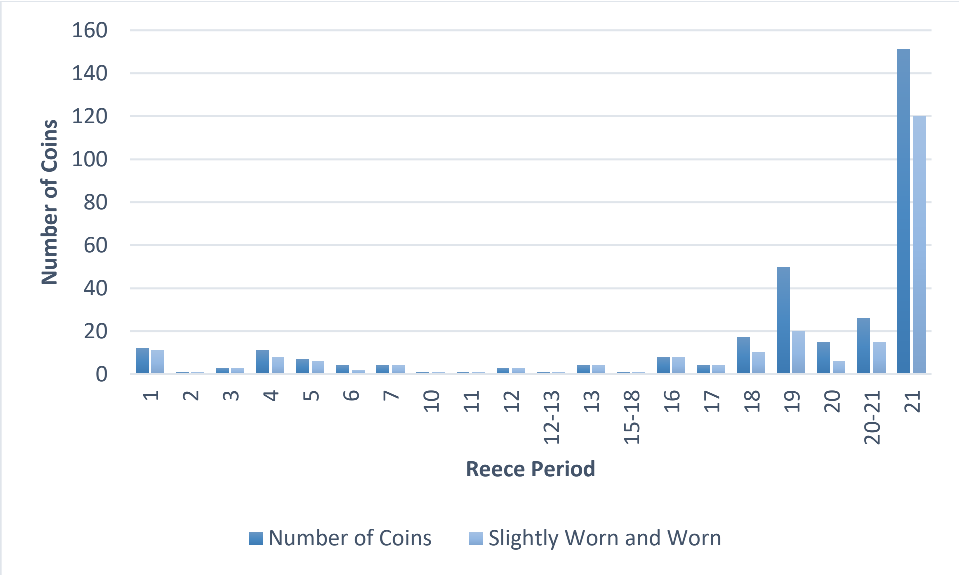

Figure 10.1-2 Chronological distribution of coins with surface damage, against those which are categorised as worn and slightly worn

Traditionally, coins which are considered worn or slightly worn are thought to have been used in many transactions, leading to the rubbing down of the iconographic elements on the surface. However, the evidence from the tertiary factors suggests that coins from the end of the third century are being produced and discarded more frequently, possibly during the same century. As the wear data demonstrates, there is a decrease in the number of coins which are considered slightly worn or worn from Period 18 onwards. This would suggest that these coins had not been used in as many transactions, leading to them becoming less worn, and therefore supports the notion that biographical factors such as surface damage are more likely to occur post-deposition. Furthermore, whilst dating evidence can only provide a *terminus post quem* for tertiary factors, it seems likely that coins of the third century were deposited in the third century.

Following the increase in coin production throughout the third century, it can be suggested that coin supply to Britain was in decline towards the end of the fourth century. During this time, there was a distinct lack of official coinage entering Britain, and therefore we can begin to see a change in attitudes towards coins. It can be argued that a coin based economic system had been adopted within the province for 300 years and as such, the decline in coin supply led individuals to begin producing coinage locally in order to account for this shortfall.

Evidence for this can be seen in Lancashire, when we consider the remaining factors. For example, we can see peaks in Period 21 with regard to perforations and coin clipping associated with the secondary phase of a coin's object biography, as well as scratches associated with the tertiary phase (Table 10.1-2). Period 21 represents AD 388-402 (PAS 2019).

	Category	Period	%
Primary	Cracked	Period 8 (18 Coins)	11%
Secondary	Perforation	Period 21 (196 Coins)	66%
	Clipping	Period 21 (196 Coins)	47%
Tertiary	Scratches	Period 21 (196 Coins)	64%

Table 10.1-2. The Reece Period with the Highest Proportion in each category

Whilst the issue of quantifying the frequency of clipping in Lancashire is complex (as discussed in the following section), the prevalence of clipping in this period is still important, and therefore chronologically this result remains relevant. Furthermore, the Lancashire evidence for perforations only demonstrates that two out of three examples belong to period 21. However, a search of perforated Roman coins on the PAS provides evidence of 396 examples (data correct as of November 2019), with 40% of examples dating to the third century onwards. The issue with analysing secondary and tertiary phase factors chronologically is that unlike primary factors which occur at the point of production (within the Emperor's reign), it is difficult to ascertain when exactly the coin would have been clipped or perforated. In fact, a fourth century coin at deposition could have been, at minimum, 43.6 years older than its production date (Gerrard 2004, 66 and Ryan 1988). Therefore, a coin of Eugenius would have been produced between AD 392 and 394 but may not have been deposited until between AD 435 and 438. Therefore, there is a potential 46 years during which the coin could have been clipped. However, as the coins themselves were produced towards the end of the fourth century, around the time when Roman rule in Britain was in decline and prior to complete Roman 'withdrawal' in AD 410, it can be suggested that clipping is likely to be a late fourth or early fifth century phenomenon, during which time new official coinage was no longer making its way into the province (Collins 2008, 259), perhaps leading to non-coin-based methods of exchange becoming more dominant, as they had been at the point of Britain's initial occupation nearly four centuries earlier.

Period 21 also shows a dominance of the tertiary phase factor, scratches. It is important to reiterate that dating of coins only provides a *terminus post quem* for the coin's deposition, and therefore the coin could have been buried at any point after this date. However, the prominence of this feature on coins produced towards the end of the fourth century may be significant. As explored with concern to Period 13, the third century onwards was a time of increased debasement of coinage, with coins of softer base metal alloys being produced over harder noble metals. Consequently, this softer coin surface may be more prone to becoming scratched in post-deposition, again highlighting that while the point of production may not provide an insight into the length of circulation and deposition periods, understanding the context of coin production in these periods can allow us to understand the circumstances of the periods in question, and how and why factors may affect a coin's object biography. This is something which cannot be explored through wear alone.

The factors analysed in this thesis form two clusters around Periods 13 and 21, however cracking seems to be an outlier against the general chronological pattern, with its peak at Period 8 (AD 161-180). During this time, forts along Hadrian's Wall saw a reduction in garrison sizes due to advances into Scotland (Howard-Davis and Buxton 2000). It was argued in Chapter 9.2.4 that an increase in coin production would have been required to fund these military pursuits. As cracking is thought to occur due to heavy striking at the point of coin production, an increase in production of coinage could lead to an increase in cracking. However, it should be highlighted that the Lancashire sample only provides evidence for 42 cracked coins, and the coin sample from Period 8 only contains 18 coins, meaning that only two of the coins from this period are cracked. If we expand the evidence for cracked coins and consider the PAS entries for cracked Roman coins, we can see that there is evidence for 143 records (data correct as of December 2019) where cracking is specifically mentioned in their description. However, it is important to highlight that the PAS entries only provide a minimum number of cracked coins, and the total number may be significantly higher. Out of the 42 cracked coins from Lancashire discussed in Chapter 8.1.4, 12 of them were from PAS data, however, the PAS records for these 12 coins do not mention they are cracked in their description. Figure 10.1-3 provides two examples of these coins, with the remaining ten Coin ID numbers 182, 188, 256, 334, 342, 359, 418, 442, 465 and 558 also being included in this category.

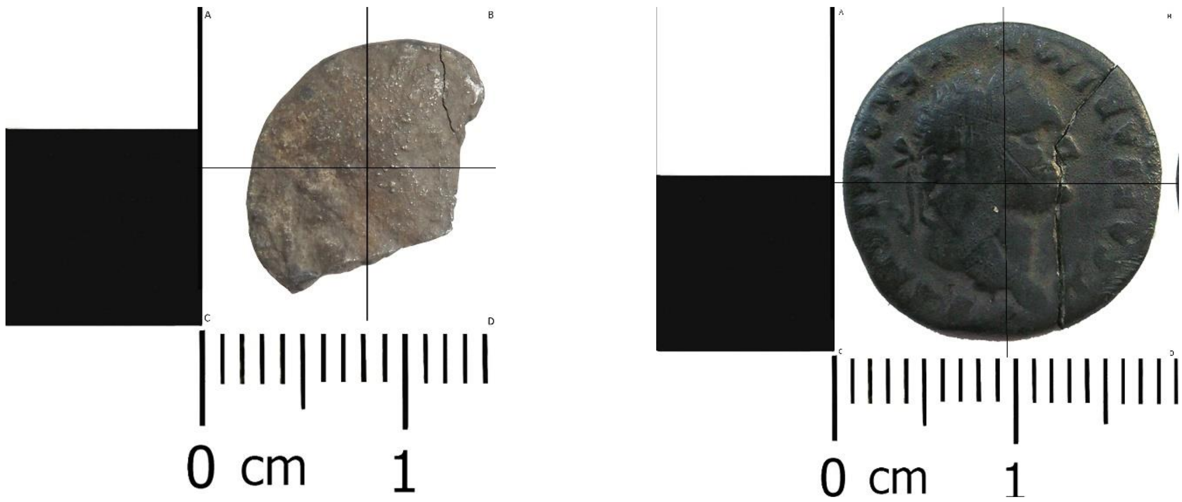

Figure 10.1-3. Two examples of cracked coins, which aren't mentioned in the PAS descriptions. Coin ID 219 (left) and Coin ID 303 (right)

As cracking is not an individual factor recorded on the PAS, it is only ever mentioned in the description. Therefore, it is down to a Finds Liaison Officer's discretion whether it is deemed to be an important enough factor for recording. Of the 143 PAS coins that mentioned cracking in the description, 115 could be assigned to their associated Reece Periods, and from this 17% can be associated to Period 13, whereas only 3% are associated with Reece Period 8 (PAS 2019). This may suggest that like otches, lastic deformation and mis-striking, cracking is also more dominant in the third century for Britain as a whole and emphasises the bias that can be interpreted from small sample sizes, such as the evidence for cracking in Lancashire alone.

10.2 Hoarding Practice

A coin hoard is considered to be a collection of two or more coins deposited together in a deliberate way (Casey 1986). The significance of a hoard is often placed on the monetary value of the coins hoarded, with general assumptions being that the coins usually represent those higher value denominations, typically gold and silver (Aitchison 1988, 272). The overarching interpretation of hoards and hoarding practices have dominated the discipline since the 1880s. This interpretation revolves around hoarding (see Chapter 4) in response to periods of external economic and political crisis, whereby hoards are buried with the intent of recovery when the crisis has passed (Guest 2015, 101). Thus, the hoards recovered from archaeological contexts are identified because the depositor could not return to claim them, or did not want to. For example, in some cases the constant debasement of coinage meant that their value had decreased so much, it may not have been worth the effort of reclaiming them. As such, this offers a biased view to the interpretation of hoards, as there is no way of knowing the reasons that hoards recovered contemporaneously to deposition were buried. Whilst, dated hoards can often be linked to known historical events, it may be unwise to consider individual hoards in this way. For example, the Boudican revolt may have provided the environment to encourage the hoarding of valuables, but this does not mean that every hoard buried in the early AD 60s, were buried in response to this event (Johns 1996b, 7). Therefore, a coin hoard alone cannot inform us whether it was not recovered for reasons linked to historical events or 'silly events linked to no more than domestic drama's (Reece 1988, 265). Instead, it is important to consider the context of hoards as demonstrated in Chapters 8.4 and 9.10 as well as the wider biography of the objects within the hoard, in order to expand the interpretations that can be made. Furthermore, if the argument of hoards buried with the intention of recovery is maintained, then there is no way to interpret how many hoards were buried as a whole (Johns 1996b,5), as it seems reasonable to argue that many hoards may have been recovered by those who buried them. Therefore, it is difficult to assess with any accuracy how widely hoarding as a process was adopted within the Roman period. Johns (1996b, 5) highlights that archaeological interpretations are based on a 'transitory moment in the lives of objects', that is the moment where an object or set of objects completes one period of its lifecycle by the people in the past, whether through a deliberate act or an accidental loss. Objects then enter a further period of use, or an additional lifecycle stage when they are discovered. Johns (1996b, 5) argues that in the case of hoards we see a group of objects passed out of human control at a particular moment in time and use our understanding of this to infer their previous life history, and the social, economic or political environment which led to its deposition. Additionally, objects may have been created with one purpose and deposited with another. For example, votive gifts, such as coins or jewellery were created to be exchanged or worn, however, when they were left as a votive offering their owner changed their primary purpose, and it gained a religious use instead (Johns 1996b, 5). Currently, there is ongoing research by Oxford University and the Ashmolean Museum into coin hoards of the Roman Empire (Howgego, C.J. and Wilson, A. 2020.). This work is crucial as it aims to collate information regarding all hoarded currency that was circulated in the Roman Empire from 30 BC-AD 400, allowing a corpus of monetary systems from both the East and West to be brought together. This integration of data will enable a wider understanding of the broader Roman economy to be understood, perhaps for the first time, as opposed to considering individual provinces in isolation. However, it can be argued that by discounting votive deposits and including individual gold coins as expressions of high value, there is a continuation of classical approaches to coinage as sources of value, as well as the more traditional methods of hoard deposition. Bland *et al.* (2020, 197) highlight that it is not just the contents of hoards which are important, as has been discussed elsewhere in this thesis (Chapter 8.4 and 9.10) the context in which these objects may also hold some significance. In their analysis Bland *et al.* (2020) identify 497 site hoards, with 77% of these being identified through excavation. Hoards from non-building contexts are most frequently found in pits and scoops, however, due to the frequency of excavations from antiquarian periods and the nature of the published records it is often difficult to establish specific interpretations. Nevertheless, two distinct groups could be observed, firstly those hoards which were buried in features specifically dug to contain the hoard, and the second context is those hoards which were buried in features originally produced for different purposes (Bland *et al.* 2020, 198). The study identified that Iron Age hoards were commonly found in purposefully excavated pits, within carefully structured deposits and therefore this may suggest that there were never an intention on recovery, due to the care and complexities of the initial burial. In contrast, there was a distinct difference in the burial of earlier Roman coin hoards, which were less likely to be deposited in pits than their Iron Age predecessors (Bland *et al.* 2020, 198). This juxtaposition between the period the hoard was buried, and the context of its burial may imply a societal change in attitude, with regards to the deposition of objects. The depositing of coin hoards outside of buildings may also reflect attitudes towards place, for example, the six fourth century coins from Hallaton may be reflective of long-term attachment to the place, and indicate a sense of tradition and social memory of the location (Bland *et al.* 2020, 199; Chadwick and Gibson 2013). Alternatively, the association of coin hoards buried outside of buildings may indicate an unease associated with burying large collections of coins within a settlement (Bland *et al.* 2020, 199). Just over 300 hoards in Bland *et al.* (2020) investigation were associated with buildings, with the majority being associated with Roman-style rectangular stone buildings. Hoards buried under internal floors and surface may indicate changes in the structures of these buildings, with Bland *et al*. (2020, 202) suggesting that many of these were modest in nature. These examples may indicate hoards which were never intended to be retrieved, particularly those which were buried underneath solid floors as retrieval of these objects would be impractical, unless the building was being altered again. However, hoards buried under floorboards or those associated with military sites and barrack blocks, such as that at Carleon, may have been more likely to be associated with an intent to retrieve, as they would have been more easily accessible (Bland *et al.* 2020, 202). As demonstrated throughout this chapter, the process of hoarding as often been linked to distinct periods of economic, social or political unrest, within the wider Roman landscape. These interpretations are often focused on the contents of the hoards themselves, rather than the context in which the finds are made within. Bland *et al* (2020) have identified that by considering the contexts of burial, whether they are associated with open landscapes or within buildings, we can begin to challenge traditional assumptions regarding the intent to retrieve these objects. This is something which has already been considered within Lancashire

(Chapter 8.4) and using the Plantation Place assemblage (Chapter 9.10). However, it is suggested here that by considering the content and context of hoards, as well as the biographical data we can obtain using the framework outlined in this thesis, we can further develop archaeological interpretation in this area.

With the significance of hoards often placed on their monetary value, it is argued that there is an emphasis on high value denominations such as gold aurei, such as that from Plantation Place (Chapter 9), and silver denarii and often of earlier chronological periods before debasement and the quality of the metal was significantly reduced (Robertson 1956, 265). However, the 14 hoards from Lancashire (see Chapter 7) demonstrate that this may not necessarily be the case, with over half of the hoards being composed of lower value copper alloy issues, and chronologically dating to the third century onwards following debasement when the value of the raw materials would have been far less than earlier coins.

Hoard	Billon	Copper Alloy	Silver
Dolphinholme - 509-27 BC (3)			3
Thurnham - 125 BC-143 AD (4)			4
Kirkham - 14-238 AD (36)		1	35
Waddington - 65-138 AD (26)		26	
Carnforth - 69-79 AD (10)		10	
Kelbrook - 69-175 AD (8)			8
Silverdale - 98-296 AD (50)		50	
Preesall with Hackensall - 253-274 AD (46)		1	45
Worden - 253-274 AD (108)		108	
Fishergate Hill - 270-361 AD (8)	2	1	5
Lytham - 307-361 AD (16)		16	
Rossall/Fleetwood - 323-402 AD (391)			391
Brindle - 348-402 AD (21)		21	

Table 10.2-1. Distribution of Material Type in Hoards

As demonstrated, six of the thirteen hoards analysed in the Lancashire sample date from the beginning of the third century onwards, with a further two hoards, Kirkham and Silverdale, having its *terminus post quem* to the third century (Table 10.2-1). This contradicts the argument of hoards being chronologically earlier, avoiding periods of debasement (Robertson 1956, 265 and Kallmes 2018, 6). Furthermore, six of the hoards only contain lower value copper alloy issues, whereas only four hoards contain solely silver issues. Again, this contrasts with traditional interpretations of hoards containing higher value denominations. If we expand this and consider the evidence of all hoards recorded on the PAS for England and Wales, to consider biographies in a wider cultural setting (see Chapter 5), we can begin to understand if this concept is something which only applies to Lancashire or is a Britain-wide phenomenon. The PAS database displays records for 593 hoards, with 541 of those being composed of copper alloy, silver or gold (data correct as of November 2019).

Material	Number of Hoards	Percentage of Hoards
Copper Alloy	279	52%
Silver	252	47%
Gold	10	1%

Table 10.2-2. Distribution of Material Type Amongst PAS Hoards

As shown, over 50% of hoards recorded by the PAS are composed of copper alloy issues, suggesting that this traditional interpretation of hoarding practices being associated with high value objects perhaps need re-evaluating, and that other factors may be considered when objects are being chosen to be hoarded (Table 10.2-2). Reece (1988, 265) suggests that coin hoards on their own, ignoring legends and archaeological context, can tell us little about why they were buried. It is only when considering the context and contents of a specific hoard can we begin to make any interpretation of its deposition. Reece (1988, 266) discusses the Arras hoard of gold issues found in northern France. This hoard contains issues which have been struck from the same coin die, which suggests they were unlikely to have ever been found in circulation. Furthermore, the presence of multiple coins which were likely to have been struck for special occasions, and the earlier coins being associated with eastern mints, whereas the later coins were associated with western mints suggests that the hoard may have been put together by a single individual whose career took them from one side of the Empire to another (Reece 1988, 266). The Arras hoard provides a particularly closed set of circumstances, including the fact that significant die links between the coins of the hoard exists, which may make its interpretation more concrete. Whilst the evidence provided by die links and mints may provide insight into how and when these coins came together, it cannot identify the reasons for deposition or non-retrieval. However,it is a good example in demonstrating how traditional models for coin burial such as life savings, or as a rushed response to external threats may have been perpetuated in archaeological discourse and why they need to be re-evaluated. If we consider the distribution of the PAS hoards, it is demonstrated that there is little patterning in where gold, silver or copper alloy hoards are distributed within Britain. Thus implying that Lancashire may fit within the general pattern of Britain as a whole. Therefore, it is argued that the Lancashire evidence is not contrary to traditional interpretation, but rather supports the notion for a reinterpretation of the methods of hoarding (Figure 10.2-1).

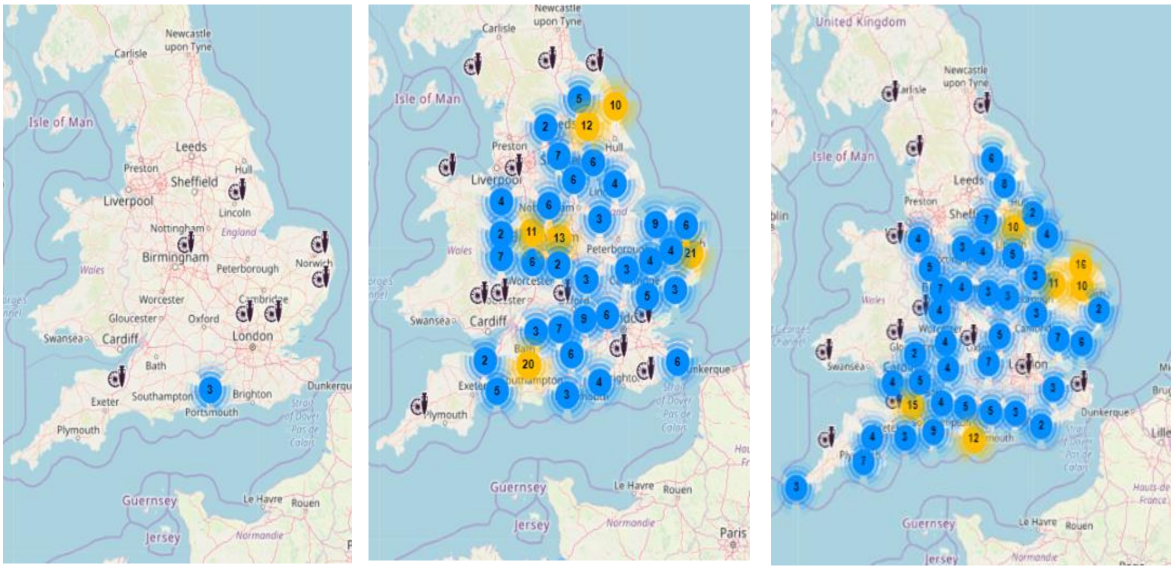

Figure 10.2-1 Maps to show the distribution of gold (left), silver (centre) and copper alloy (right) coin hoards, disk and amphora symbols indicate a single find spot, numbers in circles indicate multiple records from nearby locations, PAS 2020.

If hoarding is focused on the storage of wealth, then it would be expected that higher value denominations would be the norm. However, as the evidence from Lancashire and the wider context of Britain has shown, this is not the case, as lower value copper alloy hoards are dominant. As such, it is crucial that we begin to question traditional analyses in order to ascertain why this is the case.

