# The First Brooches in Britain: from Manufacture to Deposition in the Early and Middle Iron Age

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# Abstract

**Title:** **The First Brooches in Britain: from manufacture to deposition in the Early and Middle Iron Age**

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This thesis explores the evidence for the earliest brooches in Britain. The first brooches were used and made in Britain in the Early Iron Age from c.450 BC. During this period, and into the Middle Iron Age, methods were devised for constructing brooches with mock springs and hinges. In tandem with these changes a greater variety of types came into use. Some are relatively widespread across Wales, England and into Scotland. Others are concentrated in central or western and eastern regions of England.

Brooches were manufactured from both bronze and iron. Bronze brooches dominate in the earlier period but iron brooches are as common as bronze in the Middle Iron Age. Some bronze brooches are constructed with small elements of iron and vice versa. Other materials are also employed as decoration on the body of the brooch including coral and glass. A revised chronology and typology are proposed, drawing on both intrinsic attributes and external archaeological evidence.

The evidence from burials shows brooches were used to clasp fabric. The fabric was probably a woollen cloak wrapped around the body as a shroud. The brooch was positioned so it was visible during the funerary process. Some brooches fastened bags and other small brooches were better suited as ornaments or badges. These have distinctive designs that would have made them recognisable, perhaps as objects belonging to a particular person and/or associating that person with a specific group. Brooches are also found at settlements, at hillforts and in rivers, as well as at sites with or deposits of a ritualised character. Aside from cemeteries these latter sites contain the highest numbers of brooches. The deposition of personal objects at these types of site may have asserted the individual's connection to the community in a manner comparable to the burial of a person in a cemetery.

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# Introduction

This thesis examines Early and Middle Iron Age brooches in Britain, dating from c.600–150 BC, by exploring evidence for their earliest manufacture, use and deposition. Brooches that are typologically earlier on the continent are known in Britain, but these are thought to be imports in the Roman period or later. The basic sequence in the existing typology holds up to scrutiny but there are distinct differences and identifiable regional variations. The first types to appear here in c.450 BC maintain some affinities with the material on the continent yet incorporate local features. From c.300–150 BC the dominant types are distinctively different from other European brooches. Post c.150 BC we see resurgence in the incorporation of European features combined with an increase in the overall quantities of brooches in Britain. 150 BC therefore marks the end of the period under study here.

The variation over time in the design of bow brooches has been perceived as a useful indicator of the date of Iron Age sites from which they are recovered. Their use as a dating tool creates a need to refine the brooch chronology as precisely as possible to achieve an accurate date for associated material and features. The research presented here highlights the problems in achieving accurate dates for bow brooches and therefore the risks in employing them as a precise dating tool. Reconsideration of the typology, however, shows they may be used to propose a relative sequence or loose period for activity on a site but this is still problematic.

The last survey of all stratified and stray Iron Age brooches from Britain was published in 1987 (Hull and Hawkes 1987). The last attempt to compare brooches from archaeological contexts in Britain dated by other means, such as pottery assemblages, was published 16 years ago (Haselgrove 1997). Since then information has become available on a further 109 brooches recovered from archaeological excavations and 206 found by metal detecting (183 recorded on the Portable Antiquities Scheme database). The dataset consists of 716 brooches of Early and Middle Iron Age type recorded up to September 2011. Since data on almost 50% of these has been collected in the past two decades it is vital we reevaluate our understanding of these objects to provide up-to-date information for their integration into wider Iron Age research.

The database (Appendix 1) includes all known Early and Middle Iron Age bow and plate brooches found in Britain.. This draws on a range of sources including published brooch catalogues, site reports and data collected through the Portable Antiquities Scheme. By combining all this evidence it has been possible to address questions of when the first brooches appear in Britain and the earliest developments of insular products. To achieve this direct and associated dating evidence is compared with a revised typology and details of production methods. With the aid of GIS mapping software up-to-date distribution patterns are presented and analysed.

Iron Age research and the nomenclature employed for this period have significantly evolved since Hull and Hawkes assessed the bow brooches. In Chapter 1 the research data are located within the current understanding and chronology of this period. Previous research on brooches and their position within Iron Age archaeology is reviewed in Chapter 2 to provide the background to the research. In Chapter 3 the typology is constructed. The dating evidence associated with specific brooches and the possible application of these dates to brooch types is presented and discussed in Chapter 4. Aided by the results of scientific analysis and experimental research, brooch production methods are considered in Chapter 5. The distribution of findspots organised by material and brooch type is explored in Chapter 6 in order to identify any possible regional and chronological patterning. This patterning is examined in more detail in Chapter 7 where attention is given to the type of sites at which brooches have been found. Chapter 8 examines deposition behaviour further by studying the contexts in which brooches have been discovered. All this information is drawn together in Chapter 9 to reflect on the results produced and address how brooches were actually used in this period. We conclude with Chapter 10 bringing together the story of Early and Middle Iron Age brooches in accordance with our current knowledge.

# Chapter 1 Research Context

In studies of the European Iron Age brooches are both explicitly and implicitly used to create the chronology of the period. This thesis proves the need to be sceptical about our reliance on brooches as chronological markers in Britain. At the same time positive evidence is presented to explore how we can date them to provide a useable typology and realistic chronology. The research explores information about the production and deposition of the brooches. These facts and theories are combined to propose how brooches were used in Early and Middle Iron Age Britain.

## 1.1 Background

This research has been undertaken within the scope of a collaborative award with the University of Leicester and the British Museum funded by the AHRC. The overall aim is to re-examine the earliest brooches found in Britain with the aid of new data available from the Portable Antiquities Scheme and recovered through developer-funded archaeological excavations. The research covers all pre Late Iron Age brooches from England, Wales and Scotland (Map 1.1). Brooches from Ireland were also considered but none have proven to be contemporary (Raftery 1984; Becker 2008). There is a significant increase in the number of brooches in the Late Iron Age prompting Hill to describe this change as the 'fibula event horizon' (Hill 1995a, 1995b). Excluding the Late Iron Age brooches restricts the dataset to a manageable size to enable a Britain-wide examination of these earliest bow brooches. The investigation therefore focuses on bow and plate brooches from the Iron Age up to c.150 BC. No brooches have been recorded from Bronze Age contexts in Britain. Of the brooches studied 716 appear to be Early and Middle Iron Age types (Appendix 1 and 2). Further examples were either too fragmentary for positive identification or lacked provenance information. The provenance data is of variable quality for all brooches further restricting the examples that may inform our knowledge of distribution and deposition (Chapter 6 and 7). Further brooches were recorded but have since proven to be types not found in Britain before c.150 BC (Chapters 3 and 4). Of these 79 have been analysed here to explore their place within the chronology; these are listed in Appendix 3.

The topic has been selected to fill a lacuna in Iron Age research and brooch studies. The quantity of metal artefacts and discussion of the contextual information is much lower for the earlier part of the Iron Age in Britain than the Late Iron Age (Haselgrove et al. 2001, 31). Iron Age artefact studies have tended to focus on this later period to the detriment of the earlier evidence. This bias is created by the relative lack of evidence pre c.350 BC compared to the later period in England (Haselgrove and Pope 2007), Wales (Gwilt 2007, 301) and Scotland (Bradley 2007). This is a particular problem for brooch specific studies where the earlier material is included to a lesser degree than the evidence from post c.150BC (e.g. Hattatt 1982, 1987, 1989, Feugère 1985, Haselgrove 1997, Jundi and Hill 1998, Mackreth 2011). The aim here is to redress the imbalance with new research on Early and Middle Iron Age brooches and their depositional context to enhance our understanding of material culture and object related behaviour within this period.

### 1.1.1 Brooches in Britain

The last national study of Iron Age brooches in Britain is over 25 years old: Hull and Hawkes' *Corpus* (1987) hereafter referred to as H&H. The data collected by Rex Hull and later added to by Christopher Hawkes account for c.30% of the current total dataset. This quantity is slightly lower than the total number recorded up to that time because Hull chose not to publish all the brooches from sites with larger assemblages. Through her work on Hull's dataset Grace Simpson also added a few more brooches which are to be included in a revision of the *Corpus* (Crummy forthcoming). The next detailed examination of the Britain wide evidence was carried out by Haselgrove (Haselgrove 1997). Haselgrove's research covers data available up to 1995. Since then the quantity of brooches has increased two-fold. With such a large increase in the dataset it is vital to reconsider our understanding of these objects in Iron Age Britain to provide up-to-date information for their integration into wider Iron Age research.

This sharp increase is largely owing to two developments: the introduction of Planning Policy Guidance number 16 (PPG 16) in 1990 and the inception of the Portable Antiquities Scheme (PAS) in 1997 which expanded to cover the whole of England and Wales in 2003 (Worrell 2007, 372-373). PPG 16 has since been replaced by Planning Policy Statement 5 in 2010 (PPS) and the National Planning Policy Framework in 2012 (NPPF). As a result of the planning policy a greater number of archaeological investigations have been carried out on development sites under controlled conditions, with an increased level of detail in the data recorded. Research excavations still occur but the majority of sites are now excavated in advance of development in urban locations and along new transport routes. Instead of searching for and/or identifying sites suitable for answering research questions relating to particular periods or theoretical concerns, most sites are selected for excavation on the basis of the intensity of development and perceived archaeological potential, regardless of period and site type. For the Iron Age this has broadened our understanding by presenting a range of site types for excavation that were not previously recognised as Iron Age or even known to exist. These include unenclosed settlements, ritual locales and landscapes with a long history spanning from the Bronze Age, Iron Age and the Roman periods (Haselgrove at al. 2001, 7-9).

Overall information has been collected on 394 brooches from excavations, only 298 of which are derived from stratified deposits. About a third of the total number of excavated brooches has been found since 1995, or the excavation records have only been made available since that time. The quantity of 'new' Iron Age brooches now recorded on the PAS database is in the hundreds, most with secure findspots although usually no stratigraphic evidence. Of these, 183 are relevant to this study. The locations of these finds are often recorded with eight figure grid references. They may only be published to four figures for the security of the landowners, the detectorists and heritage but the full references may be used for research purposes. Detailed locations are particularly valuable for distribution studies providing comparative evidence to the excavated material. Although brooches might not be available for repeated physical study like in museum collections, many early brooch acquisitions in museums have only vague and often questionable findspot information (e.g. Hull and Hawkes 1987, 10 & 112). The composition of the dataset will be explored further in Chapter 2.

## 1.2 Nomenclature and Chronology

For the purposes of this research the Iron Age in Britain is divided up into the four general periods. The following discussion explains why this terminology and dating has been chosen.

1. Earliest Iron Age (c.800–600 BC)
2. Early Iron Age (c.600–300 BC)
3. Middle Iron Age (c.300–150 BC)
4. Late Iron Age (c.150 BC–AD 50)

Brooches have been a vital part in the construction of Iron Age chronologies. The belief that their frequency and reasonably rapid stylistic changes over time could be used to provide a marker against which to organise other archaeological evidence (Stead and Rigby 1999, 14) dates back to the late nineteenth century. They have been relied upon even after the development of radiocarbon dating owing to two plateaus in the calibration curve during this period: 800-400 and 400-200BC (Hamilton 2011, 26). Advances in technique as well as the application of Bayesian modelling (Buck et al. 1996; Bayliss 2009) have increased the value of radiocarbon dating for this period which has had a gradual effect on the dating of the chronological divisions.

In the late nineteenth century the Iron Age was described in relation to differences between the well preserved metalwork from two recently investigated sites, Hallstatt and La Tène, of mutually exclusive date. The earlier, the vast cemetery of Hallstatt in Austria, was excavated from 1846-1863 by Ramsauer (Hodson 1990; Wells 2012, 1) with numerous graves containing massive metal objects including brooches. The later was the metal rich site at La Tène, on the edge of Lake Neuchâtel in Switzerland, discovered in 1857.

The later period was soon subdivided by Otto Tischler (Tischler 1885) using one attribute of brooches, the foot:

- Early La Tène: the foot of the brooch was not attached to the bow
- Middle La Tène: the foot was held to the bow
- Late La Tène: the foot was cast complete with the bow

This was supported by what he perceived to be contemporary changes in sword and scabbard forms (ibid; Collis 2006, 106). These attributes still remain chronological markers of the three sub periods to the present day although the terminology varies. Déchelette developed a chronology for the French evidence where the same periods are referred to as: La Tène I, II and III and now are further subdivided (Déchelette 1914, 930-933). Meanwhile Reinecke proposed a four-fold subdivision for the German material: La Tène A, B, C and D (Reinecke 1902) with the additional division based on the size of the spring coils (Table 1.1). Since then researchers of material from Middle Europe have continued to subdivide these periods based on variations in the brooches (Rieckhoff 2008, 5-8).

**Table 1.1** Comparison of the first Iron Age chronologies for Europe.

| Brooch foot form | Spring | Tischler 1885 | Reinecke 1904 | Déchelette 1914 | Dates |
|---|---|---|---|---|---|
| Reverted foot not attached to bow | Large coils | Early La Tène | La Tène A | La Tène I | c.500 – 300 BC |
| | Small coils | | La Tène B | | |
| Reverted foot attached to bow | | Middle La Tène | La Tène C | La Tène II | c.300 – 100 BC |
| Foot cast as one with the bow | | Late La Tène | La Tène D | La Tène III | c. 100 BC – 1st Century AD |

The terms Hallstatt and La Tène were ascribed to Iron Age objects in Britain (Fox 1923, 85) but it was soon realised that the material did not directly correlate with the evidence from the continent. This led to a number of efforts to describe the British material in terms divorced from the continental type sites and based instead on proposed type sites in Britain (e.g. Hawkes 1959, 75 and Hodson 1964, 108). In 1977 Collis published a convincing argument for discarding both the terms Hallstatt and La Tène and producing a simpler British chronology as an antidote to the 'algebraic complexities' of the Hawkes system of British Iron Age A, B and C which had become 'divorced from the material' (Collis 1977, 6). Later attempts that merely changed the name of the periods but maintained Hawkes' criteria were found to be little more than an exercise in semantics with new signifiers (new terms) for the same object (the groupings of sites and materials as a period). Collis instead divided the Iron Age into four periods:

- Earliest Iron Age: c.700–500 BC
- Early Iron Age: c.500–250/200 BC
- Middle Iron Age: c.250/200–100/50 BC
- Later Iron Age: c.100/50 BC to the Roman conquest.

In Collis' opinion these periods should not be subdivided as they merely provide a way of cross-referencing evidence from the entire Iron Age to aid discussion (Collis 1977, 6). Instead he proposed that where aspects of the evidence are examined these should be organised into typologies suited to the material. These typologies should 'not necessarily be expected to fit in with the above Early, Middle and Later Periods' (ibid). In other words Collis understood that types of objects may vary over time, out of sync with the period divisions we have imposed on the Iron Age.

Collis' new terminology was not taken up by all, in particular researchers of metalwork. The terms had been derived in relation to metalwork evidence and this association has continued into the 21st century for discussions of continental and British material with researchers relying on the continental terminology to describe the different phases and development of the objects and their decoration (e.g. Stead 2006, Macdonald 2007). In Stead's analysis of swords and scabbards from Britain he proposes the French Swiss classification of La Tène I, II and III to be more appropriate to the British material than the more numerous subdivisions of the German system: La Tène A, B, C and D (Stead 2006). For Stead the La Tène system in Britain correlates thus:

- La Tène I = La Tène A and B (c.450–250 BC)
- La Tène II = La Tène C (c.250–150 BC)
- La Tène III = La Tène D (c.150 BC to the Roman conquest)

In other words, the differences in Stead's sword and scabbard types are meaningful if classified into three periods, but there is less change in the types during the earlier period than a four-fold subdivision would imply. In contrast Stead produced a specific typology for the Iron Age brooches recovered from the Yorkshire Wold cemeteries (Chapter 2) which stands alone from the Iron Age period divisions in accordance with Collis' proposal of only subdividing the periods in relation to specific artefacts (Collis 1977, 6).

From Cunliffe's research on the ceramics from Danebury and other southern sites he proposed four subdivisions to the pre-Roman Iron Age (Cunliffe 1984a, 549-50). Although he points out that regional variations may push the period boundaries in both directions by about half a century (Cunliffe and Poole 1991a, 24-26) and the scheme relies heavily on the southern data. Despite building his chronology from the ceramic evidence this is in part created through comparison to Continental ceramics both in style and technique (ibid, 98). These continental ceramics are referred to as La Tène types returning us to the creation of the La Tène chronology which has been built from the brooch typology. It is fortunate then that Cunliffe supported the notion that brooches are useful for creating a country-wide chronological sequence (Cunliffe 2005, 30) as his ceramic sequence is implicitly tied in with the brooch typologies on the continent. Cunliffe's period divisions are arranged thus:

- Earliest Iron Age c.800–600 BC
- Early Iron Age c.600–300 BC
- Middle Iron Age c.400–100 BC
- Late Iron Age c.100 to the end of the first century BC

The regional variations in the middle periods are reflected in the broad overlap from Early to Middle Iron Age. In Haselgrove's (1997) study of brooch deposition he analysed the evidence from stratified brooch finds recovered with associated ceramics. As a result he chose to employ Cunliffe's four fold divisions but made some small adjustments to the associated dates. He suggested a shorter overlap between the middle periods and was ambiguous over the transition from Earliest to Early Iron Age:

- Earliest Iron Age: when Hallstatt type brooches from the continent arrive in Britain from the seventh century to the end of the sixth century (c.800–500 BC).
- Early Iron Age: corresponding with Hull and Hawkes Types 1A, 1B and 1C commencing in the mid fifth century BC or earlier and continuing into the third century (c.475–275 BC).
- Middle Iron Age: corresponding with H&H Types 2–3. Starting in the third century BC and continuing into the late second century (c.300–125 BC).
- Late Iron Age: commencing in the latter half of the second century and continuing to the imposition of Roman rule through the first century BC (c.150 BC–AD 40/70) (Haselgrove 1997; 1999, 130-131).

As will be noticed from Cunliffe's and Haselgrove's schemes above, the dating of Collis' periods had been revised with the Iron Age commencing around a century earlier than once thought and the Middle Iron Age commencing around 300BC. These dates have been revised in reaction to the results of extensive dendrochronological research on the continent combined with comparative studies of French and Mediterranean material (Haselgrove 1997, 56). For Collis the so-called 'Arras Culture' burials, the large-scale cemeteries of the Yorkshire Wolds, were located in the Early Iron Age owing to their perceived connections with vehicle burials on the continent (Collis 1977). Re-analysis of the evidence including radiocarbon dates has shown these to belong to the end of Collis' Early Iron Age and start of his Middle Iron Age or within Haselgrove's Middle Iron Age (e.g. Anthoons 2007, Jay et. al. 2012).

Recently Collis has addressed the problem of chronology in the European Iron Age owing to discrepancies in the use of terms and application of dates across regions and sites (Collis 2006, 2009). He draws attention to issues of dating based on typological evidence. An object type might appear in different places at different times and even in a different order as ideas are accepted or transformed in a non-linear fashion (Collis 2009, 378-379). To enable discussion across different regions he proposes a simple two-part division of the Iron Age:

- Earlier Iron Age c.800–500 BC, also referred to as Early Iron Age
- Later Iron Age c.500–AD 50, also referred to as Late Iron Age

In other words Collis is returning to the long held distinction between the Late Hallstatt evidence and the La Tène period evidence only with less loaded terminology. In Britain this is useful as it distinguishes between an earlier period when material evidence is sparse and a later more abundant, more archaeologically visible period. However, these time spans are too broad to support a meaningful conversation on the changes in the physical evidence. In anticipation of this problem Collis proposes that these periods should then be subdivided in relation to one object type only. For this he selected brooches because of their frequency on settlement sites, in burials, hoards and ritual sites (Collis 2009). He creates 16 subdivisions on the basis of attributes of the brooch types (ibid, 399). These types exhibit very little correlation with the British brooch evidence so again we are back to the problem of trying to equate a continental chronology with the British evidence.

So where does this leave us? We are still in need of terms that can be understood internationally and in relation to different types of evidence. A period is a device for giving a chronological structure to the data and as such does not reflect the exact start or end of any style of object (Collis 2009, 381). Collis therefore feels there is no need for specific date boundaries for each period (ibid). However, if no approximate calendar dates are given then we really limit our ability to compare evidence across such a massive field of data and wide geographical region. At present it seems the best solution is to use a system that has been developed through analysis of the British evidence (Cunliffe and Poole 1991a; 1991b; Cunliffe 2005; Haselgrove 1997; 1999). Unfortunately this means we are creating a somewhat circular argument by discussing brooches in relation to an Iron Age chronology that has been ultimately created from brooches. However the aim is to use a common language for cross period associations but the actual brooch evidence will be considered in relation to the specific typology and chronology for this type of object. Contra Cunliffe and Haselgrove, in this scheme each period commences on the same date as the preceding period because it is implicit in our understanding of the past that changes are rarely so sudden. Transitions occur at different rates for different categories of evidence and are best explored in the detailed evidence rather than in hypothetical chronological boundaries.

Therefore, for this thesis the Iron Age is divided into the following four periods:

1. Earliest Iron Age in Britain c.800–600 BC (EtIA)
2. Early Iron Age in Britain c.600–300 BC (EIA)
3. Middle Iron Age in Britain c.300–150 BC (MIA)
4. Late Iron Age in Britain c.150 BC–AD 50 (LIA)

These four periods reflect general shifts in the character of the archaeological evidence:

1. EtIA: Decline in the bronze hoarding of the Late Bronze Age during a period of relative paucity of evidence particularly in relation to settlement activity.
2. EIA: Increased visibility of occupation. Major surge in the construction of hillforts.
3. MIA: A period of diversity and regionality with visibly insular artefacts and changes in ceramics that do not occur in sync or at all in different regions.
4. LIA: Greater quantity of artefacts, more homogenous types, revival of contacts with the continent.

The chronological span of each Iron Age type cannot be precise but this tool does enable us to question the use of styles and their combination or lack of integration with other styles of ornament or object (Macdonald 2007, 332-3). The terms provide a short hand way of referring to artefacts or sites of that general period. The chronology of the specific brooch types will be examined in Chapters 3 and 4 to see how they relate to these general divisions rather than imposing these period boundaries upon the artefact related evidence.

## 1.3 Setting the Scene

It is impossible to define exactly when the Iron Age begins in Britain. As with all chronological divisions applied after the event the participants at the time were not aware they had to set aside their current habitus and adopt a new lifestyle at a set date. The once defining characteristic of the use of iron is now seen to have a slow development from the tenth century BC (Haselgrove 2009, 149) increasing in use into the Middle Iron Age (Cunliffe 2005, 493). This has not forced back the chronological boundary as many Bronze Age practices were still taking place such as the deposition of bronze metalwork hoards into the seventh century BC (Needham 2007; O'Connor 2007). The date of 800 BC is therefore somewhat arbitrary, especially considering it marks the start of the first of two plateaus in the radiocarbon calibration curve (Hamilton 2011, 26; Haselgrove 2009, 152). However what sets the period apart from the preceding Bronze Age and succeeding Roman periods is a combination of types of settlement, new artefact types, the absence of older types, changes in deposition behaviour, changes in the form and materials used in the production of certain objects and technological changes.

### 1.3.1 Settlements in Iron Age Britain

Iron Age settlements ranged from small-scale or single household unenclosed farmsteads to densely populated, bounded, aggregated settlements and developed hillforts (Haselgrove 2009). Outside Wessex in the Earliest Iron Age the occupation evidence is often invisible. For example, in Kent where vast tracts of land were uncovered in advance of the High Speed rail link, the Earliest Iron Age evidence consists of occasional pits while ditches are rare (Champion 2011, 183, 188). In fact the regional diversity in the settlement evidence is too wide ranging to incorporate into this brief period review (e.g. Armit 1997, Cunliffe 2005, 237-346; Gwilt 2007, Moore 2007). The presence of brooch finds on settlement sites does not appear to be restricted to one type of settlement. 74 definite and 92 possible Early and Middle Iron Age brooches have been found at only 43 settlements. The variety of these settlements means that division into specific types for comparative deposition analysis achieves unreliable results. The data from settlements was therefore combined to examine patterning but this has contrasted with regional and local variations.

Originally I planned to compare enclosed and unenclosed settlements on the basis of a perceived difference in the structuring of bounded and unbounded sites (Haselgrove 1999, 177-120). This aim was set aside when analysis of the excavated evidence revealed that it was often difficult to be definite about which sites were enclosed and which not or whether the finds belonged to the phase of enclosed or open settlement on the same site. This is often a result of restrictions on excavation areas meaning the limits of the settlements have often not been reached or surrounding crop-mark evidence has not been interpreted through excavation (Sharples 2010, 58). It is also difficult to identify exactly when some boundaries were in use so the archaeological site might be a palimpsest of different phases of settlement some bounded, others not. It was instead decided to compare settlement sites which showed evidence for occupation in bounded and unbounded areas contrasting with hillfort sites by being less conspicuous in the surrounding environs even if they were well-known during the period. In other words the comparison is drawn between sites that dominate the landscape and sites that sit within the landscape even though these differing sites might be occupied in a similar manner (Sharples 2010, 58-61).

### 1.3.2 Hillforts

Hillforts are seen to have a long history of construction, occupation and abandonment that varied not only regionally but within regions too (e.g. Payne et al. 2006). They are defined in comparison to other enclosures by their larger size including the dimensions of the boundaries and their location 'on or near prominent hilltops' (Palmer 1984, 9). In Wessex many early hillforts were abandoned at the transition to the Middle Iron Age, a time when a few local hillforts were developed both in terms of the rampart structures and the density of the settlement within. The early hillforts across the country tend towards one of two extremes: either small sites with strong fortifications and dense internal occupation or large sites, perhaps enclosing whole hilltops, but with limited internal occupation evidence. Comparison across all known hillforts is difficult in light of the varied intensity of research on those sites. Danebury and Maiden Castle are two of the most extensively excavated sites yet neither has been excavated in its entirety (Wheeler 1943, Cunliffe 1984a, Sharples 1991). Recent research at Burrough Hill in Leicestershire has shown the presence of contemporary settlement immediately outside the ramparts (Thomas and Taylor 2010), an area rarely targeted in hillfort excavations and often outside the limits of the scheduled sites. Recent research has shown that differences in the evidence are not solely due to excavation and survey strategies but do represent actual differences in the use of these sites. Some clearly were occupied as settlements but others might have provided a focus for seasonal activity rather than long-term occupation (e.g. Sharples 2010, 70-76).

### 1.3.3 Artefacts

The deposition of large quantities of bronze objects in the Late Bronze Age gives way to three centuries of relatively little metalwork deposition (James 2007, 163). The apparent arrival of brooches in Britain in the Early Iron Age (Chapter 3) coincides with increased presence of other types of metalwork. This evidence may say more about changes in deposition practices than about the use of the metalwork at the time. Although it also indicates either melting down and re-use of copper alloys and re-forging of iron or possible longevity of objects that are only deposited later in the Early Iron Age. As mentioned above, iron becomes increasingly popular throughout the period under study with more frequent use not only for tools but other objects in the middle Iron Age including brooches. While iron was better suited to tools than bronze, in terms of the shapes and strength achievable, it is no better suited to small accessories like brooches than bronze. Its uptake may, therefore, relate to access to raw materials or preferences in terms of appearance (Chapter 5).

Prior to the Late Iron Age gold and silver objects are incredibly rare in Britain. The brilliance of a polished bronze or iron brooch would have been the closest most people came to seeing the lustre of gold and silver. Coinage had not yet come into existence so brooches could also have been the most portable shiny metal objects in circulation. The effect of light glinting off polished surfaces and casting grooved areas into shadow is clearly an intentional part of the brooch design.

### 1.3.4 Production

Material culture evidence from Iron Age sites shows a range of products were manufactured across the period from unfired clay loomweights to ceramic vessels; from bone modelling tools to decorated weaving combs; from iron tipped ards to decorated bronze scabbards; from plain woollen cloth to coloured cloth borders; from salt extraction to grinding grain. The list goes on and on covering domestic utensils, consumables, craft tools and much finer objects. Local materials were exploited and resources cultivated, and more distant raw materials were transformed into objects at a distance from the source. In pottery manufacture we find evidence for locally produced wares, perhaps homespun, and long distance distribution of vessels (Willis 2002, Woodward 2008). The presence and composition of iron currency bars has led to the suggestion that while the resource was widely available, certain iron sources were favoured for their particular qualities and this material was traded as distinctive shapes of currency bar, particularly in the Middle Iron Age (Hedges and Salter 1979, Hingley 1990, Crew and Salter 1993). Iron manufacturing technology meant that tools could now be produced that could be reworked in contrast to stone and bronze versions from earlier periods. Although deposition of bronze objects is far less common than in the Bronze Age, bronze was still popular throughout the Iron Age for cast objects, from brooches to horse bits, and sheet bronze items, such as shields and mirrors (Stead 1985, Jope 2000, Joy 2010). In this thesis we will examine the production process for brooches to see what this might inform us about brooch design and technological changes but also what it might indicate about who was making them and for whom. The resources required and their source may inform our understanding of the significance of the final product within the context of its style and deposition.

### 1.3.5 Deposition and Distribution

The difficulty for the archaeologist is to pick apart the time lapse between when a type or style of object is produced and when that object is deposited. By examining the available production and deposition evidence in this thesis as well as the individual artefacts comparison will be made between possible production date and possible time of deposition (cf Collis 2009). With deposition evidence we have to attempt to interpret all that happened to the object, all the processes that incorporated the object before it ended up in the context in which it is discovered. Residuality and reuse can hamper our ability to interpret this evidence (Haselgrove 1997). Yet the deposition evidence is of greater value than merely adding to the chronology.

Hill's analysis of deposition in Wessex (Hill 1995a) has been much quoted to draw attention to the possibility that objects and bone assemblages did not end up in negative features (pits and ditches) merely as rubbish. Hill proposed the selection of material and its placement within specific features and specific layers within those features was evidence of structured deposition of a ritual nature (Hill 1995a, 99-101). This interpretation has recently been critiqued by Brudenell and Cooper (2008, 33-34) who proposed that while the material might have been part of a ritualised activity at some stage in its use that activity may have occurred prior to deposition in the feature. The material used to infill a pit may have been derived from layers elsewhere on the site that might have been formed through repetitive, controlled activity of social or spiritual significance. This could explain the poor condition of some of the items found in the pits. As with all Iron Age evidence from types of settlement to style of decoration, one interpretation does not fit all the evidence.

### 1.3.6 Sites with a Ritual Character

At Late Iron Age and Roman sites we sometimes find rectangular and circular structures associated with concentrations of artefacts often brooches and sometimes figurines. These are typically interpreted as shrines or sanctuaries. In the Early and Middle Iron Age we find no structural evidence of this type but concentrations of metalwork and sometimes pottery do occur at sites with no evidence for other occupation or production activity. Some of these sites have later associations with sanctuaries so we must question whether the structures were built on previously significant locations or the objects are curated items deposited at these later sites. Others, such as Grandcourt Farm in Norfolk, show no evidence for later activity but appear to make use of the natural topography for the placement of the artefacts. Metalwork is also found deposited in watery environments during this period, a practice maintained from the Bronze Age although whether the meaning was the same is not certain (Fitzpatrick 1984, Yates and Bradley 2010). This evidence will be compared with other sites and deposition contexts in Chapters 7 and 8.

### 1.3.7 Iron Age Society

Research over the past two decades has attempted to revise the long held view of a warrior led hierarchical Iron Age society with centralised distribution and systems of elites. Modern discourse on the Iron Age reflects modern approaches to archaeological fieldwork: terms like community, interaction and regional identity dominate. Yet high quality metalwork or exotic materials are still equated with 'an elite' (e.g. Sharples 2010, 242-3, cf Wells 2012). Sharples supports the egalitarian interpretation for Wessex but reminds us that the social structure must have been different in different regions considering the contrast visible in the archaeological record (Sharples 2010, 311). He proposes the very existence of square barrow burials in comparison to a dominant simple inhumation rite, as well as the presence of greater quantities of artefacts in a smaller number of graves compared to the rare artefactual evidence in most of the East Yorkshire burials to be indicative of a hierarchical society (Sharples 2010, 242-243). If the exclusive treatment of a few in comparison to many is evidence of a privileged select group within the society we must be careful of who we interpret to be the select few. The burial may be as much about the living as the dead (Parker Pearson 1999, 43-44, 141, 194) so the evidence for privileged treatment may reflect the status of the mourners or the deceased, or both. The individual's status is achieved through their inclusion with the group rather than in their exclusivity from the group. Sharples explores the issues of individual identity in the context of Iron Age Wessex in response to recent suggestions that we put emphasis on the individual in the past because of our own cultural context which reminds us of our individuality (Sharples 2010, 238-240).

Hill proposes that the evidence in fact indicates an egalitarian society with local production but some long distance trade and great regional variation (Hill 1995c). This has received criticism for pacifying the past and presenting an implausible society of peaceful farmers (James 2007, 160-161). James argues that although not overtly visible in the Earlier Iron Age, conflict, violence and combat must have been a routine aspect of Iron Age life (ibid*,* 162-30). He draws attention to the evidence of fighting and dispute such as skeletal trauma, weapons and defensible structures. While the increased visibility and elaborate decoration of weaponry in the Later Iron Age may be a reflection of changes in social structure and the increased use of martial objects as distinctions of wealth and status. The possible lower frequency of martial equipment in the Earlier Iron Age could reflect more the simplicity of these objects at the time, objects used as tools for maiming and killing people.

Anthropological research has highlighted a different concept of persons as *dividuals*: they identify themselves, and are identified by others, as a part of a group and their actions affect the group (Strathern 1988). Archaeological discourse has also drawn attention to the use of boundaries in the Iron Age suggesting these features are a physical representation of the definition of the group (Hingley 1984, Bowden and McOmish 1987). Sharples extends the analogy to propose that the construction of hillfort ramparts creates a community and the extent of their territory might be indicated by the incorporation of specific materials in the structure, such as limestone at Maiden Castle (Sharples 2010, 296). The emphasis Sharples argues, in the period of hillfort construction in Wessex, the Early to Middle Iron Age, is upon group identity. Although this discards the concept of high status individuals it does not rule out the possibility of different power and status between groups.

The large scale but short lived houses such as at Longbridge Deverill, Cow Down (Brown 2012) contrast with the lack of decorated fine wares and restriction of ceramic forms in the Middle Iron Age indicating possible changes in social structure from the Early to Middle Iron Age. The contrast of Middle Iron Age material culture and burial evidence with that of the Late Iron Age (Cunliffe 2005) emphasises that social identities were constantly changing and varied across regions. With these arguments in mind, instead of discussing an Early or Middle Iron Age society we should be talking about societies: groups that interacted with one another on a regular basis (as indicated by the distribution of similar materials and ideas) not always peacefully and not always directly; groups that at times had to work together in larger communities for mutual benefit or to fulfil obligations.

# Chapter 2 Past and Present Research on Brooches

## 2.1 The Brooches

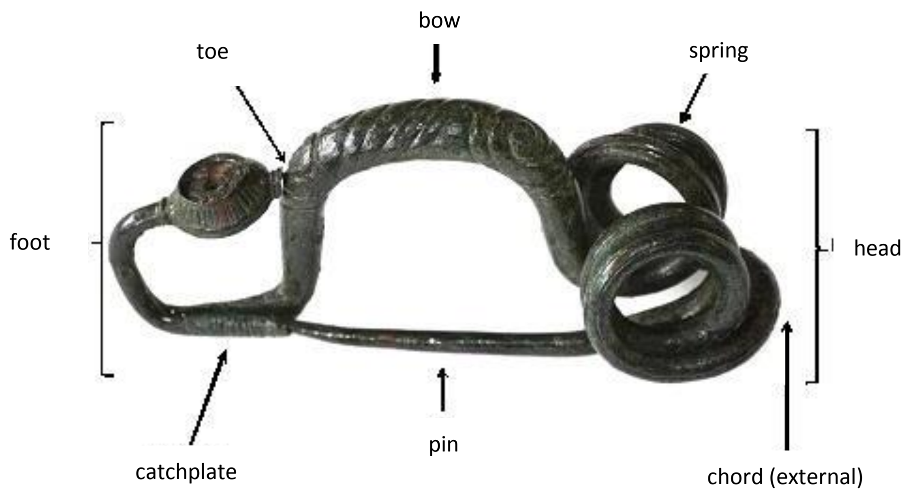
This research focuses on bow and plate brooches from the Early and Middle Iron Age in Britain. These will be termed 'brooches'. Where another type of brooch is discussed it will be specifically identified. The brooches typically described as bow in form are the earliest to have been made and used in Britain. This will be examined further in Chapters 3 and 4. Bow brooches had an arched bow element but also include those with a concave bow such as the Middle Iron Age involutes (figures 3.2 and 3.4). During the period some less common examples of plate form brooches also occur. The only other brooch type that existed during the Iron Age is the penannular. Current evidence suggests they were a later development in the third century BC (Haselgrove 1997; Hattatt 1982, 43). Their form and distribution has received little attention in the past and is now being revised by Anna Booth for her doctoral research at the University of Leicester. Present results suggest they are rare before the first century BC with few earlier examples found across a disparate area from Somerset to Norfolk to East Yorkshire (A. Booth pers. comm. 2013).

Figure 2.1 provides a visual explanation of the brooch form and the terminology used to describe the various components of each type. To integrate my research into the existing literature, I will maintain the existing terminology, which equates well with that used in French and German studies. The bow brooches consist of four main elements: pin, bow, head (either a spring or a hinge) and catchplate. The pin pierces the fabric. The bow provides a counter surface to the pin between which the folds of the fabric are clasped. This arched element is typically convex but concave types occur in Britain in the Middle Iron Age. The spring or hinge at the head end of the bow holds this and the pin in tension so that the brooch functions as a clasp that may be opened for fixing onto a garment or textile item. The whole device is secured by inserting the pin into the catchplate, at the opposite end of the bow to the spring or hinge. The pin is inserted by pressing it up towards the bow and allowing it to slide back down into the narrow curve of the catchplate. The foot is the catchplate end of the bow and any extension of the brooch after this point such as upright finials or disc features. On the majority of La Tène brooches the foot is bent back on itself over the top of the catchplate towards the bow; this is called reverted. All features are the same for plate brooches except that a relatively flat plate of variable form replaces the bow and foot part and the catchplate is short or hooked. The design of each element varies over time, not necessarily in a linear fashion.

**Figure 2.1** Terms for the parts of an Iron Age bow brooch.

Photograph by S.Adams © Trustees of the British Museum.

brooch: [10195] Box, Wiltshire




Brooches found in Britain are typically cast or forged as a single piece in the EIA with some multiple-piece variants becoming common in the MIA. The majority are made from copper alloy but iron examples also become more common in the MIA. The copper alloy examples tend to survive in a recognisable brooch form albeit with variable green patinas. Previous research suggests the alloy is tin so these may be identified as bronze brooches (Dungworth 1996, 1997). Further energy dispersive X-ray fluorescence analysis undertaken in this research verifies these results. Iron examples are generally rather corroded and often x-ray photographs are required to view their original form within the corrosion minerals. Some examples have copper alloy elements such as within the hinge mechanism. These corroded brooches often provide invaluable evidence for associated organic textiles where fragments of the fabric have been preserved within the corrosion minerals (Crowfoot 1991). However the unsightly and crumbly nature of the iron brooches suggests they were less likely to be recovered from early excavations.

Metal detectorists tend to ignore iron altogether in their searches. This is to avoid spending time recovering less aesthetically appealing, fragmentary artefacts and relatively modern industrial or farming waste. This must have some effect on the relative quantities of iron brooches compared to copper alloy artificially suppressing their total quantity.

## 2.2 Previous Research on Brooches

### 2.2.1 Early to Middle Iron Age Brooch Studies in Britain

Iron Age brooches have been reported and described in literature on Iron Age Britain for over a century, from Smith (1905) to Giles (2012). Specific brooch-based analyses have been incorporated into catalogues and studies of the Iron Age throughout this period. The first country-wide study focussed solely on brooches was published in 1987 (H&H 1987). This consisted of the catalogue of pre-Roman brooches compiled by M.R. Hull, with revisions and additions by Christopher Hawkes following Hull's death in 1976. The sources most frequently referenced in their Corpus of Ancient Brooches in Britain are Fox's publications on *The Archaeology of the Cambridge Region* (1923) and the second edition of the British Museum's *A Guide to the Antiquities of the Early Iron Age* (Smith 1925, hereafter referred to as BMG). Neither publication focuses exclusively on brooches but both attempt to place the British examples within a chronological context, the latter incorporating them within a European chronology. The other feature both have in common is an attempt to record or deduce the provenance of the brooches. Smith's guide is more consistent in this respect. Hull was, therefore, building upon earlier research practices by creating a catalogue of all brooches known from Britain and forming these into a typological order. Hull, and later Hawkes, was concerned to confirm the precise provenance of each object with Hawkes often remarking at length on the quality and reliability of the sources (e.g. H&H, 18-19).

Their research and compilation of the corpus took many years to complete without the aid of computers to speed up the process and correlate information. Grace Simpson originally undertook the task of bringing Hull's extensive catalogue to publication. With the benefit of spreadsheets, scanned images and word-processed documents, Nina Crummy is now reviewing Simpson's work and studying Hull's original manuscripts to compile a more consistent catalogue (Crummy forthcoming). Crummy's work reveals the strong personal stamp Hawkes applied to the manuscript. Hull, in theory, saw every surviving brooch that he recorded for his catalogue. Where there were issues with the origin of the find or the artefact was missing, this was noted and described by Hawkes. Hawkes also made his own additions to the catalogue but where assemblages were large he did not always include every example from those sites. However, H&H is the most comprehensive study of Iron Age brooches so far produced for Britain and its contents form c.30% of the objects in my database. The H&H typology has formed the backbone of British Iron Age brooch studies ever since. The *Corpus* is only rivalled in quantity and detail, if not in clarity, by Mackreth's recently published *Brooches in Late Iron Age and Roman Britain* (Mackreth 2011). Produced from an accumulated dataset of 15,000 brooches the sheer volume distinguishes them from the EIA and MIA brooches as well as the more numerous types.

Hattatt's four volumes on brooches from his own collection (1982, 1985, 1987, 1989a and b), acquired through his occupation as an antiques dealer, include the early brooches but are also dominated by LIA and even later types. These volumes contain detailed descriptions of each brooch with high quality illustrations. Hattatt also drew comparisons with the clearly illustrated *BMG* (Smith 1925) and, his last two volumes, refers to H&H. Hattatt's is the more commonly available of the two illustrated 1980s catalogues. It is often referenced in definitions of metal detected finds even though it contains far fewer examples and far less detailed discussion of the typology (e.g. PAS record KENT1378 brooch [10045]). Hattatt's research is more analytical with regard to the Late Iron Age brooches as seems to be typical of much brooch research. The larger quantity of LIA brooches recovered in Britain and the association with confirmed archaeological contexts is the probable reasoning behind this emphasis in brooch studies. Hattatt was an enthusiastic researcher who not only collected brooches but also undertook experiments in constructing them. His research in this matter appears to be rather rare and is therefore invaluable. He did not record these experiments in a published form but when comparing the technical quality of the brooch springs and hinges he refers to his own production trials (1982, 48).

The H&H interpretation of the brooch evidence has been accepted by brooch specialists and Iron Age researchers for over a quarter of a century, during which time many new finds have come to light in Britain, and intensive research has been carried out on the continent. They proposed that brooches were introduced to Britain in the Earliest Iron Age from continental Europe (H&H 10). Since which time brooches have continued to be used in Britain. The earliest known brooch types found in Britain, the Hallstatt brooches, have close parallels in southern Europe, particularly Italy (cf Bietii Sestieri and Macnamara 2007, 186-194, 229-235). This has led researchers to identify these as imports contemporary with their continental counterparts (e.g. H&H 1987; Hattatt 1982, 1985, 1987, 1989a and b). In the EIA the closest parallels have been recognised in France and Switzerland suggesting strong contacts across the English Channel and beyond (H&H 73). These contacts are believed to have collapsed or lost their potency by the MIA, when variations in the brooch design and form are less comparable to those in continental Europe and imply insular influences (Haselgrove 1997, 53). Current understanding places the earliest insular brooch manufacture in the late sixth century BC (H&H 56-62, Haselgrove 1997, 53).

Although H&H recorded the provenance and some contextual information for each catalogue entry they did not attempt to interpret the deposition context across all types. Colin Haselgrove has written the only brooch specific study that has explored their deposition (Haselgrove 1997). This illustrates the potential for more detailed research on Early to Middle Iron Age brooches in Britain. His article is based on the premise that we may glean information about 'social and cultural practices' in the Iron Age through 'artefact deposition and context' (ibid 51). Examining only brooches from confirmed findspots Haselgrove identifies patterns in the data and analyses the meaning of such patterns. This forms the basis for many of the research questions discussed in this thesis. The bulk of the paper concentrated on Late Iron Age brooches owing to the greater quantity and quality of this evidence but he was able to draw out some patterning in the earlier brooch deposition (ibid, 58-67). According to his figures an increase in brooch numbers may be observed from c.650-450BC (his late Hallstatt to La Tène A and B) and again into the MIA period (his La Tène C) (ibid, 54). MIA brooches were more commonly found in specific features and predominantly at cemeteries as a result of the numerous brooches from the Yorkshire Wold cemeteries (ibid, 55). He also identified their frequency at Roman temple sites. EIA brooches, on the other hand, were found to occur more frequently at wet places. Haselgrove noted that Hallstatt brooches from secure provenances are relatively rare. His conclusions were based on a far smaller dataset than is now available (Chapter 1). In light of this new evidence and through re-evaluation of the typology and deposition evidence several of these patterns have now been overturned as will become clear over the following chapters.

The majority of brooch analyses since the 1980s occur within site or region-specific studies where the brooches form one element of a wider analysis of material and physical evidence (e.g. Allen and Webley 2007; Boyle and Wait 2004). Typically the site reports consist of descriptions of the brooch data with any analysis built into overall discussions of the sites by period or the finds by material (for example, Sharples 1991, May 1996, Coles and Minnitt 1995). These focussed studies are of great value in analysing local types but it is necessary to my research to tie these into an overall picture. The Yorkshire Wold cemeteries provide the closest parallel to the brooch research possible in continental Europe where Iron Age cemeteries are far more common than in Britain and where brooches tend to be the most common artefacts recovered from the burials (Stead 1979, 1991a; Dent 1982). Although this detailed evidence received only limited attention from H&H it has provided the data for much Iron Age brooch research (e.g. Dent 2010, Jundi 1996, and Giles 2012). Jay, Hill, Haselgrove, Hamilton and Dent (Jay et al. 2012) have recently combined radiocarbon data from the burials with stratigraphic and brooch typological evidence to create Bayesian models and propose more refined dates for the Wetwang cemetery and chariot burials. These are now the most tightly dated MIA brooches from Britain and therefore form a vital part of the discussion on dating in Chapter 4.

Sophia Jundi examined the brooch evidence from the Yorkshire Wold cemeteries for her Master of Arts thesis (Jundi 1996). She identified that they were mostly placed on the upper part of the body for both sexes and all ages. They were more frequent at the head, neck and shoulder areas. Those located on the lower arms and hips she suggests were for clasping folded textile, not worn on the body in the grave or for belt related equipment (Jundi 1996 62). The brooches found near the head have elsewhere been interpreted as clasps for shrouds (Bretz-Mahler 1971) but may also have fixed forms of head covering. John Alexander (1973) proposed that brooches found at the head would have clasped the hair but the brooch designs are unsuitable forms for such a use. Those around the neck, shoulders and chest are typically identified as cloak clasps.

Melanie Giles has developed the Yorkshire Wolds research further with her inclusion of brooches in a detailed study of landscape, identity and material culture (Giles 2012). She also draws attention to the use of brooches in the funerary process and the significance of their decorative forms. Using Dent's typology she analyses patterning in the brooch data to identify gender differences in the presence of brooch types between different cemeteries (ibid, 131-139). The results rely on an acceptance of Dent's typology and fall apart if this is scrutinised (Chapter 8). Giles also appraises where the brooches are found on the bodies (ibid, 129-130) to explore the importance of covering or wrapping the bodies in the graves. These results are drawn upon for discussions of burial evidence and brooch use in Chapters 7 and 8. Joy suggests some brooches were used to secure bags around mirrors, thereby showing they may not always be directly associated with dress (Joy 2010, 2011).

Some brooches have featured in discussions of 'Celtic Art' (e.g. Jacobsthal 1944, 192-197; Jope 2000, 39-52, Garrow 2008, 24). A few are repeatedly referenced despite being rather atypical in their form and decoration, such as the Newnham Croft brooch [10575] (e.g. Fox 1958, 11; H&H 147; Jope 2000, 45-46; Parfitt 1995, 86). EIA and MIA brooches are rarely decorated with more than a simple combination of lines or dots. Those exhibiting more elaborate decoration consisting of complex combinations of curvilinear motifs are particularly rare before the third century BC (Jope 2000, 39). Jope's discussion of brooches in the context of *Early Celtic Art in the British* Isles (Jope 2000) is therefore based on a few unique brooches. His detailed study of the designs on individual examples explores comparisons to examples from Britain and Europe combined with a clear understanding of their form and construction (ibid, 39-51). He proposes that the objects were not entirely divorced from those of the continent but finds no positive support for claims that any were imported brooches, instead placing their manufacture and design in Britain (ibid, 39-45). However, Jope's research is hampered by a lack of analysis of the deposition context leading him to make unsubstantiated assumptions such as the brooches 'must have been worn mainly by women' (ibid, 50), a misconception not upheld by the burial evidence (Dent 1982, 443; Stead 1991a, 90; Giles 2012, 132-135). Dent's research on the Yorkshire Wold burials indicates that smaller brooches might have been commonly associated with women (Dent 1982, 443 Figure 5). The following assumption by Hawkes may therefore not be as presumptive as it seems: 'Late Hallstatt brooches, 6th century to very early 5th,… are mostly – though still by no means always – smaller. Women, if rich, wore more of them for ornament than merely for fastening their dress. While the larger ones – men could wear these' (H&H 1987, 10). Although analysis of the brooches and the deposition evidence in this thesis shows that any gender or wealth association is not as simple as this implies.

### 2.2.2 Early to Middle Iron Age Continental Brooch Studies

Hull and Hawkes (1987, 5) cite the origin of brooches in Bronze Age Scandinavia and Northern Germany and simultaneously in Greece and North-Eastern Italy around 1300 BC. This continental creation and subsequent adaptations prompted them, alongside others, to perceive the first brooches occurring in Britain as items imported from the continent. Bearing this in mind it is unsurprising that the brooch typology in Britain is based upon studies of continental material. The continental typologies are better supported by contextual evidence where many brooches are found in burials, particularly in large-scale cemeteries like those uncovered in Switzerland (e.g. Münsingen, Hodson 1968) and more recently in northern France (e.g. Bucy-le-Long, Desenne et al. 2009). Just as Stead's chronology of the brooches in the East Yorkshire cemeteries (Stead 1991a) is useful for regional research so too do the continental sites provide a useful comparison. However we must employ caution in directly correlating them with brooches in Britain that may be similar but are not the same and are found in different deposition contexts.

No country-wide corpus has been produced for the French material like H&H (1987). Useful regional analyses have been published (Hodson 1968; Bretz-Mahler 1971; Feugère 1985) but are in need of review. Each new cemetery study relies on prior knowledge of all preceding studies and their brooches found therein. In theory this enables the collection of material to be added to, and updated, but it does not allow for a focussed review of existing typologies. Two recent doctorates have attempted to update the regional typologies: Marion (2004) on the late Hallstatt and early La Tène brooches of the Ile-de-France, and Edgar (2012) on the Late Iron Age and Early Roman brooches in Northern France. The specific geographical regions of both studies, and the numerous brooch types identified, highlight the impossible task of creating a country-wide, let alone continent-wide, typology.

The recent Bucy-le-Long cemetery report provides a valuable summary of previous work on the Iron Age cemeteries of the Aisne-Marne region, from the inventories of late 19th century excavations to the regional focus of the recent French studies (Desenne, et al. 2009, 15-16). The application of spatial analyses and seriation studies arrived early in this area with research carried out by Vogt (1944), and Hachmann (1950-1), but the application of these techniques has been inconsistent since then. The researchers identify Denise Bretz-Mahler as the first to tentatively apply the Swiss (La Tène) chronology to the local material from the Champagne region (ibid, 15, Bretz-Mahler 1971). This was followed by Hatt and Roualet (1976-77) bringing together the data from old cemetery excavations to propose a chronology for the La Tène period in Champagne dividing it into six phases: La Tène *Ancienne* Ia/b, IIa/b and IIIa/b. This has been frequently utilised in studies of the Champagne material. Some criticism is made of more recent excavations in the region, which either did not analyse internal chronology of the sites or failed to produce a satisfactory chronology (Desenne et al. 2009, 15). Demoule addressed the chronological and typological problem with a number of short preliminary presentations followed by a more exhaustive publication in

1999 (Demoule 1999). They conclude that the most recent studies have taken a cultural technological standpoint aiming to identify regional styles and typologies.

In contrast to the many site-specific studies that focus on cemeteries, Günter Mansfeld (1973) examined the brooches from the 1950-70 excavations at the Heuneburg hillfort. Though only a consideration of one site, the depth of his research is comparable to regional and national studies. Mansfeld's study is of value to researchers through his use of schematic diagrams and tables explaining the elements of each brooch type and the known permutations within each of his types. This organised and stylised representation of the evidence produces a catalogue of types and corresponding variations of elements as though a specific, known repertoire was available to each metalworker from which to produce their final product. It creates an easy reference source against which scholars may compare their artefacts to identify their type according to Mansfeld's model, and a shorthand description of the form of each element, one that is adopted in many British studies (e.g. Haselgrove 1997). It seems improbable that this repertoire of foot forms, springs, bow shapes and so on was available to all producers so we should be wary of employing it as a form of sample card for brooch customising options.

Feugère's (1985) corpus of Late Iron Age and Roman brooches in Narbonne is important when considering the construction of brooch typologies, although the actual brooches are too late for direct comparison to this research. Feugère's typology emphasises technology as the major component in differentiating one type from another (ibid, 15-18). So, for example, the form of spring or hinge on each brooch is given priority when assigning it to a period (ibid, 18, Figure 5). However brooches are complex objects incorporating technical features and stylistic elements which affect their location within a typology; to focus on only one element is to ignore all these other aspects.

In Hodson's study of the La Tène cemetery at Münsingen-Rain, Switzerland (1968) he defined categories or types of likely chronological significance and then made associations between them: 'Diagnostic tombs with two or more such types [were] placed in rough chronological order according to horizontal stratification of their constituent types' (Hodson 1968, 13). He tabulated the information and arranged it to present a declining curve of the appearance of new types. Points on this curve that could be supported by the archaeological evidence to show a definite chronological phase were marked as horizons and some of these horizons were grouped as apparent 'stylistic phases' in relation to the entire series from the site (1968, 13). Once this seriation had been produced Hodson hoped that it would provide a relative chronology into which 'non-typed and non-diagnostic tombs' could be fitted (1968, 14). With the site chronology in place Hodson was then able to test artefact chronologies. He thought it improbable for 'identical or near identical objects' to be far removed in date so similarities in the brooches were employed to verify his chronology (1968, 14). Hodson's research benefitted from the detail and complexity and quantity of the archaeological evidence at this single cemetery but still created a chronological order from a subjective interpretation of the brooch evidence. The statistical analysis Hodson explored in this and other papers (e.g. Hodson 1969, 1990) is inappropriate for EIA and MIA brooches in Britain owing to the low numbers from specific sites and the variable contextual data.

Age and sex differences in brooch use have also been examined on the continent where the higher frequency of brooches in burials is suited to such research. Bretz-Mahler (1971) on the brooches in the Champagne region of France commented that where they occur in graves they are most common in adult female burials, rare in adult male burials and none are known from child burials. The picture has developed since that time. When Stead and Rigby published *The Morel Collection* of artefacts from cemeteries in Champagne, they observed that the 'brooch is the only metal artefact found with both men and women, but few from men's graves have useful associations' (Stead and Rigby 1999, 16). So these are not gender specific items but there appears to be a bias towards an adult female association. However a different picture was noticed at Bucy-le-Long, Aisne, France where brooches are found with children and one particular type, the Dux, occurs exclusively in child graves (Desenne et al. 2009, 445).

Wells has studied brooches within a wider examination of perception in the European Iron Age (Wells 2012). He employs them as a case study in personal adornment and Iron Age aesthetics (Wells 2012, Chapter 6). This is combined with analysis of brooch deposition across Europe and the possible significance this gave the objects. Across Europe the majority of brooches have been found in funerary contexts (ibid, 101-102). Yet in Britain this is only the case in a very specific region, the Yorkshire Wolds (Chapter 7). With such a broad sweep approach he is not able to explore the regional nuances in the deposition data. However, his conclusions on the use, role and significance of brooches in relation to individuals and the funerary rite are pertinent to discussion of brooches from any location. To Wells people had unique relationships with brooches that are not evident in any other Iron Age object (ibid, 100, 111) so they provide an avenue through which we can investigate the role of individuals within the community.

Comparison of the British evidence to continental brooch studies for the EIA and MIA is problematic. The abundance of the continental data mean that studies tend not to extend beyond specific sites or distinct regions so the comparative task is complex. The visible regionality in types also indicates that transference of ideas was neither a simple unidirectional process nor a linear development. To assume then that Britain received influences on brooch styles from a general place on the continent is to mask the variability of regional interaction. Certainly ideas and techniques might have crossed the channel, the North Sea or travelled up the Atlantic coast with craftworkers or traders or travellers or embedded within the actual objects. To expect we can identify the source of each strand of influence is to ignore the complexity of human interaction. This research therefore focuses on the evidence found within Britain to provide a substantiated record of the brooches and their deposition context which can inform future research on interaction between Britain and neighbouring countries, or further afield.

## 2.3 Research Aims and Methodology

The aims for this research were composed after an evaluation of previous research on brooches in Britain.

1. To identify the earliest types that were made and used in Britain.
2. To examine brooch manufacture to inform our understanding of craft production, exchange and inter-regional knowledge transfer in Iron Age Britain.
3. To explore temporal and regional variations in brooch distribution and depositional practices and their social significance.
4. To question the meaning of the evidence for deposition of EIA and MIA brooches at Roman sites.
5. To examine who wore brooches and why

## 2.4 Methodology

To fulfil the aims of this research it was felt that a complete dataset of all recorded and reported Early and Middle Iron Age brooches found in Britain should be compiled. This would enable interpretation to be based upon the evidence and incorporate the additional brooches recorded since the last Britain-wide study (Haselgrove 1997). The evidence was recorded in a database including information about the context of the find and the composition of the brooch.

### 2.4.1 Data and Sources

This research has recorded brooches found in Britain, or reported to have been collected in Britain. The research database has been split into two spreadsheets. Appendix 1 lists the 716 EIA and MIA brooches. Appendix 3 lists the 79 brooches of Types 3-6 for the discussion of typology and chronology discussed in Chapters 3 and 4. Each brooch has been allocated a five digit number from 10001 to 10990. The catalogue does not contain the full sequence of numbers up to 10990: records were made of all possible Earliest Iron Age to Middle Iron Age brooches but several were excluded during analysis either on the basis of misidentification or the brooches were of too late a type. The Hallstatt brooches have also not been listed in the Appendices owing to the lack of British origins (see Chapters 3 and 4).

The brooches have been derived from a number of sources as described below. Where a brooch occurs in more than one source the published source takes priority. I am grateful to Colin Haselgrove for providing me with the list of brooches he recorded up to 1995 with some later additions. The research database includes 183 brooches recorded on the Portable Antiquities Scheme database; 250 from H&H (1987); 3 from Grace Simpson's reworking of Hull's corpus (Crummy forthcoming) and 76 from the British Museum's catalogue (MERLIN). The remaining 280 are from published and unpublished excavation reports including records on the county Historic Environment Record (HER); stray finds published in local archaeological journals; unpublished stray finds and Hattatt's volumes (1982, 1985, 1987, 1989) which are not in Hull and Hawkes (1987); and some brooches from Scotland discussed by Hunter (2009). None of the few Irish examples published in Raftery (1983) were thought to date stylistically or otherwise to the period under study.

This research benefitted from unrestricted access to the British Museum Iron Age brooch collection enabling first hand recording of 125 brooches (including Hallstatt brooches excluded from the research database). Examination of the brooches not only provided a physical understanding of the qualities of the objects but also allowed more detailed records to be made of the variations and similarities of each feature than were usually available in any written or illustrated source. In reaction to these benefits a selection of museum collections were chosen for further detailed work on the basis of size of the collection and where access to the collections could be granted during the research period. Recording was therefore carried out at the following: The Ashmolean, Oxford; Museum of Archaeology and Anthropology, Cambridge; Museum of London; Maidstone Museum and Bentlif Art Gallery; National Museum of Wales; Reading Museum; Somerset County Council Heritage Centre; and the Wiltshire Museum, Devizes. The Hull and East Riding Museum contains the only collection of iron brooches to rival those in the British Museum stores. Suitable records were available online for this collection so this was chosen as the most efficient way to access these data. The records made at the museums included weights and measurements and descriptions of the brooches and the various elements of the brooch from head to foot; photographs and sketches. Although the museum collections were valuable for information about the object itself, further research of publications and site reports was necessary to find out any related contextual information. Through examination of the objects and the published records it was realised that several had been misidentified and were in fact a different type to that reported. These have been re-interpreted and are recorded under the corrected types in the research database.

It was not possible to study first-hand the brooches recorded with the Portable Antiquities Scheme as most of these are in private ownership. In such cases it has been necessary to rely on the records on the Portable Antiquities Database. At best, these include written descriptions, photographs and sometimes illustrations of the objects. Not all objects are so well recorded, especially those presented to the scheme in its early days. At times it was necessary to decipher what the brooch may have looked like from the written description alone. Many of the PAS brooches are also incomplete whereas the museum collections tend to focus on the better preserved examples. For brooches excavated by commercial archaeology units it has often been necessary to rely on the published or unpublished finds report. These tend to include illustrations rather than photographs of the objects, which means that although the detail is clear one is dealing with an interpretation of the object, particularly as the conventions used for illustrating brooches are less uniform than those for ceramics, for example. It has, therefore, been necessary to find ways to equate the different records from the different sources without smoothing the data so much that it no longer reflects the original find information.

This brings us to the next issue identified during my collection of brooch data: the reliability of different provenances. Christopher Hawkes was explicit about his and Hull's issues regarding the findspots of specific brooches and the reliability of the finders. In the majority of cases Hawkes presented the paradigm for provenance attribution (e.g. H&H 1987, 31). The quality of the provenance data has meant that different brooches are suitable for different levels of interrogation. For example the quantities that can inform our knowledge of the distribution are greater than those that are useful for deposition analysis. These issues are discussed in Chapters 6 and 7. Richard Hingley has recently drawn attention to the issue of artefact production date and the date of deposition (2009). He shows that several Bronze Age type metal objects are actually from Iron Age contexts and some even from Roman contexts. Others are Bronze Age objects deposited on sites with earlier prehistoric evidence (Hingley 2009). The date of deposition and the condition of the brooches in the deposits will be discussed in Chapters 3, 7 and 8 to examine matters of curation and residuality versus production and deposition within the lifetime of an individual.

### 2.4.2 Databases

Hodson long ago noted the difficulties of classifying brooches due to their large quantities and typological range. In a 1969 paper he explored issues of classifying brooches by comparing the results obtained by archaeologists, a geneticist and the output of a bespoke computer program. Ignoring the antiquated language ('high speed computers' Hodson 1969, 649) and lack of the computer programs that now exist for statistical analysis, one may recognise the feasibility of computer-based analysis in constructing site and artefact chronologies. However what the research highlights is the variables that could be included in a chronological system and software is only able to analyse the data that has been selected for input. No typological series is a perfect reflection of the past, it is affected by the data available and how these are processed. The advantage of database software that can process large quantities of information may aid a revision of previous research and, in theory reduce human error but the results will only be as accurate as the data put in and the manner in which these data are queried. In preparing my own database it has been necessary to create categories from the evidence and try to best fit all the examples into these categories without creating too many variables for analysis.

As archaeologists we are always dealing with an incomplete record of the past. This record may be further limited by the evidence chosen for collection and that chosen for recording or analysis. Hodson (1968) excluded the iron brooches at Münsingen due to their poor state of preservation so one category of brooch evidence was ignored just as iron brooches are frequently overlooked by metal detectorists working in Britain (Chapter 5). In modern developer-funded excavations requirements are often placed on the percentage of a feature to be excavated based upon preconceived notions of its date and the type of feature it is. This is likely to create a bias in the dataset.

A range of software is now available for creating databases. Time was spent early in this research exploring the different options available. These ranged from simple spreadsheets to Access databases to NVivo software that enable annotation of illustrations and written work to be catalogued as a database. Finds specific software was also explored such as the AdLib system used at many museums for cataloguing their collections. Not one system quite achieved what I ideally wanted: a spreadsheet of information about each object that could be extended and added to and tied in to illustrations of the objects and their specific features. All of the existing systems required foreknowledge of what categories you wanted to organise the data into or a set location for all the images that never changed. The latter would only be useful if one solitary computer was used for the entire research period, which could not be guaranteed. The former meant that it was not possible to incorporate categories of new information about the objects that might be realised during the research process. In the end Microsoft Excel was selected for storing the textual data and the images were stored in individual electronic folders corresponding to the unique database number given to each brooch. These numbers are quoted thus [10###] throughout this thesis. Both systems could be edited, updated and added to continuously and could be copied to numerous computers as long as effort was taken to make sure all copies corresponded with each other.

The unique database ID numbers allocated to each brooch are quoted throughout the thesis to enable readers to refer to that specific example and its record in the database in Appendices 1, 2 and 3. Appendix 2 lists the references for each brooch. Where brooches are referred to in the text the database ID number will be used to refer the reader to the relevant published and unpublished references in Appendix 2.

### 2.4.3 Illustrations

Illustrations, photographs and x-rays of the brooches were collected together as part of the database of information. An image for each brooch may be viewed in Appendix 6 available on the attached CD to allow the reader to refer to it while reading the text. Reproducing the images in a digital format maintains the quality that may be lost in printed format. A future aim of this research is to make the visual catalogue available online for other archaeologists to interrogate. Appendix 6 is a preliminary version of this catalogue.

Specific examples to illustrate types and details such as hinge mechanisms are printed as figures within the text. The detail and quality of the records is variable and no images exist anywhere for some brooches. For the latter the written descriptions were relied on to identify type. Where possible original photographs were taken and record sketches were made. A selection of the brooches from the Prehistory and Europe collection at the British Museum were skilfully illustrated for this research by Stephen Crummy and Craig Williams. These were selected on the basis of an absence of published drawings or the existing ones did not show details important to this research. Photographs were also taken of all brooches studied first hand. The illustrations could then be interrogated alongside the database to answer the research questions: building hypotheses from the data rather than trying to make the evidence fit the theory.

Some publications show the brooches illustrated vertically with the head at the top of the page and the foot at the bottom. This is the typical layout for drawings of LIA and Roman brooches (e.g. Mackreth 2011). Others illustrate the brooches horizontally with the head to the right and the foot to the left, typically EIA and MIA brooches (e.g. Cunliffe 2005, 469 Figure 17.19). Either method seems suitable for brooches of this period owing to the varied positions in which they are found including on skeletons. These brooches seem to have been used in a variety of positions and the design is intelligible from a range of angles (Chapter 8). As a result it was decided not to conform to one orientation for the illustrations in order to create a visual reminder of the varied positioning of the brooches when in use. The majority of illustrations have therefore been left orientated as published although some have been rotated for close comparison with other particular examples of the type. Many published illustrations show two views of the brooch: 1) looking down onto the top of the bow 2) a view of the side of the brooch. The latter ideally depicts the side on which the catchplate opens to show how this feature was formed. This is always the brooch's left side on EIA and MIA types.

### 2.4.4 Mapping

Maps are used in this thesis as a visual representation of the distribution of specific types or materials. The dots on the maps mark the grid referenced location of the finds or sites containing brooch finds. Where only a town name has been recorded an arbitrary point within the centre of that town was selected to provide a grid reference for the find. The maps are produced at a relatively small scale to reflect the Britain-wide approach of this analysis. This also avoids over interpretation of specific findspots where the grid reference is only accurate to four figures and allows inclusion of finds from sites where the exact location must be withheld for legal reasons. The maps are relevant to several chapters so they have been placed at the end of the thesis, before the appendices, to ease reference.

The increased availability and improved user interface of Geographic Information Systems enables archaeologists to map a range of data, particularly large quantities of data, where spatial information is recorded. The distribution map has long been favoured by archaeologists as a way of presenting the geographical distribution of types of artefact or types of site (e.g. Childe 1925). Although the large arrows of the diffusionists are now gone the presentation of information on a map is still a subjective process. With the aid of different symbols and shading the author may emphasise those aspects of the evidence that best suits their hypotheses.

While a dot on a map might mark the precise grid referenced location at which a find was discovered choices are made over whether to include that find on the map with other finds, whether to show the dot in relation to topographical features or modern political boundaries. In this research the maps show minimal topographic data and only physical land boundaries. It is important to remember the landscape of Britain has been transformed considerably over the last three millennia through natural forces and human processes. At present no topographical map is available for the entire British Isles at a set period within the Iron Age. The basic course of major rivers and the location of upland and lowland areas nowadays is still close to the topography of the Iron Age landscape but the larger the scale the more discrepancies will appear between now and then. The creation of canals and damming of rivers has had a marked effect on river courses, while quarrying has destroyed vast areas of sites such as the settlement at Castle Quarry, Ancaster (H&H 161 and May 1961) and the cemetery at Mill Hill, Deal (Parfitt 1995). Coastal erosion has reduced the coastline in some areas while silting up of watercourses has incorporated islands into the mainland such as Thanet in Kent (Moody 2008, 35-52). Simple base maps have, therefore, been chosen to illustrate relative locations rather than the minute detail of the modern landscape. Not only has the landscape altered but the findspots are only dots at the spot where a brooch has been found. A location without a dot does not necessarily mean a brooch was never deposited there deliberately or otherwise. It merely means one has not been found there or if found has not been recorded and reported in the sources searched.

Every brooch is individual and the typological characteristics are not always present in all examples. The data presented on any of the maps have been smoothed to simplify the information so that we may interrogate it. Too many variations cannot be represented in one image or the map will become unintelligible. The maps are therefore another tool for analysis that may be used alongside the database tool and descriptive information but should not be used alone.

## 2.4.5 Experiments

No evidence for EIA and MIA brooch production has been found in the form of moulds or partially complete brooches. Instead it has to been drawn out of the information contained within the objects and from wider metalworking evidence. Three processes were undertaken to explore aspects of brooch production:

1. Scientific research to explore the metallic composition of the copper alloy brooches.
    - A selection of brooches were analysed by energy dispersive X-ray fluorescence (EDXRF).
2. Experimental research to create an EIA style brooch using a close approximation of the metallic composition.
    - Working from drawings, measurements and practice pieces, two attempts were made to produce a complete bronze brooch, one of which was successful.
    - This enabled exploration of the construction and production process and indicated why certain technical changes might have taken place.
3. Scientific research into the composition of the material applied as decoration to some brooches.
    - Using Raman spectroscopy the materials could be identified through this non-destructive process.

The scientific research was carried out in the Department of Conservation and Scientific Research at the British Museum. Duncan Hook undertook the EDXRF analysis and Melanie Keable and Janet Ambers undertook the Raman Spectroscopy. The experimental metalworking was undertaken by Neil Burridge an independent prehistoric bronze metalworking specialist who has made reproductions of Bronze Age and Iron Age objects for museums and archaeological research. The analysis of the production process, methods and skills was greatly informed by these three areas of research. The processes and results will be explored in Chapter 5.

## 2.4.6 Discussion and Analytical Process

To fulfil the research aims the data have been discussed in the following categories:

- **Typology – Chapter 3**
  - Classification of the types EIA and MIA brooches found, made and used in Britain.
  - Proposal of the approximate chronological order of these types
- **Chronology – Chapter 4**
  - Examination of the dating evidence for each type from radiocarbon dates to contemporaneity of technological features.
- **Production – Chapter 5**
  - Exploration of the range of evidence that can be drawn together to identify how brooches were made and where the raw materials might have been sourced.
- **Distribution – Chapter 6**
  - Spatial analysis of the distribution of brooch finds comparing temporal and typological evidence to explore possible regional variations
- **Deposition by site type– Chapter 7**
  - Comparison of the types of sites at which brooches are found, their geographical distribution and the types of brooches at those sites.
- **Deposition by feature type – Chapter 8**
  - Detailed examination of the context of brooch finds within specific features
- **Use – Chapter 9**
  - Drawing together the results of the previous chapters to explore how brooches were used and why and how this varied across time and place.

Each chapter builds upon the evidence in the previous chapters. Although deposition marks the end of the active, physical use of the brooch in the Iron Age 'use' considered towards the end of the thesis because all the other evidence is needed for us to find out information about how a brooch was used. As Jody Joy has explained ‘archaeologists most often encounter objects at the moment they ended their social lives. To reconstruct biographies it is necessary to work backwards from death to production.’ (Joy 2010, 543). By addressing the technical detail the aim is to create a sound footing from which to explore possible interpretations of the evidence, to answer the research questions posed and to put forward significant features of the evidence that were not perceived prior to the research.

# Chapter 3 Typology of Early and Middle Iron Age Brooches in Britain

By classifying the brooches into types we may be better able to discuss the evidence (Macdonald 2007). Close examination of Early and Middle Iron Age brooches shows the individuality of each object. By creating types we are grouping these items together by the ways in which they are similar and separating each type by the ways in which they differ. Hodson (1969, 1990; Doran and Hodson 1975) has explored the combinations of attributes and variations within each feature using statistical modelling in an attempt to produce a more objective typology. However, his research showed that the choice of modelling produced varied results so archaeologists still had to select which output they thought was most appropriate. Creating types is a subjective exercise. In order to produce a typology that is recognisable to other researchers and holds true for most examples it is necessary to avoid too many subdivisions; particularly when working with unique products like hand cast and forged brooches. The types should also make it possible for other researchers to discuss the evidence.

Stead, Feugère, Hattatt and Mansfeld have all discussed the technological aspects of Iron Age brooches particularly the fabrication of the spring mechanisms and foot elements (Feugère, 1985; Hattatt 1982, 36-48; 1987, 3-8, Fig.1, Fig.2; 1989a, 26-28; Mansfeld 1973; 1993; Marion 2004; Stead 1991a). Mansfeld, like Hattatt, identifies the two main manufacturing techniques used: casting and forging (Mansfeld 1993, 310). In *Les fibules à tête d'oiseau* (Mansfeld 1993) he aimed to explore the techniques behind the production of these particular forms to establish whether they are produced by different workshops. He concluded that the variable types may be contemporary forms created as a result of the different manufacturing techniques employed by ateliers trained in either casting or forging (ibid, 314-5). Mansfeld was proposing technology and craft skills as the main impetus for designs.

Feugère (1985) too emphasises technology as the major component in differentiating one type from another. For example, the form of spring or hinge on each brooch is given priority when assigning it to a period. However, his analysis gives little consideration to alternative variations of form such as a bow shape or foot form that could render different types as contemporary. Later in this chapter the treatment of each feature: the head, bow and foot will be examined and compared. In this research I have examined more brooches than most Iron Age metalsmiths would have seen in their lifetime. The chronological development of the types implies the full repertoire of foot forms, springs and bow shapes was not available to all producers at the same time. Even when several variations were known other factors may have controlled which were used together. In other words technological knowledge may have limited design but this could have been controlled by cultural mores or social changes.

It was decided that it is better to use an existing typology as much as possible to allow the discussion to be understood in relation to previous research. The only typology available for the entire period and the whole of Britain is that created by Rex Hull and published by Christopher Hawkes (1987). Other typologies exist for the Yorkshire Wolds created as a reaction to the large quantity of brooches found there: Dent (1984) and Stead (1979, 1991) both of which differ from one another (see Giles 2012, 137). None have been produced for other regions. As mentioned in relation to Iron Age chronology (Chapter 1) some regional typologies created for European brooches have also been applied to some British material but are not consistent with the British evidence.

## 3.1 Hull and Hawkes' Typology

Hull and Hawkes' brooch typology (H&H 1987) still retains a meaningful structure in light of more recent finds although the chronology and some of the terminology is in need of review. They divided the brooches into Hallstatt types and La Tène types based on broad affinities with continental evidence. The La Tène brooches are those with an arched bow, bilateral spring and reverted foot where the end of the brooch beyond the catchplate bends up and back towards the bow. The shape of the bow varies over time and the foot is eventually joined to the bow. The spring too changes shape and hinged versions are common in Britain but the general effect of a bilateral spring is retained. The Hallstatt brooches are more varied and none in Britain are securely provenanced. To aid analysis Hull organised the Hallstatt brooches into groups of similar appearance in an attempt to make sense of this randomly collected information. As Hawkes explained, Hull chose to call them groups rather than types as the contextual and chronological associations were so problematic (H&H 1987, 11). Table 3.1 lists the general characteristics of each of Hull's Hallstatt subgroups.

The H&H La Tène brooches belong to the Early and Middle Iron Age periods as explained in Chapter 1. H&H divided these into numbered Types 1 to 6. These types were further subdivided as follows:

1. 1A (a-b), 1B (a-d & x) and 1C (a-b)
2. 2A (a-b), 2B (a-d), 2C (a-c) and 2D
3. 3A, 3B and 3C
    - The one-piece 3C brooches with internal chord and reverted foot attached high up the bow have Roman period provenances and are sometimes made from brass suggesting these are in fact a simple Romano-British type. These are excluded from further analysis.

**4. and 6.** were not subdivided since each type includes such a small number of brooches.

**Type 5** comprised a group of unprovenanced Late Iron Age continental types so are excluded from further discussion here (H&H 1987, 187-189).

This numbering can be confused with La Tène periods on the continent with those beginning with 1 being classed as La Tène I brooches and all those beginning with 2 classed as La Tène II. This is not too far from the truth but it can obscure the variation between the continental and British evidence. Alternatively the 1A brooches may be directly interpreted as La Tène A, the 1B brooches as La Tène B. Again this over simplifies cross-channel connections. Further confusion is created when we move on to types 3-6. The H&H type names are often used for descriptions of brooches found on archaeological excavations, in surveys and through metal detecting activity. The problem is that while the type names are used, few people know or have access to the published type characteristics so the brooches are often misidentified. To avoid that problem the following section describes each type as defined by H&H and draws attention to those brooches that can be classified as that type through reference to the tabulated information in the Appendix 1.

The H&H typology is appealing because it groups together brooches on the basis of their overall form. In my opinion the manner in which this shape was achieved is a matter of technique rather than type. The main aim with the typological divisions is to create a comprehensible system for discussing the brooches rather than assume that every miniscule variation sets that brooch apart from others. However, the discussion towards the end of the chapter shows that some technological features are only present on certain types. Combined with the evidence in Chapter 4 it will become clear that some of these features have chronological significance.

## 3.2 Hallstatt Brooches (Figure 3.1)

It has long been recognised that brooches of continental Hallstatt type have been reported in Britain (Smith 1905, 33; Smith 1925, Fox 1923, Hull and Hawkes 1987). All are copper alloy brooches. The majority are best paralleled in Italy, Greece and along the Dinaric Alps to the Balkans (Müller 2000, 36-43). Unfortunately the precise provenance of most examples is unknown. Many held in museum collections are derived from antiques dealers' collections which mixed British finds and imports from Mediterranean countries and elsewhere. Hull and Hawkes proposed these were the earliest types found in Britain but were very aware of the uncertainty behind the reported provenance for each of these examples. Despite the loose grouping of the Hallstatt forms the group names (see Table 3.1) have often been employed as type names, especially on the PAS database. Only six possible new examples have been added since the *Corpus* was published. All are metal detected finds, none have been recovered from sealed archaeological contexts and only three are definite Hallstatt types (Chapter 4).As will be shown in Chapter 4 we cannot be certain whether any of these brooches actually appeared in Britain before the Early Iron Age or even before the Roman period.

**Figure 3.1** Examples of Hallstatt brooches Group A-Lx [1] (all images by S. Adams. Images of the BM brooches © Trustees of the British Museum.)

**Group AA** Avebury Down, Wilts
Wiltshire Museum (1987.18)

**Group B** Bredon? Glos.
Ashmolean Museum (AN1948.177)

**Group C** Ixworth? Suffolk
Cambridge Museum of Archaeology and Anthropology (1901.239)

**Group D** Broughton, Lincs.
(BM.24)

**Group E** Hod Hill, Dorset
(BM 1892,0901.909)

**Group F** Lakenheath, Suffolk
(BM 1854,1107.13)

**Group G** Dorset?
(BM 1944,0702.7)

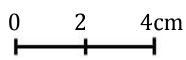
**Group J** Reading, Berks
© Reading Museum (1961,212.1)

**Group Lx** Thames, City of London;
reproduced by permission of
Museum of London (81.227)

**Group H** London or Italy© Reading Museum (1961.211)

Sandy Lane, St Paul's Cray
Maidstone Museum (IA 203)

Ringlemere, Kent
Parfitt RFW-03-KF-360




[1] Provenances are those recorded for the brooches but they are of variable accuracy (see Chapter 3 text)

**Table 3.1** Characteristics of Hull and Hawkes Hallstatt Brooch Groups (H&H 1987, 7-67)

| Group | Bow Shape | One piece | spring style | Catchplate | Any other details |
|---|---|---|---|---|---|
| **AA (Violin bow)** | flat wide bow, with right angled hip and shoulder. | one-piece brooch | unilateral single coil spring. | hooked | small concentric circles sometimes on top of bow |
| **A** | flat wide, ovoid shaped bow. | one-piece brooch | no spring. pin is threaded onto head of bow which is coiled into a flat spiral to hold pin | symmetrical with head of brooch: pin end rests on the flat spiral | |
| **B (leech-shaped)** | high arched bow, sometimes thin but usually thick towards middle | one piece brooch | unilateral single or double coil. | u-shaped catchplate with pin extending beyond end of catchplate. | bow decorated with patterns of geometric motifs. |
| **C (boat-shaped and cushion-bow)** | high arched, bow hollowed out forming upturned boat-shape / or bow pinched to a point on either side | usually one-piece but occasionally spring and pin are a single piece riveted to the head end of the bow | unilateral single or double coil | u-shaped profile or long and straight | bows often decorated with patterns of geometric motifs |
| **D** | similar to the cushion bows above but with knobs on either side of the bow | one-piece | unilateral double coil | straight catchplate sometimes decorated with a knob that matching those on bow | |
| **E** | flattened, angular version of the Group D bows. | one-piece | unilateral double coil | toe may be decorated with an elaborate knobbed feature | |
| **F** | as Group E but with an additional knob rising up from the top of the bow | one-piece | unilateral double coil | elongated foot and enclosed catchplate | foot often decorated with geometric patterns. |
| **G (serpentine)** | wire form bow sags between the hip & shoulder | one-piece | unilateral large single or double coil | short catchplate but foot can be hooked or a series of bends / coils | |
| **H (spectacle)** | two or four flat spirals made from one-piece of wire | two-piece. the spirals are rivetted to a narrow plate | no coils | hooked catchplate | |
| **J** | high arched narrow bow | one-piece | unilateral single or double coil | long catchplate often upturned or curled back foot | varied decoration, shape and foot treatment |
| **Lx** | high arched bow | one or three piece | multiple coil spring | triangular catchplate | upturned foot |

### 3.2.1 Hull and Hawkes Group Lx (Figure 3.1)

Hull and Hawkes identified a small group of delicate cast brooches with similarities to continental Hallstatt D brooches. These are small in size with high arched bows and long, multiple-coil bilateral springs (Freiddin 1982, LIST 33, FIG.49, 8). However, the group consists of quite a diverse collection. Two have tightly coiled springs: Thames near Dowgate, London (H&H 63, Pl.21 no.4570) and Sandy Lane, St Paul's Cray, Kent (H&H 63, Pl.21 no.2347). The former is a bilateral multiple coil or long spring. Little of the spring survives on the latter so we may only estimate it was of a similar form. This is a very lightweight brooch with an upturned foot along the lines of Mansfeld's fibula foot type F2 (Fusszierfibel F2), based on his study of the numerous brooches from the Heuneburg in Germany (Mansfeld 1973). The dainty Dowgate brooch has a reverted foot with a cupped and snouted toe (similar to some 1B brooches). The brooch from Ringlemere (Parfitt 2005, 382-3 Fig.1) that has been proposed as an Lx brooch is more solid than the aforementioned two. It has a hole through the head of the bow for an iron axial rod that would once have supported a mock spring. It seems feasible to suggest that the delicate long spring brooches from Dowgate and St Paul's Cray are of continental origin. Mock springs of the type proposed for the Ringlemere brooch are also found on the continent on Hallstatt D period brooches (Mansfeld 1993, Marion 2004). It is possible this group represents some early style brooches in Britain but as with all other possible Hallstatt types this is not currently supported by contextual data.

**Figure 3.2** Examples of Type 1A and 1B brooches (all images by S. Adams except [10111])

**Type 1A**

**1Aa**

[10441] Middle Hill, Woodeaton, Oxon.
© Trustees of the British Museum

**1Ab**

[10430] Icklingham, Suffolk
Ashmolean Museum

**Type 1B**

**1Ba**

[10861]Batheaston, Avon
© Trustees of the British Museum

**1Bb**

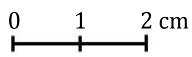
[10111] Frampton, Dorset
(PAS DOR-41F0C6)

**1Bc**

[10266] Thames, City of London
© Trustees of the British Museum

**1Bd**

[10500] Thames? City of London
reproduced by permission of Museum of London



## 3.3 Early and Middle Iron Age Bow Brooches

The following section describes Hull and Hawkes typology in more detail highlighting the number of each type. The result is a slightly revised typology with some newly defined types identified through this research.

### 3.3.1 Hull and Hawkes Type 1A (Figure 3.2)

The 1A type is defined by a high arch, large spring coils, and a reverted foot: the foot is bent up from the catchplate and back towards the leg of the bow. The return part lies parallel to the catchplate and the end of the foot is not attached to the bow. These brooches are made from a single piece of metal wound into a bilateral, four coil spring, with an external chord that links the coils on either side of the bow. H&H talk of the legs being only slightly, if at all, splayed. This means the rise and fall of the arch is close to vertical at either end. The pin is a continuation of the spring; it rests in a short catchplate, roughly, U-shaped in profile. On the continent they are often referred to as Marzabotto type (e.g. Marion 2004). Examples do exist of three piece 1A brooches. Piece one: the bow and three coils of the spring; piece two: the pin and final inner coil of the spring; piece three: a wooden rod or copper alloy cylinder passed through the spring that holds the two parts together (see [10427] Danebury, [10431] Thames, and [10426] Crickley Hill). All bar three are made from copper alloy, the exception being the iron brooch [10432] from Cow Down, Longbridge Deverill, [10425] from Crickley Hill and [10763] from Castell Henllys.

The bow is often decorated with ridges or ribs that could only be achieved by casting in a mould. Some have more elaborate decoration such as the combination of dot and ring motifs between diagonal lines on the Middle Hill, Woodeaton brooch [10441] (figure 3.2). A few examples have indented features on the toe or bow that could once have contained inlay material but none survive with this still intact. Two subtypes exist that reflect differences in the finish of the foot but appear to have no chronological relevance (Collis 2009). H&H defined the subtypes by presence or absence of a snout at the end of the foot but a more feasible distinction employed by other researchers (e.g. Collis 2009) is as follows:

**1Aa**: the foot is finished at the toe with a simple disc.

**1Ab**: the foot is finished with a more elaborate bulb-like feature.

45 Type 1A brooches have been found across England, Scotland and Wales. Two more are of unknown provenance [10436, 10439] and two doubtful [10195] (Figure 2.1) possibly from Box Wiltshire and [10215] (Figure 3.10) possibly from Lakenheath Suffolk. Of the 45 brooches:

- 1Aa = 18 brooches
- 1Ab = 3 brooches
- The remaining 24 are incomplete so the subtype cannot be confirmed.

Both varieties of foot treatment are found on the continent; however it is intriguing that only 3 of subtype 1Ab are known and two of these are iron: [10425] Crickley Hill and [10432] Cow Down. The only other iron example is a 1Aa from Castell Henllys [10763] although the spring coils are slightly smaller than normal. Variation is also found in the height of the bow arch from the very high arched Thames find [10431] from Hammersmith (Figure 3.10) to the very low arched PAS find [10156] from the Vale of Glamorgan. Some are quite large objects such as the 1Ab Icklingham brooch [10430] at 75.8mm long (Figure 3.2). Others are tiny, for example [10269] found in the vicinity of the Roman temple at Worth, Kent now only 22.6mm long (Figure 3.16) but originally no more than c.35mm. Most are around 60mm in length. A further 27 brooches might be 1A types but the remains are too fragmentary to separate them from 1B or even 1C types.

### **3.3.2 Hull and Hawkes Type 1B** (Figure 3.2)

The 1B brooches typically have a lower arched bow and always have smaller spring coils than 1A brooches. The reverted foot still remains detached from the bow and is positioned parallel to the catchplate, below the top of the bow. Both real springs and mock-springs are common. The latter typically have a copper alloy or iron rod through the spring on which the looped head of the pin pivots.

1B brooches typically have limited decoration on the bow. This tends to be restricted to either indented dots along the top or sides of the bow between or outside parallel indented lines or just the lines alone. Some have a cup-shaped foot feature that may once have held inlay. Like the 1A brooches the distinction between the foot forms seems irrelevant to the dating of the brooches. Variations in the foot and bow shape might be better represented through regional analysis (see Chapter 5). Of the subtypes, 1Ba and 1Bb differ only in decorative features while 1Bc has a distinctively different bow shape and 1Bd have several differences:

**1Ba**: The foot is decorated with a simple disc or ball or drum at the toe and remains detached from the bow. The bow is low arched and usually thick in cross-section either plano-convex or sub-circular.

**1Bb**: The foot is decorated with a disc or ball or drum followed by a snout feature at the toe end or a two pronged protrusion like a snakes tongue. These toe additions are designed to rest against the bow. The bow shape and cross-section is otherwise comparable to the 1Ba brooches.

**1Bc**: The bow is wide, thinner and flatter than the other 1Bs, often described as leaf-shaped. The shape is emphasised by grooved decoration on the surface with a central longitudinal lozenge groove flanked by one or two grooves on either side almost meeting at a point at either end of the bow. The foot is decorated with a flat disc and snout-like feature at the toe.

**1Bd**: The narrow bow is segmented and often decorated with alternating bands of indented dots or lines and smooth surfaces. The chord is internal and the foot feature is an ornate combination of bulbs and cones. These have also been described as 'Dux' or Duchcov types on the basis of their similarity to examples from Bohemia. The Dux types are found in fewer numbers in Champagne and it is not impossible that a handful could have reached the southeast of England but none have been found in confirmed Iron Age contexts (H&H 1987, 111-113).

**1Bx:** Hawkes created this subtype for a handful of brooches in which he saw continental elements to the design. However the group does not hold up to scrutiny and most of the examples fit comfortably into the above subtypes or stand out as solitary variations. This category has therefore been excluded as of no value for discussing the British brooches.

**1BaW**: Hull proposed a further type within the 1Ba group: : 1BaW (Wessex type), so-called after the Wessex bias to the distribution (H&H 98). Hawkes, however, noted that this encompassed most of the 1Ba type (H&H 99-100). Add to this the inconsistent application of the defining criteria (see H&H plates 28-29) and the distribution of these brooches well beyond Wessex, and this subdivision becomes meaningless. Brooches of this subtype have all been reclassified as 1Ba brooches.

The 1B brooches reflect the similar development of the 1A spring to smaller coils as seen on the continent. However they are far less decorated and never with the elaborate moulding of the continental types with the exception of the suspicious 1Bd brooches. Considering the similar spring development to their continental counterparts it seems feasible that actual imported examples are to be found amongst the 1B brooches. Overall, though, I agree with H&H who found the majority to be distinctive from continental styling and therefore stand as probable insular products. The frequent presence of a mock spring that is not found on the continent, where the final coil is separate from the head of the pin, further supports these as insular products (see spring and hinge discussion below).

The 1B brooches are far more numerous than the high arched Type 1A. 227 Type 1B brooches (including 10 with questionable findspots) are now divided into the following subtypes:

- 1Ba: 54 brooches
- 1Bb: 42 brooches
- 1Bc: 40 brooches
- 1Bd: 5 brooches with one borderline 1Bb/1Bd.
- Plus
    - a further 68 brooches of either 1B or 1Bb type, including one where the bow has been distorted from the original 1B form [10573] from Edington.
    - 1 variation on the 1Ba brooch
    - 3 variations on the 1Bb brooch
    - 8 variations of the 1Bc brooch.
    - 6 atypical brooches with 1B elements.

The variant brooches have the foot or bow form of the subtype but with unusual features such as long springs. The 6 atypical brooches can best be classed as 1B but the overall shape does not conform to any of the subtypes.

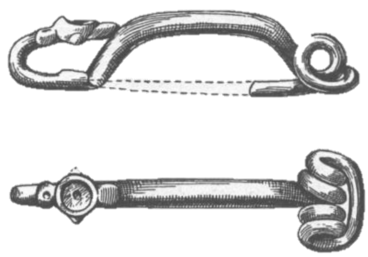
**Figure 3.3** Examples of Type 1C and 2A brooches (all images by S. Adams except [10525])

**Type 1C**

**1Ca**

[10171] Abingdon, Oxon.
© Trustees of the British Museum

**1Cb**



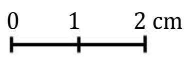
[10525] Maiden Castle, Dorset
(Wheeler 1943, 254, Fig. 81 no.3)

**Type 2A**

**2Aa**

[10490] Thames at Wandsworth, London. reproduced by permission of Museum of London

**2Ab**




[10175] Argam Lane, Rudston, East Riding of Yorks.
© Trustees of the British Museum

### 3.3.3 Hull and Hawkes Type 1C (Figure 3.3)

The 1C brooches are the final design to use a reverted but unattached foot. Both iron and copper alloy examples are found but the latter are more common. Hull and Hawkes divided them into two types: 1Ca and 1Cb:

- **1Ca**. Sloped or low arched bow. The foot stretches to the hip of the bow at an angle of about 45° from the end of the catchplate. Complete examples of 1Ca brooches do survive confirming the lack of foot attachment. (8 definite examples).
- **1Cb**. Straight bows and foot reverted level with the top of the bow. No complete examples are known. (2 definite examples).

The difference between 1Ca and 2Aa brooches is solely a matter of whether the foot is attached to the bow at the toe end (2A) or merely touches or rests on the bow (1C). Where brooches are incomplete it is not always possible to distinguish between a 1Ca brooch and a 2Aa. These must therefore be categorised as possibly 1Ca or 2Aa.

It would be preferable to place the arched brooches into the same numbered category and separate them from the distinctive straight bowed brooches (cf Dent 1982, 441). However the typology is currently understood by reference to the foot and bow form and to reorganise categories could create confusion. Also the straight bow of the 1Cb brooches is less rectilinear in profile than that of the 2Ab brooches. Scholars must instead remember that the types are a tool for organising the data not an indication of complete separation or chronological difference. We must also remember that some brooches do not fit neatly into one category or another. So some of the brooches with 45° angled unattached feet have fairly flat bows but not as straight as the 2Ab straight bowed brooches described below.

At Wetwang the 1Ca are typologically the earliest found. Dent classified these as his Type 1 (Dent 1982, 441). He also included a 2Aa brooch with foot attached to the bow. Dent was therefore recognising the close similarities between the two H&H types. By placing them in the same type he implies they were contemporary with one another. This possible contemporaneity is discussed in Chapter 4.

The 1C brooches are few in number compared to the preceding and succeeding types. Three variations of the 1Ca type have been found in Howe, Orkney [10521], Middle Hill, Woodeaton, Oxfordshire [10492] and Meare Village West, Somerset [10872]. One possible 1Cb brooch has a long spring [10538], Wedhampton, Wiltshire. A further 10 are incomplete so they cannot be comfortably placed in the subtypes. Seven brooches are of 1Ca shape but the foot is missing so they cannot be assigned to 1Ca or 2Aa and four possible 1Cb or 2Ab brooches are in similar condition. In total then there are a maximum of 35 Type 1C brooches but the definite quantity is only ten. The low quantity may imply the style was little favoured in comparison to the other insular types.

### 3.3.4 Hull and Hawkes Type 2A (Figure 3.3)

H&H Type 2 brooches mark a change from a reverted but detached foot to a reverted foot attached to the bow either with a separate collar or by splitting the toe of the foot and wrapping this around the bow. They can be found in copper alloy although more examples are iron. 2A brooches are often simply decorated but examples do survive with particularly elaborate moulded decoration along the bow and extra details on the foot. The 2A brooches are divided into two subtypes:

- **2Aa**: the less common of the two types. This brooch has an arched bow, often a low arch, with the end of the foot attached to the bow at the hip. The foot is typically angled at 45° although occasionally it takes two right-angled turns up from the catchplate returning it to the bow almost horizontal with the catchplate. H&H thought the 2Aa brooches to be closer in style to contemporary continental brooches than the 2Ab (H&H 135). (10 definite examples and four further possible, plus two that could be either 2Aa or 2Ab).
- **2Ab**: a flat, straight bow often elongated in comparison to earlier bow forms. The foot rises up from the catchplate at about 90° then is bent again at 90° so it arrives at the hip horizontal with the bow. Any decoration on the foot is therefore on the same plane as the top of the bow. As suggested by H&H and still supported by today's evidence, these appear to be a wholly insular style. (67 definite examples and 12 possible).

The few arched bows with attached feet compared to the straight bows indicate an overall change in brooch shape therefore occurs in tandem with the shift to an attached reverted foot in Britain.

### 3.3.5 Hull and Hawkes Type 2C (Figure 3.4)

The 2C brooches are the easily recognisable involuted forms. These brooches have a concave instead of a convex bow and the pin follows the downwards curvature of the bow. H&H split them into two groups with one further outlier. Both iron and copper alloy versions are known as well as several adorned with other materials from coral to sandstone (Chapter 5). The vast majority of involuted brooches have hinges often hidden from above by plates that look like springs. A small number have real two-coil springs. All the involuted brooches have a curved reverted foot that attaches to the bow at the hip either with a separate collar or more typically with the toe end formed into a clasp around the bow that may have the appearance of a raised collar. A few examples such as the very short involute from Middle Hill, Woodeaton, Oxfordshire [10565] have the foot cast as one with the bow (Figure 3.16). The upper side of the foot is often decorated with a larger curved disc; where this is copper alloy the upper surface of the disc will often be decorated with moulded La Tène style tendril forms. Iron examples are typically decorated with bulbs made of other materials, held to the iron disc with copper alloy rivets and/or resin.

Amongst the 155 **2C** brooches are two main subtypes:

- **2Ca** are the shallow or long involuted brooches. These have a longer profile than the 2Cb brooches and the concave curve is quite shallow. (62 definite examples).
- **2Cb** brooches are typically short and tightly involuted, meaning the concave bow has a deep curve so the pin is longer than the bow to follow this curve and leave space for the pierced fabric. (76 definite examples).

H&H also had an outlier Type 2Cc (H&H 167-8). It is like a tightly involuted brooch with a curved pin but the bow is so short it does not have space for much curvature at all and therefore is almost straight [10565] (Figure 3.16). There are myriad variations on the involuted theme ranging from very long and shallow to this hyper short form meaning that it is not beneficial to a discussion of overall typology to keep subdividing the types. Five brooches are part way between the 2Ca and 2Cb types indicating perhaps a developmental increase in the curvature of the bow. Stead (1991) and Dent (1982) both evolved their own numbering system for the varieties of brooches recovered in Yorkshire neither of which directly corresponds to the other (Giles 2012, 137 Table 5.1). Stead's (1991) system inconsistently shifts between giving preferential treatment to bow shape and to decorative elements. Dent's (1982) is more focussed on bow shape and length which reflects the use of similar decorative techniques on different bow shapes. This system can be beneficial for regional studies but to enable a country-wide comparison I prefer the simpler 2Ca and 2Cb divisions.

The foot cast with the bow is typically viewed as a Late Iron Age characteristic on bow brooches. However, the Late Iron Age versions are lighter, more wire-like brooches than the Type 2 brooches with this foot feature. The LIA examples have a catchplate formed into a triangular foot shape complete with the end of the bow, sometimes pierced. In the 2C, 2B and 2L brooches the cast foot shape is very much that of the reverted attached or abutting foot but it has just been cast complete with the bow rather than reverted after casting (see Chapter 4 Production).

Twelve brooches are slightly concave versions of the 2Ab brooch, not as curved as the 2Ca but not as straight as the 2Ab. Although stratigraphic evidence supports the typological order of straight bow to shallow involutes to sharply involuted (Dent 1982, 441) the differing methods for attaching the foot to the bow occur on the same shaped brooches. This has been taken as evidence that changes in the bow shape or the foot form did not follow a linear development (Jay et al. 2012, 179-80). However, as shown below hinge features also vary on the same bow types. Perhaps the bow form changes over time but the foot attachment and hinge feature are technical features associated with differing contemporary manufacturing techniques perhaps synonymous with different manufacturers.

**Figure 3.4** Examples of Brooches of Type 2C, 2D and 2E
(all images by S. Adams unless except [10148], [10897], [10928])

**Type 2C**

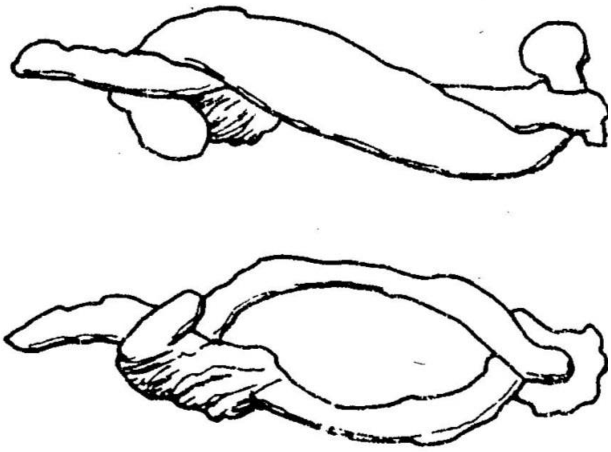
**2Ca**

[10148] Bramham Cum Oglethorpe
West Yorkshire (PAS SWYOR-399938)

**2Cb**

[10546] Beckley, Oxon.
Ashmolean Museum

**Type 2D**



[10897] Wetwang Slack cemetery, E. Yorks.
(H&H Plate 50 No.8008)

[10928] Wetwang Slack settlement
Hull and East Riding Museum

**2E brooches**

[10569] Middle Hill
Woodeaton, Oxon.
Ashmolean Museum

[10028] Batheaston, Avon


0 1 2 cm

**Figure 3.5** Examples of Type 2Ba brooches (all images by S. Adams except [10295])

**Type 2Ba**

[10646] Grandcourt Farm Middleton, Norfolk

**2Ba1**

[10412] Harborough Cave, Brassington, Derbys.
© Trustees of the British Museum

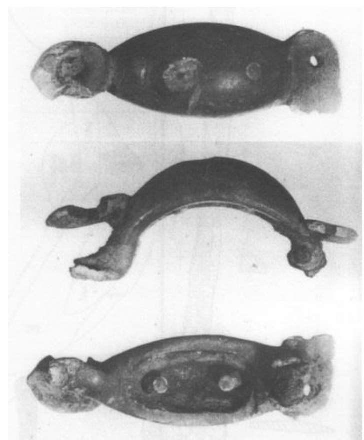
**2Ba1**

[10399] Middle Hill, Woodeaton, Oxon.
Ashmolean Museum

**2Ba2**

[10575] Newnham Croft, Cambs.
Cambridge Museum of Archaeology and Anthropology

**2Ba3**



[10295] Castle Yard, Farthingstone
(Knight 1986-7, 36 Pl. 1)

0 1 2 cm

**Figure 3.6** Examples of Type 2Bb brooches (all images by S. Adams except [10571])

**2Bb1**

[10571] Wetwang Slack, E. Yorks
Hull East Riding Museum

[10570] Meare Village East, Somerset
Somerset County Council Heritage Service

0 1 2 cm

**2Bb2**

[10033] Batheaston, Avon
© Trustees of the British Museum

**2Bb3**

[10650] Grandcourt Farm
Middleton, Norfolk

**2Bb3**

[10800] near Casterley Camp,
Upavon, Wilts
Wiltshire Museum

## 3.4 Decorated, Plate and Bulbous Types

Hull and Hawkes' typology holds up well to this point. The following brooch types were less well understood because of their variety and the small number of examples known until recent years. Only 28 were recorded up to 1995. 57 definite examples are now known 23 of which have been found through metal detecting activity. The 2B brooches now exhibit a greater consistency in form than previously expected. However, we are still lacking reliable contextual data for many examples so they can only be located within the chronology through comparison of the technological and stylistic characteristics.

### 3.4.1 Hull and Hawkes Type 2B (Figures 3.5 and 3.6)

The 2B brooch is the most elaborate and varied type. It consists of a number of decorated thick bow brooches and slightly arched plate bow brooches. Hull and Hawkes described the 2B brooches as '*Decorative forms, peculiar to Britain*' (H&H 143). The shared characteristics are as follows:

- All the brooches are cast copper alloys in varied forms that do not sit comfortably within the other Type 1 and Type 2 categories. The shapes would not be achievable in iron.
- The brooches are all decorated and often decorative[2].
- The decoration is often with additional materials, such as coral, added for decorative effect. Where the decoration is not supplied by the addition of other materials it is usually of a moulded form with the brooch cast with additional bulbous features or various tendril designs that are classified as La Tène style ornament (Jope 2000).
- All the brooches have hinges rather than springs (see more on hinges below).

Hull and Hawkes created subdivisions which they said were 'a formality only. With use of it or without, each brooch should be judged as what it is, an individual

[2] Although some impressively decorated examples of Type 2A and Type 2C brooches exist the shapes of those brooches conform to the 2A and 2C types.

creation.' (H&H 143). Such a statement can be applicable to all Early and Middle Iron Age brooches: no two are identical, all are unique objects. As more examples of the 2B brooches have come to light it is apparent that sub-types do exist but they do not fit comfortably into the four-fold divisions created by H&H which were distinguished by differences in the foot from reverted but unattached, to attached, to cast as one with the bow (H&H 143, 147, 152 and 154).

57 brooches may now be classified as Type 2B. Amongst the new 2B finds are more plate brooches than previously identified. In recognition of these differences I propose a two-fold division of the 2B brooches thus:

- **2Ba:** essentially bow brooches. The design of these brooches may be appreciated from the side or face on. (40 brooches)
- **2Bb:** plate brooches. The design of these brooches can only be appreciated looking onto the face of the plate. (17 brooches)

At the most basic level a brooch may therefore be described as a decorated bow form or a decorated plate form or a wire brooch. Further subtypes are visible within the 2Ba and 2Bb divisions although not all brooches conform to a subtype and so may only be classifiable as 2Ba or 2Bb, such as the unique Mill Hill Deal brooch [10002] described below (Figure 3.17). The subdivisions are useful for identifying possible regional types or long distance exchange of ideas (Chapter 5).

**2Ba** bow brooch subtypes are as follows (Figure 3.5):

- **2Ba1:** Brooches with an arched bow deeply recessed to hold inlaid material covering the entire length of the bow and with additional applied or inlaid material at the foot and sometimes the head. The inlaid material is often now missing but where present this has so far proven to be coral (see Chapter 4). Eight known examples although two are of questionable provenance [10318] and [10806] both possibly from Norfolk.
- **2Ba2:** Openwork brooches with integrated foot and low arched or almost flat bow that is pierced by openings creating a decorative form such as a wheel shape. Some of these brooches are further decorated with applied material such as the knobs of probable coral on the Newnham Croft brooch

[10575] (Figure 3.5) or the small dots of inlay on the metal detected find from Lincolnshire [10151]. (six brooches).

- **2Ba3:** Low arched brooches with a double lug hinge that blur the division between bow and plate brooches but still have a bowed profile. They have wide humped bows. The head and feet decorated with applied bulbs or moulded circular shapes. The foot is plate-like with a catchplate cast below. They tend to be decorated with moulded or applied bulbs or copper alloy or other material. This group includes two exceptionally similar brooches decorated at head and foot with three roundels in a row grooved on the upper surface with concentric rings, both stray finds: Tetsworth, Oxfordshire [10160] (Figure 3.15) and Aylesford, Kent [10288]. (12 brooches).
- (14 further brooches may be classified only as 2Ba, but they do not form any specific subtype).

**2Bb** plate brooch subtypes are as follows (Figure 3.6):

- **2Bb1:** Thin, sheet like plate, low arched with a raised edge around the upper surface. Both the head and foot parts are usually broader than the bow and all are or were decorated with strips and beads of applied material such as coral. All have a hooked catchplate cast below the plate and a double lug hinge. (five brooches).
- **2Bb2:** Bulbous plate brooches with four equal and symmetrical arms, usually in a cross shape. A bulb rises up from the centre and the arms are all surmounted by bulbs. Generally each bulb form flows into the other creating a smooth whole. The brooch has a double lug hinge on the back of one arm and a hooked catchplate at the back of another. The pin pivots on a narrow rod passed through the lugs. (five brooches).
- **2Bb3:** Flat plate brooches roughly cruciform in plan with the arms of the cross formed from roundels: either two pairs of equal length arms or all four arms equal. The upper surface may be decorated with slightly indented concentric rings or insets for inlay such as coral [10800] (Figure 3.6).The brooch has a double lug hinge on the back of one arm and a hooked

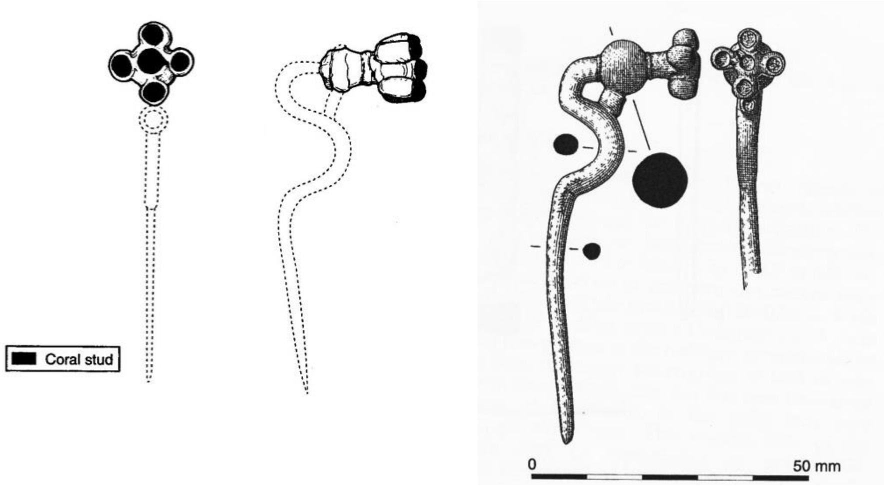
catchplate at the back of another. The pin pivots on a narrow rod passed through the lugs. (six brooches).

The shape rather than decorative technique is the overriding characteristic in the subdivisions above. Similar techniques are used for decorating different types of brooches as well as other materials such as the coral beads attached with bronze rivets to the strap fittings in Grave 112, Mill Hill Deal [10002] (Figure 3.17). This brooch finds no direct parallels in other MIA examples. It is so unique that it can only be listed as a 2Bb brooch meaning it is a decorated plate style brooch. This and other unique 2B brooches can be related to other contemporary types through the comparison of different elements of the brooch, such as the hinges, as discussed later in this chapter. As more brooches are discovered it may be that these unique items can be grouped together into specific types or subtypes. The Mill Hill Deal brooch although unique amongst brooches is clearly part of a set of accessories of the same style and decorated in the same manner (Chapter 8 and 9).

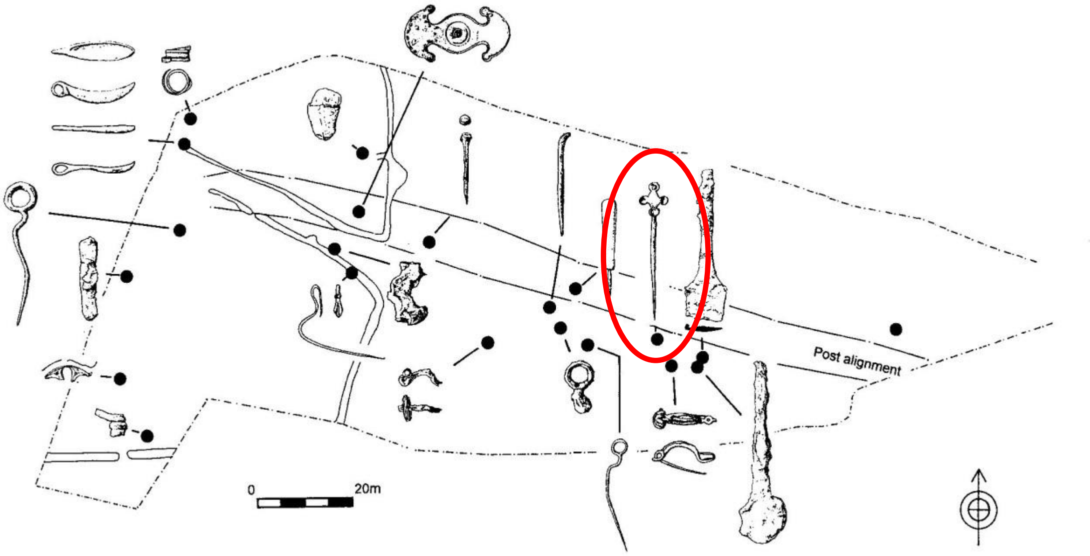
Four further brooches may possibly be of 2B type merely because they do not fit anywhere else in the brooch typology. This includes [10990] from Finlaggan, Islay discussed by Hunter (2009, 143-146) as being of Middle Iron Age technology but with a Late Iron Age decorative style. At present this is included as a possible Middle Iron Age brooch but until a dateable comparison is found we cannot be certain. The majority of the Scottish brooches do not fit comfortably into the typology for England and Wales suggesting they are best considered in comparison to other local objects as Hunter has done (ibid).

The 2Bb2 brooches are similar in plan to the heads of a handful of contemporary pins (Figure 3.7): one from Fairfield Park, Bedfordshire, another from Ludford, Lincolnshire (Allen and Webley 2007, 94 Figures 3.17 and 3.18) and a further example from Flag Fen (Pryor 2001, 299, Figure 10.20). The first two have the same bulbous cruciform shape the former with small coral beads inserted into the head of the brooch creating each of the five bulbs. The Ludford pin appears to be missing comparable inlay. The Flag Fen pin has a flattened central portion but four cupped roundels creating the cross shape.

**Figure 3.7** Pins comparable to 2Bb2 brooches




Pins from Fairfield Park (left) and Ludford (right)
(Allen and Webley 2007, 94 Figures 3.17 and 3.18)




Pin from Flag Fen, Power Station site (Pryor 2001, 299, Figure 10.20)

**Figure 3.8** Examples of Type 2L and 2K brooches (all images by S. Adams except [10815] and [10275])

**Type 2L**

2L

2Lb

[10281] Thames near Hammersmith, London
© Trustees of the British Museum

[10287] White Horse Stone, Aylesford, Kent (Maidstone Museum )

[10815] Freshwater Parish Isle of Wight (PAS IOW-4DA383)

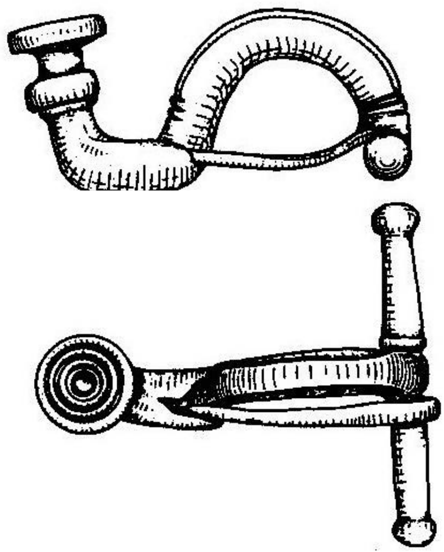
2L

2Ld

[10814] Chorleywood, Hertfordshire
© Trustees of the British Museum

[10297] Middle Hill, Woodeaton, Oxon
Ashmolean Museum

**Type 2K**



[10274] Harlyn Bay, St Merryn, Cornwall
Truro Museum

[10276] Mount Batten, Plymouth, Devon
(Cunliffe 1988, 63, Fig.34)

0 1 2 cm

### 3.4.2 Adams Type 2L (Figure 3.8)

The bulbous form of some 2B brooches as well as some of the hinge and decorative features compare positively with examples of the Type 2L brooches. These brooches were originally classed by H&H as Group L, who suggested, following Hodson (1971, 53), that they might be the first brooches made in Britain (H&H 54-62) although they were aware that some shared hinge devices comparable to the 2B brooches (H&H 61). Enough examples have now been discovered to suggest these similar characteristics form a discrete Middle Iron Age type. The sharing of features between the 2B and 2L types suggests possible contemporaneity in the design.

The characteristics of a Type **2L** brooch are:

- thick humped bow (usually roughly hollowed)
- short length
- cast in copper alloy (bronze where tested)
- either with a flat foot surmounted by a knob or an integral reverted foot. The latter gives the appearance of a bent back foot closely abutting the bow but in fact the foot and bow are a solid piece of cast metal.
- All complete enough brooches exhibit remnants of a hinge rather than a true spring. The hinges consist of a narrow finial cast as the head of the bow which is pierced once or twice. In some examples the remnants of axial rods survive within one or both holes which provided the support for possible decorative springs and the pivot for the pin head. Where positively identified the axial rods are all iron.

Of the 28 identified examples most conform to the typical form and are grouped into subtype **2La**, while the remainder can be grouped into further subtypes although there are few in each of these categories. Despite these low numbers it was decided to retain the subdivisions to see if the typological variations equate with distribution differences (Chapter 6).

Type **2L** subtypes:

- **2La** classic Type L brooch as described above. 19 brooches.
- **2Lb** the bow is thinner and lighter. 4 brooches, two of which have a long head plate in the shaped of a skeuomorphic spring that hides the hinge below; [10988] Hampshire and [10815], Isle of Wight.
- **2Lc** the bow is divided into segments or punctured with deep recesses to create a decorative texture. 3 brooches.
- **2Ld** the bow is narrower and thinner and the hinge is hidden by a rod representing a long spring. These are comparable, although different from the Type 2K brooches (see below). 2 brooches only.
- Four further fragments may be 2L brooches but this cannot be confirmed from the available records. The Holloway Lane fragmentary brooch [10294] is probably a 2La but only a reconstructed drawing is available for analysis.

The hinges consist of a narrow finial cast as the head of the bow which is pierced once or twice. In some examples the remnants of axial rods survive within one or both holes which provided the support for possible decorative springs and the pivot for the pin head. Where positively identified the axial rods are all iron. The importance of the hinge feature will be analysed below.

### 3.4.3 Adams Type 2K (Figure 3.8)

Previously known as Group K brooches, H&H's late Hallstatt 'Atlantic type' (H&H 49). These are now proposed as a discrete Middle Iron Age type. They all have a short but well arched bow, a catchplate almost as long as the bow and an upturned foot surmounted by an elaborated knob that ends in a saucer like plate with raised concentric ring decoration on the upper surface. The head of the brooch is cast with a long bilateral bar perpendicular to the bow with bulbous spheres at either end of the bar. Where the pin survives the head of it is bent over and round this rod close to the right side of the bow. The mechanism is therefore very simple with the pin pivoting on the rod. The foot form certainly has Hallstatt characteristics but the rod like head is unusual on any type of brooch.

Comparisons have been made with Iberian brooches (e.g. Boudet 1988, 64 and Cunliffe 2005, 473) but Boudet's evidence can be used to dismiss such claims. Firstly the Spanish finds are made from several parts joined together with a fully functioning spring whereas on the British examples the bow and arms of the head are cast as one solid piece, the pin being the only separate part (Boudet 1988, 64). The Iberian brooches are also usually iron or made from a combination of bronze and iron, but were rarely made solely from bronze. Both bronze and iron examples are known from Britain.

No Iberian brooches have been found in Britain so if they did provide the antecedents for the Type 2K brooches that influence may have been more in a memory of the Iberian styling rather than copying an actual example although we cannot assume that absence of evidence is evidence of absence. The combination of the hinge and their occurrence in Middle Iron Age style burials indicates these may be another Middle Iron Age southwestern variety. The upturned foot form finds its closest comparison in the head of the vase-headed pins from Mount Batten (Cunliffe 1988, 63 Figure 34.78), thus emphasising the local influence upon the design. Only six 2K examples are known, two from Mount Batten, Devon [10276] and [10277]; three from Harlyn Bay, Cornwall [10237], [10274]. [10275] and the head of an iron example found recently near Swansea [10987] (Figure 3.8).

### 3.4.4 Hull and Hawkes Type 2D (Figure 3.4)

The 2D Type is an extremely select group of only three iron brooches: two from the Yorkshire Wolds [10897, 10928] and one from Maiden Castle [10940]. They consist of a slightly bowed S-shape of metal upon which the pin head pivots at the top of the S and the end of the pin hooks over at the bottom of the S. Dent suggested (1984, 55) they find their closest comparison in the penannular brooches which are formed from an incomplete circle of wire-like metal with terminals of varying elaboration either side of the opening. The pin head pivots around the wire and the end hooks over the wire usually near one of the terminals. Although rare in the MIA the overall shape and pin mechanism can be recognised in the Roman dragonesque brooches (Jundi and Hill 1998, 131-134, Hunter 2009).

### 3.4.5 Adams Type 2E (Figure 3.4)

Four further brooches do not sit comfortably within any of the existing types. They are brooches made from two plain pieces of wire joined by looping the head of the pin wire through the looped head of the bow wire. The bow is usually straight with an almost right-angled shoulder and hip, however on one example [10569] the wire of the bow is arranged into a series of loops along the length of the bow (Figure 3.4). The catchplate is formed merely from bending up the end of the bow wire into a hook. Two are iron brooches and two bronze. These all occur at sites which contain several other MIA brooches: All Cannings Cross [10865], Batheaston [10028], Cold Kitchen Hill [10410] and Middle Hill, Woodeaton [10569].

## 3.5 Stylistically Later Types

### 3.5.1 Hull and Hawkes Type 3A (Figure 3.9)

Type 3A is another anomalous group of only three brooches (two copper alloys and one iron) that do not conform to other groups but have elements of Middle and Late Iron Age brooches. It does not seem a reliable type. Instead it is a reminder of the transitional objects that occur as new techniques and styles are developed. One example has a solid foot, high arched bow and internal chord [10977] Makeshift cemetery. The two others have high arches with large spring coils but a foot reverted and attached to the bow close to the shoulder with a collar: [10582] Maiden Castle and [10583] Sudbury. A further example has now been identified as a 2Ab brooch with straight bow [10888] from Wetwang Slack: the reverted foot was previously interpreted as solid but this appears to be a misinterpretation of the x-ray.

### 3.5.2 Hull and Hawkes Type 3B (Figure 3.9)

3B brooches appear to be a type related to the reverted and attached foot style brooches. They vary in thickness but have arched bows tapering to a narrow foot that is reverted and attached either at the hip or further up the bow and either attached with a rivet or a collar. Where complete these have long, multiple coil, bilateral springs with external chords. More often they have mock springs where the brooch consists of four pieces: the bow, a long spring, a rod passed through the spring and the head of the bow and a pin pivoting on that rod. On yet other examples the whole spring is a skeuomorph with a rod ribbed on one side and decorated on the other with rings of bronze to give the impression of coils. These mock springs are reminiscent of those found on 2L brooches. The thickness of the 3B bows may indicate a stylistic connection to the globular 2L bows. Out of the 22 possible 3B brooches only 6 are definite examples and the rest are variants either towards the Type 6 shape or Type 3C shape (see below). Both iron and copper alloy examples are known.

### 3.5.3 Hull and Hawkes Type 4 (Figure 3.9)

Another group of only three brooches, comprised of two definite copper alloy examples from Glastonbury [10567, 10568] and one incomplete, possibly damaged, iron example from Meare Village East [10694][3]. They consist of a narrow, plate-like, arched bow surmounted by a line of coiled wire adhered to the surface of the bow. The brooch has a long, tightly wound bilateral spring with thin external chord. The foot is missing on all examples. The long mock spring and arched plate bow place these stylistically between the 2B plate brooches and the Type 6 bow brooches. It is probable they are a local style showing off the skills of the metalworkers in the Glastonbury region. I would suggest that Type 4 is a variation on late MIA brooches, peculiar to the Somerset Lake Villages.

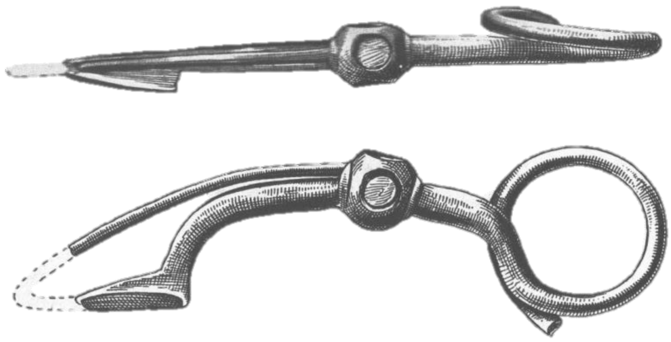
### 3.5.4 Hull and Hawkes Type 6 (Figure 3.9)

On the basis of the foot form Hull and Hawkes placed this type late in their sequence (H&H, 193-4). Here the reverted foot is cast as one with the bow but often with a skeuomorphic moulding to create the effect of being a reverted foot attached to the bow. However the overall form is rather solid and thick in comparison to 3B and 3C brooches which have a more wire-like quality. The head part of the Type 6 is closer in style to 3B brooches with a typically long mock spring with external chord. Of the 18 possible Type 6 brooches, 12 are definite and these are all copper alloy.

[3] H&H (1987, 186) also listed a Woodeaton brooch [10569] as a Type 4, but it is actually one of the 2E wire brooches described above.

**Figure 3.9** Examples of Type 3-6 brooches (all photographs by S. Adams)

**Type 3A**



Maiden Castle, Dorset
(Wheeler 1943, 254, Fig.81 no. 7)

**Type 3B**

The Mount, Maidstone. Maidstone Museum

**Type 3C**

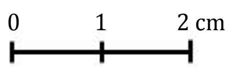
The Walbrook, City of London
© Trustees of the British Museum

**Type 4**

Glastonbury Lake Village, Somerset
Somerset County Council Heritage Service

**Type 6**

Hod Hill, Dorset © Trustees of the British Museum



## 3.6 Making a brooch from its parts

### 3.6.1 Head/Torsion Mechanisms (Figure 3.10-3.13)

Table 3.2 shows the presence or absence of different spring forms and the presence or absence of hinges on the brooches. This simple summary shows that Early and Middle Iron Age brooches are constructed with either a bilateral spring, where the spring element sits either side of the head of the bow (Figure 3.10), or a hinge (Figures 3.12-3.13). Some of these springs may be mock but even in those cases the spring element is bilateral (Figure 3.11). Large coiled springs are only found on Hallstatt and 1A brooches[4], the bilateral large coils are the main defining characteristic of the latter type. It is notable that earlier style springs tend to have more coils than later examples. Type 1A brooches have four coil springs but two coil springs do not definitely appear until the Middle Iron Age. A couple of possible corroded iron 1B brooches such as [10645] from Barnetby-le-Wold, Lincolnshire, could potentially have two coil springs but we cannot be certain on this point.

The wire for the spring and pin is always circular in cross section until the Middle Iron Age when we find rare examples where the bow and pin are circular but the coils of the spring are D-shaped in cross section. This is best observed on the well-preserved, straight bow, bronze brooches from Grandcourt Farm, Middleton Norfolk [10647] (Figure 3.10) and [10661]. On these examples the chord is kept short sitting close around the spring holding the whole mechanism tight.

The multiple coil springs with more than four coils are a problematic group. Extremely long, tightly coiled bilateral springs are found on the Hallstatt Group Lx brooches (Figure 3.1). This feature has been identified as a continental characteristic and is rarely found on any real spring brooches of British type. The possible 1B brooches with multiple coiled springs have between 5 and 9 coils, far shorter springs than the Lx brooches, with >12 coils. One of the rare examples of 1B style with an atypically long spring [10188] (Figure 5.2) has also been seen to be exceptional for this period in terms of metallic composition (Chapter 5). This

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[4] With the exception of the aforementioned 3A brooches.

spring is also unusual in that the pin extends from the top of the coil rather than the bottom or underside of the spring. This brooch from the Yorkshire Wolds is found in an area dominated by MIA brooches with few earlier examples. It could be a local variant or a unique version of the 1B style or possibly a post 1B brooch using characteristics of this earlier style.

**Table 3.2** Form of the head mechanism by type (Figures 3.10-3.13).

| Spring or hinge type | 1A | 1B | 1C | 2A | 2B | 2L | 2K | 2C | 2D | 2E | 3A | 3B | 4 | 6 | 3C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unilateral springs** | | | | | | | | | | | | | | | |
| **Bilateral Springs** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y*** | **Y** | | | **Y** | **Y** | **Y** | **Y** | **Y** |
| **Mock Springs** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** | | | | | **Y** | **Y** | **Y?** |
| **Hinges** | | | | | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** | | | | | |
| Large coil springs | Y | | | | | | | | | | Y | | | | |
| Small coil springs (incl. mock) | | Y | Y | Y | Y | Y | | Y | | | | Y | Y | Y | Y |
| Four coil bilateral springs | Y | Y | Y | | | | | | | | | | | | |
| Two coil bilateral springs | | Y*** | Y | Y | | | | Y | | | Y | | | | Y |
| External chord | Y | Y | Y | Y | Y | Y | | Y | | | Y | Y | Y | Y | |
| Internal chord | | Y** | | | | | | | | | | | | | Y |
| Multiple coil real spring | | Y*** | | | | | | | | | | Y | | | |
| Multiple coil mock spring | | | Y | | | Y | | Y | | | | | Y | Y | |
| Skeuomorphic long spring | | | | | | Y | Y | | | | | | | | |
| Real springs with axial support | Y | Y | Y | Y | | | | | | | | | | | |
| **Developed mock spring hinges** | | | | **Y** | **Y** | | | **Y** | | | | | | | |
| **Lugged hinges** | | | | | **Y** | **Y** | | | | | | | | | |
| **Looped hinges** | | | | | **Y** | | | | **Y** | **Y** | | | | | |

**Key:** *Bilateral bar. **1Bd brooches only. ***rare variants on the 1B type.

**Figure 3.10** Brooch head mechanisms: different spring forms

(Photographs by S. Adams, drawings by S. Crummy and C. Williams © Trustees of the British Museum, except [10647] and [10667] by D. Hopkins in Adams et al. forthcoming)

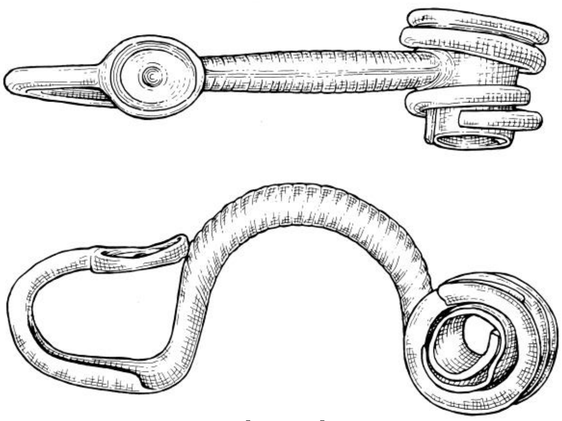
Large coil real spring

[10435] National Museum of Wales

Large coil mock spring

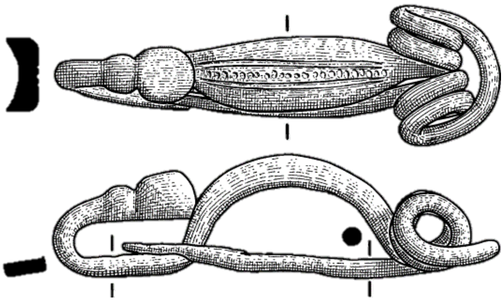
[10431] © Trustees of the British Museum

Large coil with rolled copper alloy axial support



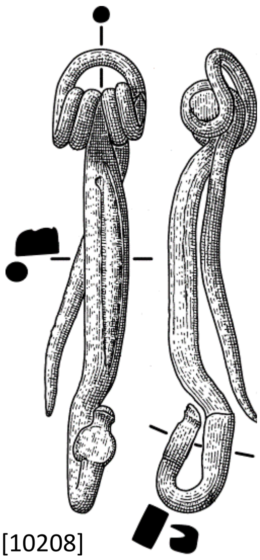
[10215]

Small coil real spring



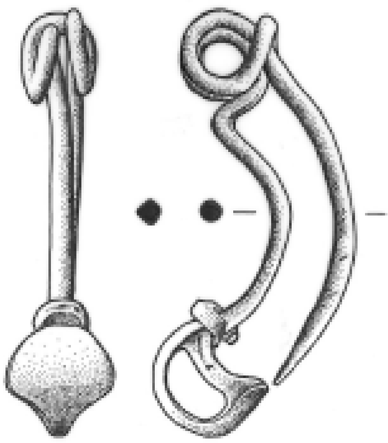
[10447]

Small coil mock spring



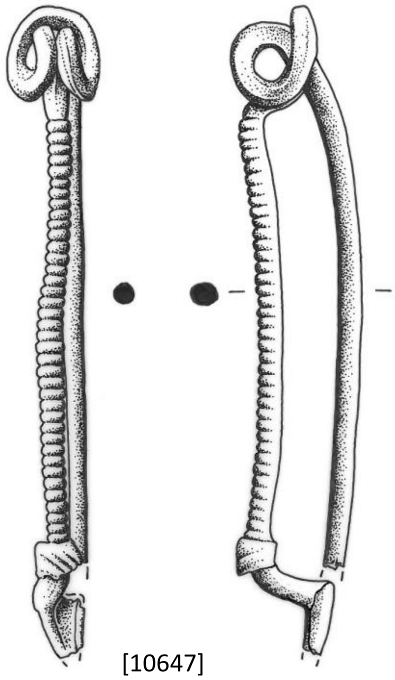
[10208]

Two coil real spring



[10667]

Two coil with D-shaped wire



1cm.

[10647]

**Figure 3.11** Mock springs: original forms and repairs

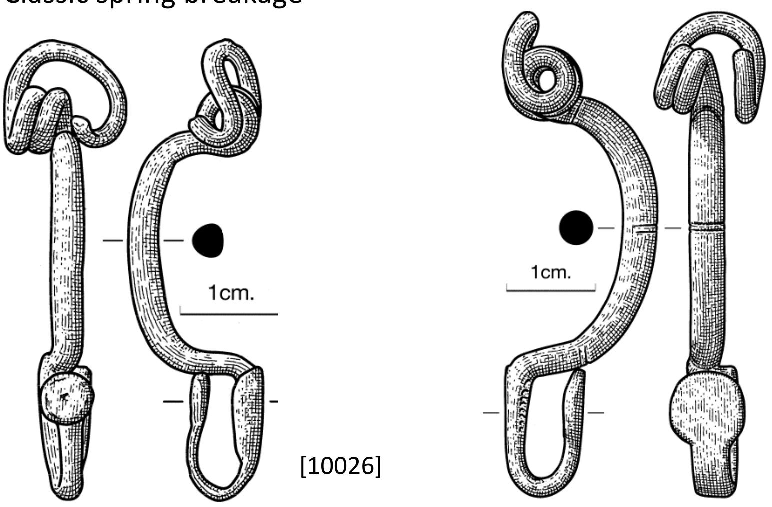
end of pin coil finished at an angle to match end of spring coil

replacement iron pin and coil

[10201]
Photograph S. Adams © Trustees of the British

[10844]
PAS SUR-0B2C37

Classic spring breakage



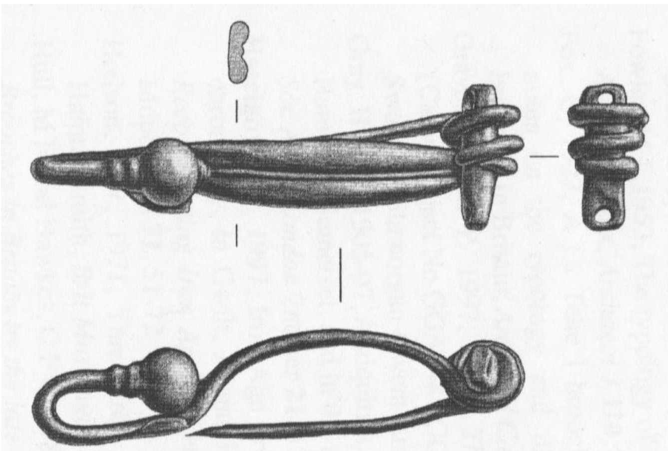

[10026]

[10029]

Drawn by S. Crummy and C. Williams. © Trustees of the British Museum

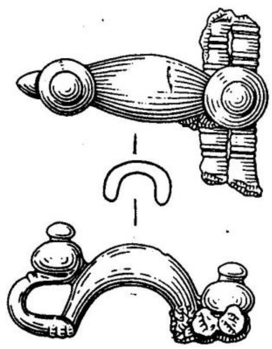
Spring repaired with a toggle

Skeuomorphic double spring



[10741]

Drawn by J. Chadwick, National Museum of Wales



(H&H, plate 21) [10788]

### 3.6.1.1 Mock Springs (Figure 3.11)

The mock spring hinge is found in Britain throughout the period under study. It appears in conjunction with most bow and foot forms. It is rare on 1A brooches with only three definite examples: [10426] Crickley Hill, [10427] Danebury and [10431] Hammersmith (Figure 3.10). A further example is found where the innermost coil and pin of a bronze 1A brooch has been replaced by an iron coil and pin [10452] from Cowlam. This may be a repair to a brooch that once had a real spring or a mock spring. The construction of mock springs varies across periods and brooch types (Figure 3.11). Typically the bow and most of the coils of the spring will be the same piece. The fourth or innermost coil on the right side is made from the looped head of the pin. Visual analysis with the aid of a x10 optical magnification lens shows that the pin head loop was designed to carefully marry up with the end of the spring. The pin head loop is formed in such a way that it is finished with a narrow oblique edge that sits perfectly against the end of the third coil of the spring.

Considering the precision achieved it appears that mock springs must have been produced as such from the outset. This careful production would have been almost impossible to create from a damaged spring without affecting the alignment of the coils. If they were repairs to real springs it seems improbable the two parts would correspond so well. These carefully produced objects may be compared with examples where the mock spring is a repair to damaged real springs. Perhaps the most obvious being a metal detected find from Newton Moor, Penllyn which re-uses a sub-rectangular copper alloy rod, pierced at either end (possibly an old toggle), as an axial rod [10741] (Figure 3.11).

When making the experimental brooch (Chapter 5) it was noted that the most difficult part of the spring was bending the final coil without snapping it. Perhaps many of the Iron Age metalsmiths decided to avoid this problem by planning a separate pin from the outset. It would also have had the practical benefit of easy replacement of a damaged or broken pin. The pin is one of the most vulnerable parts of the brooch as evidenced by the rare survival of complete pins. We also find rods of bronze or iron inserted through the small coiled real springs of other 1B brooches to keep the spring aligned and stop it bending out of shape through use.

These examples show the problematic nature of the springs; a problem that was later removed with the introduction of hinges and simpler two coil springs.

#### 3.6.1.2 Mock versus real springs

Mansfeld saw the mock springs as the products of a different workshop or craft groups (1993, 310). Both groups are seen to produce similar looking products but in different ways according to whether they were blacksmiths (the full spring form) or a foundry (the mock spring). The former shaped their object with tools, the latter cast their object and joined the pieces together. He utilised these terms to reference the two groups as he explored the employment of real versus mock springs in the La Tène bird brooches. His discussion puts forward the possibility that similar brooches could be produced through casting or forging. This is certainly the case in Britain where brooches of a similar type (such as involutes) are found forged in iron or cast in bronze. The evidence for casting and forging in the same workshops, for example at Llwyn Bryn-Dinas (Musson et al. 1992), shows that these two techniques could be produced in the same workshops in Britain, thus undermining Mansfeld's argument for different producers.

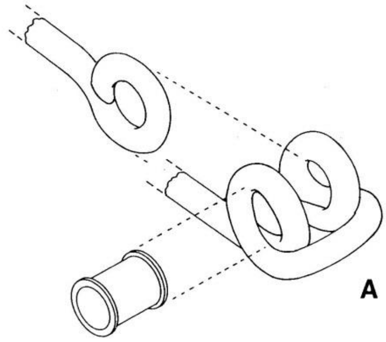
#### 3.6.1.3 Hinges

Six mock spring variations and twelve further hinge variations have been recorded on the brooches, a few examples of which can be found in Figures 3.12 and 3.13. The hinges can be divided into three groups:

- developed mock springs (DMS)
- lugs
- loops

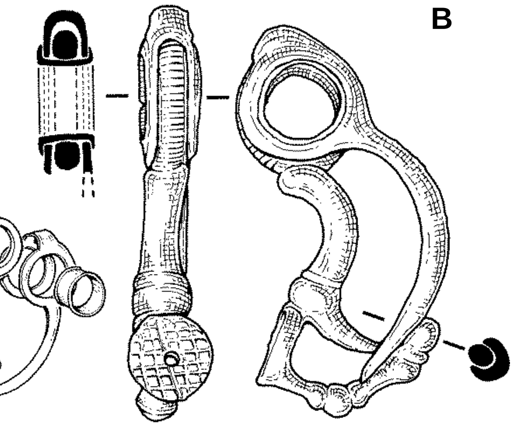
Setting aside the mock springs, all other hinge types are only found on MIA brooches. In this period hinge designs are as varied, if not more so than bow shapes. This means many of the brooches H&H considered to be the same type are constructed with different hinges. Although the overall appearance may be very similar, the construction is different.

**Figure 3.12** Developed mock spring hinges (DMS): some examples

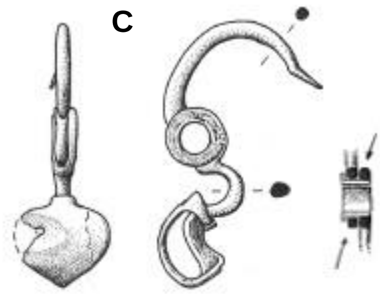



**A** = this is a three coil form of mock spring. The head of the bow forms a single loop. The pin head is formed into a bilateral two coil spring which sits either side of the bow head. The two parts are secured by an axial rod or cylinder around which the hinge pivots. (Stead 1991a, 80, Fig. 59)

[10201]

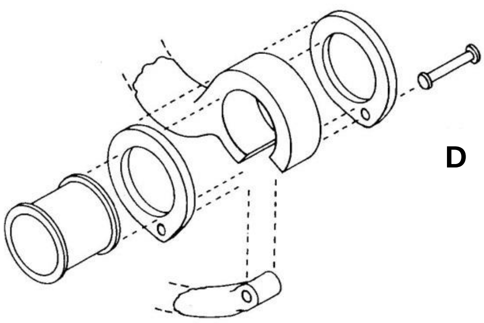



**B** = similar to A except the bow head is an open circle with a ribbed outer edge. The pin head has two flat open circles bent around the bow head. All pivoting on an axial cylinder c.1mm thick, secured by an everted rim on either side. (Drawing by C. Williams © Trustees of the British Museum)

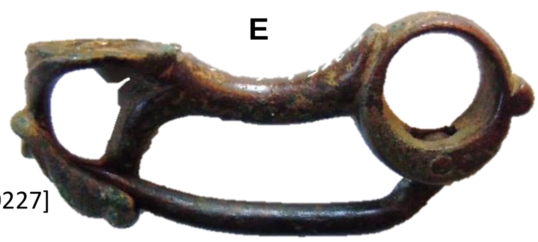



**C** = the bow and pin heads are both cast as a single flat open circles. These are placed side by side and secured by a cylinder pivot. (Drawing by D. Hopkins, Adams et al. forthcoming)

[10664]




**D** = the iron bow head forms a penannular ring. Two complete rings are set either side of the bow head and secured with a bronze cylinder. The pin pivots on a small rod passed through the end of the rings. (Stead 1991a, 80, Fig. 59)

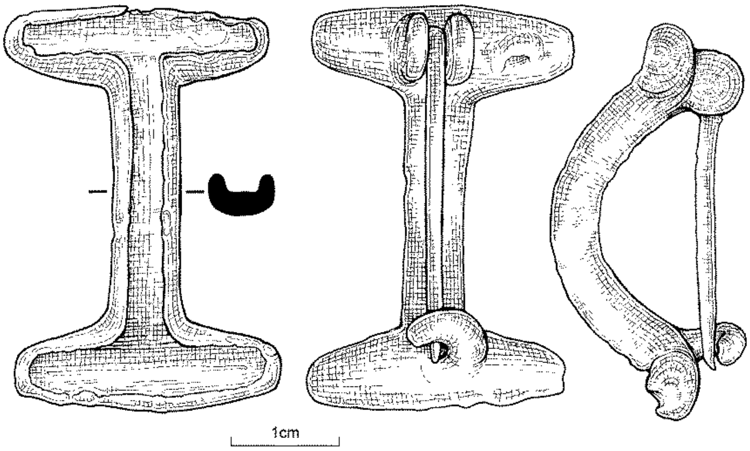



[10227]

**E** = the pin is inserted into a cavity in the base of the circular bow head; where it pivots on a small axial rod. (Photograph by S. Adams © Trustees of the British Museum)

**Figure 3.13** Lugged and looped hinges

## Lugged hinges

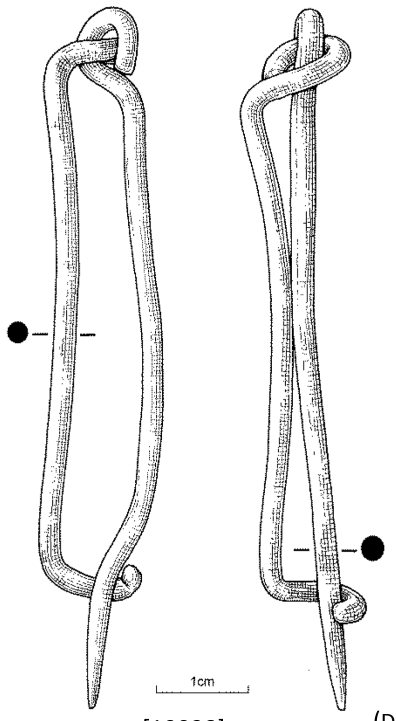



[10318]

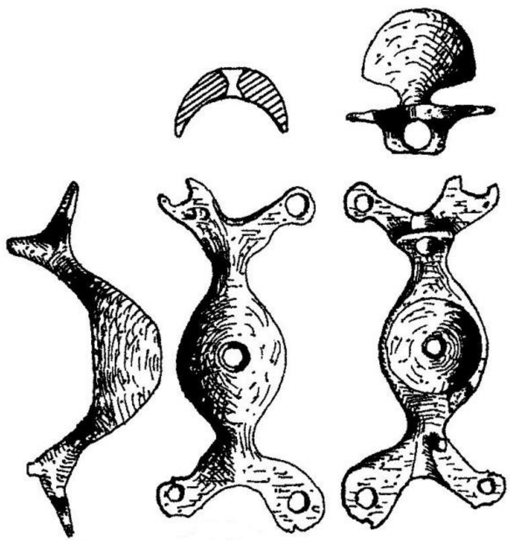
(Drawing by S. Crummy and C. Williams © Trustees of the British Museum)

[10718]
PAS SF10308

## Looped hinges




[10028]



[10803] (Hattatt 1982, 6, Fig. 2 no. 1444)

(Drawing by S. Crummy and C. Williams © Trustees of the British Museum)

DMS hinges have an appearance and structure reminiscent of the two-coil mock springs (Figure 3.12). They are constructed from three, or more, separately cast or forged pieces. The bow, pin and pivot will be three separate items. The combined parts create a round head shape like a closely coiled spring and sometimes even have a small tab on the outer side in imitation of the external chord. DMS hinges are found in both bronze and iron brooches. On iron brooches the pivot feature, usually a cylinder with everted ends, is rendered in bronze.

By switching to hinges the production process became more reliable. The metalworker did not risk damaging the whole cast if they broke the spring during production. Instead the bow piece could be cast as one solid item with only the foot part to revert and the pin was cast as another solid piece. For DMS hinges the precision needed was increased as each part had to match perfectly to the other. Close examination of the pivot cylinder shows that the sheet of bronze was cut to the exact required length so both ends meet without overlap and fit perfectly within the opening in the head of the bow and pin. So risk was reduced but precision increased maintaining the need for specialist skill in brooch production. The skill here is in the balance between what could be modelled and what could be achieved in casting. The molten metal must be able to flow into all parts of the mould and its viscosity limits its flow (Chapter 5).

### 3.6.2 Feet (Figure 3.14)

For H&H the defining difference between La Tène I and La Tène II brooches (Early and Middle Iron Age) is the foot treatment. The EIA brooches have a reverted foot that is not attached to the bow whereas on the MIA brooches it is attached to the bow (Table 3.3 and Figure 3.14). The reverted foot is attached to the bow at the hip, either by a separate collar wrapped around the toe end and the bow or the toe was split in two and bent around either side of the bow. This development is followed by a movement of the attachment up the bow towards the shoulder and a change to a reverted foot cast as one with the bow forming a triangular catchplate area. The latter is usually equated with Late Iron Age types but on a few MIA examples the foot is cast as one with the bow, although retaining the shape of the detached foot versions (e.g. Batheaston [10032] Figure 3.14). This general pattern appears to correspond with the dating evidence but is of limited use for plate brooches and brooches where the foot is not reverted. The latter would be classed as Hallstatt types within the H&H foot typology but some brooches with an upturned or knobbed foot exhibit features that place them clearly within the Middle Iron Age (2Bb, 2K, and 2L brooches).