One of the foundations of traditional hoarding interpretations is focused on the intent of recovery (Reece 1988, 267). It can be implied that the lower proportions of gold and silver hoards could be indicative of these higher value assemblages being recovered contemporaneously to burial, and therefore leave no archaeological trace. Alternatively, this evidence could suggest that too much emphasis is being placed on material value systems, which may not have existed in the Roman world. It is evident that there is a value system in the Roman world, with coins that are worth the most being made from gold, it can be argued that an individual's exposure to these coins may perhaps be limited. Alternatively, it may suggest that due to the sheer value of gold issues, more effort would be made to recover them if they were lost and therefore, they would be less likely to appear in the archaeological record as they were more likely to be recovered (Walton 2011, 56). For example, the PAS (2019) for England and Wales provides evidence for 286,947 coins, with only 187 of these being represented by gold denominations (data correct as of December 2019), which is only 0.1% of all gold coins recorded on the PAS. Furthermore, only 1 % of coin hoards on the PAS are composed of gold issues (based on the available data at the time of analysis). As such, whilst it is clear that there is a value system in the Roman period due to the production of coins in different metals, it is argued that perhaps it is our interpretation of the effects of this value system on coin-using societies that needs to be rethought. Connotations surrounding value in the Roman world are problematic as they require assumptions to be upheld. Millett (1995, 99) highlights that hoards are often considered with regard to a collection of hoards or precious metal objects but is rarely applied to an assemblage of pottery or animal bone. As such, the concept of hoarding practices revolves around what we as the archaeologists who interpret the material perceive to be of value or importance. In reality, however, there is nothing to argue that Roman populations may have buried collections of pottery as a hoard, or, that they would have a notion of hoarding in the same way as we do in the present day.

Perpetuating traditional interpretations of hoarding raises several other issues in addition to those outlined above. Firstly, it assumes that modern connotations surrounding money apply to the Roman past. For example, it is difficult to understand why somebody would not retrieve coins buried as a hoard unless they have succumbed to the crisis which led to its deposition, or, the coins themselves were no longer legitimate currency. However, this fails to consider that the metal the coins themselves were made from would have had some value, even if the denominations or Emperors struck were no longer legal tender.

Additionally, Guest (2015, 105) highlights that for England and Wales an initial condition of Treasure Trove (pre-1997) stipulates that an object is considered to be Crown property if it had been buried with the intent of recovery. As such, perpetuating the traditional models of hoarding as storages of wealth, or responses to invasion could be seen to work in the favour of archaeology, as the object in question would therefore be preserved for analysis and interpretation. Consequently, it may be implied that archaeological approaches to hoarding practices are deeply ingrained in the operation of the discipline itself and may in fact have less to do with the interpretation of the material.

Furthermore, the similarities between the designs of Roman and modern-day coinage with the bust on the obverse, may be conflating arguments, as it is difficult to separate connotations with current monetary systems with those of the past as they are such easily recognisable objects. For example, if we consider the guinea of George III below (Figure 10.2-2) we can see a very similar obverse bust to that of a Roman coin. This may suggest that modern coinage still incorporates elements of Roman design and style, with portraits being considered one of the most powerful symbols on coins, giving the coin legitimacy through its connection with authority figures. Even in modern day coin production, the bust of Queen Elizabeth II is thought to be the most circulated portrait of an individual, with issues being produced in the 16 Commonwealth realm countries, with the different stages of her adult life being commemorated in the changing portraits (Frewing 2020, 91)., this makes it easier to impose more modern values and understandings of economic systems onto the past.

Figure 10.2-2 Comparison of obverse design between an issue of Vespasian (left) and a coin of George III (right), PAS 2020

Thus, more emphasis perhaps should be placed on the value of a hoard outside their monetary function or representation of currency, this has been explored through the analysis of the coin's object biography throughout this thesis. One approach to this, is to consider the role of production and chronology of the coins. Previously, chronological focus has been placed on dating contexts on excavations, and how these dates fit into the wider Roman narrative as dictated through historical evidence of invasion, uprising and periods of economic instability. However, if we consider the chronological evidence for hoards in a more intrinsic way, it is argued that additional interpretations can be made.

For example, if we consider the coin hoard from Plantation Place of 43 gold aurei, we can begin to see how context and chronology can work together to interpret the hoard, instead of one being used to justify the other. As discussed in Chapter 9.10.6, the hoard itself was uncovered in a bag within a box and kept within a sunken room, of a large town house, Building 31 (Bowsher 2015, 214). The dates of issue for the coins within the hoard span 109 years from AD 65-174, and as such could have been collected across multiple generations and added to over time. Alternatively, this could demonstrate the longevity of circulation of individual coins, allowing a single person to have received this issue and buried it alongside others in their possession. The extended time span for the hoard, and the fact that it was buried inside of a building could be seen to counter traditional interpretations of the failure to retrieve hoards due to the effects of crisis, as it seems unlikely an individual could forget the hoard buried under their floorboards. However, Bowsher (2015, 214) suggests the lack of retrieval could be due to localised disasters, rebuilding or more personal threats. If we compare this with the hoarding evidence from Lancashire (Chapter 7 and 8), many of which are from outside of distinct Roman settlement spaces, we can begin to explore the difference between hoards buried in inside and outside spaces. For example, it may be that the hoard could not be retrieved from an outside space because the location of its burial was misremembered, something which seems distinctly unlikely for hoards buried in inside spaces. Contrastingly, hoards buried inside with a long chronological span of coins such as that at Plantation Place, could represent personal savings, added to over a period of time, a concept which seems to be more difficult if discussed with relation to outside spaces. Again, this has implications for the way in which we consider hoards as being single events due to the result of impending invasion.

Further examples of the need to change the hoarding narrative can be demonstrated when considering the Lancashire dataset. For example, the Kirkham hoard of 36 Roman coins, is one of the only hoards attributed to Lancashire that comes from an area of known Roman settlement, chiefly in the form of a potential early Roman fort (Howard-Davis and Buxton 2000). The hoard itself has a broad date range ranging from AD 30 – AD 238 and was uncovered in 1853 buried in a small Samian ware pot (Harris Museum 2019). The excavations at Dowbridge, Kirkham, suggest that whilst minimal in nature, there is some evidence to suggest the area remained in occupation into the third century, such as a hearth which may be associated with a building or enclosure, as well as potential domestic compounds and buildings (Howard-Davis and Buxton 2000,44). As such, whilst little conclusive interpretation can be made without a re-exploration of Roman Kirkham, if the hoard was recovered from within the fort, and re-building did take place in the 3rd century, it is possible that the Kirkham hoard may have been deposited for similar reasons to the Plantation Place hoard, where re-building prevented the individual from reclaiming their personal savings.

With regards to coin hoards in Lancashire, much of the dataset is poor in terms of its context, as has been discussed in depth with regard to the Rossal Fleetwood hoard. However, they still allow for interesting discussions with regards the nature of hoarding and in the case of the Brindle hoard, possible re-hoarding in more modern contexts. The Brindle hoard provides evidence for 20 bronze coins dating between AD 323 and AD 408, with a high sample of these demonstrating Eastern mint marks and representing only one of 50 British hoards to end with issues of Honorius and Arcadius (Harris Museum 2019). The rarity of issues belonging to these mints and Emperors has led to the suggestion that the hoard, which was originally housed in a pot, is likely to have been originally buried in the Eastern Mediterranean and subsequently reburied in Lancashire in the nineteenth century (Harris Museum 2019). Evidence for this can be seen in the types of corrosion present on the coins, which are consistent with burial in a dry climate (Harris Museum 2019). In addition, little evidence can be found for Roman activity in Brindle, suggesting that if Roman occupation did exist, it was minimal at best. The Brindle hoard provides only one example of the difficulties in understanding context for finds that are not well recorded. However, this example does allow us to question traditional hoarding models; firstly, in its demonstration of hoards of low value coinage, but also due to its potential of reburial in the nineteenth century. If considered at face value, as a hoard found in Brindle this could lead to interpretations of late Roman occupation in this area of Lancashire, as well as potentially perpetuating models of coin hoards buried as a result of impending invasion. As such, this example highlights the necessity of considering each hoard's individual context before making broad interpretations.

Interpretations of hoarding motives from this research suggests that traditionally, the discipline has been concerned with creating broad umbrella terms for hoarding practices in order to allow hoards to be grouped together such as savings, votives and invasion. However, it is crucial to go beyond these traditional methods and consider the concept of hoarding as a product of the individual. Hoards are buried by individuals and individuals are not static in their motives. Consequently, hoards should be considered as individual entities, which have been buried under a unique set of circumstances by individuals. As such, it is crucial we consider the context of the hoard as well as its contents in order to interpret the motives behind its buried. Therefore, it is suggested here that instead of trying to fit a hoard into a broad category, the question should actually be what this individual hoard represents.

It is only by considering coins as artefacts in their own right, with complicated and ever evolving biographies that we can move beyond this old-fashioned narrative of coins as mere units of monetary value and instead begin to explore the ways in which they can inform on our understanding of society.

10.3 Coin Clipping

Before an in-depth analysis of coin clipping can be undertaken, it is important to reiterate that the Lancashire sample provides 391 examples of clipped coins, with all but one coming from the Rossall Fleetwood hoard.

As has been suggested throughout this thesis, the provenance of the Rossall Fleetwood hoard is open to much debate. The hoard is thought to have been uncovered in 1840 somewhere between Rossall Point and Fenney and consisting of 400 denarii (Robertson 2000). Upon finding the hoard, 40 of the coins were thought to be in the possession of Rev. W. Thornber, with the remaining coins being purchased by Alderman Brown of Preston (Robertson 2000). In 1887 the Rossall hoard was presented to the Preston Museum, however, the coins presented consisted of 401 siliquae, 388 of which are now in the Harris Museum (Shotter 1990). The general consensus is that there is enough information regarding the denarius hoard from this location which was originally recorded (History of Preston 1857, Transactions of Lancashire and Cheshire Antiquarian Society VI 1887 and Transactions of the Historic Society of Lancashire and Cheshire XXXIX 1887). It may be the case that two individual hoards passed through the hands of the same collectors, Rev. W. Thornber and Alderman Brown, and as such the provenance became confused before being acquired by the Harris Museum (Shotter 1990, 154). As such, it is unclear whether both a denarius and siliquae hoard existed as two separated entities, there is also still some confusion as to whether the siliquae hoard is from Lancashire at all.

If we move away from the written accounts of the hoard and begin to look at this hoard as coins in their own right, and against the wider pattern of Lancashire coinage some patterns begin to emerge. If in fact, the original hoard discovered in this location was a hoard of silver denarii (as opposed to the hoard of siliquae recorded for this thesis), then it is unknown as to whether the recorded siliquae hoard came from the same location or somewhere else entirely. As such, little can be said for certain regarding its burial or context. If we consider the PAS evidence for siliquae from the remainder of the UK, however, we can begin to ascertain how likely the Rossall Fleetwood hoard examined for this thesis is to have come from Lancashire.

Siliquae are very rare finds for the North West of Britain, with only two examples coming from the Lancashire area (Figure 10.3-1). Furthermore, the higher concentrations of this denomination are focused around the South East, Midlands and North East regions. This may imply that this hoard is not the original Rossall Fleetwood hoard, and that its provenance to Lancashire should actually be called into question. Furthermore, this evidence may suggest that clipping as a process is something that is altogether absent from Lancashire, and a phenomenon which is much more heavily concentrated in the east of Britain. If we consider the PAS (2019) evidence for clipped siliquae hoards more specifically, there is only evidence for one additional example from West Sussex (data correct as of December 2019). However, this example is suggested to be a dispersed hoard due to the proximity of the two coins in question (one clipped and one unclipped), with a time span of 12 years between the discovery of the two coins. It is apparent that clipped siliquae are more common in the South East, Midlands and North East zones, however hoards of these clipped issues are extremely rare in England and Wales altogether. This further supports the notion of clipped coins being considered as official currency, which remain in circulation rather than being hoarded.

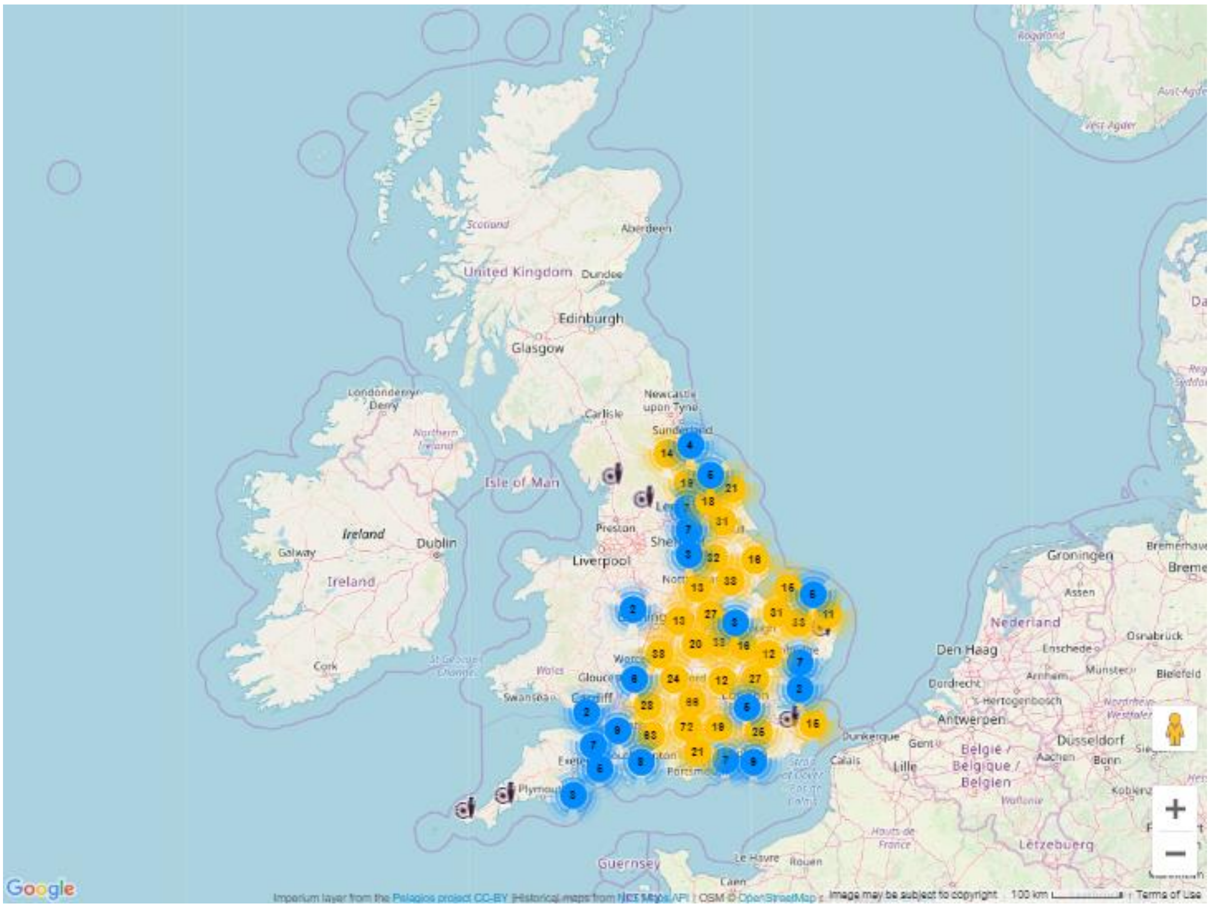

Figure 10.3-1. A Map to Show the Presence of PAS Evidence for Siliquae in Britain, PAS 2019

Contrastingly, if we next consider the mints of the Rossall Fleetwood hoard present at the Harris Museum, we may be able to ascertain whether they coincide with the standard pattern displayed by the rest of Lancashire. There is only one mint that is represented in the Rossall Fleetwood hoard that appears to be otherwise absent from the Lancashire dataset, Aquileia, Italy. However, coins of this mint only represent 1% of the entire Rossall Fleetwood sample, and the PAS contains records for another 399 coins from elsewhere in Britain attributed to this mint location. As such, it is not unfeasible that the coins could have found their way into the Rossall Fleetwood hoard from elsewhere in the country, and therefore cannot be used as evidence for the entire hoard not originating from Lancashire. Interestingly, the Rossall Fleetwood hoard shows that 51% of its issues are attributed to the mint of Trier, with other coins of this mint being found in Lancashire as site coins (1%), or in other hoards; Lytham (6%), Hackensall (9%), Worden (3) and Fishergate Hill (13%). Furthermore, other mints composing the Rossall Fleetwood hoard are often only found in one other hoard associated with Lancashire. For example, the mint at Constantinople composes 1% of the Rossall Fleetwood hoard and 14% of the Brindle hoard, as well as Mediolanum, which also composes 1% of the Rossall Fleetwood hoard and 35% of the Brindle Hoard. As the other hoards have a more secure provenance of

Lancashire, this further emphasises that mint locations do not provide conclusive evidence to support whether the Rossall Fleetwood hoard can be associated with Lancashire or elsewhere.

Although coin clipping in Lancashire is a rare phenomenon and all but one of the examples of this biographical feature comes from the Rossall Fleetwood hoard, analysis of the process of clipping provides an interesting methodological example, which relates directly to the value of exploring an object biography of coinage in the Roman Period. Therefore, it is important to consider which aspects of a coin are clipped, and which aspects remain unclipped. The primary assumption is that the Emperor's portrait on the obverse is rarely clipped, suggesting a much more structured or regulated process (King 1981, 57).

Only 4% of the siliquae sample show evidence of the bust of the Emperor being clipped. It may be possible to make some assumptions reagrding the biographies of clipped coins, for example, the fact that the Emperor's face is so rarely clipped suggests a structured method regarding what and where it is appropriate to clip a coin. If the Emperor's face is rarely clipped, it would suggest that it was inappropriate to do so and could highlight an element of respect for the ruler. This may appear as a strange concept given the time period and economic and political backgrounds to coin clipping. As shown throughout this thesis, the traditional narrative of coin clipping is that it is a late fourth century phenomenon (see chapter 8.2.1), occurring at a time when Roman rule was beginning to withdraw from Britain, and the coin supply was insufficient to sustain the economy. Furthermore, due to the quick overturn in rulers and usurpers during this period (20 issuers in the 85 years between Reece Periods 16-21), it is unlikely that the coin-using societies of Britain, who remained on the fringe of the Empire and became increasingly more isolated, would have known who was currently in power, particularly with an average rule of just four years. As such, it could be implied that the population of Britain would have little to no allegiance to whoever was in power. However, the fact that the bust design is so rarely clipped may counter this implication by suggesting that a level of respect for Roman authority still remained. One reason for this could be due to the militaristic connections within Lancashire, and the fact that a large proportion of the communities occupying the county would have been likely to be linked to the military, either through their own active service, or familial links. However, it may also be implied that the acceptance of a monetary economy had become so ingrained in Lancashire by this period, particularly due to the level of military occupation, that for a coin to be considered to have monetary value it needed to retain the imperial bust, as it had always done. The high levels of military occupation in Lancashire may also explain why clipping is a rare phenomenon in the country, as those more likely to be using the coinage in exchanges would perhaps be more likely to have an allegiance to authority and therefore did not want to be seen defacing coins in anyway.

The rarity of coin clipping in Lancashire, Rossall Fleetwood hoard excluded, means it is important to compare the quantities of clipped coins found in other parts of the UK, in order to try and understand this aspect of a coin's biography in more depth. The PAS provides a wealth of data in their recording of artefacts and enabled a good sample to be explored with regards to clipping. If we consider the PAS (2019) evidence for the county of Hampshire, there is evidence for 72 clipped coins with images recorded (data correct as of December 2019), suggesting that more clipping may have been occurring in this area, perhaps due to a need for raw material to produce new coins. Hampshire was selected as a comparison county due to the different social connotations with the period, less military influence and more focus on towns and cities. This is to allow for an exploration of the trends highlighted above for areas of Britain with fewer military connotations. Of the 72 clipped siliquae from Hampshire, all of them display the same pattern as Lancashire, with the bust remaining unclipped. This suggests that occupation type (military or non-military) may have little effect on the structure of coin clipping. However, it is important to highlight that whilst the patterns between the Lancashire and Hampshire datasets imply the same approach for the methods of coin clipping, these provide evidence of just two examples. If we are to understand one aspect of what makes a coin a coin, in the form of clipping, it is crucial that future study aims to expand the evidence to include a wider geographical area. Due to the evidence outlined above, it can be argued that whilst coin clipping can be seen as a reaction to economic crisis, there are still social and political factors at play that govern how and where this phenomenon occurs. Furthermore, the fact that the obverse bust remains unclipped may also suggest that it is the imperial portrait that makes a coin a coin. This concept may also link into the appearance of unofficial issues, which are locally made copies. These copies, though crude in design, still conform to the same style as official issues with a copy of the imperial bust on the obverse, and the reverse maintaining images of deities. It has been argued elsewhere in this thesis that unofficial issues were created in response to a shortfall in circulation of official issues, and as such the need to make coins locally may have lent itself to a lapse in design (see chapter 4.3). However, this appears to not be the case and may suggest that there are fundamental design principles required for a coin to be considered as such, and thus carry out its function.

If we now look at the effect of clipping on the obverse legend of the coin, it can be demonstrated that 98% of the Lancashire data shows that the legend is likely to be removed from the coin during the process of clipping. This may contrast the notions explored when looking at the Emperor's bust and suggest a lack of disrespect to the ruler. However, it is important here to consider the extent of literacy in Britain during this period, with Woolf (2009, 46) highlighting that few members of society would have been fully literate. In fact, the majority of written evidence is focused around military zones, with multiple ink tablets being identified at Vindolanda, concentrating on the successive units that occupied the fort space and featuring information on the households of the commanding officers (Mattingly 2006, 40). There is also some evidence of contemporary written sources for civilian literacy in Roman Britain. For example, Mattingly (2006, 40), highlights the curse tablets from temple settings such as those at Bath. The curse tablets can be seen to be 'reactionary' with the texts focusing on revenge for wrongs that have be carried out towards the aggrieved and seeking justice towards the perpetrators of these wrongdoings (Adams 2006, 1). Tomlin (2018, 214) highlights that the curse tablets feature writings from many different individuals and that some of these demonstrate more advanced literacy than others, with some crude inscriptions of letters also apparent. Five of the 122 tablets feature patterns of regular repeated scratches and Tomlin (2018, 215) suggests that these may represent 'pseudo-text', whereby illiterate individuals are trying to maintain the pretence that they are as literate as their counterparts by imitating written text. The Bloomberg tablets also provide some evidence of the extent of Roman literacy, with one of the tablets (Tablet 50) having been written by a slave in AD 64. The translation reads

'I, Florentinus, the slave of Sextus Cassius […]tus, have written by order of my master that he has received the two payments from the … farm …' (Roman Inscriptions of Britain 2022).

This example highlights that literacy may not have been a skill that was reserved for societal elites but instead could be something that was more common than previously understood. Alternatively, it may represent the relationships between individual slaves and their owners, who perhaps invested in the learning of those they owned so they could help them in business. This may be exemplified by Bloomberg Tablet 44, which describes slaves and freemen acting as agents for the payment of transactions. This tablet was found at the site of Bloomberg European headquarters and Tomlin (2018, 204) suggests that it is the first dated financial document of the City of London, dating to January AD 57. Other examples from the Bloomberg tablets include 'letters addressed to a merchant, a brewer, a cooper, a cost account of successive deliveries of beer written by different hands, a letter complaining of transport animals being taken without permission, an allusion to an ill-judge loan which had become a laughing-stock 'through the whole market' and a plead 'by bread and salt' for money to be sent as soon as possible' which also suggest that civilian literacy may have been more advanced than previously understood (Tomlin 2018, 206). Evidence from the temple site at Uley, Gloucestershire provides evidence of literacy in the countryside of Roman Britain. The site uncovered 140 tablets, 86 of which were inscribed, with the others being blank. Tablet two reads

'A memorandum (commonitorium) to the god Mercury [written over Mars Silvanus] from Saturnina a woman, concerning the linen cloth which she has lost. May he who stole it have no rest before / unless

/ until he brings the aforesaid property to the aforesaid temple, whether man or woman, whether slave or free …' (Tomlin 2018, 216).

The other side of the tablet suggests that the woman will offer one third of the goods recovered to Silvanus, but this time the name is not corrected to Mercury. Whilst the writing of the tablet is extraordinary suggesting a high level of literacy, the corrections of the Gods name in the first instance, but not the second suggests she was unsure who she should write to (Tomlin 2018, 217). More commonplace or everyday examples of Roman literacy can be seen through the graffiti found on pottery on forts, vici, civitas capitals, small towns, villas and rural sites, with Evans' (1987, 191) study highlighting 400 examples identified across these categories. The graffiti itself included the use of personal names, numbers and content and suggested that there was a slight variation in frequency as you move across the settlement hierarchy. Graffiti was more common in forts and towns compared to rural settlements and villas (Evans 1987, 193). However, the presence of names and numbers added to the surface of the pottery, suggests that increased literacy may have been more widespread than previously understood from epigraphic evidence. The examples represent individual words or numbers, and therefore it may be implied that these individuals were not demonstrating high level of literacy, but instead had learned key words, numbers or phrases that were useful in their everyday lives. In this sense, it might still be argued that they would not have been able to read the full legend of a coin, which perhaps feature words that are not associated with their everyday roles. The surviving contemporary written sources suggest that whilst large volumes of written evidence may have been identified at a handful of specific sites, literacy may have been an element that both united and divided different social groups within the province (Mattingly 2006, 41). In a military setting, literacy and the Latin language can be seen as an important aspect of a soldier's identity. Upon joining the army many soldiers were required to adopt Latin names in order to be seen to conform to Roman ideological practices (Mattingly 2006, 200). The focus of epigraphic evidence focusing on military activity only serves to compound the notion that literacy may have been restricted to those who adopted a military focused identity. Handwriting analysis of the Vindolanda tablets suggest that there is as many as several hundred different people who were creating these documents and suggests that in order for people to advance further up military rankings, literacy may have been increasingly important (Mattingly 2006, 201). However, it is important to highlight that military settings were not just home to high ranking military officials. Lower ranking soldiers are likely to have lower literacy levels, and fort spaces were often occupied by the families of military personnel and traders. In fact, it is estimated that tens of thousands of people would have occupied these military spaces and their extramural settlements (Stallibrass 2008, 103). It can be argued that these individuals were operating within a world where the written record was an important part of society (Mattingly 2006, 201), there is insufficient evidence to imply that everybody occupying these spaces would have had a high literacy level. Furthermore, literacy in Roman Britain may not have been as restricted to military activity as previously thought, as demonstrated by the examples at Bloomberg, Uley and representation on pottery throughout Britain. However, written evidence in the province still appears to be restricted to few sites and therefore it is likely that the vast majority of people operating within these spaces had little to no level of literacy. Eckardt (2017, 224) highlights that whilst many people could not read or write, a 'literate mentality' still played an important role and effected people's lives. Therefore, we should consider literacy as a multifaceted concept, which included multiple practices which were responsive and changed over time. Consequently, it is important to consider that literacy exists on a scale. On one hand there is elite literacy (Eckardt 2017, 225) which may be represented by the Vindolanda tablets which outline military life at the fort, on the other those individuals who may just be able to understand or produce simple codes (Eckardt 2017, 225), such as those numbers of letters found on pottery as discussed above.

If coin clipping was taking place by local communities in order to subsidise the lack of coins circulating within the economy, then it is entirely possible that a lack of literacy amongst the wider population meant the legend was unimportant and could be clipped off to gather the raw material required. Furthermore, it is also likely that clipping the legend was inconsequential due to its location on the edge of a coin. If clipping was to be a worthwhile process (i.e., enough raw material was to be recovered to allow additional unofficial copies to be made), then perhaps choices were made between losing the legend and maintaining the bust of the Emperor. Clipping a word may have been considered less personal than clipping a face. There are some practical considerations to consider, such as the fact that it would be difficult to clip the portrait first without the removal of the legend. However, if the bust was also to be clipped after the legend was removed, then it may have been more practical to melt the entire coin and use the raw materials to make new unofficial issues. Furthermore, if there was little structure to the coin clipping process then it would be more likely that the clipping would be more haphazard and extend into the imperial portrait. However, this does not seem to be the case, with the Imperial portrait predominantly remaining intact (96% of the Lancashire sample and 100% of the Hampshire sample demonstrated no clipping on the imperial portrait). Consequently, this implies that there is a level of structure to the clipping process which further highlights the deeply embedded respect towards the object, and fundamentally characterises the elements that make a coin a coin.

10.4 Coins Beyond Coins

As shown in Chapter 8, whilst few in number, there are examples of coins being transformed into other objects. In Lancashire, there is evidence for three coins showing signs of perforation, possibly transforming the biography of the object from a coin with monetary value into a an entirely new object, perhaps a pendant, with its own unique biography detached from that of a coin. It is important to highlight that we cannot say with any certainty when coins themselves were perforated. The presence of perforated coins in post-Roman contexts, such as in Anglo-Saxon graves, suggest that this transformation and change in biography could have occurred after the end of the Roman period. However, this interpretation can only be made based on the known context of re-use.

The archaeological literature on the subject suggests that the reuse of coins in the post-Roman period as pendants and decoration is likely to be the most common way in which these objects were used. Analyses of Romano-British coins found on Anglo-Saxon cemetery sites has been undertaken by Meaney (1981, 216) who suggests that many of the coins date to the third and fourth centuries, whilst perforated coins are found in graves during fifth and sixth centuries. For example, White's 1988 corpus of Roman coins in Anglo-Saxon burials highlighted that there were 455 coins from 102 sites, which was an increase from John Kent's work in 1961 which included 195 examples from 29 sites. As more excavations of Anglo-Saxon cemeteries have taken place, the number has continued to increase. In fact, Werthmann's PhD thesis (2019, 64) has identified 234 coins from 134 graves at 43 cemeteries across her study area of the coastal counties of England, making coins the most frequently found Roman object in the grave good assemblages.

Moorhead (2010, 40) highlights that over half of Roman coins found in the post-Roman period have been pierced for use in personal adornments, including as pendants for necklaces. It is possible that the images or writing on the coins would have endowed them with magical qualities in a society that was largely illiterate (Moorhead 2010, 42). Fulghum (2001, 139) also notes that to simply label these objects as jewellery without understanding the iconography displayed is to underestimate their significance. She considers that it is the iconography itself which led to its transition into a new object (see below).

Werthmann (2019, 64) and Moorhead (2010) have suggested that third and fourth century coins are more commonly found in early medieval contexts, and this is most likely to be due to the availability and accessibility of these issues. Where perforated coins are found within Anglo-Saxon graves, there appears to be two trends in their location. Firstly, they are found around the neck and chest, indicating they would have been a pendant. For example, grave three at Blewburton Hill, Oxfordshire, a sixth century burial of a child provided evidence of a perforated coin of Constantine I found at the neck with beads (White 1988, 66). Secondly, perforated coins can be found near the torso associated with other items and remnants of fabric, suggesting they belonged in a bag with other objects (Werthmann 2019, 65). An example of this can be seen in a different grave at Blewburton Hill. In grave twelve two perforated coins, one of Roma and one of Helena, were found at the pelvis of a female inhumation, associated with a copper alloy double loop ring, sheet fragment, a knife and an iron strip (White 1988, 66). White credits the original excavation photographs as clearly showing the coins were associated with the rings in a probable pouch or purse (White 1988,66).

The above example was from a female burial and in 42% of Werthmann's sample, Roman coins found in Anglo-Saxon graves were associated with females, with 33% having no gender identified. This suggests that Roman coins may have been frequently taken out of circulation and fundamentally changed to create a new object, associated with jewellery. However, Geake's (1997) survey of conversion-period sites suggests that Romano-British coins are more likely to be unperforated and associated with bags in sixth and seventh century graves, suggesting a change in how coins were being reused. This indicates that in a fifth and sixth century context, a coin's object biography may transform into a new object in one way (becoming jewellery), but in the sixth and seventh centuries this transformation forms an entirely different object (perhaps a token as the monetary or economic value of the coin may have been based on the value of its metal, rather than its use in exchange within the monetary system it was created within).

In general, Romano-British coins have not only been reused as objects associated with personal adornment or collections, but there are also examples of Roman coins being used as weights in the medieval period. Biggs (1990, 66) highlights the presence of Roman coin weights (usually brass coins) in the Gilton Hoard dating to the second half of the seventh century (Kilger 2008, 266), which were rubbed down or worn and furnished with a number of dents or punchmarks. These objects were found alongside scraps of gold and silver, a small beam, and fragments of scale pans. Further possible examples of this can be seen at Barton-on-Humber, Dover, Ozengell, Sarre and Watchfield (Scull 1990, 185). These have consisted of balances, two or three copper alloy or lead ingots and a number of pre-Anglo-Saxon coins (predominantly Roman, though examples of Iron Age coins are known from Watchfield and Gilton). The coins usually show evidence of being filed down or abraded and then marked, which has been interpreted as adaptations for use as weights (Scull 1990, 185). This may provide another example of a coin's object biography being transformed from an object of economic value to a new object undergoing a different set of social interactions. However, the evidence suggests that coins that have been specifically perforated are most likely to be reused as objects associated with personal adornment. If this argument is to be maintained, then it leads to questions as to why certain coins are chosen to be reused in this way.

As highlighted above, the context for the re-use of Roman coins is important. Of the three perforated examples from Lancashire, two were part of the Rossall Fleetwood hoard and as it is suggested the hoard was buried towards the end of the Roman period, these objects would have been perforated during the Roman period. The third example comes from PAS evidence, therefore the specific archaeological context for this coin is less clear. However, the iconography displayed on all three coins has strong connotations of law and order associated with Roman principles (see chapter 8.2.2), which may imply a Roman date at the point of perforation. Irrespective of a known date at the point of perforation, it is important to note that the individuals who are repurposing the object may have still considered themselves to be Roman in a new post-Roman world, as the terms Roman and Post-Roman are assigned in modern times to distinguish between groups and their material culture. As has been seen elsewhere in this thesis, the main argument against Romanisation as a concept is that Iron Age populations would not have ceased to exist following occupation by the Romans (see Chapter 3). Consequently, the same logic is to be afforded to the Roman and Post-Roman period, whereby Romano-British communities would not have ceased to be 'Roman' following the abandonment of official imperial control in AD 410. Esmonde Cleary (2011, 26) suggests that throughout fifth century Britain 'one vocabulary of power remained', which focused on or appealed to the memory of the Roman Empire and its displays of power. This can be seen in the artefactual record with the evidence for the Quoit Brooch style, common in modern day Kent and East and West Sussex. This style of fitting suggests that the communities using them placed importance on the continued use of 'Roman' objects (Esmonde Cleary (2011, 25). Their presence in some of Britains early Anglo-Saxon cemeteries in East Sussex, such as High Down, may again imply the continuation of 'Roman' objects with Anglo-Saxon spaces, and demonstrate the amalgamation of styles and beliefs that were undertaken within these communities. Thus, emphasising the fluidity of culture, and demonstrating that there was no hard end to the Roman period.

The three examples from Lancashire and two examples from Plantation Place, highlighted that the location of the perforation itself could be important for understanding the ways in which the iconography would have appeared, both to the wearer and the viewer.

If we expand this to use the available PAS data of perforated coins from England and Wales, we can begin to explore this concept of the importance of iconography and the display of the pendant to the viewer or wearer, allowing a more detailed analysis of this importance using a bigger sample size.

A search for perforated Roman coins, searching for key words, provided 336 examples, of these 273 records have images allowing the author to see the perforation, and 269 of these have findspot information (PAS 2022, data correct as of July 2022).

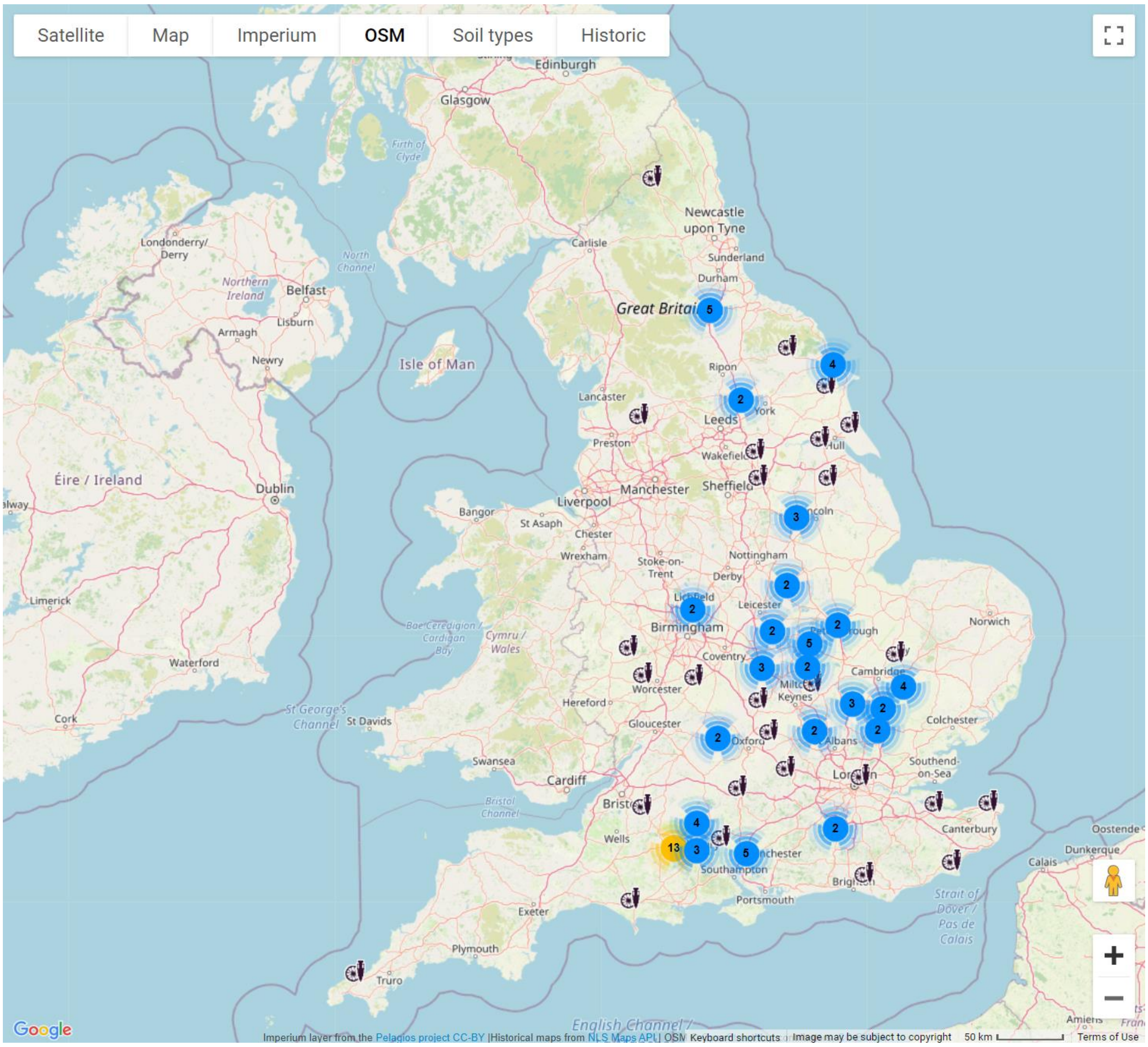

Figure 10.4-1. Geographical distribution of perforated Roman coins in Britain, PAS 2022

As demonstrated in Chapter 8.2.2, there is only one example from the PAS of a perforated coin in Lancashire, as with clipping the remaining examples are focused on the North East, East Midlands and South East (Figure 10.4-1).

Unpicking the iconography on each of the perforated examples and looking at them within the context they were found in, may indicate whether particular designs appear to be more prevalent in certain geographic locations, as well as if there are specific designs which seem to be more commonly perforated. Using the example of the 273 perforated coins we can begin to delve into this data (see Table 10.4-1).

	Hertfordshire	Isle of Wight	Cambridgeshire	Warwickshire	Leicestershire	Oxfordshire	Unknown	Suffolk	Wiltshire	Northamptonshire	Hampshire	Berkshire	Sussex	Yorkshire and the	Dorset	Lincolnshire	Nottinghamshire	Kent	Essex	Darlington	Norfolk	Worcestershire	Greater London	Staffordshire	Surrey	Shropshire	Buckinghamshire	Gloucestershire	Cornwall	Northumberland	Somerset	Lancashire	Bedfordshire	Totals
Unknown	3	2	16	1		2		8	20	4	5	2	3	6	1	5	2	2	1	4	3	1	1	2	1		1	1		1	1		2	101
Sol		1	1				1	1	1	2	2			1		1																		11
Emperor dragging Captive			2			1		1	1		1															1								7
Globe on Altar				1				1	1																									3
Pax			1					3								1				1														6
Pietas					1				1																									2
Nobilitas						1																												1
Felicitas	1					1			1																1									4
One Soldier			2					1																										1
Two Soldiers								4	8	2				1	1												1							17
Victory	1		4		1			4	11	2	3			1		2	1										1				1			32
Unknown Figure			1			1		3	3	1	2	1		4	1	1		1	1														1	21
Fortuna			1											1						1														3
She Wolf, Romulus and Remus								2	3	1																								6
Laetitia					1				1																									2
Salus			1					1																										2
Chi-Ro								1																										1
Campgate with two turrets								1	2							1																		4
Virtus			1							1			1																		1			4
alter inscribed VOTIS XX										1			1		1																			3

	Hertfordshire	Isle of Wight	Cambridgeshire	Warwickshire	Leicestershire	Oxfordshire	Unknown	Suffolk	Wiltshire	Northamptonshire	Hampshire	Berkshire	Sussex	Yorkshire and the	Dorset	Lincolnshire	Nottinghamshire	Kent	Essex	Darlington	Norfolk	Worcestershire	Greater London	Staffordshire	Surrey	Shropshire	Buckinghamshire	Gloucestershire	Cornwall	Northumberland	Somerset	Lancashire	Bedfordshire	Totals
with globe on top																																		
wreath with VOT//XX	1		1					1	1					1			1																	6
Mars																				1														1
Lion and Thunderbolt								1																										1
Liberalitas																					1													1
Spes								1																										1
Genius						1			3												1													5
Valens									1																									1
Fallen Horsemen									2																									2
Two captives seated														1																				1
Aequitas									1																									1
Emperor								2	3		1			1																				7
Securitias			1						1																				1					3
Emperors and Victory									1																									1
Wreath									2																									2
Antelope			1																															1
Horseman riding with whip								1																										1
Fides												1																						1
Brutus																																1		1
Roma										1	1																							2

	Hertfordshire	Isle of Wight	Cambridgeshire	Warwickshire	Leicestershire	Oxfordshire	Unknown	Suffolk	Wiltshire	Northamptonshire	Hampshire	Berkshire	Sussex	Yorkshire and the	Dorset	Lincolnshire	Nottinghamshire	Kent	Essex	Darlington	Norfolk	Worcestershire	Greater London	Staffordshire	Surrey	Shropshire	Buckinghamshire	Gloucestershire	Cornwall	Northumberland	Somerset	Lancashire	Bedfordshire	Totals
wine jug, ladle, sprinkler and lituus.																				1														1
Venus																				1														1
Totals	6	3	33	2	3	7	1	37	68	15	15	4	5	17	4	11	4	3	2	9	5	1	1	2	2	1	3	1	1	1	3	1	2	273

Table 10.4-1 Geographic locations and imagery of the perforated coins from the PAS database

In terms of geography, Wiltshire demonstrates the highest number of perforated Roman coins with 25% (68 coins) falling into this category. This may indicate that perforated coins were more common in this part of Britain. However, it is important to highlight that the data is taken from PAS data, which is associated with finds made by metal detectorists. Therefore, this may just be indicative of more metal detecting being undertaken in and around rural Wiltshire, or at least more reported finds from this area. However, the predominance of these issues in Wiltshire suggests there may be a regional pattern for this activity, especially when considering that the next highest number of perforated coins comes from Suffolk with just 13% (36 coins) of the total sample.

In terms of iconography, 37% (100/273) of the coins are too worn to be able to establish what the reverse iconography represents, this highlights the input a biographical approach might have on understanding patterns. If the coin becomes worn before deposition, then this might suggest that iconography was not important and that in fact the object was chosen as it represented a circular metal object that could be used as a pendant. If the coin became worn after deposition, then the iconography may still have been important in the selection process for perforation, even if these images are no longer visible to us.

Of the visible iconography, imagery associated with Victory is the most commonly identified with 12% of the sample falling into this category. This iconography in its broadest sense is associated with the celebration of military victories over conquered nations and emphasises the domination of the Roman Empire (Kéfélian 2021, 112). The presence of these coins as the most prominent imagery in the known portion of the sample, may imply that the individuals buried still assimilated with the power of Rome, or at least the imagery of strength that these coins portray.

However, it is important to note that, where imagery could be identified on the PAS data, the iconography represented over 30 recognisable individuals. When considered as a whole group, these coins account for 56% of the entire sample of perforated coins, with the remaining 44% coming from unknown individuals or unknown imagery. This may suggest that perhaps on the whole, iconography was not the main selection criteria for perforated coins, and it was merely the fact that it was Roman that was important.

10.4.1 Single Perforations

Coins with a single perforation seem to be the most common with 249 examples, one coin has an attempted singular perforation (the hole does not go all the way through), 17 coins have double perforations, there is one example of a coin with three perforations and two examples of a coin with more than three perforations. Four coins demonstrate an attempt at a perforation, where the indicative shape of a perforation has removed part of the flan, but the hole does not go the entire way through the flan itself.

To interrogate this data further, the coins will be considered based on the orientation of the reverse image when strung as a pendant. In this instance, the reverse image is considered the 'correct' way up for the wearer if the perforation is at around 12 o'clock and therefore when strung the head of any individual depicted would then be at the 'top' of the coin. The image is considered the 'correct' way up for the viewer if the perforation sits at around 6 o'clock and therefore when strung the head of any individual depicted would be at the bottom of the coin, making it the 'correct' way up if the wearer was to look down at their pendant. The reverse is considered angled if the reverse image is clear, but the perforation means that any imagery depicted appears to be diagonal or off centre.

Of the 249 coins with a single perforation (Table 10.4.1-1), four coins would demonstrate the reverse image as being the 'correct way up' for the person wearing the coin when they were looking down. Seven of the coins would have the reverse imagery the 'correct way up' for anyone else viewing the coin. The majority of the unworn issues (82) had a reverse design that was neither the correct way up for the wearer or the viewer, which may suggest that the imagery was not important. Alternatively, it may suggest that the projection of the imagery to the outside world (the way it was viewed) was not as important as the symbolism behind the image itself. By considering the imagery associated with these coins, we can begin to look at their biography in a different manner, for example, as their use changed from being a coin of monetary value to a new object, most likely a pendant on a necklace. Alternatively, this might be considered a new object biography, as the coins' original lifecycle has ended.