**Table 3.3** Form of the foot and catchplate by type (Figures 3.14-3.15).

| Foot form | 1A | 1B | 1C | 2A | 2B | 2L | 2K | 2C | 2D | 2E | 3A | 3B | 4 | 6 | 3C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Upturned or knobbed | | | | | Y | Y | Y | | | | | | | | |
| Reverted | Y | Y | Y | Y | Y | Y | | Y | | | Y | Y | Y | Y | Y |
| Reverted detached | Y | Y | Y | | Y | | | | | | | | | | |
| Reverted attached to hip | | | | Y | Y | Y | | Y | | | Y | Y | | | |
| Reverted solid cast | | | | | Y | Y | | | | | | | Y | Y | |
| Reverted attached near shoulder | | | | | | | | | | | | Y | | | Y |
| Hooked catchplate | | | | | Y | | | | | Y | | | | | |
| Triangular U-profile catchplate | Y | Y | Y | Y | Y | Y | Y | Y | | | Y | Y | Y | Y | Y |
| No catchplate, (pin rests on the bow) | | | | | | | | | Y | | | | | | |

The reverted foot is not known on any Hallstatt brooch. The unilateral spring also disappears in the Hallstatt period on the continent to be replaced by bilateral springs. These stylistic changes are also practical. The reverted foot enables the end of the brooch to be simply decorated while protecting the object from becoming hooked on anything that came in its way such as locks of hair or the fabric of other garments. It also avoids the foot becoming bent away from the brooch thereby distorting the overall design. The effect of reverting the foot was clearly popular as this shape was retained, albeit modified, over five centuries. The shift to attached reverted feet and eventually the foot cast as one with the bow can also be seen to have practical origins. By attaching the end of the foot to the bow it toughens the shape of the feature which in turn allows for the application of elaborate decorative details to the foot (such as the glass beads and coral strips). Casting the foot as one piece with the bow also reduced the amount of work needed to create the finished article and avoids the risk of casting a foot of unsuitable length for the desired design. However practicality is not the only issue and changes in design had to be widely accepted in order for them to be adopted.

### 3.6.3 Catchplates (Figure 3.15)

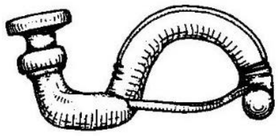
Catchplates on the earliest continental Hallstatt brooches are little more than a hooked end of the bow providing a rest for the pin. EIA and MIA catchplates are designed to contain the end of the pin in order to keep it from being hooked open if snagged on other material (Figure 3.15). The increased torsion of a bilateral spring means a solid catchplate was necessary to hold the pin. The catchplates forms a wide triangle in plan, reflecting the tapered end of the pin. The pin sits within a U-shaped gully in the top of the catchplate. The reverted foot adds strength to the end of the catchplate and acts as a cap partially enclosing the top of the catchplate and so aiding its pin holding function.

As hinges were altered this style of catchplate would have been too shallow to keep the pin secure now the pin could pivot open so easily. We therefore see a change to a deeper grooved catchplate set at a slight angle to the curvature of the pin (Figure 3.15). The pin end is bent slightly to negotiate this angle and so forms a shallow hook restricting the pin’s movement away from the catchplate and therefore holding it in place. These functional changes also give greater scope for decorating the shape of the outer surface of the catchplate, an opportunity not missed in cast bronze examples. The hooked catchplate makes a return in the MIA on the back of plate brooches, providing a simple solution for holding the pin that could be cast as one with the brooch. The hook has to be fairly deep to hold the pin securely. Hooks are narrow and short enough not to intrude on the decoration of the plate above.

**Figure 3.14** Different brooch foot forms. Not to scale to enable comparison across types.
Photographs by S. Adams; drawings by S. Crummy and C. Williams: © Trustees of the British Museum. Except [10276] (Cunliffe 1988, 63 Fig.34); and [10543] (H&H Plate 40 no. 3798).

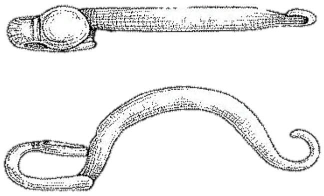
Upturned/Knobbed

[10025]

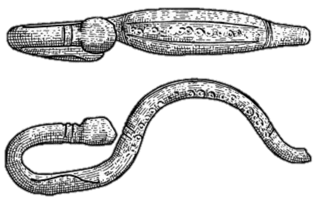


[10276]

Reverted (but not attached)



[10025]

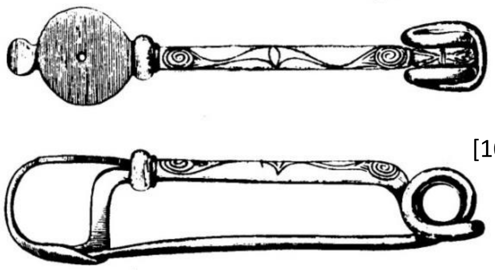


[10031]

[10171]

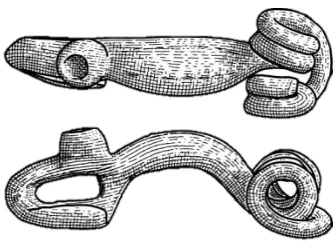
Reverted attached at hip

[10490]

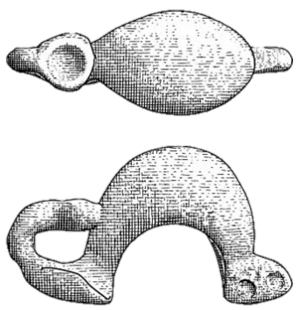


[10543]

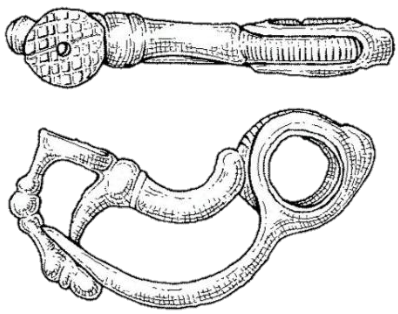
Reverted solid cast



[10032]

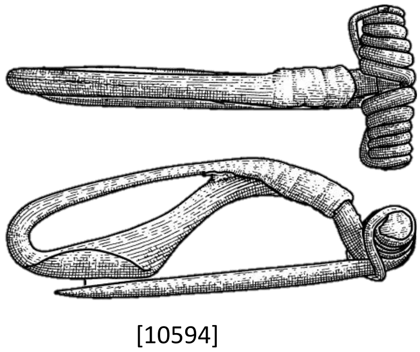


[10698]



[10201]

Reverted attached near shoulder

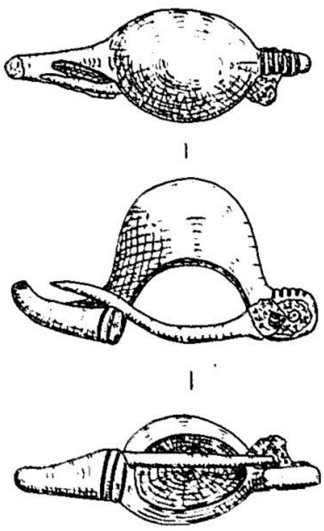


[10594]

[10262]

**Figure 3.15** Different forms of catchplate. Not to scale to enable comparison across types.
(Photographs by S. Adams; drawings by S. Crummy and C. Williams. © Trustees of the British Museum except [10287] and [10160])

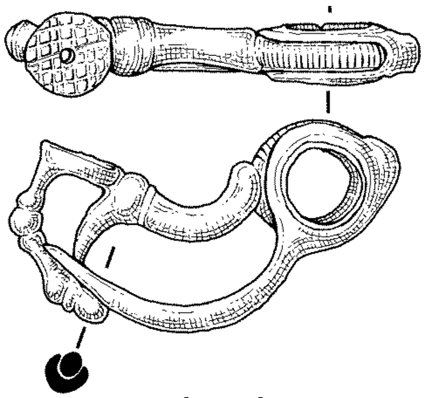
### Triangular catchplate



[10287] (Kelly 1991, 340, Fig.1,3)

[10447]

### Curved deep catchplate

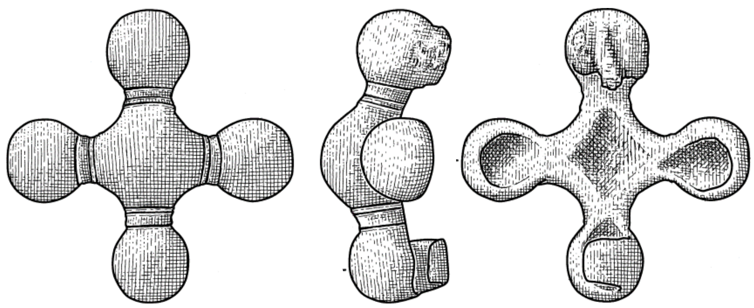


[10201]

[10227]

### Hooked catchplate

[10160] PAS: BERK-91FC62
Ashmolean Museum



[10033]

### <u>3.6.4 Bows</u> (Figure 3.16)

The shape of bow brooches follows a general pattern from a high rounded convex arch to a deeply curved concave arch via low and angular arches and straight bows (Table 3.4 and Figure 3.16). Greater variety in form is found in MIA types. The ability to cast varied curved and bulbous shapes is explored in MIA bronze brooches. Iron brooches are formed in the same shapes as low arched and straight bowed and involuted brooches. Instead of forming the iron brooches into elaborate shapes like some bronze versions, they might be decorated with applied material (see below).

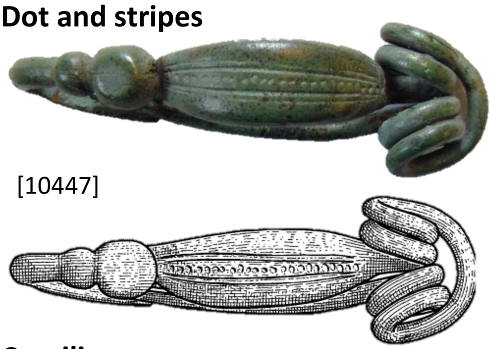
**Table 3.4** Form of the bow by type (Figure 3.16)

| **Bow** | **1A** | **1B** | **1C** | **2A** | **2B** | **2L** | **2K** | **2C** | **2D** | **2E** | **3A** | **3B** | **4** | **6** | **3C** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High arch | Y | Y | Y | Y | | | Y | | | | Y | Y | | | |
| Low arch | | Y | Y | Y | Y | | | | | | | | | | |
| Flat arch | | | | Y | Y | | | | | | | | | | |
| Humped | | | | | Y | Y | | | | | | | | | |
| Concave bow | | | | | | | | Y | | | | | | | |
| Thick | | | | | Y | Y | | Y | | | | | Y | Y | |
| Wire | | | | | | | | | | Y | | Y | | | Y |
| Plate | | | | | Y | | | | Y | | | | | | |
| Smooth curved profile | Y | Y | | | | | Y | Y | | | | | | | |
| Splayed legs | | Y | Y | | | | | | | | | | | | |
| Right angled shoulder and hip | | | | Y | | | | | | Y | | | | | |
| Angled arch higher at shoulder | | | | | | | | | | | Y | Y | Y | Y | Y |

**Figure 3.16** Examples of different bow shapes. Not to scale to enable comparison across types. (Photographs by S. Adams. [10269], [10197], [10698] and [10594] © Trustees of the British Museum)

**Figure 3.17** Varieties of brooch decoration. Not to scale to enable comparison across types. (Photographs by S. Adams. [10447] drawn by S. Crummy and C. Williams © Trustees of the British Museum, unless otherwise stated)

## Dot and stripes

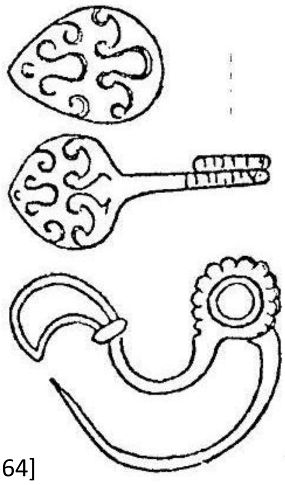


[10447]

[10156]
PAS NMGW-EFAFA3

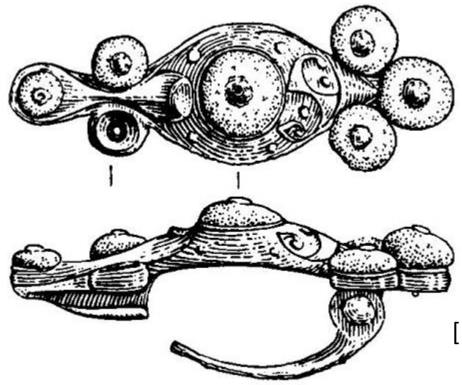
## Curvilinear

[10575]
Cambridge Museum of Archaeology and Anthropology



[10564]

(H&H Plate 47, no,3070)



[10002]

(Parfitt 1995, 87, Figure 32. No. 4)

© Trustees of the British Museum

## Moulded Bulbous

[10799]
Wiltshire Museum

[10609]
PAS BERK-4EFFC6

## 3.7 Decoration (Figure 3.17)

Decoration on brooches of this period ranges from simple indented dots or transverse lines such as those found on 1B brooches, to elaborate moulded swirls and trumpets (see Jacobsthal 1944, MacGregor 1976 and Jope 2000) (Figure 3.17). The wax models would lend themselves easily to decoration. Restrictions on the ornament would be imposed by the small size of the object but might also be controlled by ideological or social concerns, or even current tastes. The decoration falls into three main categories:

- **Dots and stripes** usually impressed into the surface of the bow or rather the wax model. Often dots are surrounded by a thin circle. The stripes are narrow indentations usually in parallel pairs following the long axis of the bow [10447] or across the bow at either end or round the top of the foot. Occasionally the stripes are cut at an angle along the side of the bow.
- **Curvilinear designs** in low relief from cusps and tendrils to split palmettes (Jope 2000, Glossary). These are frequently found on the upper side of the footplates of 2A and 2C brooches but they also appear on the bow of the early 1A brooches and Type 2A and 2B brooches such as the 2Ba2 Newnham Croft brooch [10575] (Figure 3.17). Concentric circles in low relief develop the previous theme of dots and rings into this curvilinear style as on the 2Bb3 brooch [10650] from Grandcourt Farm or [10800] found near Casterley Camp (Figure 3.6).
- **Moulded bulbous shapes** where the decoration is the entire shape of the brooch rather than something rendered on the surface of the brooch like the 2Bb2 brooches such as [10033] from Batheaston (Figure 3.6). Or applied bulbous feature(s) that dominate the whole brooch such as the large glass ball on the 2Cb Ferry Fryston brooch [10009] or the coral decorated 2Ba1 Harborough Cave brooch [10412] (Figure 3.5).

Some brooches are decorated with more than one technique. The Mill Hill Deal 2B brooch has low relief tendrils and applied coral knobs [10002] (Figure 3.17). Occasional variations are known such as the row of indented, interconnected triangles along either side of the bow. A further technique half way between the linear grooves and moulded shapes is the twisted cable effect created by moulding a series of parallel ridges along the body of the bow that curve around the short axis [10156] (Figure 3.17).

## 3.8 The Whole is the Sum of All Parts

While the treatment of the reverted foot may equate with a particular stylistic period the variations of this feature only occur with specific combinations of head treatment and bow shape. On the basis of complete or near complete examples we can say that in the Early and Middle Iron Age in Britain:

- The foot of brooches with high-arched bows and large spring coils are always reverted but never attached.
- Low arched bow brooches may have attached feet but these are only found on examples where the bow is relatively long.
- A bow that is leaf-shaped in plan is always accompanied by a real spring and a reverted unattached foot.
- A straight brooch with almost right-angled shoulder and hip will only have a reverted foot that is attached to the bow. This shape of bow is not found with multiple coil springs or large coiled springs but may have a two coil real or mock spring or a hinge of developed mock spring type.
- Thick humped bows are only found with evidence for a mock spring/hinged head. They never have real springs. Whereas the foot treatment may vary from reverted and cast as one with the bow to a plate like foot surmounted by a bulbous attachment.
- Involuted brooches all have a reverted foot attached or cast as one with the bow. They are most often found with hinges of developed mock spring type but occasionally they are found with real two coil springs.
- Plate brooches of this period always have a lug hinge, usually double lugs.

Although the makers may have been aware of different shapes of bow, or different spring mechanisms, there appear to have been strict rules limiting the possible combinations. Each type cannot be defined by one feature alone; it is the result of specific criteria.

Intriguingly while an overall look may be desired and restricted the exact construction of each element was open to interpretation. The way each element has been put together to produce either a reverted attached foot or a hinged head is quite variable. This is best exemplified in the assemblage of 38 bow brooches and one plate brooch from Grandcourt Farm (Adams et al. forthcoming). Three forms of real spring, two variations of mock spring and five hinge forms are present. The involuted brooches, alone, exhibit three of the hinge types (DMS 2, 3 and 4) and two coil bilateral springs.

## 3.9 Summary

The general structure of the H&H typology is still relevant despite the increased quantity of brooches found since it was published. Some of the subtypes have needed adjusting and other possible groups are now classed as types. The updated typology is listed in Table 3.5 with basic classifying features (see below) The composition of the types has been compared to identify the features particular to a type and those shared by a number of types. It is clear that 1A and 1B types show more uniformity in construction than other types. The 2B, 2C and 2L brooches show the greatest variety of head mechanisms showing that specific shapes may be created through a range of methods. The dating of each type will now be explored in Chapter 4 where it becomes clear that these more varied types and construction methods are a feature of the MIA and the more uniform styles belong to the EIA.

**Table 3.5** Typology of EIA and MIA brooches in Britain.

| Type | Subtype | Sub-divisions | Bow | Spring/Hinge | Foot | Quantity |
|---|---|---|---|---|---|---|
| 1A | | | | large 4 coil spring | reverted | **Total 45** |
| | 1Aa | | high arch | some mock springs | + simple disc at toe | 8 |
| | 1Ab | | | external chord | +bulb at toe | 3 |
| 1B | | | | small coil spring | reverted | **Total 227** |
| | 1Ba | | lower arch | usually 4 coils | + simple disc/bulb toe | 54 |
| | 1Bb | | | some mock springs | + snouted foot feature | 42 |
| | 1Bc | | leaf-shaped | external chord | + snouted foot feature | 40 |
| | 1Bd | | segmented | internal chord | + ornate features | 5 |
| 1C | | | | small coil spring | | **Total 10** |
| | 1Ca | | sloped arch | 2or 4 coils | reverted at an angle | 8 |
| | 1Cb | | straight/flat bow | some mock springs | reverted level with bow | 2 |
| 2A | | | | small coil real and mock springs | attached to bow | **Total 93** |
| | 2Aa | | sloped arch | 2 coils | + reverted at an angle | 10 |
| | 2Ab | | straight/flat bow | developed mock spring hinges | + reverted level with bow | 67 |
| 2B | | | | | reverted | **Total 57** |
| | 2Ba | | arched | | attached or | **40** |
| | | 2Ba1 | arched and inlaid | | detached or | 8 |
| | | 2Ba2 | openwork | | cast as one with bow | 6 |
| | | 2Ba3 | wide, humped | | | 12 |
| | 2Bb | | plate | | | **17** |
| | | 2Bb1 | thin arched plate | double lug hinge | hooked catchplate | 5 |
| | | 2Bb2 | bulbous plate | | | 5 |
| | | 2Bb3 | flat plate | | | 6 |
| 2C | | | involuted | 2 coil real springs | reverted | **Total 155** |
| | 2Ca | | shallow/long | mock springs | attached to bow | 62 |
| | 2Cb | | tight/short | various hinges | either with collar or split toe | 76 |
| 2D | | | S-shaped | pin head bent round bow | pin rests on end of bow | **3** |
| 2E | | | wire: straight or coiled | pin head looped through bow head | pin rests on end of bow | **4** |
| 2K | | | arched | pin head wrapped around crossbar at bow head | Upturned foot | **6** |
| 2L | | | think low arch | | reverted | **Total 28** |
| | 2La | | thick humped | | attached to bow or | 19 |
| | 2Lb | | thinner & lighter | mock springs | cast as one with bow | 4 |
| | 2Lc | | segmented/ punctured | various hinges | or knobbed foot | 3 |
| | 2Ld | | narrower & thinner | | | 2 |

# Chapter 4 Chronology of the Brooch Types

This chapter brings together the available dating evidence for brooches. Emphasis is placed upon those recovered from archaeological sites. Here we find support for the general chronological order of Hull and Hawkes' typology and provide amendments on the dating for each type. These data also indicate periods when certain styles dominate and times when several forms overlap. The chronological data inform subsequent chapters to develop our understanding of which brooches were first deposited in Britain, and when; and which were first made here. As has already been stated, the brooch chronology is very important to wider Iron Age research because these artefacts are often used as dating tools and form the backbone of Iron Age chronologies in Europe (Chapter 1).

One of the biggest problems for brooch chronology is the very fact that they have been used as chronological markers, so any evidence that could be used to independently date brooches has already been dated by the brooches. The aim of this chapter is to draw together the range of dating evidence available for the brooches to assess the validity of the existing chronological order and attempt to suggest feasible dates for the production and use of each type. The radiocarbon dating evidence for decorated Iron Age metalwork has been recently reviewed (Garrow et al. 2010). That research showed the value of reconsidering the existing chronology through comparison with the deposition evidence.

## 4.1 Deposition Dates

It is not possible to achieve an absolute date for brooches. The only organic components on any surviving examples are axial rods of wood surviving within the spring of two 1A brooches [10427] from Danebury and [10431] Hammersmith. But neither fragment is suitable for dendrochronological or radiocarbon dating. The closest possible scientific date for any brooch may be derived from organic material within the same deposit, within the same feature that contains the brooch. Inhumation burials are ideal in this situation as the brooch and human remains usually appear to have been deposited at the same time. In burials the brooches are often found on or close to the skeleton. In undisturbed graves the location of the brooch is thought to approximate well with the position it was placed in the grave usually as part of the clothing or wrapping of the body (Chapter 7 and 8). Although a brooch can be older than the buried individual (Jay et al. 2012, 183) we can at least ascertain that a reliable radiocarbon date for the body equates to the last period of use of that particular brooch, that is when the brooch was taken out of circulation. The burials in the Iron Age cemeteries in the Yorkshire Wolds are particularly helpful because several contain brooches, and have been radiocarbon dated and some sequencing of the burials has been achieved (Stead 1991a, Jay et al. 2012). In particular the Wetwang cemetery has recently been reviewed using Bayesian modelling to analyse the radiocarbon dates (Jay et al. 2012). Only two other burials containing brooches have been sampled for radiocarbon dating: Mill Hill, Deal, Kent (Parfitt 1995) and The Bridles, Barnetby-le-Wold, Lincolnshire (Bray et al. 2003). Unfortunately at other sites it seems that the presence of the brooch is considered adequate for dating the burial such as at Suddern Farm, Hampshire (Cunliffe and Poole 2000, 168). This illustrates the general acceptance amongst archaeologists that Iron Age brooches are well dated and, therefore, useful for dating associated material. Yet, in reality, this is not the case.

Brooch evidence has also been compared to pottery assemblages (e.g. Stead 1991, Haselgrove 1997). Haselgrove's research compared the brooch types found with ceramics and the dating of the pottery assemblages. For this he used Cunliffe's (1974) chronological scheme for Iron Age pottery developed in his 1966 PhD thesis and refined in relation to the radiocarbon dates from Danebury (Cunliffe 1995, 13-18; Haselgrove 1997, 53-5). The results indicated Early Iron Age brooches were deposited from the mid fifth century BC, or just before, into the early third century BC. To view this in a simplified numerical form we could be looking at deposition dates from c.475–275 BC. The peak representation compares well with the calibrated dates of 470–310 BC for ceramic phases 3-5 at Danebury, the so-called *Early Iron Age* assemblages. Haselgrove proposed that Middle Iron Age brooches were deposited from the start of the third century BC until the late second century BC, or c.300–c.150/125 BC. The start date corresponds reasonably well with the revised calibrated dates for Ceramic Period 6, 310 BC, and Ceramic

Period 7, 270 BC. While comparison to associated finds may be important for estimating date of deposition and could indicate possible longevity of brooch types it is at risk of circularity when ceramic assemblages have been compared to perceived brooch chronologies (Willis 2002, 10) as explained in Chapter 1. Willis (Willis 2002, 19) draws attention to the case of King Harry Lane where the specialists' dating of the pottery and brooches conflict, and reminds us of the possible differing duration of use and deposition for different objects.

## 4.2 Dating Audit

As shown in Table 4.1, only 13 brooches are from burials with associated human remains, which have been radiocarbon dated. Only three are derived from deposits containing other organic material that has been radiocarbon dated. Six individual brooches, plus the collection from Grandcourt Farm, Middleton, Norfolk, are from deposits immediately below or above those which have been radiocarbon dated: three of these are from the problematic Glastonbury Lake Village site (see below), one from Ashville Trading Estate, one from Burrough Hill and one from Cow Down (which also has a complementary date from the deposit in which it was found). Other brooches have been found on sites where the stratigraphic or ceramic sequence have been radiocarbon dated by associated organic remains. This evidence may produce an estimate for the brooch deposition date. These links between the brooches and the direct dates are very tenuous. Add to this lack of associated dates the problems of imprecision and calibrating radiocarbon dates from the period 800–400BC and 400–200BC (Hamilton 2011, 26) and we discover how uncertain the actual dates are for brooch types. The problems with the calibration curve have, in the past, been used as an argument against spending money on radiocarbon samples of sites which now would benefit from chronological analysis using Bayesian statistics, such as Maiden Castle (Sharples 1991).

**Table 4.1** Closely associated radiocarbon dates and brooches. (*continues over two pages*)

| **Site** | **association with brooch** | **type** | **date range at 95%** | **brooch** | **metal** | **details** | **sampled material** | **lab code** | **raw date** | **INTCAL09 calibrated (95.4%)** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Gussage All Saints, Dorset** | direct: same deposit | 1A | 770–210 cal BC | **10613** | copper alloy | pit 379 (ctxt/layer 7) phase 1 | charcoal from layer 7/8 | Q-1203 | 2370 ± 90 BP | 770–350 cal BC (90.9%), 304–209 cal BC (9.1%) |
| **Cow Down, Longbridge Deverill** | direct: same deposit | 1Ab | 790–390 cal BC | **10432** | iron | pit 37 (layer 3) | charred wood: corylus avellana (hazel) | NPL-109 | 2440 ± 90 BP | 790–392 cal BC |
| **Cow Down, Longbridge Deverill** | close: beneath brooch deposit | 1Ab | 770–370 cal BC | *10432* | iron | pit 37 (layer 4) | charred grain | HAR-253 | 2390 ± 70 BP | 766–369 cal BC |
| **The Bridles, Barnetby-le-Wold, Lincolnshire** | direct: burial | 1Ba | 520– 230 cal BC | **10645** | iron | burial | human bone collagen | BETA-175049 | 2330 ± 40 BP | 521– 354 cal BC (90%), 291–231 cal BC (10%) |
| **Ashville Trading Estate, Abingdon** | close: feature directly postdates brooch deposit | 1Bc assoc. | 1410–980 cal BC | *10627* | *copper alloy* | ditch 73 cuts pit 79 containing brooch | carbonized grain and charcoal | HAR-1249 | 2970 ± 80 BP | 1409–980 cal BC * |
| **Burrough Hill, Leicestershire** | close: feature below brooch deposit | 1C/2A assoc. | 390–210 cal BC | below *10404* | *iron* | fill of pit [4080] underlying earlier rampart extension (4079a) | animal bone: sheep, pelvis | SUERC-38811 | 2255 ±30 BP | 394–349 cal BC (36.8%), 315–208 cal BC (63.2%) |
| **Burrough Hill, Leicestershire** | close: feature above brooch deposit | 1C/2A assoc. | 390–205 cal BC | above *10404* | *iron* | fill of pit [4080] underlying earlier rampart extension (4079b) | carbonised food residue | SUERC-38812 | 2240 ±30 BP | 390–345 cal BC (28.1%), 323–205 cal BC (71.9%) |
| **Burrough Hill, Leicestershire** | close: feature above brooch deposit | 1C/2A assoc. | 390–210 cal BC | above *10404* | *iron* | hearth D (1072b) | cereal grain (single): unidentified | SUERC-38814 | 2245 ±30 BP | 391–347 cal BC (30.7%), 320–206 cal BC (69.3%) |
| **Burrough Hill, Leicestershire** | close: feature above brooch deposit | 1C/2A assoc. | 370–180cal BC | above *10404* | *iron* | hearth C (4056a) | cereal grain (single): barley | SUERC-38818 | 2195 ±30 BP | 367–181cal BC |
| **Burrough Hill, Leicestershire** | close: feature above brooch deposit | 1C/2A assoc. | 360–120 cal BC | above *10404* | *iron* | hearth C (4056b) | cereal grain (single): barley | SUERC-38819 | 2175 ±30 BP | 363–163 cal BC (98.7%), 129–120 cal BC (1.3%) |
| **Burrough Hill, Leicestershire** | close: feature below brooch deposit | 1C/2A assoc. | 360–110 cal BC | below *10404* | *iron* | burial (4049) in pit [4026] | human bone: right femur | SUERC-38810 | 2165 ±30 BP | 360–274 cal BC (46.9%), 261–148 cal BC (48%), 140–112 cal BC (5.1%) |
| **Wetwang, E.Riding Yorkshire** | direct: burial | 2Aa? | *270–205 cal BC* | **10902** | iron | burial 327 | human bone, rib | OXA-14141 | 2265 ±30 | *245–230 cal BC (18%)* OR *225–205 cal BC (50%)* |
| **Wetwang, E.Riding Yorkshire** | direct: burial | 2Ab | *255–200 cal BC* | **10891** | iron | burial 275 | human bone, rib | OXA-14108 | 2210 ±28 BP | 373–201 cal BC |
| **Grandcourt Farm, Middleton** | features below brooch deposit | 2A to Type3 | 350–50 cal BC | *10646-74, 10729-39* | *copper alloy* | deposit | residue on pot in pit | Beta-286311 | 2130 ± 40 BP | 354-291 cal BC (16.8%), 231-46 cal BC (83.2%) |
| **Grandcourt Farm, Middleton** | features below brooch deposit | 2A to Type3 | 350–5 cal BC | *10646-74, 10729-39* | *copper alloy* | deposit | Residue on pot in layer 2851 | Beta-286310 | 2110 ± 40 BP | 350-302 cal BC (7.1%), 226–225 cal BC (0.1%), 209–38 cal BC (92.4%), 9–4 cal BC (0.4%) |
| **Makeshift Cemetery, Rudston** | direct: burial | 2Ba | *310–200 cal BC* | **10220** | iron | burial 178 | human bone | HAR-1130 | 2150 ±150 | 731–691 cal BC (1.1%), 660–651 cal BC (0.3%), 544 cal BC – cal AD 175 (98.1%), cal AD 191–211 (0.5%) |

| Site | association with brooch | type | date range at 95% | brooch | metal | details | sampled material | lab code | raw date | INTCAL09 calibrated (95.4%) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Mill Hill, Deal, Kent** | direct: burial | 2Bb | 235–110 cal BC | **10002** | copper alloy | Grave 112 with weaponry and 'crown' | human bone | OXA–17506 | 2158 ± 28 BP | 235–106 cal BC |
| **Wetwang, E.Riding Yorkshire** | direct: burial | 2Bb1 | *260–200 cal BC* | **10572** | copper alloy | burial 155 | human bone | HAR-1665 | 2110 ±80 BP | 367–27 cal BC (99.2%), cal AD 40–48 (0.8%) |
| **Ryton-on-Dunsmore, Warwickshire** | direct: same deposit | 2Cb | 360–110 cal BC | **10683** | iron | pit 132, fill 133 with deposited remnants of fired clay oven superstructure | charred seed: *pomoideae* | SUERC-24756 | 2170 ± 35 BP | 364–148 cal BC (95%), 140–112 cal BC (5%) |
| **Wetwang** | direct: burial | 2Cb | *235–185 cal BC* | **10887** | iron | burial 59 | human bone, rib | OXA-14075 | 2206 ±30 BP | 375–198 cal BC |
| **Ferry Fryston** | direct: burial | 2Cb | *225–185 cal BC* | **10009** | iron | burial with 'chariot' | human bone, right radius | INCL. NZA-20494 | 2185 ±35 BP | 513–56 cal BC (COMBINED RESULTS) |
| **Wetwang Village Chariot burial** | direct: burial | 2Cb | *215–185 cal BC* | **10976** | iron | burial with 'chariot' we01 340aq | animal bone: pig | OXA-11993 | 2151 ±21 | 352–296 cal BC (31.7%), 229–220 cal BC (1.5%), 211–111 cal BC (66.9%), |
| **Makeshift Cemetery, Rudston** | direct: burial | 2Cb | *230–170 cal BC* | **10247** | iron | burial 143 | human bone | HAR-1129 | 2050 ±80 | 354–292 cal BC (5.8%), 231–217 cal BC (0.9%0, 214 cal BC – cal AD 94 (91.3%), cal AD 96–125 (2%) |
| **Wetwang** | direct: burial | 2D | *240–160 cal BC* | **10897** | iron | burial 236 | human bone | HAR-2771 | 2140 ±80 | 383–17 cal BC (98.2%), 15–0 cal BC (1.8%) |
| **Wetwang** | direct: burial | 3Aa or 2Ab | *210–160 cal BC* | **10888** | iron | burial 117 | human bone, rib | OXA-14140 | 2125 ±29 | 346–320 cal BC (6.6%), 206–53 cal BC (93.4%), |
| **Wetwang** | direct: burial | 3Aa or 2Ab | *210–160 cal BC* | **10888** | iron | burial 117 | human bone, rib | OXA-14206 | 2145 ±27 | 353–293 cal BC (25.3%), 230–218 cal BC (1.9%), 213–91 cal BC (71.7%), 71–60 cal BC (1.1%) |
| **Makeshift Cemetery, Rudston** | direct: burial | 3Ab | *170–140 cal BC – cal AD 55* | **10977** | iron | burial 175 | human bone | HD-29256 | 1976 ±23 | 39–8 cal BC (15.9%), 4 cal BC – cal AD 71 (84.1%) |
| **Glastonbury Lake Village** | close: deposit below brooch | 3B | 770–410cal BC | *10577* | *copper alloy* | 14C from: early phase: floor 3 glv/m75, brooch from floor 2 (middle phase), mound 75 | bone | OXA-4747 | 2485 ± 50 BP | 767–480 cal BC (88.8%), 469–414 cal BC (11.2%) |
| **Glastonbury Lake Village** | close: deposit above brooch | 6v | 776–410 cal BC | *10965* | *copper alloy* | 14C from: middle phase: floor 3 glv/m74 b, brooch from: floor 5 (early phase) mound 74 | antler | OXA-4749 | 2475 ± 45 BP | 776–480 cal BC (90.2%), 469–414 cal BC (9.8%) |
| **Glastonbury Lake Village** | close: deposit below brooch | 6v | 390–120 cal BC | *10965* | *copper alloy* | 14C from: early phase: below mound glv/m74 a, brooch from: floor 5 (early phase) mound 74 | bone | OXA-4746 | 2190 ± 45 BP | 386–157 cal BC (97.5%), 135–115 cal BC (2.5%) |

**Key to Table 4.1** *Date ranges listed in italics*: are derived from a specific model (see Jay et al. 2012). *These dates do not complement the stratigraphic data.
**Brooches in bold**: the 14C dates are from material within the same deposit. *Brooches in Italics*: the dates are from material within deposits above or below that containing the brooch.

## 4.3 Associated dates and types

The following section explores the expected dates for each brooch type based on the H&H chronology and compares these to direct or associated dates. The direct and associated dates are derived from associated radiocarbon dates, ceramic phases and stratigraphic information. All calibrated radiocarbon dates are cited at 95% confidence (2 sigma), unless otherwise indicated, and were calibrated in January 2013 by CALIB Version 6.0 using the INTCAL09 Calibration curve (Stuiver et. al. 2011). The dates for all types are reviewed and displayed at the end of this chapter in Chart 4.1.

## 4.4 Hallstatt

A range of Hallstatt type brooches have been recorded in England, plus three examples from Scotland (H&H 17 no.7281; 27 no.7280; 37 no.7919) one from Wales (National Museum Wales 31.78/116) but not one has been excavated from a stratified Iron Age context. Only three brooches of definite Hallstatt type with a findspot record have been reported since 1995: a Group B from Wetwang (PAS: DUR-EE7BA7), a Group J from Malton (PAS: DUR-85A306) and a Group G from Spilsby, Lincolnshire reported to the British Museum in 2012. The few pre 1995 finds reported from known Iron Age sites still have no contextual data, such as the Group J brooch from Cold Kitchen Hill (H&H 43 no.3096) (not a single brooch from this site has any stratigraphic information) or the Group D brooch apparently found in ploughsoil on the Iron Age hillfort on Hod Hill (H&H 30 no.6455) in the nineteenth century. Where a findspot has been given for the Hallstatt brooches the sites have invariably yielded evidence from later periods, usually Roman. Hull and Hawkes (1987, 7-8) proposed that in the late nineteenth and early twentieth century antiques collectors were fascinated by Roman archaeology. In fact this can be seen in the early twentieth century practice at villa sites of only exposing the Roman structures and not examining the sites for earlier evidence. As seen at East Wear Bay where the walled structures of the Roman villa were excavated but the entire courtyard was left untouched and is now known to contain deeply stratified Iron Age evidence (Parfitt 2012). This fascination was reflected in the antiques market where many brooches were assigned to known Roman sites to increase their value regardless of their actual findspot.

Two Lx brooches have been found in dateable archaeological deposits: one a ditch around the Roman site of Sandy Lane, St Paul's Cray (H&H 63 no.2347); the other in an Anglo-Saxon Grubenhaus at Mucking (Haselgrove forthcoming) where it is thought to be residual from earlier activity on the site which dates to both the Roman and Iron Age periods. The only recently found brooch that could possibly be a Hallstatt Lx was recovered during metal detecting survey in the vicinity of the Ringlemere cup find: a Bronze Age object believed to be disturbed from a barrow by ploughing (Parfitt and Needham 2007, 55). This site is also famous for the rich Anglo-Saxon cemetery that was focussed around the barrow. The knobbed, upturned foot feature of this brooch is better paralleled in Mansfeld's *Fusszierfibel* F2 (Mansfeld 1973) of the Late Hallstatt period on the continent and the high arch of the bow has little comparison in Britain except with one or two Type 1A brooches. The Ringlemere is a hinged form. It is also the heaviest Lx brooch at 11g (compared to <5g). Although the general shape of the Ringlemere brooch correlates well with the other Lx brooches the presence of this hinge and the use of iron for the axial rod is more commonly associated with MIA brooches in Britain (Chapter 3). The contextual evidence is not available to confirm suspicions of its early date and the style of the brooch is not conclusively of any type.

It is certainly possible these relics were brought to Britain in the Roman period. It has been argued that Later Prehistoric finds do occur on Romano-British sites and in some instances were in fact curated and purposefully deposited in the Roman period (Eckardt 2004). A Romano-British findspot of a Hallstatt brooch from the continent can only confirm the presence of that form in Britain in the Roman period. Without more detailed contextual evidence we cannot know whether they are Roman imports of ancient items or earlier imports to Britain. The frequent association of Hallstatt style brooches with Roman sites may be down to four factors or a combination of all.

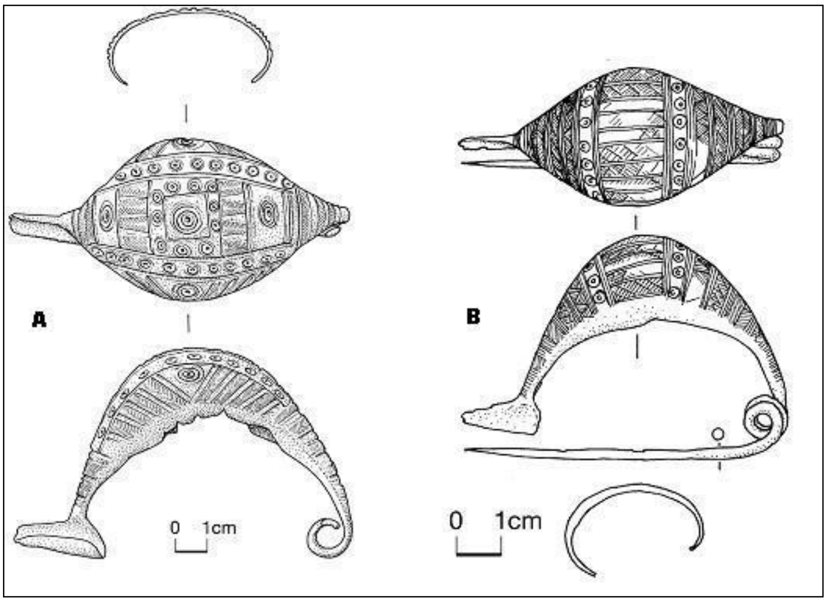
1. The date when these finds were collected. The majority are nineteenth century or early twentieth century finds passed on or sold to antiques collectors and dealers (H&H 1987, 7-8). At this time the value of such

objects was enhanced if it could be associated with a known Roman site. This could have led to artificial provenances being assigned to these objects.

2. Many Roman sites have been constructed over Iron Age sites which could lead to disturbance of earlier finds.
3. The best comparisons for these Hallstatt brooches are generally found in collections from Italy (Bietti Sestieri and Macnamara 2007). Many other Hallstatt types from across Europe do not appear in Britain. It may be that these objects were acquired in Italy in the days when a souvenir meant bringing home an actual artefact rather than a replica.
4. Lastly these continental artefacts could have arrived in Britain with the Romans. This certainly seems possible for those recovered from Roman sites such as the dainty Lx brooch found in a ditch at Sandy Lane, St Paul's Cray (H&H 63 no.2347).

It would be exciting to find one of the massive Hallstatt brooches such as the hollow boat-shaped bowed Group C in an Early Iron Age feature. This has not happened to date so we must remain sceptical about their date of import. The metallic composition (Chapter 5) and the overall construction also differ from any British Iron Age brooch finds (Chapter 3). Further support for their late introduction can be found in the lack of Hallstatt features in the EIA and MIA brooches in Britain such or unilateral springs, straight catchplates or large boat-shaped bows.

**Figure 4.1** Comparable Hallstatt brooches © Trustees of the British Museum.




**A**: Group C brooch from Box, Wiltshire (BM 1911,0401.1).
**B**. 'Hollow Leech' brooch found at Orvieto in Italy (BM 1901,0115.1).

# 4.5 Early Iron Age brooches

## 4.5.1 Type 1A

### 1A: Hull and Hawkes Proposed Dates

The dating of Hull and Hawkes' Type 1A brooches was devised through comparison with the continental chronology of comparable brooches from well stratified and intensively studied sites such as the Münsingen cemetery (Hodson 1968). They proposed the first 1A brooches appeared in Britain c.450BC (H&H, 72) with the type going out of use in the early fourth century BC, giving a use span from c.450-375BC.

### 1A: Associated deposition dates (Table 4.1)

- Cow Down, Longbridge Deverill, iron 1Ab [10432]: 790–390 cal BC (NPL-109), radiocarbon date of a charred hazel seed (*Corylus avellana*) found in the same layer in the same pit (Pit 37) (Brown 2012, 233-4, Table 6.2). Also 770–370 cal BC (95%), from a charred grain in the layer below in the same pit (HAR-253). This pit is reported to have cut through material associated with the destruction of House 2. That House was radiocarbon dated from charred oak within one of the main structural postholes and hazel in an internal posthole. They produced date ranges of 790–400 cal BC (95%) and 770–210 cal BC (95%)[5] which are roughly contemporary with those from Pit 37. The broad ranges obscure the sequential detail provided by the stratigraphic information although they do not contradict that evidence. This site is a potential candidate for further Bayesian analysis.
- Gussage All Saints, copper alloy 1A [10613]: 770–210 cal BC (Q-1203), charcoal found in the same secondary fill of a Phase 1 pit (Wainwright 1979, 186. Table XLVII).
- Moel Hiraddug, Clwyd, 1Aa copper alloy [10435] three radiocarbon dates for the site give the ranges: 760–370 cal BC, 760–230 cal BC and 720–190 cal BC (Houlder 1961).

[5] NPL-106, House 2 PH114: 2450±90BP and NPL-107 House 2 PH136 2370±95BP (Brown 2012, 234 Table 6.2).

- Crickley Hill, iron 1Ab [10425] and a copper alloy 1Aa mock spring [10426]. The main occupation at this site has been dated on the basis of the style of the material to between the seventh and fifth centuries BC. The latest radiocarbon dates for the site suggest the brooches precede 450-425BC (HAR 391, HAR 392, HAR 393, HAR 394) (Dixon 1994). [10425] was derived from a small midden deposit within the hillfort. The other [10426] was recovered from a subsoil layer overlying a Neolithic ditch within the fort's limits. Elsewhere this has been proposed as an intentional deposit within the top of the Neolithic long mound (Haselgrove 1997, 56) but the published contextual evidence locates it in a less secure context.
- Danebury, copper alloy 1Aa [10427]: The brooch was found in a pit underlying the earliest rampart. One must remain cautious that the presence of this type of brooch in the pit will have added to the conclusion that the rampart is an early structure at this point owing to the proposed date of the deposits it sealed. The ceramic phase (cp3) associated with the earliest occupation is now estimated to span the period 470–360 cal BC (Cunliffe 1984a 197; 2000, 163). The brooch could be contemporary with this earliest pottery or slightly earlier.

A handful of other 1A brooches have been found in stratified deposits but none can be dated more closely than to the Middle Iron Age. All the recorded 1A brooches are listed in Appendix 1.

### 1A: Revised date

The earliest possible brooch deposition on the basis of associated radiocarbon dating evidence is late eighth to early fourth century BC. If one takes all the radiocarbon dates associated with these six examples and examines where they all overlap the earliest date is narrowed to the mid fifth century BC. As unscientific as such a matching is it does provide us with a hypothesis that future research may build upon. However, the dates are not particularly precise and some of these brooches could have been deposited in the fourth or even third century BC. As yet the evidence is too limited to push the proposed start date back with confidence from c.450 BC, but a slightly earlier date would not be impossible. The date of c.450BC is supported by continental parallels of this so-called Marzabotto type (Haselgrove 1997, 53; Marion 2004, 122)They appear to go out of use by c.350 BC. Although sparse the above evidence also implies 1Aa and 1Ab brooches were contemporary, as mentioned in Chapter 3.

## 4.5.2 Type 1B

### 1B: Hull and Hawkes Proposed Dates

H&H make little mention of dates with regard to the 1B brooches, but they clearly perceived them as the next stage in their insular development from the 1A brooches. On the basis of the linear and dotted decoration of some 1Ba brooches they proposed a start date close to 400BC and certainly not much later (1987, 97). The 1Bc leaf-bow brooches are thought to be a British development of a continental style (1987, 107). All the 1B brooches have characteristics peculiar to insular forms, such as the mock springs, the limited decoration and the continued use of a reverted foot that returns parallel to the catchplate rather than angled up to the bow (see Marion 2004, 57, Figure 54; Müller 2000, 459, Figure 89). None of the proposed continental antecedents have been found in Britain with the exception of the 1Bd brooches. The 1Bd brooches are a small collection of late 19th and early 20th century brooch finds attributed to the Thames all with very suspicious provenances (H&H 1987, 95, 11 and John Cotton pers. comm. 2011). The closest 1Bd parallels can be found on the continent (Müller 2000, 459, Figure 89). If these are imports the question remains as to when they were imported: in the Iron Age or perhaps in modern times? None have yet been found in any Iron Age context suggesting the latter could be correct.

H&H estimated the 1B type to be fourth century products (H&H 1987, 107) with a possible third century use of the form in Ireland. However, the provenance of any possible Early or Middle Iron Age brooches in Ireland is so vague that such a proposal finds no support in the evidence at present.

### 1B: Associated deposition dates (Table 4.1)

Despite being the most frequent E-MIA type of brooch found in Britain (>200) only 37 have been recovered from stratified deposits (6 are 1Bc brooches and the remainder are 1Ba or 1Bb). Only one 1B brooch is recorded with associated radiocarbon dated material and two more are derived from sites with associated radiocarbon dates:

- The Bridles, Barnetby-le-Wold: iron, 1Ba [10645] in a burial: dated by the human bone to sometime between 520–230 cal BC (Beta-175049) (Bray et al. 2003, Appendix 6). Only a simple drawing from an x-ray is available for reference. The narrow head could potentially be a hinge rather than a spring, in which case the brooch could be of MIA type. We must rely on the illustrator to have drawn a correct record of the foot to confirm this as a 1Ba brooch rather than an attached Type 2 foot.
- Ashville, Oxfordshire: a copper alloy 1Bc [10627] in a pit. This brooch was found in a Period 1 pit with Iron Age Group B pottery cut by Period 2 circular ditch 73. The stratigraphic and ceramic evidence places it within the 6$^{th}$ to 3$^{rd}$ century BC (Parrington 1978, 39-40).
- Danebury, Hampshire: one unstratified copper alloy 1Ba [10873]: calibrated radiocarbon dates for the Iron Age pottery from this site place the brooch anywhere from c.470–50 cal BC (cp 3-7) (Cunliffe 1984a 190-198; Cunliffe and Poole 1991b, 163).

A number of 1B brooches have been found in stratified deposits that may only be dated on the basis of the site assemblages and stratigraphy (see 1 B brooches in Appendix 1). 26 are stratified finds from sites with other Middle Iron Age evidence. 18 are unstratified finds from possible Middle Iron Age sites and 8 were found at Late Iron Age to Roman period sites. The associated material could date from as early as the fourth century BC but in a few instances the presence of the brooch has led to the dating of the site or a specific phase of activity on the site.

### 1B: Revised date

Little may be gleaned from the radiocarbon dates. If we follow the method applied to the 1A brooches the dates all overlap in the fourth to third century BC but we could be looking at production as early as c.550BC or as late as 210BC or even later. This leaves us with only relative dates in terms of style and sites at which these brooches are found. The majority derive from Middle Iron Age sites but they are rarely found together in any quantity (the Batheaston hoard is a notable exception). Several 1B brooches have been recovered from Late Iron Age or Roman sites indicating possible curation or incredible longevity of this style (e.g. Cambria Farm, Somerset [10983], Chedworth Roman villa, Gloucestershire [10984], East Wear Bay, Folkestone [10119]) or perhaps hinting at earlier origins of these sites, as yet undetected in the stratigraphic evidence. At best one can propose the fourth century as a start date for the 1B brooches with the style continuing in popularity into the third century. The third century appears to mark the end of the first wave of Iron Age brooch deposition. No 1A or 1B types are directly associated with second century deposition dates.

## 4.6 Middle Iron Age brooches

### 4.6.1 Type 1C

#### 1C: Hull and Hawkes Proposed Dates

Hull and Hawkes felt that the angled foot was comparable to examples from the continent and wondered if these might be imports or copies thereof (H&H, 117). In contrast to their continental counterparts the 1C brooches have external chords and decoration tends to be limited to one part of the bow or foot. It would appear they are at best a distant copy of a loosely known form rather than a direct correlate as suggested by Jay et al. (2012, 164-7). As Hawkes noted: 'It remains to be asked whether the Continental lowered bow, made long and low-arched, with slanting foot, can be recognized in any dateable example imported into Britain.' (H&H 117). He felt the only possible candidate was the brooch found at Mill Hill, Deal [10003], probably derived from a grave but sadly no context was recorded. This brooch was assigned to late fourth to early third century BC so approximately 325-275BC (H&H 119).

### **1C: Associated deposition dates** (Table 4.1)

Only two possible examples have associated radiocarbon dates:

- **1Ca**: copper alloy and coral [10003], Mill Hill Deal. Other burials from the site have been radiocarbon dated to: 235–110 cal BC Grave 112 (OXA-17506); 260–40 cal BC Grave 31 (BM-2868); 200 cal BC–cal AD 90 Grave 20 (OXA-2967), 170 cal BC–cal AD 170 Grave 15 (OXA-2966); 110 cal BC–cal AD 230 Grave 44 (OXA-2968) (Parfitt 1995, 153, Table 46). In line with this evidence the brooch could have been deposited in the mid-to-late third century or later but an earlier date cannot be completely ruled out (Garrow et al. 2010, 87, 103).
- **1C/2A**: **iron** [10404] found in the 1960s excavation of the entrance way to the hillfort at Burrough Hill. Reanalysis of the site records suggest the brooch was located in the top of a large pit or in a layer immediately overlying this pit (Taylor at al. 2012, 64). The pit is now known to contain an inhumation at the base and was overlain by a chamber floor. Radiocarbon dates for the chamber hearths place this activity between 355–170 cal BC (ibid, 69, Table 1). The human remains were dated to 360–110 cal BC (SUERC-38810) and the animal bone to 390–205 cal BC (SUERC-38811). The overlying hearths ranged from 390–120 cal BC (SUERC-38814, SUERC-38818, SUERC-38819). Even after Bayesian analysis these dates add little clarity to the stratigraphic information or the brooch dating, they merely indicate the deposits were laid down sometime between 390 and 110 cal BC.
- **1C: iron** [10952] found in a pit at Tollgate, Cobham. Burnt residue on a pot in the pit was radiocarbon dated to 850-760 cal BC (NZA-22880: 2624±35) (Champion 2011, 166).This date contradicts the other evidence from the feature and the site so is thought to be an anomaly rather than a reflection of the brooch's period of use.

A number of other 1C brooches have been found in stratified deposits that have only been dated on the basis of the site assemblages and stratigraphy to the Middle Iron Age (Appendix 1).

### 1C: Revised date

The exact period of use could range from the fourth to second centuries BC. These forms are often associated with MIA types both stylistically and in deposition contexts. They tend not to be contextually associated with EIA forms. Therefore, a third century introduction and possible continuation into the second century BC seems feasible at present, placing them in the Middle Iron Age.

## 4.6.2 Type 2A

### 2A: Hull and Hawkes Proposed Dates

The transition from EIA to MIA is thought to occur around 300BC based on continental and British evidence (Chapter 1). This date does not represent a cessation in the production or use of EIA style objects but represents the time when features associated with MIA objects appear such as the attachment of the reverted foot on bow brooches. According to Hull and Hawkes, and supported by the horizontal stratigraphy of sites such as the Yorkshire Wold cemeteries, the 2A brooches are the earliest to employ the reverted attached foot (H&H 133-5). They, therefore, dated them to the early third century so c.295–270BC.

### 2A: Associated deposition dates (Table 4.1)

Two sites containing several 2A brooches have associated radiocarbon dates: Grandcourt Farm and Wetwang Slack.

- The date range c.350–5 cal BC for the six possible 2A brooches in the Grandcourt Farm assemblage [10647, 10648, 10663, 10671, 10672, 10738] represents the *terminus post quem* for their deposition (Beta-286311 and Beta-286310). This tells us only that the brooches may have been deposited in the MIA or later[6].
- At Wetwang Slack two brooches have been found in graves radiocarbon dated to 270–205 cal BC (OxA-14141) [10902] and 255–200 cal BC (OxA-14108) [10891].

[6] Two further dates for this site extend the possible date range up to cal AD 60: 2080±30 (Beta-316433) and 2020±30 (Beta-316434).

2Aa brooches have also been found in burials at the MIA cemeteries at Makeshift and Trevone. At the latter the possible 2Aa brooch [10633] was found in the same burial as a 2Ca brooch [10516] indicating at least contemporary deposition if not manufacture of the two types. Brooch [10633] may have been repaired during use (Chapter 8). Although only two 2A brooches are from burials sampled for radiocarbon analysis, 30 definite 2Ab brooches have been found in burials all in the MIA Yorkshire Wold cemeteries.

2Ab brooches have also been found in stratified deposits at sites dated by the artefact assemblages. For example: Croft Ambrey 2Ab [10553]; Battlesbury Bowl 2Ab [10162]; City Farm, Hanborough 1Cb or 2Ab [10520] and a possible 2Ab at Slonk Hill [10958]. At Croft Ambrey the brooch was deposited in an occupation layer within the hillfort quarry ditch dated to Phase VID of the hillfort occupation (Stanford 1974, 223). This phasing places its deposition within the early second to first century BC. The Slonk Hill brooch was found in a Phase 3 pit dated to the third to first century BC by the presence of saucepan pottery (Hartridge 1978, 74-80). The City Farm brooch was found in a pit in the West settlement dated by the ceramics to the late third to second century BC (Case et. al. 1966, 44-50). It is important in these instances to be cautious in applying these dates to the entire type when the dating of ceramics is closely tied to proposed dates for brooches (Chapter 1).

### 2A: Revised date

On the basis of the evidence we can be relatively confident they are a Middle Iron Age type. H&H may have been correct with an early third century date but it also seems possible that the style continued later in that century and possibly beyond. If this form was introduced in the third century BC then it is probable that an overlap period occurred in the production of 1C and 2A brooches. The low quantity of 1C brooches suggests only the fleeting popularity of a transitional type. Possible continental correlation has been used to place the 2A brooches slightly later than H&H suggested to c.275–250 BC at the cemetery at Wetwang, East Riding of Yorkshire (Jay et al. 2012, 164-7). Even if this was the main date of manufacture it is possible this type continued to be deposited during much of the MIA and possibly beyond.

### 4.6.3 Type 2B

#### 2B: Hull and Hawkes Proposed Dates

'Towards and in the third century' (H&H 143): a wonderfully ambiguous description of the date of this brooch type. This is unsurprising given the variety of forms grouped into this type. Stylistic connections may be identified with insular 1B, 1C, 2A, 2L and 2K brooches, as well as a decorated example on the continent such as the fibula from Münsingen grave 49 (Hodson 1995) which further complicates the dating. These probable insular forms may span a much longer period than might be expected for a single type. The presence of reverted feet separated from the bow could push some examples earlier and the feet cast as one with the bow may push others later. Although the latter is not a confirmed indication of late date. As Hopkinson has noted in Palaeolithic evidence the same technical advances may occur at different places at different times but only take-off as a phenomenon when the right conditions are present for these changes to be accepted by the many rather than the few (Hopkinson 2011).

#### 2B: Associated deposition dates (Table 4.1)

Three 2B brooches have been recovered from graves all radiocarbon dated:

- Makeshift Cemetery, Rudston: iron, 2Ba [10220] in Burial 178: *320–200 cal BC* (derived from the model applied in Jay et al. 2012). This is a pre-accelerator Harwell date and the calibrated range for the determination on its own is very broad: 730 cal BC–cal AD 210 (HAR-1130) (Jay et al. 2012, 161-89. Table 1.). This hinged brooch has the unattached foot of a 1B brooch but the thick bow, hinge and applied foot decoration push it into the 2Ba category.
- Mill Hill, Deal: bronze 2Bb [10002] found in the so-called 'Warrior Grave'. This is a moulded plate form with a curved underside providing the shallow arch of the bow. The upper surface is highly decorated with tendril like curvilinear designs and applied bulbs of coral. The burial is dated to 235–110 cal BC (OXA-17506) (Parfitt 1995, 153, Table 46). It does not fit within any of the subdivisions of the plate brooch so can only give an indication of the possible date of the 2Bb form. Following re-analysis of the radiocarbon dates Garrow et al. (2010, 87; 103) proposed two possible brackets: c.360–

280 BC or c.260-100 BC suggesting this burial could be third century BC but not ruling out an earlier date.

- Wetwang: bronze 2Bb1 [10572] with a thin plate decorated with strips of inlay (probably coral). Although the date-range for this burial is 370 cal BC to cal AD 50 (HAR-1665) this has been refined through the application of statistical modelling (Jay et al. 2012) to 260–200 cal BC

### 2B: Revised date

Three radiocarbon dates for such a varied group of brooches is of limited value. These decorated forms may appear as early as the fourth century but a general third century date seems more feasible. The 2Ba brooch [10220] would not be stylistically out of place as one of the earlier 2B brooches while the unique 2Bb [10002] could mark the end of this type in the second century BC. A couple of 1A and 1B brooches appear to be missing inlay but we have no confirmed evidence for what this inlaid material was. The results here indicate that brooches with coral decoration appear in the latter half of the third century BC and may continue into the second century BC. The lack of coral on Late Iron Age types indicates a cessation in its use on brooches at the end of the Middle Iron Age. The comparative form of pins from Ludford, Fairfield Park and Flag Fen (see Chapter 3) lend further support to an MIA date for the sparsely dated 2Bb2 and 2Bb3 brooches.

## 4.6.4 Type 2C

### 2C: Hull and Hawkes Proposed Dates

Following Jacobsthal's dating of La Tène art styles (Jacobsthal 1944) these brooches would coincide with a date of 275–250BC. H&H, however, thought this was a little early, instead placing them in a mid third to second century date and possibly even later. So we could be looking at a date of 250-150BC for this insular brooch form.

### 2C: Associated deposition dates (Table 4.1)

More 2C brooches are associated with radiocarbon dated evidence than any other brooch type.

- Ryton-on-Dunsmore, Warwickshire: iron 2Cb [10683] found in a pit with a charred seed dated to 360–110 cal BC.

For the following burials the results of the Bayesian modelling programme are listed here (Jay et al 2012), see Table 4.1 for full radiocarbon date range:

- Ferry Fryston, 'chariot burial': iron 2Cb [10009] 225–185 cal BC (e.g. NZA-20494)
- Makeshift cemetery, burial 143: iron 2Cb [10247] 230–170 cal BC (HAR-1129)
- Wetwang burial 59: iron 2Cb [10087] 235–185 cal BC (OxA-14075)
- Wetwang Village 'chariot burial'; iron 2Cb [10976] 215–185 cal BC (OxA-11993)
- The only other associated date for the type comes from East Anglia at Grandcourt Farm, Middleton in Norfolk. There the 2Ca and 2Cb brooches may have been deposited any time after 350 cal BC.

### 2C: Revised date

The dates derived from the Wetwang model place the involuted brooch in the mid third to early second century (235–170 cal BC). These dates are consistent with a proposed sequence of 2C from 2A brooches of possible early third century date with some overlap of the two styles within the mid third century. Unfortunately the detailed data that enabled the production and application of the Wetwang model are missing from other sites yielding 2C brooches so we can at best propose their use in the third and second centuries in England but accept the possibility for some earlier versions as well as continued deposition in some areas. We can be more confident with an end date as the involuted shape is not carried on in any known Late Iron Age brooch styles nor any early Roman types. They seem to go out of fashion before the late second century BC in burials in the Yorkshire Wolds. Perhaps the deposition at Grandcourt is towards the earlier possible date but it is impossible to be certain from the contextual evidence.

## 4.7 Undated types: Possibly Middle Iron Age

### 4.7.1 Type 2L

#### Type 2L: Hull and Hawkes Proposed Dates

H&H suggested a possible fifth century BC date for their Group L brooches on the basis of a perceived connection with the late Hallstatt French types but some connection to the continental La Tène types. They did not fully explore the dating of the group, instead focussing on the Lx owing to their closer similarities to the continental brooches.

#### Type 2L: Associated deposition dates

Only one 2L brooch is derived from a deposit that has been dated by any other means. It is of great interest that the majority are stray finds many recovered in recent years through metal detecting activity. None are known from burials nor pits, postholes or floors. They have not been found in ramparts or occupation layers.

- Unfortunately the only example is a fragmentary brooch that was probably of 2L type, Holloway Lane, Hillingdon [10294]. This was found in a droveway ditch 'above the lowest fill' (Cotton et al. 1986, 53). The ditch appears to have been in use for a number of centuries after it was first dug in the Bronze Age. It was located in a landscape of scattered farmsteads linked by such droveways. The brooch seems to have been within the Iron Age deposits that gradually filled this feature. Unfortunately no further dating evidence is available.

#### Type 2L: Proposed date

It may be that some 2L brooches should be more closely aligned with the 2B brooches in terms of the typological attributes (Chapter 3). H&H proposed that the similarity of 2L and 2B brooches was a result of the latter being a development of the former. Yet none exhibit solely Hallstatt characteristics and the resemblance of the other features to MIA rather than EIA brooches suggests they are more likely to be contemporary with these later types. They are also quite incongruous in comparison to the large and sinuous 1A brooches. I therefore propose an early third century origin to overlap with the close of the EIA styles and the development of MIA characteristics; and remain hopeful that other dating evidence will become available in the future to develop or contradict this argument.

### 4.7.2 Type 2K

None of the six possible 2K brooches are from dated contexts. Three were found in Iron Age style cist burials at Harlyn Bay, Cornwall, in fact two were in the same burial. The other two from Mount Batten are proposed cemetery finds contemporary with the MIA settlement on this promontory but the exact context of these finds is unknown (Clarke 1971, Cunliffe 1988). The site revealed evidence from the Late Bronze Age to the Roman period although not necessarily continuous and none of the ceramics were associated with any of the metalwork finds (Cunliffe 1988, 100-2). The cist style burials appear to be more closely associated with Middle Iron Age activity than any other period in this area (Whimster 1981). The only possible Early Iron Age type brooches found in burials in Britain are some variants of the form found in the Yorkshire Wold burials which appear on the basis of radiocarbon modelling to be from Middle Iron Age cemeteries.

### 4.7.3 Type 2D

All three Type 2D brooches were found at Iron Age sites. The two from the Yorkshire Wolds [10897, 10928] were dated by their presence at MIA sites: the former [10897] in a grave at Wetwang; the latter from a pit in a roundhouse at a settlement on the north side of this cemetery. The pit also contained two ring-headed pins which were thought to support a MIA date (H&H 168). The other example from Maiden Castle [10940] was found in a fourth century AD deposit within a circular structure possibly associated with the Roman temple (Wheeler 1943, 262; H&H 168). The design of this example is different to the Yorkshire versions with neatly scrolled terminals and a thinner, straighter pin than the curved, twisted pins of the others. As aforementioned the type has some similarities to the penannular and dragonesque brooches, the Maiden Castle examples especially. This could push [10940] towards a Late Iron Age date but this would still make it an old item in a fourth century AD deposit. Perhaps the stylistic connections between the Yorkshire Wold type 2D and the Dorset version can be found in their structural similarity to penannular brooches rather than their similarities to each other. At present no further examples or dating evidence is available so we can only suggest a possible date in the MIA for [10897 and 10928] and a LIA date for [10940].

### 4.7.4 Type 2E

The few examples of 2E brooches recorded by H&H were grouped into a range of categories including Type 4 and Group G. None are from stratified deposits but all were found on sites with several other MIA brooches. At present we may only estimate an MIA date owing to their findspot and features some stylistic affinities with other MIA brooches such as the straight bowed 2Ab.

## 4.8 Late Iron Age

A small selection of brooches have on occasion been classed as Middle Iron Age Types either because they are reported in the same H&H volume as other brooches of the period or because they are thought to reflect continental types from the period. The following examination shows these all to be Late Iron Age or Roman Types.

### 4.8.1 Type 3A

#### 3A: Hull and Hawkes Proposed Dates

An ambiguous category perhaps postdating the 2C brooches and predating the 3B brooches: late second century BC.

### 3A: Associated deposition dates (Table 4.1)

Two radiocarbon dates from Wetwang of a possible 3A brooch and one from the Makeshift cemetery (OxA-14140 and OxA-14206) place this form somewhere between 210 cal BC and cal AD 55. This is perhaps consistent with a grouping of only three individual brooches each incorporating different elements of Middle or Late Iron Age stylistic features.

### 3A: Revised date

These are individual brooches that do not conform to the main style groups. Some are contemporary perhaps with later second century BC brooches others with first century BC brooches.

## 4.8.2 Type 3B

### 3B: Hull and Hawkes Proposed Dates

These bronze brooches exhibiting some similarities with continental brooches were thought to appear close to the end of the second century BC (H&H 173).

### 3B: Associated deposition dates (Table 4.1)

Only one radiocarbon date is associated with a 3B brooch. This dates a deposit at Glastonbury Lake Village below that in which the brooch [10577] was found giving only a *terminus post quem* for the brooch deposition: 770–410 cal BC (OxA-4747). The Glastonbury Lake Village radiocarbon dates are a conundrum being wholly at odds with the expected dating on the basis of the style of artefacts from the site and the stratigraphic sequence. Both of which would place these deposits in a Late Iron Age context. Considering the myriad problems in the application of radiocarbon dating to Iron Age sites as well as issues relating to the collection and processing of the samples it seems pertinent not to rely on the dates for this site at present.

### 3B: Revised date

The only associated date might indicate these are a MIA type but form wise they are closer to Late Iron Age than earlier styles. Combined with the stratigraphic evidence this could suggest a first century BC date. They do not compare well with the wire-like brooches of the LIA or La Tène C–D transition in France suggesting they are a continuation of insular traditions rather than a sign of reinvigoration of continental contacts (Edgar 2012, 45-48; Feugère 1985; Stead et al. 2006).

## 4.8.3 Type 3C

### 3C: Hull and Hawkes Proposed Dates

Hull and Hawkes found no evidence for the use of 3C brooches before the first century AD. They felt these to have influenced the design of Colchester brooches in Britain. This could place them late in that century (H&H 179). In 1987 they appeared to have a southeastern distribution bias.

### 3C: Associated deposition dates

All have been found on Roman sites, some of which have Iron Age origins, such as Hod Hill (Brailsford 1962). None are from confirmed Iron Age contexts.

### 3C: Revised date

These brooches do not appear to be an Iron Age type and are best located within the early Roman period in Britain. Close comparisons can be found in the latest Middle La Tène *filiform* brooches in France (Marion 2004, 60 Fig.55) but there is no evidence to support such an early date for the examples from Britain.

## 4.8.4 Type 4

### 4: Hull and Hawkes Proposed Dates

The rare Type 4 brooches were assigned to the first century BC by H&H.

### 4: Associated deposition dates

No direct dates are available for the two Type 4 brooches. They have only been found at Glastonbury Lake Village where the direct dating is problematic (Coles and Minnitt 1995, 174-8). In light of the other data from the site we can at best place these in a late second or first century BC context until further data are available.

### 4: Revised date

These are probably a post c.150 BC local type only produced or used at the lake village. The wide bow below the coiled wire has close affinities with Late Iron Age brooches, such as Nauheim derivatives although these later styles have a more simplified design. The possibility that specific styles of brooch were made at the village is feasible considering the evidence for ferrous and non-ferrous metalworking at the site (Coles and Minnitt 1995, 138-143)

## 4.8.5 Type 6

### 6: Hull and Hawkes Proposed Dates

According to H&H these brooches occur in the latter half of the first century BC (H&H 193-4).

### 6: Associated deposition dates (Table 4.1)

The only radiocarbon dates for a Type 6 brooch are indirectly associated dates for brooch [10965] from Glastonbury Lake Village: 776–410 cal BC (OxA-4749) and 390–120 cal BC (OxA-4746). Although the later date range is plausible for the evidence from the lake village, they do not correspond with the stratigraphic sequence (Coles and Minnitt 1995, 174-8) so they cannot inform our understanding of the position of Type 6 brooches in the Iron Age chronology.

### 6: Revised date

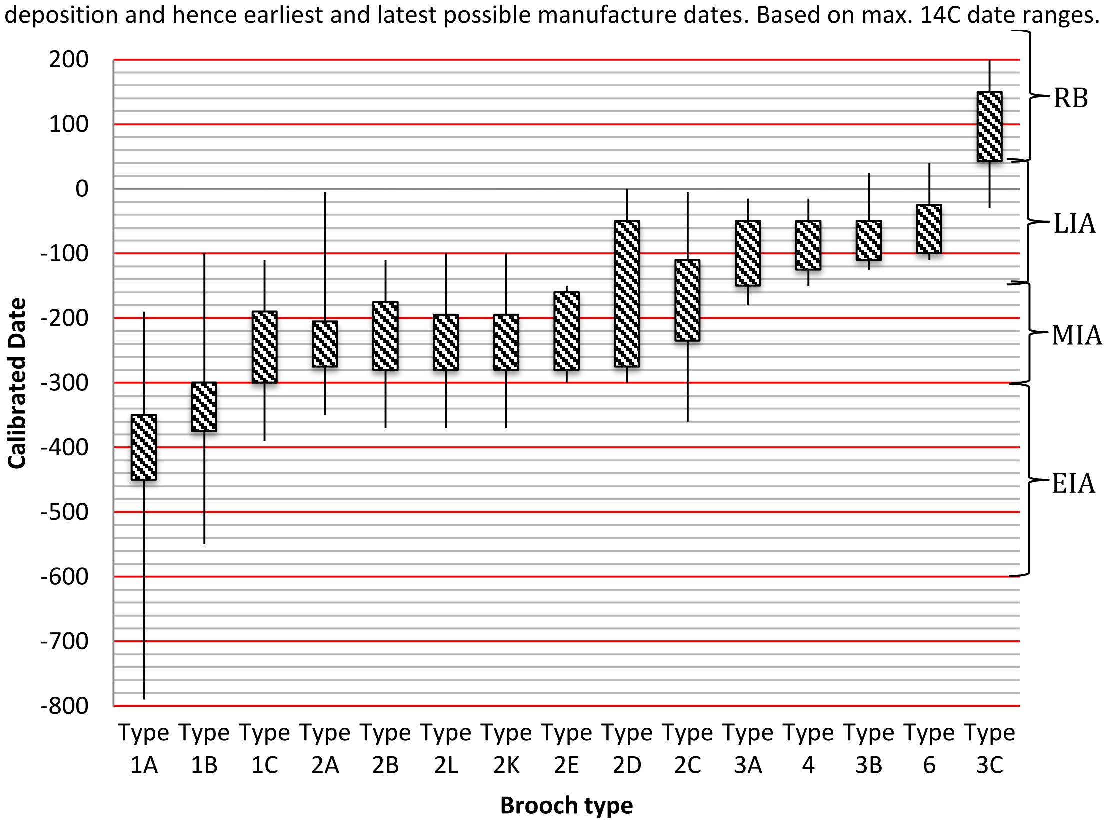
This type could be an insular variation of continental Middle Iron Age forms perhaps appearing at the end of that period or in the Late Iron Age either contemporary with or shortly after the 3B brooch design appears? Or they are a type peculiar to Britain contemporary with these more delicate wire forms from the continent. While these are all interesting and important questions they pertain to a brooch type that is most likely of first century BC date and therefore beyond the scope of this thesis.