Reverse Correct way up for wearer	Reverse Correct way up for viewer	Reverse Angled	Reverse Worn
4	7	82	156

Table 10.4.1-1 Table to show how the reverse iconography would be displayed due to perforation

10.4.1.1 Correct way for viewer

If we consider the reverse designs that would be the correct way up for anybody viewing the coin if worn as a pendant, we may begin to be able to understand the imagery and associations people were trying to reflect through the wearing of a coin. This could highlight how the original coin's biography has transformed from a token of economic value to a new object whose symbolism holds more value than its physical or economic properties. In order to do this, we will examine the seven examples from the PAS in more detail below.

NARC-FC57F9

Figure 10.4.1.1-1. Image of NARC-FC57F9, PAS 2022

This coin is a copper alloy nummus (Figure 10.4.1.1-1), dating to Reece Period 17 (AD 300-335) found in Norton in the East Midlands (PAS 2022). The reverse image shows the she-wolf suckling twins and is associated with Romulus and Remus, and the foundations of Rome itself. The she-wolf, therefore, is perhaps one of the most powerful images of Rome, as 'there is no Rome before her and there would be no Rome without her' (Mazzoni 2010, 15). The importance of the she-wolf has been discussed throughout antiquity, with Francesco Domenico Guerrazzi writing in 1863 that Rome 'has the nature of the she-wolf' (Mazzoni 2010, 15). Rissanen (2014, 335) highlights that the she-wolf was an 'iconic scene that was not used randomly in provincial art' and that it represents the very essence of being Roman, being used as an expression of loyalty to Rome and the Emperor. This may suggest that the coin biography has changed from its intended purpose at production. Originally, the object was created as a low value coin of Constantine, during the fourth century and was presumably used in circulation. However, the addition of this perforation may have transformed this biography from being an object of monetary value to being an object of personal adornment. As a possible pendant, the imagery portrayed is one of power and strength, with significant links to Roman rule and the power of Rome.

WILT-3B15B9

Figure 10.4.1.1-2 Image of WILT-3B15B9, PAS 2022

This coin represents a copper-alloy sestertius of Trajan Decius (Figure 10.4.1.1-2), dating to Reece Period 12 (AD249-251) and was found in Langford, Oxfordshire (PAS 2022). The reverse type depicts Felicitas, standing left, holding a long caduceus in her right hand and a cornucopiae in her left hand. Felicitas is associated with prosperity with the reverse inscription FELICITAS SAECVLI S C, meaning the prosperity of the age (PAS 2022). During the Roman Republic, Felicitas was associated with success on the battlefield, but by the time of the Roman Empire this connotation had shifted to representing the more general blessings because of the successes of the Emperor (Manders 2012, 193). The theme of prosperity is a common one for third century coins, with Manders (2012, 195) highlighting that only eight out of 35 Emperors did not issue coins referring to happiness or prosperity. Due to the unstable nature of the third century, it is not surprising that Roman Emperors were choosing to use coinage to try and portray an image of stability. Some Felicitas reverse types hold specific connotations to military success, such as one of the types of Valerian with the legend FELICITAS AVGG/AVGVS-TORVM, which is combined with an image of Valerian, Gallenius and Valerian's son accompanied by soldiers in a cart (Manders 2012, 196). However, the imagery in this example is less military heavy and features Felicitas in her usual attire holding a caduceus and cornucopiae. Morris suggests that the presence of these two symbols represents that peace and prosperity leads to a successful harvest (Morris 1882, 54 and Prusac 2011, 83). The fact that Fecilitas is associated with Rome's state religion and a symbol of prosperity might suggest that the reuse of this coin is to portray symbolism of success (Prusac 2011, 83). Thus, the biography of this coin has shifted from an object of economic value, to one which is heavily endowed with social meaning and symbolism.

SF-3E3253

Figure 10.4.1.1-3 Image of SF-3E3253, PAS 2022

This coin is a copper alloy nummus of Constantine I (Figure 10.4.1.1-3), dating to Recce Period 15 (AD317-318), and was found in Suffolk. The reverse legend reads SOLI INV-I-CTO COMITI (the unconquered sun) and features Sol standing right with a chlamys on his left shoulder, a globe in his left hand and his right hand raised. The perforation, whilst allowing the obverse to be the correct way round for the viewer, does mean that the head of Sol is pierced on the reverse. Marlow (2006, 225) highlights that the presence of the sun god became common in the third century, during periods of discontent and civil war. The connotations of invincibility and the eternal became used as a representation of the Emperor. By the reign of Constantine in the early fourth century the association with Sol escalated, with the SOLI INVICTO COMITI legend appearing on approximately three-quarters of his coinage between AD 313 and 317. Establishing the invincible sun as the companion to the Emperor (Marlow 2006, 225).

NCL-B75EB2

Figure 10.4.1.1-4 Image of NCL-B75EB2, PAS 2022

This coin's is a copper allot radiate of Gallienus (Figure 10.4.1.1-4), dating from Reece Period 13 (AD260-268) and found in Darlington (PAS 2022). The reverse inscription reads PIETAS AVG and depicts Pietas standing left with hands raised and an altar at feet. Pietas was associated with family values and the 'reciprocal affection and obligations shared by family members' (Saller 1988, 399). The personification of pietas on this coin may indicate that it was perforated and reused for his associations with family values.

LEIC-E6AB88

Figure 10.4.1.1-5 Image of LEIC-E6AB88, PAS 2022

This issue is a worn copper alloy barbarous radiate which is an obverse copy of Tetricus II (Figure 10.4.1.1-5). Interestingly, the reverse of this coin is a copy of Tetricus I and represents Laetitia standing left holding a purse and anchor. The PAS record for this coin suggests that the triangular nature of the perforation may imply it was made using a knife blade or similar object (PAS 2022).

The combination of Tetricus I and Tetricus II for the obverse and reverse respectively, suggests this is a more unusual coin as there would not be an official counterpart to this issue, this may suggest, in virtue of the biographical approach, that during the production phase, unofficial dies were combined to produce coinage as needed and that their comparison to official issues was not as important. If the perforation for this coin was made by a knife blade, then it would emphasise the lower quality of the metal for a knife to be able to perforate the coin. Furthermore, this may indicate the coin was perforated for reuse quickly, or in a hurry, and that might explain the unusual shape of the hole created.

SUR-638656

Figure 10.4.1.1-6 Image of SUR-638656, PAS 2022

This coin is a copper alloy radiate of Allectus dating too AD 293-296 (Figure 10.4.1.1-6). The reverse imagery depicts Felicitas standing left with caduceus and cornucopiae. Felicitas is thought to have personified happiness, focusing on the welfare, prosperity and fertility of Rome (Prusac 2011, 75), and sees these connotations being transformed from the private sphere into the public world through this imagery and its connection to the state. Felicitas became seen as a symbol of the prosperity of the Roman Empire, particularly when combined with the caduceus, a staff associated with Hermes, which symbolised wealth (Prusac 2011, 83). The symbolism of this imagery being associated with happiness and fertility may be indictive of why the coin was perforated in this place and being the correct way around for the wearer to see it.

BERK-623125

Figure 10.4.1.1-7 Image of BERK-623125, PAS 2022

BERK-623125 represents a copper alloy nummus of Maximanus (figure 10.4.1.1-7), dating to AD 307-318, found in Oxfordshire. The reverse imagery represents Genius standing facing left with corn measure, cornucopiae. The PAS record indicates that the coin was perforated at 6 o'clock when looking at the reverse, however the imagery suggests that the perforation may have become covered by rust and corrosion during antiquity. The connotations of Genius are associated with protection and guardianship of man, organisations and regions (Sutherland 1963, 15) and from the end of the third century was taken to represent the unity of Rome and the Empire, at a time when the Empire was becoming increasingly under threat.

10.4.1.2 Correct way for wearer

In terms of the four coins which suggest the imagery would be the 'correct' way around for the wearer looking down at the pendant (see table 10.4.1), all four coins have reverse images associated with personifications of individuals, and no representations of iconography associated with key events, such as the she-wolf and twins. Even though the sample size is small, this may imply that reverse imagery that would be the 'correct' way around for the wearer was chosen based on the values they represent and the emotive connotations this would have with the wearer. In contrast, the use of more imperial iconography on coins which would be strung the 'correct' way around the viewer may be associated with the impression these individuals were trying to portray to the outside world.

WILT-0FA13F

Figure 10.4.1.2-1 Image of WILT-0FA13F, PAS 2022

This example is the only silver coin in this sample (Figure 10.4.1.2-1), a denarius of Carausius dating to Reece Period 14 (AD 286-293) and found in Wiltshire. The reverse type depicts a lion facing left holding a thunderbolt in its jaws (PAS 2022). This symbolism could be related to campaigns that were led in the east, where the lion was a symbol of the sun (Manders 2012, 250). The thunderbolt in the lion's jaw may then be interpreted as a sign of Roman dominance in this area (Manders 2012, 250). The transformation of this object from a silver coin of high value to an object likely to be worn as a pendant suggests that the imagery was selected initially and that this pendant may have symbolised power and strength, regardless of whether the owner or people viewing the object would have known about the connotations of the imagery in the Roman east. Interestingly, this find helped to alter the Treasure definition to include precious metal coins which had been transformed into a new object (PAS 2022). It is maintained that silver and gold pierced coins are rarely found within coin hoards, meaning that these coins were purposefully taken out of circulation and transformed into something else, and therefore should be considered as jewellery. Whilst this thesis maintains that coins are also objects in their own right, it is clear that the transformation of coins into new objects, encompassing new biographies is also being more widely recognised within the archaeological community.

SF-58BA3E

Figure 10.4.1.2-2 Image of SF-58BA3E, PAS 2022

This coin is a copper alloy nummus from the house of Constantine (Figure 10.4.1.2-2), dating to Reece period 17 (AD 330-335), and was found in Suffolk (PAS 2022). As with NARC-FC57F9, this coin represents the she-wolf and twins' reverse type, as a coin this imagery is associated with the foundations of Rome and is suggested to be a symbol of Roman assimilation. Through the transformation of this coin into a new object, most likely to be a pendant, it can be suggested that this symbolism may be carried over into the new object's biography.

BH-82F8E7

Figure 10.4.1.2-3 Image of BH-82F8E7, PAS 2022

This is a copper alloy House of Constantine nummus (figure 10.4.1.2-3), dating from Reece Period 17, AD 347-348 (PAS 2022). The reverse type is VICTORAE DD AVGG Q NN, depicting Victories with wreaths. Manders (2012, 281) highlights that there are many Victory reverse types for Roman coins, which suggests that the design is not always associated with real life victories in battle but instead the symbolism of being victorious. The fact that there are many coins featuring Victory may suggest that it was a commonly understood symbol within the community. Therefore, by changing this coin's biography into a new object which is likely to have been worn, it might be argued that this new object of personal adornment was displaying a commonly understood symbol.

NARC-844022

Figure 10.4.1.2-4 Image of NARC-844022, PAS 2022

This issue represents a worn copper alloy nummus (Figure 10.4.1.2-4) of the House of Constantine dating to AD 335-337, produced at the mint in Trier. The reverse design is GLORIA EXERCITVS and represents two soldiers with one standard. The issue was found in Northamptonshire.

10.4.2 Incomplete perforation

In addition, to the coins with one perforation there is also one record on the PAS for a Roman coin with a single attempted perforation to the centre, though this hole does not go all the way through to the back of the coin. SF-3ACE9C (Figure 10.4.2-1), is a copper alloy nummus of Constantine I, found in Suffolk and dating to AD306-337, however the reverse type of the coin is unclear (PAS 2022). We cannot say when this coin was perforated, however we can see that the perforating of this coin was abandoned for an unknown reason. This coin serves as an example of an object between biographies, the intent to transform the coin into a new object through the act of perforation, but the fact that the perforation remains incomplete suggests that this transformation was never fully actualised. However, the coin may have instead transitioned back to its original biography and continued to function as coin until it was lost.

Figure 10.4.2-1 image of SF-3ACE9C, PAS 2022

10.4.3 Double Perforations

When considering coins with two perforations, perhaps, the most relevant example for this thesis is that of the Republican denarii from Whalley, Lancashire (PAS 2019, LANCUM-D5FA15), which has two perforations allowing the coin to be reused as a pendant. In this example, the two perforations were in front of the bust, meaning that when strung the reverse image would have been facing the ‘correct’ way up for the wearer, but would have been upside down to anyone who would have viewed it whilst being worn. This may suggest that the Lancashire example of the Republican denarii is quite rare with two perforations to the flan. As with the coins with one perforation, if we look more closely at the remaining 16 coins with double perforations (Table 10.4.3-1), we can begin to understand whether there is a standard way the coins images are being displayed by the placement of the perforation.

	Location	Bust Correct for Viewer	Bust Correct for Wearer	Reverse Correct for Viewer	Reverse Correct for Wearer	Bust and Reverse Angled	No Visible Design Details to Assign
LANCUM-D5FA15	Lancashire				✓		
WILT-D1B8A2	Wiltshire						✓
CAM-B141A8	Cambridgeshire	✓			✓		
SF-913C91	Suffolk	✓			✓		
SF-420541	Suffolk	✓			✓		
NARC-2B91B8	Northamptonshire		✓				
HAMP-EA7059	Hampshire					✓	
CAM-E4D7E2	Cambridgeshire					✓	
SF-552D51	Suffolk					✓	
NLM-EB62B6	Lincolnshire						✓
NMS-D13744	Norfolk						✓
BUC-80CD7E	Bedfordshire					✓	
SF-C8FDF1	Norfolk						✓
NARC-63B61C	Central Bedfordshire					✓	
PUBLIC-E87974	South Cambridgeshire					✓	
HAMP-3DDBB4	Hampshire					✓	
NMS-7BE575	North Norfolk						✓

Table 10.4.3-1 Design Orientation of Perforated Coins from the PAS

As demonstrated, there appears to be little standardisation in the ways in which the designs on coins with two perforations are represented. Four out of the seventeen examples show that the reverse image would be the 'correct' way around for the wearer, and three of these demonstrate the obverse would have been the 'correct' way around for the viewer depending on which surface of the pendant was shown outwardly. This may imply the coins and their imagery are specifically chosen for repurposing into a new object. The Lancashire example (LANCUM-D5FA15) has already been discussed in depth (see Chapter 9.3.2). However, if we consider the other three examples highlighted above, where the reverse imagery would be the 'correct' way around for the wearer only, we can begin to explore this notion in more depth. In this instance, the assumption is that the 'correct' way around for the wearer only is taken to mean that the individual wearing the pendant could look down at the object whilst it was being worn and the imagery would look correct to them. In contrast, if someone was looking at the pendant being worn by an individual the imagery would appear upside down.

CAM-B141A8:

Figure 10.4.3-1. CAM-B141A8. Perforated Copper Alloy Nummus, PAS 2022

This copper alloy Nummus of Constantine I, dates to AD 306-337 and was found in East Cambridgeshire. The reverse image depicts Sol standing left, raising right hand, with a glove in left hand, with the inscription SOLI INVICTO COMITI (PAS 2019). The reverse inscription translates to 'to Sol, the invincible companion' (DiMarzio 2012, 9). Sol represents the personification of the sun (Stevenson *et al.* 1889, 272) and emphasises the introduction of the cult of the Sun from the third century (Hasberghe 1972, x). The symbolic power of Sol may be intertwined with concepts of Romanitas and became a crucial challenge to Christianity (Hasberghe 1972, xi). As such, the symbol of Sol is a powerful demonstration of the practices by which individuals within the Roman Empire defined themselves, and therefore the fact this particular coin was chosen to be repurposed into a new object may be an important representation of this image to the person who chose to wear it.

SF-913C91:

Figure 10.4.3-2. SF-913C91, Perforated Copper Alloy Nummus, PAS 2022

Again, this example is a copper alloy nummus of the House of Constantine, dating to AD 330-340, and found in Suffolk (PAS 2019). As with NARC-FC57F9, the reverse of this coin also has the she-wolf and twins, a very powerful symbol of the strength of Rome. It is impossible to know why this coin was chosen to be reused in this way, however the selection of powerful symbology, with specific connotations to the Roman period, may imply an assimilation or affiliation with a Roman identity or Rome itself.

SF-420541:

Figure 10.4.3-3 Image of SF-420541, PAS 2022

This copper alloy nummus, dating to AD 348-350 from Suffolk, displays two perforations at the bottom of the coin (when looking at the reverse). The reverse imagery shows the Emperor standing left in a galley, holding either Victory or Phoenix, with Victory in the stern steering, with the inscription FEL TEMP REPARATIO. This inscription can be associated with 'a renewal of happy times' (Mattingly 1933, 182), or taken as a symbol of good luck. Furthermore, if the Emperor is holding a Phoenix, then the Phoenix has strong associations with rebirth (Davies 2000 ,253). As such, reusing this coin and displaying it in a prominent way, such as on a necklace, may project connotations of rebirth, new beginnings and an association with the strength and prowess of the Empire.

10.4.4 Perforated Roman Coins in Anglo Saxon Graves

As discussed above, perforated coins from the third and fourth century are often found in Anglo-Saxon cemetery sites as grave goods, with the burials most commonly being associated with the fifth and sixth centuries. This suggests a continuation in the biography of Roman coins, which are transcending time periods and being reused in new contexts outside of their intended economic function. In contrast, the PAS data may demonstrate the transformation of a coin's biography into a new object, which takes place within the Roman period itself, particularly with the presence of examples from the north, such as that in Lancashire.

Whilst we can never know for sure whether the perforated coins discussed here in the PAS sample were perforated in the Roman period, it has provided interesting discussion into the intentionality behind the perforation of coinage using the iconography of the objects as a basis for analysis.. This brief analysis also allowed for an exploration for any regional patterns in the use of these objects. However, the PAS data only provided a pilot study for single finds, that are found outside of an archaeological context. To explore this further, additional data has been explored from Anglo-Saxon cemetery sites, using Roger White's (1988) *Catalogue of Roman and Celtic Objects from Anglo-Saxon Graves*.

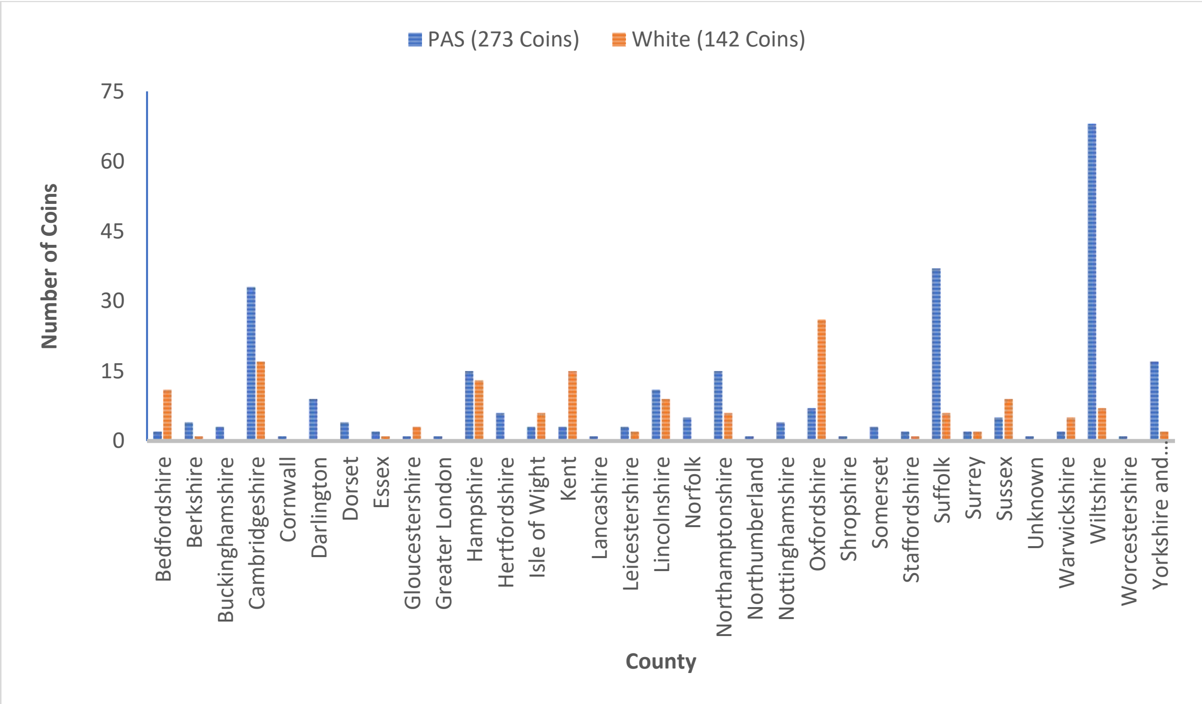

Figure 10.4.4-1 Graph to show the geographical distribution of perforated coins from the PAS and from White's 1988 Corpus of Anglo-Saxon Cemeteries

Geographically (Figure 10.4.4-1), the distribution of perforated coins from the two contexts shows some slight differences. As discussed above, the PAS data showed a larger proportion of perforated coins coming from Wiltshire and Suffolk. In contrast, the larger proportions of perforated coins are found in the Anglo-Saxon cemeteries in Oxfordshire. The higher proportions of perforated coins in these counties may reflect where these communities settled. However, if perforated coins in Anglo-Saxon graves are more common in one part of the south than the other it may be indicative of the practices of individual communities. Whilst the sample sizes for both datasets may be small (273 coins for the PAS and 142 coins for White), this may indicate that a further analysis of this area of a coin's biography may provide a more solid understanding of any patterns for the reuse of Roman coins in this way.

In terms of iconography, the same two datasets were analysed to see if any patterns between perforated coins lost as single finds, or perforated coins intentionally placed in graves could be understood (Table 10.4.4-1). For example, was particular iconography more commonly found in through the reuse of these objects in the fifth or sixth century?