# 4.9 Dating Conclusion

## 4.9.1 The Early to Middle Iron Age Brooch Types in Britain

Although direct dating evidence is limited for individual types, from the accumulated data it has been possible to refine the dating of the H&H types and propose manufacture dates for newly defined types. Chart 4.1 illustrates the probable manufacture period and compares this with the maximum deposition period. The latter shows that some brooches may have been made earlier and/or later than the proposed manufacture period. In light of these results I propose that the earliest brooches to appear in Britain were the high arched and large coiled 1A brooches. These were an EIA style following continental antecedents but many were probably produced locally from or early in the fifth century BC. These were soon replaced by the typically smaller 1B brooches which become popular in much of England from the fourth to third century BC. The 1B style may have been known in the Roman period when some examples were disturbed by Roman occupation of earlier sites (Chapter 7).

**Chart 4.1** Revised dating and chronological order of brooch types.
The thick bars represent the most probable manufacture period, the thin bars the maximum period of deposition and hence earliest and latest possible manufacture dates. Based on max. 14C date ranges.



In the third to second centuries BC there was a flurry of insular brooch production with styles appearing with no continental parallels, such as the 2C involuted forms. The sloped-arched and straight bowed 1C and 2A brooches appear to be the earliest MIA forms occurring in tandem. However, the deposition is broadly contemporary with 2B and 2C brooches. On the basis of site associations, structural and stylistic features the undated but insular 2L, 2K and 2E brooches appear to sit within the MIA. The 2D brooches have been more difficult to place and possibly represent a MIA form in East Yorkshire but are a later type in Dorset. Changes in manufacturing techniques and increased deposition of brooches are precursors to the explosion in numbers and styles in the first century BC: JD Hill's 'fibula event' (Hill 1995a, 1995b).

The remaining types discussed above: 3A-C, 4 and 6 all appear to belong to the Late Iron Age and beyond. They may not be the forms typically described as Late Iron Age brooches, perhaps because their low number is inconsistent with the expected quantity of each Late Iron Age types. The localised distribution of all but the 3C brooches hints at a period of increased localised manufacture. These data emphasises the need to reconsider the objects of these earlier and perhaps localised stages of the Late Iron Age period: a task beyond the scope of this current thesis. These later types will therefore be excluded from the remainder of this study. With this revised chronology in mind subsequent chapters will now examine how the Early and Middle Iron Age brooches were manufactured, where they have been found and what this might tell us about the use of brooches at this time.

# Chapter 5 Raw Materials to Finished Pieces

This chapter examines the materials brooches were made from, the sources of these materials and how the brooches were made. The evidence is supported by scientific research carried out for this thesis at the British Museum to explore the metallic content of the copper alloy brooches and the materials used for decoration. Information about the production process from ore collection to designing moulds extends this research beyond the typological and chronological analysis of earlier chapters to explore technology and bring to light the people involved in making brooches.

## 5.1 Materials

The earliest brooches in Britain were produced from copper alloy. Iron examples remain relatively rare until the third century BC. Some copper alloy brooches had iron elements and some iron brooches had bronze parts. The copper alloys employed are all tin bronze, typically containing around 90% copper and 10% tin with other elements present only in traces. This composition has been shown by previous research (Northover 1984 and Dungworth 1996, 1997) and new metals analysis undertaken for this research (below). No leaded bronze, nor brass, nor gunmetal brooches are known from this period, the first brass brooches appearing in the Late Iron Age in Britain e.g. at Hayling Island (Bayley 1998; Bayley and Butcher 2004). No silver or gold brooches have a known British provenance[7]. Other materials were incorporated into the design as inlays. Past research (e.g. Henderson and Freestone 1991) and new analysis using Raman Spectroscopy reveals the inlays to range from whitish coral to red glass to brownish red stone. The applied material was either attached with the aid of small copper alloy rivets or set as inlay on the brooch foot or bow. Examination of the inlaid material on chariot fittings has revealed that birch bark resin (Stacey 2004) was applied as a glue to secure the inlays.

[7] Including the silver and amber brooch at the Museum of London [10401]. The closest parallels for that example can be found at Herzegovina, Bosnia (Hull and Hawkes 1987, 53).

### 5.1.1 Composition of Copper Alloys

69% of all the known early to middle La Tène brooches in Britain are copper alloy. Research into the alloys using energy dispersive X-ray fluorescence (EDXRF) or inductively coupled plasma atomic emission spectrometry (ICP-AES) has previously shown those examples to be bronze (Dungworth 1996, 1997 and Northover 1984). Such research has incorporated brooches into wider studies of metal objects to ascertain either the composition of alloys on a particular site such as Danebury (Northover 1984) or in a particular region, such as Dungworth's analysis of northern British bronzes (Dungworth 1997). Chronological implications have been considered but none of the research has focussed on brooches alone. It was, therefore, decided to analyse a selection of the brooches at the British Museum to identify any similarities or differences in the composition of the alloys and query these from a regional and chronological basis.

Consideration was given to the application of different scientific methods for the analysis of the metals including inductively coupled plasma atomic emission spectrometry (ICP-AES) and energy dispersive X-Ray fluorescence spectrometry (EDXRF). The former has been successfully applied to a selection of Early Iron Age brooches from Italy within the British Museum's Department of Greece and Rome (Hook 2007). Unfortunately the technique is destructive, costly and time consuming. EDXRF on the other hand requires fewer resources and was more readily available at the British Museum. It is also possible to achieve quantitative results from EDXRF from very small polished areas of the object (1-2mm in diameter) so avoiding the destructive sampling process for ICP-AES that leaves a drilled hole in the artefact. EDXRF has been identified as a viable method for analysis of brooch metals in research by Justine Bayley and Sarnia Butcher on Roman brooches (Bayley and Butcher 2004). They used EDXRF to analyse the metal content of 3000 Roman brooches found at a number of Roman sites in Britain including Richborough. Their results identified the range of copper alloys employed and their correlation with certain brooch types.

David Dungworth carried out similar experiments on drilled and polished samples of copper alloy objects from the Iron Age in northern Britain (Dungworth 1996, 1997). His results indicated a strong preference for tin as the main secondary component of copper alloys in this period in northern Britain (Dungworth 1996, 401-404). Unlike Roman brooches Iron Age copper alloy brooches rarely contained zinc and those that did were Late Iron Age types (ibid, 403). This presents a more pessimistic forecast for the potential in using EDXRF to study variations between periods within the Iron Age. However, Dungworth was focussing on only one region of Britain. Comparison with evidence from other regions is therefore needed. The apparent increase of zinc in later brooches suggests the potential for at least separating Early and Middle Iron Age brooches from the later examples based on the metal composition.

### 5.1.2 Analysis of Copper Alloys

In February 2011, 21 brooches from the British Museum collection were selected for analysis via Energy Dispersive X-Ray fluorescence spectrometry (EDXRF). 13 were EIA and MIA types. Six Hallstatt brooches of proposed British provenance and two Type 3C brooches were analysed for comparison (Figure 5.2). The brooches were chosen as a representative sample of the range within the museum's collection of British finds. 16 produced fully quantitative results. Five produced only semi-quantitative results because the surface corrosion was too deep. Their results were uninformative so have been excluded from the analysis here but are listed in Appendix 4 for reference. The process was carried out by Duncan Hook in the department of Science and Conservation at the British Museum.

An area of 1-2mm diameter was polished on a discrete location on each of the ten suitable brooches (Figure 5.1). Using a Bruker ARTAX XRF Spectrometer each polished area was bombarded with X-rays and the fluorescence recorded and calibrated against a control sample of copper alloy (Appendix 4). The metals were analysed for the presence of the following elements: Copper (Cu), Tin (Sn), Iron (Fe), Lead (Pb), Zinc (Zn), Arsenic (As), Nickel (Ni), Silver (Ag), Antimony (Sb), and Cobalt (Co). The results were also compared with the analysis of seven EIA-MIA brooches by David Dungworth (1996, 1997) including types not available for analysis at the British Museum. The results are presented in Table 5.1.

**Figure 5.1** The target area prepared for EDXRF of brooch [10447] and positioning brooch under the ArTAX XRF Spectrometer.


**Figure 5.2** Brooches analysed by EDXRF (see Table 5.1)

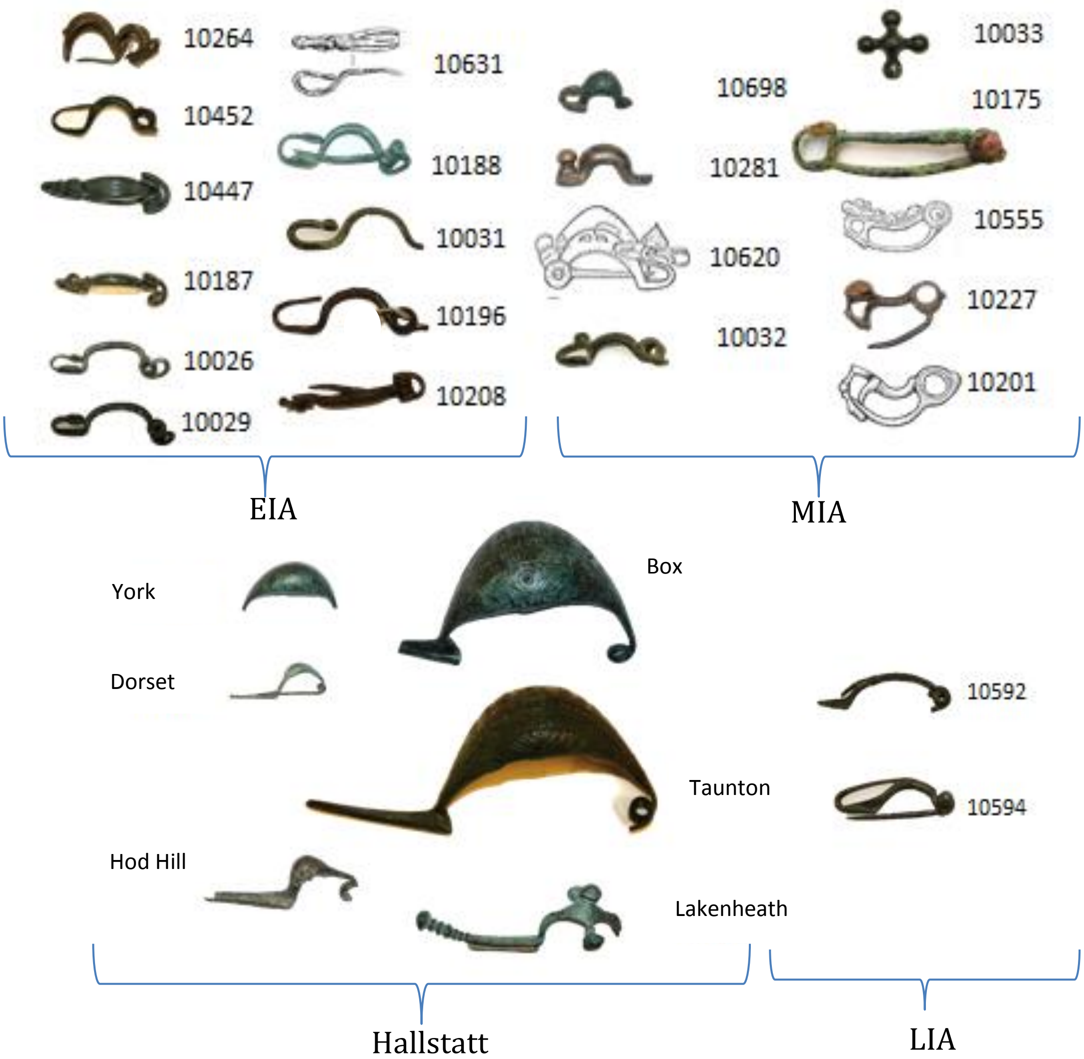


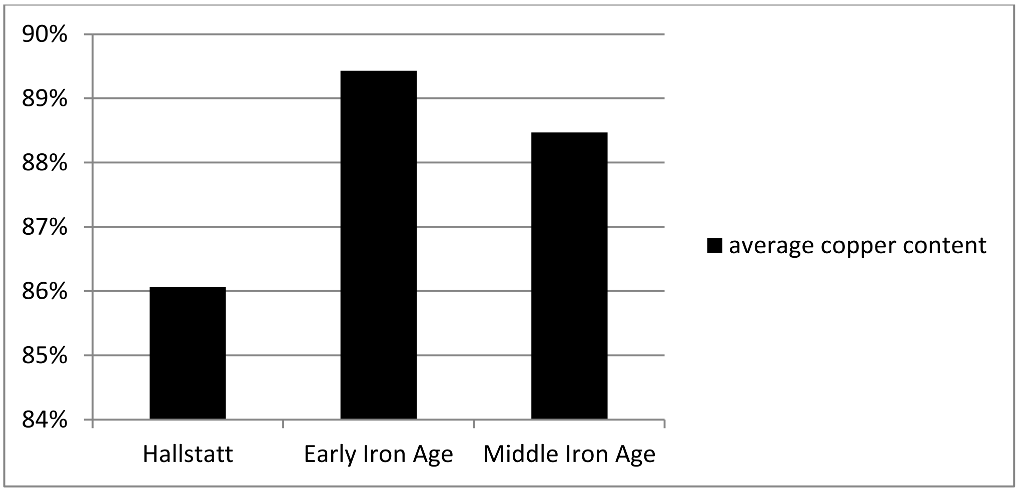
**Table 5.1** Results from EDXRF analysis at the British Museum combined with Dungworth's results (1996) (**in bold**). The brooches are illustrated in Figure 5.2 (EIA= Early Iron Age; MIA = Middle Iron Age; RB = Romano-British)

| SAA Db | Findspot | Period | Type | Cu | Sn | Zn | Fe | Pb | As | Ni | Co | Sb | Ag | Mn | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | York (BM 1919,1213.1) | Hallstatt | Group B | 84.17 | 11.67 | <0.2 | 0.14 | 1.98 | 0.78 | 0.14 | str? | 0.88 | 0.20 | - | |
| | Dorset? (BM 1944,0702.8) | Hallstatt | Group C | 86.57 | 11.05 | <0.2 | 0.14 | 1.53 | 0.34 | 0.15 | <0.1 | str | str | - | |
| | Taunton, Somerset (BM 1916,1014.1) | Hallstatt | Group C | 80.23 | 13.10 | <0.2 | 0.24 | 4.28 | 1.11 | 0.15 | <0.1 | 0.55 | 0.14 | - | |
| | Hod Hill, Dorset (BM 1892,0901.909) | Hallstatt | Group D | 90.69 | 7.72 | <0.2 | 0.18 | 0.86 | 0.20 | str | <0.1 | <0.2 | str | - | |
| | Lakenheath, Suffolk (BM 1854,1107.13) | Hallstatt | Group F | 88.66 | 8.28 | <0.2 | 0.11 | 1.04 | 1.46 | str | <0.1 | 0.28 | 0.10 | - | |
| **10264** | Thames, London | EIA | 1A | 88.28 | 9.79 | <0.2 | 0.36 | 1.15 | 0.16 | 0.10 | <0.1 | str | str | - | |
| **10026** | Batheaston, Avon | EIA | 1Ba | 95.51 | 3.75 | <0.2 | 0.11 | 0.31 | 0.13 | str | <0.1 | <0.2 | <0.1 | - | |
| **10029** | Batheaston, Avon | EIA | 1Ba | 89.90 | 9.46 | <0.2 | 0.08 | 0.36 | 0.17 | str | <0.1 | <0.2 | str | - | |
| **10447** | Blandford, Dorset | EIA | 1Ba | 90.40 | 8.91 | <0.2 | <0.1 | 0.46 | 0.08 | <0.1 | <0.1 | <0.2 | <0.1 | - | |
| **10187** | Avebury Downs, Wiltshire | EIA | 1Bb | 88.30 | 10.67 | <0.2 | 0.20 | 0.59 | 0.14 | <0.1 | <0.1 | <0.2 | <0.1 | - | |
| **10631** | **Dragonby DR73 AC [1175], Lincolnshire** | EIA | **1Bc** | **84.16** | **14.68** | **0.24** | **0.06** | **nd** | **0.83** | **nd** | **0.03** | | | **0.02** | **Dungworth results (1996)** |
| **10188** | **Burton Fleming BF61, Yorkshire** | EIA | **1BaV** | **88.02** | **10.97** | **nd** | **0.06** | **0.23** | **0.10** | **nd** | **nd** | **-** | **-** | **nd** | **Dungworth results (1996)** |
| **10196** | Thames, London | EIA | 1BbV | 87.81 | 10.51 | <0.2 | 1.00 | 0.27 | 0.25 | str | <0.1 | < 0.03 | str | - | |
| **10032** | Batheaston, Avon | EIA/MIA | 1Ba or 2Bb | 89.51 | 8.23 | <0.2 | 0.10 | 1.76 | 0.20 | str | <0.1 | <0.2 | str | - | |
| **10208** | Thames at Barnes, London | MIA | 1Cb | 88.52 | 9.62 | <0.2 | 0.15 | 1.30 | 0.17 | str | <0.1 | <0.2 | str | - | |
| **10175** | **Burton Fleming BF10, Yorkshire** | MIA | **2Ab** | **87.60** | **11.81** | **nd** | **0.09** | **nd** | **0.21** | **nd** | **nd** | **-** | **-** | **0.01** | **Dungworth results (1996)** |
| **10033** | Batheaston, Avon | MIA | 2Bb2 | 90.18 | 8.91 | <0.2 | 0.12 | 0.49 | 0.22 | <0.1 | <0.1 | <0.2 | <0.1 | - | |
| **10281** | Thames at Hammersmith, London | MIA | 2L | 88.54 | 9.42 | <0.2 | 0.19 | 1.67 | 0.10 | <0.1 | str? | <0.2 | str | - | |
| **10620** | **Queen's barrow, Yorkshire** | MIA | **2Ba** | **87.27** | **10.44** | **nd** | **0.84** | **1.34** | **0.11** | **nd** | **nd** | **-** | **-** | **nd** | **Dungworth results (1996)** |
| **10201** | **Danes Graves 48, Yorkshire** | MIA | **2Ca** | **89.66** | **9.66** | **0.10** | **0.10** | **0.20** | **0.23** | **0.06** | **0.03** | **-** | **-** | **nd** | **Dungworth results (1996)** |
| **10227** | **Rudston R32, Yorkshire** | MIA | **2Ca** | **88.86** | **10.43** | **nd** | **0.15** | **nd** | **nd** | **nd** | **nd** | **-** | **-** | **nd** | **Dungworth results (1996)** |
| **10555** | **Danes Graves 57, Yorkshire** | MIA | **2Ca** | **88.11** | **11.49** | **nd** | **0.17** | **nd** | **0.22** | **nd** | **nd** | **-** | **-** | **nd** | **Dungworth results (1996)** |
| **10594** | Medway Marshes, Kent | RB | 3C | 87.89 | 10.30 | <0.2 | 0.11 | 1.07 | 0.25 | 0.11 | str | str | str | - | |

### 5.1.3 Bronze

All the brooches are tin bronze (**Table 5.1**). The quantity of copper present ranges from 63.9% to 95.5%. Three brooches are peculiar variants on the Early and Middle Iron Age types [10188, 10196, 10032]. The difficulty in placing them into one period or another means it is necessary to discuss these as individual items and not include them in the averages for each period.

**Chart 5.1** Average copper content of the brooches analysed by EDXRF.




The average copper content of the brooches by period:

- **Hallstatt** = **86.06%**, standard deviation = **4.06%.**
- **Early Iron Age** = **89.43%** standard deviation = **3.70%.**
    - The lowest copper content of a La Tène I brooch is found in the Dragonby brooch [10631] at 84.16%, the composition is altogether at odds with the rest of the sample. If this is excluded the average becomes **90.48%** with a standard deviation of **2.97%.**
- **Middle Iron Age** = **88.47%**, standard deviation = **0.99%.**

The tin content varies in synchronisation with the copper content. The Hallstatt brooches have a higher average tin content (10.36%) than the EIA brooches which have a slightly lower average tin content (9.54%) than the MIA types (10.28%). The average tin contents are more consistent across the three periods than the copper content. The ratio of copper to tin varies as follows:

**Copper: tin**

- **Hallstatt** is **6:1** to **12:1**
- **EIA** is **6:1** to **10:1**
- **MIA** is **7:1** to **10:1**

These figures show that Hallstatt brooches have a lower copper content than EIA brooches, which have a slightly higher copper content than MIA types. The Hallstatt brooches exhibit the greatest variation in copper content. There is a considerable change in the variation of the copper content between EIA and MIA with exceptional homogeneity in the later period. The difference between the Hallstatt brooches and the Early to Middle Iron Age types lends support to the theory that they are not the products of the same locations as the later brooches. This variation is further illustrated in the trace element composition (see Table 5.1). Both the EIA and MIA groups include finds from northeast, southeast and southwest England so the consistency in the MIA results cannot be down to a regional bias. Perhaps we are seeing evidence here for greater consistency in brooch production methods in the later period or even wider distribution of regional products. There is the possibility that the results from the two different studies are not directly compatible, certainly more of the MIA results were derived from Dungworth's research but even without these results, and therefore with a reduced sample, there is still greater variation in the composition of the EIA and the MIA types.

### 5.1.4 Trace Elements

The trace elements within each alloy have been proposed as evidence of differing alloy sources but as Dungworth (1997, 46-7) has suggested their reliability for identifying a particular ore source can be questioned. The trace element composition is affected not only by the ore source and the possible combination of ores from different sources and recycled material but also the different stages in the production process (Northover 1988, 1991a, 1991b; Dungworth 1997, 46-7). Volatile elements present in the ores may be lost through the roasting process; the variables in the smelting process from temperature to the addition of fluxes will affect the trace elements as will any post smelting refining of the metal (Hook 2007, 309). Zinc, antimony, silver, arsenic, iron, cadmium and mercury may all be present in the copper ore and may be retained through the smelting process, especially zinc, silver, arsenic and antimony (Ixer and Pattrick 2003, 9).

## Hallstatt Brooches

As previously noted Hallstatt brooches in Britain lack any direct contextual information. The EDXRF results show they have a different metallic composition from the EIA and MIA brooches both in the quantity of copper and tin and in trace elements. In his examination of Italian Bronze Age objects Hook identified groups of similar trace element levels that reflected geographical distributions of the findspots (Hook 2007, 312). This could indicate regional manufacturing differences which produced similar trace element signatures. The differences between the Hallstatt and EIA and MIA brooches could be indicative of a different manufacturing location or differences in manufacturing technique. The latter could be the result of the former. Although not conclusive this evidence lends support to the theory that the Hallstatt brooches were not manufactured in Britain. It does not prove when the Hallstatt style brooches first appeared but it implies that the manufacture of Early Iron Age brooches in Britain did not follow the same techniques as the manufacture of the Italian style Hallstatt brooches.

The following discussion of the trace elements will focus on the EIA and MIA brooches to explore the possibility of insular manufacture and regional variation.

**Zinc**

To be classified as brass the alloy needs to contain at least 2% zinc (Bayley and Butcher 2004, 12-16). The evidence here confirms that no brass brooches of pre Late Iron Age type are known. Less than 0.2% traces of zinc were present in the brooches analysed with one exception: [10631] a Type 1Bc brooch from Dragonby (0.24% Zn). Zinc can be present in tetrahedrite group copper ores and may be carried over into the metal smelted from these ores (Ixer and Pattrick 2003, 9). Its presence here in minimal traces is unsurprising considering tetrahedrites are one of the two main groups of copper sulphosalts incorporating ores in Britain and Europe. No visible pattern was identified in the quantities of zinc in relation to copper or tin. This would support the theory that the zinc here was not intentionally added to the alloys so we can confirm the absence of brass (alloys composed of copper and zinc) or gunmetal (alloys composed of copper, tin and zinc) in the alloys of Early and Middle Iron Age brooches.

**Iron**

Iron is a minimal trace element throughout the samples studied here with the majority containing <0.20% (Table 3.1). Previous research identified an increase in the quantity of iron present as an impurity in later Iron Age and Roman alloys in comparison to Bronze Age copper alloys (Craddock 1986 & Dungworth 1996, 410). Both suggested this may have been caused by a technological change in Britain at c.500 BC from a largely slag-free smelting method to a tap-slagging method. The highest average iron content is found in the MIA brooches 0.22% while EIA brooches average at 0.12%. This would imply that increased quantity of iron as an impurity is occurring in the third century BC. This is at the same time as iron brooches are increasing in frequency.

Two brooches contained considerably more iron than the rest: the variant 1Bb brooch [10196] (1%) from the Thames and the bow of the 2Ba brooch [10620] from Queen's Barrow, Arras, East Riding of Yorkshire (0.84% Iron). The former has been argued as an import (after H&H 1987, 101). It is distinctive amongst a British assemblage with a segmented body and foot feature closely related to the 1Bd group: the so-called 'Dux' types (Chapter 3). If this brooch was manufactured outside Britain we might be able to suggest a variation in the quantity of iron present in imported as opposed to insular manufactured brooches. The sample is too small and the quantities of iron too low for this to be a secure conclusion. As for brooch [10620] the form seems peculiar to Britain. Although the drilled sample taken from this brooch should have avoided surface corrosion, it might be possible that the results were affected by the intricate nature of the brooch with its inlays creating deep corrosion deposits.

**Lead**

Lead is present in variable quantities throughout the period under study here. The EIA brooches have a lower average lead content (0.57) than the MIA types (1.08%). To be classified as a leaded bronze the alloy needs to contain a minimum of 5% lead (Bayley and Butcher 2004, 12-16). None of the alloys analysed here reached this percentage (Table 5.1). The majority contained less than 2% lead. Dungworth suggested that moderate levels of lead (1% or more) are more likely to be found in cast objects (1996, 402). This finds limited support here where 12 out of the 18 EIA to MIA brooches contained <1% lead, but all appear to be cast objects. However, a shift to 'largely lead-free alloys with higher iron contents' occurs around the time of the Yorkshire Wolds burials (Dungworth 1996, 410). Dungworth suggested a 4th century date but radiocarbon modelling puts burials with brooches in the 3rd century cal BC (Jay et al. 2012). Three brooches [10175], [10555] and [10227] from these burials contained less than the minimum detectable quantity of lead (<0.15%) but they did not exhibit higher iron contents than the other brooches. Clearly the relationship of lead and iron quantities does not conform to a simple pattern.

**Other minimal trace elements**

The remaining trace elements identified were only present in minimal quantities: arsenic (<0.25%), nickel (<0.1%), cobalt (<0.1%), antimony (<0.2%), silver (<0.1%) and in Dungworth's analysis manganese (<0.02%). Such small quantities would not have affected the appearance or quality of the metal and are unintentional inclusions in the alloy either derived from the raw material or the smelting process. Dungworth explained the presence of arsenic throughout the period as the result of the moderate smelting temperatures (Dungworth 1996, 400). Again the Dragonby brooch [10631] is unusual with well above average arsenic content at 0.83%.

Peter Northover suggested a chronological change from cobalt as principal impurity to nickel (Northover 1984). This argument does not find support in these results where no pattern is discernible in the minimal cobalt quantities. Neither do we find support, in the brooch evidence, for Dungworth's observations that cobalt and nickel levels are slightly lower in bronzes from northern England than those from southern England (Dungworth 1996, 405).

**Trace elements - discussion**

The composition of the Type 2L brooch [10281] sits comfortably within the ranges produced for the other MIA brooches supporting its inclusion within this period.

The same applies to the 1C brooch [10208]. The MIA examples cover a range of types but only three examples are the same specific type: the 2Ca brooches with short, gently involuted bows. These three have variable compositions. They also all have differently formed hinge mechanisms from each other. As mentioned in Chapter 3 it is common to find the same shaped brooches with different hinge or spring mechanisms on the same sites. Differences in composition then cannot relate directly to the deposition site but they could indicate that a number of craftworkers were making products that ended up in the same place or that the same craftworkers were trying out different mechanisms and different ways to achieve similar results.

[10631] contains a considerable amount of arsenic 0.83% in comparison to the average for the whole EIA period (0.37%). It also has a very low lead content and a slightly higher than average zinc content 0.24%, the other brooches contain less than <0.2%. The arsenic would suggest a moderate smelting temperature, the lack of lead a possible MIA or late EIA date and the zinc suggests it should be located late in the Iron Age period. This is the only EIA style brooch from a site with several of Late Iron Age and Roman date (Olivier 1996, 231-264). It may, in fact be a later production of an earlier style. Roman copper alloys rarely contain arsenic according to Dungworth (1996, 405) therefore suggesting this is not a Roman copy. The higher arsenic content is more typical of Hallstatt brooches but the style of this example excludes it from this earlier period. The Burton Fleming brooch [10188] also contrasts with others of this type in the presence of a nine coil spring (as opposed to the typical 4 coils) and could be a later production reminiscent of the 1Ba form.

The Batheaston assemblage is thought to contain finds from one, or possibly two, hoards (Stead 1998, 120-2). It was therefore interesting that the compositions of five out of these six Batheaston brooches bore a similar pattern (Cu, Sn, Pb, As, Zn/Sb, Fe, Ni/Co/Ag, in the other iron was the third most common element and antimony at the bottom end of the scale), one could describe this as the Batheaston signature. All five have the same dark slightly greenish brown patina but the sixth is lighter brown and rougher in texture. The comparative composition and appearance lends credence to the grouping of these brooches and one wonders whether they were originally manufactured together. If they are products of the same time and workshop this contrasts not only with the range of EIA and MIA types in the hoard but also the full selection of bronzes in the hoard that includes Bronze Age objects and Late Iron Age penannular brooches (Ben Roberts pers. comm., Anna Booth pers. comm.). The Batheaston hoard will be explored further in relation to deposition (Chapter 7).

The apparent north to south differences recognised by Dungworth (1996, 405) are not evident in the brooches. The two EIA brooches with contrasting compositions to the others were from more northerly locations: Lincolnshire [10631] and Yorkshire [10188] as opposed to the others, which were derived from southerly sites. It is not possible to say this difference is one of ore source of production method because they do not conform with one another so the evidence does not stand up to interrogation. They also do not correspond with the metal composition of later forms from the north. The south-eastern brooches analysed contained a more consistent quantity of lead than those from elsewhere in England. The majority of these were found in river environments, particularly the Thames. Past pollution levels in the Thames have been held to account for the distinctive patina of bronze found in this river; perhaps this also affected the traces of lead in the alloys.

## 5.2 Copper and Tin Sources

Copper and tin ores are known in Britain (Map 5.1). Tin stone still occurs, albeit very rarely, on the surface in Cornwall. The tetrahedrite group found in Britain are grey coloured crystals. These grey heavy rocks are recognisable in their unusual weight in comparison to similar sized stones but visually unobtrusive. In other words foreknowledge is needed to identify them. In Britain copper sulphosalts are only present in any abundance in Devon, Cornwall and the Munster-Shannon Basin of Ireland. Although evidence has been found of Bronze Age copper mining activity in Cheshire and Wales (Timberlake and Prag 2005) we do not have any direct evidence for contemporary copper and tin mining. The use of the raw materials confirms these processes would have taken place. The continental influence on the earliest brooches promotes the possibility that the ores as well as the designs could have been derived from the continent. As explained above, the metallic composition cannot be directly related to ore sources so we may only speculate that insular sources were utilised. It is tempting to wonder whether the variation in the EIA brooch composition compared to the more homogenous MIA composition may be indicative of a change from varied ore sources in the earlier period to a concentration on insular sources in the later period.

### 5.2.1 Iron Sources

31% of all known EIA and MIA bow brooches were manufactured in iron. Iron ores were far more readily available across Britain than copper or tin (Bayley *et al*. 2008, 4-5) (Map 5.1). It could be obtained through mining but also by surface collection. The latter perhaps being carried out during, or following, ploughing (Hingley 1997). DeRoche explores this activity further to locate the ore collection within the agricultural cycle and associate iron production with other productive activities from salt extraction to cloth making (DeRoche 1997). Analysis undertaken on iron currency bars indicates that several ore sources were utilised but, as with copper, it is not possible to identify where these were (Cunliffe 2005). Access to suitably shallow ironstone beds might have restricted the location of iron ore processing (Salter and Ehrenreich 1984, 147). Considering the widespread availability of surface or bog-iron (Bayley et al. 2008, 4-5) these surface deposits may have been preferred. Evidence is available for large-scale bog-ore extraction in the Foulness Valley in East Yorkshire (Halkon 2008). This complements the preponderance of iron brooches in this region (Map 5.3 and 5.7) and would seem a feasible candidate for the ores used to make these brooches.[8]

Hingley (1997) and Giles (2007, 400) have explored the relationship between iron and agriculture and suggest the two were inextricably linked. Hingley proposed that iron ore was collected from the surface of fields after ploughing (Hingley

[8] The majority of the iron brooches in the British Museum collection are from burials in the Yorkshire Wolds. Although it would be useful to characterise the composition of this iron to see if the source is the same it was not a feasible area of research for this thesis.

1997). If ploughing took place in the autumn after the harvest then the iron ore would be collected and ready for smelting before the winter months. The intense heat required for smelting may have made this a favoured activity in the cold winter months. The combination of ploughing activity and iron surface collection would fit comfortably within seasonal tasks (DeRoche 1997). This relationship could have extended to a metaphorical connection between agriculture and ironworking within concepts of fertility and life-cycles (Giles 2007). The connection could also have been felt in the physical extraction processes: pounding and washing the ore equating with winnowing and cleansing the grain with both materials being ground before baking (Hingley 1997).

### 5.2.2 Distribution of Bronze and Iron Brooches

Chart 5.2 shows the quantity of brooches of each primary material by percentage of the brooches of that period. 97% of the EIA brooches are copper alloy and only 3% are iron. In the MIA only 46% are copper alloy and 54% are iron. There is, therefore, a massive increase in the quantity of iron brooches into the MIA in comparison to earlier periods. Iron examples do exist of EIA brooches but these are rare. As Chart 5.3 illustrates the total quantity of brooches also increases in the MIA.

Map 5.2 shows the distribution of all bronze brooches and 5.3 the distribution of all iron brooches. Comparison of the ore sources (Map 5.1) to the distribution of brooches show a curious opposition. Bronze brooches are mostly found away from copper and tin sources while iron brooches are found where the iron ore was available in rock form, not to mention the widespread availability of bog iron. The bronze brooch findspots fill the areas of Britain where no copper or tin ore sources are indicated on Map 5.1.

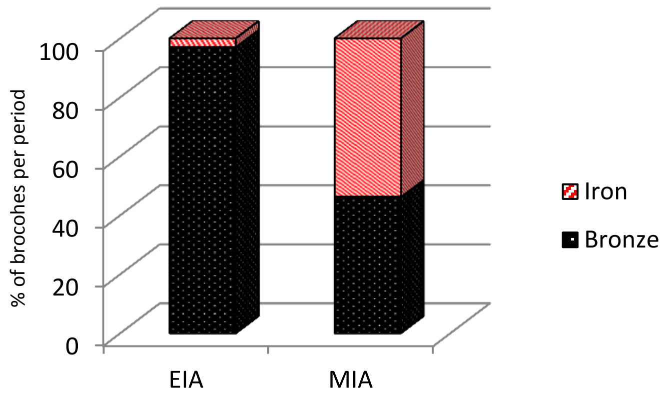



**Chart 5.2** Percentage of bronze and iron brooches per period

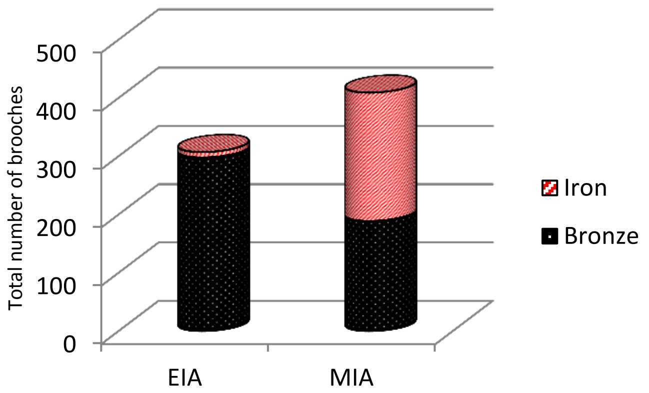



**Chart 5.3** Total numbers of bronze and iron brooches per period.

Maps 5.4 to 5.7 compare the distribution of bronze and iron brooches across the two periods. Iron examples are exceptionally rare amongst all EIA brooches. They are confined to a single 1A in Wales [10763], with 1A and 1B brooches in Wessex and the southwest. An iron possible 1Ba was found in Lincolnshire [10645] and a 1B variant in Kent [10954]. The distribution of iron brooches becomes more widespread in the MIA extending the EIA distribution in every direction. The distribution of MIA bronze brooches moves even further from the source materials than EIA types with the exception of the occasional finds along the western coast of Britain.

## **5.2.3 Smelting**

Evidence for smelting is rare from Early Iron Age sites (Sharples 2010, 108-9) becoming more common into the Late Iron Age (Hingley 1997, 10; Joy 2010, 19). Several authors suggest smelting was a specialised activity (DeRoche 1997, Hingley 1997, Salter and Ehrenreich 1984). According to Hingley Iron smelting was highly specialised in the earlier Iron Age as indicated by the low number of smelting sites known from this period (Hingley 1997, 10). DeRoche proposed the activity was specialised owing to the complexity of the procedure (DeRoche 1997, 21). This is not to say the smelters only specialised in this one task. Instead a limited number of people possessed the necessary knowledge for smelting; people who may have been involved in other activities relating to metalworking or the agricultural cycle.

Herbert (1993) discovered that in Sub-Saharan Africa the smelter might also be the smith. The two tasks were often carried out at separate locations and a distinction was made between those who knew smithing techniques and those with the knowledge of smelting. At Brooklands, Weybridge, Surrey evidence for both smelting and smithing were found at the same settlement (Hingley 1997, 10) possibly dating to the Early and Middle Iron Age. Two different areas were employed for the different activities: the smelting to the south-west of a west-facing roundhouse and the smithing to the south-east. Although different people could have undertaken the tasks, the same people may have worked in the different locations at different times, dependent on requirements. The relative proximity of the two areas would have allowed the same people easy access to the separate tasks even if other factors, such as taboos, restricted the actual level of access.

The Foulness Valley research shows smelting sites were located along the valley bottom in the vicinity of the bog ore sources and at a distance from the settlements on the drier, high lying ridges (Halkon and Millett 1999, 95, Halkon 2008, 170-171). The smelting sites were also located close to other necessary resources such as managed woodland that could have provided wood for charcoal, and the creek for transporting the smelted iron by boat (Halkon 2008, 221, Millett and McGrail 1987). Joy suggests different groups may have had to work out the smelting process on their own with slightly varied systems being invented exclusive of one another (Joy 2010). Salter and Ehrenreich proposed that not only was general smithing knowledge protected but not all smiths had knowledge of the finer techniques such as 'carburization, quenching and tempering' (Salter and Ehrenreich 1984, 160).

In sub-Saharan Africa Herbert observed amongst small-scale iron-workers the belief that the settlement needed protection from the powerful forces invoked in the challenging procedure of extracting metal from its ore (Herbert 1993, 116). In this way the danger of fire and personal injury is incorporated into the spiritual sphere. Comparing Bronze Age and Iron Age metalworking to anthropological evidence Budd and Taylor (1995) proposed that magic or spiritual perceptions and ideas provided the impetus for, and environment within which metal objects were created and manipulated. Iron Age people must have had a strong respect for fire since it was necessary for so many of their productive activities for which we have evidence from preparing food for daily or feasting needs as indicated by the heated animal fats in cauldrons (Joy and Baldwin forthcoming), to firing pottery or providing heat in a roundhouse. They were also aware of its destructive and transformative properties from burning down wooden structures such as the roundhouse at Longbridge Deverill (Webley 2007, 127) to vitrifying stone walls as at the hillfort at Dunagoil (Cotton 1955, 71), to transforming silica (sand), soda (ash) and lime (limestone or chalk) into glass (Henderson and Freestone 1991, 165). We cannot directly impose the beliefs and behaviour from twentieth century sub-Saharan Africa onto this temporally and spatially distant Iron Age smelters of Britain but the comparable small-scale iron smelting provides an analogy from which we can consider the possible ritual nature of the evidence.

Smelted iron was transported in the form of currency bars especially from the second century BC, indicating a focus on iron production in particular areas with wider distribution of the prepared metal (Cunliffe 2005, 496). The more established copper and tin trade meant these materials were already being distributed as ingots well before their use in brooch production (O'Connor 1980). The smelting of copper and tin may also have occurred in close proximity to the ore sources although evidence is sparse (Budd et al. 1992, 683). Copper alloy bar-ingots, also referred to as billets, were discovered at Gussage All Saints and Croft Ambrey (Spratling 1979, 130) and possible examples have come to light through recent metal detecting activity in Lincolnshire (PAS: NLM-9C91B5, NLM-EBBC25 and LIN-6F0033). Although the ore source cannot be identified these objects show the material was transported in metallic form ready for metalwork production.

## 5.3 Brooch Production

Once the smelted metal has been acquired locally or through longer distance contacts the brooch production process may begin. This can be broken down into a number of stages depending on whether the final object will be primarily bronze or iron.

Iron brooch production process:

1. Preparing the iron
2. Planning the brooch design
3. Forging the brooch
4. Polishing
5. Application of any further decorative materials[9]

Bronze brooch production process:

1. Production of the mould
2. Combining and melting the metal
3. Casting the brooch
4. Annealing and bending the rod into coils
5. Polishing the brooch
6. Application of any further decorative materials

To understand the production process for brooches it was decided to work with a metalsmith familiar with later prehistoric metalworking techniques to produce a copper alloy example. Neil Burridge undertook the task building on his knowledge of casting Bronze Age type objects. This experiment enabled detailed questioning

[9] It is possible this stage occurred prior to polishing or a second polishing episode was carried out after the decorative material was applied.

of the different stages and difficulties involved in the task. These aspects enlighten us on possible technological and practical matters behind the development of brooch styles during this period. Ideally an experiment into forging an iron brooch would have been carried out for comparison but this was not possible within the limits of this thesis. Mansfeld has made some exploration of brooch manufacture leading him to conclude that some workshops produced only cast brooches while others only produced forged brooches (1993, 310) but this finds no support in the British evidence. Hattatt (1982, 48) undertook experiments making brooches to inform his understanding of the technical ability required to produce the brooches, but has left no record of the process.

### 5.3.1 Production of the mould

The final form of the object had to be decided and planned before any production could take place. The overall size was calculated to produce a wax model of the correct dimensions. This may in part have been influenced by the amount of metal available for casting but the desired shape of the brooch and the material to which it would be affixed and how it would be displayed are vital components. Complete brooches range in length from 24.81mm for a tightly involuted bronze brooch from Grandcourt Farm, Middleton, Norfolk [10664] to 93.09mm for the slightly damaged iron brooch from Makeshift cemetery, East Yorkshire. The longest bronze brooch is a Type 1Ca found in Abingdon in c.1904 [10171]. The shortest iron brooch is 36.4mm long Type 2Cb brooch from the Makeshift cemetery [10243]. The length is measured from the outer edge of the spring chord or the hinge to the tip of the foot/catchplate before it reverts back to the bow. There is some consistency in length within types but specific brooch assemblages also appear to maintain some consistency in size. The iron involutes of East Yorkshire are generally larger in every direction than the dainty bronze involutes found in Norfolk. Type 2L brooches show little variation around 30mm in length, although this has been one of the classifying factors of this type so the argument is circular.

The length of the complete brooch does not equal the overall length of the cast object. Examination under microscope and with a handheld lens shows the springs to have been coiled from a long cast wire that extended from the head of the bow in the mould. In our experiment this was one of the most complicated parts to prepare and fashion. The craftworker had to plan the number of coils and calculate the length of wire needed to form those coils: large open coils on 1A brooches and tight coils on the 1B and later spring brooches. There is a limit to how tight the coils can be drawn dependent on the thickness of the wire which eventually forms the pin. They had to allow enough length of wire to form the chord without making this too loose. Investigation shows a preference for external chords that sit close to the spring strengthening it and reducing the risk of it unravelling during use. The end of the spring wire formed the pin so had to be cast long enough to lie along the length of the bow and sit in the catchplate but not so long as to overshoot the catchplate.

The modern metalworker has the advantage of steel edged and electric powered tools to file down an overly long pin. If the Iron Age smith cast the wire too long it would have been far more laborious to wear down the tip and the lack of evidence for filing at this point implies most achieved the correct length during casting. However the tapered end of the pin is typically the part that is broken and lost prior to recovery so we cannot be certain about this point. Middle and Later Iron Age iron working tools have been recovered at Gussage including shears and chisels that could have been used to cut and file the pin and a comparative iron file was found in burial R141 at Makeshift cemetery (Fell 1988, Figure 1; Fell 1991, 79 and Figure 110). On involuted brooches the end of the pin was often purposefully bent to make the tip hook into the catchplate. This bend could have been created with a pair of pliers after casting. On arched bow brooches the pin often bows out slightly to the right side of the bow. Our experiments show this was a necessary shape to allow the pin to negotiate the head of the bow and return to sit within the catchplate.

In our experiments it was not possible to cast the brooch using the lost wax technique. Although this distances the final product even further from the 1B style brooch we wished to emulate, the processes of preparing the model and casting and working the spring wire gave more insight into the activity than merely contemplating the process. Instead the object was cast in a sand mould. For this process we had to create a flat, solid model of the brooch which was later bent into the final arched form. The length of the flat piece therefore had to take into consideration the arch of the bow and the bend of the foot to revert it back to the bow. The model was cut and constructed from soft leaded metal and recast as a single bronze object (Figure 5.3) to enable repeated mould making. The advantage we had over the Iron Age smith was the possibility to create several objects from the same model. The lost wax method produces unique objects every time. Yet the similarities in many of the final brooches suggest a sharing of techniques across regions through dissemination of ideas by contacts between metalworkers or through copying objects; or through actual movement of smiths or their products.

Parts of clay moulds survive for other contemporary bronze objects such as the fittings for horse drawn vehicles and horse bits (Wainwright 1979, Coles and Minnitt 1995, Foster 1995). These have been broken in order to extract the cast object. This evidence is indicative of the lost wax method where the form of the object is carved in wax probably using the kind of bone and antler tools discovered at Gussage All Saints (Wainwright 1979, 141, fig.98) and Glastonbury (Coles and Minnitt 1995, 142-3). Damp clay was built around the model to make the mould. Firing or heating the mould would have melted the wax within and solidified the clay leaving a hidden enclosed cavity in the shape of the brooch.

The wax brooch model would have been carved using the types of tools found at Gussage (Spratling 1979, 141). These were made from cow and pig or deer bones, possibly using the waste products from food. The skill of carving wax was closest, perhaps to the skill of decorating pottery and tools employed for each purpose could have been utilised for either task. To create a mould around the wax model required understanding of the moulding qualities of different clays or differently tempered clays. It would have been just as important to prepare the clay to ensure the mould remained intact throughout the casting process as to avoid a pot exploding in the bonfire kiln. We decorated our brooch with a linear pattern; a row of dots between two parallel grooves. The decoration was applied after casting using a steel pin hit by a hammer. Using this hardened metal we were able to create a significant indentation in the surface of the bronze. Steel would not have been commonly available at this time so it seems more probable even simple decoration would need to be carved into the wax model instead.

The forms of many of the bronze brooches would only be achievable through casting rather than forging. It is possible that the few undecorated, wire-like 1B brooches where the bow is a slightly thicker version of the wire for the pin and spring (such as [10681] Winson, Gloucestershire), could have been made by hammering and drawing out the metal but no scientific evidence is currently available to prove or disprove this theory. In Britain no evidence survives of brooch moulds or of brooches discarded during the production process with the possible exception of [10559] from Hod Hill. This 2Ca bronze brooch bow has a flat, spatula like head that has not been pierced or shaped to form the ring of a hinged head, possibly an indication that it was never completed.

Metalworking evidence from EIA and MIA sites is limited although more common than smelting evidence (Sharples 2010, 137). The evidence for the activity is very much based on the presence of the end products in these earlier periods. In the later Iron Age we see distinctive smithing locales at a number of sites often close to settlement activity but on the periphery of the sites such as outside the ramparts of Llwyn Bryn-Dinas hillfort, Clwyd (Musson et al. 1992) or close to the entrances of Maiden Castle hillfort, Collfryn enclosure, Powys and the settlement at Gussage All Saints (Hingley 1997, 12).

### 5.3.2 Combining and melting the metal

Whether metalworking was the sole task for a specialist or not they certainly required expert knowledge to create the appropriate alloy for casting. The metals analysis shows a preference for a mixture of c.88-90% copper to c.12-10% tin. For our first attempt at sand casting a brooch we weighed out the copper and tin to form an alloy of 88% copper (88 grams) and 12% tin (12 grams). The first brooch broke during coiling the spring and reverting the foot (we repaired it in non-Iron Age fashion with silver solder). Three issues could account for this breakage.

1) This ratio created an alloy that was a little too brittle; this can be seen in the tiny fissures all over the surface of our first attempt.
2) The metal had been heated to too high a temperature before casting. At a higher temperature the metal is seen to 'dance' as the surface breaks and

almost bubbles. Neil showed me this action when melting the first batch. For the second brooch (the successful one) he took the crucible out of the heat before this lively stage.

3) We were too hasty and inexperienced with bending the delicate coils on the first attempt. In the second attempt we repeatedly annealed each area prior to bending.

Although an element of 3) must have come into play 1) and 2) were important factors. For the second attempt the alloy was formed from 11% tin and 89% copper. The result was a smooth and solid surface that bent without cracking. Precise compositions were needed and achieved by the bronze smiths. They had to employ their knowledge and observation skills to know how long to heat the metal to melt it but not overheat it. They would have known, as Neil showed me, that adding the tin to the copper aids the melting process.

The copper and tin were heated together in a crucible, examples of which occur at the aforementioned sites as well as the enclosed settlement at Weelsby Avenue, Grimsby (Foster 1995) and Llwyn Bryn-Dinas hillfort (Musson et al. 1992, 272-5). The molten metal was poured into the mould through a sprue cup, an open funnel at the top of the mould. Once cooled, the mould was cracked open and the complete object extracted if the casting had been successful, which was not always the case (Wainwright 1979, 133, fig.103, 4.5). If brooches were produced using this technique it is unsurprising that no mould fragments have yet been found for these small objects as they would have been mostly destroyed during extraction of the brooch. It is possible that where they might have occurred on excavated sites they have not been recognised as more than small lumps of clay with the odd indentation in them. The terret ring moulds would have been more substantial and with a more simple cavity. These would not be so damaged by extracting the cast object so have a better chance of survival in the archaeological record.

The overall quantities of materials required were minimal with the final brooches weighing between 1.4 and 42.2 grams (based on current weight but the original weight may have been greater before corrosion). Only small quantities of wax were needed to make such small models and little clay was required. It is possible the molten wax could have been recycled but the clay once fired it could not be reused.

The small dimensions of recovered crucibles indicate how little metal was melted each time. A complete example from Llwyn Bryn-Dinas had a capacity of c.60ml meaning the amount of molten material it could contain would be even less (Musson et al. 1992, 274 object 26). Although the actual weight of bronze per cubic cm is variable dependent on the exact composition, if we take an approximate value of 8.5g per cubic cm, the crucible could be used to melt no more than 50grams of bronze at a time, enough for one large brooch or several small ones. The first century BC crucibles found at Gussage All Saints had a greater capacity than that needed to cast any of the terret rings from the site (Spratling 1979, 130). These could have produced enough molten bronze for a few brooches.

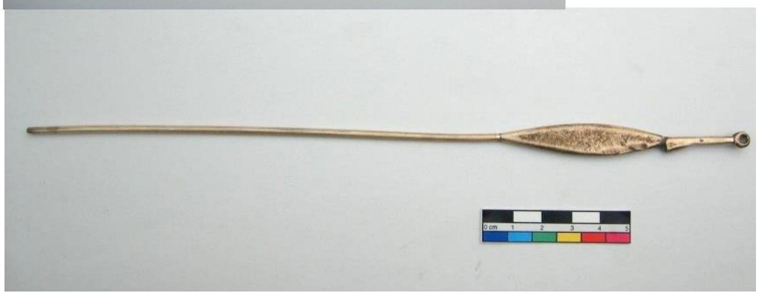
### 5.3.3 Casting the brooch (Figure 5.3)

With the mould prepared, the wax melted out (ideally with no residue as this could catch light) and the molten alloy in the crucible the smith had to swiftly, but evenly, pour the bronze into the mould and rapidly cool it probably by adding drops of cold water to the metal rising up the sprue. The possible forms for the brooch (and hence its mould) were limited by the progress of the molten metal into the mould. The viscosity of the molten bronze limits its movement through a mould. The molten metal cannot flow into a large space after passing through a constricted area. Where we cast our brooch flat we had to avoid the disc at the toe of the foot being too large or the metal would not have filled it properly. So we doweled an indentation into the top of the foot disc; an indentation that took on the appearance of the cup-shapes seen in the top of many reverted foot discs. These have always been proposed as designed to accommodate inlay in some form. Perhaps they were a practical development to aid casting that in some instances was employed as a cell for inlay. The positioning of the end of the reverted foot against the leg of the bow, particularly where decoration exists across the bow below this point, encourages me to wonder if perhaps many feet were cast flat and then bent up and back after casting just as the coils had to be formed after casting. This is particularly visible in 1Bb brooches with a bisected toe to the foot. This sits around and close to the bow often between two grooves cast across the bow. It would have been exceptionally difficult to cast this foot in its reverted position without the foot and bow being cast as one piece.

**Figure 5.3** The model, mould and sprues. (Photographs by S. Adams)

Creating the sprue space in the mould

The cast before removing the sprue



The cast after removing the sprue

**Figure 5.4** Coiled spring practice piece from Batheaston hoard, Avon

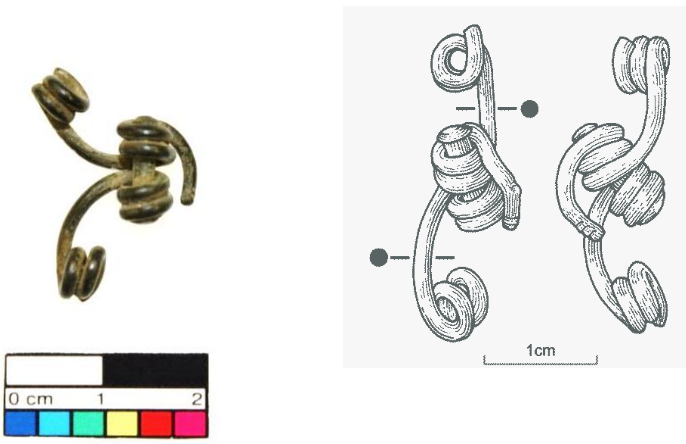
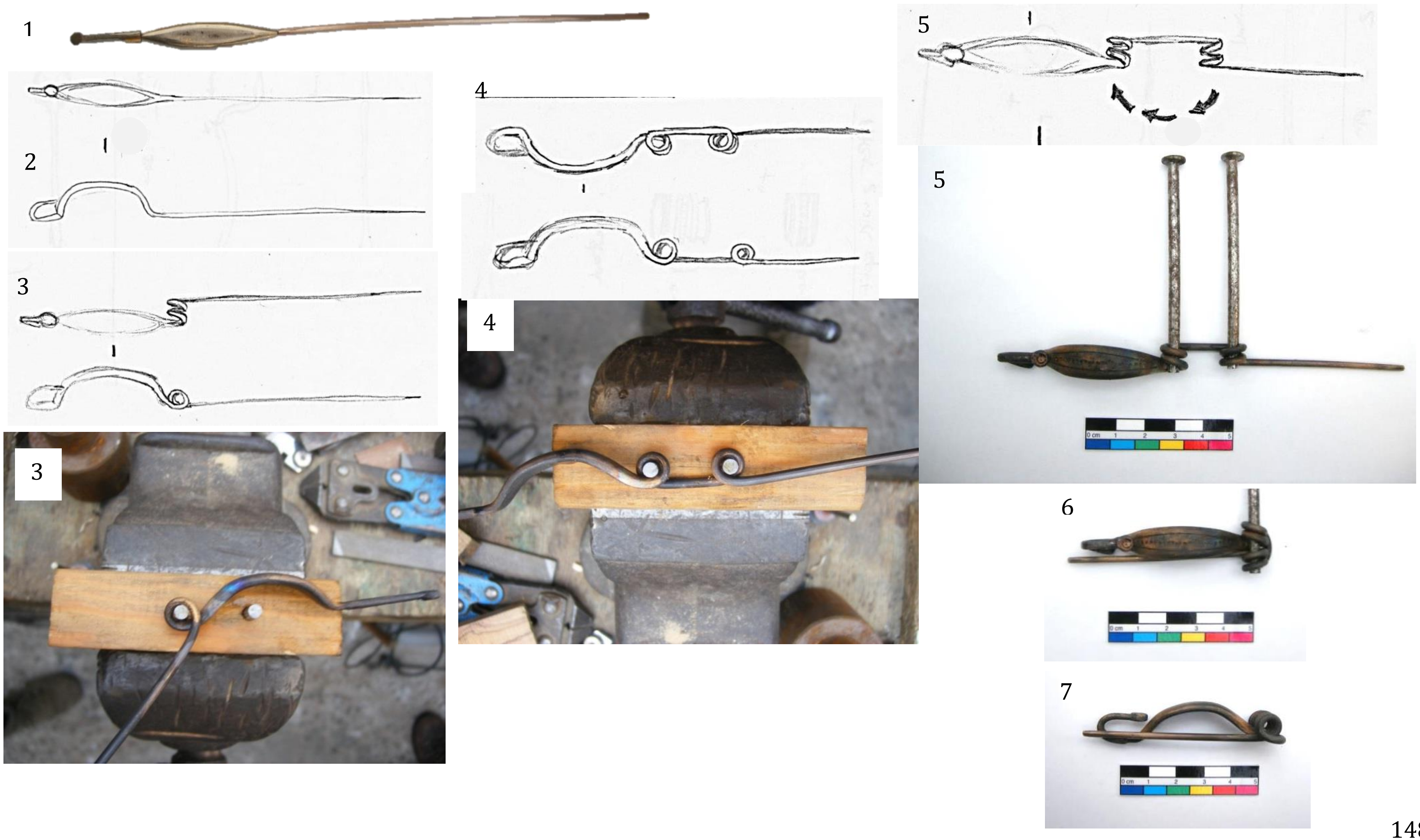


**Figure 5.5** Illustrations of the different stages of the experimental brooch production. (Photographs by S. Adams)



### **5.3.4 Annealing and bending the rod into coils** (Figures 5.4 and 5.5)

The need to bend the cast wire or rod at the head of the bow into a spring has already been mentioned above. Unlike pure copper the bronze is less pliable. To encourage the metal to bend in a specific area it had to be heated intensely until it glowed red. This process was best carried out in the dark or low light so one could see when the metal was hot enough. The object is then rapidly quenched by submerging it in cold water. This heating and quenching process or annealing, changes the quality of the metal and it will remain flexible until bent at which point it hardens again. The object physically transformed during the annealing process. It glowed red then hissed with steam when cooled leaving it blackened with a bluish sheen emanating away from the burnt area. The brooch only reverts to bright shiny metal when polished.

Once annealed we bent the wire by turning the first part of the first coil around the nail on the template gently pressing the outer edge with a small block of wood to encourage it to curve; encouraging, negotiating with, talking to the metal (Figure 5.5). We repeated the process for the second coil. Next we measured the pre-defined distance along the wire before bending the third coil at the opposite end of the chord. Before each bend the metal had to be annealed and remained flexible until bent. Once all four coils were made two rods were threaded into each pair of coils. These provided leverage for bending the two pairs round towards the bow and each other thereby creating the bilateral four coil spring. At this point in our experiment it was clear the pin had been cast too long and had to be filed to shorten it. Experience would have enabled the Iron Age metal workers to cast the object to the correct length to start with.

Although it is possible the wire for the spring was later drawn out from the head of the bow after casting, the decoration on some springs wires implies the wire was cast to its full length. This decoration consists of shallow ridges along the uppermost edge of the wire that follow the route of the coils suggesting the ridges were carved along the length of the wire before it was cast and bent; as found on the 1A brooch [10269], Worth. A coiled wire found with the Batheaston hoard(s) (Stead 1998) shows the smith or perhaps an apprentice practicing their coiling technique to combine two pieces of wire into one spring (Figure 5.4). One end of this wire is finished with two parallel narrow grooves running around the upper half of the circumference of the wire. This end shows no sign of breakage and is in fact bent round in the position of an external chord but the decorated end of the wire does not meet the other side of the spring. The opposite end of this wire is bent into two coils as are both ends of the other wire. This piece does not show any sign of being a broken brooch.

### 5.3.5 Polishing the brooch

On all the brooches examined first hand for this thesis (c.330 brooches) no casting debris was visible on any of them. When extracted from the mould the sprue would still be attached to the cast brooch. This would need to be removed and the boundary between the two pieces would need to be smoothed. The absence of any sign of casting debris suggests the polishing of the finished piece would have removed such traces. The lost wax method also means the mould encapsulated the model in one piece so avoids the seams visible on the side of our sand cast example, the result of a two-piece mould. It is probable the smiths used iron files for wearing down any rough edges (Fell 1988) then polished the whole object using sand and water or even fine clay dust or wood ash to produce the final lustre. Given the repeated use of consistent quantities of copper and tin to cast the brooches it seems highly probable the bronze smiths wanted to produce a shiny object of this approximate hue (Figure 5.6).

### 5.3.6 Summary of the Brooch Production Process

To summarise, the brooch was planned either by following or developing existing examples. The wax model was then carved and the pre-prepared clay pressed around it to form a solid mould. The mould was then heated to extract the wax. Specific quantities of prepared copper and tin were combined to a ratio of c.9:1 and heated until they melted in a crucible, taking care not to overheat them. The molten metal was poured into the mould, quenched and then the mould was cracked open to reveal the cast brooch. The sprue would be broken off at this point. The spring was then formed through annealing and bending. The foot was reverted in the same manner. The complete piece was polished to remove any casting debris and bring out the natural lustre.

**Figure 5.6** The finished polished reproduction brooch (63mm long). (Photographs by S. Adams)

## 5.4 Composite Brooches (Figure 5.7)

Several copper alloy brooches incorporate small iron features which comprise a very small percentage of the overall brooch but can be vital components. Likewise some iron brooches incorporate copper alloy features. The iron elements are typically axial bars on real and mock springs and hinges. In real springs the bar strengthens the springs to protect it from distortion and breakage as found on the Radley 1B brooch [10416]. In the mock springs the iron rod fastens the coiled head of the brooch and pin together like the 1B from Hordley [10080]. Copper alloy axial rods were also employed in the same fashion in copper alloy brooches in real springs: St Edmundsbury 1Bb [10715]; mock springs: Cold Kitchen Hill 1Ba [10861]; and as repairs as found on the [10844] from the Thames at Wandsworth. In 2L brooches iron axial rods are often used in the same way: to provide the pivot for the pin and to attach it and the separate spring or decorated cylinder and the bow together (see Leatherhead brooch [10043] and Aylesford [10287]).

Copper alloy elements appear on some of the iron brooches. These include thin sheets of copper alloy (<1mm thick) rolled into cylinders and used as the axial rods above, like the 2Aa [10875] brooch from Market Deeping. This brooch has a rare feature where the iron foot is attached to a copper alloy foot plate that expands to form the collar for attaching the reverted foot to the bow. The foot plates on iron and bronze brooches might be surmounted by other material such as glass attached by means of a small copper alloy rivet, for example the iron 2Cb from Bell Slack [10193], and bronze 2Ba2 from Newnham Croft [10575] and 2Bb1 from Wetwang Slack [10571]. This combination of metals indicates that metalworkers in this period were adept at working both bronze and iron and combining the two metals.

**Figure 5.7** Composite bronze and iron brooches

Not to scale to enable comparison of features. (All photographs by S. Adams).

[10416] Radley. Ashmolean Museum

[10800] Hordley PAS HESH-E8A211

[10043] Leatherhead PAS SUR-41D522

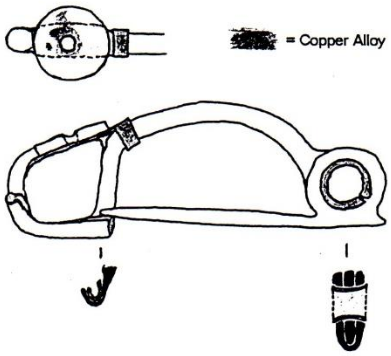



**Figure 2** The copper alloy components of the brooch

[10875] Market Deeping (Fitzpatrick 2010, 290, Fig.2)

[10287] Aylesford. Maidstone Museum

[10193] Bell Slack.
© Trustees of the British Museum

[10234] Makeshift
© Trustees of the British Museum

[10258] Makeshift.
© Trustees of the British Museum

## 5.5 Applied decorative materials (Figure 5.8)

Approximately 80 brooches show evidence for having been decorated with non-metallic material attached to or inlaid on the brooch. These are found at sites distributed across England (Map 5.8). Over half were found in burials. Of the remainder: six are from hillforts, four from ritual locales, two were found at settlements, 18 are stray or metal detected finds, three are from water courses, and seven are of uncertain provenance.

This additional material was applied to the upper surface of the bow and/or the foot and occasionally the sides of the head (Figure 5.8). For some examples the applied material is missing but the shape of the brooch indicates it was once decorated in this way. For 35 examples the remnants of the applied material survives but its composition is not always clear. Analysis has been carried out on brooches from the Yorkshire Wold cemeteries by Henderson and Freestone (1991) using electron probe microanalysis (EPMA), X-ray diffraction (XRD), scanning electron microscope (SEM), and low-powered microscope. This indicated that coral, glass and dolomitic clay were used as decorative materials. Other brooches have received only visual analysis in the past including the Harborough Cave brooch [10412] which Stead said was not decorated with coral (Stead 1979, 66). For most examples the applied material is the same across the whole brooch but the bronze brooch [10560] from Danes Graves has small beads and strips of various materials ranging from very pale pink to reddish brown in colour and including coral and possibly amber.

The type of material can make a significant difference to our understanding of the exchange networks required to achieve the finished product. The presence of coral has been thought to show connections with the Mediterranean. Different sources have been proposed for red glass. Freestone has suggested the dolomitic clay on the East Yorkshire brooches could have been derived from Israel (Ian Freestone pers. comm.). Partially perforated small clay objects found at Danebury described as reels (Poole 1984, 398-401, Figure 7.45) are of a comparable size to the decorative beads on brooches. It is possible they were clay beads prepared for brooch decoration in which case the production is at a different location from deposition of such brooches.

To be able to discuss the possible source of the material it is first necessary to prove whether the material is actually what we think it is. This issue was brought to the fore through research on the continent (Schüler 1997). Scientific analysis has shown that many examples once thought to be coral are in fact composite materials either made from shell or compressed coral fragments. The former could indicate the use of local material as a substitute for coral and the latter could either indicate recycling or an effort to stretch out meagre supplies. The matter has been further explored by Sebastian Fürst (Fürst 2010). Using Raman spectroscopy Fürst had shown that of a sample of 36 objects from middle Europe one third had previously been misidentified. In several examples coral had previously been misidentified variously as glass, 'white paste' and bone (ibid, 138). It was also proposed that while red coral was used to decorate some objects, others appear to have been white coral or shell.

These results prompted me to question the identification of the applied material on British brooches. To this end research was undertaken on my behalf by Melanie Keable and Janet Ambers in the Department of Conservation and Scientific Research at the British Museum. Four bronze and eight iron brooches with definite and possible applied decoration were analysed via non-destructive Raman Spectroscopy (Raman), to clarify the different materials[10]. Positive results were achieved for all four bronze brooches and four iron brooches. The remainder proved unsuitable owing to the heavy corrosion[11]. It was hoped that the small surface area needed for analysis might make it possible to identify the applied material on corroded iron brooches where a visual estimate would not be possible but the corrosion salts interfered with the results. It is of note that the four iron brooches with positive results are also the four that have surviving copper alloy rivets to attach the decorative bead or strips to the foot.

[10] For Raman conditions see Appendix 4
[11] These are listed in Appendix 3.

**Figure 5.8** Brooches decorated with applied material

All photographs by S. Adams except [10620], all © Trustees of the British Museum, unless otherwise stated.

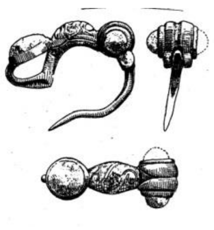
## Coral

[10002] Mill Hill

[10268] Winchester

[10412] Harborough Cave

[10256] Makeshift

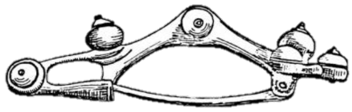


[10574] Maiden Castle
(Wheeler 1943, 257, Fig.82)

[10620] Queen's Barrow, Arras
© Trustees of the British Museum

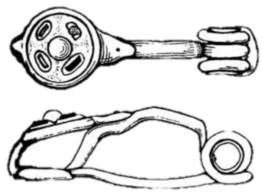
[10917] Wetwang Slack
Hull and East Riding Museum

## Various materials



[10556] Datchet Old Ford,
The Thames (H&H Pl.43)

[10560] Danes Graves
Hull and East Riding Museum



[10516] Trevone
reconstruction drawing
(Jope 1965, 21, Fig.7)

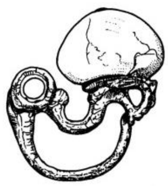
## Glass

[10175] Argam Lane

[10193] Bell Slack

[10255] Makeshift

[10227] Makeshift



[10009] Ferry Fryston
(Brown et al. 2007, Fig. 104)

## Clay?

[10221] Makeshift

[10233] Makeshift

0 2cm

### 5.5.1 Coral

The spectrum produced for the decoration on three of the brooches was unequivocally coral. It is not possible to identify the source of the coral from prehistoric examples as research data are not available for comparison of the decomposed surviving prehistoric material with known coral sources. The current appearance of the coral ranges from a creamy white colour with a slightly powdery texture, [10268] Hampshire, to mid reddish cream solid beads with a slight striation in cross section, [10412] Harborough Cave (Figure 5.8). The original colour of the coral is thought to be red based on the composition of objects with coral inlay such as the use of red glass possibly as a replacement for a missing coral stud on the Wetwang Village 'chariot' (Hill 2001). Yet James and Rigby have likened small decorative beads of white coral to mistletoe berries in comparison to small red beads of glass that could represent holly or rowan berries (James and Rigby 1997, 44). It is possible that varying tones and shades of coral could have been used on different or even the same objects.

**Table 5.2** Results of successful Raman analysis on brooches from the British Museum collection (Figure 5.8)

| SAA Db | Brooch Material | Findspot | Raman analysis: result | XRF result | Prev. or visual estimate |
|---|---|---|---|---|---|
| 10002 | CuA | Mill Hill, Kent | coral | | coral? |
| 10268 | CuA | Winchester, Hants. | coral | | coral? |
| 10412 | CuA | Harborough Cave, Derbys. | coral | | calcite not coral? (Stead 1979, 66) |
| 10175 | CuA | Argam Lane, E.R.Yorks | haematite and calcium carbonate. possibly coloured quartz, red limestone or marble | | glass? – *could not be sampled* (Stead 1991) |
| 10221 | Fe | Makeshift, E.R.Yorks | haematite and calcium carbonate. possibly coloured quartz, red limestone or marble | | dolomitic clay (Stead 1991, 164) |
| 10193 | Fe | Bell Slack, E.R.Yorks | heavily degraded glass containing a red colorant | confirms presence of silica | glass (Stead 1991, 164) |
| 10255 | Fe | Makeshift, E.R.Yorks | heavily degraded glass containing a red colorant | confirms presence of silica | glass (Stead 1991, 164) |
| 10256 | Fe | Makeshift, E.R.Yorks | calcium carbonate, possibly a limestone | | coral? |

Out of 24 brooches decorated with coral 14 were found in burials. Two, both 2Ba1 type, were found at ritual locales [10412] Harborough Cave and [10399] Middle Hill, Woodeaton. The 2Bb1 from Meare Village East [10570] was probably once decorated with strips of coral. The only hillfort find with coral decoration is the aforementioned Maiden castle [10574]. The remaining six are stray and metal detected finds. Coral decorated brooches occur in quite disparate areas from East Kent to Devon, to the Fens and East Yorkshire with barely any examples in between (Map 5.9). Apart from the Harborough Cave [10412] and Cambridgeshire examples [10575], [10718], [10808], all are relatively close to the coast, no more than a day's walk distant. Access to the Cambridgeshire area and the fens would have been possible by boat from the coast along one of the many rivers such as the Stour or the Great Ouse. The river Trent provides the closest river route to Harborough Cave from the coast. Ideally the distribution would be presented on a map modelled on sea levels and river courses of the period. For example, the eastern most point of Kent, Thanet, was at this time an island Moody (2008, 35-52). Perhaps then it is of no surprise that the highly decorated brooch recovered from Mill Hill Deal [10002] on the east Kent coast has its closest parallels in Cambridgeshire and East Yorkshire.

Sara Champion (1982) has discussed the presence of coral in graves in central Europe c.700-250BC. She noted that it continued in use even when other prestigious goods were no longer imported from the Mediterranean. Not only are coral decorated objects found in the settlements in the transalpine region but also pieces of raw coral (Champion 1982, 68). The general assumption is that the coral in Britain must also be derived from the Mediterranean, since that is the closest known source to northern Europe. This would imply that the tiny pieces of coral used to decorate a few Iron Age brooches in Britain have been transported and probably traded across this great distance before eventually being incorporated into the brooch decoration. Brooches are not the only items decorated with coral in this period but the total known pieces in surviving objects forms less than one frond of coral. Coral was a rare commodity, as something from a great distance might be. However the Mediterranean is not the nearest source of coral to Britain. Cold-water coral is known to exist in the North East Atlantic off the coast of Ireland, Scotland and Norway (Murray Roberts et. al. 2006) where it has been disturbed and drawn up by deep sea trawling and long-line fishing. Some of these reefs are estimated to have been in existence for over 2000 years (Watling 2001). If it could be proven they were in existence during the Iron Age it is not unfeasible to imagine that small fragments or stems of coral could have washed up onto the eastern coast of Britain. Reginald Smith in his examination of the Harborough Cave brooch drew attention to a Roman period reference to coral on the Scottish coast but dismissed this as 'poetic licence':

*Usque sub ingenuis agitatae fontibus herbes*
*Vibrantes patiuntur aquas lucetque latetque*
*Calculus et viridem distinguit glarea muscum.*
*Tota Caledoniis talis patet ora Britannis,*
*Cum virides algas et rubra corallia nudat*
*Aestus et albentes concharum germina baccas,*
*Delicias hominum, locupletibus atque sub uniclis*
*Adsimulant nostros imitata monilia cultus.*

Mosella by Ausonius AD 380 (65-72) (Smith 1909, 139)

The quivering herbs endure constantly the waters under the natural springs of waves and the sand shines and has no pebbles in it and the gravel decorates the green grotto. The entire coast is accessible in the same way to the Caledonians and the Britons, when the tide discloses green seaweeds and red corals and the white berries, fruits of the shell, delight of the people, and, under the opulent waves, imitations of necklaces look like our ornaments.

Translation by Marcella Raiconi, University of Leicester, 2013.