	PAS (273 Coins)	White A/S Graves (142 Coins)
Aequitas	0.30%	0
Altar		2.1%
Altar Inscribed VOTIS XX with Globe on Top	1%	0
Antelope	0.30%	0
Brutus	0.30%	0
Campgate with Two Turrets	1.00%	0
Chi-Ro	0.30%	0.7%
Emperor	2.00%	0.7%
Emperor advancing right holding standard and dragging a captive	2.00%	0
Emperor and Victory	0.30%	0
Felicitas	1.00%	0
Fides	0.30%	0
Fortuna	1%	0
Genius	2.00%	0
Globe on Altar	1%	0.7%
Horseman	1%	0.7%
Laetitia	0.70%	0
Liberalitas	0.30%	0
Lion and Thunderbolt	0.30%	0
Mars	0.30%	0.7%
Nobilitas	0.30%	0
One Soldier	1%	0
Pax	2%	1.4%
Pietas	0.70%	0
Roma	0.70%	1.4%
Salus	9.00%	2.8%
Securitas	1%	0
She Wolf and Twins	2%	2.1%
Sol	4%	2.1%
Spes	0.30%	2.8%
Trophy	0	0.7%
Two Captives Seated	0.30%	0
Two Soldiers	6.00%	0.7%
Unknown	36.00%	74%
Unknown Figure	7.00%	2.1%
Valens	0.30%	0
Venus	0.30%	0
Victory	11.00%	3.5%
Virtus	1.50%	2.1%
Wine jug, Ladle, Sprinkler and Lituus.	0.30%	0
Wreath	0.70%	0
Wreath - VOTIS/V/MVLT/X	0	0.7%
Wreath with VOT//XX	2%	0

Table 10.4.4-1 Reverse Iconography of Perforated Coinage from the PAS and White's Corpus from Anglo-Saxon Cemeteries

In both datasets, worn issues dominated with 36% of the PAS coins and 74% of White's dataset belonging to the unknown category. This suggests that worn coins may have been used for perforation as they could pass as a blank pendant, or blank piece of circular metal that could be used for decoration. In the Anglo-Saxon cemetery data, the next most common reverse images are Victory (3.5%), Salus (2.8%) and Spes (2.8%). However, a search on the PAS database for Roman coins using Victory as a keyword returned over 40,000 results, Salus returns just over 2800 results and Spes just over 3300 results. Therefore, these images appear to be popular inclusions on Roman coins in general and therefore it is assumed that they would be more commonly occurring on coins that had been reused. However, imagery such as the emperor dragging captive design returns just over 7400 results doing a keyword search for Roman coins on the PAS database, and the globe and altar design returns 3100 results (data correct as of January 2023). As a result further work is needed exploring the reverse iconography on a larger proportion of perforated coins in order to test the results of this analysis, and explore whether iconography is being specifically chosen due to the connotations the imagery represents, or whether there statistically is no significance in terms of iconography and perforation. The low proportions of identifiable reverse imagery for this perforated sample means any interpretation is difficult, although perhaps it suggests that worn 'blank' pendants were more suitable for inclusion in grave deposits. However, it may again indicate that future work exploring this element of a coin's object biography may be able to shed new light on why these coins were chosen to be reused in new contexts, and whether the intrinsic properties of these coins assisted in their selection.

10.4.5 Summary

Unlike coin clipping, perforations transform the object from being a coin into being a new object with a different biography and bound up with a different set of social negotiations. It is considered that perforated coins are likely to be reused as pendants, though there is little organic material surviving to prove this. As such, perforations are associated with a different set of 'instructions' as the economic value and integrity of the coin does not need to be maintained. The PAS examples of single perforations being the 'correct' way round for the viewer and the three examples above, of coins with two perforations and the reverse design being the 'correct' way round for the wearer all demonstrate specific iconography with associations to the power of Rome and her imperial cults. As such, although we cannot say in which time period these coins were perforated, these objects may have been chosen specifically for this reason, in order to portray particular characteristics for and to the wearer or viewer. Furthermore, all bar one example of single perforation and each of the examples of double perforations are from copper alloy issues, which may also be indicative of the social status of the individuals repurposing and wearing the objects. Copper alloy issues are associated with lower value and perhaps the individuals repurposing these coins were of lower status trying to emulate higher status jewellery and pendants (Cooper and Al-Saad 2015, 91).

As highlighted earlier in this discussion, coin clipping appears to have a series of rules attached to it, whereby it is predominantly only the legend, which is clipped, leaving the bust intact. Contrastingly, as perforations transform the artefact from a coin to a new object these rules do not necessarily apply. Again, if we consider the PAS data, it can be seen that 10% (25 out of 252) of the sample have perforations in the centre of the coin, which would be straight through the centre of the bust or reverse design. This coupled with the fact that predominantly lower denomination coins are reused in this way, may support the idea that the imagery of the coin is one reason why it has been chosen to be repurposed. Alternatively, it may indicate that as the coins were being reused during the Anglo-Saxon period, Roman rules of leaving the bust intact were no longer important. As demonstrated above, the context of the reused coins is also important, with many examples being found in medieval graves, usually associated with female inhumations. However, due to the nature of the PAS data as being single finds usually identified by metal detectorists, context cannot always be fully understood in the examples highlighted above.

Three of the PAS records demonstrate evidence for coins with three perforations, one coin with four perforations, and a single unit with seven perforations on the coin's flan (Figure 10.4-5) which arguably would have completely obscured the design details of both the obverse and reverse. Again, due to the nature of PAS data the context of the surrounding archaeology is not always available. It can be suggested though that coins with multiple perforations may have been used as a different kind of object, perhaps as an accessory sewn onto clothing, or a bag.

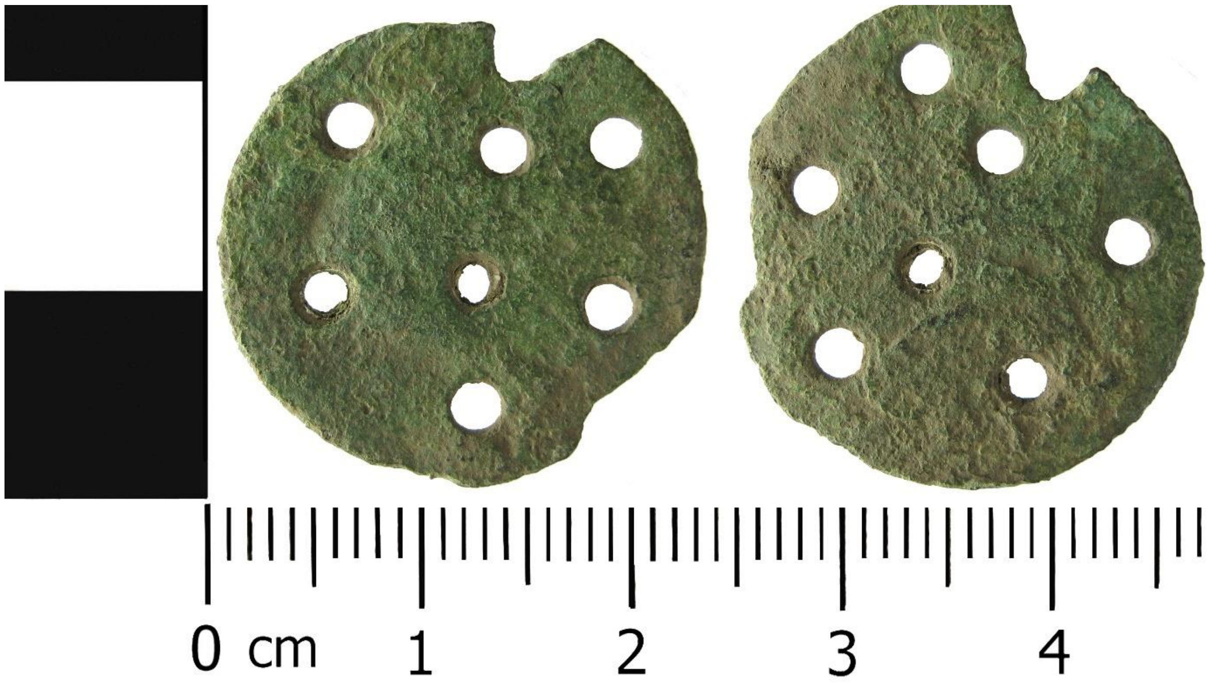

Figure 10.4.5-1. LVPL-5B46A7. Perforated Copper Alloy Nummus Recorded on PAS

In these instances, it may suggest that when a coin with multiple perforations is repurposed to form a new object, the imagery displayed on the coin is no longer important as the object is no longer intended to fulfil its original function as a part of a monetary economy. Perhaps, the association with the object as a coin is enough to convey the desired effect.

Further work is needed using datasets with a more well understood contextual background, however this analysis has shown some interesting results with regards to the types of coins chosen to be perforated. It is important to reiterate that we cannot know when the objects themselves became perforated, but the frequency of Romano-British perforated coins found in Anglo-Saxon and post-Roman graves may suggest that it is a phenomenon that is likely to have occurred after the end of Roman rule in Britain. By exploring the object biographies of perforated coins and understanding the types of iconographies associated with them, we may begin to interpret the reason why these coins were chosen to be used in this way. In doing so, it may also be possible to make inference into the way in which society viewed Rome at this time.

10.5 Changing the Narrative

As demonstrated, the methodology produced for this thesis allows a deeper exploration of a coin's object biography than has previously been perpetuated using traditional narratives. By considering coinage against the backdrop of life phases, and therefore as objects in their own right, it is possible to explore the wealth of knowledge retained in these artefacts through their production, circulation and deposition. The methodology has used specific factors displayed on a coin's surface and has aimed to incorporate this with the contextual information of the periods in question to go beyond coins as evidence for dating. Instead, beginning to explore how a coin's object biography can and has contributed to the archaeological record. Consequently, the value of coins as objects in their own right is crucial with biographies providing a multifaceted methodology for this consideration. This thesis has demonstrated that synthesised information provided by multiple coins can provide important biographical information which can be incorporated into wider contextual information for a more well-rounded interpretation (see Chapter 5, 8.4 and 9.10).

The adoption of a biographical approach has highlighted important patterns and insights that inform on Roman life. For example, through the analysis of reused coins showing signs of perforations, we can begin to explore why specific coins are chosen and identify whether specific imagery or specific patterns of perforation inform on reuse. These patterns allow an association to be made between the object and iconography associated with law and order, implying that the individuals choosing these coins for reuse were assimilating with a particular set of cultural ideals and values. Furthermore, the process of coin clipping has allowed certain inferences to be made about attitudes towards the value of coinage, far beyond their monetary or chronological worth. These patterns and insights have further served to highlight the futility of current methodological approaches to coinage, particularly the concept of wear patterns. By beginning to unpick the concept of wear and explore those components which make it up in more depth, it has been demonstrated that the picture is far more complicated. This highlights the need to re-examine these objects in new and innovative ways, in order to unleash their full potential.

11 CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER WORK:

11.1 Introduction

This thesis has demonstrated how a biographical approach to coinage can shed new light on the archaeological contexts in which they are found. These approaches go beyond the traditional focus of coins as a tool for dating archaeological contexts, beginning to place a greater emphasis on the objects themselves in providing an understanding of the social interactions with the people that occupied these landscapes. Importantly, the approach has aimed to move past the static and subjective nature of wear analysis, which currently forms the basis of interpretations regarding coins, instead placing focus on what constitutes wear, and the way in which this process is demonstrated on a coin's surface.

The methodology created has provided one such framework for the construction of an object's biography, focusing on factors relating to their production, use and deposition. Practical application has been conducted on a sample of over 1000 coins from Lancashire and over 400 coins from a single site Plantation Place, London. It has been demonstrated that the method is effective and successful in regard to exploring the ways in which a coin's biography can place it within the wider context of the Roman landscape.

11.1.1 Demonstrations of Coin Acceptance

The North West of England is often considered to contain 'relatively low levels of material culture and poor site visibility' (Philpott 2006, 59), outside of the major known military installations. However, the identified material culture is still important in understanding the social, economic and political landscape of the area. As demonstrated through the PAS data in Chapter 7.7.6, Lancashire does have significantly fewer coins than other counties, with 218 coins recorded for Lancashire compared to 8704 coins for Hampshire for example, although there are numerous possible biases in comparing PAS collections per region (Walton 2011). However irrespective of this, the biographical approach has demonstrated that there is still a wealth of knowledge that can be understood about the ways in which coins were used and lost in the county. The evidence from coin clipping has highlighted the level of imperial acceptance through the preservation of the imperial bust (see chapter 10.3) and has provided evidence for the intrinsic requirements for a coin to be considered a coin (the existence of an imperial portrait). The exploration of perforated coins has also raised interesting considerations in terms of archaeological context, as if provenance of the Rossall Fleetwood hoard is inaccurate, then coin clipping is a rare phenomenon in Lancashire. The notion of a fixed understanding of the properties needed to make an object a coin is further supported by the evidence provided for unofficial coin issues, that even though stylistically basic, still portray a copy of an imperial portrait. Furthermore, unofficial issues also indicate an acceptance and usage of a coin-based economy through their very existence, as if there was little acceptance of coinage then unofficial issues would not need to be produced. One reason for this could be due to the dominance of military sites in Lancashire, whereby a coin-based economy may be more prevalent due to the payment of soldiers in coinage, which would then be circulated in the area. However, the high proportions of military sites do not exclude the presence of civilians from the data. Fort spaces were not occupied by military personnel alone and were often occupied by family members and traders in the vicus settlements surrounding the forts themselves (Petts 2013, 318). Consequently, the acceptance of Roman rule may be biased in these locales, with civilian coin use in these spaces being influenced by the presence of coinage from soldiers. This can be supported by the evidence from the 4th and 5th century coins from the Ribchester Revisited project, which suggests that most coins from the excavations belonged to this period. This may demonstrate changes in military spaces, where coins were still being used and accepted whilst the space was transitioning into a more civilian settlement (see Chapter 8.4.3). However, the evidence from Lancashire does suggest a basic level of acceptance of a coin-based economy within the region through presence of coinage and the factors associated with their use and deposition.

Furthermore, considerations of the iconography of perforated coins have indicated that specific imagery may be selected when coins are repurposed into new objects, with this imagery being focused on aspects of Roman law and order (see chapter 8.2.2 and 10.4). Finally, the Lancashire sample has provided evidence of a long chronology for the presence of coinage in the county. When considered together, the evidence provided throughout this thesis has demonstrated that the acceptance of Roman coinage was prevalent throughout Lancashire during the Romano-British period. Furthermore, the biographical approach to coinage undertaken demonstrates that this acceptance moves beyond the economic value of the object as a commodity and highlights the interplay between coins as an artefact and human interaction.

11.1.2 Beyond Wear: Coins as Objects

Through the application of the biographical approaches explored in this thesis, it has been demonstrated that coins have a vast array of information within them, which is not currently being utilised. Importantly, it has been demonstrated that the proposed methodology has provided new innovative information about Roman coins that goes beyond traditional methods.

One of the main aims of this research was to move away from the static and outdated generalisations of wear patterns. This is not to disregard the previous work in this area (see chapter five), as the study of coin wear has facilitated conversations and interpretations of circulation and economy in the Roman world. However, wear is taken as a single measure and used as an all-encompassing indicator of a coin's circulation. This thesis has demonstrated that wear constitutes many different factors that all affect the ways in which the imagery on a coin is displayed or altered. Furthermore, these factors allow interpretation of all of the stages of a coin's lifecycle and can contribute to a broader understanding of these valuable artefacts than just their circulation patterns alone. The danger of relying solely on wear patterns has also been demonstrated through a comparison between wear stage and corrosion factors (see Chapter 9.9.1), where coins that are heavily corroded are placed into high wear categories. However, as corrosion is a by-product of a coin's deposition phase and caused by the chemical reactions between the metal and the soil, this should not be taken as an indicator of wear and therefore a demonstration of increased circulation. For example, the images below show a group of Iron Age coins before and after chemical cleaning (see Figure 11.1.2-1).

Figure 11.1.2-1 Images of coins from the Le Catillon II Hoard, Before Cleaning (Left) and After Cleaning (right), Mahrer 2014

If taken as is, the corroded coins would be placed in a worn category as no design details are visible. However, after cleaning these coins in formic acid, it can be demonstrated that the underlying coin itself is largely unworn and can be identified to its group and subgroup with relative ease. It is not advocated that all coinage must undergo this level of post-excavation processing, however it does demonstrate that corrosion and wear are not one and the same and highlights the difficulty of relying solely on wear patterns when interpreting evidence of circulation and coin use.

This thesis has demonstrated that by deconstructing wear into its constituent parts, we can begin to understand the separate aspects that compose it. Therefore, this thesis has provided one such method to begin to move away from such a rigid structure and has established that these separate aspects which make up wear can inform on the life history of the coin. In turn, this can educate us about human actions and behaviours in the past. Consequently, this thesis has highlighted the need for coins to be seen as objects in their own right, rather than only useful for dating contexts or as data collection tools. By considering coinage as a unique artefact, the distinctive relationship between coins and human action can be explored in order to ascertain a deeper and richer interpretation of the Romano-British world.

11.1.3 Validity of the Dataset

As with any project, it is crucial to consider the validity of the dataset studied. Firstly, it is important to note the difference in sample size between the three main datasets: the synthesised data (1147 coins), the collected data (1466 coins) and the biographical data (1072 coins). All three samples show differences and crossovers with each other, with some coins being present in all three datasets. However, some coins from the synthesised material could not be located, whereas others in the collected material had not been published. This demonstrates how understudied coinage is, and perhaps how this important artefact group is often undervalued in archaeological discourses. In traditional approaches to coin studies, the value of a coin has been placed on its ability to date an archaeological context, with coin reports afforded a small number of pages at the back of the report. This has often led to minimal detail in recording and only specific information being published, this can be demonstrated through the quantification differences between the factors in Chapter 7 and Appendix 1. However, if more importance is to be placed on coinage, as this thesis has demonstrated, then perhaps this divide will become narrower as coins are given a bigger place on the archaeological stage and are reported in full.

A further complication can be seen through nature of reporting and acquiring hoards. For example, it can often be difficult to track hoards found and published in the early modern period as they pass through private collectors or individuals before being donated to museums. As discussed throughout this thesis, the Rossall Fleetwood hoard has proved to be particularly interesting with regard to origin (see chapter 10.3). However, it is argued here that irrespective of whether this particular hoard is from Lancashire, it still demonstrates that a biographical approach can assist in understanding more about human negotiation and interaction with everyday objects, particularly through the analysis of clipping.

Altogether, this thesis has demonstrated that biographical approaches to Roman coins can provide new methodologies which allow information provided by these objects to be harnessed in interpretations. Object biographies may usually be considered on the basis of single objects; however, it is possible to produced synthesised biographies which take into account the evidence provided by large datasets, adding new information and further value to archaeological discourses. By incorporating the evidence provided by biographical approaches with contextual information from excavations (see Ribchester 8.4 and Plantation Place (9.10) we can begin to see how the location of coins and the physical evidence of the coins themselves can inform on the way in which these objects were made and used, and how these finding can in turn inform on the ways in which archaeological sites functioned.

11.2 Recommendations for Further Work

This thesis has sought to demonstrate the benefits of applying new methodologies to Roman coins, as well as the importance of considering a group object biography for these artefacts. However, due to the scope of this research there is still much work that can be done to fully utilise new methodologies within artefact studies.

11.2.1 Corpus of Roman Coins in Britain and the Biographical approach

Due to the depth of the methodology and the number of factors recorded, it was only possible within the scope of this thesis to explore coin data from a specific county, Lancashire and one alternative site, Plantation Place, London. Therefore, there is enormous potential for the methodology to be expanded to include data from additional regions and counties of Britain. This will allow the conclusions from this thesis to be tested further and explore the ways in which biographical approaches can be used to explore geographical differences for the use of Roman coins within Britain.

The PAS alone records 291,878 roman coins for the whole of the UK, and this is before those uncovered on archaeological excavations are considered. The Roman Rural Settlement Project

(2018) records 217,773 coins from rural sites published in traditional site reports and grey literature from developer funded excavations which have taken place since 1990, and the Coin Hoards of the Roman Empire project (2020) has records for 1169-coin hoards from the United Kingdom. This demonstrates how vast the data of Roman coins is from Britain. Consequently, it would not be practical to carry out an extensive survey on the entire sample of Roman coins from Britain. However, there is potential for a pilot project to be conducted using just the PAS data. For the biographical approach to be conducted, images of the coins are required. This would narrow the PAS sample down to 127, 224 coins, with the county with the largest sample being Lincolnshire with 9,220 coins and areas such as Plymouth, Dudley, the Isles of Scilly, Merthyr Tydfil and Rochdale having the smallest samples, with just a single coin each.

To utilise a more manageable and even sample, the aim would be to take a representative sample from each county across the represented Reece periods. This would enable both regional comparisons and chronological patterns to be explored within the Romano-British period, as well as exemplifying the validity of the methodology and biographical approaches outlined in this thesis.

11.2.2 Utilising Methodologies Across Time Periods

This thesis has demonstrated the benefit of considering biographical approaches to understand the use of Roman coins in Britain. However, if this methodology could be expanded to other time periods before and after Roman rule, it may be possible to explore the changes in acceptance and use of coins in more depth. As discussed in Chapter 2.1, early Iron Age coinage was focused on the designs of Philip II of Macedon, depicting a stylised bust of Apollo on the obverse, and a stylised horse on the reverse. Creighton (2000, 28) notes that by the time these design types had reached Britain and local issues were created, the designs had become so abstract that they formed a series of abstract dots. The import of Iron Age coinage into Britain and the subsequent local designs have caused much debate on the role of coinage in an Iron Age landscape (Creighton 2000, 28). It is argued here that undertaking a biographical approach to this artefact group may help to shed new light on the use, value and acceptance of Iron Age coinage in Britain.

Williams (2005, 73) highlights that between 10 BC and the middle of the first century AD, there is coin evidence for issues in the name of three different individuals circulating in south-central England. Perhaps most interestingly, is that the designs of all three-coin types bear strong resemblances to official Roman coinage. The legends are all in Latin and in some form feature the phrase ‘son of Commius’ and all depict imagery widely related to Roman styles (Creighton

2000, 170). A biographical approach to this record may provide one avenue for exploring the similarities and differences in the acceptance and circulation of coinage that we have come to know and expect from the Roman world. Furthermore, evidence for coin deposition at ritual sites pre-conquest has been demonstrated at Wanborough and Harlow, as well as sites with no archaeological evidence for temples such as Fresham in Surrey, where coin deposition begins pre-conquest and continues into the Roman period (Williams 2005, 77). These sites may imply that coinage of the Iron Age and Roman periods were used in much the same way, as a token or symbol of offering. Undertaking a biographical approach to coins from sites such as these may provide a method to explore the similarities and differences in the approach to deposition of coins at ritual sites, and thus allow a broader picture of acceptance and use to be constructed.

Evidence from Roman coin hoards suggests that coins continue to remain in circulation following the withdrawal of Imperial Rome in AD 410. Significantly, there appears to be few coins dating to the later parts of Constantine III's reign (Moorhead and Walton 2014, 112), suggesting that official issues did not arrive into Britain in great quantities. Silver coins of Constantine III have been noted in the Coleraine hoard, all of which are clipped, suggesting that they had been in circulation before deposition and that perhaps the removed metal was being made into unofficial issues to counteract the lack of official coinage in circulation. Therefore, this may imply a degree of acceptance or reliance on a coin-based economy at the beginning of the Anglo-Saxon invasion period. However, the evidence for circulating bronze coins is much rarer, with Moorhead and Walton (2014, 113) noting that the majority of these issues focus around military and urban sites. The minimal evidence for Honorius (AD 393-423) and Valentininan III (AD 425-435) does however imply that some coinage was still entering Britain even after the collapse of Roman rule (Mcintosh and Moorhead 2011). The decreasing quantities of coins throughout the fifth centuries suggests the collapse of a coin-based economy following Anglo-Saxon invasion. The PAS evidence also supports the notion of a collapse in coin-based economy, with 278,083 Roman coins being recorded on the database, compared with only 5,209 early medieval coins (data correct May 2020). However, by adopting a biographical approach to these late Roman and early Medieval issues we can begin to see how a change of acceptance is reflected on the objects themselves. From Roman Lancashire, it is already possible to see an increase in clipping and a rise in the creation of unofficial issues in the later Roman periods, suggesting perhaps that the communities in the region were trying to cling on to the economy of which they had become accustomed. Biographical features on Anglo-Saxon coins may allow a deeper study into attitudes towards these new types of coinage and may display evidence of a lack of acceptance by the societies in which they circulated.