Was Ausonius actually seeing coral in the clear waters on the shore of Scotland along with pearls ('white berries, fruits of the shell')? It certainly adds a further hint that coral was in fact available close to home for the brooch wearing population of Middle Iron Age Britain. If the materials being used were not always exotic imports but instead were local products or recycled coral or the remnants (the coral fragments retained after Mediterranean contacts dry up) the consequences for our interpretation of trade activities and status are significant.

## 5.5.2 Other applied materials

Of the other applied materials stone clay and glass only appear on brooches in burials. There is a preference for applied materials from the red end of the colour spectrum (Fitzpatrick 2007, Giles 2008, 72-73) (Figure 5.7). The presence of haematite in the stone examples (Henderson and Freestone 1991) would naturally cause the material to be this colour. The colour of the glass is produced by the copper content (ibid). Copper can produce a red or blue or green colour in glass depending on its oxidation and coordination (Johns 1996, 29-30). Iron Age glass workers were able to achieve a range of colours including shades of blue and green as well as yellow, white and red (James and Rigby 1997, 22-3, Figure 23; Henderson 1991, 167-8; Stead 1996, Figure 47; Giles 2008, 72). The red colour of the glass inlays on the brooches must therefore have been chosen on purpose. The red spectrum is also referenced on the 2Ba found at Datchet Old Ford on the Thames, this was decorated with a reddish-yellowish, fractured material thought by H&H to be amber owing to its colour and softness [10556] (H&H 148).

Connections have been drawn between the red colours and blood particularly in relation to decorated weaponry (Giles 2008, 59-77). Following such concepts if some of the coral was white when used perhaps and that coral is more typically found in burials than elsewhere might indicate a comparison of this material to white, exposed bones. We cannot know the exact meaning behind each colour preference but we can certainly see that while red was not exclusively used colours from the red part of the spectrum were preferred.

The only glass of any other colour on a brooch is the fragment of a blue glass bangle re-used as inlay in one cell of the decorated foot of a 2Aa brooch [10516] from a grave at Trevone, Cornwall. Another cell contains red glass, Jope suggested this was a replacement owing to the way it does not completely fill the cell (Jope 1965, 21). However the fractured condition of much of the opaque red glass on the Yorkshire Wold brooches indicates it decomposes unevenly which could account for the poor condition of the glass on this fragmentary iron brooch at Trevone, rather than a poorly made replacement inlay. The clearer blue glass could have been of a more resilient quality. Evidence for glass production in Britain is rare. Only at Meare Lake Village is there definite evidence for glass bead production where Henderson noted red glass was used in the moulding process (Henderson 1981; 1987). Although brooches definitely decorated with glass are found at considerable distances from Meare (Map 5.10). A lump of unshaped red glass was found at Fish Street Hill in London (BM 1931,1019.8, see also James and Rigby 1997, 42, Figure 48). This find could be of Roman date, but it promotes the possibility that the ready formed glass was transported before cutting, heated and shaped onto objects. Henderson's results show the composition of the Burton Fleming and Rudston red glass corresponds with MIA glass from sites such as Meare and Seven Sisters (Henderson 1991, 167) indicating the possibility of wide distribution of the prepared glass at this time.

The only other brooch to be decorated with non-red inlay is the 1B from Flag Fen [10632] with tin inlay on the bow (Rohl and Northover 2001, 300-2). This is the only recorded application of tin for decoration on an EIA-MIA brooch in Britain. Contrasting golden and silvery colours were part of the decoration on other objects such as the Kirkburn scabbard where the bronze frontplate contrasted with the iron chape and hilt or the Chiseldon cauldrons with bronze bowls and contrasting iron rims and handles (Joy and Baldwin forthcoming). Tin has also been found with other scrap metals in Snettisham Hoard F both in their pure state and alloyed (Clarke 1954, Stead 1991b). Analysis of fragmentary torcs from Snettisham shows the complex ways that different metals were combined to create different visual effects (Joy forthcoming). Although those hoards were deposited in the early first century BC much of the material is thought to be old when buried so these metalworking techniques could have been in use towards the end of the MIA. It is certainly possible that further tin inlaid early brooches may be discovered in the future.

## 5.6 Production Review

Jody Joy has explored the methods and decisions involved in the production process or *chaîne opératoire* for bronze and iron mirrors (Joy 2009, 541 and Joy 2010, 15-23). Through this approach he defines the range of skills required and the decisions involved in the whole process. Just as the final outcome is not a given for each mirror so too each Iron Age brooch was a unique product resulting from different decisions made at key moments in the process. David Fontijn described the life-path of Bronze Age metalwork as a series of 'decisive steps' (Fontijn 2002, 29) undertaken at each of the three main stages: production, life and deposition. These choices included matters of technique but also intention: such as the functional and conceptual possibilities of the objects. As indicated above some outcomes were influenced by decisions made early in the process such as choosing to make a brooch from iron. This meant the object had to be forged and could only be decorated by the application of additional material. The choice of iron may have been the result of access to supplies of the metal: the brooch was made at a time when local iron sources were being exploited, or a cultural preference relating to the desired colour of the object and the strength of the item. Other decisions during the use of the object could alter its role including matters of repair and deposition context could alter the role of the object.

Iron brooches at this time had to be forged because the technology was not available to melt the iron. The majority, possibly all, of the bronze brooches were cast but forging skills were necessary for constructing the final shape. Many of the iron brooches are formed with a hinge mechanism the axis of which is made of bronze. Some of the bronze brooches have an iron axial rod within the mock or real spring. Limited evidence is available for contemporary metalworking sites but that found at Llwyn Bryn-Dinas showed both metals were worked in the same location.

To produce a brooch knowledge was needed of:

- how to obtain the ores and extract the metal from these
- charcoal burning to provide the fuel for various stages of the process
- wax collection, modelling and carving
- clay extraction, preparation and the properties of different tempers
- bone tool preparation
- melting and combining of metals, casting and forging process and its limitations (after Spratling 1979, 141)

Foreknowledge was needed of the technology for constructing a brooch shape and making the object work for its intended purpose as well as the desired stylistic traits. The resources required included charcoal, wax, clay, copper and tin, and/or iron, metalworking tools and suitable light conditions: bright light for model making and constructing the cast object, low light or darkness for annealing the metal.

The tasks involved in producing a brooch were located within a calendar of seasonal activity. Cross-craft skills and the combination of materials suggest that the different stages in brooch manufacture could have been carried out by people involved in the production of other types of object. The distinct end product of a brooch could, therefore be the result of cooperation of different people or perhaps the same person produced a range of goods from metal objects to ceramics. The low numbers of brooches found across this period certainly support the theory that the brooch manufacturers were also employed in other production tasks. Although we must also bear in mind the difference between the numbers of brooches that survive and are found compared to those that might have been made. With impetus from anthropological work in Africa (Herbert 1993), Hingley also observes the smelting process as equivalent to the processing of grain (Hingley 1997, 9). The two activities occur side by side in Herbert's study area. The analogy is extended to equate the final bloom produced in the furnace with the baked loaf of bread. Although the bread requires a lower temperature to bake both processes require the maintenance of heat to an enclosed environment to produce the desired result.

Skills developed for either activity could be transferred to the other. Instead of thinking about craftworkers as either potters or blacksmiths or carpenters perhaps we should instead think of those who worked with fire, with clay, and carvers and forgers. The division of tasks by skill set rather than final product type. This is not to assume that one person could not possess and use a number of these skills. Not everyone had the specialist knowledge to be a brooch maker but every brooch maker was also involved in other seasonal tasks. Brooches were specialist products but the specialists did not only make brooches. Specialist knowledge was required for each stage in the brooch production process. It is suspected that this knowledge was shared but variation and innovation in the objects implies the presence of a number of workshops and limitations to the transfer of knowledge.

# Chapter 6 Spatial Distribution and Regional Variation

Iron Age studies have highlighted for some time the extent of the regional variation apparent in the data (e.g. Haselgrove et al. 2001). Haselgrove noted an increase in the quantities of excavated brooches from the EIA to LIA (Haselgrove 1997) and Worrell has shown that PAS finds reflect this pattern (Worrell 2007, 376). When last assessed the PAS records showed more E-MIA brooches in the southeast of England (Worrell 2009, 59) and Worrell's initial results suggested a move westwards over time (S. Worrell pers. comm. 2009). With the current dataset (Chapter 1) it is now possible to map the distribution of specific types. Through the following examination of the spatial distribution, various regional connections are proposed.

This chapter examines brooch frequency in the landscape exclusive of specific archaeological context. The findspot information from stray finds bolsters our knowledge of the distribution of brooch types although we are still limited by the biases in the PAS data (Robbins 2013). This includes a focus on cultivated land and therefore regions of arable land use (where the landowners grant access). However, this complements the excavated data (see below) which tend to be concentrated in urban areas or focussed upon very specific regions to fulfil research agendas. The evidence here may be compared with the contextual evidence addressed in Chapters 7 and 8. This might indicate whether certain types are associated with specific recovery processes and if some brooch types were purposefully deposited and others could be equated with day to day loss. The distribution data will be analysed under the following four categories:

- General distribution pattern
- Quality of data
- Development over time
- Regional diversity

## 6.1 General Distribution Pattern

Early and Middle Iron Age brooches are more common in eastern, central and southern England than further north and west (Map 1.1). They are rare in Scotland where they tend to be found at coastal locations, mostly fortified sites. In Wales the distribution is focussed around the edges of the country possibly reflecting the mountainous topography of the central region and the restrictions this places on the recovery of finds rather than a true distribution of the brooches themselves. Even so the distribution of findspots decreases across England into Wales and Cornwall, and they are exceptionally rare in north western counties such as Lancashire and Cumbria. No contemporary brooches have been found in Ireland (Raftery 1984, 144-157). The distribution also avoids the moors, fells and mountains of England, Scotland and Wales (Exmoor, Dartmoor, Cambrian Mountains, Pennines, Southern Uplands, Grampian Mountains and Northwest Highlands). This may in part reflect biases in excavation and metal detecting survey towards lower lying sites but climatic change from the Late Bronze Age to the Early Iron Age may have led to a movement of occupation and agricultural activity away from higher lying land (Cunliffe 2005, 68). Haselgrove proposed that the Pennines were a physical barrier to interaction between communities on either side of the country (Haselgrove 2008) so cultural differences could account for their relative absence across the Pennines and into northwestern England.

## 6.2 Quality of the Data

Of the 990 brooches studied for this research,716 are EIA and MIA brooches. The remainder are brooches of imported late Hallstatt type and a few now identified as Late Iron Age types (Chapters 3 and 4). Of the 716 brooches:

- 394 were recovered from excavations
    - 285 were from excavations published before 1995 (including 19 from antiquarian excavations)
    - 109 are from excavations reported since Haselgrove's research in 1995 (published 1997).
- 209 have been found by metal detecting

    - of which 183 are recorded on the PAS database
- 102 are other stray finds (including 1 reported to PAS found in garden soil)
    - 68 from dryland locations (although the provenance of 24 is uncertain)
    - 4 found near watery locations
    - 30 were found in watery locations typically rivers but sometimes the seashore (although the provenance of 5 of these brooches from the Thames is treated with suspicion)
- 11 are of unknown or very uncertain provenance

Brooches of unknown or very uncertain provenance are excluded from the distribution analysis as are brooches which cannot be categorised to a specific period, they are just of EIA or MIA style. Maps 6.1, 6.2 and 6.3 illustrate the increase in known brooch findspots since Haselgrove's analysis (1997). The general distribution pattern has altered little over the past two decades. Data on <30% of the excavated examples have been made available since 1995 and for at least two of these sites, Castell Henllys and Twyn-y-Gaer, the contextual evidence is still unavailable. However, the recently excavated brooches do add value to the distribution record by supporting the general pattern and adding more detail in certain areas as well as the contextual information discussed in Chapter 8.

### 6.2.1 Value of the PAS Data

The most dramatic increase in the distribution evidence is derived from the PAS database. East Anglia and parts of the southeast and central England have now been filled with findspots. The density of distribution in other areas has also increased including the south coast, Wessex and the Thames valley. For example in East Anglia 23 definite EIA and MIA brooches had been recorded up to 1995 (only 3 from excavations). Since then 50 have been recorded with PAS amounting to 40 unique findspots. A further 43 have been excavated from only 4 findspots including 39 brooches found at Grandcourt Farm in 2009 (Adams et al. forthcoming). The PAS finds therefore account for almost 70% of all the known brooch findspots in East Anglia. The PAS data also pushes the brooch distribution further west with finds in Lancashire [10823] and Cumbria [10824] and Shropshire (e.g. [10850], [10080], [10851]). The only brooches from the northwest are stray and metal detected finds.

The majority of the PAS finds have been recovered through searches with metal detectors on cultivated land. These locations are often those areas less likely to be developed and therefore less likely to be subjected to intensive excavation work. The majority are found in ploughsoil or topsoil with no associated stratigraphic information. However the location is usually recorded with eight figure or at least six figure national grid references (although these cannot be published for confidentiality). In the nineteenth and early twentieth centuries there was little concern with precise context and stratigraphic relationships. This means that many brooches in museum collections are poorly provenanced even if they are well preserved. The metal detected finds therefore provide more precise data than these older stray finds.

Whilst it originated in 1995 the PAS system originally focussed on areas with a long history of recording metal detected finds, such as Kent (e.g. Kelly 1985, 1989, 1991; Parfitt 1999, 2000). The system was not rolled out across the whole of England and Wales until 2003 (Worrell 2007, 373). It does not cover Scotland or Ireland. Comparison of the distribution of EIA and MIA brooches on PAS (Map 6.3) with that of all other PAS finds recorded up to 2007 (Map 6.4) shows that although many brooches are from areas subject to intense metal detecting survey and finds collection, not all such areas are represented in the brooch distribution.

The lack of finds in the Weald in southeastern England may be down to a modern bias. There is a definite lack of metal detected finds recorded with PAS from this region (Map 6.4) combined with a general lack of building development leading to large scale excavation. Comparison of the total distribution of brooches (Map 1.1) with other Iron Age objects shows that the E-MIA brooch distribution does not simply reflect findspots of Iron Age metalwork. For example the decorated horse equipment, terret rings and so on, recorded for the Celtic Art Database (Garrow 2008, 25) exhibit a more dense northerly distribution than the brooches (Map 6.5). This could relate to their later date but the distribution of coinage in LIA Britain corresponds geographically with the brooch evidence, although the numbers of coins are much higher than brooches (Garrow 2008, 24, Figure 2.6b). By combining the findspots of excavated brooches and other stray finds (Maps 6.1 and 6.2) with the PAS data (Map 6.3) we have a detailed enough map to be able to investigate temporal and regional differences.

## 6.3 Temporal changes to the distribution pattern

In this section we look at the changes in the distribution pattern over time from the Early to Middle Iron Age. We will also consider how the undated brooch types might fit into these patterns to add further evidence for dating these groups. This leads on to examination of the distribution of subtypes in order to explore regional diversity.

### 6.3.1 Early to Middle Iron Age

Across the two periods there are subtle changes in the distribution pattern with a more concentrated distribution of EIA brooches (Map 6.6) compared to more dispersed findspots of MIA types (Map 6.7). This temporal change is combined with increased density of finds per site (Chart 6.1). The brooches in Wales and England appear to be broadly contemporary whereas EIA types are almost completely unknown in Scotland (see below) and the few MIA brooches are focussed around the coast.

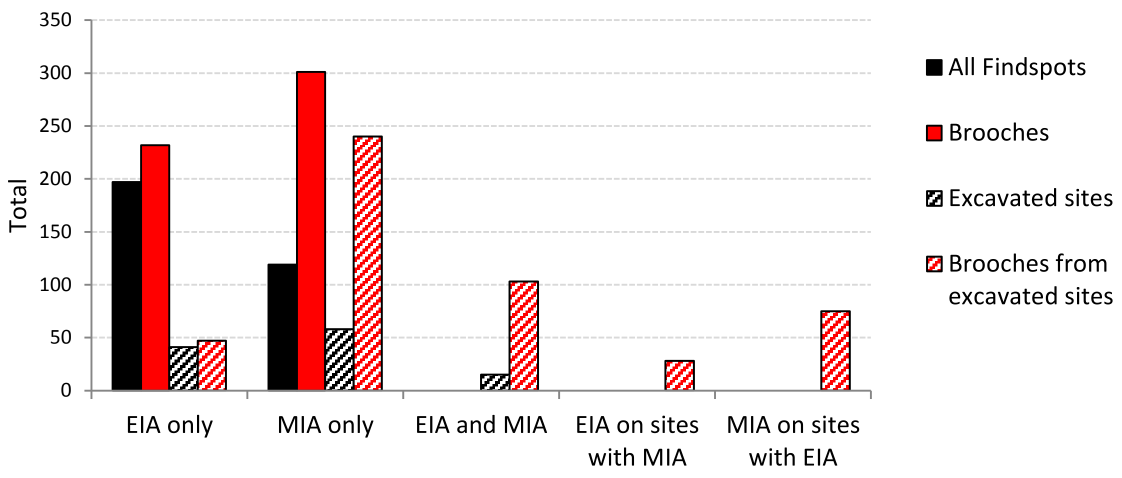



**Chart 6.1** Comparison of quantity of findspots and quantity of brooches.[12]

## 6.3.2 Early Iron Age

There are two main EIA types: 1A and 1B, the former generally deposited earlier than the latter (Chapter 4). The 1A brooches findspots are more dispersed than 1B (Map 6.8 and 6.9). They focus around central, southern, southeastern and western counties of England and around the edge of Wales. Few examples are known from eastern and northern counties, and only one from Scotland a 1A brooch [10197] from Teviotdale, Scottish Borders (Hunter 2009). Although the EIA brooches avoid the high regions as noted for the general EIA and MIA distribution (Map 1.1), the 1A brooches are also relatively infrequent finds in particularly low lying regions such as East Anglia, the fens, the wash and the Weald.

We see an explosion of findspots with the arrival of 1B style brooches (Map 6.9). 1B brooches make up about 30% of all the identifiable brooches. There is a definite bias towards southern and eastern areas with some spread northwards up the eastern side of England and into more central regions. Again a few are located round the edge of Wales and the southwestern coast. None have been found in Scotland.

[12] This chart compares only brooches of definite type per period and excludes provenances that are uncertain or unknown.

### 6.3.3 Middle Iron Age

The MIA brooches cover a broadly similar geographical area to EIA but the distribution is spread further west and north and the findspots are more dispersed (Map 6.7). Findspots are now dotted up the west coast including the islands of Scotland. Many of the MIA brooches are derived from excavated sites with few PAS finds. This means that fewer findspots of single MIA brooches are recorded than for EIA brooches. This may be a true reflection of changing deposition behaviour (Chapter 7). However the lack of PAS finds for this period may be a direct result of the preponderance of iron brooches in the MIA (Chapter 5) and the general avoidance of iron in metal detecting surveys (Chapter 1).

### 6.3.4 Comparison of EIA and MIA findspots

More MIA brooches are found at fewer findspots than EIA brooches (Chart 6.1). However more excavated sites contain only MIA brooches than EIA brooches. The total quantity of MIA brooches found in excavations is much higher than EIA. Only 15 excavated sites contain both EIA and MIA brooches and on those sites the MIA brooches are more abundant. Therefore we seem to have increased deposition at specific sites in the MIA than EIA. In most cases where more than one EIA brooch is found at a site that site also contains MIA types. This is not the case for MIA brooches where several sites yield large assemblages of only MIA brooches, particularly the Yorkshire Wold cemeteries (Chapter 7).

EIA brooches are more often recovered as stray finds than MIA brooches. The increased preference for iron in the MIA (Chapter 5) may account for the decrease in the number of findspots and stray brooches because this material is rarely collected by metal detectorists except on archaeological excavations (Chapter 1). Two MIA brooch types, 2B and 2L, include only bronze brooches, albeit with some iron elements (Chapter 3). Of these 75% are stray finds of which 60% were found by metal detecting. This could indicate the potential for more MIA iron brooch finds in unstratified contexts, but could also imply that 2B and 2L brooches were less often deposited in specific features or at sites that have been spared later damage by human activity or erosion by natural forces.

## 6.4 Regional diversity

### 6.4.1 Early Iron Age Regionality

#### 1A brooches

The majority of 1A brooches that can be assigned to a specific subgroup are the 1Aa brooches. There is no clear pattern to the distribution of definite 1Aa brooches (Map 6.10). Only three 1Ab brooches have been found: one in Gloucestershire [10425], one in Wiltshire [10432] and one possibly from Icklingham, Suffolk [10430]. The precision of this last findspot is uncertain (H&H 81) so the brooch has been excluded from the distribution map (Map 6.6). It is difficult to ascertain why the 1Ab brooches are so few. The 1Ab foot end is found on continental examples but then so too is the 1Aa foot (Chapter 3). With so many 1A brooches with missing feet it is not possible to tell if 1Ab brooches were actually more common.

#### 1B brooches

The 1B subtypes, on the other hand, show distinctive regional distribution (Maps 6.11, 6.12, 6.13). 1Ba brooches are focussed around Wessex, The Upper Thames valley, and the south coast with a few findspots on the border of East Anglia and in Lincolnshire. It appears that in his Type 1BaW Hull (H&H 99-100) was in fact identifying a general Wessex bias to the 1Ba brooches although the current distribution now shows this style was more widespread than previously thought. The temptation is to assume that the Wessex cluster represents the home of the 1Ba brooch and the fewer distant findspots could indicate trade or other contacts from this area. We must be cautious of the dominance of Wessex in the Iron Age archaeological record owing to the concentration of research and metal detecting activity in this area (Haselgrove *et al*. 2001, 23). It has been noted that many metal detectorists from southern Wales tend to search in Wiltshire as the latter area is perceived to be richer in finds than the former (Mark Lodwick, Wales FLO, pers. comm. 2011). This is reflected in the number of PAS finds from Wiltshire recorded at the National Museum of Wales. This focus on Wessex therefore increases the bias. It may only be counteracted through comparison to other subtypes.

The 1Bb brooches cover a much broader area with limited evidence for concentration in one region (Map 6.12). Few are found in central England and the most westerly and easterly areas. In fact 1B brooches of identifiable subtype are rare in Kent. Comparison of Map 6.9 with Maps 6.11-13 shows that the specific distribution of subtypes is problematic owing to the number of incomplete 1B brooches from eastern counties. Unfortunately many of these brooches are well abraded finds from ploughsoil.

The distinctive 1Bc brooch, with leaf-shaped bow, also has a more distinct distribution which favours the eastern counties (Map 6.13). No true 1Bc brooches are found west of a line that runs diagonally from North Lincolnshire southwest to Dorset. Four main concentrations of 1Bc findspots are evident and show some variations in the brooch shape:

- along the Sussex coast
    - tend to have higher arched bows
- along the Thames Valley
    - low and wide bows
- across southern East Anglia and Lincolnshire
    - narrower bows

These groups could represent regional products designed to produce a similar overall effect. The majority of 1Bc brooches are stray brooch finds and unstratified examples; stratified examples are known from settlements and hillforts, none from cemeteries.

### 6.4.2 Middle Iron Age Regionality

The MIA low-arched and straight bow brooches (Types 1C and 2A) are found at few locations (Maps 6.14 and 6.15). They are rare in the northwest and none have been found in the Midlands. The low-arched 1Ca brooches appear in Wessex and on the coasts of Scotland and Kent while the 2Aa follow a route up the east of England (Map 6.14). The straight bowed 1Cb brooches are very rare finds again on the Scottish coast and in Wessex (Map 6.15). The 2Ab brooches are clustered around Wessex and Wales with a further concentration in the Yorkshire Wolds and examples in Norfolk (Map 6.15).

Although the Scottish brooches best fit the 1C type they are distinctive from finds in England. The two from either side of the country are incredibly similar 1Ca bronze brooches: [10504] Castle Law and [10532] Rahoy, although both are incomplete. The other west coast brooch from Dunagoil is an iron example with a straight bow [10411] (1Cb). It is difficult to say when the 1C brooches arrived in Scotland owing to the longevity of these Iron Age sites.

The 2C involutes and bulbous decorated 2B types cover the same regions as the low-arched and straight bows but fill in many of the gaps between (Maps 6.16 and 6.17). The 2B brooches have a more central England focus (Map 6.16) while the 2Cs cover a much wider area (Map 6.17) although with considerable distance between most findspots, there is very little clustering. The occurrence of 2B brooches in the same locations as 2C brooches lends further support to the probability that these are MIA types.

## Involutes

In 1979 Ian Stead published a map of involuted brooches showing 15 findspots (1979, Figure 35). In 1995 Keith Parfitt published an updated distribution map (Parfitt 1995, 98, Figure 41) with 24 locations. My research reveals a further increase to 40 findspots, including the concentration of cemeteries in the Yorkshire Wolds (Map 6.17). This has also pushed the distribution further west across Wales, north into Scotland and filled in more of the central areas. In light of the increase over the past 34 years we cannot assume the current picture represents the full extent of their distribution. However, the spread still appears to be limited to mainland Britain with no known examples from Ireland or the continent.

The distribution now covers much of England and the edges of Wales, albeit sparsely, with one fragment known from western Scotland [10787]. They are most common, in both numbers of sites and quantity of brooches, in Yorkshire and Wales. They are rare in the Midlands, East Anglia and the South with the exception of Wessex and the large assemblage from Grandcourt Farm in Norfolk. They occasionally appear in graves in coastal parts of southwest England.

The involutes range from long and shallow curved bows (2Ca) to short and very tightly curved bows (2Cb) with various grades of length and curvature in between (Chapter 3). About a third of all involute findspots are exclusively 2Ca types and a third 2Cb types (Maps 6.19 and 6.20). The remainder are mixed or of unspecific sub-type. The 2Ca brooches are the most widespread subtype. The ambiguous very shallow curved borderline 2Ab_2Ca brooches cover as broad an area but more intermittently (Map 6.18). The 2Ca brooches have a greater presence in southern England than the other subtypes with brooches near the southern coast at Mill Hill [10004], Slonk Hill, Sussex [10677], [10678], [10679] and Maiden Castle [10941, 10942]. The 2Cb brooches push the distribution into Scotland with the recovery of the head of a 2Cb brooch at Luce Sands [10787] on the west coast. There is no visible clustering in any subtype in comparison to the overall 2C distribution.

## Plate and bulbous types

The distributions of the more poorly dated and undated MIA types show greater regional variation than the better dated 2A and 2C brooches. This may in part reflect the ease of categorising these brooches into smaller groups owing to their greater diversity; but this in itself distinguishes them from the involutes which exhibit a great deal of commonality across their distribution area. 2B brooches are focussed more towards central England than the 2A and 2C types (Map 6.16). 2E brooches are concentrated in Wessex (Map 6.21). The rare 2D brooches are only found in two disparate locations: Dorset and Yorkshire (Map 6.21). 2K brooches are only found in the southerly parts of western England and Wales (Map 6.22). 2L brooches have a Thames and eastern England focus (Map 6.22).

## 2B brooches

The 2Ba brooches are relatively evenly distributed across England (Map 6.23) but none have been found in Wales and the subtypes show regional differences. The decorated arched 2Ba1 brooches favour central England. 2Ba2 brooches are dotted around England from northwest to southwest and back up the east. None are found in the southeast and they are rare in central England. The 2Ba3 brooches have a central and eastern distribution with no examples from the west or north.

The 2Bb brooches show very specific clustering (Map 6.24). The few 2Bb1 brooches are found in the Yorkshire Wolds, Cambridgeshire and then further southwest in Wiltshire and Somerset. The cruciform plate types 2Bb2 and 2Bb3 are all focussed at the Wessex end of the Thames valley with one outlier at Grandcourt Farm in Norfolk. The latter is derived from an assemblage that is altogether unusual for its composition in a local context. It lies approximately 120 miles northeast of the main group. None of the 2Bb3 brooches are identical but there is a strong similarity in the overall shape as there is a similar overall design to involuted brooches. The unique 2Bb from Mill Hill [10002] is also physically distant from the rest of the subtype; perhaps its unusual form owes something to this distance from other comparable plate brooches.

The 2Bb distribution (Map 6.24) is similar to the 1Ba distribution (Map 6.11). 1Cb/2Ab brooches also show a similar clustering in the Wessex region but more distant findspots are recorded too (Map 6.15). While it might be tempting to suggest that the E-MIA people of eastern Britain distinguished themselves from those of the Wessex region in their brooches this is not confirmed by the distributions of other types. There also seems to be long distance contact across the more low lying parts of Britain from west to east and up around the Pennines on the basis of the brooches.

## 2L brooches

The 2L brooches are generally located along the Downs, across the Thames Valley and up towards Lincolnshire and Yorkshire (Map 6.22). As previously discussed (Chapter 3) 2L brooches may only be placed in the chronology on stylistic grounds. Features of these brooches from their hinged heads to the often reverted, or bulbous, foot ornamentation find their closest comparisons in the MIA styles such as the 2B brooches (Chapter 3). Comparison of the distribution of 2L brooches with EIA and MIA brooches raises two possibilities with regard to their dating.

1. The distribution of 2L brooches (Map 6.22) complements the distribution of 1B brooches so would not be out of place in this period and overlaps with the distribution limits of all the subtypes (Maps 6.11-6.13).
2. The distribution of 2L and 2K brooches fill in gaps in the distribution of MIA brooches (Map 6.14-17).

**If**

1. is supported this could place the earliest design of hinge features in the EIA: hinge forms that become a main feature of well-known MIA types like involutes.
2. is supported this would explain the lack of recognised MIA types in these regions, which have plenty of earlier and later brooch finds but a dearth of third to second century brooches.

On the typological evidence (Chapter 3) option 2 seems a more suitable outcome but the current evidence still leaves the issue open.

## 6.5 Distribution Analysis

The distribution pattern observed through the combined evidence of excavated data, metal detected finds, other stray finds and antiquarian collections (Map 1.1) shows a distinctive bias towards England with little evidence from Scotland and an emphasis on the periphery of Wales. High lying areas and mountainous regions are avoided such as the Pennines, the Yorkshire Dales, Exmoor and Dartmoor. This research has shown that our data are susceptible to the collection biases of the past and present. Areas where brooches are absent may not equate with an absence in the past but merely a lack of searching or collection in those areas. In contradiction, the distribution pattern for brooches is different from some and similar to other contemporary and Late Iron Age objects suggesting the pattern is not solely the result of collection biases.

Some regional styles are apparent, particularly in the MIA when choice of material also seems to have a regional emphasis. So 2B bronze brooches dominate the evidence along the Thames Valley and Home Counties while iron involuted 2C and straight bowed 2Ab brooches are preferred further north and west. Yet no region exhibits exclusive preference for one style or material. Some shapes are quite widely dispersed such at the 2Ba2 plate brooches with applied decoration. 2L brooches appear to be favoured in areas where other MIA brooches are rare. 2Bb plate brooches cluster around the Wessex region but comparable examples are known far to the northeast. The other 2Ba subtypes also show some clustering suggesting that the clearest evidence for regional distinctions is found in the more decorated brooches.

Comparison of the spatial distributions of specific types was carried out here with the aim of exploring regionality. A distinctive feature of the results is the general lack of regionality in the distribution of different types. If we compare each type to the overall distribution of all EIA and MIA brooch findspots we find they cover most of this region. This contrasts with the distribution of, for example, pottery types where comparatively small distribution regions may be identified. This may indicate that brooches were artefacts designed and used to bring communities together or to show connections between places. Alternatively it is merely a reflection of the classification of the brooches which has focussed on similarities whereas pottery specialists with their larger datasets might highlight differences. This research has brought together the EIA and MIA brooch evidence from the whole of Britain in order to understand this phenomenon across the British Isles. A side effect of this broad sweep approach may have been the glossing of regional characteristics that may come to light in future research.

The greater quantity of MIA brooches implies increased deposition of brooches in England, Wales and Scotland in this later period. It is rare to find EIA brooches at the same sites as MIA brooches. Although these earlier types are found at more locations they are less frequent on excavated sites and are often solitary brooches at each site. The MIA brooches are found at fewer sites but they tend to occur in higher frequencies at each site. Increased deposition may be translated as increased production, we certainly do not have the evidence to contradict this although it is always possible that earlier brooches were melted down to make new versions, especially considering the majority of the EIA brooches are bronze not iron.

The higher quantity of stray finds from the EIA compared to the MIA may be in part the result of less collection by detectorists of MIA iron brooches, given that iron brooches are more common than bronze in the MIA (Chapter 5, Charts 5.2 and 5.3). Yet simple 1B brooches are more often found through metal detecting than any other type and are comparatively rare at excavated sites. Are we seeing a difference in the importance of brooches over time or the importance of structured deposition? To answer this question we need to explore the types of sites where brooches have been found (Chapter 7) and the detailed contextual evidence (Chapter 8).

# Chapter 7 Deposition at Specific Sites

The location of brooches at different types of site can inform our understanding of the role and significance of these objects in EIA and MIA Britain. The potential for patterning in the distribution of brooches at specific sites has been explored by Haselgrove, who identified that they were recovered at a range of locales from 'high status settlements' to hillforts and 'wet places' (Haselgrove 1997, 54). This chapter examines the evidence for differences between the brooches at specific types of site and possible geographical variation. Compared to the preceding chapter, the PAS data are of little use here, as these finds tend not to be associated with identified sites, although it is worth keeping in mind the differences between the distribution of stray finds and those discussed here. More brooches are recorded from specific sites than are recorded from features. This chapter therefore focuses on associations with site-types only; feature-types will be examined in Chapter 8.

## 7.1 Organisation of the Evidence

Of the 716 EIA and MIA brooches only 446 may be ascribed to a particular type of site. These are usually finds recovered through excavation but do include some stray and metal detected finds from known sites. The excavated finds amount to 392 brooches. Stratigraphic information is only available for 298 brooches and of these only 200 relate to specific features. Of the brooches in specific features 137 were found, or were reported as found, in burials. 35 brooches have been found in watery locations such as rivers, streams and along the seashore although at least five of these were found in water deposited layers or old stream beds.

Close examination of the site evidence reveals the unique character of each individual Iron Age site. As explained in Chapter 1 settlements of different character are known from this period and the term hillfort incorporates a number of sites of varied size and content. However, the quantity of brooches from excavated sites is too low to enable comparison across myriad varieties of sites. In order to compare the evidence from a range of sites these have been grouped into six broad categories:

1. **Hillforts** – including all prominent fortified sites such as drystone forts in Scotland and promontory forts in Wales
2. **Settlements** – including all sites exhibiting occupation evidence in a bounded or unbounded area but with no visible substantial fortification features
3. **Ritual locales** – locations where the deposition evidence is not associated with evidence for occupation or fortification and instead has a highly ritualised character. This may be because the material is concentrated in a single area or feature, often exhibiting a preference for specific types of material. Sites interpreted as Roman temples or Iron Age sanctuaries will be discussed in this section as well as hoards: individual single deposits of large quantities of metalwork.
4. **Cemeteries** – all sites devoted solely to burials including solitary burials but not including burials within settlements or hillforts[13].
5. **Watery sites** – brooch finds from modern and ancient watercourses, usually rivers but also streams and along the coastal shoreline.
6. **LIA/R-B sites** – Late Iron Age and Romano-British sites that have yielded EIA and MIA brooches. These include farmsteads, villas, and cemeteries but exclude sites with definite evidence for EIA or MIA activity preceding LIA or R-B occupation.

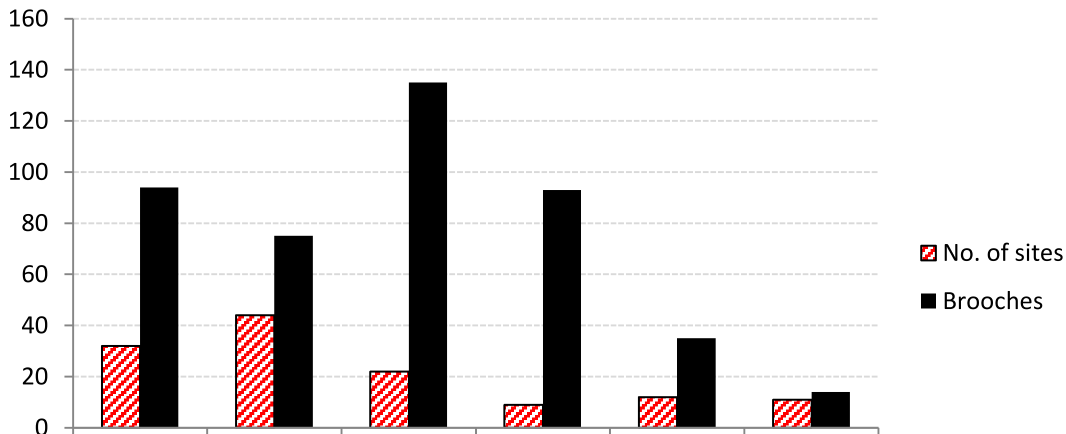
The site categories are based on modern categorisations of site type which tend to make a distinction between occupation sites, burial sites, dryland locations and finds in rivers and bogs although the detail of each classification varies between publications (e.g. Fitzpatrick 1984, Haselgrove 1997, and Hingley 2006). We cannot be certain that these divisions equate with how Iron Age people classified the places at which they deposited artefacts. Differences between the evidence from each category of site may lend some support to our divisions. Evidence for

[13] Although the only brooch found in a burial in a settlement will be compared with the other burial evidence in Chapter 8.

repeated use of these types of site, especially for deposition of similar materials, such as metalwork in rivers (e.g. Jope 1961, Stead 1985, James and Rigby 1997), suggests at least that there did exist a cognitive system of that meant different environments were interacted with in specific ways.

## 7.2 Quantitative and Spatial Variation

As illustrated in Chart 7.1 differences are immediately apparent in the quantity of brooches at each type of site. They are most numerous at cemeteries but only 22 cemeteries are known with brooches[14]. Hillforts and sites of a ritual character have produced similar quantities of brooches but from significantly more hillfort sites. More settlement sites contain brooches than any other type of site although they often contain only one brooch, as indicated by the lower overall quantity of brooches. Brooches of EIA and MIA type are least common in watery locations and are rare on Late Iron Age and Roman sites.




| | Hillfort | Settlement | Cemetery | Ritual | Watery | LIA_RB |
|---|---|---|---|---|---|---|
| No. of sites | 32 | 44 | 22 | 9 | 12 | 11 |
| Brooches | 94 | 75 | 135 | 93 | 35 | 14 |

**Chart 7.1** Quantity of EIA and MIA brooches by type of site[15].

[14] Two of which are estimated from the possible find of a burial with a brooch: Newnham Croft and Old Farm, Sawdon, Wykeham Moor.
[15] Charts 7.1–7.6 include both excavated data and stray finds from known sites. The Thames has been treated as four findspots: the City, East London, West London and upstream west of London.

### 7.2.1 Hillforts

The geographical distribution of types of site containing brooches is also found to differ (Maps 7.1 to 7.9). There is a western bias to the hillfort distribution (Map 7.1) that is emphasised by the quantity of brooches found at each hillfort (Map 7.2). Hillforts have a widespread distribution across England, Wales and Scotland (Brown 2009, 2-4) although the larger sites, over 1.4 hectares in area, are more common in the western zone (Map 7.3). Of the hillforts where EIA and MIA brooches are found, more than half are large scale and/or developed hillforts (Payne et al. 2006, 2). Promontory forts and vitrified forts account for a quarter of this category. EIA and MIA brooch deposition is therefore far more common at substantial and highly prominent Iron Age fort locations than at any other kind of hillfort.

The only excavated sites to contain MIA brooches in Scotland are all fortified sites located around the edge of the country. Although they are still rare finds at these sites. Their coastal location suggests possible external influence on the use of brooches in the region and an avoidance or lack of interest in brooches elsewhere in Scotland. We can say there appears to be a lack of interest in depositing brooches there but we cannot know for certain how many were used but never deposited in the region. We may only estimate their low popularity on the basis of the lack of finds.

### 7.2.2 Settlements

Settlement sites at which brooches have been found have a far more easterly distribution than hillforts (Map 7.4). In the Wessex area and along the southern coast greater quantities of brooches are found at individual settlements (Map 7.5). These brooches were found at a range of settlement types from open settlements, such as All Cannings Cross, to ditched enclosures, like Gussage All Saints (Cunliffe 2005, 247-250). A third are from bounded settlements, just under a quarter are from definite unenclosed settlements. In several locations we are dealing with an incomplete record of the settlement owing to limitations on the area available for excavation, as at the developer-led site at West of Blind Lane, Sevington, Kent

(Champion 2011, 188). The majority of settlement sites containing brooches are well populated locations consisting of a few or several households. Some of these sites are exceptionally densely occupied over a long period as at Gravelly Guy, Oxfordshire (Lambrick and Allen 2004, 103-156).

### 7.2.3 Cemeteries

The cemetery sites containing brooches are dominated by the numerous and dense burial sites of the Yorkshire Wolds (Maps 7.6 and 7.7). The remainder are widely dispersed and all in England. There is a preference for sites close to or at a short distance from the coast or major waterways. Aside from the Yorkshire cemeteries no other cemetery site in England contains more than five EIA/MIA brooches per site. Only one brooch has been found in a burial at a settlement site: Slonk Hill [10677]. All other brooches in burials appear to be from cemeteries. The records for Mount Batten indicate the two 2K brooches found here [10276 and 10277] were from burials within a cemetery (Cunliffe 1988, 63). The Newnham Croft burial has also been grouped with the cemeteries, although reference is only made to one grave (Fox 1923, 6) this is the only suitable site category in which to place this find. The antiquarian find from Old Farm, Sawdon [10534] is also recorded as possibly from a burial and has been grouped with the cemetery sites on the basis of its Yorkshire Wold location and the lack of association with settlement evidence.

In the vicinity of these cemeteries it is rare to find brooches at any other type of site. The deposition of brooches in formal burials in graves may have negated the need for depositing brooches in other features or sites in these regions. The east coast of Kent, to the south of the Wantsum channel is an exception to the rule. Here EIA and MIA brooches have been found in a cemetery at Mill Hill, Deal (Parfitt 1995), in the vicinity of a Roman temple at Worth (Parfitt 2000), residual in LIA and RB deposits at the East Wear Bay Roman villa (Parfitt 2012) and at two possible settlement sites Hartsdown Community Woodland, Margate (Perkins 1996) and West of Blind Lane, Sevington (Champion 2011). Although there appears to be limited continental influence on brooch manufacture across the period it is possible that continental ideas surrounding deposition behaviour could have had held sway in this region. If that were the case, though, one would expect to find more cemeteries and more brooches in cemeteries. The connections were clearly complex and are better discussed in relation to a range of objects and sites.

### 7.2.4 Ritual Locales and Watery locations

It has long been suspected that Iron Age brooches are amongst early objects curated and later deposited at Late Iron Age sanctuaries and Roman temples (e.g. Haselgrove 1997, 54). Although a number of EIA and MIA brooches have been found in the vicinity of later sanctuaries or temples only one is an actual stratified find: from a pit at Fison Way [10947] and this feature does not appear to directly relate to the sanctuary structure. Instead it seems more closely associated with earlier activity on the site. The sites grouped under ritual are very varied in character and tend to contain brooches of several periods. The only ritual site with several brooches of one period is Grandcourt Farm in Norfolk. Each individual site will be examined in detail below to explore the specific nature of the deposition.

The distribution of sites of a ritualised character (Map 7.8) provides an interesting comparison to the distribution of cemeteries (Map 7.7). The former appear to partially fill the gap between the northeastern and the southern cemeteries. The gaps are further decreased when we incorporate the evidence for brooch finds in watery locations (Map 7.9). The latter consist of rivers, streams and coastal shore finds. The context of these finds tells us only that the brooches have been recovered from the edge of or within water courses. The preponderance of metal finds in rivers and the comparative evidence of the distribution of the brooches with that of ritual and cemetery sites are indicative of a possible sacred aspect to their location in waterways but this is only speculation.

### 7.2.5 Late Iron Age and Romano British sites

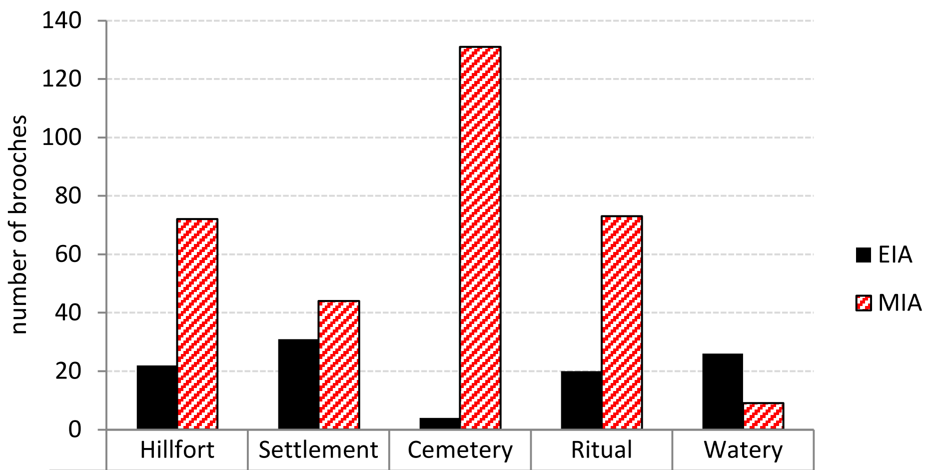
Very few brooches are found at LIA and/or RB sites that are not associated with sanctuaries or temples (Chart 7.1). The sites grouped here all have evidence of LIA and/or Roman occupation. Four are Roman villas (Chedworth, East Wear Bay, Fullerton and Thistleton), at least one of which definitely overlies Late Iron Age occupation (East Wear Bay, Folkestone; Parfitt 2012). The bow of a possible 1A brooch was found in a gravelly subsoil at the Late Iron Age cemetery at Westhampnett (Fitzpatrick 1997). The remainder are from LIA and RB settlements including one from Silchester, which is a Late Iron Age foundation. Some sites with overlying Roman occupation are grouped here under EIA or MIA settlements as excavations have revealed definite evidence of earlier occupation, for example the villas at Keston (Philp *et al.* 1991) and Stanwick (Neal 1989).

The geographical location of the brooches from LIA and RB sites is useful for our understanding of the distribution of brooch types examined in Chapter 6. However, they provide little information in terms of deposition beyond the possibility that some EIA and MIA brooches were curated, but their eroded condition suggests that they are instead disturbed from earlier deposits. Nine of the 16 brooches from LIA/RB sites are of 1B type, the most frequent type in the research database and the most common E-MIA brooch find. The brooches from LIA/RB sites are of more use for understanding the history of the sites at which they are found than for understanding EIA and MIA brooch deposition and are therefore excluded from further analysis in this chapter.

Regional deposition practices may affect the type of site at which brooches are found. The cemeteries, watery and ritual locales may be too few to confirm this variation but by their infrequency could also support the hypothesis. What is clear from the evidence is that the only sites with any quantity of brooches are devoted to the burial of human remains or the burial of objects.

## 7.3 Temporal Variation

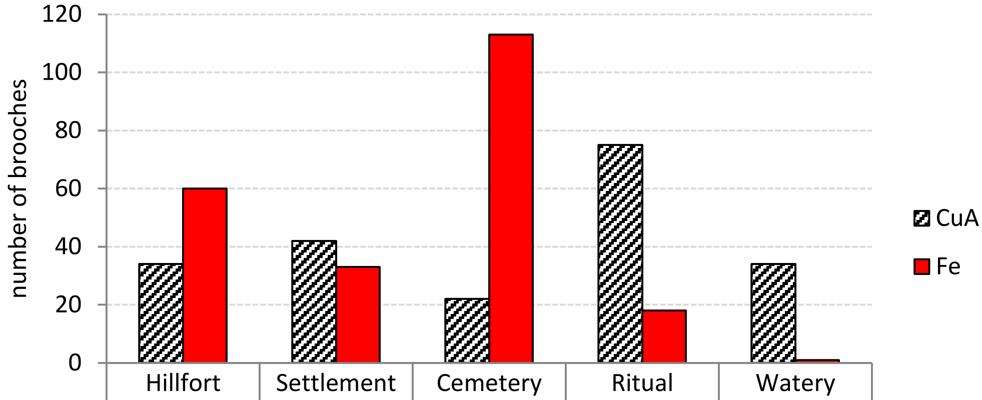
Haselgrove drew attention to the increase in the number of brooches from the Early to Middle Iron Age. He suggested this increase was less dramatic in relation to brooches from burials and wet places (Haselgrove 1997, 54). The database compiled for this research (Appendix 1) shows that although there is a general increase in numbers across the two periods the quantities at each type of site show considerable variety (Chart 7.2). Comparison of brooches from hillforts, settlements, cemeteries, ritual locales and watery sites show differences between the five types of site. At four out of the five types the quantity of brooches increases contra to Haselgrove's results (ibid). The most dramatic increase is seen in the number of brooches at cemeteries, from 4 to 131. Over three times as many MIA than EIA brooches are found at hillforts and ritual sites while at settlements <1.5 times as many MIA brooches are found. In contrast the number of brooches deposited in watery places decreases by more than half over the same period.




| | Hillfort | Settlement | Cemetery | Ritual | Watery |
|---|---|---|---|---|---|
| EIA | 22 | 31 | 4 | 20 | 26 |
| MIA | 72 | 44 | 131 | 73 | 9 |

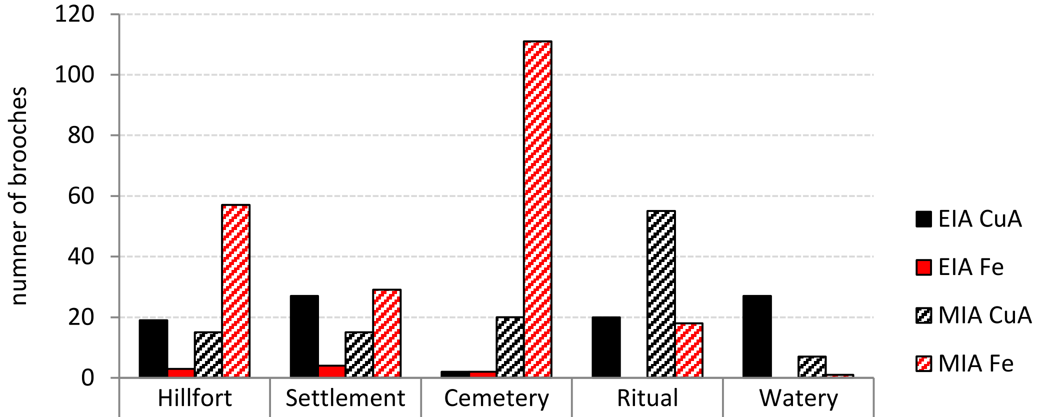
**Chart 7.2** Comparison of quantity of EIA and MIA brooches by site type

These changes may be compared with the differences in material between each type of site (Chart 7.3). Bronze brooches are more commonly found at settlements, ritual sites and watery places than iron brooches. Iron brooches are more common than bronze brooches at hillforts and cemeteries. The smaller increase in the quantity of MIA brooches at settlements reflects a preference for bronze brooches at settlements leading, perhaps, to a decline in their incidence in the MIA when overall there is a shift to increased preference for iron brooches in the MIA.




| | Hillfort | Settlement | Cemetery | Ritual | Watery |
|---|---|---|---|---|---|
| CuA | 34 | 42 | 22 | 75 | 34 |
| Fe | 60 | 33 | 113 | 18 | 1 |

**Chart 7.3** Comparison of presence of bronze (CuA) and iron (Fe) brooches and type of site.




| | Hillfort | Settlement | Cemetery | Ritual | Watery |
|---|---|---|---|---|---|
| EIA CuA | 19 | 27 | 2 | 20 | 27 |
| EIA Fe | 3 | 4 | 2 | 0 | 0 |
| MIA CuA | 15 | 15 | 20 | 55 | 7 |
| MIA Fe | 57 | 29 | 111 | 18 | 1 |

**Chart 7.4** Comparison of presence of bronze (CuA) and iron (Fe) brooches by period and type of site.

The picture becomes more complicated when we separate brooch materials by period (Chart 7.4). Here we see that the quantity of bronze brooches at hillforts is fairly consistent across the two periods whereas the quantity of iron brooches increases dramatically for MIA brooches. At settlements we end up with similar quantities of iron MIA brooches as bronze EIA although bronze brooches still account for over a third of the MIA brooches. At cemeteries not only are there more MIA brooches but more in both materials, albeit exceptionally more iron brooches. MIA brooches are more frequent at ritual sites but these show a strong preference for bronze. 16 out of the 18 iron brooches at ritual sites were found at Cold Kitchen Hill. This site could also be classified as a settlement, which may account for the presence of iron brooches. This will be examined further below. The watery sites show a preference for EIA brooches but the few MIA finds tend to be bronze.

These results raise four main questions:

1. Are iron brooches less likely to be recognised at some types of site than others?
2. Do different materials hold a more exalted position for brooches?
3. Are iron brooches preferred for certain types of deposition and bronze for others?
4. Are the temporal and material differences in brooch deposition a result of varying regional deposition behaviour?

In answer to these questions:

1. Are iron brooches less likely to be recognised at some types of site than others?

   The chance of iron brooches surviving in watery places is much lower than for bronze brooches. The only iron brooch found in such a location [10875] was discovered in a silted up palaeochannel at Market Deeping where it had been preserved by soil deposits. Although we cannot rely on the evidence of only one example it does indicate we may be missing more iron finds from rivers than we will ever know. At cemeteries the rate of recovery of iron objects is likely to be higher owing to differences in excavation technique for human remains and pit or ditch deposits. The Wetwang village brooch [10976] is a classic example. The brooch was not identified during excavation on site but soil blocks were lifted for careful excavation in the laboratory afterwards. It was only during the laboratory work that this small iron involute was picked out from a soil block (Hill 2001). Excavation strategy and taphonomic processes could be to blame for the lower quantity of iron brooches from settlements, ambiguous ritual sites and watery places. However, this does not account for the lack of bronze brooches in burials nor their lower quantity at hillforts. It also does not explain why sites like Grandcourt Farm contained a plethora of minute bronze and amber objects and many ceramic vessels but few iron finds (Adams *et al.* forthcoming).

2. Do different materials hold a more exalted position for brooches?

   We cannot know for certain which materials were more highly prized for brooches in the Iron Age. As shown in Chapter 5 bronze required raw materials from further afield, but several iron brooches incorporate bronze elements and are decorated with rare applied materials like coral. Yet some of the most elaborately decorated brooches are made from bronze. We are also at risk of over-interpreting the Iron Age sites by suggesting hillforts are more prestigious locations than other kinds of settlement. The lack of brooches in many burials in Yorkshire and beyond does not mean those burials are less prestigious, in fact brooches are rare in some of the most lavishly furnished graves including the majority of burials containing wheeled vehicles (Giles 2012).

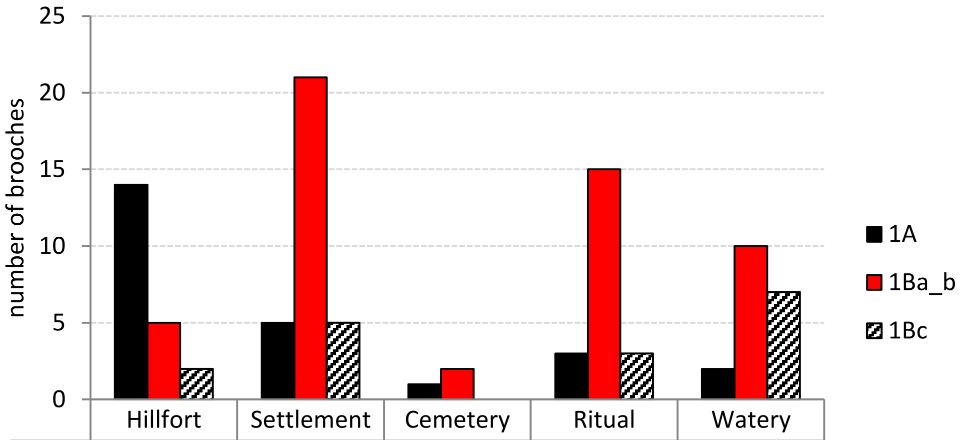
3. Are iron brooches preferred for certain types of deposition and bronze for others?

   Iron brooches seem to be preferred for inclusion in burials whereas bronze ones are preferred for deposition at sites where the burial of the material is of visible significance, the sites I have here termed 'ritual locales'. In burials outside the Yorkshire Wolds, bronze brooches are almost as common as iron (eight bronze to nine iron) and both often occur at the same site. The dominance of iron in the cemetery record could be a reflection of a local preference for iron brooches in Yorkshire.

4. Are the temporal and material differences in brooch deposition a result of varying regional deposition behaviour?

   If we return to the maps from Chapter 5 illustrating the distribution of bronze and iron brooches (Maps 5.2-5.7) and compare these with Maps 7.1-7.9 it is apparent that many of the areas where hillforts and cemeteries dominate the brooch record are also where iron brooches are found. The bronze distribution has a slightly more easterly bias than iron, comparable to the distribution of brooches at settlements, ritual sites and river finds. It does seem possible that iron brooches were preferred in regions where brooch deposition tended to occur more at hillforts and cemeteries than at settlements, ritual sites and watery places, with the latter three site types and regions instead preferred for bronze brooches. However we are at risk of circularity because one set of maps is the product of the other. There is a typological element to this argument as well where certain brooch types are more or less common at certain types of site. This will be examined further below.

## 7.3.1 Typological Differences




| | Hillfort | Settlement | Cemetery | Ritual | Watery |
|---|---|---|---|---|---|
| 1A | 14 | 5 | 1 | 3 | 2 |
| 1Ba_b | 5 | 21 | 2 | 15 | 10 |
| 1Bc | 2 | 5 | 0 | 3 | 7 |

**Chart 7.5** Distribution of EIA types of brooches at types of EIA and MIA sites.

## Early Iron Age types

1A brooches are more common at hillforts than any other type of site (Chart 7.5). They are also the most frequent EIA type found at hillforts. At other types of site and in stray finds too, 1B brooches are more common. 1Bc are relatively infrequent finds except in watery places. Seven have been found in watery locations: five in the Thames, one off the coast at Bognor Regis and one in a stream at Woodcock Hall, Saham Toney [10635]. The type is also well recorded as stray finds (Chapters 3 and 6) but none have been found in a funerary context, returning us to the possibility of regional differences in brooch deposition. As described above cemeteries and finds in watery sites present a very different distribution. 1Bc brooches are also focused towards the east and south of the country (Chapter

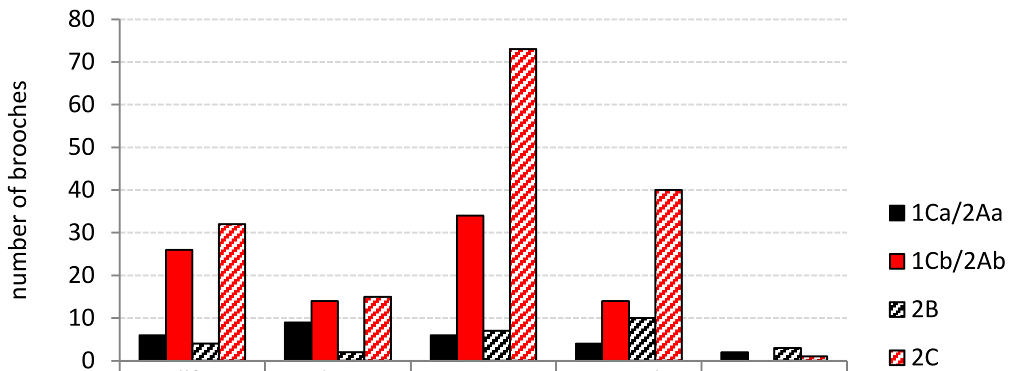
6). They are therefore less favoured in the dominant hillfort distribution corresponding with their absence from all but two hillforts: Balksbury Camp, Hampshire [10628] and Maiden Castle [10496].

The relative lack of 1A brooches at other types of site may be a reflection of the focus of settlement and control at hillfort locations in the EIA (Cunliffe 2005, 590). 1A brooches are the least common EIA type and have a low frequency in comparison to most MIA types too (Chapter 3). It is rare for more than one 1A brooch to be found per site (Chapter 6). They are also possibly the earliest brooches to appear in Britain (Chapter 4). All these factors suggest 1A brooches would have been prized and distinctive possessions.

1Ba and 1Bb brooches are the most frequent EIA type at the majority of sites especially settlements, ritual sites and watery locales. They have been grouped together here as many examples are damaged at the foot end so the exact subtype cannot be identified. 1B brooches are the most common EIA and MIA type to be found in England and Wales and they are frequent finds on the PAS database (Chapter 3 and 6). The technical and dating evidence suggests these are the first definite locally produced type although it is possible many 1A brooches could have been made in Britain. They represent a major uptake in brooch use across the southern part of the British Isles. Their frequency in settlements may be indicative of their general frequency. They are found in almost every type of context that contains brooches (see below) and may have been the only type of brooch ever seen by most people in Early and Middle Iron Age Britain.

## Middle Iron Age types

Chart 7.6 details the distribution of MIA brooch types across the different types of site. Where more MIA brooches are found, more iron brooches are also found with the exception of the ritual locales. This is a reflection of the increased use of iron for brooches in this period. The preference for bronze at ritual locales will be discussed further below in relation to those sites.




| | Hillfort | Settlement | Cemetery | Ritual | Watery |
|---|---|---|---|---|---|
| 1Ca/2Aa | 6 | 9 | 6 | 4 | 2 |
| 1Cb/2Ab | 26 | 14 | 34 | 14 | 0 |
| 2B | 4 | 2 | 7 | 10 | 3 |
| 2C | 32 | 15 | 73 | 40 | 1 |

**Chart 7.6** Distribution of major MIA types of brooches at types of EIA and MIA sites. All examples of Types 2D-2L are exceptionally infrequent at any type of site (3 or less per site) so have been excluded from the chart.

Involuted 2C brooches are the most popular MIA type at cemeteries and ritual locales. Only at settlements are they as frequent as the straight bowed 1Cb/2Ab brooches while there is little difference between the quantities from hillforts. Their great frequency in cemeteries might indicate an increase in burials with brooches through the MIA towards the LIA. As brooches become more popular, at least in excavated contexts, the choice of deposition site appears to shift towards the more distinctive locations. Fewer hillforts were in use during the MIA than the EIA (Cunliffe 2005, 388), yet more brooches are deposited at those sites during the MIA. Deposition at settlements is more frequent overall but no specific type dominates.

For individual types the rate of deposition at settlements changes little over the EIA and MIA. At the same time as we see increased numbers of more decorated brooches such as the 2B type, we also find more brooches deposited in a ritualised manner in cemeteries and at locations of focussed metalwork deposition. Therefore, although brooches appear to become more common in the MIA they still held a somewhat exalted position in the sphere of hand-crafted objects. The production costs in terms of materials, skills and manufacturing time, and the deposition contexts suggest that despite increased frequency they were still prestigious objects.

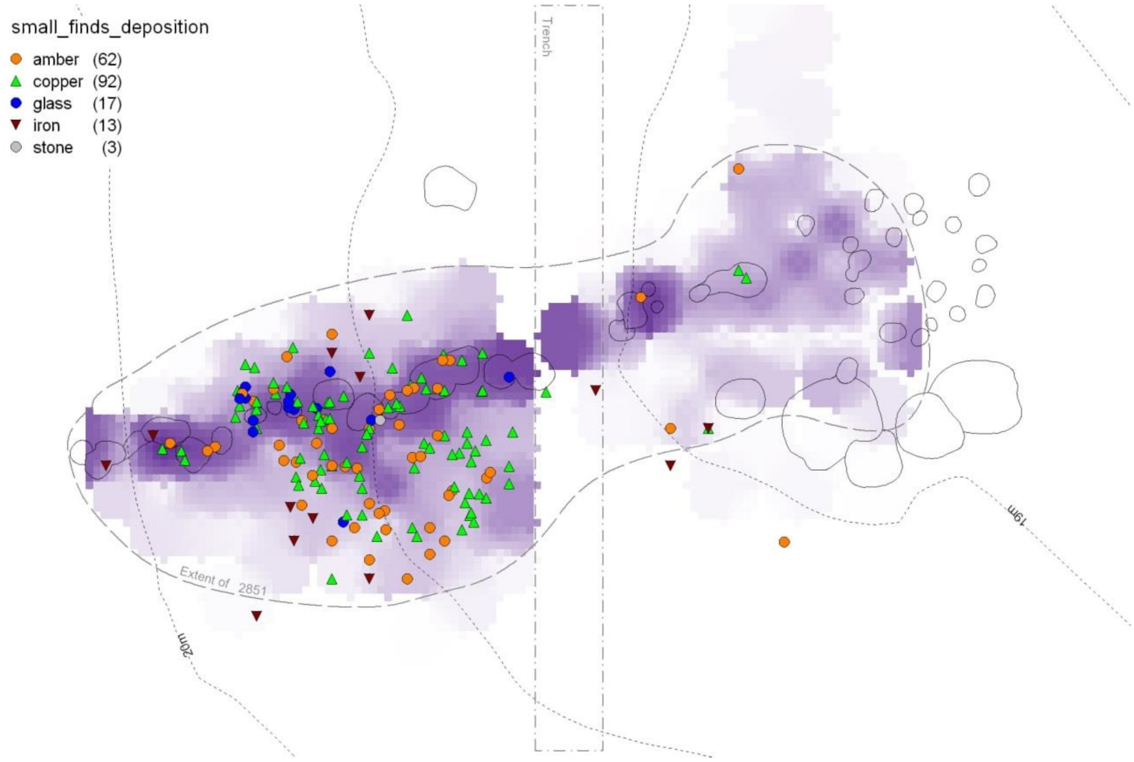
## 7.4 The Question of Ritualised Deposition

Very few brooches from watery places and ritual locales are associated with any stratigraphic information and so are of no benefit to the discussion in Chapter 8. However, these sites do exhibit definite patterning in terms of spatial location, brooch types and metals as shown above. The following section explores these individual sites to explore the deposition practices that could have led to the brooches being found there.

### 7.4.1 Brooches at Ritual Locales

Nine sites have been grouped as ritual locales and a further 14 as watery sites. The sites grouped in this manner are distinguished from settlements because they show no visible sign of settlement activity in terms of structures or deposits; from hillforts because they are generally unbounded locations with none of the defensive or occupation characteristics of such sites (although they may be in prominent locations in the landscape); and from cemeteries because they tend not to contain any surviving evidence for human burial, neither cremation nor inhumation. They are also distinguished by a tendency towards above average quantities of brooch finds. These are the sites that have elsewhere been described as: sanctuaries, shrines and temples; natural sites: caves, wetland, rivers; dryland hoards; metalwork hoards; founder's hoards; watery environments; votive offerings (e.g. Fitzpatrick 1984, Haselgrove 1997, Hunter 1997, Hingley 2006). However, what brings these sites together is also what distinguishes them from one another: a uniqueness of deposition activity. The unusual nature of all these sites means it is necessary to discuss each one individually in order to draw conclusions about the meaning of brooch deposition at these sites.

**Figure 7.1** Plan of the distribution of small finds at Grandcourt Farm, Middleton, Norfolk. (Courtesy of APS Archaeology). The intensity of the purple colouring equates to the density of ceramics.




## Grandcourt Farm, Middleton, Norfolk

Grandcourt Farm is the only site of a possible ritual character where all the metalwork is of MIA type. The site yielded 38 copper alloy bow brooches plus a plate brooch, 22 penannular brooches, glass beads, amber objects, two early Kentish potin coins and other fragmentary copper alloy and iron objects. These were found in an amorphous spread of material roughly overlying a line of pits within a natural gulley down the side of a natural promontory. Although the midden-like material overlying the row of pits contained sherds of vessels matching the fabric of the complete pots found in the pits, no direct association was identified between this deposit and the complete vessels below. The brooches are mostly straight bowed and involuted, plus a single 2Bb3 plate brooch. The spread out nature of the small finds (Figure 7.1) creates the impression that they were scattered across the area rather than deposited as a confined hoard of objects.

Stratigraphic information does not indicate whether any time elapsed between the depositions of the different objects. There is visible consistency in the types and metallic composition of the bronze brooches indicating contemporaneity. However the variety of springs and hinges found here (Chapter 3) on the same types of brooch could reflect different dates of manufacture or the products of different metalworkers. The deposit might represent an accumulation of dress items over time or a single episode of deposition perhaps the coming together of a number people with their own accessories to include them in this mass deposit. In either case each object could represent an individual and their deposition together represents that the individual belonged to this group.

## Batheaston, Avon

Only one brooch assemblage has been described as a hoard: Batheaston (with 12 brooches) yet at least two further sites have produced such considerable quantities of brooches that the title of hoard could apply to them: Grandcourt Farm, 39 brooches; Cold Kitchen Hill, 28 brooches. The only other sites with anywhere near these quantities are the Yorkshire cemeteries. The Batheaston find is believed to have been found through metal detecting in one location, but the exact circumstances are unknown (Stead 1998, 120-2). The finds may have been grouped in two hoards but again this cannot be confirmed. As well as the 12 bow brooches, there were copper alloy objects of Late Bronze Age and Iron Age type, including miniature weaponry and numerous pins. The assemblage also contains several penannular brooches including Romano British types (A. Booth pers. comm. 2013). A further object appears to be a practice piece for making brooch springs (Chapter 5).

The range of material purporting to come from Batheaston and the similarity in the metallic composition (Chapter 5) could indicate an association with metalworking. This collection of artefacts may be compared with the material in the smaller so-called Founder's hoard from Whitelot Bottom, Portslade, West Sussex. This contained a ring-headed and swan-necked pin, bronze spearhead and socketed axe and other small bronzes including a copper alloy EIA brooch [10169] of unspecific type. To suggest the objects are merely the accumulated material of a metalworker is to oversimplify the processes that led to the accumulation and deposition of this material. The combination of material is reminiscent of both the possible Roman temple sites and the finds along the Flag Fen post alignment described below. The presence of miniature Bronze Age chisels and axes in an assemblage of Iron Age, and possibly Roman, artefacts suggests extensive curation of the objects if they were all deposited at the same time. Alternatively the finds could indicate reuse of the site for centuries perhaps owing to sacred associations; associations that may have altered or been manipulated over time but still retain a special nature.

The contents of the hoard(s) can be divided into two main groups: tools/weapons of Bronze Age type often in miniature, and dress accessories of generally Iron Age type. A possible miniature (BM 1989,0601.21) wheel is allocated to the latter group on the basis of evidence for such objects being attached to clothing and even brooches for example at Stradonice (Kiernan 2009, 13-16). The latter group is therefore reminiscent of the deposition at Grandcourt Farm, and the sanctuary or temple sites described below such as Middle Hill. Stead (1998) and Hingley (2009) have both examined the presence of Bronze Age objects including miniatures in Iron Age contexts. Hingley links the deposition of Bronze Age objects in Iron Age contexts with commemoration of place although he points out the probability that one interpretation does not fit all occurrences (Hingley 2009, 157-8). He also highlights the possibility that the miniatures of Bronze Age objects were made in the Iron Age (Ibid, 150). The Batheaston material could therefore still be the product of a workshop or group who relied on particular metalworkers to produce their pins, brooches, miniature objects and so on. Sadly, the lack of contextual information limits the possibility of confirming or denying these hypotheses through the archaeological evidence.

**Cold Kitchen Hill, Brixton Deverill, Wiltshire**

Not one of the 28 brooches of Hallstatt EIA and MIA type from Cold Kitchen Hill is accompanied by contextual information and all must be treated as unstratified. The site is known for its Roman temple and Iron Age settlement (Kivell 1926 and Fox 1927). All other sites of ritual character contain only bronze EIA and MIA brooches. The Cold Kitchen Hill collection includes both bronze and iron examples. One may speculate whether the iron brooches were derived from the settlement and the bronzes could have been associated with a precursor to the Roman temple but no evidence is available to support such arguments. The quantity of brooches is extremely unusual for a settlement site. Perhaps this hillside was also an identifiable landscape providing a focus for the deposition of objects connecting individuals with a communal association with the place (Schama 1995, Campbell 2006). Sadly the evidence is so limited that we may only speculate whether the Roman temple developed an earlier sacred ritual function of the site or built over an area of dense settlement activity. This site is a cautionary tale in attempting to separate the sacred and profane in Iron Age evidence. Elsewhere it has been argued that ritualised deposition occurs at the same sites as general subsistence evidence (e.g. Hill 1995a). We should then resist the urge to separate the two except that some sites did exist that were of a very specific character like Grandcourt Farm.

### Harborough Cave, Derbyshire

Harborough Cave too shows the difficulty in segregating different classes of evidence. Only one MIA brooch was found [10412]. This bronze, coral decorated 2Ba1 was excavated from a deposit within the cave in 1907 (Smith 1909). Other finds included Iron Age items relating to fabric production including spindle whorls, weaving combs and needles, as well as a possible bridle ring and Roman brooches (ibid). The cave apparently contained the remains of several hearths (Storrs Fox 1909, 131-134). The presence of hearths indicates possible occupation within the cave, which may have been associated with production, hence the aforementioned tools. However, the thick artefact rich deposits could also indicate repeated visits to the site to place remains there over a long period of time. Through his examination of the Covesea deposits in Moray, Hunter noted the possible ritual use of the cave (Hunter 1997, 119). Hunter proposes that other caves might too have had a ritual function which could include the 'burning of offerings' (ibid). Perhaps the proposed hearths at Harborough cave had such a function. It is a curious site that is difficult to interpret from the published records but the single brooch find in a site with Roman brooches positions the evidence closer to that of the Roman and possible Iron Age sanctuary sites discussed below.

## Fison Way, Thetford, Norfolk

The Fison Way site also cuts across categories. This Late Iron Age sanctuary contained burials, enclosures and evidence for manufacture but no apparent sign of settlement. An iron 2Ca brooch [10947] was found here in a pit. The pit was isolated from all other activity in the sanctuary period to which it has been assigned but it is close to the earlier manufacturing activity. The brooch does not appear to be directly associated with any of the proposed spiritual rituals that took place at this site. This raises the possibility that activities at a site might take on a ritual character over time possibly in contrast or in relation to their earlier use. The special nature of craftwork was touched upon in Chapter 5. The role of metalworkers or potters in transforming their raw materials into objects dramatically different both visually and physically from the source material may have set their activities apart. The separation of smelting activity from settlement sites reminds us of the distinction between the processes of daily life and this dangerous, transformative task.

## Middle Hill, Woodeaton, Oxfordshire

Numerous bronze objects were recovered from the Romano-Celtic temple at Middle Hill, Woodeaton (Goodchild and Kirk 1954). A number were collected as surface finds in the fields in the late 19$^{th}$ and early 20$^{th}$ centuries leading to targeted excavation in 1952. Many of the finds were brooches but mostly of first century AD date or later. The temple structure dates to the Roman period. No Iron Age features were found below the temple but a dark deposit containing small sherds of Iron Age pot and some animal bones was cut by the temple foundation features. The stratigraphic evidence does not support the suggestion of an Iron Age sanctuary at this site but the artefactual evidence and other earthworks in the vicinity imply occupation in the area throughout the first millennium BC. The presence of nine Middle Iron Age brooches is unusual for a settlement. It has been suggested that the site had a productive or even industrial role although this would not necessarily account for the large number of copper alloy objects since such a role would suggest the objects were distributed from this site not retained here.