By adopting biographical approaches, it may be possible to show these transition periods in a new light and see if a change in use and circulation of coins as objects can be identified. As the Romanisation debate has demonstrated (see Chapter 3), the focus of the Iron Age to Roman transition is, even now, on the ways in which 'native' groups became 'Roman', and material culture is often taken as one measure of this act. However, by studying the biographies of both Iron Age and Roman coinage, we can begin to analyse how the attitudes and acceptance to this style of economy became more prevalent throughout Britain. Conversely, by analysing the biographies of coinage from the end of Roman Britain and into Anglo-Saxon Britain we can begin to explore the collapse of a predominantly coin-based economy and begin to understand the effects of this changing attitude on society in a new way.

11.2.3 Testing the Method

This thesis has selected multiple factors which represent the stages of a coins' lifecycle, in order to interrogate the ways in which a biographical approach can inform interpretations of archaeological sites. Consequently, the author has considered these factors as belonging to either production, use, or deposition. However, it is important to interrogate the method further in future in order to test the validity. Two proposed ways this could be conducted is through the use of microscopy and experimental archaeology.

This thesis has suggested that factors such as notches and plastic deformation on the outer edge of the coin occur at the point of a coin's production, through the process of heating and striking the flan. In order to test this, it may be possible to use a replica coin die and test the striking process on blank metal flans of different chemical compositions in order to see if we can replicate the conditions which would cause notching and plastic deformation. Whilst little may be known of the exact production techniques for Roman coinage, making them difficult to replicate in the modern day, it is hoped that we may be able to recreate something similar enough to explore this process in more detail.

Furthermore, using microscopy techniques to take better, close up images of factors such as notching, and scratching may enable us to look for elements of intentionality where these factors occur. As it stands, this thesis has discussed the presence of notching as a consequence of production, and the presence of scratches as a result of post-depositional activity. However, by looking at these factors in more detail, we may be able to provide more concrete evidence to support where these factors fit within the biography. Additionally, it may also enable us to highlight instances where scratches or notching were intentionally created and therefore more likely to be a part of the use phase of the biography. If this is the case, then we could begin to look for evidence of tools and implements used to create these factors if necessary.

11.2.4 Geographic Analysis

Through further geographical mapping, particularly of PAS finds and single finds it may be possible to identify further locations of potential Roman occupation within Lancashire, and thus highlight the potential locations of unidentified sites with the county. This thesis has demonstrated the use of Roman coinage as a commodity within Lancashire due to a large dataset of over 1000 coins. Furthermore, through the analysis of their biographies it can be seen that human interaction with coinage was prevalent throughout Lancashire through actions of clipping and perforation as well as the circulation of unofficial issues. As such, a more comprehensive analysis of geographical data could provide a deeper insight into the extent of Romano-British occupation within Lancashire.

11.3 Conclusion

The beginning of this thesis explored the information provided by traditional methodologies of a copper alloy radiate of Claudius II (see chapter 1.1), highlighting the issues surrounding coin recording, with focus on the subjective nature of wear patterns. This thesis has demonstrated the potential for biographical methodologies to be used and applied to everyday objects in order to understand the ways in which they were made, used and deposited, breaking down 'wear' into constituent parts to explore what we recognised as wear actually means about the social relations objects were part of. Specifically, this thesis has applied this methodology to coins, considering them as objects in their own right, with complex pasts, and moving beyond their use as dating tools to consider the rich evidence they can provide about past societies. Consequently, it seems important at this point to come full circle and consider the information that can be gained by utilising a biographical approach with regard to another coin from the Lancashire sample.

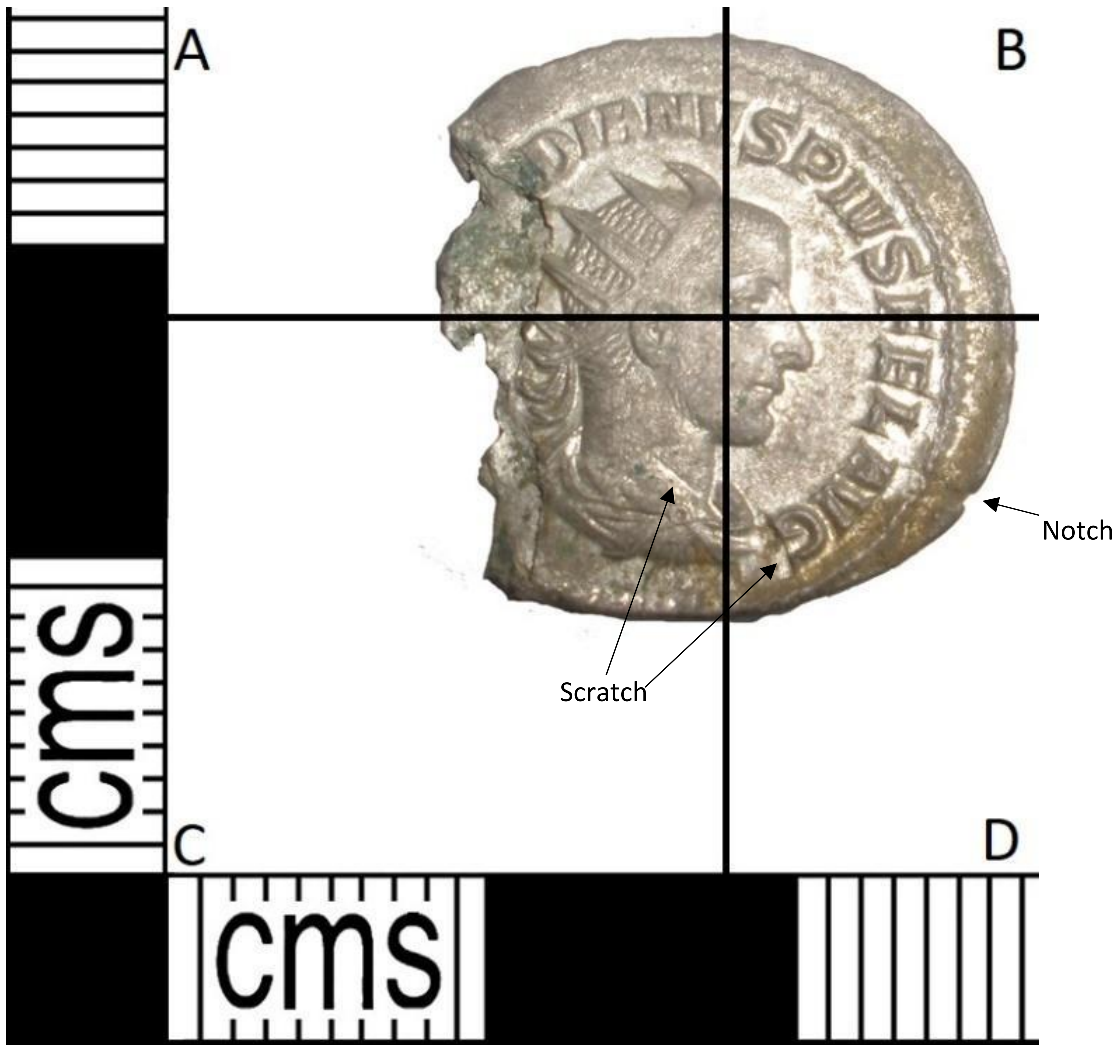

Figure 11.3-1 Coin ID 359 from database, LANCUM-C82F17

The coin above (Figure 11.3-1) represents a silver radiate of Gordian III recorded on the PAS. Traditional methods would focus on the date of issue for this coin being AD 243-244 (Reece Period 12), with a right facing radiate bust, the visible legend reading *[] DIANVS PIVS FEL AVG* (PAS 2019). It is likely the full legend would have read *IMP GORDIANVS PIVS FEL AVG,* roughly translating to Imperator Gordian Pius Felix Augustus, or the Emperor Gordian happy (dutiful/patriotic) with the Augustus associating Gordian III with the first Emperor of Rome.

The location of the coin is recorded as Ribchester, of which there have been numerous Roman coins found due to the location of the fort and bathhouse. The wear category system used by the PAS would tell us that this particular coin is 'Hardly Worn: Extremely fine'; if other wear systems were used then it would most likely be classed as an unworn coin. In analysis, the result of this would be that this coin is unworn and therefore is most likely to not have circulated very much or been used in many transactions. It may be considered as a useful dating tool of Roman activity due to its unworn nature and being more easily identifiable. In this particular instance the coin would be returned to the finder (as per PAS guidelines), but if this was a museum collection piece, it would be archived away and perhaps due to the damage, would never make it to the museum floor. However, the approaches outlined in this thesis suggest that this individual coin can tell us much more about Romano-British attitudes to coinage. This single silver radiate of Gordian III, provides evidence of notches, scratches, surface damage and being incomplete.

The presence of a notch in quadrant D implies that the blank coin flan was too cool at the point of striking, therefore demonstrating a unique element of human interaction at the point of production. The presence of this feature means that this coin fits in with 51% of the Lancashire sample but is slightly more unique in that it occurs on the bottom half of the coin (something which features on only 43% of the Lancashire sample) and is rarer still when we consider the fact that it occurs on the right-hand side of the coin (only 48% of the Lancashire sample feature this) (see chapter 8.1.1). With further experimental work, this may be able to tell us whether the striker was right or left-handed and adds a deeper layer to the personal nature of this object.

This issue also provides evidence of plastic deformation, concentrated on the right-hand side of the coin. The thesis has suggested that plastic deformation is most likely to occur during the process of a coin's production, when the flan is too hot at the point of striking, causing the metal to spread out from under the coin die. This factor is present on only 2% of coins in the Lancashire sample and is one of only 12 examples of coins from Lancashire that had both notches and plastic deformation. It has been suggested in Chapter 8.1.5 that this is a result of two distinct phases in a coin's production: one occurring when the blank coin flan itself is produced, and the second occurring when the blank flan is struck with the coin die to give the object its obverse and reverse imagery.

Scratches on the surface of this radiate align it with 42% of the Lancashire sample, and their presence in quadrants C and D is consistent with 27% of the Lancashire sample. Interestingly, the presence of scratches on this issue is somewhat unique as only 15% of individual coins (coins not associated with hoards) provide evidence of this feature, and of that 15%, only 14% of unworn coins show evidence of scratches on the coin's surface (see chapter 8.3.3). If scratches occur as a post-depositional phenomenon, which has been suggested in this thesis, then this may imply the coin was lost in an area of human activity (causing more movement of the coin and therefore surface scratching), or, that the area in which it was deposited or lost may have been the subject to rebuilding and soil movement in later periods before it was found by a metal detectorist in the present day.

The presence of surface damage on this issue is consistent with 59% of the Lancashire sample, but is slightly less common, as only 37% of unworn coins displayed evidence for this feature. Additionally, only 37% of individual coins displayed evidence for surface damage (see chapter 8.3.4). As with surface scratching, this may indicate the type of environment the coin was exposed to following deposition. It is noted that the surface damage on this coin is concentrated on the left-hand side of the issue, around the area where the coins has been partially broken, or had some of its metal removed. The propose future work, incorporating microscopy techniques would enable an exploration into whether this damage was intentional or the result of post-depositional activity. If we consider the presence on this coin, coupled with the context of its recovery it may help us to add a further layer to our understanding of coin acceptance and use on military sites such as Ribchester, which are assumed to have higher levels of economic activity. By comparing these biographical factors of deposition with coins from other site types, we can begin to explore coin acceptance through area of social activity.

Completeness of the coin is also a factor that has been associated with deposition throughout this thesis. This silver radiate demonstrates evidence of being incomplete due to the damage on the left-hand side of the coin. Interestingly, only 4% of radiates from the Lancashire sample show evidence of being incomplete and only 5% of individual coins (those coins not associated with a hoard) (see chapter 8.3.2). Incompleteness adds an interesting layer to the biography of an object, as the ways in which coins have become damaged or incomplete are based around a unique set of circumstances for each object. Whilst it is impossible to know how this coin became damaged in this way, it adds another dimension to its biography through the questions it poses. Did this issue become damaged and therefore was no longer accepted as a legal currency and consequently thrown away? Was it damaged during post-deposition, and would further analysis of damage types allow us to identify what kind of force caused this type of damage? There is still a lot of further work which can be done regarding a biographical approach, but it is hoped that this thesis has demonstrated the value in moving beyond traditional approaches.

Interestingly, neither of the factors recorded for this thesis associated with circulation (perforations and clipping) are demonstrated by this issue. However, the absence of these features is evidence in itself. For example, was this issue lost or deposited early on in its lifecycle during the first half of the third century, and therefore was not in circulation when clipping for raw material was become more popular? This example may highlight that the absence of biographical factors can be just as interesting as their presence. Traditional approaches to this silver radiate, and to the remaining sample of this thesis, has demonstrated that on the surface, coinage has an economic identity due to its use in a monetary economy, and that they have an imperial identity due to the presence of the Emperor's bust and the iconography and written words imprinted on them. However, there is more to coinage than their use as a commodity or propaganda tool. The main objectives of this thesis were to go beyond these traditional narratives and explore new methodologies relating to the object biographies of coins, providing a framework and a number of factors which relate to each phase of a coin's lifecycle (production, circulation and deposition). The analysis conducted in this thesis has outlined how this can be applied to coins in Lancashire, as well as providing a comparative assessment of coins from Plantation Place, to demonstrate that the factors discussed related to Roman coinage from any geographic location and is not specific to Lancashire datasets. A biographical approach to these artefacts has demonstrated the constant human negotiations of which they are a part, and by exploring the factors recorded through this investigation, have shown the unique imprint that these human negotiations can leave in the archaeological record. If harnessed, this evidence can allow a deeper understanding of the ways in which coins were made, used and deposited, using unique evidence left behind on the artefact itself.

The methodologies and conclusions presented throughout this thesis are able to contribute to archaeological discourses surrounding coin studies by providing a framework to consider these objects in a new light, beyond mere economic functions. Additionally, this thesis has opened up conversations regarding the potential that object biographical approaches have in furthering our understanding of human and object interaction and the physical way this is expressed on the objects themselves. Furthermore, it is hoped that this study can help to bridge the gap between numismatics and archaeology by demonstrating the importance of a dual methodology in understanding the past. This thesis has provided one such method for integrating a biographical approach, and it is hoped that this will provide a stepping stone in developing coin studies in the future. Thus, it provides a platform for people to move beyond traditional analysis and fully utilise what these unique and personal artefacts can tell us about past societies, as objects in their own right.

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13 APPENDIX ONE: DATABASE

The database for this thesis is accessible via the Dropbox link below. The database was composed using Microsoft Access and is 6.2 GB.

The database contains all of the data tables used for this thesis;

- Synthesised Table – 1147 records
- Collected Table – 1466 records (plus images)
- Condition of Collected Sample – 1072 coins
- Cut Marks/Coin Clipping of Collected Sample – 1072 Coins
- Design and Legend Visibility of Collected sample – 1072 Coins
- Notches from Collected Sample – 1072 Coins
- Plantation Place Table – 428 records (plus images)
- Plantation Place Condition – 388 Coins
- Plantation Place Cut Marks/Coin Clipping – 388 Coins
- Plantation Place Design and Legend visibility – 388 coins
- Plantation Place Notches – 388 Coins

https://www.dropbox.com/s/ppj0tlc6c8ct6a3/VLeQuelenec%20PhD%20Database.accdb?dl=0

14 APPENDIX TWO: SYNTHESISED DATA

14.1 Introduction

The initial stage of this project required a synthesis of the available data on Roman coins to be produced, in order to ascertain the volume of Roman coins from Lancashire. This informed the primary data collection stages of this thesis. However, the synthesis of this data produced a dataset in its own right and the analysis was undertaken and is presented here.

The synthesised data provides evidence for five main sites in Lancashire (Table 14.1-1): Ribchester (40%), Walton-le-Dale (1%), Lancaster (41%), Kirkham (2%) and Burrow in Lonsdale (3%). It is also possible to see that the majority of the synthesised data collected for this research (81%) was available through published coin syntheses (most notably the works of David Shotter 1990, 2004, 2011). Subsequently, the lowest proportion of data (19%) came from published and accessible excavation data (Oxford Archaeology North's data of coins from Mitchell's Brewery, Lancaster and the 1989-1990 Bremetancaum catalogue (Buxton and Howard-Davis 2000)), and the University of Central Lancashire's Ribchester Revisited excavations, which at the time of writing are unpublished but available to the author. From this, we can suggest that the lack of publication, and broader dissemination of data from deliberate archaeological excavation is affecting the wealth and breadth of data available for academic research, and thus goes some way to explaining the lack of methodological advancement when it comes to understanding coinage and the Roman economy. In order to explore this in more detail, four categories will be discussed: denomination, material type, chronology and wear.

	EXCAVATION REPORTS	SYNTHESIS	TOTAL	TOTAL %
RIBCHESTER	154	306	460	40%
WALTON-LE-DALE	0	158	158	14%
LANCASTER	67	401	468	41%
KIRKHAM	0	17	17	2%
BURROW IN LONSDALE	0	38	38	3%
TOTAL	221	920	1141	100%
TOTAL %	19%	81%	-	-

Table 14.1-1 Breakdown of the synthesised data by site and type

14.2 Denomination

Denomination represents the unit of the coin identified and allows us to break down coinage in to distinct categories for discussion. The main denominations represented in Roman monetary systems in Britain are the aureus, denarius, radiate, as, sestertius and the dupondius.

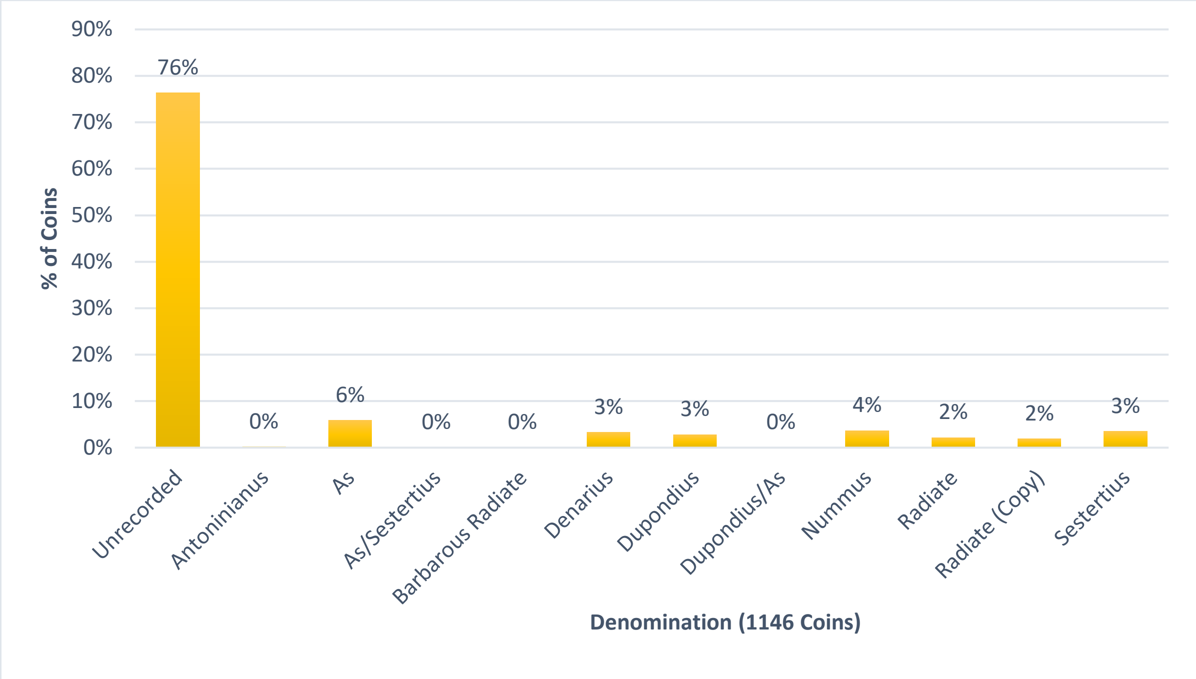

Figure 14.2-1 Distribution of Coins by Denomination

Despite being a major aspect of numismatics study, it is surprising to find that denomination is not always recorded in the publications synthesised - 875 (76%) coins had no denomination recorded (Figure 14.2-1). It has been argued elsewhere in this thesis that the lack of a distinct framework for Roman coin reports may be hindering our discipline (See Chapter 1).

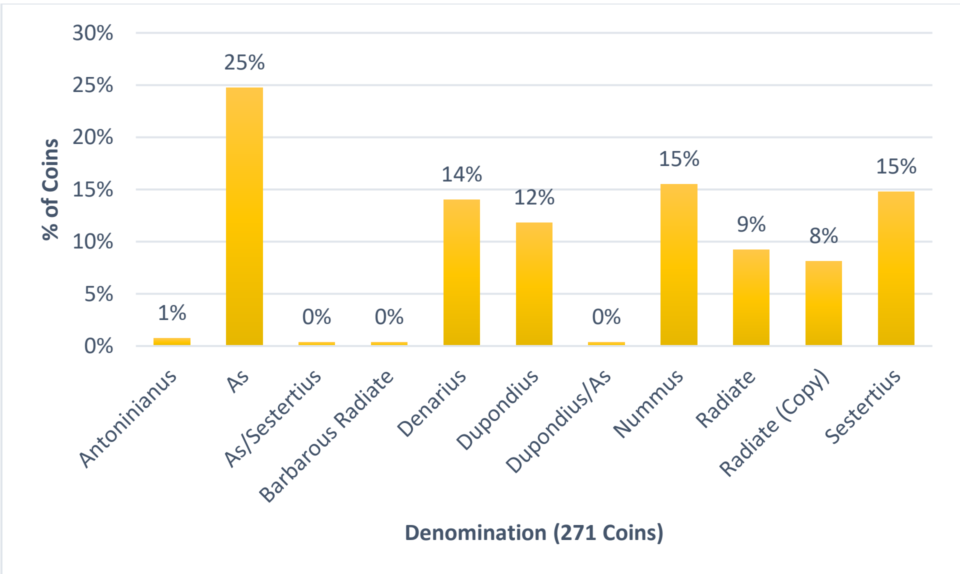

Figure 14.2-2 Distribution of Known Denomination

Of the 271 coins with denominations recorded, only one category contains samples of 20%, the as, and only two categories contain samples of 15%, the nummus and sestertius (Figure 14.2-2). The most common denominations are all associated with low value coinage. From the data analysed in this study, contemporary copies represent 8%, this constitutes two denominations - barbarous radiates, and radiate copies and all of these issues were associated with site finds, with none being found within hoards in this dataset. This highlights the need to reassess the language used to categorise coinage in the current literature, as both denominations are likely to be the same.

Denomination by Material

Material type appears to be one of the more common factors recorded across the board when publishing information regarding Roman coins (Figure 14.2-3).

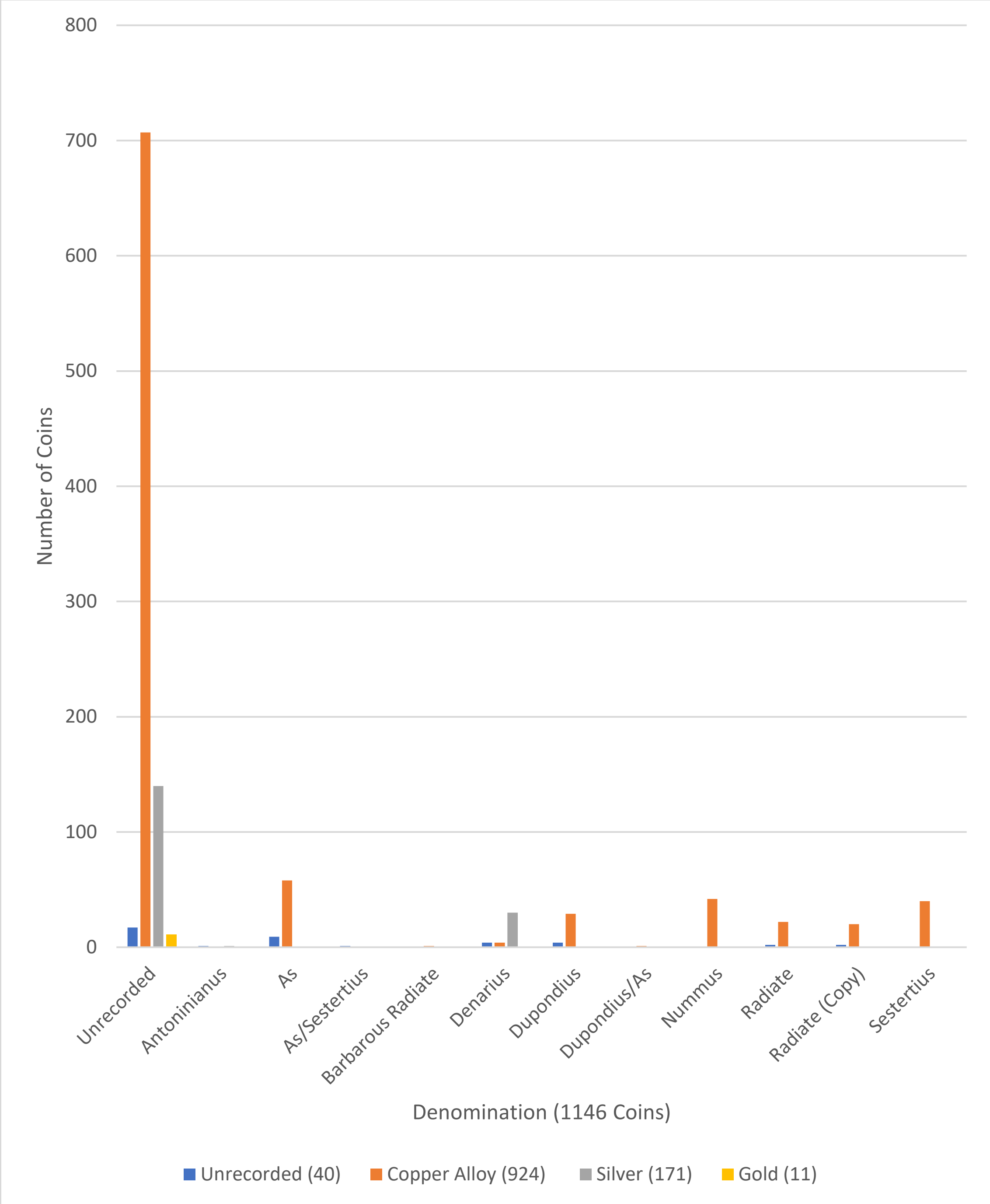

Figure 14.2-3 Distribution of Denomination by Material Type

From this, we can see that the majority of the unrecorded coins are copper alloy, suggesting that they would be comprised of the lower value denominations as, dupondius, nummus and sestertius. When examining the evidence for gold coins in Lancashire, 11 coins are categorised as unrecorded, but assumptions can be made that these would likely be aureui due to their gold content. In addition to this in the unrecorded denomination group, there are 140 silver coins that would most likely belong to the denarius or the radiate.

As such, recording material type can provide some indication as to what denomination of coin we may have, however it can be argued that this would become more uncertain as we move through the material type. For example, if a coin is gold, it is most likely to be an aureus as there are fewer gold denominations. However, when we consider the copper alloy coins from the synthesised dataset, we cannot assign them to a denomination accurately, as there are much more of these low value denominations. Due to this, section 14.3 aims to explore material type as a factor in its own right, though its associations with denomination should not be disregarded.

14.3 Material Type

If we consider the evidence for material type across official versus unofficial coinage, the area specific data, and also analyse this further on a site-specific scale (again using Ribchester as a case study), we may then be able to further our broad observations regarding the wealth of Lancashire as a whole. Interpretations may be easily reached when using material type to evaluate the synthesised data, as it is one of the more common factors to be recorded across the publications used in this thesis. This is perhaps because the majority of coin interpretation is based on the acceptance of coin, which has been undeniably linked to monetary value, as opposed to the intrinsic value of the artefact. If we are only concerned with monetary value, then it might be felt that material type alone is enough of an indicator for these discussions.

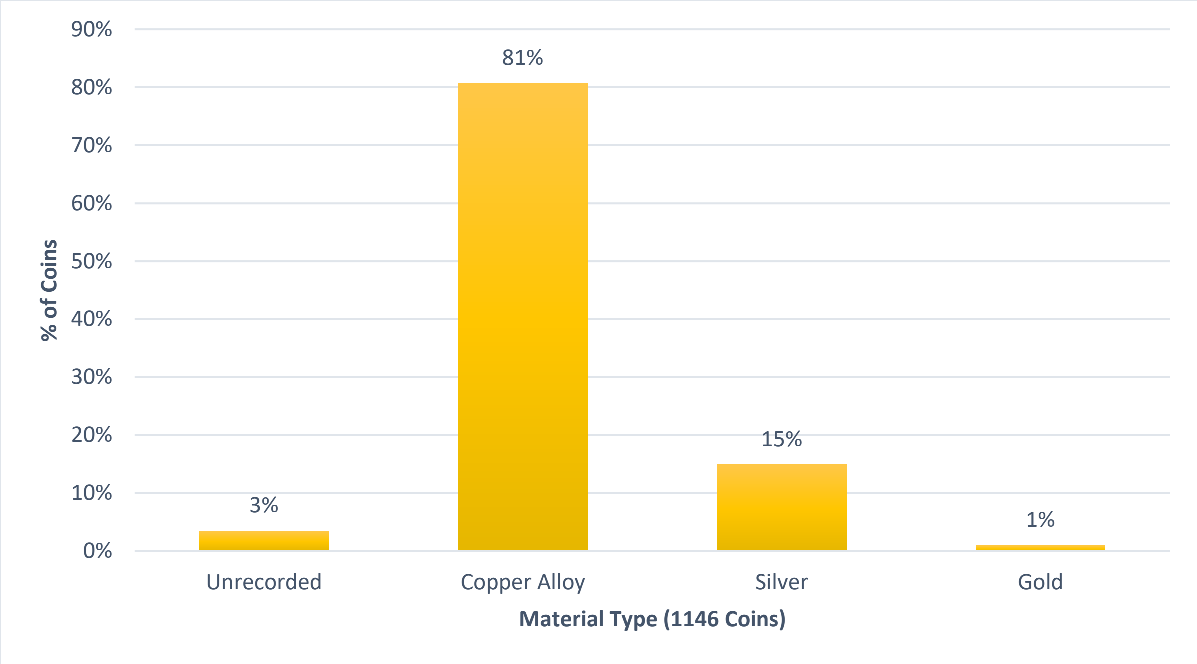

Figure 14.3-1 Distribution of Material Types

If we consider material type as its own group across the published data, we can see that 3% coins have unrecorded material types (Figure 14.3-1), which is a stark contrast to denomination where 76% of coins were unrecorded. This is due to the nature of corrosion and the way in which it presents itself across the different denominations. The presence of copper alloys lends itself to the classic green corrosion by-products, which indicates that a coin is likely to belong to one of the lower value units. Contrastingly, the silver and gold content in higher value denominations means that the surface material is more likely to be visible, allowing a more accurate description of silver or gold to be assigned.

As previously mentioned, 11 of the coins are gold, which was not indicated during the analysis of denomination, as the gold coins did not have denomination data attached to their entries. Where gold coins are found, the only likely denomination that could be assigned is aureui, therefore the lack of denomination data is arguably as a result of this factor not being reported by the respective publications.

Furthermore, the majority of the sample (81%; 925 coins) are copper alloy, a material that is attributed to lower value denominations in the Roman economic system. This indicates that Lancashire has a higher prevalence of these lower value, copper alloy coins compared to higher value (silver and gold) coins.

Finally, 171 of the 1146 (15%) coins are silver, suggesting a scarcity of middle-to-high value coins in the county. This may be due to the distinct lack of towns present in the archaeological record for Lancashire. If we consider the data provided from the Roman Rural Countryside Project (2018), we can see that for the East of England there are 100 different findspots for Roman coins in rural settlement sites (though the proportions of silver coins from these sites is unknown).

By breaking this data down further into the categories outlined in section 6.2, we can begin to see if any of the trends highlighted when analysing the data by denomination remain the same, or if the additional data provided by analysing material type might help change our interpretations of areas, or the site-specific data from Ribchester.

Official vs Unofficial Coinage:

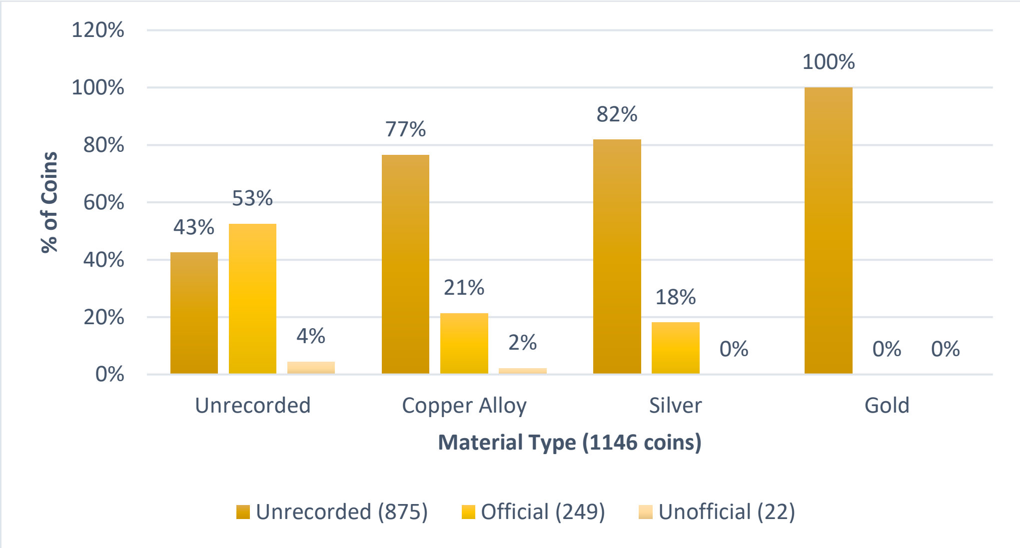

Figure 14.3-2 Distribution of Material Type in Official vs Unofficial Coins

It is demonstrated in the graph above that 20 out of 22 of the unofficial coins that make up the synthesised data sample are copper alloy. This could be due to high proportion of copper alloy coins in general (1145 out of 1526, Figure 14.3-2). This would have provided enough raw material when melted down to produce this unofficial coinage during the third and fourth centuries and enabled more coins to be produced of lower quality to account for the shortfall in circulation, as the Empire began to retract from Britain.

Material Type Chronologically:

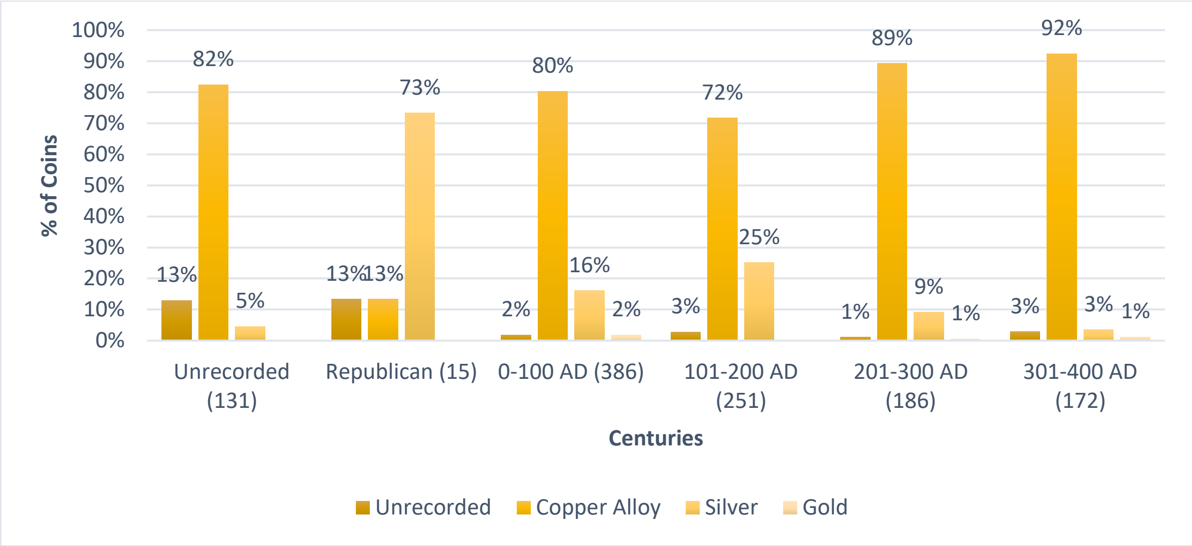

Figure 14.3-3 Chronological Distribution of Material Types

These investigations considering material type alone have allowed us to make broad observations of the use of coins over the different areas of Lancashire, however it is also crucial that we do not consider any of these factors in isolation. By incorporating chronological information, we can begin to see how the presence and absence of the different materials changes over time, which adds a new dimension to our understanding and interpretations of the archaeological record.

In this initial instance, chronology has been broken down into broad categories to identify changes over the centuries across the whole sample of 1146 coins.

Republican coins (that is any coin produced before the beginning of the first century) are predominantly composed of silver, making up 81% of the coins in this group, two of the coins have no material type ascribed to their record, and two of the coins are recorded as being copper alloy (Figure 14.3-3). This data would suggest that the coinage of the Roman Republic was dominated by silver coinage, and that this coinage continued to be in circulation until at least the end of the first century AD, as the north of Britain was not occupied by the Romans until this time. The contextual location of the Republication issues can further inform on the length of time they were in circulation for (see 14.4). Interestingly, 12 of the of the 16 Republican coins come from Ribchester, with three being associated with Lancaster, and one from Walton-le-Dale. Contextually, the Ribchester sample provides the best understanding of circulation time due to the extensive excavation of the area. Three of the 12 Republican coins from Ribchester are associated with the 1989 excavations, a single issue from phase three (117-125 AD), one from phase four (117-140 AD), and one from phase six which is an unstratified find. This suggests that at least two of the Republican issues found at this site with a production date of 509—27 BC must have been in circulation until at least the first half of the second century.

Moving into the first century, we can see that the coins from this category make up a large proportion of the data (386 out of 1146 coins; 34% of the whole sample). From this category, it can be seen that there is a distinct peak, as the copper alloy coins associated with this date form 310 out of the 386 coins (80%). Contrastingly, silver and gold are much less frequent from this time period, consisting of 62 and 7 coins (or 16% and 2%) respectively.

By the second century, we see a slight dip in the overall coinage assigned to this chronological period, falling from 386 coins to 251 coins. Proportionally, the biggest drop seems to be in the presence of copper alloy coins, which fall from 310 coins to 180 coins (or 80% to 72%). However, there is an increase in the proportion of silver coins from 62 out of 386, to 63 out of 251 (or 16% to 25%).

By the third century, the frequency of coin finds decreases again from 251 coins to 186 coins. Proportionally, during this period we see an increase in copper alloy coins, which compose 166 coins out of the sample of 186 (89%). However, perhaps most interesting is the significant drop in the quantities of silver coinage, which by the third century make up only 17 out of 186 coins (9%).

Finally, by the fourth century AD the frequency of recorded coins had dropped from 186 to 172. By this period, 92% of the coins are composed of copper alloy (159 out of 172 coins), suggesting a lot of low value exchange taking place during this period. Whereas the presence of silver coins has reached an all-time low, forming only 6 out of 172 coins (3%).

14.4 Chronology

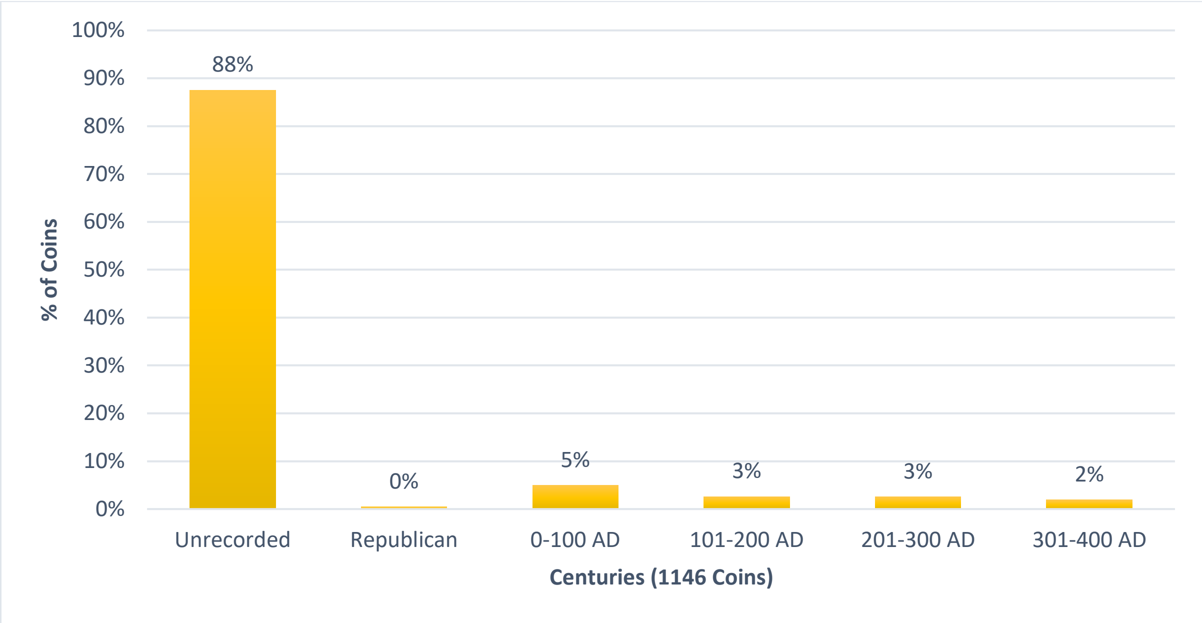

Figure 14.4-1 Chronological Distribution of the Synthesised Sample by Date of Issue

Figure 14.4-1 shows the distribution of coins chronologically by date of issue, where this information has been recorded. As shown, 1003 coins fall into the unrecorded category (88%), meaning no date of issue has been attached to their record in the synthesised data. This is due to the lack of specific date assigned to the coinage, meaning that a precise timeframe of production could not be allocated.

This leaves 143 coins (with date of issue recorded) to be split amongst the six chronological categories outlined in the graph above. As can be seen, the only sample to reach over 50 coins are the 1st century AD (57 coins), suggesting an influx of coins into Lancashire following the conquest of Britain and the increased inhabitation of the north of England by Roman populations. We then see a decrease in the frequency of coins in the third and fourth century (29 and 27 coins). However, with so much information unrecorded for this particular factor, it is argued here that date of issue may not be the best method to analyse the coins chronologically. As such, this investigation will be using the date of Emperor to allow a more in-depth analysis of the chronological distributions. As we will see later in this Chapter, Emperor is one of the more common factors recorded across the synthesised publications used for data collection in this study. A coin bearing the face of a particular Emperor on its obverse, must have been minted during that Emperor's reign, and therefore may allow a much broader analysis of chronology across the county. However, it is important to acknowledge that this can only provide the earliest possible date at which the coin could have been minted, and interpretation of deposition date or circulation length cannot be made without the contextual information of the coin's location and surrounding area.

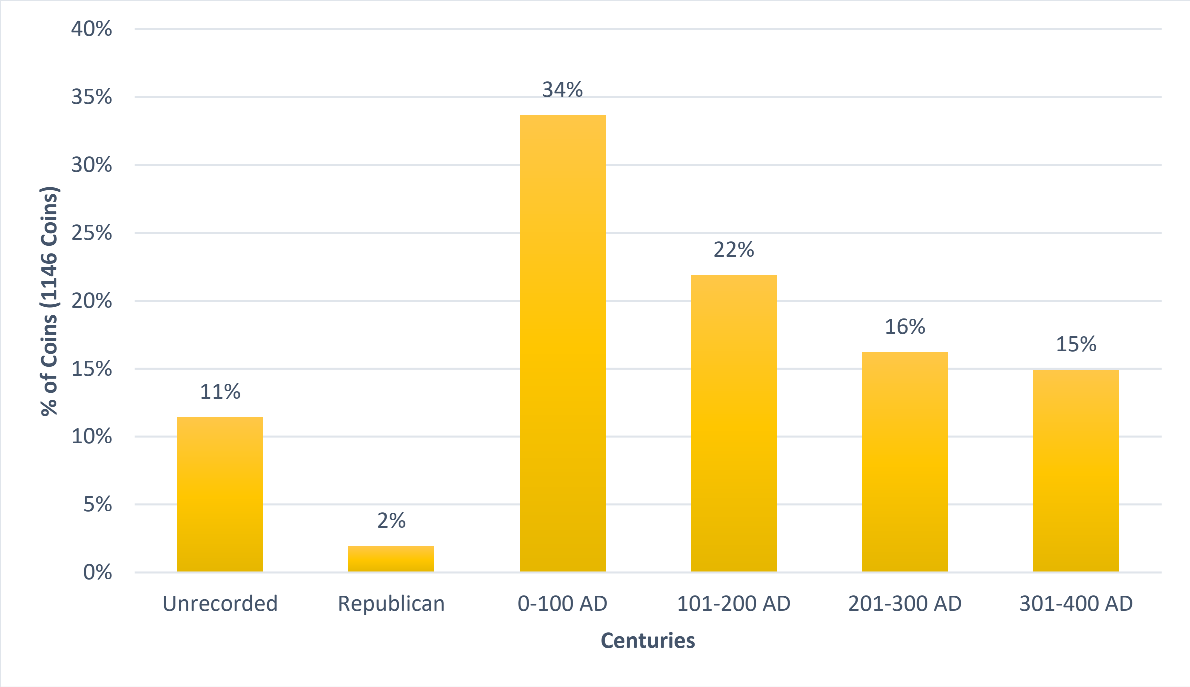

Figure 14.4-2 Chronological Distribution of the Synthesised Sample by Date of Emperor

By analysing the coins by date of Emperor as opposed to date of issue, we reduce the quantity of unrecorded coins from 1003 to only 131 (Figure 14.4-2). Thus, we see a significant increase in coins across the chronological groups, including a big jump in first century coins from 57 to 386 (or 5% to 34%).