Again the evidence for either an earlier ritual role or deposition for curated objects is inconclusive.

## Noah's Ark, Frilford, Oxfordshire and Worth, Kent

Frilford and Worth are also Roman temple sites with scattered earlier evidence. A 2Ca involuted brooch [10558] was found unstratified at Frilford. Two 1A copper alloy brooches [10269] and [10615] were found in the vicinity of the Worth temple, one excavated from a deposit of unspecific character, the other metal detected in ploughsoil. The distribution of scattered finds at Worth show intense Late Iron Age deposition in the vicinity, particularly in the form of coins, but a general lack of earlier evidence (Klein 1928; HER Ref: TR35NW27). Are these incomplete brooches merely evidence of disturbance of unspecific earlier Iron Age activity in the area or do they hint at reuse of earlier objects at these later sanctuary sites? The absence of a single EIA or MIA brooch from any stratified context at a LIA or RB site of a sacred character lends support to the probability their appearance in these locations is unrelated to the later rituals.

The evidence here combined with that from Middle Hill and Cold Kitchen Hill lends little support to assumptions that these Roman temples superseded Iron Age sanctuaries, at least none as early as the MIA. Whether the sites at Middle Hill and perhaps part of Cold Kitchen Hill were once the scenes of mass brooch deposition in association with natural features in the MIA can only be speculated upon. We must not rule out the possibility that the Woodeaton brooches were later deposits of curated items but again this cannot be confirmed stratigraphically.

For the hoard sites the metallic nature of the object or perhaps its personal associations could have been more important than their specific function as an item of dress. At Grandcourt Farm, both bow and penannular brooches appear to be intentional deposits; especially considering the relatively complete condition of many examples. All MIA brooch types are represented across these sites. Only at Cold Kitchen Hill and Middle Hill do we see a broad representation of EIA and MIA types from 1B to 2Cb at the former, and 1A to 2Cb at the latter. Cruciform 2Bb brooches were found both at Batheaston and Grandcourt Farm, albeit a 2Bb2 bulbous form at Batheaston [10033] and a flatter 2Bb3 type at Grandcourt [10650]. Such brooch finds were rare before 1995 and the few known examples tend to be metal detector finds (Chapter 3). In fact several unique or rare types are associated with ritualised deposition: the crescent headed low arched 2Bb1 plate brooch from Flag Fen [10808], and the 2Ld brooch [10297] and the coral inlaid 2Ba1 [10399] both from Woodeaton. Hull and Hawkes suggested the 2L brooches (their Group L) were in fact made for the purpose of ritual deposition rather than use (H&H 61). This argument seems to have arisen from the often incomplete condition of this style of brooch. However, the condition seems more a result of taphonomic processes than design and manufacture. Also, apart possibly from Woodeaton, none have been found in ritual contexts.

## Flag Fen

At Flag Fen in Cambridgeshire three brooches were found in one area of the Bronze and Iron Age post alignment at the Power Station site (Pryor 2001, 299). The post alignment followed the shoreline then turned a corner and headed direct to the Flag Fen platform where the majority of the Bronze Age metalwork was recovered (Pryor 2006). The brooches are all slightly unusual. The bronze 1Bb [10632] was inlaid with tin along the top of the bow, the only known brooch decorated with tin inlay in this period (Chapter 5). The bronze 2Bb1 [10808] is of a more curved shape in plan than others of the type. The final brooch is a fragment possibly of an arched decorated 2Ba brooch [10972] but it is difficult to be certain from this small fragment. Bronze pins and bronze rings were also prolific finds along this particular section of the post alignment (Pryor 2001, 298 Figure 10.17 and 10.18).

If these are treated as finds from a watery site then they are comparable to the range of metalwork recovered from the Thames. They are included in the ritual locale category here because of the known nature of the deposition at this site in comparison to the less precisely recorded Thames finds. The site also provides a possible connection between the dryland deposition and the watery sites. Furthermore the quantity of dress related bronzes in one location reflects the character of the deposits at many of the ritual locales described here. Pryor proposed that each metal object is an indicator of an individual and partitions on the site might group together the deposits of one genealogical group (Pryor 2005, 56). He was referring in particular to the Bronze Age metalwork deposited at the Flag Fen platform but this theory could be extended to incorporate the later metalwork found along the post alignment.

### 7.4.2 Brooches in Watery Places

Brooch finds in rivers are rare all over Britain except in the Thames. The EIA and MIA brooches from the Thames account for 76% of all brooches recovered from watery environments. These were recovered from four main stretches of the river: 1) The City of London, 2) West London, 3) Upstream West of London in the Home Counties and 4) East London. Of the remaining nine sites two are rivers: the Medway at Aylesford, Kent [10288], and the Kennet at Reading, Berkshire [10459]. Two are from minor waterways in the vicinity to the southeast and southwest of The Wash [10485, 10616, 10635] and [10875], one was found in Finlaggan loch, on Islay [10990] and the remainder are from the coastal shore at Meols, Cheshire [10618], Bognor Regis, Sussex [10858] and Luce Sands, Dumfries and Galloway [10787].

A recent metal detected find from Chenies in Buckinghamshire [10810] brings to light the variation between deposition context and recovery context. Here the brooch was found eroding from the riverbank. The brooch is, therefore, a dryland find but if it had been recovered later in the erosion process it might have been defined as a deposition in a watery environment. Compare this with the brooch found in excavations at Runnymede Bridge [10161]: this was found in a stratified layer that is thought to be the accumulation of river silts, the result of movement of the course of the Thames at this point (Needham 2000, 77). The brooch, therefore, may originally have been deposited in the river but has now been recovered from dryland or it was a dryland deposit eroded into the river silts that later accumulated at this site. Another, a 2La brooch [10791] found on the Thames foreshore, was discovered where lumps of peat were seen eroding from the southern foreshore 'at about same level' (Cotton and Merriman 1991, 51). In this case the brooch could originally have been deposited in wet boggy land near but not in the river. The coastal finds are also problematic in the sense of being located in erosion zones that could mean they were originally dryland deposits. Yates and Bradley (2010) have explored the issue of the deposition context for finds in watery locations. They note, for example, that the Gundestrup cauldron was placed on top of the Iron Age bog when the ground was dry (ibid, 406). This is one a several cases where the deposition is related to watery places but is not directly within the water (ibid, 413).

The dominance of the Thames in this group warrants further consideration. The Thames is known for the impressive Bronze Age to Late Iron Age metalwork found therein; for example Bronze Age and Iron Age swords, the Battersea shield, the Thames spearhead and the horned helmet (Jope 1961; James and Rigby 1997; Stead 1985). There is some uncertainty over the provenance of several nineteenth century metal finds apparently from the Thames (Fitzpatrick 1984, 181) but the continued recovery of brooches along the western route of this waterway including the aforementioned [10161] Runnymede Bridge and PAS find [10844] support the probability that earlier founds were discovered along this river. Swords also are lacking in rivers in rivers in northern Britain compared to the south (Stead 2006).

Little is known about Iron Age activity within the limits of the present day City of London but towards the outskirts of London and into the upper Thames valley Iron Age settlements are frequent and substantial such as at Gravelly Guy (Lambrick and Allen 2004). Brooches have been recovered from these settlements but brooch finds in burials are entirely absent from this region. The deposition of brooches in the river here could have occurred in lieu of inhumation burials with the brooch as a personal item representing the deceased individual. Bradley and Gordon (1988, 508) recorded the Iron Age metalwork finds from the Thames showing they focussed upon the stretch from Richmond downstream to Battersea. This stretch is also the source of the majority of human skulls found along the course of the river (ibid, 504), indicating a possible connection between deposition of bodily and material remains within this part of the river.

Iron brooches are less likely to be retrieved from swiftly flowing rivers which could account for the general lack of MIA types but a few examples are found both of the period and of iron. Alternatively the greater quantity of EIA brooches could indicate a shift in behaviour over time with fewer brooches being cast into rivers in the later part of the Middle Iron Age. This coincides with their increased appearance in burials and higher quantities at hillforts. The places with meaning were shifting or perhaps the meaning of places was changing and how this meaning was expressed through actions and objects.

## 7.5 Summary

The largest quantity of brooches derives from cemeteries. They are followed by hillforts and ritual locales, then settlements and finally watery sites. Few EIA or MIA brooches have been found in features on LIA or RB sites. Although fewer brooches occur per site at settlements, more settlements contain brooches than any other type of site. Ritual locales have the greatest quantity of brooches from the least number of sites but intensive deposition activity is a defining characteristic of those sites.

More MIA than EIA brooches have been found but at fewer sites, except in rivers where over twice as many EIA brooches have been found. MIA brooches are more frequent than the EIA brooches in Britain and slightly more of these are iron than bronze. The poor preservation of iron finds from watery contexts may help account for the lack of MIA brooches in rivers. That iron brooches are more common than bronze in cemeteries is partially explained by the greater quantity of MIA brooches in cemeteries. Despite higher numbers of MIA brooches at ritual locales they are still more frequently made from bronze than iron.

In more westerly regions brooches are more likely to be found at hillforts while settlement finds dominate more easterly locations with the exception of the Yorkshire Wold cemeteries. Other cemeteries with brooches tend to be located around the edges of England. Ritual locales and river finds on the other hand are focussed more towards the centre of the country and in the vast spaces between the cemetery clusters. This does not mean that in each region brooches are only exclusively found at a particular type of site but those sites dominate the brooch record for those places. It is rare to find brooches in a range of types of site in any region with the exception of the eastern part of Kent. Although the limited MIA brooch finds in burials here suggests the varied deposition is not owing to proximity to the continent.

The above discussion has shown the difficulties in interpreting the sites here categorised as ritual locales. Some show evidence for continuity of metalwork deposition into later periods and even with origins in earlier periods. Others could be the result of later deposition of metalwork accumulated over centuries but evidence to distinguish between either mode of deposition is limited. Some locales show an association with landscape features: hills, rivers, caves and natural gullies. A literal translation of the numerous brooch finds at several of these sites would imagine a cult of personal adornment but perhaps we should look to Pryor's interpretation and instead see the personal objects as signifiers of individuals with a common group identity.

Comparative evidence for ritual locales containing large numbers of brooches might be found in hoards of other metalwork. Metalwork hoards from the E-MIA have received limited attention owing to the apparent lack of such assemblages unlike earlier and later periods (e.g. Bradley 1990, Yates and Bradley 2010). The best comparative dataset at present is the Celtic Art database (CAdb). This contains records of finds decorated with Celtic or La Tène style ornament discovered in Britain before December 2008 (Garrow 2008). For comparison with the EIA and MIA brooch dataset it is necessary to look at the earliest dated objects on the database, classed as Garrow's phase 1: pre 80 BC. Out of the 2582 objects on the CAdb, 204 are ascribed to phase 1. 29% of these earliest decorated objects were derived from dry land hoard contexts compared to 16% from pits on hillforts and 30% from burials. However these hoard objects were derived from only four sites: Netherurd, Scottish Borders (c.120-60BC); Old Down Farm, Andover, Hampshire; and two hoards (B/C and E) from Snettisham, Norfolk (c.120-60BC) (CAdb 2010). Although not a direct comparison the evidence presented here indicates that dry land hoards were rare in the E-MIA and each had a unique function. Like the hoards of decorated metalwork (Garrow and Gosden 2012, 169-170) the ritual sites containing brooches are located away from hillforts. They are also located in different parts of the country to where E-MIA brooches are found in hillforts and in regions where they are also not found in burials. The possibility that each item is connected with a specific individual suggests to this researcher that these locations performed a function similar to that fulfilled by cemeteries or hillforts elsewhere, sites that enabled commemoration of ancestors through the burial of material pertaining to individuals at distinctive locations associated with the community (Sharples 2010).

# Chapter 8 Deposition in Specific Contexts

Detailed contextual evidence has been explored by several authors to examine deposition behaviour (Hill 1995a, Lally 2008, Brudenell and Cooper 2008). They moved beyond comparing specific types of sites to examining the deposits in specific types of features and locations within those features. The data collated for this research enable comparison of different types of features in which EIA and MIA brooches have been found. This has been categorised in relation to the type of site to examine how deposition behaviour varied in different types of places. The level of contextual evidence recorded and published means that it is not possible to compare all the sites discussed in Chapter 7. The evidence here therefore focusses on hillforts, settlements and cemeteries where the contextual records are detailed enough for comparison.

## 8.1 Deposition

JD Hill's work on deposition (Hill 1995a) draws on data from Wessex to examine why specific artefacts and assemblages of ecofacts were found in particular features. The concept of disposal of material as rubbish or waste was dissected to reveal patterns of intentional deposition associated with repeated purposeful behaviour invested with symbolic meaning (Hill 1995a). The hypothesis suggests that no materials recovered from specific features were accidentally placed in the ground. Mike Lally picked up on this concept of 'structured deposition' through detailed analysis of the deposits within pits at Danebury hillfort (Lally 2008). Building on Hill's identification of the importance of vertical stratification of pit contents, Lally revealed patterns in the location of specific materials in lower, middle and upper vertical contexts. Of interest here is his recognition that 95% of the brooches recovered from the site occurred in the lower vertical contexts, that is near the bottoms of features. This would suggest not only that where brooches occur in pits these are amongst the earliest materials to be placed within the empty features, but also that they are more likely to be intentional primary deposits rather than accidental finds eroded or swept into the upper fills in open pits.

The original process of digging a pit may be its primary purpose, perhaps to extract clay or quarry stone for pot making and wall construction. The pit might then have been filled with material that needed to be stored or hidden below ground for a certain period. Once this material was removed the filling in process took place, which is often the stage that survives archaeologically. When studying the pit fills we are therefore looking at possibly the secondary or tertiary use of the feature (Brudenell and Cooper 2008). What is then described as the primary or lowest fills may mark the start of the final use of the pit for permanent deposition of material and/or organic remains which is not the same as the first filling process. The presence of clusters of snail shells tucked in the crevices of the rocks at the side of large pits at, for example, Burrough Hill and the frequency of small rodent and amphibian bones in the fills indicates that at least some pits remained open for some time and were gradually filled in (Jeremy Taylor and John Thomas pers. comm. 2012).

Significance might have been placed upon the combination of materials or derivation of a deposit employed in infilling the feature. Brudenell and Cooper have warned against a tendency to overstate the significance of material in infilling deposits (Brudenell and Cooper 2008). They propose that, were that material of importance in a ritualised activity, that activity may have occurred well in advance of the material finally ending up in the pit (ibid, 17, 33-34). This places the infill deposits in the category of waste, material that was no longer required, either at the moment in which it entered the pit or earlier as part of an accumulated debris deposit that was utilised for refilling pits (ibid, 32).

Deposition does not necessarily mean intentional disposal. The role of each brooch in deposition practices may well vary and the possibility of accidental or non-intentional discard cannot be excluded for such small items. A brooch can break and fall from a garment. A fabric item may be disposed of while the brooch was, intentionally or unintentionally, still attached. By exploring the quantity and position of brooches in features we may explore whether the act of including the brooch in infilling a feature was of importance or whether it had to be placed in an exact location in the feature.

## 8.2 Types of Feature and Types of Site

The available detail for brooch location within specific sites and specific features is of variable quality. The detail of the evidence does not necessarily relate to the date of excavation, see for example the very specific records from Pitt Rivers' excavations at Rotherley (Pitt Rivers 1888, 116-18). Even when all the evidence is taken in to account the quantity of brooches from individual features is so low that any new finds can entirely change the pattern and the interpretation of deposition practices. To achieve as broad an understanding as possible it has been necessary to find a way of comparing the variable detail of the contextual information. The analysis therefore looks at three levels of evidence:

1. Types of site at which brooches have been found (Chapter 7)
2. Types of feature in which brooches have been found (Chapter 8)
3. Location of the brooches within features (Chapter 8)

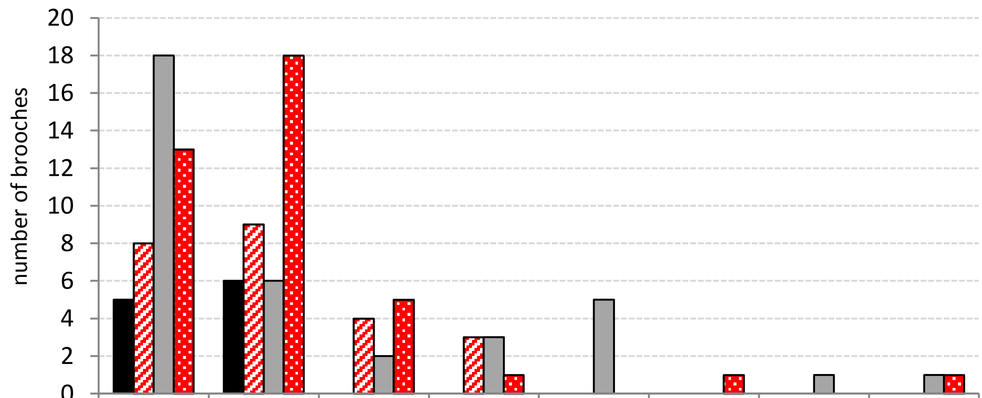
As we progress down through these levels the quantity of brooches suitable for comparison reduces.

## 8.3 The Data

Of the 394 excavated EIA and MIA brooches only 298 are from stratified deposits. The most complete contextual evidence is derived from the cemetery sites while only c.50% of the brooches from hillforts and ritual sites are recorded from specific deposits. At settlements the picture is more positive with 85% of the brooches from recorded deposits. 94 brooches are derived from stratified deposits, usually occupation layers, not associated with any specific features. 200 have been found within specific features: 136 in burials, 41 in pits, 12 in ditches (including narrow gullies and larger ditch features), 7 in postholes and 6 in deposits or features within structures (between floors or walls). One further brooch [10574] from Maiden Castle may have been derived from within the rampart since it was found in a rabbit scrape in the north rampart on the eastern part of the hillfort (Wheeler 1943, 257). One brooch was found in a pit at a possible sanctuary site [10947]. Aside from those in burials the majority of feature specific finds are located at hillforts and settlements. The following discussion will therefore compare the hillfort and settlement evidence to explore possible structuring of the brooch deposition. This will be followed by contextual data from burials, ritual locales and the context of finds in watery places.

## 8.4 Stratified Brooches within Features

Where brooches are found in features these tend to be pits or occasionally ditches. They are infrequent finds in postholes and are rare finds in house features (floors and walls) and ramparts at hillforts and burials at settlements (Chart 8.1). Only MIA brooches on settlements appear to be frequently deposited in any type of feature. Brooches are rare finds in ramparts but then excavations across or into ramparts are also rare. We may be missing some interesting evidence here like the LIA Nauheim brooch deposited in a ceramic vessel below the rampart at the Hunnenring in Germany (Hornung and Reith 2010, 78, Figure 15 and Figure 138, plate 70).




| | Deposit | Pit | Ditch | Posthole | House related | Burial | Rampart | Residual |
|---|---|---|---|---|---|---|---|---|
| Hillfort EIA brooches | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Settlement EIA brooches | 8 | 9 | 4 | 3 | 0 | 0 | 0 | 0 |
| Hillfort MIA brooches | 18 | 6 | 2 | 3 | 5 | 0 | 1 | 1 |
| Settlement MIA brooches | 13 | 18 | 5 | 1 | 0 | 1 | 0 | 1 |

**Chart 8.1** Quantity of EIA and MIA brooches from specific features or other deposits at hillforts and settlements.

## 8.4.1 Structures

The postholes containing brooches are components of a variety of structures. At settlements brooches are found in the following postholes:

- postholes from probable boundary fence posts Gravelly Guy [10012] and Fairfield Park [10007]
- part of a tripod post structure within a roundhouse at Flint Farm [10978]
- the fill of a single posthole unconnected with other features at West of Blind Lane [10953].

At hillforts:

- the hole for gate post at Croft Ambrey [10880]
- part of a possible four-post structure at Breiddin [10756], and another there in a posthole cutting through the floor of a roundhouse [10754]. The latter was thought to postdate the house structure (Musson 1991, 142-3).

Some of the posthole brooches, therefore, relate to structures and houses while others are connected with boundaries. All except the 1Ba Flint Farm brooch [10978] are incomplete.

Of the three brooches from house features, two were found in occupation deposits within the roundhouses at Braich-y-Ddinas [10748] and Sudbrook Camp [10419]. The other was found in the cavity between the outer and inner wall of a roundhouse at Bonchester Hill [10644]. It is tempting to imagine the brooches in walls and postholes as some form of foundation deposit but they could just as easily be described as closure deposits entering the feature in the backfill. Many may even have been accidental finds eroded into the cavities left by rotted post or tumbled walls. Alternatively the brooches could have been placed into nooks and crannies in the stone or wooden walls and then fell out of these as the structure collapsed. At the Magdalensberg in Austria, Iron Age coins were found within the structure of the walls of this first century BC to first century AD settlement (Haselgrove and Krmnicek 2012, 241). This careful secreting of metal objects in places that have not survived in many Iron Age structures in Britain i.e. the above ground elements of buildings, reminds us of the possibility that the final findspot of each brooch may be a poor reflection of where they were intentionally deposited, even if the analogy has been drawn with different objects in a continental location.

Brooches within occupation deposits that build up on floors cannot have been placed there before the floor was used. It also seems unfeasible to imagine these rare items to be abandoned and not retrieved if accidentally lost during use of the house. However, the Bonchester and Braich-y-Ddinas brooches are very incomplete examples consisting of just the head [10644] and the head and pin [10748]. The Sudbrook Camp brooch is the most complete of the three although the foot is missing. The deposit which contained it appears to have been located between two phases of cobbled floor which would have protected it from further erosion forces (Nash-Williams 1939).The deposit itself has been dated to the first century BC suggesting either this is actually a residual find but it may be an incomplete example of a Type 6 brooch. The Braich-y-Ddinas brooch was also found in a deposit that contained fragments of Roman objects suggesting possible disturbance of this layer or the brooch might be derived from a different location on the site. We therefore have no direct evidence to confirm an association between brooches and roundhouses either during building or use and possibly not even as closure deposits. A later association of brooches and floors is exemplified by Glastonbury Lake Village where all the brooches are Type 4 [10567] and [10568], Type 6 [10962], [10963], [10964] and [10966], and other forms all proposed as Late Iron Age objects (Chapter 4).

### 8.4.2 Ditches

Brooches are occasionally found in ditches at settlements (Chart 8.1). So far only a few MIA brooches have been found in ditches at hillforts and no EIA brooches. It is difficult to say whether the few brooches in ditches were intentionally placed there. Only two are confirmed finds from lower or primary ditch fills, one EIA and one MIA, both bronze. The Rotherley 1Bb brooch [10484] that must have been found in the lower fills of an enclosure ditch as its depth was recorded at 0.86m (2'10") in a ditch that ranged from 0.76 (2'6") to 1.06m (3'6") deep (Pitt Rivers 1888, 116-18). The other, a 2Ab brooch [10929] was found below a green layer in a gully that could have been part of a fence line at Cadbury Castle hillfort (Olivier 2000, 360-361). The Rotherley brooch is complete; most of the foot, pin and part of the head is missing of the Cadbury Castle brooch. Both brooches must have entered the ditch early in the infilling or silting up process. This could imply they were purposefully placed there but it could just as easily have been accidental that they ended up in these features.

Four other brooches in ditches have been found in the upper fills. The bronze 2Ba3 from Castle Yard, Farthingstone, Northamptonshire [10295] was found in the upper layer of the hillfort ditch but could be part of the rampart material collapsed into the top of this feature (Knight 1986-7, 36-7). The iron 2Ca from Fairfield Park [10008] was also in the upper fill of an enclosure ditch in phosphate rich material that are thought to be midden or latrine deposits (Webley et al. 2007, 93-4). An incomplete possible 1Ca iron brooch [10967] was found in the limestone rubble rich upper fill of a sub-rectangular enclosure ditch at the settlement at Watchfield, Oxfordshire (Scull, 1992, 145-147; Creighton 1992, 148). A fragmentary, bronze, probable 2L brooch [10294] from Holloway Lane, Hillingdon, was found in the layer above the primary fill of a droveway ditch, so in the upper or lower half of the feature but not the lowest fill (Cotton et al. 1986, 53). The ditch dates from the Bronze Age into Iron Age with the depression still visible in places into the Roman period. All of these brooches could easily be finds eroded into the features or redeposited here from other layers in the vicinity such as the rampart at Castle Yard or a midden at Fairfield Park. We cannot exclude the possibility of intentional damage followed by deposition but neither does the evidence give conclusive support to such a possibility.

If brooches were intentionally deposited whole in features then the Rotherley example is the most likely candidate for such purposeful deposition within a ditch. It is one of only three complete brooches found in ditches. The other two were: an iron 2Ca from Farningham Hill [10624] found in the upper fill of an enclosure ditch (Philp 1984, 35-6) above MIA pottery (Champion 2011, 166); and a bronze 1B from Castle Lime Quarry, Ancaster [10467] found in a possible enclosure ditch to the north of the settlement (H&H 161). There does not seem to be any preference for particular types or condition of brooches in enclosure ditches compared to for example hillfort quarry ditches or field boundaries; or even location within the ditch fills.

The general low frequency of brooch finds per settlement means they rarely occur in more than one feature type in any settlement. In other words settlements with a brooch, or two, in a pit are unlikely to have any in a ditch. The five exceptions are Gravelly Guy, Fairfield Park, Meon Hill, Rotherley and Slonk Hill. At all these sites one brooch was found in a ditch and one either in a posthole (Fairfield Park) or in a pit (Gravelly Guy, Meon Hill and Rotherley) (Allen and Webley 2007, 94; Lambrick and Allen 2004, 103-156; Liddell 1933, 152; 1935, 35; Pitt Rivers 1888, 116-18). Except at Slonk Hill where one of the five brooches was found in a burial the others were all in pits (Hartridge 1978, 99). Excavation strategies tend to focus attention upon discrete features such as pits as opposed to non-structural linear features. The excavation of the latter concentrates on the terminals and intersections with often only 10-20% of the remainder of the fill excavated as a sample. This creates an immediate bias in the record towards finds from pits. It is possible that were more of the ditch fills excavated more EIA and MIA brooches might be found at settlements. However, the lack of such finds in ditches only enforces the perception that pits will be more informative in terms of finds.

### 8.4.3 Pits

Pits are the only features in which brooches are found in any quantity and recorded with enough detail to examine vertical deposition, all of which are located only at hillforts and settlements[16]. The detail of published contextual evidence is so varied that we only have information regarding the location for 21 of the 35 brooches in pit fills, and for only five out of the 10 in ditches. Although some of the other examples may have been derived from pits containing only a single homogenous fill, where the fill is published in detail there tend to be two or more different infilling episodes for each pit. It has not been possible to refine the data further to examine location within vertical thirds as Lally (2008) was able to do at Danebury but only to compare upper and lower fills.

[16] With the exception of the single brooch in a pit at Fison Way [10947], discussed under ritual sites.

The evidence for the location of brooches within pits is compared in Chart 8.2. The periods relate to the brooch type and do not necessarily equate with feature date although the presence of a brooch of particular type has often been used to date features (Chapter 4). At present the evidence shows that EIA and MIA brooch deposition is not confined to specific locations within pits and ditches. Total quantities for upper and lower across all features is identical so any new data could create a bias either way.

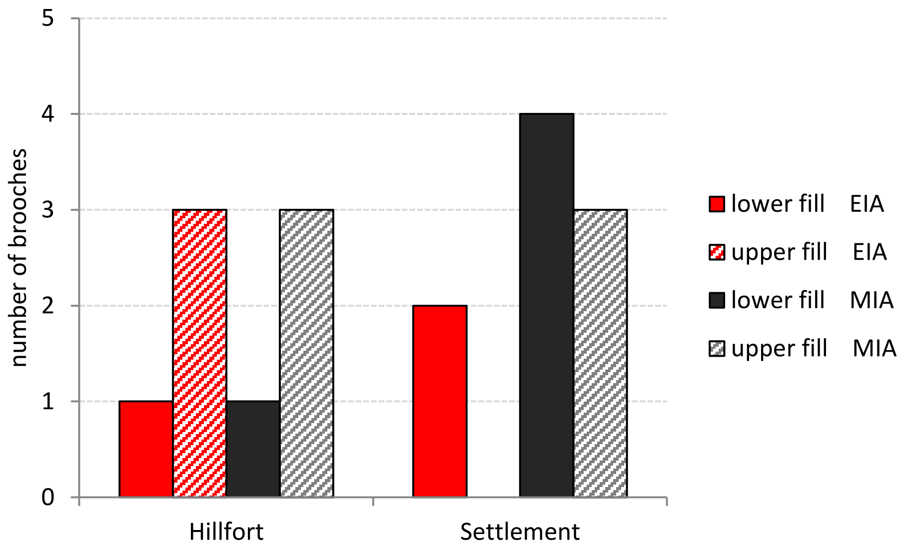



**Chart 8.2** Quantity of brooches of specific periods that have been found in lower or upper fills of pits. Compare with Chart 8.1 illustrating the total number recorded from each feature type.

Although 18 MIA brooches have been found in pits on settlements (Chart 8.1) this is not reflected in the contextual data in Chart 8.2 owing to limitations in the records. The small sample available for comparison suggests that brooches are slightly more frequent in lower than upper fills on settlements implying they are more likely to have been part of the primary infilling deposits in pits at settlements, particularly for MIA brooches. The small number that can be allocated to a particular part of the feature could indicate that the location of a brooch within a pit was more important than its position in the pit. This may only be confirmed or denied if future records of brooch finds are more precise.

At hillforts both EIA and MIA brooches are more frequent in the upper than the lower fills of pits. This contrasts with Lally's results for all brooches at Danebury (Lally 2008, 120) showing a possible change in the relevance of brooches to primary infilling layers in later periods. This upper fill emphasis is exaggerated by the presence of two of these three brooches in the same deposit at Blaise Castle (Rahtz and Brown 1957, 156-7). This is the only instance where more than one brooch has been recovered from any pit. Here two bronze 1A brooches [10541 and 10446] were found in the same fill of the same pit, what is thought to be the last purposeful deposit before a final layer filled the remainder of the pit through natural erosion processes (ibid). Although the same type, they are not an identical pair neither in size nor decoration. The smaller brooch [10446] was found in a fragmentary condition but the other [10541] was complete. Their occurrence with decorated 'saucepan' pot sherds (H&H 83) of third to first century date (Cunliffe 2005, 631) has led to the proposal that they were of some antiquity when buried or they were late versions of this earlier style (Rahtz and Brown 1957, 167).

The Blaise Castle brooches could have been deposited attached to fabric perhaps symbolising the connection between two individuals or two groups represented by their cherished heirlooms and the deposit contents. They were found in the secondary backfill of a pit in the same layer as weaving and spinning tool fragments, burnt daub, bronze smelting debris, hammerstone and bone fragments, and animal bones, all thought to be the result of domestic waste (Rahtz and Brown 1957, 167). However the contents appear to reference specific spheres of activity. A saddle quern was placed face down at the bottom of the pit connecting the primary fill with grain preparation prior to food production. The secondary fill with the animal bones and tools represents the conversion of animal to food and animal products to clothing and equipment. The association with the closure of previous use either of that feature or part of the site may have been the significant act rather than something specific to a feature type. The selection of the material incorporated into this deposit may have followed a number of rules that can never be comprehensively understood by archaeologists. Rules that could associate closure deposits directly with previous use or even contrast them with this.

The only brooch from Tollgate, Kent [10952] probably a 1Ca type, was found in pit 374 along with the majority of the small finds recovered from this site and an above average amount of pottery (Champion 2011, 222). Again many of the finds appear to be tools: a whetstone, an awl, and other sharpening and grinding tools (ibid). These objects could have been used for maintaining and repairing metal tools. If found in a grave they might be interpreted as the deceased's tools: a representation of their role in life. The presence of a personal item in this pit promotes a possible association of the contents with an individual. Could this deposit be in lieu of a burial of the body? Perhaps it was important to make a formalised deposit of the individual's craft utensils whereas the body was disposed of in a less archaeologically visible way. Or maybe this was not a deposit to venerate the dead but to penalise the living, taking away their livelihood, taking away their skills. There is definitely an avoidance of associating brooches with human remains in pits in the EIA-MIA despite the deposition of skeletal remains in pits (e.g. Sharples 2010, 238-9). Only one EIA brooch has been recovered from a deposit containing fragments of human bone that was not an inhumation burial : a 1A brooch from a pit at Alfred's Castle [10870]; and no MIA. This rarity suggests brooches were not normally part of structured deposition with fragmentary human remains.

As with floors it would appear that we have no direct relationship with human remains and brooches in pits until the LIA. For example, at Maiden Castle there is positive evidence for the placing of brooches in the same features as human remains with two brooches of LIA type in the same pit as a human femur (Sharples 2010, 239). We do find E-MIA brooches in full inhumation burials with complete articulated bodies but only in limited locations. Perhaps we are indeed seeing a representation of the person in the deposition of their artefacts in some features.

Even amongst these few examples there seems to be no specific rule for brooch deposition in pits in relation to the type of site, nor the contents of the fills and not even the location within the fills. The evidence suggests we should not be looking for a universal interpretation of brooch deposition but instead consider what the myriad evidence might indicate about brooch use which in turn could explain why they are included in some structured deposits. The evidence needs to be interrogated further on a regional basis comparing both features with possible structured or atypical contents and those without (Champion 2011, 225 and 228); a task beyond the scope of this thesis.

### 8.4.4 Brooches in Burials

Where EIA and MIA brooches occur in burials these features are most commonly found in cemeteries. Only one example has been found at a settlement: Slonk Hill and none at hillforts. Where brooches do occur in cemeteries they are not found in every single grave. For example of the 446 graves at Wetwang Slack only 41 contained EIA or MIA brooches (Dent 1982, 437 and 442). The brooches from the dense cemeteries in the Yorkshire Wolds have received the most intensive study of any group of Middle Iron Age brooches in Britain (e.g. Stead 1991a, Dent 1982, 2010, Jundi 1996, Giles 2012). This combined with the quantity from these sites mean they form much of the basis for our understanding of brooch deposition in graves. It is, therefore, important to remember that this may tell us as much, if not more, about regional practices than inhumation rites across Britain. To counteract this bias we must compare the evidence with the few burials containing brooches found elsewhere in England although the records of many of these are minimal, often owing to the antiquity of the excavation.

#### Sex and age of the deceased

In the Yorkshire Wold cemeteries brooches are found in both biologically male and female adult burials but not with any infants or juveniles (Giles 2012, 132; Jundi 1996). This holds true for the burials elsewhere in England where the association with males and females is still evident. At Mill Hill the graves of three adult males and one adult female contained MIA brooches (Parfitt 1995, 159-170). At Slonk Hill and Suddern Farm the only MIA brooches were found in the burials of adult females (Hartridge 1978, 80; Cunliffe and Poole 2000, 168). Only two graves were found at the Slonk Hill settlement, the other contained an adult male not buried with a brooch (Hartridge 1978, 80).

These adults cover all identifiable age ranges from 17 to 50+ (Hartridge 1978, 80; Parfitt 1995, 159-170; Cunliffe and Poole 2000, 166-170; Giles 2012, 132). Giles has compared the quantity of all grave goods in the Yorkshire Wold graves and identified that more occur in adult burials than juveniles (Giles 2012, 132). The term grave goods imply the objects are purposefully placed in the grave as part of the burial process. Brooches and other bodily adornments are classed as grave goods which distracts from the possibility that many may have been items worn by the living and they carried on wearing them into their graves. So when reading her results it is important to remain aware that by grave goods she means durable objects or 'belongings' (ibid, 131) recovered from the graves. 50% of burials in the oldest age bracket of 45+ contain such objects. This is the highest proportion of any age group although the proportion of other adult graves with objects ranges between 40-45% (ibid 132 Figure 5.2). It may be that adults had accumulated objects during their lifetime that were considered appropriate items for inclusion in a burial. Or perhaps the quantity of objects relates to the social bonds with older people building up more complex social connections during their lifetime which are represented by the contribution of gifts to be included in the burial (ibid, 154*)* or perhaps the objects are an indicator of knowledge, knowledge that could impart power, knowledge that might be signified by possession of, for example, a specific shape of brooch.

Equal numbers of men's and women's graves contain brooches (Stead 1991a, 90). Dent (1982, 431) proposed that shorter brooches are more often associated with women's graves than men's graves while Giles (2012, 136) has explored the possible association of specific types with either gender. However, the differences do not hold up to scrutiny. At the Wetwang and Garton Slack cemeteries 2Cb short involutes are not directly associated with either sex while at the Great Wolds Valley cemetery more 2Cb brooches are found in male than female graves and 2Ca long involutes are more common in female than male graves (Giles 2012, 138, Figure 5.6). One problem for Giles' analysis is Dent's typology which subdivides the short involutes into more divisions than any other type (Dent 1982, 441; Giles 2012, 137, Table 5.1). These divisions include a distinction between decoration and hinge mechanisms, distinctions that are not made for the long involutes.

## Location within each burial

In the Yorkshire Wolds 66% of burials contained no durable objects but many of these appear to have been placed in plain coffins (Giles 2012, 131). The presence of brooches, pins, toggles and ties in many of the other graves may be indicative of a different mode of covering the body than evidence for specific grave goods. In the former the body is covered by the wooden coffin. In the latter the body might be covered with a cloth wrapping held in place by a brooch or pin, toggle or tie. Those with neither coffins nor such fasteners could still have been stitched or tied in cloth using organic materials.

It is certainly possible that the brooches were part of the dress of the deceased before death and some might have entered the grave on the clothing of the deceased attached in the same position as they were worn during life. However, the brooches are not always located in a position where they could be worn during life (e.g. in front of the face). Refining Jundi's early results (Jundi 1996) Giles has calculated the percentage of brooches found in different positions in the burials (Giles 2012, 130). She notes that while 26% of fasteners are found at the ears or neck and 21% on the upper torso a further 20% are found in front of the face or back of the head (ibid). If a brooch were fastened at the shoulder to hold a cloak in place during decomposition of the body and cloth the brooch may gradually shift position in the grave. This might explain the position of a brooch near the ear, for example. However, a brooch at the back of the head or on the lower limbs of an undisturbed grave is unlikely to have shifted so far. 9% of fasteners were found on the lower torso, 2% on the thighs, 3% at the calves and 2% at the feet of individuals (ibid). The majority of the burials with brooches are in a flexed or crouched position, some quite tightly folded with the knees drawn close to the chest. The varied positioning of the brooches is simple to explain if we imagine the body being wrapped and bound with fabric which is secured by means of a brooch or other fastener at whatever point the end of the cloth reaches (ibid). This point tended to be towards the top of the body but not always so there may not have been a set pattern to how the cloth was wrapped around the body.

In other burials the brooch does appear to hold the garment at the shoulder implying a cloak draped around the body, as in life, rather than tightly wrapped as a shroud. Such as the 2Cb brooch [10009] found by the man's left shoulder in the Ferry Fryston 'chariot' burial (Brown *et al.* 2007, 147). Across the body from the edge of the left shoulder were the remnants of a composite metal and wood object, possibly a shield (ibid, 130) above which the brooch would have just been visible. Interpretation of the skeletal evidence suggests his body was not tightly bound and may instead have been covered by a container.

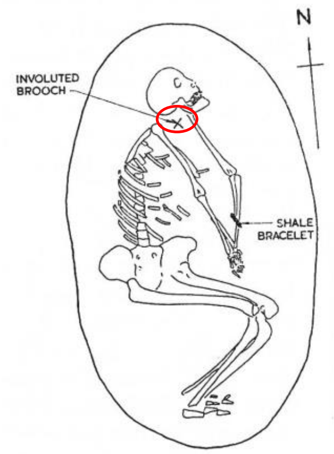
Not all the brooches in burials appear to have been used to fasten a garment or shroud. This particularly seems to be the case for two of the more furnished graves to contain brooches. The short involuted brooch [10976] found in the Wetwang Village burial of a woman with a two-wheeled vehicle appears to have been attached to the beaded cord of a pelt bag in which contained an iron mirror (Hill 2001, Joy 2010). This is one of only two so-called 'chariot burials' to contain a brooch. The other was the burial of a man with a brooch at the left shoulder at Ferry Fryston [10009]. At Mill Hill brooch [10002] was found on the shins of an extended inhumation, the only burial with a sword to also have a brooch. This brooch could still have fastened a shroud but the fully extended body would not have required binding in the same way as the tightly flexed inhumations. Instead the brooch might have clasped a fabric item resting on the legs, perhaps a folded cloak or bag.

The geometric design of many brooches did not need to be viewed from one particular direction to be appreciated. Even where zoomorphic imagery is used this again is omni-directional as on the Finlaggan brooch [10990]. This means they are also suited to decorating or fastening other mobile items such as portable bags. Wetwang Village is possibly the earliest example of a brooch being used to fasten a bag containing a mirror. The clearest evidence for such use is recovered from LIA contexts. Two brooches were found possibly clasping a cloth bag containing the Chilham Castle mirror (Joy 2010, 79). Another brooch was linked to the terminal loop of the mirror handle on the Portesham mirror (ibid, 81). The importance of the brooch may be increased by its association with these rare and potent objects.

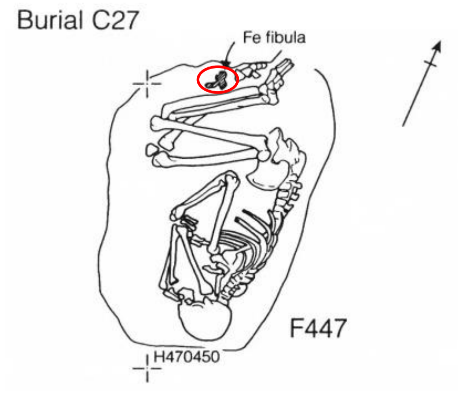
Remnants of cloth have been preserved as mineralised fibres or casts of the fibres in the iron corrosion (Crowfoot 1991, 119). The majority are woollen fabrics, perhaps then the bodies were wrapped in woollen cloaks; cloaks that could have doubled up as blankets. In the scant fabric remains we can see evidence for different spinning and weaving patterns as well as colours from dyes (Crowfoot 1991, 119-122). The deceased, even if fully wrapped in their cloak, would still have been identifiable by their own distinctive garment. The remains of the cloth borders on a few brooches, [10221], [10255] and [10228] and [10234], adds further support to the probability that the brooch held the end of the wrapped cloth in place. While a decorated striped border preserved on the fragments of brooch [10186] show these edges of the garment may be distinctive to individuals (ibid, 121, Figure 80).

Brooches of the same type are found in different locations on the body and no difference is evident between the positioning of brooches in burials of either sex. Despite this variety there is a tendency for the brooch to be located where it would be visible once the deceased was placed in the grave. Where the records provide enough detail, all brooches found in burials appear to have been positioned where they were visible to anyone observing or participating in the funerary process. They are always located at the front or just to the side of the body but not behind it (Figure 8.1). Of the few other burials with the brooches outside of Yorkshire: in two the brooch is located by the shins (Mill Hill Grave 112 [10002] and Suddern Farm Burial C27 [10001]), one near the waist (Bromfield [10542]), one by the head (Trethellan Farm), two near the neck or shoulder (Slonk Hill [10677] and Ferry Fryston[10009]), one on the chest (Mill Hill Grave 47 [10005]) and two by an elbow (Mill Hill Graves 108 and 127 [10004, 10006]). The location implies it was important not to lay the body on top of the brooch and to make the object visible before the grave was filled in. The burial of these relatively rare objects must have been a significant, perhaps powerful, action.

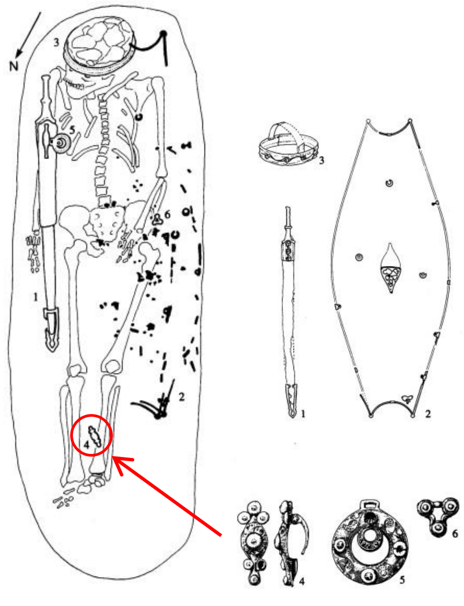
**Figure 8.1** Comparison of the location of brooches in burials.



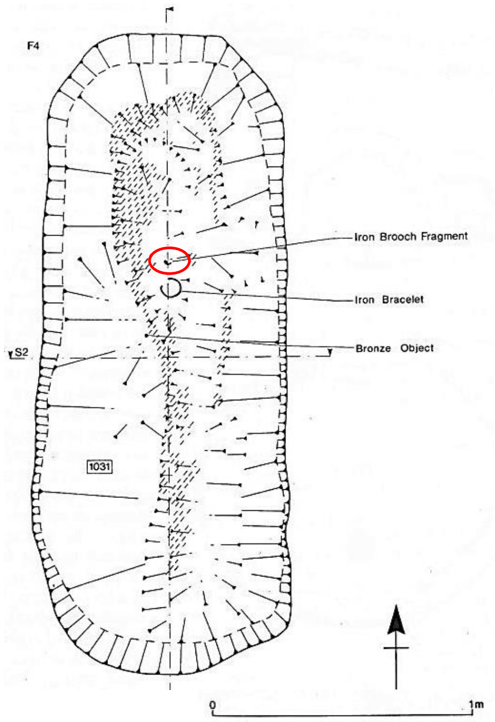

Slonk Hill Grave 2
brooch [10679]
(Hartridge 1978, 81, Fig. 5)




Suddern Farm Burial C27
brooch [10001]
(Cunliffe and Poole 2000, 156, Fig. 3.96)




Mill Hill Grave 112
brooch [10002]
(Parfitt 1995, 18, Figure 3)




Bromfield Barrow Burial
brooch [10542]
(Hughes 1994, 399, Fig.3)

### 8.4.5 Pairs of brooches

Only two burials in Britain contain more than one MIA brooch. Two brooches are found in each of these features: a pair of bronze 2K brooches in a cist grave at Harlyn Bay [10273] and [10274], an iron 2Aa and a bronze 2Ca in a cist grave at Trevone [10633] and [10516]. The latter two appear to have been located in the upper torso area of the extended inhumation. The Harlyn bay brooches are both missing their pins. The Trevone brooches were both in a fragmentary state probably damaged by the acidic soil conditions (Dudley and Jope 1965, 18). The Harlyn Bay cemetery contained c.130 graves but only two contained brooches, the other only a single iron 2K brooch [10275] (H&H 52).

Pairs of brooches are known from LIA inhumations but they are otherwise unheard of in MIA burials (Fitzpatrick 1997, 109). The burial of two brooches in the same context therefore first occurs in the MIA. The phenomenon becomes more common although of limited frequency in the Late Iron Age such as the pair of bronze brooches from cremation Grave 13 at Swarling (Cunliffe 2005, 153) or the eight pairs of brooches, some linked by a chain, at Westhampnett cemetery (Fitzpatrick 1997, 92) or the two pairs of brooches found in the Winchester hoard, unusually made from gold, each pair originally joined together by a gold chain (Hill et al. 2004). The Trevone brooches are clearly not a pair and repairs to the inlay of the 2A brooch suggest this may have been of some age before deposition. The Harlyn Bay pair is the only evidence for a matching pair of brooches in the EIA or MIA. This individual was distinguished from others at the cemetery by being not only one of two to be buried with brooches but to have a pair. Although of different type the Trevone brooches could have been worn at the same time. There is also the possibility that one brooch was a gift to the deceased (Chapter 9).

## 8.5 Summary

Stratigraphic information is available for less than half of all the excavated EIA and MIA brooches. This limits the extent to which we may interpret the evidence but also indicates just how many brooch finds occur outside of sealed contexts which could indicate a general avoidance of feature specific brooch deposition.

Only at hillforts and settlements is there any evidence for brooches being found in different types of feature and deposits. Occupation deposits are generally favoured but pits are preferred for MIA brooches on settlements. In fact the evidence suggests there is little structured deposition of EIA and MIA brooches in features at hillforts. The slight emphasis on EIA and MIA brooch deposition in the lower fills of pits in settlements implies they are more likely to be intentionally placed in those features than features where they are found in the upper natural erosion layers. Yet typically only one brooch is found per settlement. This rarity shows the practice to be uncommon. It is also exceptionally rare to find more than one brooch in any feature at any type of site and never more than two brooches. Deposition in pairs only gains any popularity in the Late Iron Age.

Although boundary features do occasionally contain brooches these are relatively rare contexts for brooch finds. Brooches also tend not to be associated with structures especially roundhouses until the Late Iron Age. The dominance of occupation deposits would imply the brooches are lost or discarded items rather than carefully placed in a specific location. This would not be surprising considering the incomplete condition of many brooch finds. However it draws us back to Brudenell and Cooper's (2008) comments about the possible significant act of deposition occurring elsewhere on the site before the brooch arrived in a spread of material, perhaps levelling layers, or a feature as simply backfill material . Loss of deposition context does not mean the brooches were not originally carefully placed in a specific location. For all we know brooches could have been tucked into crevices in wooden structures or hung from the branches of trees, which eventually rotted, scattering the brooches in the soil layers below.

Where brooches are found in burials the burials are usually located in cemeteries and rarely in settlements and never in hillforts. However, the majority of the burials in these cemeteries do not contain brooches. Brooches are found in adult female and male burials but never with juveniles or infants in Britain. In graves they often appear to have been used as fasteners for woollen fabrics wrapped around the deceased. It is probable these were the cloaks of the individuals. These garments were often wrapped in such a way as to cover the body like a shroud, with the brooch clasping the loose end to hold it in place and thereby keeping the body in a flexed position. Brooches also appear to have been used as fasteners on bags. It is exceptionally rare to find a burial with more than one brooch suggesting that the fashion of wearing them in pairs may not have come about until after the MIA. We have no direct evidence of brooches being used to hold a garment in place on an active living person but the burial evidence indicates they could clasp woollen cloaks and the upper torso near the clavicles would be a practical position for such a clasp.

# Chapter 9 Function of the Form

The common design element in all EIA and MIA brooches is the combination of a pin to pierce the fabric, a catchplate to hold the pin in place and a bow joining the two ends together. Brooches could be fastened to cloth and would stay attached better than a simple pin. They are fascinating because of the range of ways in which this design was achieved. On the basis of brooch design and deposition evidence the way the finished product was used also seems to have varied. This chapter brings together the different strands of evidence presented during this thesis to explore the use of brooches across the period and across Britain.

## 9.1 Fasteners for Fabric

Burials provide the most direct evidence we have for how brooches were worn or used. This confirms what most would expect, that brooches were attached to fabric. The remains of woollen cloth preserved in iron corrosion products shows that at least the iron brooches were attached to woollen material. The decorated cloth border preserved on the Argam Lane brooch [10186] indicates that brooches were used to fasten the end of the garment (Chapter 8).

Popular belief would have these brooches used as cloak clasps at the shoulder to pin the loose end of a cloak wrapped around the body (e.g. Stead 1991a, 179, Brown *et al.* 2007, 147). The shoulder or chest provided a secure location to stop the cloak slipping down or falling off. In the burial evidence there is limited support for this interpretation. In the Yorkshire Wold graves with brooches they are found in the vicinity of the shoulders or neck in less than half the graves and are also found in front of the face, on the lower limbs, at the back of the head. In the few examples found in Cornwall, Hampshire, Kent, Shropshire and Sussex, the brooches are also located in a range of positions from head to foot. It would appear that brooches were often not worn at the shoulder, at least in a burial context especially in crouched inhumations. Many of these brooches appear to have been used to secure fabric wrapped around the body as a shroud. This would certainly explain why the brooches are found in various locations on flexed burials where the fabric could have been wound around the body binding it in a crouched position. The end then clasped with a brooch to hold the wrapping in place. In extended burials the preference appears to be to secure a garment around the mid to lower torso perhaps showing the cloak was draped around the body but pinned so as to cover the arms and upper body. A brooch at the top of the torso might have gaped open during burial. In these cases the cloak is still a shroud in the meaning of a wrapping for the body but it does not bind and completely cover the body in the same way as in crouched burials (Chapter 8)

### 9.1.1 How to Wear a Brooch

From the available evidence it appears that most people who wore brooches in the E-MIA wore them singly. Only one matching pair is known from a grave at Harlyn Bay; the two from the Trevone grave are not a matching pair. Brooches are found in a horizontal position across the body or following the vertical axis of the body or at an angle to this. Although these show only how they are positioned in a burial this varied orientation combined with the geometric decoration suggests there was no strict rule on which way up a brooch should be worn (Chapter 8). Where the foot of short involutes are decorated with beads of glass or coral, only this feature would have been visible once the brooch was clasped onto a fold of fabric.

By folding similar garments in different ways or changing the position of a brooch the wearer might have been able to communicate different messages about their identity or their intentions. Miller (2010) has examined the un-superficial nature of clothing. Through the example of saris, Miller explores how a person interacts with the cloth and how the way it is worn not only gives off intentional messages but can also reveal something about that woman's character (Miller 2010, 23-38). These messages can be both positive and negative from the viewpoint of the wearer but also might be interpreted in contradicting ways dependent on the outlook of the viewer. The size of the brooches may have restricted how the cloth could be held and thereby restricted how the person manoeuvred in a fastened garment. If the brooch was small yet held a thick cloak its position would have to be manipulated to be as effective as possible. Yet the position of small, light brooches could be controlled more easily than heavier and larger brooches. The former staying in the position they are placed, the latter might hang or twist in the fabric.

A brooch could also be attached to a bag or pouche. The Wetwang Village brooch [10976] is the most probable example of such a use in the MIA, here clasping the beaded strap for a pelt bag around a mirror (Chapter 8). The presence of single brooch in a pit or even a ditch could be the results of deposition of a bag clasped by the brooch, the organic material having rotted away. As yet no positive examples can confirm this but the possibility remains.

## 9.2 Adornment

The evidence show that brooches could indeed fasten a garment but their infrequency implies most people at this time held their garments closed in other ways. Brooches must have had a function beyond pinning and holding fabric in place. Jundi and Hill (1998) proposed that people became more interested in personal appearance in the LIA as evidenced by increased finds of brooches and metal items of personal toilet such as tweezers, nail cleaners and ear scoops (ibid, 129-130; Hill 1997, 98). Contra this argument it seems that people were already interested in personal appearance before the LIA as indicated by variations in their cloaks, their pins and brooches. How this interest manifested itself may have changed in the LIA but it was certainly there before. Although the greater number of brooch types in the LIA is used as evidence for greater variation in appearance (Jundi and Hill 1998, 129), in fact the variation is much lower than in the MIA; the greater numbers of each LIA type (Haselgrove 1997, 60) shows more people could dress with very similar brooches than was previously possible and more people wore brooches decreasing the effect of the presence of a brooch on one's garment.

The Ferry Fryston, Wetwang Village and Mill Hill Grave 112 burials are distinctive from most of those found with brooches, not just in the quantity of objects found with them but also in the modes of display. It would appear that the bodies were placed in the graves fully visible with objects added to the display before the deceased was covered and fully buried (Chapter 8). Perhaps this was the case for the extended inhumation at Bromfield covered by a barrow (Hughes 1994) and the Newnham Croft burial with its collection of ornate metalwork (Fox 1923, 6). All bar the Bromfield burial contain brooches decorated with applied material: a vast glass bead on the Ferry Fryston brooch [10009], strips of coral on the foot of the Wetwang brooch [10976] and beads of coral set into decoratively moulded bronze at Mill Hill [10002] and Newnham Croft [10575]. In Grave 112 Mill Hill the brooch was part of a set of decorated bronzes similarly ornate and a bronze headdress decorated with fine, relief ornament. The presence of these objects indicates the body was not covered but laid out in the grave with the sword, shield and other decorated metalwork all visible. In these cases the brooch appears to reflect the emphasis on elaborate display perhaps being deemed appropriate objects for these distinguished persons.

52% of the 83 brooches possibly decorated with inlaid or applied material were found in burials. Brooches decorated with stone or glass are only found in burials. 58% of the brooches decorated with coral were found in burials at cemeteries. Although taphonomic processes could account for the lack of coral on non-burial brooches, the lack of suitable brooch forms in those contexts implies there is a preference towards depositing brooches decorated with extra materials in graves as opposed to in any other environment or feature (Chapters 5 and 8).

Not only are these decorated brooches more common in burials and cemeteries than any other context or site, the plainer types are relatively rare in burials (such as 1B brooches) (Chapter 7). Research on Anglo-Saxon brooches found in graves in Kent and those reported to PAS (Mclean and Richardson 2010) has shown that different, often more elaborate, brooches were deposited in Saxon graves compared to more simple styles that are found on cultivated land away from known cemeteries. For the E-MIA the absence of plainer types of brooches in graves could be an indication of a possible variation in brooch deposition. However, this may in fact be a chronological variation between limited depositions in graves in the EIA compared to the MIA. Those EIA types that do occur in burials tend to be a little different from the norm. The variation is therefore not so much a matter of preference of certain brooch types as a change in deposition practices over time (Chapter 7). MIA brooches dominate the burial evidence. Though few radiocarbon dates are available these lend support to the hypothesis that far more MIA inhumations contain brooches than the preceding period (Chapters 4 and 7).

In spite of the chronological aspect to the brooch choice there is still an emphasis on more decoratively moulded bronze brooches or iron brooches decorated with applied material compared to other contexts. Perhaps the deceased were dressed for burial in their most treasured possessions. Or they could be gifts to the deceased where an individual gives their own brooch to the burial to enhance or reflect their connection with the deceased (Giles 2012, 154). The connection of woven garments and individual identity may be more significant than we can recognise from the limited organic remains. To produce a single cloak the sheep needed to be reared and sheared, the yarn had to be dyed and spun, and the fabric had to be woven on a correctly weighted loom and perhaps stitched. The process was at least as labour intensive as that required to produce a forged iron brooch and possibly more so than casting a small bronze version. The brooch then enhanced the valuable garment rather than standing out as the only item of any worth.

## 9.3 Brooches as Badges

Some brooches appear to have been more suitable as badges or jewellery than as clasps. Particularly the small 2Bb2 and 2Bb3 plate brooches and the little bulbous 2L brooches (Chapter 3) which are less suited to fastening clothing but have a strong visual quality in the way they reflect light. So too the bronze involuted 2Cb brooches with shallow relief moulded designs on the footplates such as those from Grandcourt Farm [10651, 10655, 10665 and 10669]. No regional patterning has been identified in the 2Cb brooches but the 2B and 2L show distinct regional associations (Chapter 6). To stretch the evidence further it might be possible these types were used for indicating not only personal identity but group associations. Those with a restricted distribution (e.g. Type 2Bb2) could represent some form of allegiance to a local identity whereas those found across a wide distance (e.g. Type 2Cb) may indicate social connections way beyond local settlements. Alternatively some brooches could have been gifts (Sharples 2010, 245) which when worn show the conciliatory relationship between individuals and even groups both locally and long distance. However, the same evidence may be used for proposing the metalworkers travelled short or long distances producing particular style brooches along the way or their products were traded or gifted locally or over long distances.

### 9.3.1 Personal Identity

A brooch can only be worn by one person at a time, be it attached to a garment or clasping a shroud. The brooch is therefore directly connected with the individual and with the way they present themselves or they are presented to other people. Many of these shrouds appear to have covered the face of the deceased: explaining the presence of brooches in the head area. As aforementioned it is possible that the shrouds were made from the deceased's cloak, a garment that could also have acted as a blanket during their life. Differences in weave pattern and/or colour could have distinguished each person's cloak. Even if the shroud covered the whole person when they were carried and laid in their grave they could be recognised by this personal garment. The individuality of each brooch (Chapter 3), including those of the same type, would further be connected with that person. The material items were therefore a manifestation of the personal identity of the deceased.

No differences have been identified in how brooches are positioned on men's or on women's bodies in graves or any difference dependent on brooch type (Chapter 8). This implies that a brooch was not part of the construction of gender identity in the MIA if gender identity was intertwined with biological sex as recognised in the skeletal remains (Whitehouse 2007, 31, Sørenson 2007, 46). Brooches are found in burials with blue beads which have been positively connected to older women (Fitzpatrick 2007, 345; Giles 2008, 72) but they also occasionally occur with shields (Ferry Fryston and Mill Hill Deal) and swords (Mill Hill Deal) which have been shown to have a direct connection with biological males in a burial context (Stead 1991a, 33). Brooches have also been found with adult males of about 25-35 years old with evidence for possible injuries incurred through fighting. Grave R140 at Makeshift had a spearhead still intact in his body found with a 2Ca brooch

[10251] over the hips. Two showed evidence for wounds possibly incurred from defending themselves: grave R84, Makeshift, with a borderline 1B/1C brooch [10219] over his hand in front of his face and grave BF2, Argam Lane, with a 2Ab brooch [10177] under the front of his skull (Stead 1991a, 185-211; Giles 2008, 66).

A brooch could be part of a well-furnished male or female grave or it could be the only inorganic object in a grave. It might be used to clasp the shroud round an injured man's corpse or it might hold the wrapping around the only woman buried in a single settlement, as at Slonk Hill (Hartridge 1978, 80). We cannot make any simplistic dichotomies concerning brooch use. Instead we must accept that they were unique objects that may be associated with specific individuals regardless of their sex, or role as represented by material objects. However, the relative infrequency of brooches in burials implies that not everyone had access to one.

The complex associations of different objects and biological sex may well be the result of the complexity of gender identity in the MIA. A complexity built up from the myriad physical and social roles of men and women that crossed age groups and that could easily have been related to skills and ability in a time when specialist skills were drawn upon but everyone had to contribute to sustaining the population (DeRoche 1997). As visually complex objects, brooches could have been encoded with meaning not only in their form and decoration but also the materials from which they were made and how they were worn (Wells 2008, 40-41). As Gell warns us, objects and their decoration cannot be read like text because they are not structured like language (Gell 1998, 163-5). The physical properties of the object, its tactile qualities and location within the context of other Iron Age objects forms the basis from which the object was understood.

Not everyone had a brooch and few people were buried with one. They are found in adult male and adult female burials but never in association with children in Britain. Exceptionally few people seem to have had two brooches and we cannot be certain whether both or either belonged to the individual they were buried with. The pair of 2K brooches from a grave at Harlyn bay [10237, 10274] are the most likely to belong to that one person on the basis of their similarity. Just as the Mill Hill brooch [10002] was buried with other bronze objects decorated in the same style.

The low numbers of brooches in settlements in Britain compared to the number of people who must have lived at those settlements suggests either that very few people owned brooches or brooches were carefully kept and rarely discarded. Either way this would indicate a brooch to be a valuable item. So they might only be buried with an adult who had achieved the right or wealth to own one. Perhaps the adult's brooch might have been deemed to have fulfilled its role and therefore could be included in the burial whereas a child's brooch might have been passed on to other youngsters to wear into adulthood. Alternatively brooches were part of the accoutrements of adulthood along with other less tangible qualities and responsibilities.

On the continent brooches tend not to be associated with children but their connection with women and men varies regionally and temporally (e.g. Bretz Mahler 1971; Stead and Rigby 1999, 16; Evans 2004, 174; Desenne et al. 2009, 445). Although at Bucy-le-Long, Aisne, France one particular type of brooch, the Dux, is only found in children's graves (Desenne et al. 2009, 445). It may be that brooches belonging to people of different age or social groups might have been deposited in different contexts so children may have worn brooches but they were deposited in contexts separate from the human remains. All we can say at present is that children were not buried with brooches in Britain.

Research on the Hallstatt and La Tène cemeteries in northern France recorded temporal changes in the frequency of brooches in male and female burials (Evans 2004). While the changes were roughly contemporary the frequencies varied at a different rate for either sex. Towards the end of the Hallstatt period more brooches were found in female than male graves. During the early La Tène period the number of female burials containing brooches decreased while the number of male burials with brooches increased a little. After which time the number of burials with brooches increased for all genders until the middle La Tène when the frequencies dive again with the most dramatic loss occurring in the female group but all frequencies remaining higher than at the end of the Hallstatt period (Evans 2004, 174). So the relationship of brooches and gender constantly varied in northern France across the EIA and into the MIA showing fluctuations at different rates for men and women. With little evidence for EIA brooches in burials in

Britain and limited numbers for the MIA we cannot expect to identify such precise chronological changes but the evidence reminds us of the possibility that the material manifestation of gender was fluid and constantly shifted over time.

### 9.3.2 Group Identity

A brooch as a personal item could reference an individual but its deposition with groups of other brooches or other metalwork could represent that individual's location within a genealogical or social group (e.g. Pryor 2005, 56) (Chapter 7). As Wells suggests, after Krämer, brooches as fasteners represent 'holding things together' (Wells 2012, 105) the brooch holds either side of the fabric together to keep the individual warm. Where brooches were deposited *en masse* they might have a dual function of representing the individual whose brooch it is and the group who are being held together by this deposition.

Hunter has suggested that pins are favoured in Scotland over brooches for much of the Iron Age (Hunter 2009, 151). The same seems also to be true of Ireland (Raftery 1984, 157; Becker 2008). Pins are still in use in England during this period with finds at sites which have also yielded several brooches including Cold Kitchen Hill (Becker 2008). The brooch absence in Scotland and Ireland indicates a major regional difference in dress accessories during this period. The brooch distribution is, therefore, not merely a reflection of artefact recovery locations but a close representation of Iron Age preference. So brooches were preferred in the south and east and southwest when pins and penannular brooches are preferred in the north and northwest of Britain. Here then we see evidence for group identity in the explicit wearing or not wearing of brooches.

## 9.4 Designed for Use

The simple yet effective design of E-MIA brooches in Britain was only achievable with superb skill and detailed knowledge of the properties of the metals. Typological changes make the construction process more reliable although they still required immense skill to cast or forge and assemble them (Chapter 5). The increased homogeneity in the metallic composition of MIA brooches compared to EIA suggests perhaps more consistent production methods and/or the production was confined to fewer specialist workshops. Despite this increased homogeneity, brooches of the same type, found at the same location may be constructed with different mechanisms (e.g. at Grandcourt Farm). This contradicts the idea that they represent the efforts of a few workshops unless the variation is the result of creativity and experimentation by the metalworkers. Owing to the minimal numbers of brooches these artisans must have been making other metal objects and were perhaps also involved in different craft or subsistence activities dependent on the season (Chapter 5).

The majority of EIA brooches in Britain are bronze with a few rare iron examples. In the MIA at the same time as new styles of brooches come into use we see increased production of iron brooches. The overall shapes are the same in either material but the iron brooches required new ways to construct them and new ways to decorate them as the metal bows cannot be moulded with designs. At about this time we see a heightened use of the moulding facility in bronze casts to decorate brooches with elaborate curvilinear designs in low relief. Some examples are even decorated in discrete areas not visible while the brooch is being worn, such as the back of the Newnham Croft brooch [10575]. Much of the skilled work is hidden when the brooch is worn, such as the detail of the hinge mechanisms. Perhaps knowing the brooch was a complex and well-crafted design was an important aspect of the wearing and significance of such objects.

The shift to iron has also been recognised in brooches on the continent. Marion's examination of brooches in cemeteries in northwestern Europe shows a change between La Tène B1/B2 and La Tène B2/C1 (Marion 2011). During the former 57.9% of the brooches are bronze while 42.1% are iron. In the latter period iron now becomes far more dominant accounting for 93.1% of the brooches with only 6.9% in bronze. Other objects also showed a shift in the choice of material all changing to resources that were available more locally than before. Marion perceived this focus on local resources as a reaction to a time of increased friction and fighting between territories (ibid). As a result it might have been more difficult to obtain resources across a long distance and even might have encouraged a focus on the local community to improve cohesiveness.

In Britain the dating evidence implies the shift to iron brooches occurred at c.300 BC. At first glance the evidence also suggests a shift to local resources, iron ores were widely accessible across Britain compared to copper and tin (Chapter 5). The detailed evidence is not so simple. Brooches might be made primarily from local materials but many still required bronze elements to complete the hinge mechanisms. Applied decorative material, such as coral and glass, may also have travelled some distance from its source although the actual location of those sources is open to debate (Chapter 5). Even the iron used may not always be local. The evidence for trade of iron with specific metallic composition (Chapter 5) also indicates that the resources from further afield might be preferred. In the Yorkshire Wolds the evidence for a substantial iron production system (Halkon 2008) may have led to the local preference for iron brooches. Or a local desire for this silvery coloured metal helped the industry to flourish.

While there is an increase in the use of iron for making brooches in the MIA this increase is not visible at all types of site nor in all types of brooch. Bronze brooches appear to be preferred for deposition at ritual sites and are more often found on settlements than iron brooches. Cemeteries on the other hand are completely dominated by iron brooches but then the cemetery evidence is dominated by the Yorkshire Wold sites. Yet iron also increases in popularity for brooches in Wales (Gwilt 2007, 303) where none are found in burials. Iron brooches are also recovered from settlements and hillforts where they are not found with bodies (with the exception of Slonk Hill) so iron brooches were not just for the dead.

Bronze brooches are found in some graves. At Trevone one bronze brooch was found in the same grave as an iron brooch. Brooches of the same type were produced in either material except where the form was only achievable in cast bronze: 2B and 2L. The latter show greater regionality in their distribution than other brooch types (Chapter 6) perhaps local preferences affected the type of material used to make brooches as well as type of brooch and the deposition context.

## 9.5 Curation

With brooches used as dating tools for many features it is difficult to separate the date of the brooch from the date of the deposit (Chapter 4). Therefore it is only possible to identify later deposition of earlier brooch types when material of a definite later date is found in a feature of a brooch of definite early date. The 1Bc brooch [10628] in the fill of an MIA-LIA pit at Balksbury Camp is one such rare example (Wainwright 1995). More often we are dealing with proposed later deposition at temple sites as discussed in Chapter 7.

The problem extends to burials. The majority of brooches in burials are iron (Chart 7.3) so their corroded condition makes it impossible to identify wear or damage or repairs. The exception is an iron 2Aa brooch from Trevone [10633]. The foot was inlaid with glass, two fragments survive, one red the other blue. The blue glass appears to be a shard from a broken object such as a bangle. It is the only example of blue glass on an MIA brooch. The poor condition of the red glass led Jope to propose this was a replacement for one of the missing blue glass cells but this is more probably to do with the softer condition of the red glass (Jope 1965, 21). Instead I propose that the blue glass shard is a replacement (Chapter 8). Of the few bronze brooches in burials, only one example is said to show evidence for repair: the 1Aa Cowlam brooch [10452] which had a mock spring with inner coil and pin of iron thought to be a repair (Stead 1979, 64-5, H&H 85).

Giles proposed that the incomplete condition of some iron brooches from the Yorkshire Wold burials could be deliberate deposits of broken objects (Giles 2012, 140). This contradicts her argument that the brooches act as fasteners for shroud like wrappings, since a broken brooch would have been of no use. Examination of the iron brooches at the British Museum and the illustrations from the x-rays (Stead 1991a) also contradicts Giles' argument that they were buried in a broken state. The corrosion deposits do not fully encase the broken edge of these brooches including [10243] and [10231]. These are also located in suitable positions for shroud fasteners. Owing to the general consistency in brooch types within single cemeteries and the lack of definite evidence for antiquity at time of burial the brooches are probably the same production era as the burial and would have been current styles at least towards the end of the life of the deceased.

The applied material on decorated MIA brooches tends to have a better survival rate in burials than other contexts. Dent has proposed that where similar brooches lacking the applied material are found in other contexts: Flag Fen [10808] and Meare [10570] these objects were deliberately broken which included removing the applied decoration, probably coral (Dent 1995). This is entirely feasible and would have enabled recycling of the coral but I wonder whether its absence in these contexts may well be a preservation issue. Further research is clearly needed on the use of this rare material in Britain including finding the source of the raw material.

In Britain the pins are often missing on brooches from all types of find context. The pin was clearly the weak point on most brooches being the thinnest part but also the part that is subjected to force most frequently: pulling it open, pushing it through fabric and pressing it closed. It is highly probable many brooches broke at the pin during use. This is supported by the presence of brooches with the pin repaired in antiquity such as [10844] from the Thames at Putney with a replacement iron pin or [10741] Vale of Glamorgan metal detected find where a replacement pin has been wound round a toggle now acting as the axial rod. It is possible that broken brooches were chosen for deposition in specific features at specific sites. They could still represent the individual but would have avoided taking a valuable clasp out of use. On the other hand those brooches from very specific deposition contexts are often complete brooches and any breakages appear to be the result of soil conditions and excavation processes rather than deliberate pre-deposition breakage.

## 9.6 The Detached Brooch

The location of brooches in burials suggests they were all attached to something not just placed in the grave. This is further supported by cloth remains preserved in mineralised form on corroded brooches. Corroded iron brooches have fixed the hinge or spring mechanism so that the brooch may be excavated and lifted in the same open or closed state as it was found. Whereas some bronze brooches are in such good condition that the pin still moves freely on the hinge or spring (e.g.

[10227]). In which case it is not clear whether the brooch has been closed after excavation or before deposition. Few iron brooches have been found corroded into a fixed open position:

- [10753] the Breiddin found in an occupation deposit
- [10761] Castell Henllys (context unknown)
- [10551] Cold Kitchen Hill ( context unknown)

The lack of contextual information does not confirm whether these are items that were purposefully removed from a garment and deposited open or whether they fell off a garment whilst in use and were lost. Where brooches are depicted in other mediums they tend to be shown open, as on the CRICIRV coin type (Wells 2012, 181). However, all these depictions date to the LIA so do not directly represent conceptual ideas about brooches in earlier periods. There could have been a very distinct conceptual understanding of a brooch dependent on whether it was open of closed. If a brooch did reflect conceptions of unity an open brooch could indicate the inverse: separation. Perhaps the CRICIRV coin was not for everyone, it pertained only to a select person or persons.

At Ausculum in Italy Iron Age clay loomweights have been found with the shape of a brooch impressed into them: each one a different brooch, each one missing the pin (Fabbri and Osanna 2004, 288-289). The brooches were pressed into the damp loomweights to leave the impression behind as an image. It is possible the thin pins just did not leave an impression but perhaps the pins are missing from the images because the brooches were already broken. This could be evidence of a broken object being reused for a different purpose. The broken brooch no longer able to clasp fabric could still represent the individual as a form of signature on their loomweights. An open brooch too then might be the signature of an individual.

## 9.7 Summary

With the increase in known EIA and MIA brooch finds since previous Britain-wide studies (e.g. H&H 1987, Haselgrove 1997) we now see greater complexity in the use of brooches from their different roles in deposition practices to possible variation between the value and importance of different type of brooches. The meaning of a brooch may change over time not only in how it was used but who used it. So a brooch clasping a bag for a mirror becomes more significant because of the rarity of mirrors but has less direct personal associations than other examples that are worn on the body. Or the removal of a brooch for deposition in a non-funerary context separates it from the individual but also imbues it with the identity of that individual within the group of material that it is buried with.

The visual effect of a brooch, its shining contrast with matt fabrics and dark earth was used to show off the object in a burial or soil deposit. The scattered bronze brooches and amber objects across the gully at Grandcourt Farm, Middleton would have created a sparkly, almost dazzling effect in the sunshine or they would have glimmered under torchlight. The use of rare materials like coral to embellish brooches would have enhanced the impression on the viewer. There is a strong connection between brooches and individuals. This connection is not a direct indication of gender or wealth but can show membership of a group differentiated by other means such as knowledge or skills. This could be knowledge passed on when a individual attains adulthood or the accumulated knowledge of old age or the skill of craftsmanship or fighting prowess or mediating. Heavily worn or curated examples are rare and a few must even have been made as part of decorative sets for particular individuals such as for the man buried in Grave 112 at Mill Hill with a sword and bronze head dress. Hunter talks of votive deposits having a role in 'integrating households and communities' (Hunter 1997, 122). The brooch as a representation of the individual in a mass deposit of brooches indicates that individual's part within the community. A brooch may set someone apart while integrating them into a group.

# Chapter 10 Conclusion

This research topic was devised in reaction to the growing numbers of Iron Age brooches being recovered in excavations and by metal detecting. Brooches have long been used as a dating tool for the period partly owing to limited scientific dates and partly to the perceived chronological variation in types as exemplified by the large assemblages from Iron Age cemeteries on the continent. Through the process of researching this topic and analysing the data it has become clear that we lack direct dates for the brooch types from Early and Middle Iron Age Britain. This has shown the continued importance of classification and typology to be able to extrapolate the possible contemporaneity of different and similar brooches.

The dominant existing typology for these early brooches was devised by Rex Hull and Christopher Hawkes (1987) from their own exploration of previous research and the actual artefacts. In Chapters 3 and 4 this typology was examined and found to be basically right but with some dating issues. Comparison to radiocarbon dates of associated organic remains (Chapter 4) and consideration of the technical features of the brooches (Chapters 3 and 5) showed that several styles overlap creating a fluid typology. The continental material is of little benefit for studying the MIA brooches in particular as brooches of this period show particular insular characteristics not found on contemporary or earlier European examples.

Previous research has focussed upon deposition evidence (e.g. Haselgrove 1997) and considered proposed meanings of the brooches (e.g. Jundi and Hill 1998, Giles 2012) but few have explored the manufacturing evidence to examine how brooches were made and how materials and technique influenced form and perhaps function (Chapter 2). This lacuna was addressed here through comparison of metallic composition of different types of brooches and the skills required for brooch production (Chapter 5). The evidence revealed that knowledgeable and highly skilled artisans were able to cast or forge brooches to the desired shape while experimenting with complex construction methods. The skills employed in making brooches were skills that could, and must have, been utilised in the manufacture of other products both in metal and other media such as clay.

With the benefit of the increased dataset it has been possible to interrogate the distribution of findspots in relation to chronological changes, regional biases and types of sites (Chapters 6 and 7). No single region can be shown to be the first area to have started using brooches. The earliest type is found across Wales and England although the distribution is focussed towards southerly locations rather than northern Britain with only one possible example from southern Scotland. As brooches increase in frequency so the distribution broadens. In the MIA the distribution of findspots now incorporates coastal areas in Scotland and in the southern part of the country spreading down along the western and eastern side of England and into Wales. Central England also sees increased numbers of brooches with some concentrations of very specific types. Although the distribution covers a broader area and more brooches are found in the MIA, the number of findspots is lower owing to a greater concentration of brooch finds at specific sites.

The largest brooch assemblages are derived from the cemetery sites of the Yorkshire Wolds and some unique deposition sites where personal objects are placed in dryland or watery sites often in locations quite separate from settlement activity. These concentrated depositions are generally dominated by MIA rather than EIA types with the exception of rivers possibly owing to lack of retrieval of iron finds from these environments (Chapter 7). The research has benefitted from the detailed contextual evidence provided by the burial evidence not just in Yorkshire but elsewhere in England, usually at sites not far from the coast (Chapter 7 and 8). The burial data give us the closest evidence we have for how brooches were attached to garments and bags and how they were used in relation to the dead but also how they might have been worn by the living (Chapter 8 and 9).

The combined deposition and production evidence supports the hypothesis that in the Early and Middle Iron Age brooches were personal items that indicated aspects of an individual identity and that individual's relationship to group identity (Chapter 9). The evidence does not tell us exactly what the brooches meant. Yet it does indicate that the significance of a brooch was neither in the gender of the person who wore it nor in the wealth of that individual but instead might be closely related to matters of division and cohesion based perhaps on personal skills and how these benefitted the group. When a person was buried with their brooch that brooch was made visible even if the person's face was covered. The brooch and the cloth it clasped signified the myriad information we recall about an individual from their facial characteristics, from their physical appearance: at a time when physical appearance may have been a very precise clue as to a person's main occupation.

The meaning and significance of brooches may have altered over time and certainly appears to be affected by regional nuances not only in the types worn but the places and manner in which the brooches were placed in the ground or above the ground. The presence of E-MIA brooches at sites with a religious character in the Late Iron Age and Roman period suggests that the importance of brooch deposition continued into those periods either through reference to earlier sites and deposition or incorporating earlier artefacts. We have no evidence for the definite deposition of EIA or MIA brooches in Roman contexts but we do have evidence for long-term use of sites where deposition of quantities of personal metal items was vital at that location. In the period under study it appears these focussed sites were interacted with to affirm social connections, it is only in the later periods that we find evidence that these social connections involved a spiritual affiliation.

## 10.1 The History of Brooches

The current interpretation of the early history of brooches in Britain now reads as follows:

### 10.1.1 The Earliest Brooches

The earliest deposition of brooches in Britain dates to the Early Iron Age. The earliest brooches in these deposits are Type 1A brooches as characterised by H&H and confirmed here in Chapters 3 and 4. The 1A brooches were used and probably made here from c.450 BC. After this time we see an increase in insular brooch production and an emphasis on British forms of 1B brooches which contrast with the continental counterparts by having usually thicker bows, less decoration and external rather than internal chords. As Couldrey said of the earliest Iron Age ceramic evidence 'each community was aware of the ceramic traditions and fashions of its neighbours, but chose to borrow or imitate those traits, forms and styles of decoration it found suitable' (Couldrey 2007).

Brooches of earlier style have been found in Britain comparative to late Hallstatt types on the continent, particularly Italy. None of these has been recovered from an Iron Age context and all are derived from places with a visible Roman presence. The close association of these brooches with Roman sites is in part the results of past attempts by antiques dealers to increase the value of the objects through association with well-known provenances. No recent finds of late Hallstatt brooches contradict the Roman associations so this may in fact be the period when these curated items were imported or carried in to Britain on the clothing of people from the continent.

From c.300 BC we see a shift in brooch manufacture from a preference for bronze to almost equal numbers of iron and bronze brooches. This change is accompanied by increased variety of types. More brooches are now decorated with more elaborate designs achieved through decorative moulding or applied decorative materials. Some types are found right across Wales, England and into Scotland. Other types have more concentrated regional distributions.

## 10.1.2 Changes Over Time

**Earliest Iron Age (c.800-600 BC)**

- No brooches (but pins are in use).
- A period distinguished more by an absence of evidence than a change in the types of objects and settlements. For example lack of deposition of metalwork in comparison to earlier periods.
- Beginnings of hillforts.

**Early Iron Age (c.600-300 BC)**

- First brooches to be deposited in Britain are found in contexts from this period. It seems the forms are produced here from the outset c.450 BC.
- Development of insular styles and move away from continental brooch designs.
- Preference for bronze brooches (iron brooches rare).

- Simplicity in brooch design, decoration is limited and tends towards simple geometric marks rather than specific motifs.
- Brooches are found at hillforts, settlements and in rivers but rarely at cemeteries or other locations with a ritual focus.

**Middle Iron Age (c.300-150 BC)**

- Increase in the quantity of brooches and spread further north and west
- Shared stylistic traits between some brooches and pins.
- Increased use of iron – this is reflected in the brooch data. Although continued use of bronze, also seen in the brooches.
- Value placed on raw materials from specific sources.
- Broader distribution than EIA covering more of Wales, England and around the edges of Scotland.
- Concentrated deposition: less sites contain more brooches.
- Brooches are found at hillforts and settlements, far more in cemeteries and at sites of a wholly ritual character, but rare in rivers.

**Late Iron Age (c.150 BC- AD 50)**

- Some very local styles come into use then we see a revival of contacts with European styles influencing the forms found in Britain
- Far more brooches than before at specific sites and across Britain: JD Hill's Fibula Event Horizon (Hill 1995a)
- Continued production of iron brooches but a revival in the quantity of bronze brooches
- Increased range of types and greater quantities of each type

It now seems that the so-called LIA fibula event horizon (Hill 1995a) is not the main event; the main event is that brooches appear in Britain about four centuries earlier. The next event is the shift to a preference for iron brooches as opposed to bronze brooches and a general focus on more readily available local materials perhaps enabling increased production. The increased quantity of brooches in the LIA is only possible with the skills and knowledge acquired over the preceding periods.

## 10.2 Future Work

The more we look the more we need to look again. With every new reading of the archaeological evidence new ideas are thrown up, old hypotheses might be reappraised and found still to hold or be in need of revision, more answers might be achieved but just as many new questions now need answers. This research is no different.

Now it is clear that brooch deposition varied across different types of sites and in relation to different types of brooches as well as chronological periods. As a result one wonders about the sites and features that did not contain brooches. These sites may also exhibit evidence for communal activity and evidence for individual variation but no brooches have been found there. A useful avenue of future research would be to select a region or two for comparison on the basis of the variations in brooch and site type identified in Chapters 6 and 7, then examine the differences between where brooches are found and where they are not found to develop a more nuanced understanding of these objects.

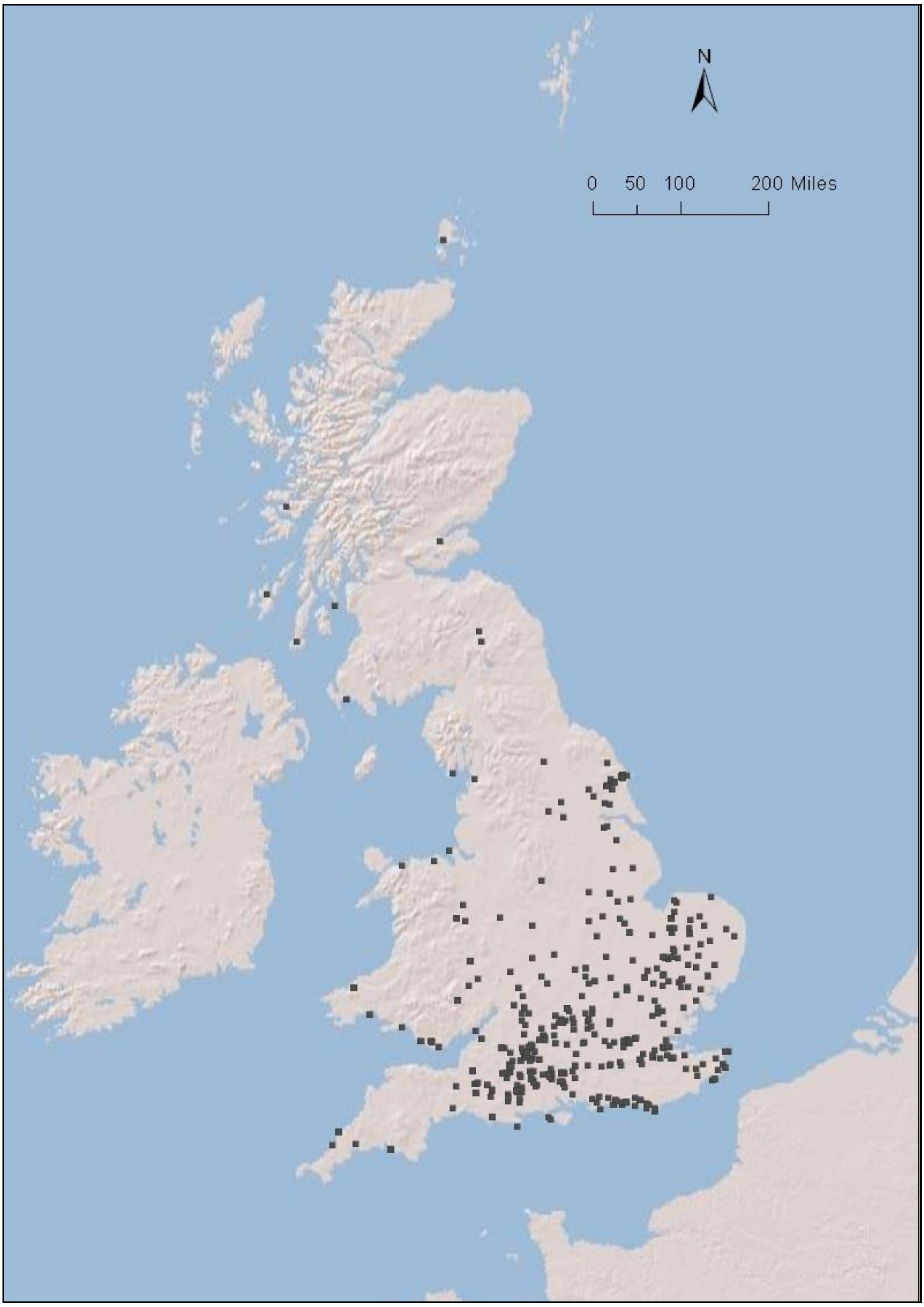
It is also important to consider how this revised corpus will be made available and why this is of use. There is a significant requirement for an up-to-date, readily available brooch reference catalogue. This should be up-to-date in terms of data and accessibility. A plan is already underway to make such a catalogue available in a convenient, cross-referenced, illustrated digital format. The data would then be available for comparison and interrogation by archaeological field staff, FLOs and researchers. This in turn should make future brooch records more accurate and easier to compare. Iron Age coins are far more numerous finds yet the Celtic Coin index maintains records of these. Perhaps a national brooch database could also be achieved if resources allow for this, one that is also accessible internationally so that, for example, researchers on the continent might explore possible connections with the evidence from Britain.

The inclusion of PAS data in this research has shown the value of such evidence in studies of Iron Age material culture. With the results achieved I will now continue to present them to a wide audience to encourage the submission of finds to FLOs for recording and to explain the value of carefully recorded findspots and contextual information. It is hoped these results will feed into excavation strategies to encourage more radiocarbon analysis and closer examination of the positioning and condition of finds in excavated contexts. The combined evidence also shows the need to synthesise the material evidence at regular intervals to avoid reiterating old errors and basing hypotheses on only half the evidence.

# Maps

**Map 1.1** Distribution of findspots of Early to Middle Iron Age brooches

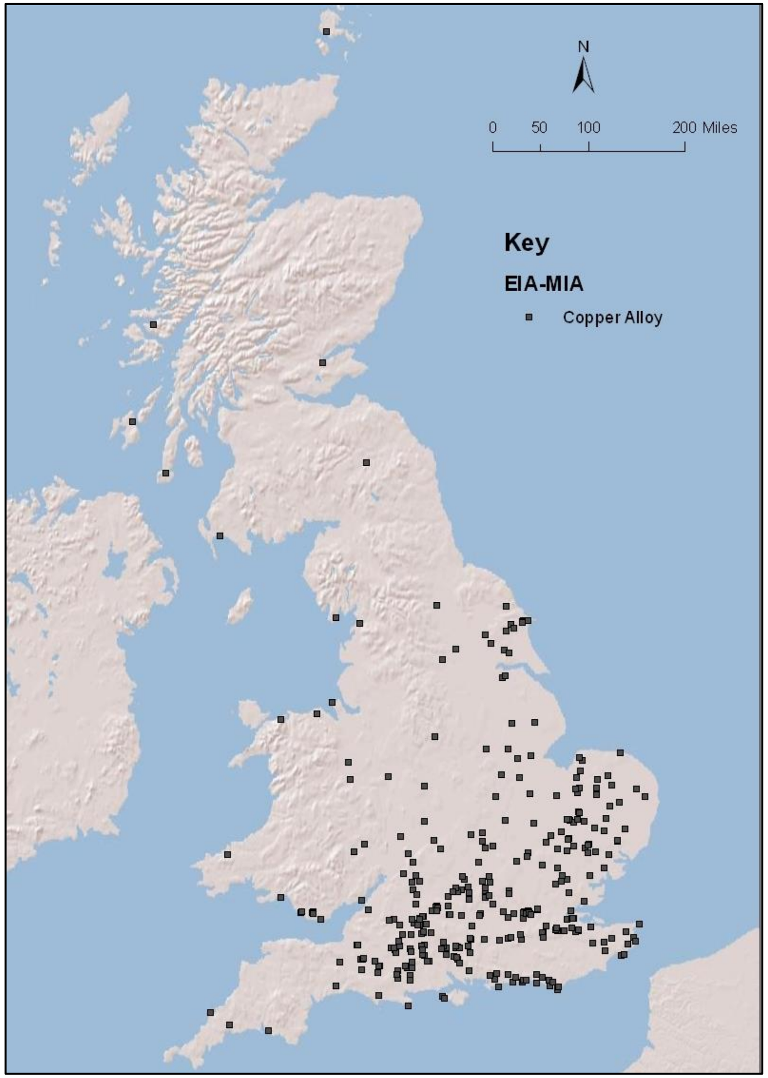
(Data Source: Appendix 1)



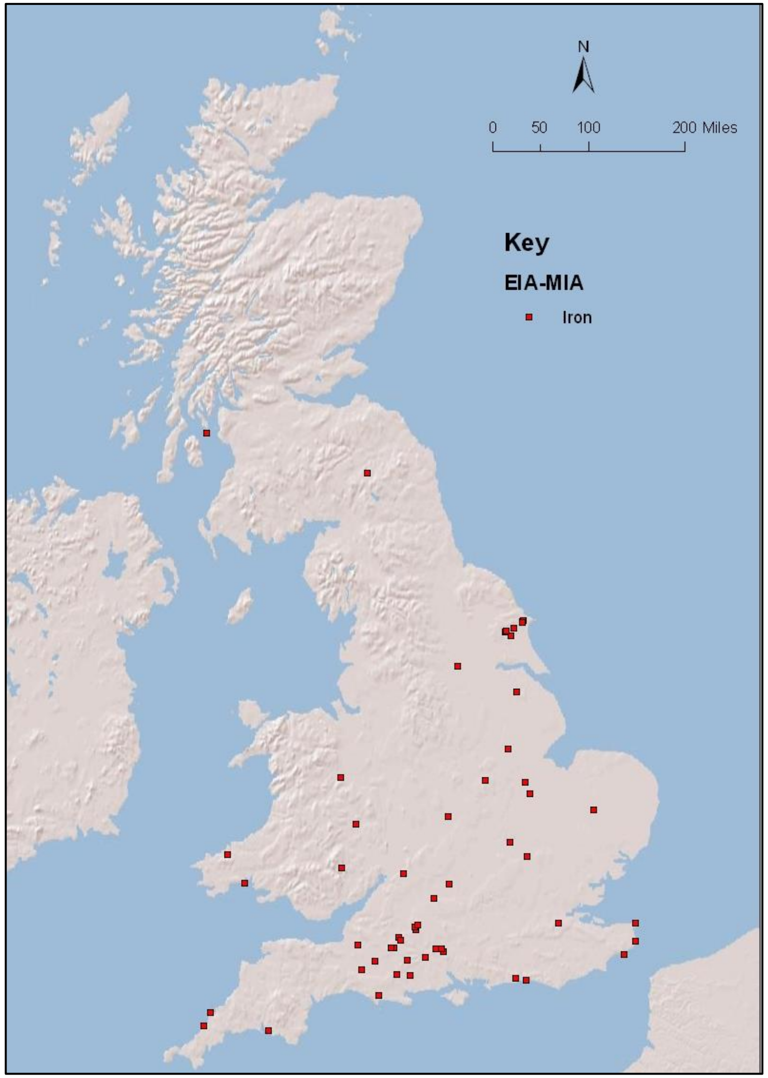
**Map 5.1** Distribution of copper, tin and iron ore sources in England, Wales and Scotland (Bayley *et al*.2008, 4-5, fig.2).


*Only iron rock ore sources are marked here, bog-iron is available across most of Britain

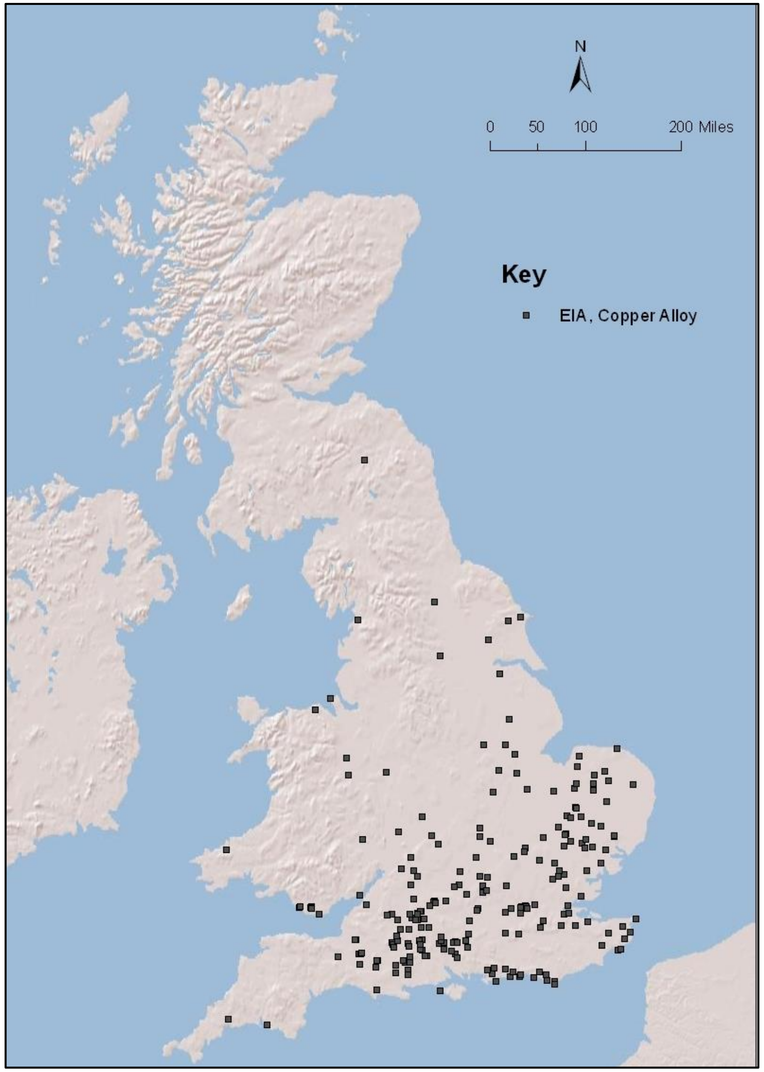
**Map 5.2** Distribution of copper alloy brooches



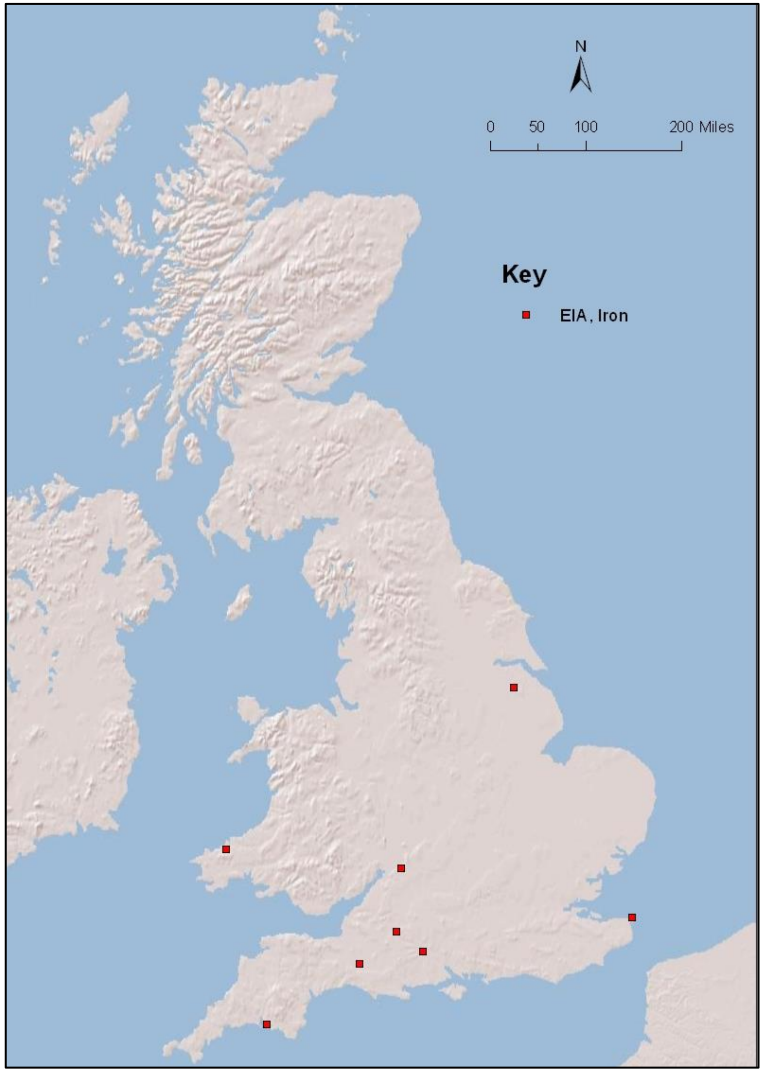

**Map 5.3** Distribution of iron brooches



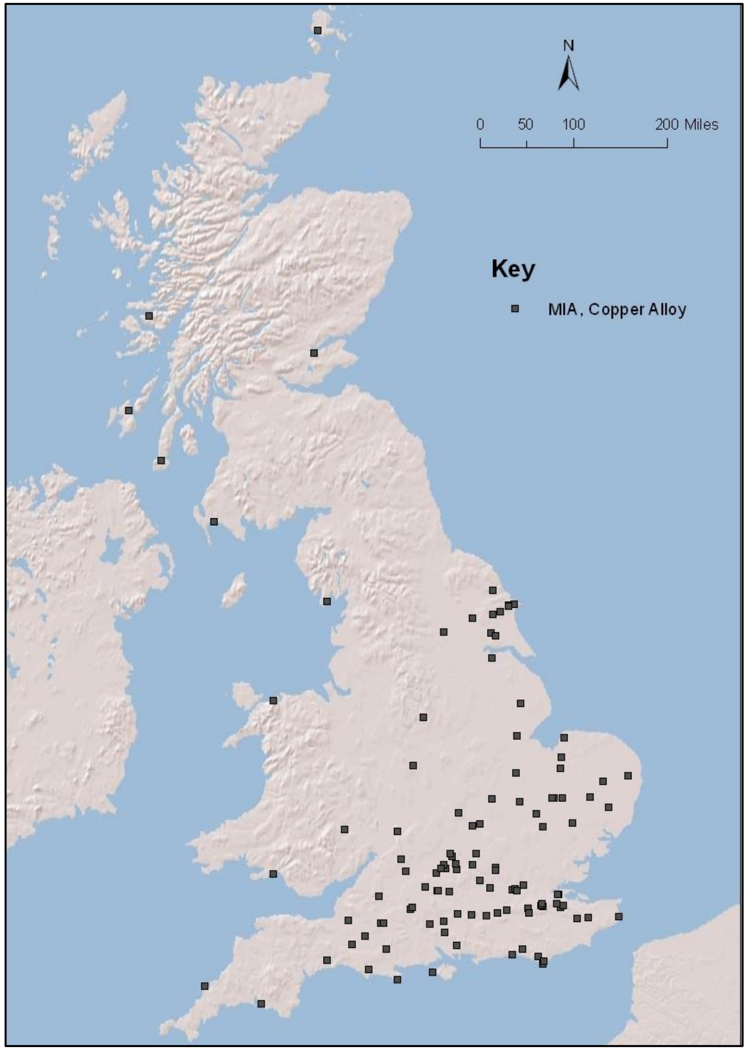
**Map 5.4** Distribution of EIA copper alloy brooches



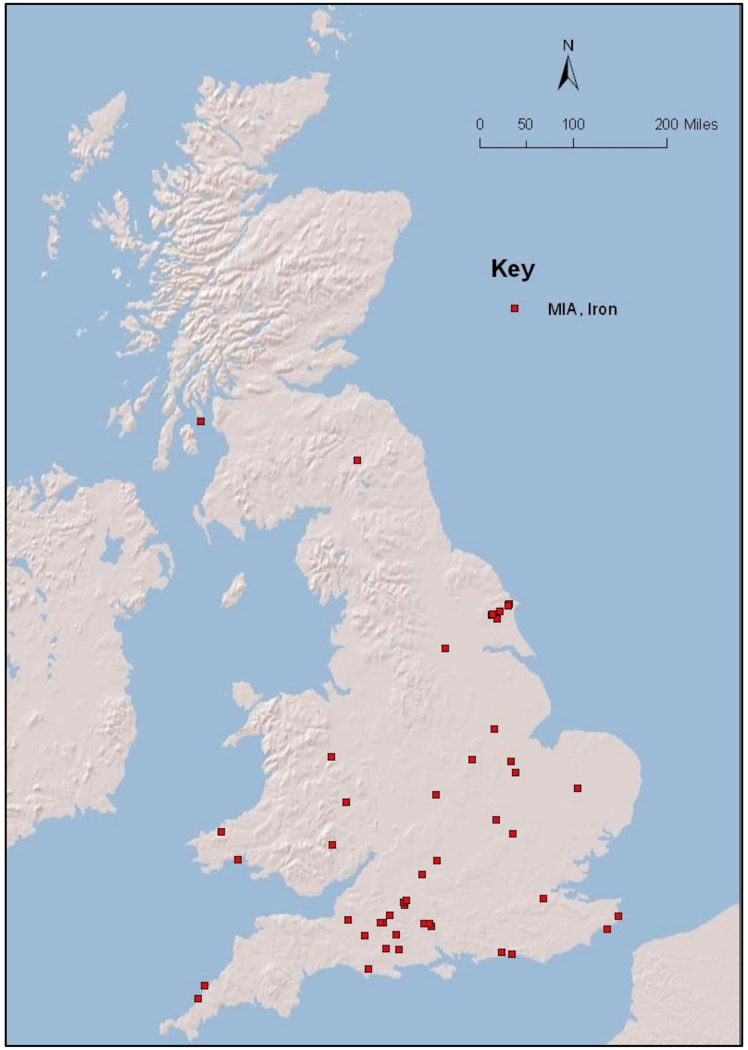

**Map 5.5** Distribution of EIA iron brooches



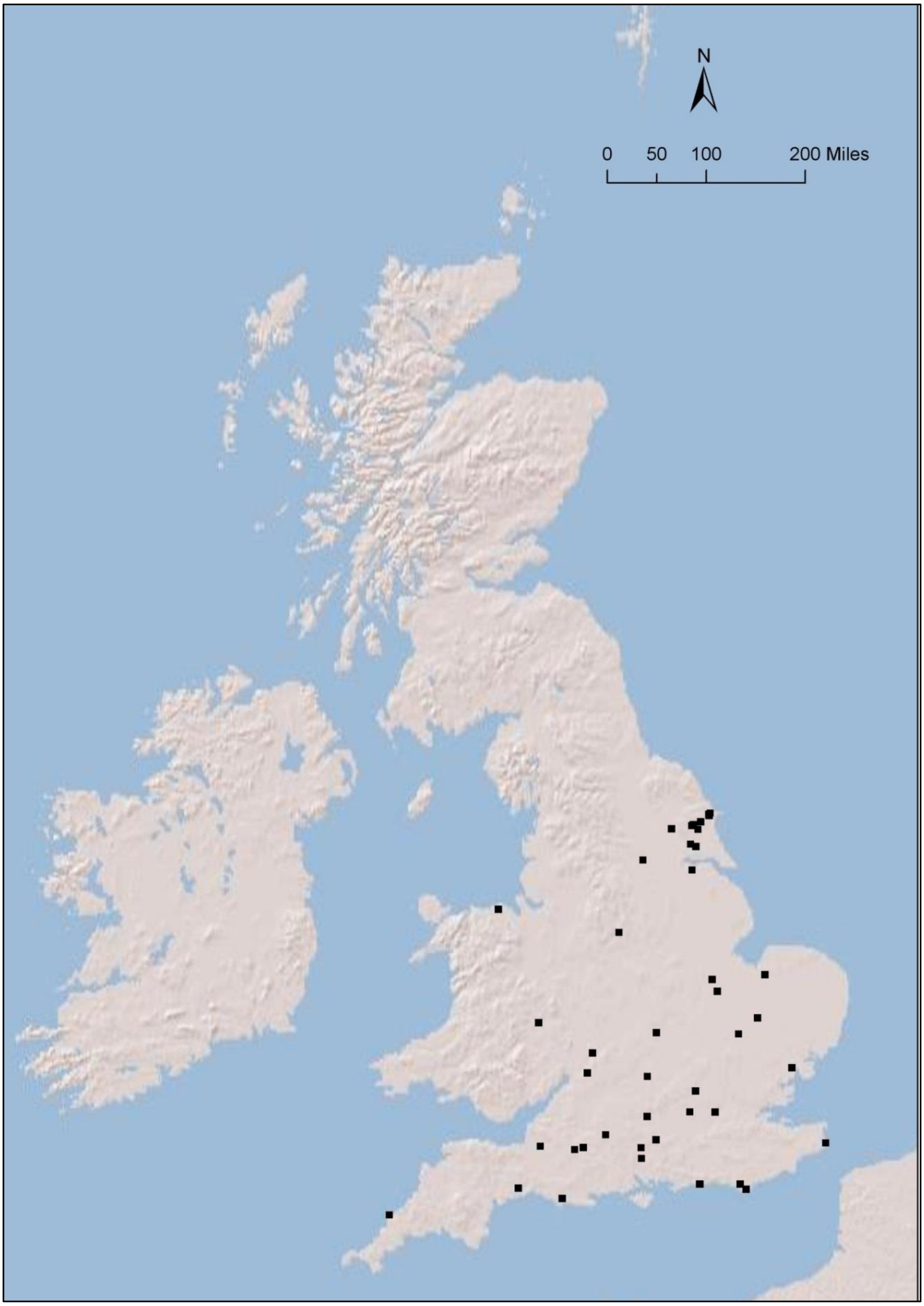
**Map 5.6** Distribution of MIA copper alloy brooches



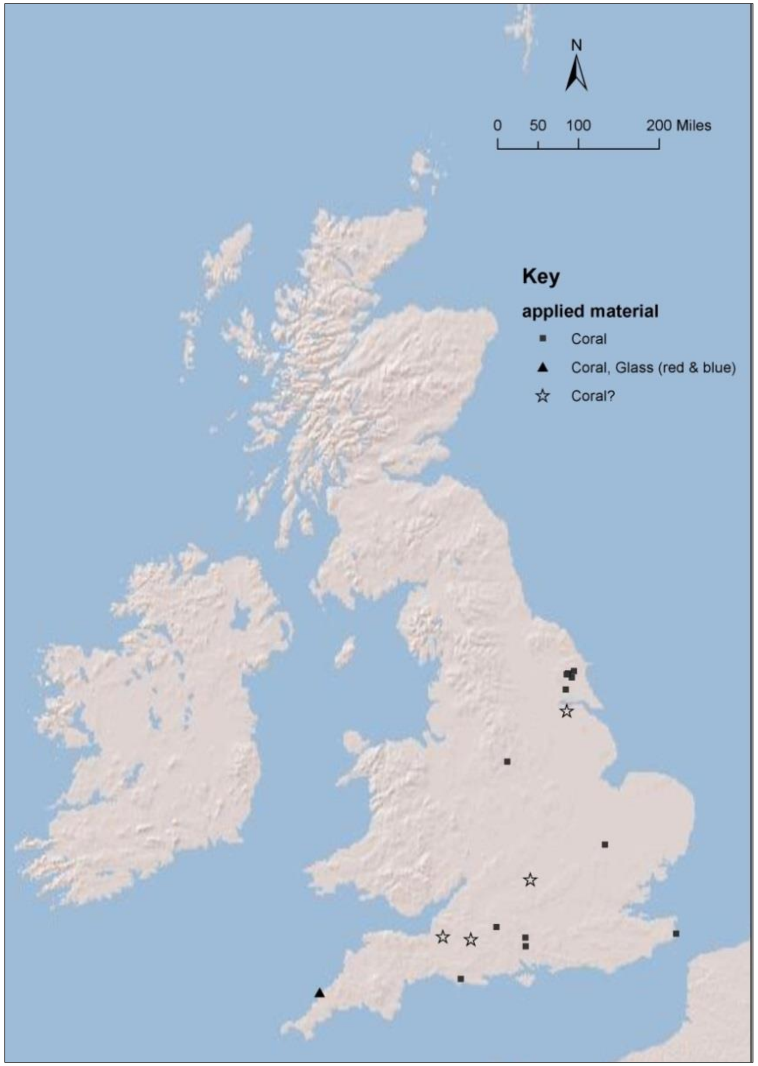

**Map 5.7** Distribution of MIA iron brooches



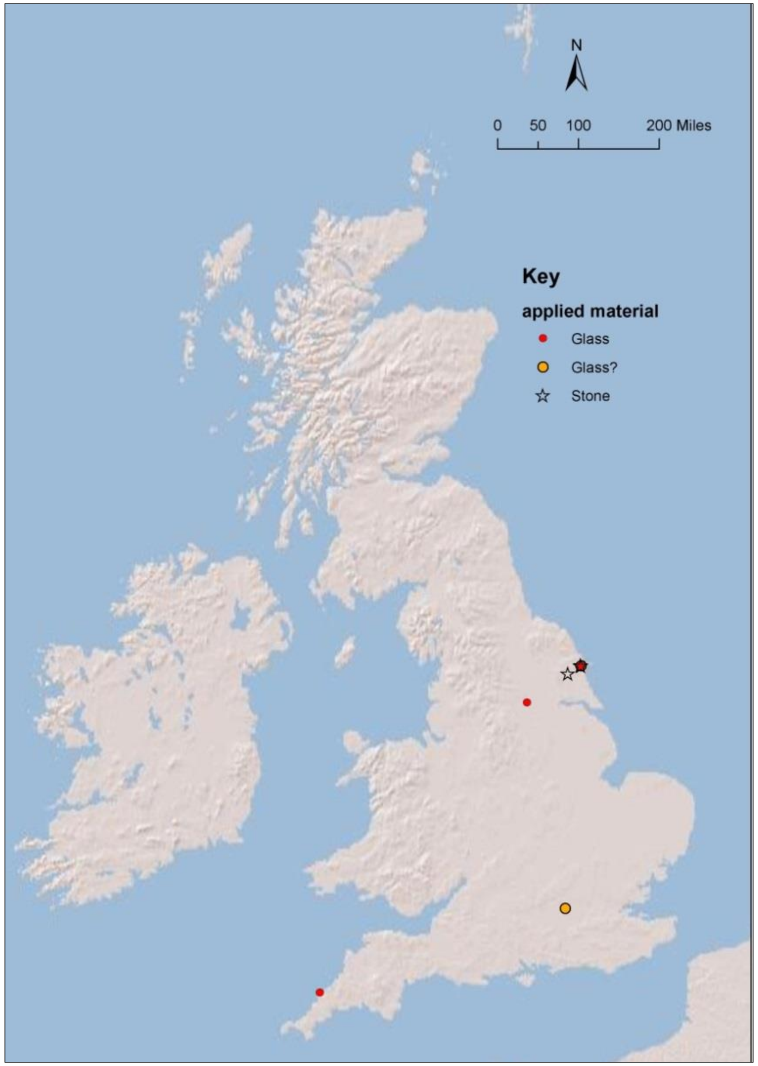
**Map 5.8** Distribution of brooches decorated with applied material (including those missing the inlay)



**Map 5.9** Distribution of coral decorated brooches



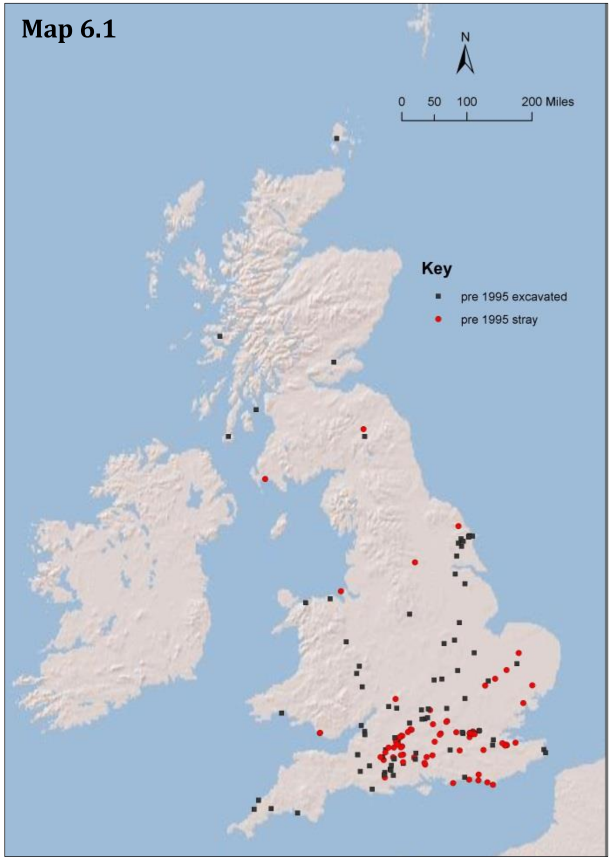

**Map 5.10** Distribution of glass and stone decorated brooches

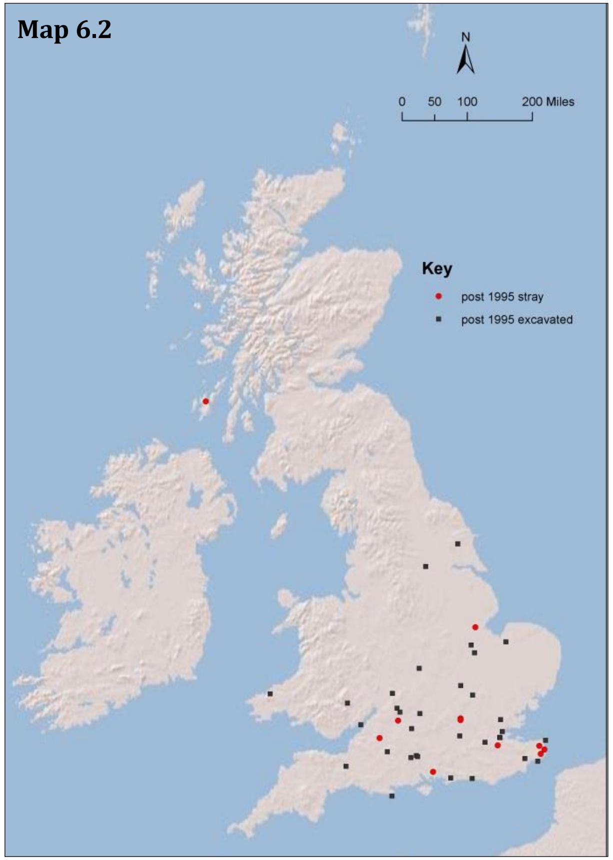


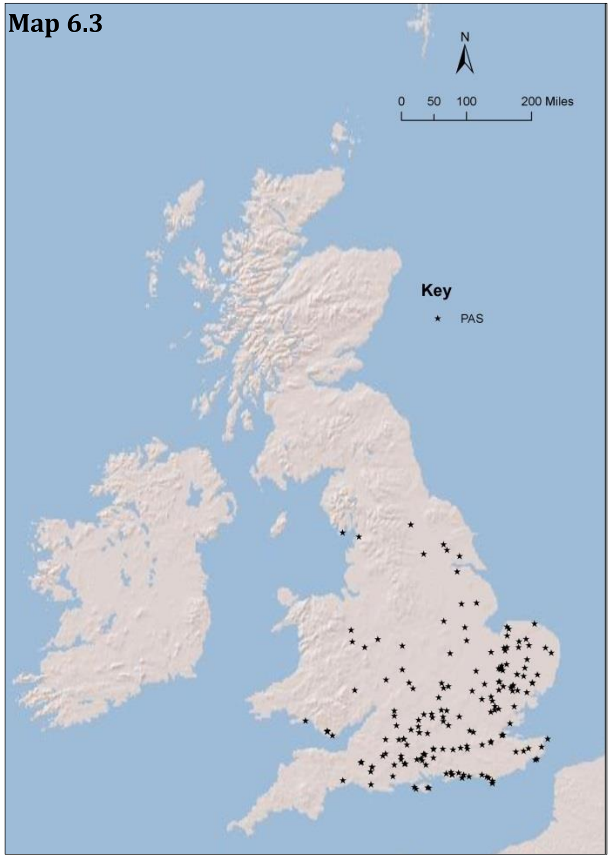
**Map 6.1** Known brooch findspots up to 1995

**Map 6.2** Excavated and stray finds published since 1995

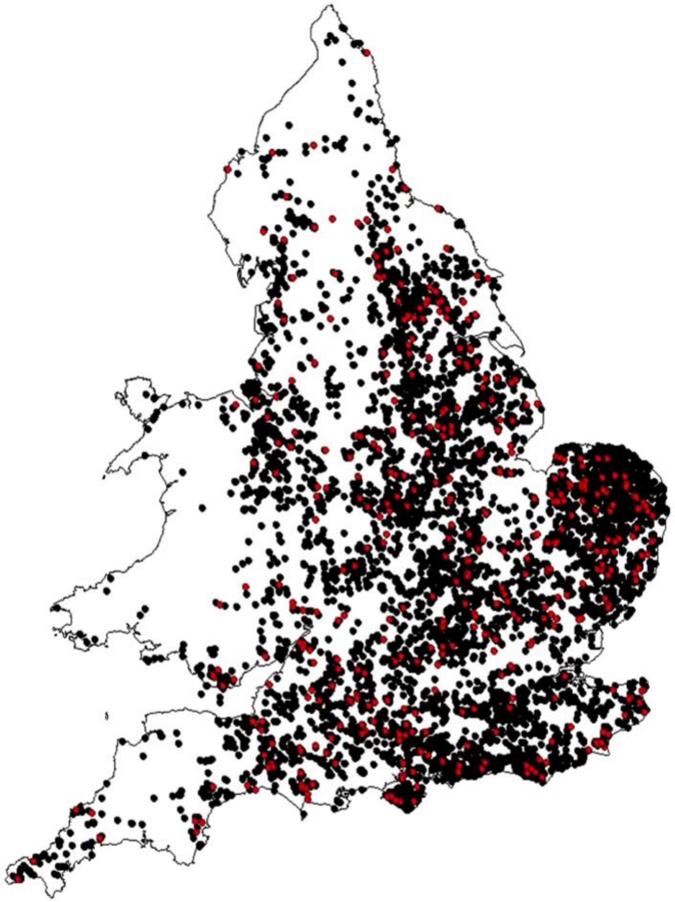
**Map 6.3** PAS recorded brooch findspots



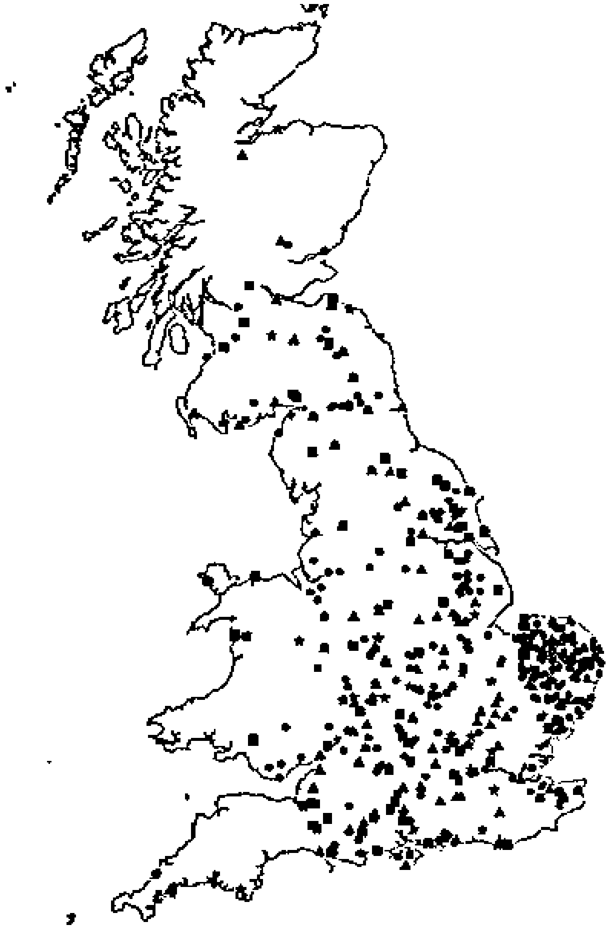



**Map 6.4** PAS finds up to 2007 (Lewis 2009,10)

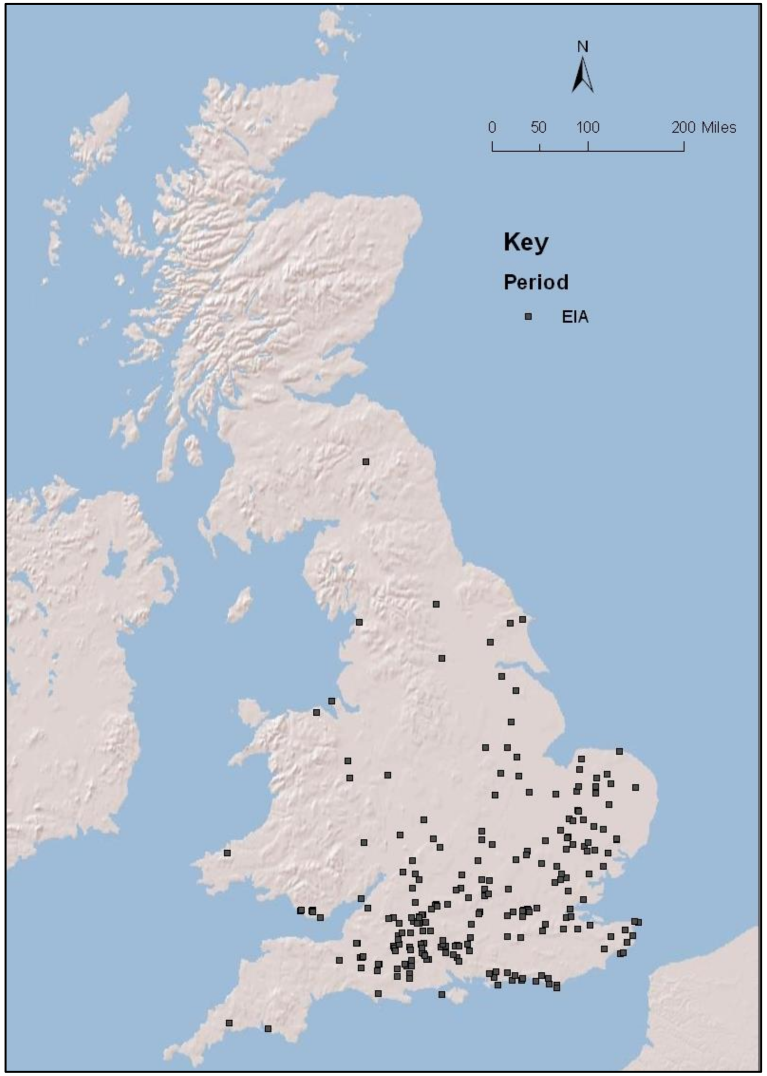


**Key**: Red dots indicate treasure cases

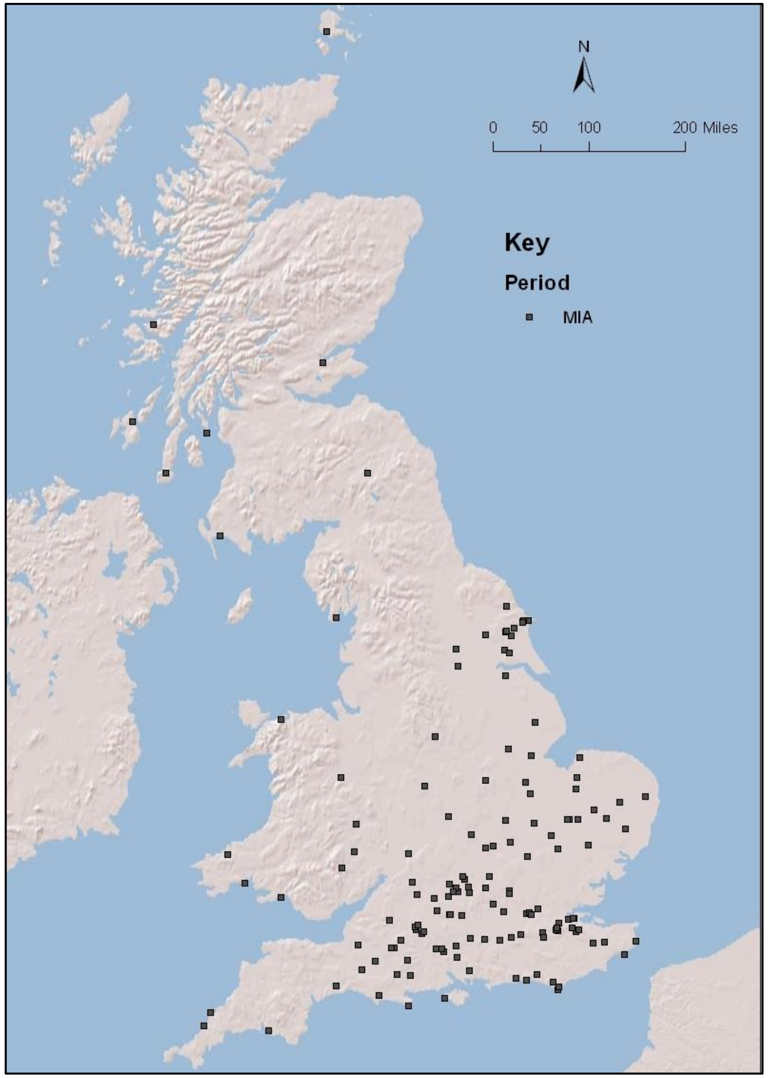
**Map 6.5** Distribution of horse equipment (Garrow 2008, 25, Figure 2.6d)



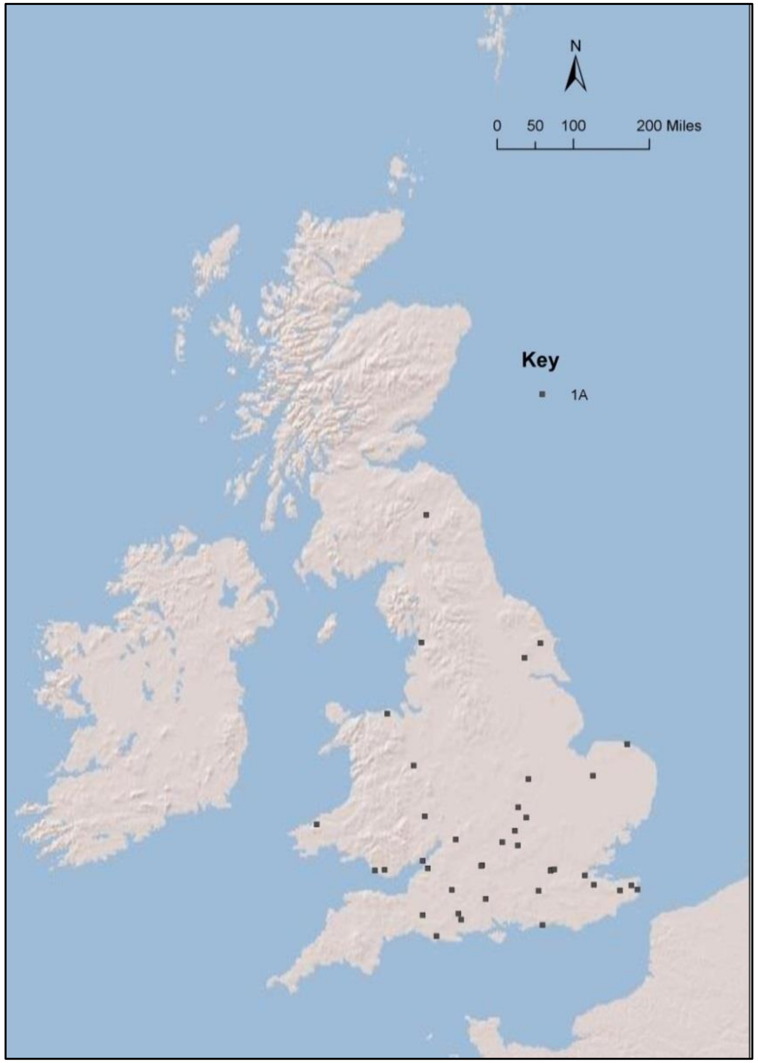
**Map 6.6** Distribution of confirmed EIA brooch findspots



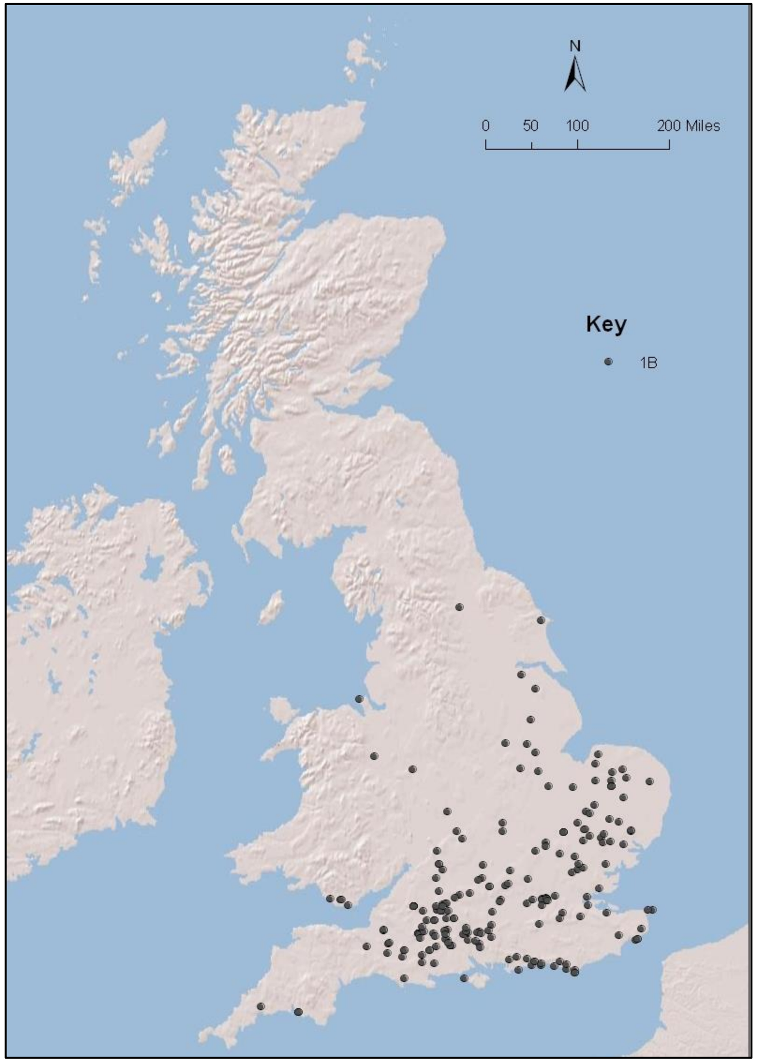

**Map 6.7** Distribution of confirmed MIA brooch findspots



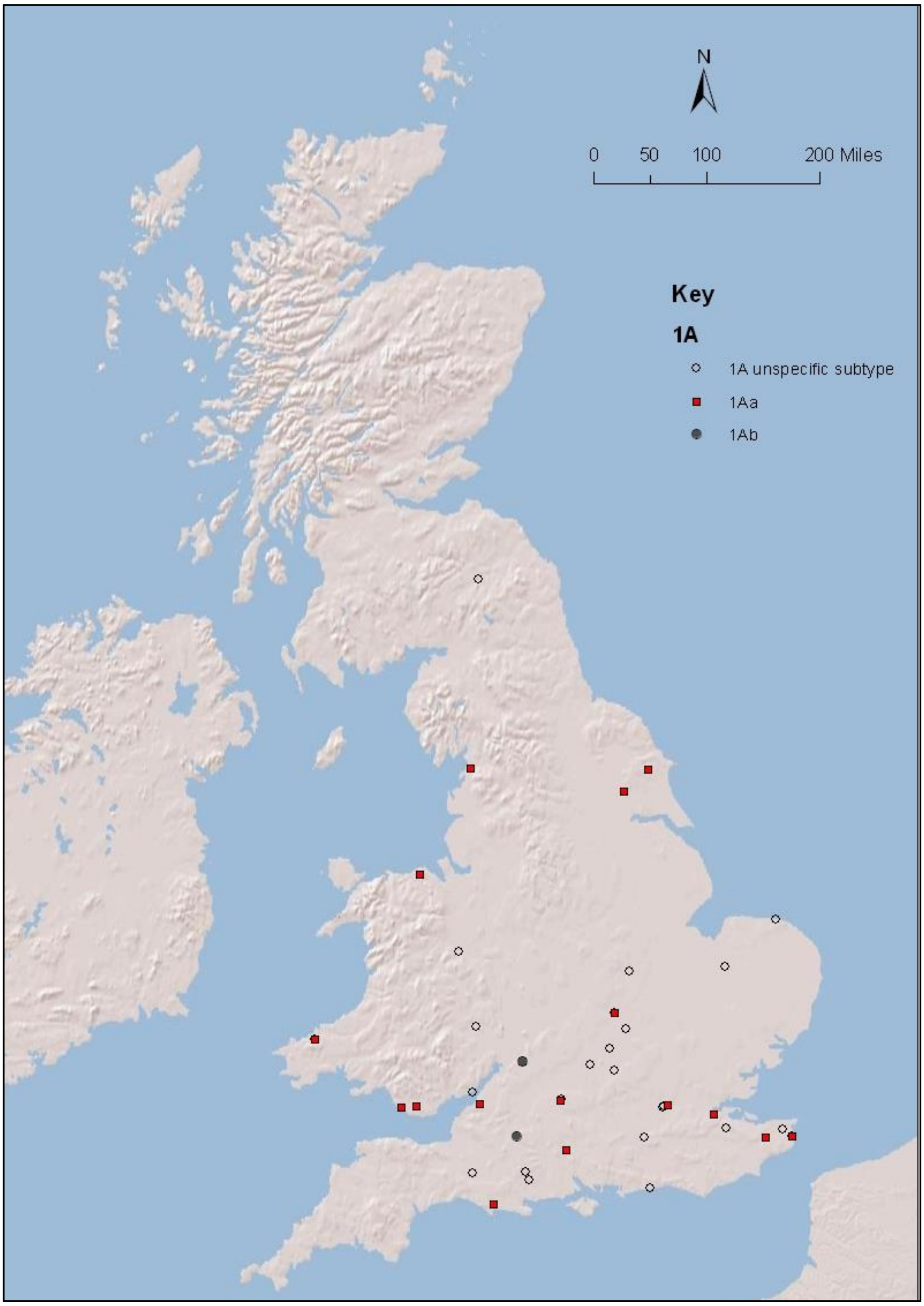
**Map 6.8** Distribution of 1A brooches



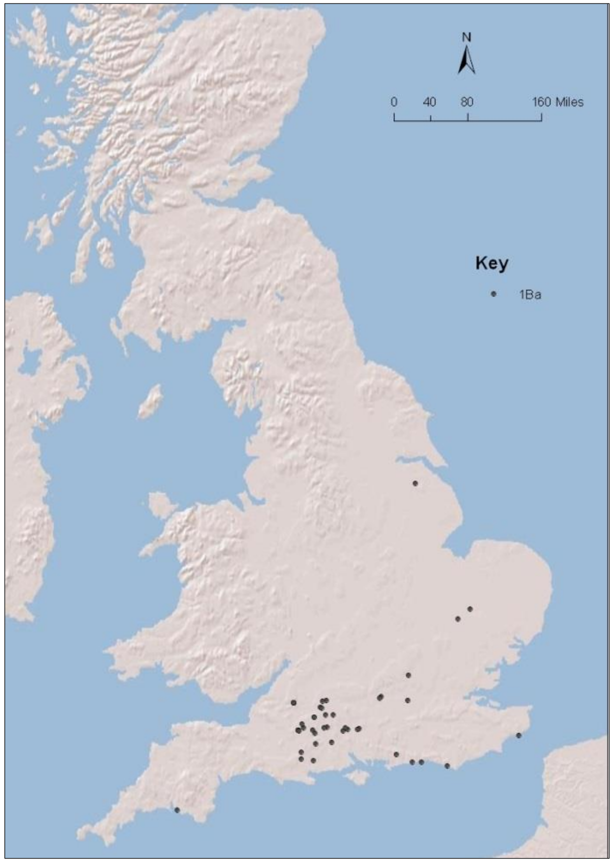

**Map 6.9** Distribution of 1B brooches



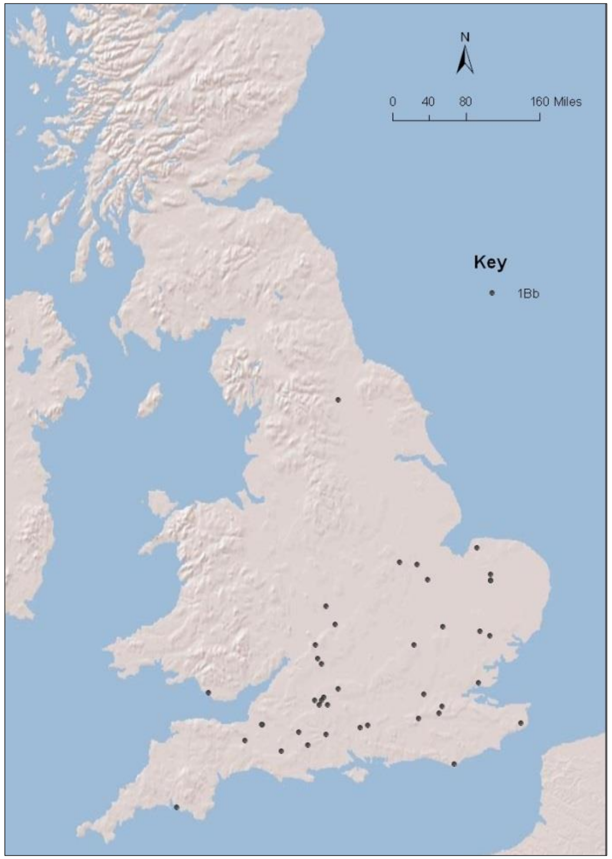
**Map 6.10** Distribution of 1A brooches by subtype



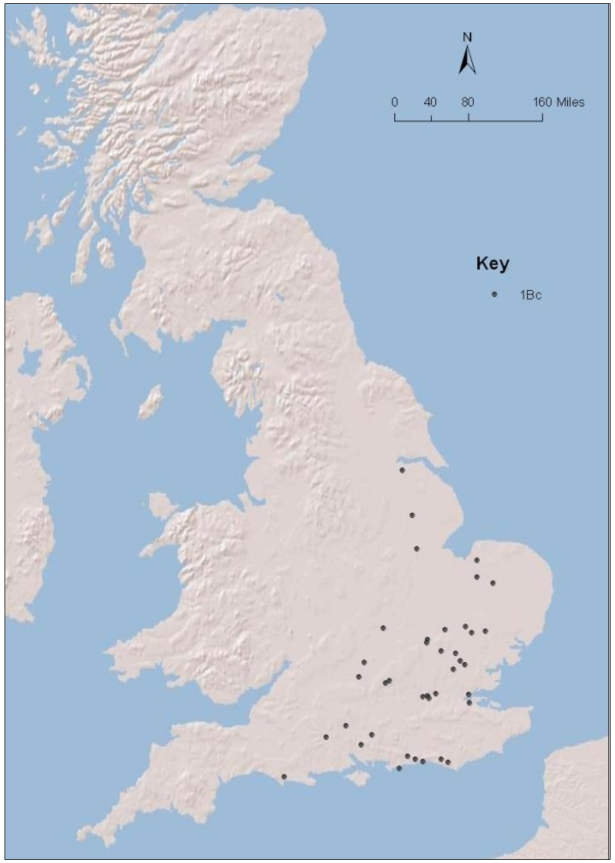
**Map 6.11** Distribution of 1Ba brooches



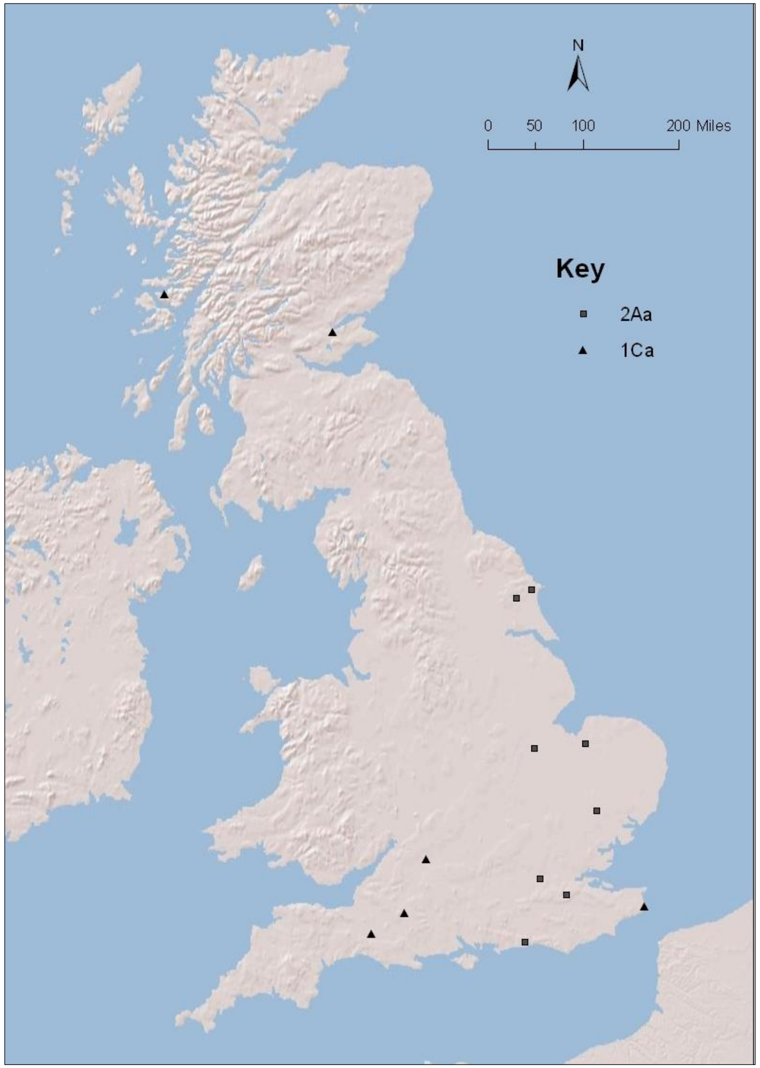

**Map 6.12** Distribution of 1Bb brooches



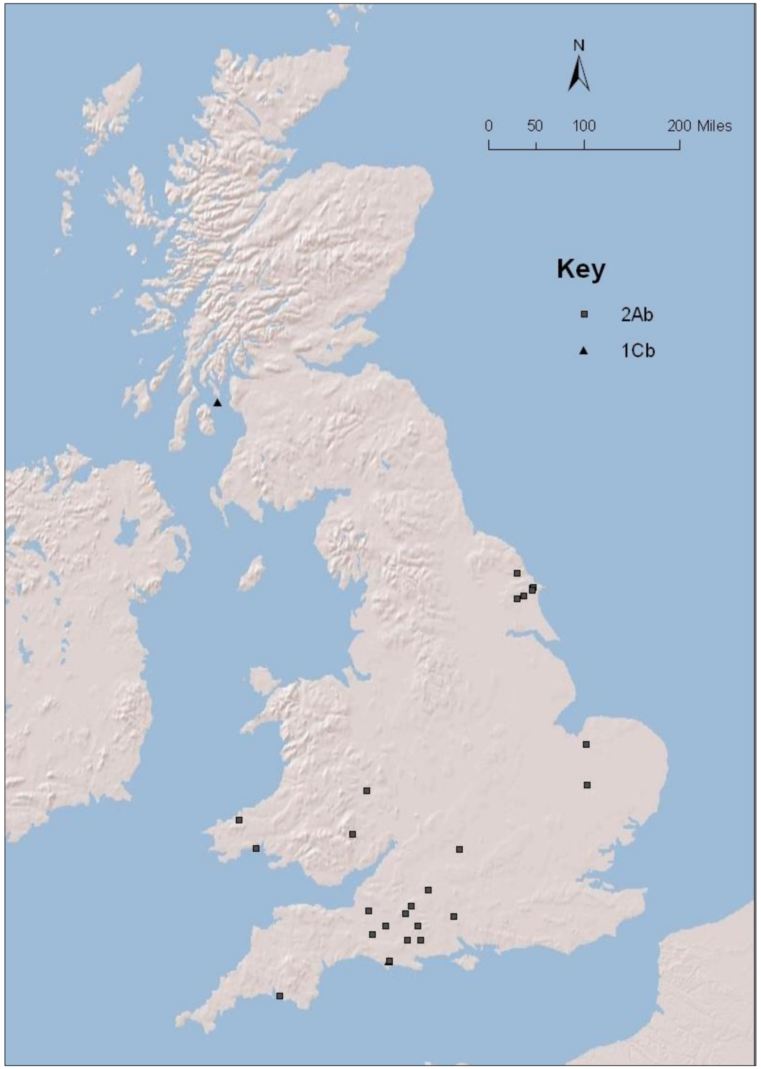

**Map 6.13** Distribution of 1Bc brooches



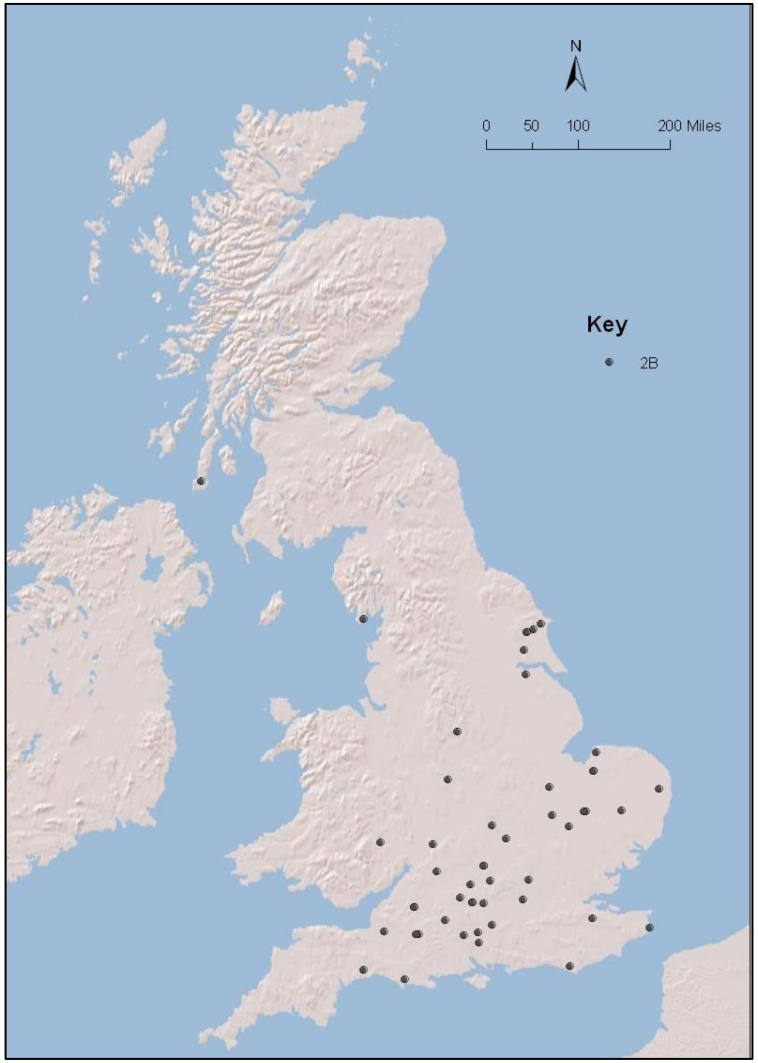
**Map 6.14** Distribution of arched bow 1Ca and 2Aa brooches