When looking at coins by date of issue, only one category had over 50 coins (the first century). Contrastingly, by looking at the coins by date of Emperor we can see that only one category is under 50 coins (Republican).

As we have seen through the analysis of the Lancashire sample by date of issue, this is often not recorded in publications, therefore exploring the data by Emperor date provided a more detailed picture of the coins in Lancashire.

By analysing the Lancashire sample as a whole using Reece Periods, we can begin to see significant peaks in coin presence and begin to understand which Emperors would have been in power at these specific points in time. A sample of 909 coins out of the 1146 can be used for the analysis of chronology by Reece period.

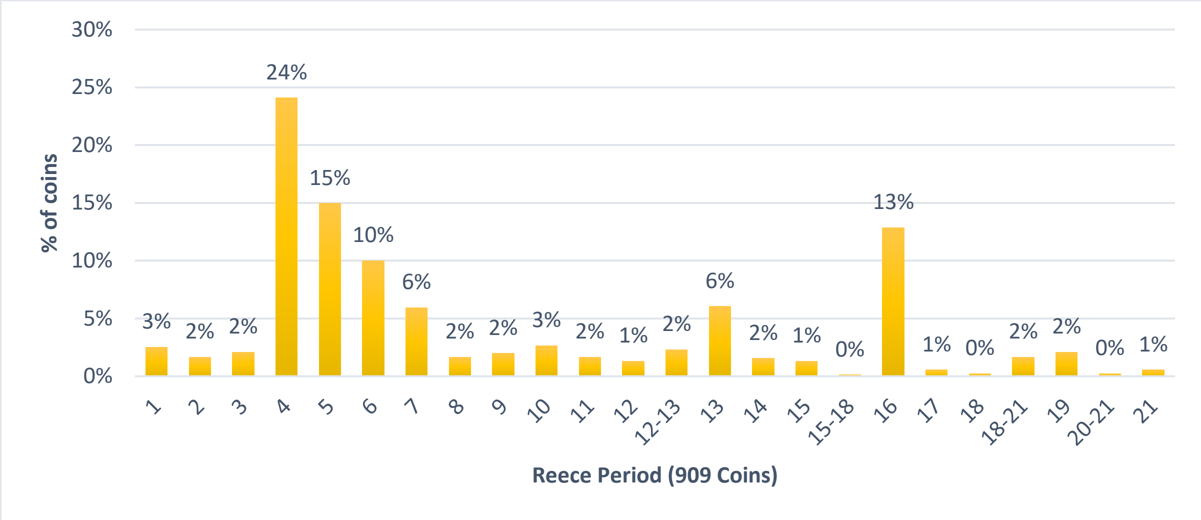

Figure 14.4-3 Chronological Distribution of the Synthesised Sample by Reece Period

Only three periods have coins in quantities over 100, with Reece Period four being the largest group with 219 out of 909 coins (Figure 14.4-3). Period four ranges from 69-96 AD and includes the Emperors Titus, Domitian, Vespasian, Domitia Longina, Domitilla the Elder and Julia Flavia. It is possible that the presence of coins in high quantities can be associated with the initial settlement of the North West of England. For example, it is thought that the forts at Ribchester (Buxton and Howard Davis 2000, 46) and Carlisle (Caruana *et al*. 1992, 45) had their initial phases of construction in the early 70s AD).

Period five also has coins assigned to them in quantities over 100 (136) and covers a time period between 96 and 117 AD and include Emperors from the Trajanic period. Consequently, it is possible to suggest stable occupation of Lancashire across these two periods ranging in date from 69-117 AD, with the coins from period four to five accounting for 39% of the entire sample.

Following on from period 6, there is a steep decline in the quantities of coins being assigned to subsequent periods, until period 16 where coin numbers reach 117. Reece's Period 16 covers the time period between 317-330 AD, and includes Crispus, Faustina, Licinius, Licinius II and Sextus Martinianus.

Official vs Unofficial:

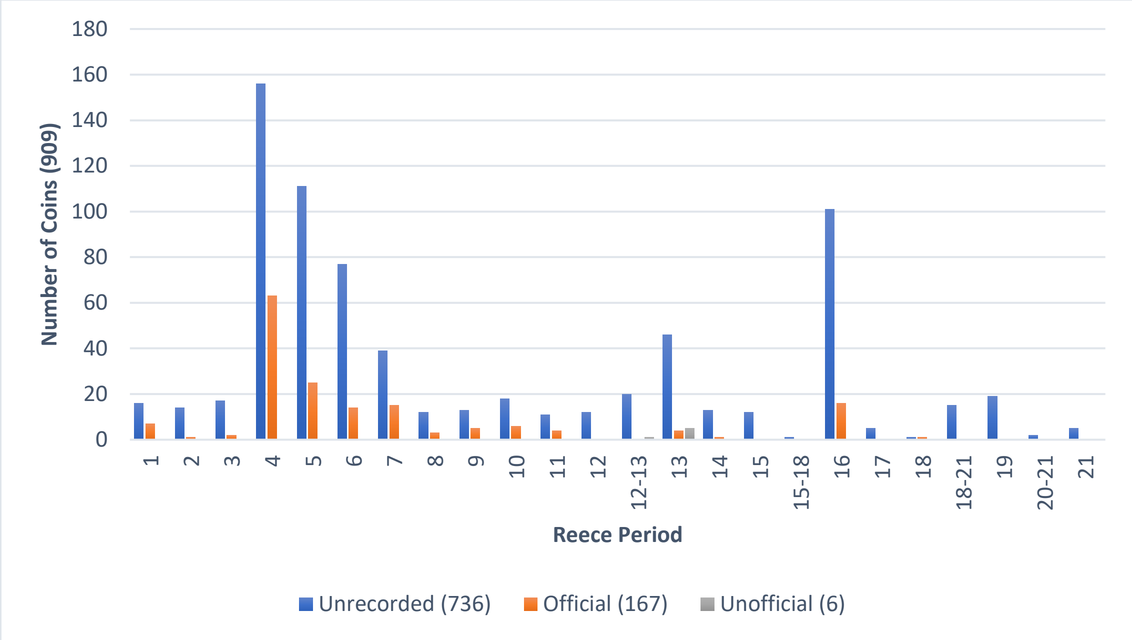

Figure 14.4-4 Chronological Distribution of Official vs Unofficial Coins by Reece Period

By subdividing the synthesised sample into official and unofficial coinage, we can begin to understand how chronology affects the production of unofficial coinage in Lancashire (Figure 14.4-4). For example, the majority of unofficial coinage (5 out of 6 coins) falls into period 13, 260-275 AD. This may be indicative of economic instability during this period, which provides a backdrop for the increase of unofficial coinage production.

Reece Period Vs Coin Wear:

By looking at coin wear chronologically, we can begin to unpick broad assumptions about how coins have become worn, and whether Lancashire became an increasingly coin-using economy across its occupation. As we have seen from the specific Reece period information with regard to the five main areas in this investigation (Ribchester, Walton-le-Dale, Lancaster, Kirkham and Burrow in Lonsdale), the majority of sites can have their peak influx of coin attributed to earlier Reece periods, which coincides with the initial occupation of the North of Britain.

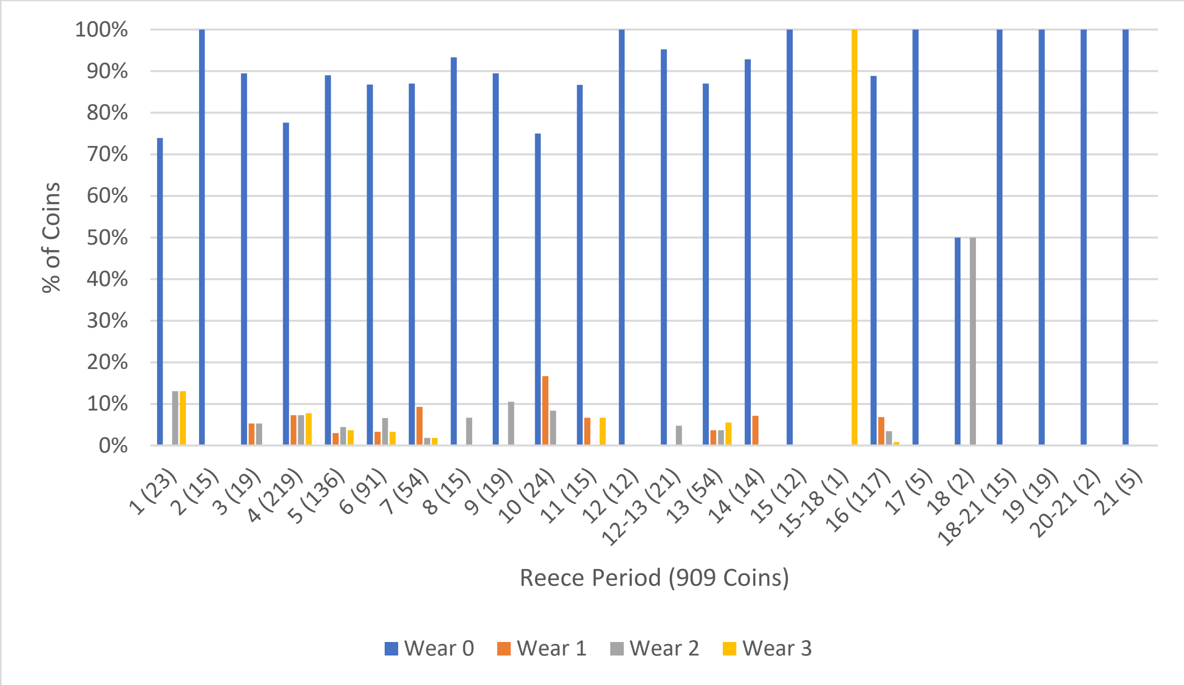

Figure 14.4-5 Chronological Distribution of Coins vs Wear Categories

For the purpose of this research, coin wear categories have been turned into a numerical system ranging from 0-3. The reason for this is, whilst in the majority of cases the synthesised material did not record coin wear (or provide the means in the form of pictures to do so), those that did used slightly different terminology for their coin wear categories. By recoding these different systems into a 0-3 numerical stage it has allowed the data collected to be compared with each other in a much more feasible way.

Whilst analysing or recording the wear of a coin is a commonly accepted numismatic method, and has also been used in archaeological interpretation, largely with regard to understanding circulation and the economy, it is important to note that in the majority of cases coin wear is unrecorded. In fact, 783 out of 909 coins (86%) were unrecorded. As such, it can be suggested that whilst wear categories/systems are widely accepted with regard to analysing coin evidence to uphold interpretations of the Roman (and Romano-British) economy, and ideas about circulation, there is no consistency in how we are recording this information (or whether we are recording it at all).

When wear data is recorded, the majority of coins belong to category 2, thus being slightly worn (Figure 14.4-5). 46 out of 126 (37%) belong in this category and as can be seen from the graph the highest proportions of this category are present in Reece Periods four to six. These three categories account for 28 out of 46 coins, or, 61% of the category 2 sample. This would imply that the earlier coins have become the most worn, which on the surface would be the most logical conclusion as these earlier coins would have had more time to circulate, thus providing a longer time period for them to have become worn.

The least common coin wear category is category 3 (unworn), with just 35 out of 126 coins (28%) belonging to this group. Again, chronologically a high proportion of these coins belong to Reece Period four, with these periods comprising 17 out of the 35 coins (49%) available for this category.

14.5 Coin Wear

This Chapter will discuss the broad observations that could be made when looking at wear categories chronologically by Reece period. However, as wear analysis has played a substantial role in considerations of the Roman (and Romano-British) economy throughout archaeological discourse, it is proposed here that this category of recording is fundamental to interpretation. As such, it is the contention of this section to delve into the recorded wear information in more depth and analyse this as a category in its own right.

Firstly, we will consider the sample as a whole, to highlight the discrepancies in the recording process when it comes to coin wear.

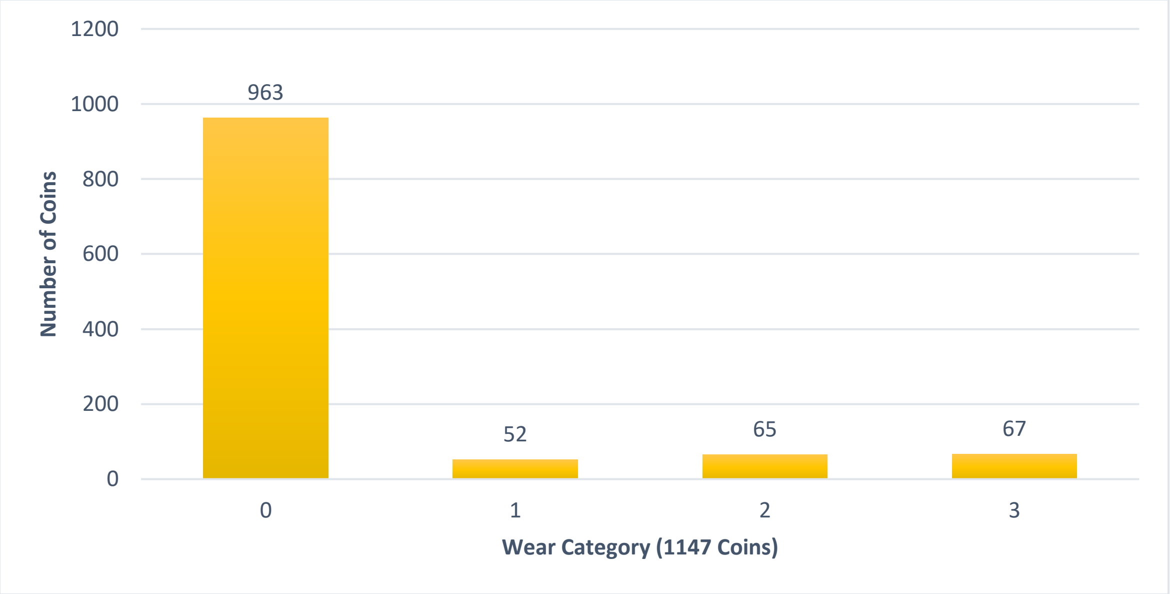

Figure 14.5-1 Distribution of Wear Categories in Whole Sample

As shown, 963 out of 1147 coins are assigned to Category 0, which means that either wear data was not recorded (Figure 14.5-1). It is possible to suggest that 84% of the synthesised data for

Lancashire cannot or has not been included in previous investigation when wear has been used to discuss circulation/the economy.

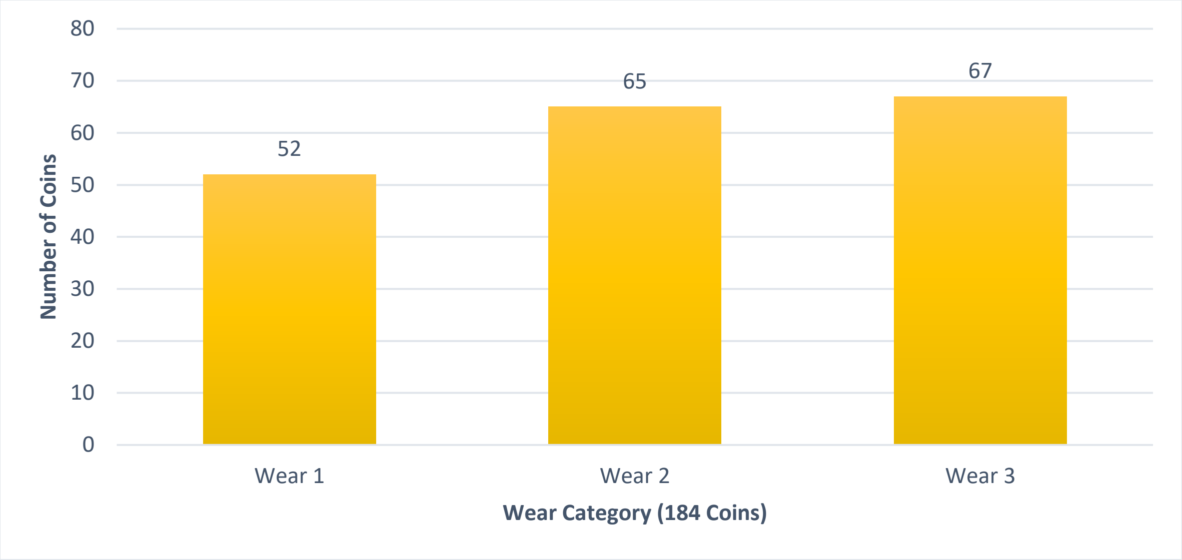

Figure 14.5-2 Distribution of Coin Wear, When Wear is Recorded

When wear is recorded, the only categories containing a sample of over 60 coins are categories two and three, being slightly worn and worn (containing 65 and 67 coins respectively) (Figure 14.5-2). Combined these two categories make up 72% of the 184 sample for known coin wear from the synthesised Lancashire data, with the other 28% of coins belonging to category one, unworn (52 out of 184 coins). This would suggest on the surface that the majority of coins found in Lancashire are well circulated, implying that a coin-based economy was both popular and thriving, as current literature would lead us to believe that coin wear is equal to coin use or acceptance. However, as already stated in this thesis, publications offer little definition as to what constitutes each group, instead assigning broad labels to each stage of the chosen wear system.

<u>Official vs Unofficial:</u>

It has already been noted that the majority of the synthesised data sample has no wear information recorded. In addition to this, there are a further 39 coins between wear categories one and three which cannot be included in an analysis of official versus unofficial coins, as they have no denomination recorded.

From the remaining data, we can begin to ascertain if there is a difference in wear between official coinage produced by Imperial mints, and the locally made unofficial coinage, which appears across Britain.

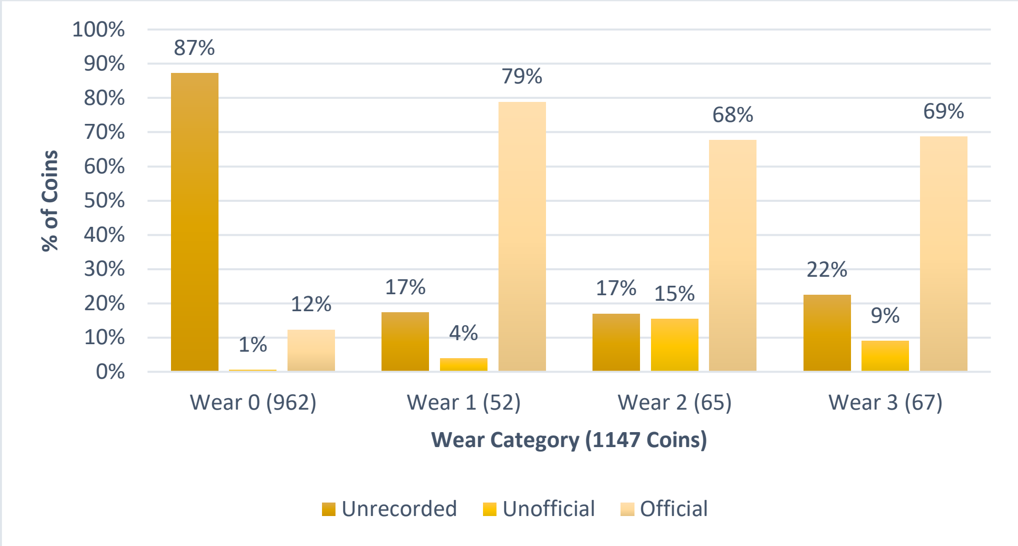

Figure 14.5-3 Distribution of Coin wear in Official vs Unofficial Coins

The range of wear is consistent for official coinage, with wear categories one, two and three containing 52, 65 and 67 coins respectively (Figure 14.5-3). The smallest category belongs to unworn coins (Wear 1), which constitutes just 28% of coins, when wear can be assigned. Contrastingly, worn coins (Wear 3) makes up 39% of coins. As 72% of this known data for official coins suggests that they are either slightly worn or worn, it is possible to argue that a coin-based economy was a widely accepted and used in Lancashire during the Romano-British period.

Whilst the sample of unofficial coinage in the synthesised dataset is considerably smaller than official coinage, it is also possible to see similar patterns. Just 23 coins comprise the unofficial coin data, and it is possible to suggest that this contradicts previous interpretations of unofficial coinage in Britain. This is because it has been suggested that being on the fringe of the Empire, Britain had high proportions of unofficial coinage from the third century onwards, when Imperial Rome was beginning to withdraw from Britain. If we look at the evidence of wear for unofficial coinage, it is possible to suggest a similar pattern to that of official coinage. When wear categories one, two or three could be assigned, the sample consists of two, 10 and six coins in each respective category. If we consider this as a percentage, just 4% of unofficial coins (where a wear category can be assigned) make up the unworn group (Wear 1), whereas 43% of unofficial coins make up the slightly worn group (Wear 2).

14.6 Summary

This initial foray into the Roman coin evidence from Lancashire from published sources has provided a wealth of important information. This synthesis has provided evidence of 1146 coins in the county, with distinct sites becoming apparent, mainly militaristic in nature. Although the dataset is extensive, it is important to highlight that it is not exhaustive, there appears to be discrepancies in the types and quantities of publications available. For example, the Ribchester bathhouse material has not been included in this synthesised analysis due to a lack of publication of the material. However, this material was included in Chapter 7, due to its availability for reanalysis.

This synthesis has challenged some of the preconceptions that surround Roman coins in Britain, most notably with regard to unofficial coinage. As this research has shown, the proportion of unofficial coinage is substantially less than previous and longstanding interpretations would have us believe. This implies that the Roman economy, particularly in Lancashire, is much more fluid than we might have previously thought. Where people are not solely relying on coins by the third and fourth centuries (when it is held that these contemporary copies were produced in large quantities) but instead other methods of exchange may have been taking place that are no longer visible in the archaeological record.

Perhaps most importantly, the synthesised data analysed in depth above has provided a useful backdrop in the understanding of the current state of affairs with regard to coin recording, and the discrepancies that exist within the field. Even though there are large bodies of work concerned with homing in on the language used and information recorded with regard to coins, many of these focus on individual elements of a coin's biography

As the synthesised data in this chapter highlights, there is also no standardisation between similar types of report (e.g., excavation reports), let alone between the different sources of data. In some cases, there are also inconsistencies in reports written by the same individuals.

15 APPENDIX THREE: DATA BREAKDOWN

The data analysed in this thesis was collected from a number of different sources including the Portable Antiquities Scheme, Oxford Archaeology North and various museums. A breakdown of the data can be seen below.

Location of Coin	Number of Coins
Harris Museum	610
Lancaster City Museum	121
Museum of Lancashire	114
Oxford Archaeology North	41
Portable Antiquities Scheme	364
Ribchester Roman Museum	141
University of Central Lancashire	75
Museum of London Archaeology	381
Museum of London	43