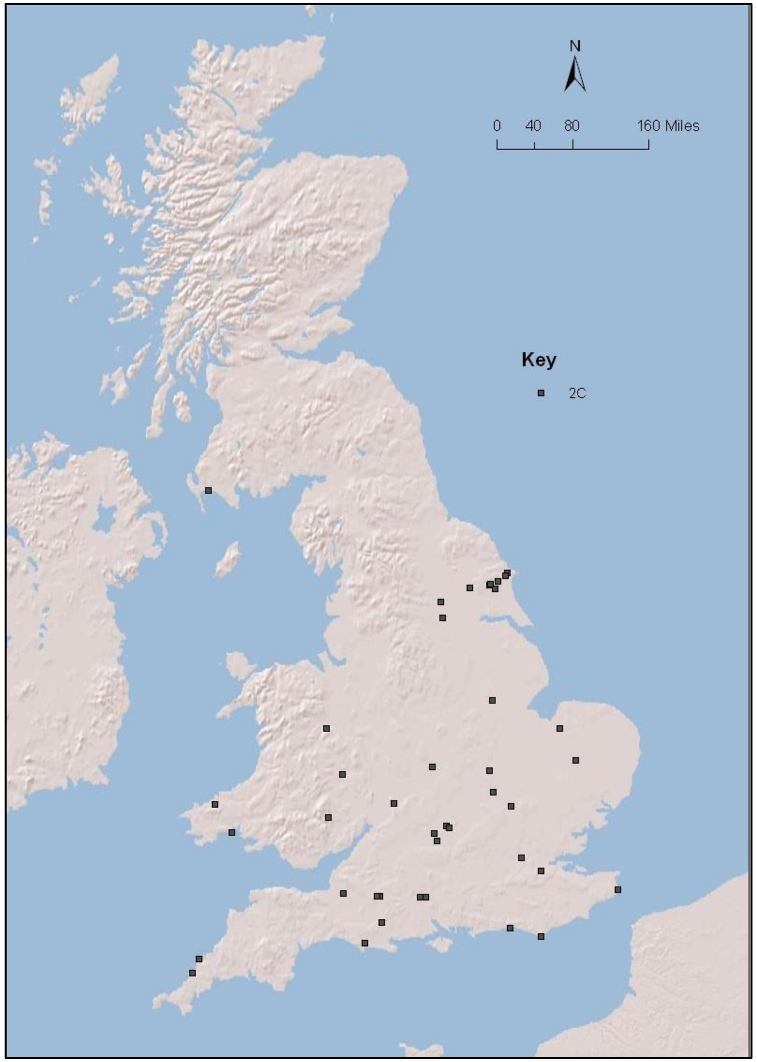

**Map 6.15** Distribution of straight bowed 1Cb and 2Ab brooches



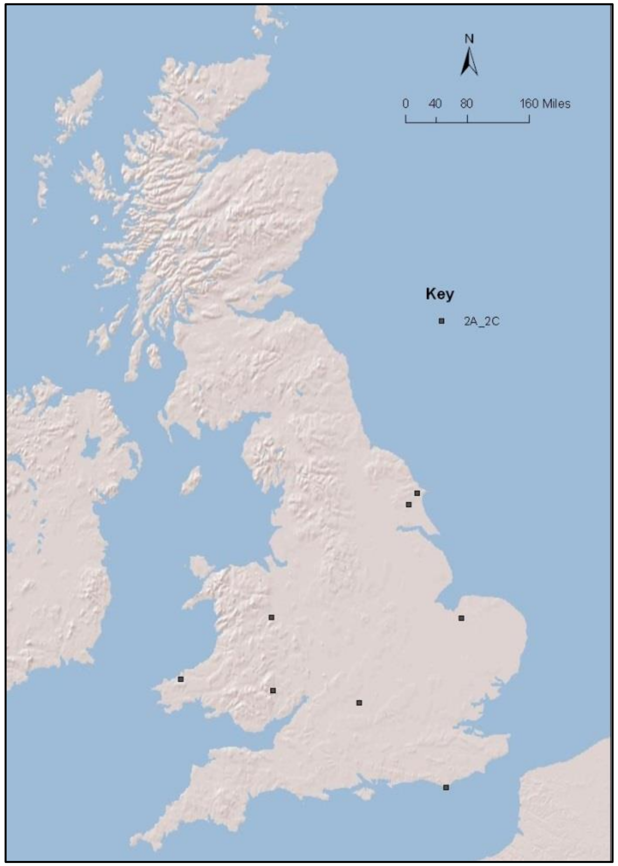
**Map 6.16** Distribution of 2B brooches



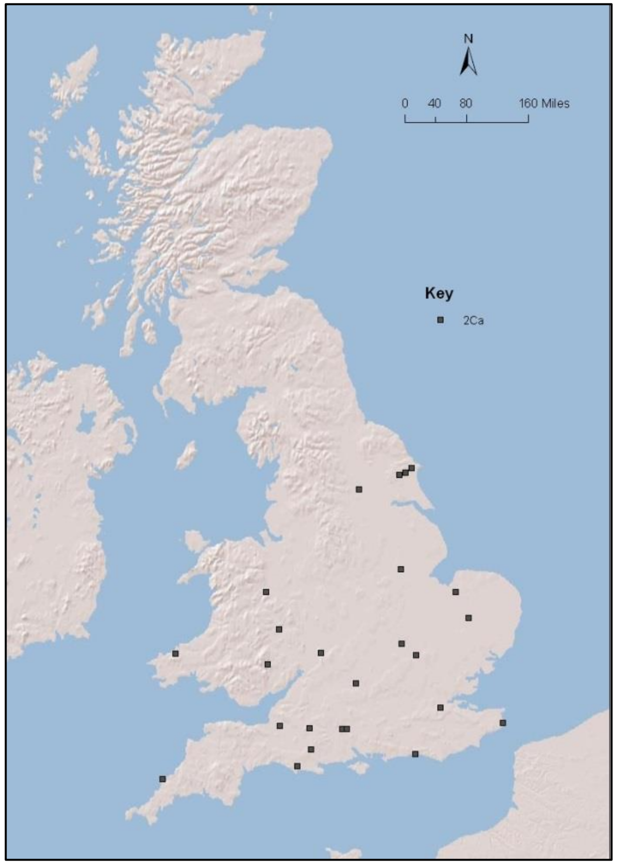

**Map 6.17** Distribution of findspots of 2C brooches



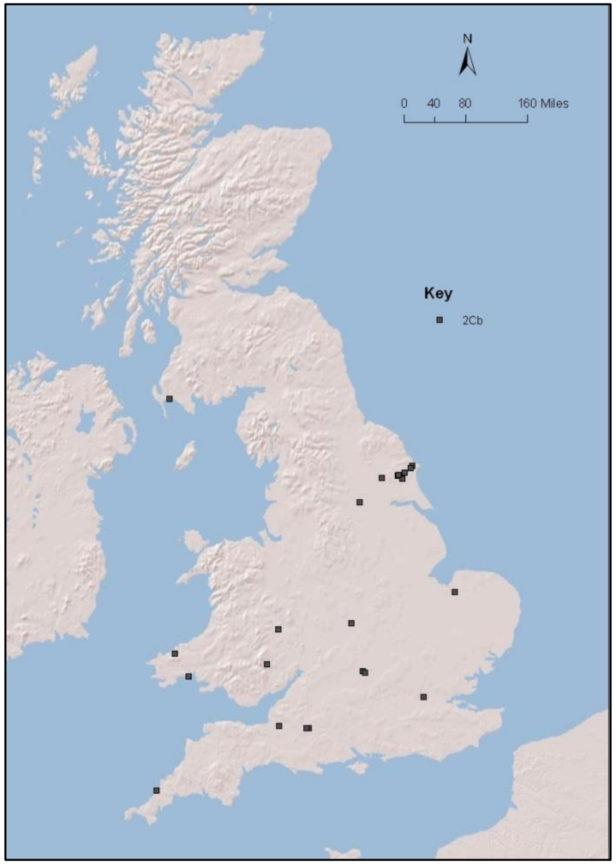
**Map 6.18** Borderline 2A/2C brooches



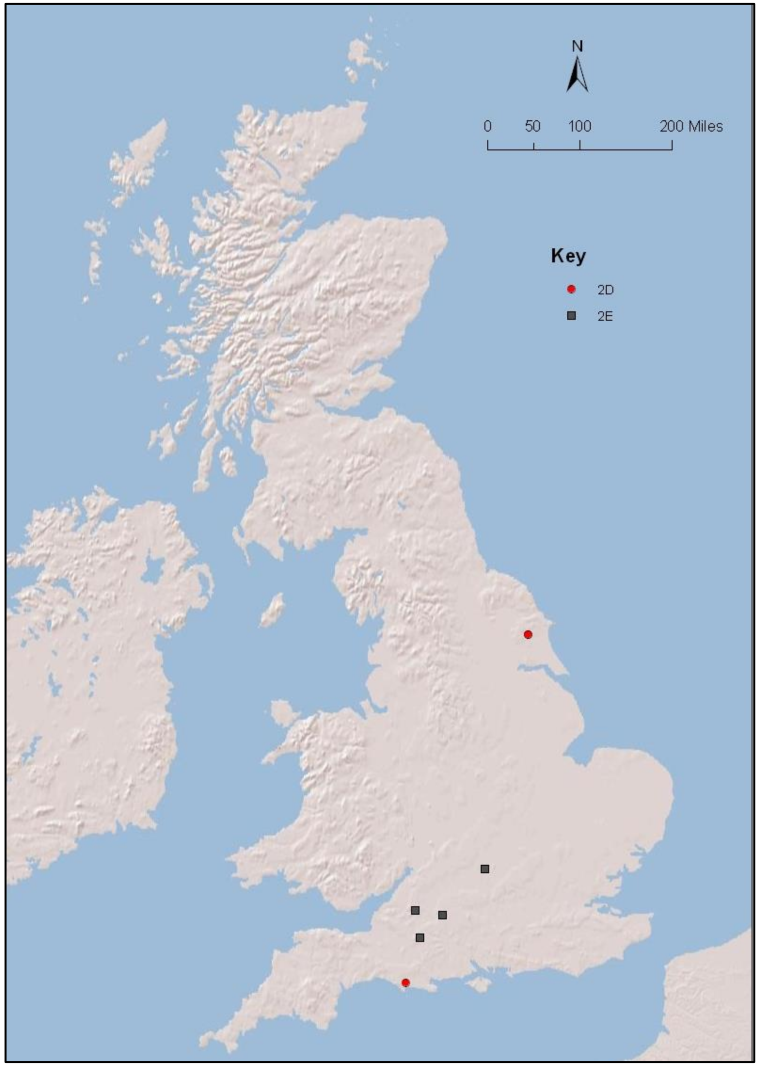

**Map 6.19** 2Ca brooches



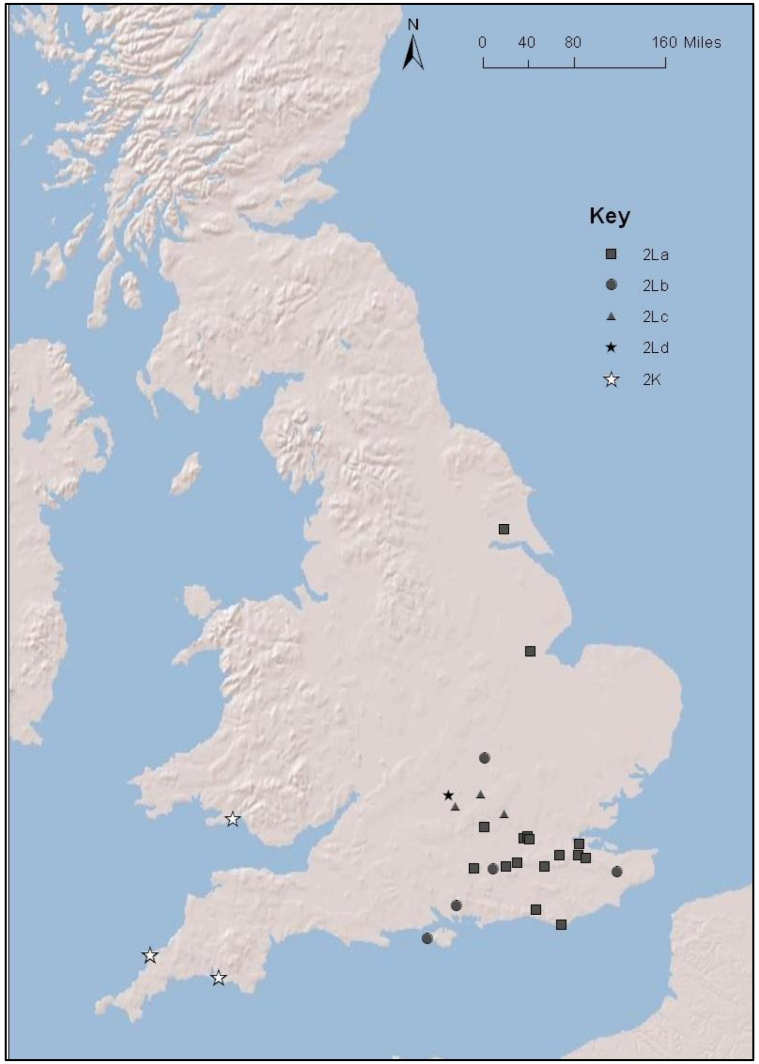

**Map 6.20** 2Cb brooches



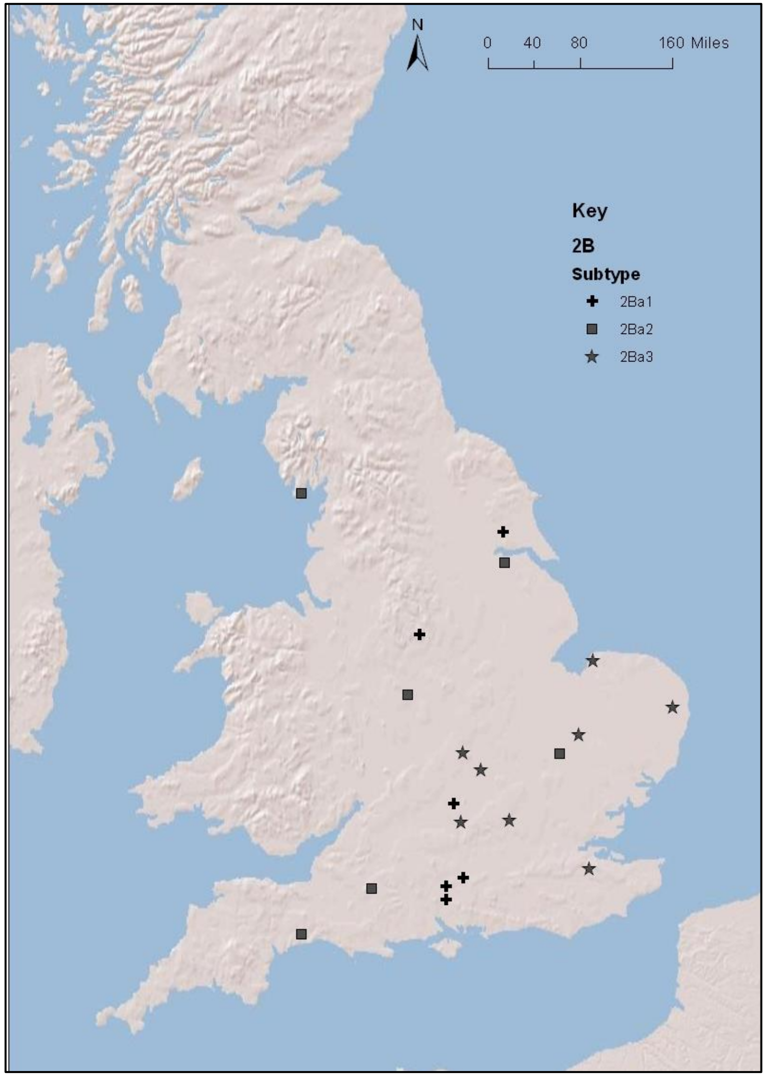
**Map 6.21** Distribution of 2D and 2E brooches.



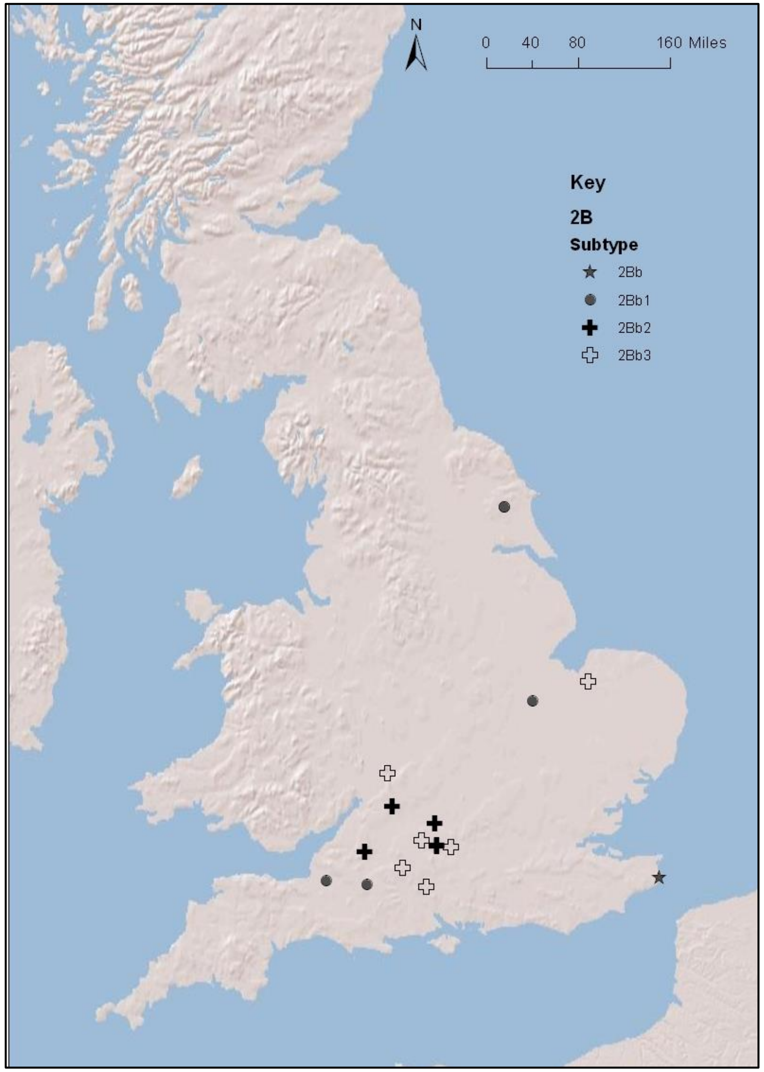

**Map 6.22** Distribution of 2L and 2K brooches



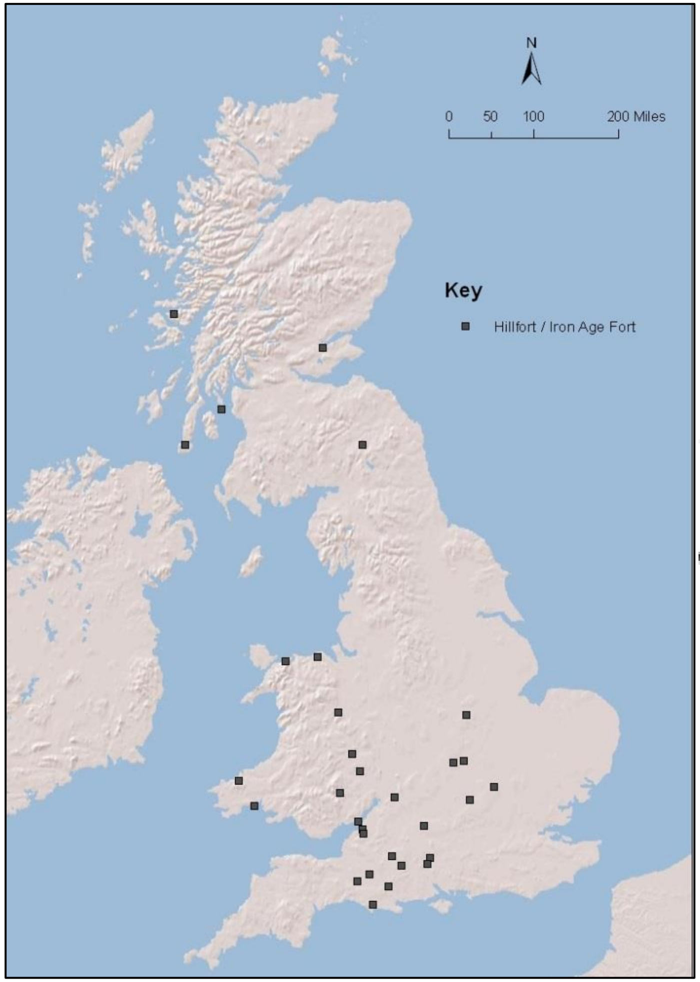
**Map 6.23** Distribution of 2Ba subtypes



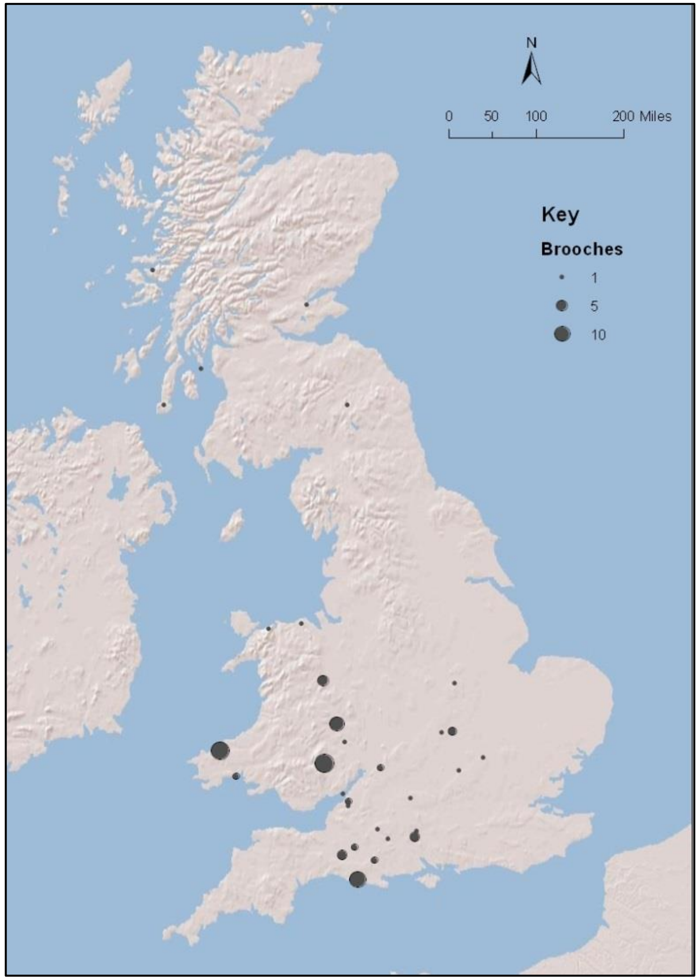

**Map 6.24** Distribution of 2Bb subtypes

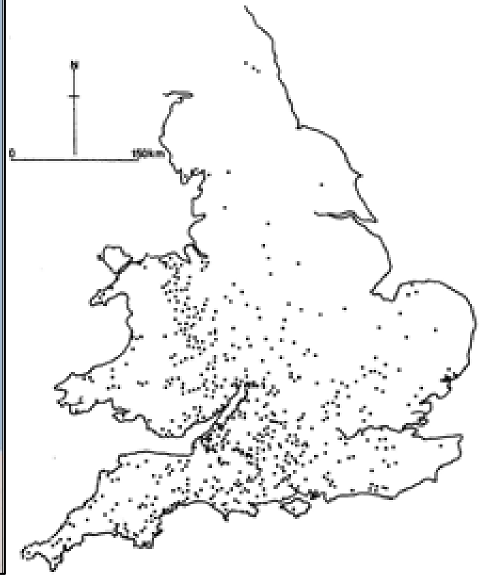


**Map 7.1** Hillforts containing EIA and MIA brooches



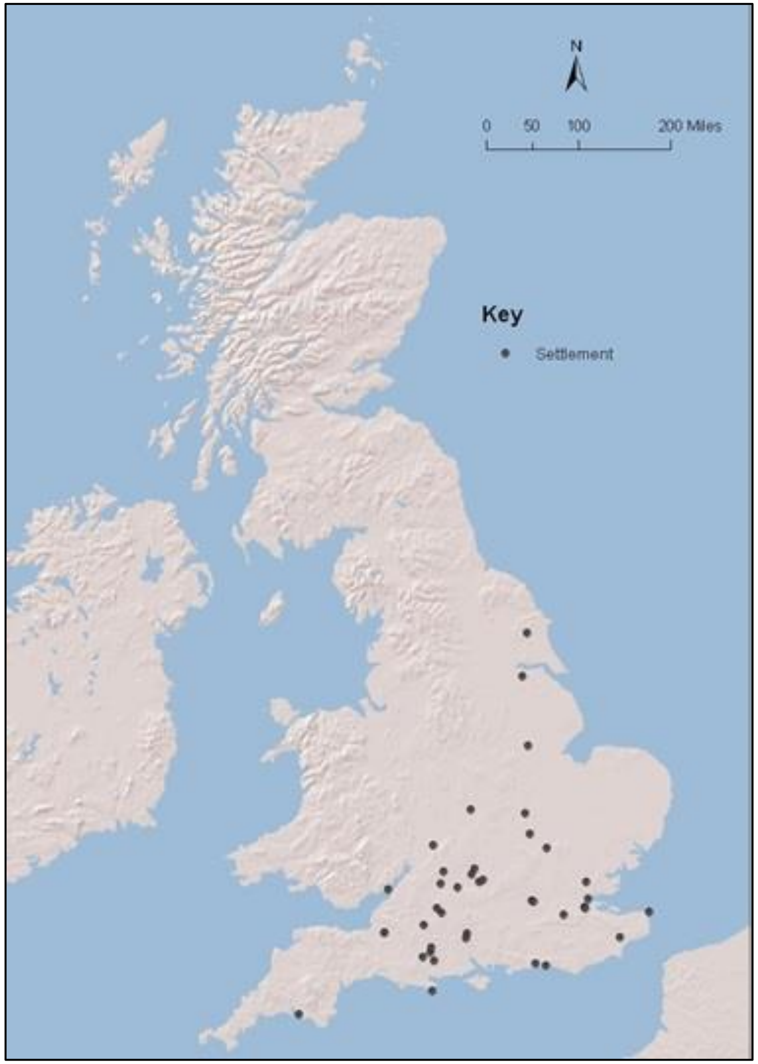

**Map 7.2** Quantity of brooches per hillfort



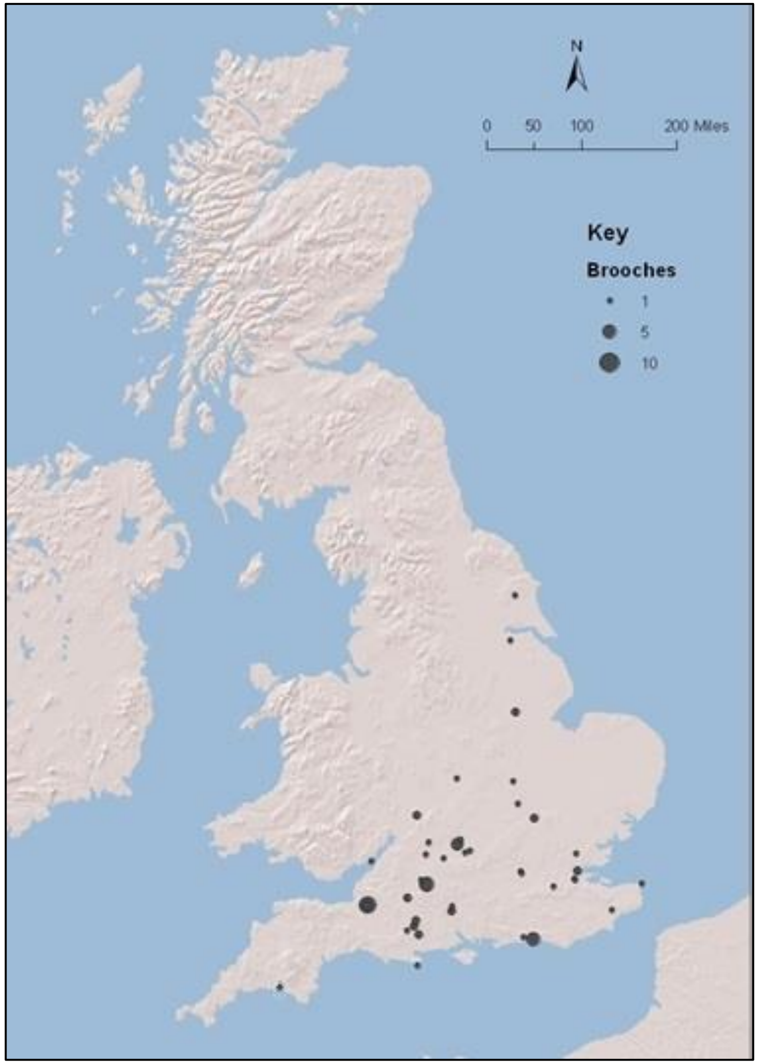



**Map 7.3** Distribution of Hillforts of 1.4ha and over (Brown 2009, 3)

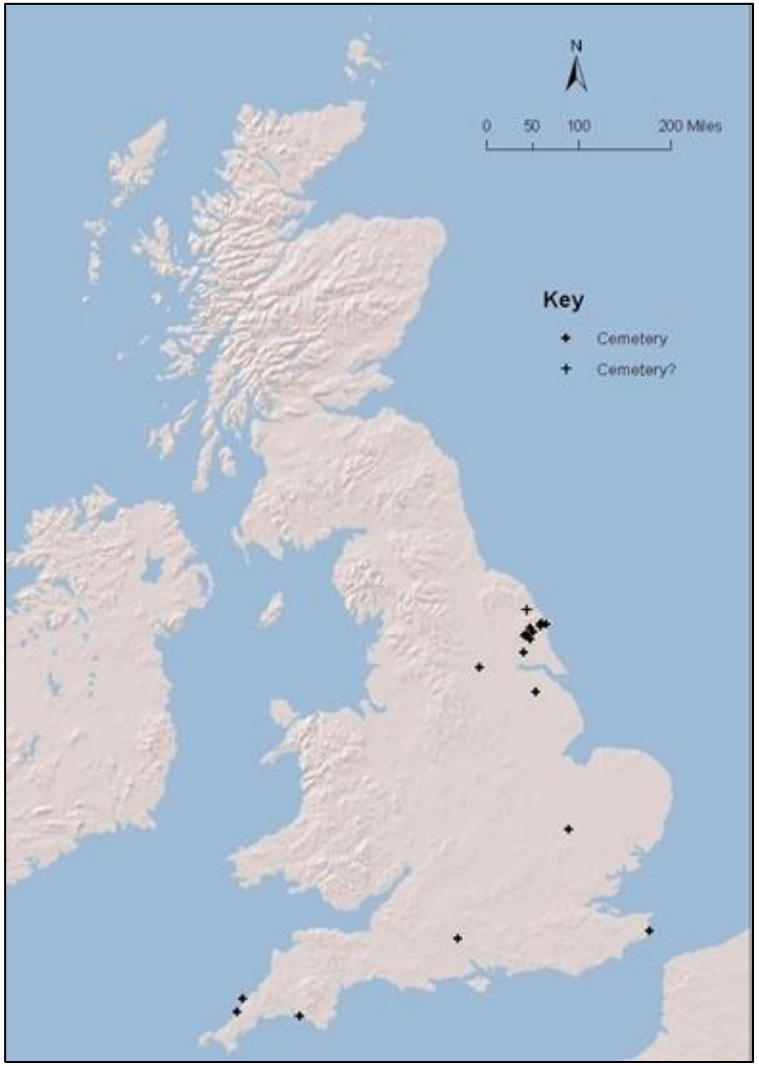
**Map 7.4** Settlements containing EIA and MIA brooches




**Map 7.5** Quantity of brooches per settlement

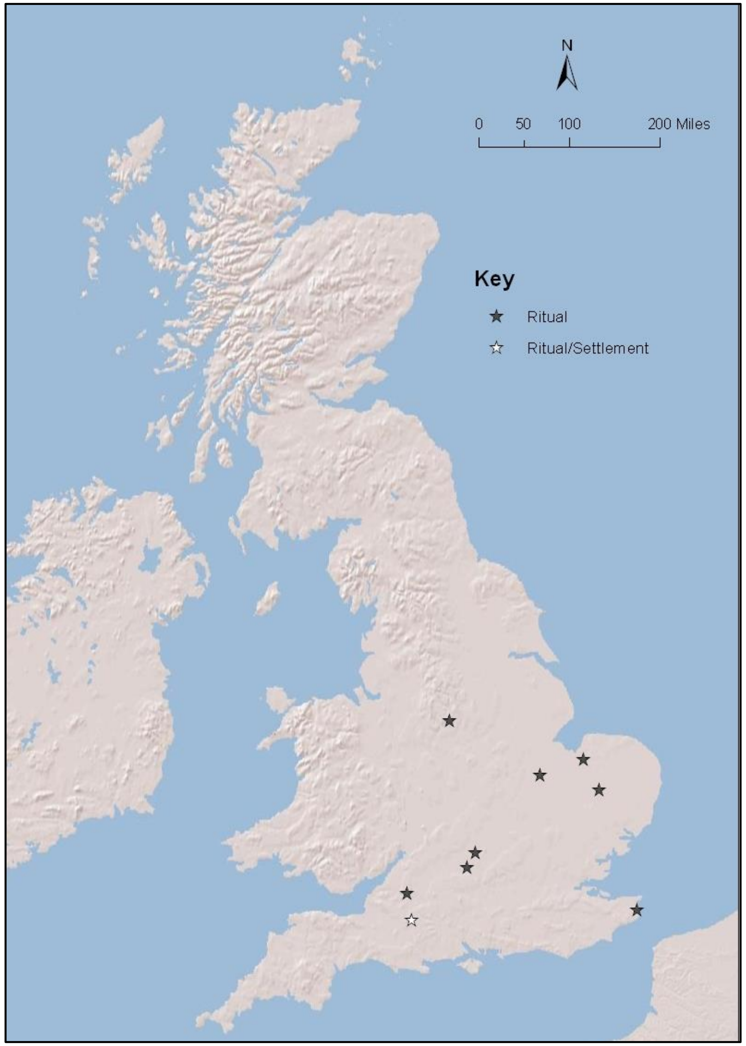


**Map 7.6** Cemeteries containing EIA and MIA brooches

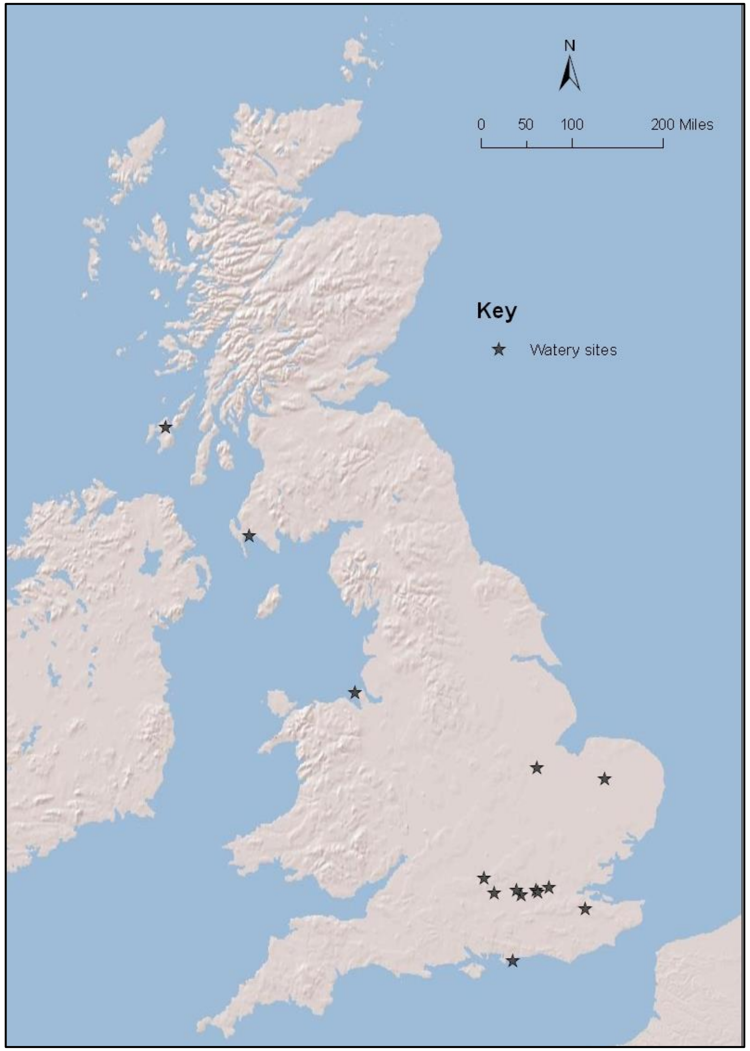



**Map 7.7** Quantity of brooches per cemetery

**Map 7.8** Sites of a ritual character containing EIA and MIA brooches




**Map 7.9** Watery sites containing EIA and MIA brooches



# Appendices

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10001** | 2C | 2Ca | Suddern Farm, Middle Wallop | Hampshire | Fe | Cemetery | burial | post 95 exc |
| **10002** | 2B | 2Bb | Mill Hill, Deal | Kent | CuA | Cemetery | burial | pre 95 exc |
| **10003** | 1C | 1Ca | Mill Hill | Kent | CuA | Cemetery | burial | pre 95 exc |
| **10004** | 2C | 2Ca | Mill Hill | Kent | Fe | Cemetery | burial | pre 95 exc |
| **10006** | 2A_3B | 2A_3B | Mill Hill | Kent | Fe | Cemetery | burial | pre 95 exc |
| **10007** | 1B | 1Bc | Fairfield Park, Stotfold | Bedfordshire | CuA | Sment | posthole | post 95 exc |
| **10008** | 2C | 2Ca | Fairfield Park | Bedfordshire | Fe | Sment | ditch | post 95 exc |
| **10009** | 2C | 2Cb | Ferry Fryston, A1 Darrington to Dishforth | West Yorkshire | Fe | Cemetery | burial | post 95 exc |
| **10010** | 2C | 2Ca | Biddenham Loop | Bedfordshire | Fe | Sment | pit | post 95 exc |
| **10011** | 1C_2A | 1Ca_2Aa | Gravelly Guy, Stanton Harcourt | Oxfordshire | Fe | Sment | pit | post 95 exc |
| **10012** | 1C_2A | 1Ca_2Aa | Gravelly Guy, Stanton Harcourt | Oxfordshire | Fe | Sment | posthole | post 95 exc |
| **10013** | 2A_2C | 2Ab_2Ca | Gravelly Guy, Stanton Harcourt | Oxfordshire | Fe | Sment | pit | post 95 exc |
| **10015** | 2A | 2Ab | Gravelly Guy, Stanton Harcourt | Oxfordshire | Fe | Sment | pit | post 95 exc |
| **10016** | 1C | 1Ca | Cleveland Farm, Ashton Keynes | Wiltshire | CuA | Sment | unstrat | post 95 md |
| **10018** | 1B | 1Bb | Waldeshare Park, Eythorne, Dover | Kent | CuA | Dryland | stray | post 95 md |
| **10019** | 1A | 1A | Preston-by-Wingham | Kent | CuA | Dryland | stray | post 95 md |
| **10020** | 1B | 1Bc | Mucking | Essex | CuA | Sment | ditch | post 95 exc |
| **10022** | 1B | 1B | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10023** | 1B | 1Ba | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10024** | 1B | 1B | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10025** | 1B | 1Ba | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10026** | 1B | 1Ba | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10027** | 1B? | 1BV? | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10028** | 2E | 2E | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10029** | 1B | 1Ba | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10030** | 1B | 1BcV | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10031** | 1B | 1Ba | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10032** | 2B | 2Ba | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10033** | 2B | 2Bb2 | Batheaston | Avon | CuA | Ritual | stray | post 95 md |
| **10035** | 2A | 2Aa | GLEMSFORD | Suffolk | CuA | Dryland | stray | PAS |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10037** | 1A | 1Aa | CHARTHAM | Kent | CuA | Dryland | stray | PAS |
| **10038** | 1B | 1Bc | WESTON COLVILLE | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10039** | 1A_1B | 1A_1B | WESTON COLVILLE | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10041** | 2L | 2L? | HIGHAM | Kent | CuA | Dryland | stray | PAS |
| **10043** | 2L | 2La | LEATHERHEAD | Surrey | CuA | Dryland | stray | PAS |
| **10044** | 2L | 2L? | OTFORD | Kent | CuA | Dryland | stray | PAS |
| **10045** | 2L | 2L? | EGERTON | Kent | CuA | Dryland | stray | PAS |
| **10046** | 2L | 2La | GLOUCESTERSHIRE | Gloucestershire | CuA | Dryland | stray | PAS |
| **10047** | 2L | 2La | BISHAM | Berkshire | CuA | Dryland | stray | PAS |
| **10049** | 1B | 1Ba | HINTON MARTELL | Dorset | CuA | Dryland | stray | PAS |
| **10050** | 2L? | 2L? | STRADSETT | Norfolk | CuA | Dryland | stray | PAS |
| **10051** | 1B | 1B | FOLKESTONE | Kent | CuA | Dryland | stray | PAS |
| **10052** | 2L | 2La | CRONDALL | Hampshire | CuA | Dryland | stray | PAS |
| **10054** | 1A_1B | 1A_1B | GREAT BARTON | Suffolk | CuA | Dryland | stray | PAS |
| **10055** | 2B | 2Ba3 | POTTERSPURY | Northamptonshire | CuA | Dryland | stray | PAS |
| **10056** | 1A | 1A | KEW, Richmon-Upon-Thames | London | CuA | Dryland | stray | PAS |
| **10057** | 1A | 1A | LEICESTERSHIRE CALDECOTT | Rutland | CuA | Dryland | stray | PAS |
| **10059** | 1B | 1Bb | ALDERMINSTER CP | Warwickshire | CuA | Dryland | stray | PAS |
| **10060** | 1B | 1Bc | FOLKINGHAM | Lincolnshire | CuA | Dryland | stray | PAS |
| **10061** | 1B | 1Ba_1Bb | FINDON | West Sussex | CuA | Dryland | stray | PAS |
| **10062** | 1B | 1B | BRAILES | Warwickshire | CuA | Dryland | stray | PAS |
| **10063** | 1B | 1Bb | TANWORTH IN ARDEN | Warwickshire | CuA | Dryland | stray | PAS |
| **10064** | 1B | 1Ba | MICHELDEVER | Hampshire | CuA | Dryland | stray | PAS |
| **10065** | 1A | 1A | HADDENHAM | Buckinghamshire | CuA | Dryland | stray | PAS |
| **10066** | 1B | 1Ba_1Bb | CODDENHAM | Suffolk | CuA | Dryland | stray | PAS |
| **10067** | 1B | 1Bb | SUDBURY | Suffolk | CuA | Dryland | stray | PAS |
| **10068** | 2L | 2La | WEST CLANDON | Surrey | CuA | Dryland | stray | PAS |
| **10069** | 2L | 2La | SOUTH OXFORDSHIRE | Oxfordshire | CuA | Dryland | stray | PAS |
| **10070** | 2B | 2Ba1 | CLIDDESDEN | Hampshire | CuA | Dryland | stray | PAS |
| **10071** | 2B | 2Ba | ALCISTON | East Sussex | CuA | Dryland | stray | PAS |

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| 10072 | 1B? | 1BcV | CODDENHAM | Suffolk | CuA | Dryland | stray | PAS |
| 10073 | 1B | 1Bb | HOLME HALE, BRECKLAND | Norfolk | CuA | Dryland | stray | PAS |
| 10074 | 1B | 1Bb | FRING, KINGS LYNN | Norfolk | CuA | Dryland | stray | PAS |
| 10075 | 1A_1B | 1A_1B | CRAWLEY | Hampshire | CuA | Dryland | stray | PAS |
| 10076 | 1B | 1Bc | LEWES | East Sussex | CuA | Dryland | stray | PAS |
| 10077 | 1B | 1BcV | WANBOROUGH | Surrey | CuA | Dryland | stray | PAS |
| 10078 | 1B | 1B | LETCOMBE REGIS | Oxfordshire | CuA | Dryland | stray | PAS |
| 10079 | 1B | 1Bc | LANE END | Buckinghamshire | CuA | Dryland | stray | PAS |
| 10080 | 1B | 1Ba_1Bb | HORDLEY | Shropshire | CuA | Dryland | stray | PAS |
| 10082 | 1B? | 1B? | DURNFORD | Wiltshire | CuA | Dryland | stray | PAS |
| 10083 | 1A_1B | 1A_1B | DOWNEND, near | Isle of Wight | CuA | Dryland | stray | PAS |
| 10084 | 1A_1B | 1A_1B | HAVENSTREET AND ASHEY | Isle of Wight | CuA | Dryland | stray | PAS |
| 10085 | 1B | 1Ba | STANTON ST BERNARD | Wiltshire | CuA | Dryland | stray | PAS |
| 10086 | 1B | 1B | KINGSDON | Somerset | CuA | Dryland | stray | PAS |
| 10087 | 2L | 2Lb | PUTTENHAM | Surrey | CuA | Dryland | stray | PAS |
| 10088 | 1B | 1Ba | FRECKENHAM | Suffolk | CuA | Dryland | stray | PAS |
| 10089 | 1B | 1Bc | CHALK, SHORNE | Kent | CuA | Dryland | stray | PAS |
| 10090 | 1B | 1BcV | ISLE OF WIGHT | Isle of Wight | CuA | Dryland | stray | PAS |
| 10091 | 1B | 1B | MILBORNE PORT | Somerset | CuA | Dryland | stray | PAS |
| 10092 | 1B | 1Bc | FINDON | West Sussex | CuA | Dryland | stray | PAS |
| 10093 | 1B | 1B | RAYDON | Suffolk | CuA | Dryland | stray | PAS |
| 10094 | 1B | 1Ba | WONSTON | Hampshire | CuA | Dryland | stray | PAS |
| 10096 | 1B_1C | 1B_1C | NEAR EASTBOURNE | East Sussex | CuA | Dryland | stray | PAS |
| 10097 | 1B | 1B | NEAR EASTBOURNE | East Sussex | CuA | Dryland | stray | PAS |
| 10099 | 1B | 1B | KELVEDON | Essex | CuA | Dryland | stray | PAS |
| 10101 | 1B | 1Bc | LITTLE WRATTING | Suffolk | CuA | Dryland | stray | PAS |
| 10102 | 1A_1B | 1A_1B | WOODNESBOROUGH | Kent | CuA | Dryland | stray | PAS |
| 10103 | 1B | 1B | GREAT BARTON | Suffolk | CuA | Dryland | stray | PAS |
| 10104 | 1A_1B | 1A_1B | EARTHAM | West Sussex | CuA | Dryland | stray | PAS |
| 10105 | 1B | 1Ba | Highdown | West Sussex | CuA | Dryland | stray | PAS |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10106** | 1B? | 1B? | NEAR EASTBOURNE | East Sussex | CuA | Dryland | stray | PAS |
| **10107** | 1A_1B | 1A_1B | NEAR EASTBOURNE | East Sussex | CuA | Dryland | stray | PAS |
| **10108** | 1B | 1B? | LAVANT | West Sussex | CuA | Dryland | stray | PAS |
| **10109** | 1A_1B | 1A_1B | LAVANT | West Sussex | CuA | Dryland | stray | PAS |
| **10110** | 1B | 1Bc | WESTMILL | Hertfordshire | CuA | Dryland | stray | PAS |
| **10111** | 1B | 1Bb | FRAMPTON | Dorset | CuA | Dryland | stray | PAS |
| **10112** | 1B | 1Ba_1Bb | TEG DOWN, WINCHESTER | Hampshire | CuA | Dryland | stray | PAS |
| **10114** | 1B | 1Ba_1Bb | ALDERBURY | Wiltshire | CuA | Dryland | stray | PAS |
| **10115** | 1A_1B | 1A_1B | PEWSEY | Wiltshire | CuA | Dryland | stray | PAS |
| **10116** | 1B | 1B | WILLINGHAM | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10117** | 1B | 1Bb | PEWSEY | Wiltshire | CuA | Dryland | stray | PAS |
| **10118** | 1B | 1B | BEESTON WITH BITTERING | Norfolk | CuA | Dryland | stray | PAS |
| **10119** | 1B | 1Ba | East Wear Bay SHEPWAY | Kent | CuA | LIAsment | stray | PAS |
| **10120** | 1B | 1Ba_1Bb | MILBORNE PORT | Somerset | CuA | Dryland | stray | PAS |
| **10121** | 1B | 1Ba_1Bb | FARLEIGH WALLOP | Hampshire | CuA | Dryland | stray | PAS |
| **10122** | 1B | 1Bc V | KINGS SOMBORNE | Hampshire | CuA | Dryland | stray | PAS |
| **10123** | 1B | 1Bb | DORKING | Surrey | CuA | Dryland | stray | PAS |
| **10124** | 1A_1B | 1A_1B | BRADFORD PEVERELL | Dorset | CuA | Dryland | stray | PAS |
| **10125** | 1B | 1B | ISLE OF WIGHT | Isle of Wight | CuA | Dryland | stray | PAS |
| **10126** | 1B | 1Ba_1Bb | NORTH NOTTS 1 | Nottinghamshire | CuA | Dryland | stray | PAS |
| **10127** | 1B | 1B | ABBESS RODING | Essex | CuA | Dryland | stray | PAS |
| **10128** | 1A | 1A | STEEPLE CLAYDON | Buckinghamshire | CuA | Dryland | stray | PAS |
| **10129** | 2L | 2Lc | CUDDESDON AND DENTON | Oxfordshire | CuA | Dryland | stray | PAS |
| **10130** | 1B | 1Bc V | CHENIES | Buckinghamshire | CuA | Dryland | stray | PAS |
| **10131** | 1B | 1Ba_1Bb | QUIDENHAM | Norfolk | CuA | Dryland | stray | PAS |
| **10133** | 1B | 1Bc | BARTON BENDISH | Norfolk | CuA | Dryland | stray | PAS |
| **10134** | 1A_1B | 1A_1B | SUFFOLK | Suffolk | CuA | Unknown | UN | PAS |
| **10135** | 1B? | 1B? | ELLESBOROUGH | Buckinghamshire | CuA | Dryland | stray | PAS |
| **10136** | 1B | 1Bc | AMBERLEY | West Sussex | CuA | Dryland | stray | PAS |
| **10137** | 1B | 1Bb | WILLINGDON AND JEVINGTON | East Sussex | CuA | Dryland | stray | PAS |
| **10138** | 1A_1B | 1A_1B | EARTHAM | West Sussex | CuA | Dryland | stray | PAS |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10139** | 1A | 1A | HIGHDOWN, ANGMERING | West Sussex | CuA | Dryland | stray | PAS |
| **10140** | 2B | 2Ba2 | WIDWORTHY | Devon | CuA | Dryland | stray | PAS |
| **10141** | 1B | 1B | ISLEHAM, CAMBS | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10143** | 2B | 2Ba2 | SWINFEN AND PACKINGTON | Staffordshire | CuA | Dryland | stray | PAS |
| **10145** | 1B | 1Bb | SNAPE WITH THORP | North Yorkshire | CuA | Dryland | stray | PAS |
| **10146** | 1B? | 1B? | SHUDY CAMPS | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10148** | 2C | 2Ca | BRAMHAM CUM OGLETHORPE | West Yorkshire | CuA | Dryland | stray | PAS |
| **10149** | 1B | 1B | ELMSWELL | Suffolk | CuA | Dryland | stray | PAS |
| **10150** | 2B? | 2Ba? | WOOTTON | Oxfordshire | CuA | Dryland | stray | PAS |
| **10151** | 2B | 2Ba2 | ROXBY CUM RISBY | Lincolnshire | CuA | Dryland | stray | PAS |
| **10152** | 1B | 1B? | FENLAND | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10153** | 1B | 1B | KINGSDON | Somerset | CuA | Dryland | stray | PAS |
| **10154** | 1B_1C | 1B_1C | BARRINGTON | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10155** | 1B | 1B? | BILLINGFORD | Norfolk | CuA | Dryland | stray | PAS |
| **10156** | 1A | 1Aa | PENLLYN | Vale of Glamorgan | CuA | Dryland | stray | PAS |
| **10157** | 1A | 1A | WEYBOURNE | Norfolk | CuA | Dryland | stray | PAS |
| **10158** | 1B | 1Bb | BASTON | Lincolnshire | CuA | Dryland | stray | PAS |
| **10159** | 2L | 2La | Duttles Bottom/Brow | East Sussex | CuA | Dryland | stray | PAS |
| **10160** | 2B | 2Ba3 | TETSWORTH | Oxfordshire | CuA | Dryland | stray | PAS |
| **10161** | 1B | 1Ba | Thames West, Runnymede Bridge | Surrey | CuA | Watery | deposit | post 95 exc |
| **10162** | 2A | 2Ab | Battlesbury Bowl, Warminster | Wiltshire | Fe | Hillfort | pit | post 95 exc |
| **10163** | 1A_1B | 1A_1B | High Wycombe | Buckinghamshire | CuA | Dryland | stray | pre 95 stray |
| **10164** | 1B | 1Ba | CHENIES | Buckinghamshire | CuA | Dryland | stray | post 95 md |
| **10165** | 2L | 2Lc | Aylesbury | Buckinghamshire | CuA | Hillfort | residual | pre 95 exc |
| **10166** | 1B | 1Bc | SE of Piddington Farm, West Wycombe | Buckinghamshire | CuA | Dryland | stray | pre 95 stray |
| **10171** | 1C | 1Ca | Abingdon | Oxfordshire | CuA | Dryland | stray | pre 95 stray |
| **10172** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10173** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10174** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10175** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10176** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10177** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10178** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10179** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10180** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10181** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10182** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10183** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10184** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10185** | 2A | 2Ab | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10186** | 1C_2A | 1Ca_2Aa | Argam Lane, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10187** | 1B | 1Bb | Avebury Down | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10188** | 1B | 1BaV | Bell Slack, Burton Fleming | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10189** | 2A | 2Ab | Bell Slack, Burton Fleming | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10190** | 2A | 2Ab | Bell Slack, Burton Fleming | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10191** | 2C | 2Cb | Bell Slack, Burton Fleming | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10192** | 2C | 2Cb | Bell Slack, Burton Fleming | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10193** | 2C | 2Cb | Bell Slack, Burton Fleming | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10195** | 1A | 1Abv | Box? | Wiltshire | CuA | Unknown | UN | pre 95 stray |
| **10196** | 1B | 1Bb/Bd? | Thames East, Brentford Ferry, Hounslow | London | CuA | Watery | watery | pre 95 stray |
| **10197** | 1A | 1A | Teviotdale? | Scottish Borders | CuA | Dryland | stray | pre 95 stray |
| **10198** | 1B | 1Ba | Cold Kitchen Hill, Brixton Deverill | Wiltshire | CuA | Ritual? | unstrat | pre 95 exc |
| **10200** | 2A | 2Ab | Danes Graves, Kilham | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10201** | 2C | 2Cb | Danes Graves, Kilham | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10205** | 2A_2C | 2Ab_2Ca | East Dean, near Ringwood Bottom | East Sussex | CuA | Dryland | stray | pre 95 stray |
| **10208** | 1B | 1BbV | Thames W Ldn, Hammersmith | London | CuA | Watery | watery | pre 95 stray |
| **10209** | 1B | 1Bc | Thames W Ldn, Barnes nr 'Crab Tree' | London | CuA | Watery | watery | pre 95 stray |
| **10211** | 2A | 2Ab | Hod Hill, Stourpaine | Dorset | Fe | Hillfort | unstrat | pre 95 exc |
| **10215** | 1A | 1Aa | Lakenheath, suspect | Suffolk | CuA | Unknown | UN | pre 95 stray |
| **10216** | 1B | 1B | Bishops Cannings | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10217** | 1B? | 1B? | Little Woodbury | Wiltshire | Fe | Sment | pit? | pre 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10218** | 1B | 1B | Woodcock Hall, Saham Toney | Norfolk | CuA | LIAsment | stray | pre 95 stray |
| **10219** | 1C | 1C_1B? | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10220** | 2B | 2Ba | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10221** | 1C_2A | 1Cb_2Ab | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10222** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10223** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10224** | 2C | 2Ca | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10225** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10226** | 2C | 2Ca | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10227** | 2C | 2Ca | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10228** | 2A | 2Ab | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10229** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10230** | 2C | 2Ca | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10231** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10232** | 2A | 2Ab_1Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10233** | 2A | 2Aa | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10234** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10235** | 2A_2C | 2Ab_2Ca | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10236** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10237** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10238** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10239** | 2A | 2Ab | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10240** | 2A | 2Ab | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10241** | 2A | 2Ab | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10242** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10243** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10244** | 2C | 2Ca | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10245** | 2A | 2Ab | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10246** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10247** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10248** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10249** | 2A | 2Ab | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10250** | 2C | 2Ca | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10251** | 2C | 2Ca | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10252** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10253** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10254** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10255** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10256** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10257** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10258** | 2C | 2Cb | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10259** | 2C | 2Ca | Makeshift Cemetery, Rudston | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10264** | 1A | 1A | Thames West Ldn, Syon Reach, Kew | London | CuA | Watery | watery | pre 95 stray |
| **10266** | 1B | 1Bc | Thames City of London | London | CuA | Watery | watery | pre 95 stray |
| **10268** | 2B | 2Ba1 | Winchester | Hampshire | CuA | Dryland | stray | pre 95 stray |
| **10269** | 1A | 1A | Worth | Kent | CuA | Ritual | deposit | pre 95 exc |
| **10273** | 2K | 2K | Harlyn Bay, St Merryn | Cornwall | CuA | Cemetery | burial | pre 95 exc |
| **10274** | 2K | 2K | Harlyn Bay, St Merryn | Cornwall | CuA | Cemetery | burial | pre 95 exc |
| **10275** | 2K | 2K | Harlyn Bay, St Merryn | Cornwall | Fe | Cemetery | burial | pre 95 exc |
| **10276** | 2K | 2K | Mount Batten, Plymouth | Devon | CuA | Cemetery | burial | pre 95 exc |
| **10277** | 2K | 2K | Mount Batten, Plymouth | Devon | CuA | Cemetery | burial | pre 95 exc |
| **10278** | 2B | 2Ba | Great Chesterford | Essex | CuA | RB Sment | stray | pre 95 stray |
| **10281** | 2L | 2La | Thames W Ldn, Hammersmith bridge 100yds | London | CuA | Watery | watery | pre 95 stray |
| **10282** | 2L | 2La | Thames W Ldn, Mortlake, southern foreshore | London | CuA | Watery | watery | pre 95 stray |
| **10285** | 2B | 2Bb3 | Beckford | Hereford and Worcs. | CuA | Sment | deposit | post 95 exc |
| **10287** | 2L | 2La | Aylesford (near White Horse Stone) | Kent | CuA | Dryland | stray | pre 95 stray |
| **10288** | 2B | 2Ba3 | River Medway, Aylesford | Kent | CuA | Watery | watery | pre 95 stray |
| **10294** | 2L | 2La? | Holloway Lane, Hillingdon | London | CuA | Sment | ditch | pre 95 exc |
| **10295** | 2B | 2Ba3 | Castle Yard, Farthingstone | Northamptonshire | CuA | Hillfort | ditch | pre 95 exc |
| **10296** | 1B? | 1BV? | Hunsbury | Northamptonshire | CuA | Hillfort | unstrat | pre 95 exc |
| **10297** | 2L | 2Ld | Middle Hill, Woodeaton | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10306** | 2B | 2Bb2 | BAGENDON, COTSWOLDS | Gloucestershire | CuA | Dryland | stray | PAS |
| **10316** | 1Bd | 1Bd | Thames? City, St Paul's Wharf | London | CuA | Watery | watery | pre 95 stray |
| **10318** | 2B | 2Ba1 | Norfolk? | Norfolk | CuA | Unknown | UN | pre 95 stray |
| **10399** | 2B | 2Ba1 | Middle Hill, Woodeaton | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |
| **10403** | 1B | 1B | Barrington | Cambridgeshire | CuA | Dryland | stray | pre 95 stray |
| **10404** | 2A | 2Aa_2Ab | Burrough Hill | Leicestershire | Fe | Hillfort | pit? | pre 95 exc |
| **10406** | 1B | 1Bb | Charnage Mere | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10407** | 1A_1B | 1A_1B | Coddenham, Baylam Mill | Suffolk | CuA | Dryland | stray | pre 95 stray |
| **10408** | 1B_2B? | 1B_2B? | Sheepen, Colchester | Essex | CuA | Dryland | stray | pre 95 stray |
| **10409** | 1B? | 1B? | Colchester? | Essex | CuA | Unknown | UN | pre 95 stray |
| **10410** | 2E | 2E | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10411** | 1C | 1Cb | Dunagoil Camp, Kingarth | Argyll and Bute | Fe | Hillfort | unstrat | pre 95 exc |
| **10412** | 2B | 2Ba1 | Harborough Cave, near Brassington | Derbyshire | CuA | Ritual | deposit | pre 95 exc |
| **10414** | 1B | 1Ba_1Bb | Kemp Town, Brighton | East Sussex | CuA | Dryland | stray | pre 95 stray |
| **10415** | 1C | 1Ca? | Maiden Castle | Dorset | Fe | Hillfort | deposit | pre 95 exc |
| **10416** | 1B | 1B? | Radley | Berkshire | CuA | Sment | pit | pre 95 exc |
| **10418** | 1B | 1B | Rotherley, Cranborne Chase | Wiltshire | CuA | Sment | pit | pre 95 exc |
| **10419** | 1C_2A | 1Ca_2Aa? | Sudbrook Camp, Portskewett | Monmouthshire | Fe | Hillfort | house | pre 95 exc |
| **10420** | 1B | 1B | Twyford Down | Hampshire | CuA | Dryland | stray | pre 95 stray |
| **10421** | 1B | 1B? | Thames? West, Wallingford | Oxfordshire | CuA | Watery | watery | pre 95 stray |
| **10422** | 1B | 1B | West Lavington | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10423** | 1A? | 1A? | Shoddesdon Farm, Weyhill, near Andover | Hampshire | CuA | Dryland | stray | pre 95 stray |
| **10424** | 1A_1B | 1A_1B | Wylye Camp/Bilbury Rings | Wiltshire | CuA | Hillfort | unstrat | pre 95 exc |
| **10425** | 1A | 1Ab | Crickley Hill | Gloucestershire | Fe | Hillfort | deposit | pre 95 exc |
| **10426** | 1A | 1Aa | Crickley Hill | Gloucestershire | CuA | Hillfort | deposit | pre 95 exc |
| **10427** | 1A | 1Aa | Danebury | Hampshire | CuA | Hillfort | pit | pre 95 exc |
| **10428** | 1A | 1A | Hunsbury | Northamptonshire | CuA | Hillfort | unstrat | pre 95 exc |
| **10429** | 1A | 1Aa | Hunsbury | Northamptonshire | CuA | Hillfort | unstrat | pre 95 exc |
| **10430** | 1A | 1Ab | Icklingham | Suffolk | CuA | Dryland | stray | pre 95 stray |
| **10431** | 1A | 1Aa | Thames W Ldn, Hammersmith | London | CuA | Watery | watery | pre 95 stray |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10432** | 1A | 1Ab | Cow Down, Longbridge Deverill | Wiltshire | Fe | Sment | pit | pre 95 exc |
| **10433** | 1A | 1Aa | Maiden Castle | Dorset | CuA | Hillfort | pit | pre 95 exc |
| **10434** | 1A | 1Aa | Candleston Castle, Merthyr Mawr | Mid Glamorgan | CuA | Dryland | stray | pre 95 stray |
| **10435** | 1A | 1Aa | Moel Hiraddug, Clwyd | Denbighshire | CuA | Hillfort | deposit | pre 95 exc |
| **10436** | 1A | 1A | unknown | Unknown | CuA | Unknown | UN | pre 95 stray |
| **10437** | 1A | 1Aa | Russley | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10438** | 1A | 1A | Sutton Walls | Hereford and Worcs. | CuA | Hillfort | quarry | pre 95 exc |
| **10439** | 1A | 1A | unknown | Unknown | CuA | Unknown | UN | pre 95 stray |
| **10440** | 1A | 1A | Merrow (Merrow Down?) | Surrey | CuA | Dryland | stray | pre 95 stray |
| **10441** | 1A | 1A | Middle Hill, Woodeaton | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |
| **10442** | 1B | 1Ba | All Cannings Cross | Wiltshire | CuA | Sment | deposit | pre 95 exc |
| **10443** | 1B | 1Ba | Amesbury | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10444** | 1B | 1Ba | Bapton | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10445** | 1B | 1Ba | Bishopstone | East Sussex | CuA | Dryland | stray | pre 95 stray |
| **10446** | 1A | 1Aa | Blaise Castle, Bristol | Bristol | CuA | Hillfort | pit | pre 95 exc |
| **10447** | 1B | 1Ba | Bryanston Farm, Blandford | Dorset | CuA | Dryland | stray | pre 95 stray |
| **10448** | 1B | 1Ba | Bottisham | Cambridgeshire | CuA | Dryland | stray | pre 95 stray |
| **10449** | 1B | 1Ba | near Bush Barrow, Normanton Down, Wilsford | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10450** | 1B | 1Ba | Micklands Farm, Caversham | Berkshire | CuA | Dryland | stray | pre 95 stray |
| **10451** | 1B | 1Ba | Cold Kitchen Hill, Brixton Deverill | Wiltshire | CuA | Ritual? | unstrat | pre 95 exc |
| **10452** | 1A | 1Aa | Cowlam | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10453** | 1B | 1Ba | Fyfield | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10454** | 1B | 1Ba | Hanging Langford | Wiltshire | CuA | Hillfort | unstrat | pre 95 exc |
| **10455** | 1B | 1Ba | Iwerne | Dorset | CuA | Sment | deposit | pre 95 exc |
| **10457** | 1B | 1Ba | Melbury (near) | Somerset | CuA | Dryland | stray | pre 95 stray |
| **10458** | 1B | 1Ba | North Wiltshire | Wiltshire | CuA | Unknown | UN | pre 95 stray |
| **10459** | 1B | 1Ba | River Kennet, Reading | Berkshire | CuA | Watery | watery | pre 95 stray |
| **10460** | 1B | 1Ba | Oakley Down, Sixpenny Handley | Dorset | CuA | Dryland | stray | pre 95 stray |
| **10461** | 1B | 1Ba | Upper Upham, Aldbourne | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10462** | 1B | 1Ba | Warminster | Wiltshire | CuA | Dryland | stray | pre 95 stray |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10463** | 1B | 1Ba | West Kennet | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10464** | 1B | 1Ba | West Lavington | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10465** | 1B | 1Ba | West Lavington | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10466** | 1B | 1Bb | All Cannings Cross | Wiltshire | CuA | Sment | deposit | pre 95 exc |
| **10467** | 1B | 1B | Castle Lime Quarry, Ancaster | Lincolnshire | CuA | Sment | ditch | pre 95 exc |
| **10468** | 1B | 1Bb | Barrington | Cambridgeshire | CuA | Dryland | stray | pre 95 stray |
| **10469** | 1B | 1Bb | Baydon, Botley copse | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10470** | 1B | 1BV | Barrington prob. | Cambridgeshire | CuA | Dryland | stray | pre 95 stray |
| **10471** | 1B | 1Bb | Chedworth Villa | Gloucestershire | CuA | RB Sment | unstrat | pre 95 exc |
| **10472** | 1B | 1B? | Heathrow airport | London | CuA | Sment | deposit | pre 95 exc |
| **10473** | 1B | 1Bb | Kent | Kent | CuA | Unknown | UN | pre 95 stray |
| **10475** | 1B | 1Bb | Thames W Ldn, Mortlake | London | CuA | Watery | watery | pre 95 stray |
| **10477** | 1B | 1Bb | Candleston Castle, Merthyr Mawr | Mid Glamorgan | CuA | Dryland | stray | pre 95 stray |
| **10478** | 1B | 1Bb | Micheldever | Hampshire | CuA | Dryland | stray | pre 95 stray |
| **10479** | 1B | 1Ba | Mount Batten, Plymouth | Devon | CuA | Sment | unstrat | pre 95 exc |
| **10480** | 1B | 1Bb | Mount Batten, Plymouth | Devon | CuA | Sment | unstrat | pre 95 exc |
| **10481** | 1B | 1Bb | Preston Candover | Hampshire | CuA | Dryland | stray | pre 95 stray |
| **10482** | 1B | 1Bb | Ravensburgh Castle | Hertfordshire | CuA | Hillfort | deposit | pre 95 exc |
| **10483** | 1B? | 1BV? | Redmore or Redmoor, St Austell/Restormel | Cornwall | CuA | Landscape | house | pre 95 exc |
| **10484** | 1B | 1Bb | Rotherley, Cranborne Chase | Wiltshire | CuA | Sment | ditch | pre 95 exc |
| **10485** | 1B | 1Bb | Woodcock Hall, Saham Toney | Norfolk | CuA | Watery | unstrat | pre 95 stray |
| **10486** | 1B | 1Bb | St Mark's Church, Salisbury | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10487** | 1B | 1Bb | Silbury Hill (near) | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10488** | 1B | 1Bb | Thistleton | Rutland | CuA | RB Sment | deposit | pre 95 exc |
| **10489** | 1B | 1Bb | Sudeley Castle? (winchcomb area?) | Gloucestershire | CuA | Dryland | stray | pre 95 stray |
| **10490** | 2A | 2Aa | Thames W Ldn, Wandsworth | London | CuA | Watery | watery | pre 95 stray |
| **10491** | 1A_1B | 1AV_1Bd | Thames? West, Wallingford | Oxfordshire | CuA | Watery | watery | pre 95 stray |
| **10492** | 1C | 1CaV | Middle Hill, Woodeaton | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |
| **10493** | 1B | 1Bc | Barrington | Cambridgeshire | CuA | Dryland | stray | pre 95 stray |
| **10494** | 1B | 1Bc | Thames W Ldn, Hammersmith | London | CuA | Watery | watery | pre 95 stray |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10496** | 1B | 1Bc | Maiden Castle | Dorset | CuA | Hillfort | deposit | pre 95 exc |
| **10497** | 1B | 1Bc | Thames W Ldn, Syon Reach, North Foreshore | London | CuA | Watery | watery | pre 95 stray |
| **10498** | 1B | 1Bc | Middle Hill, Woodeaton | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |
| **10499** | 1A_1B | 1AV_1Bd | Thames City of London | London | CuA | Watery | watery | pre 95 stray |
| **10500** | 1Bd | 1Bd | Thames? City of London | London | CuA | Watery | watery | pre 95 stray |
| **10501** | 1Bd | 1Bd | Thames? City of London | London | CuA | Watery | watery | pre 95 stray |
| **10502** | 1Bd | 1Bd | Thames W Ldn, Kingston prob. | London | CuA | Watery | watery | pre 95 stray |
| **10503** | 1Bd | 1Bd | Thames? West, Wallingford | Oxfordshire | CuA | Watery | watery | pre 95 stray |
| **10504** | 1C | 1Ca | Castle Law, Abernethy | Perth and Kinross | CuA | Hillfort | unstrat | pre 95 exc |
| **10505** | 1B | 1B | Cold Kitchen Hill, Brixton Deverill | Wiltshire | CuA | Ritual? | unstrat | pre 95 exc |
| **10506** | 2A | 2Ab | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10507** | 2A | 2Ab | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10508** | 2A | 2Ab | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10509** | 2A | 2Ab? | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10510** | 1C | 1Ca | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10511** | 2A | 2Ab | Cold Kitchen Hill, Brixton Deverill | Wiltshire | CuA | Ritual? | unstrat | pre 95 exc |
| **10512** | 2A | 2Ab | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10513** | 2A | 2Ab | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10514** | 2A | 2Ab | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10515** | 2A | 2Ab? | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10516** | 2C | 2Ca | Trevone | Cornwall | CuA | Cemetery | burial | pre 95 exc |
| **10517** | 2A | 2Aa | Findon Park | West Sussex | Fe | Sment | pit | pre 95 exc |
| **10518** | 1C | 1Ca | Ham Hill | Somerset | CuA | Hillfort | deposit | pre 95 exc |
| **10519** | 2A | 2Ab | Ham Hill | Somerset | CuA | Hillfort | deposit | pre 95 exc |
| **10520** | 1C_2A | 1Cb_2Ab | City Farm (West Settlement) Hanborough | Oxfordshire | Fe | Sment | pit | pre 95 exc |
| **10521** | 1C | 1CaV | Howe | Orkney | CuA | LIA Sment | deposit | pre 95 exc |
| **10522** | 1B | 1Ba | Lancing | West Sussex | CuA | Dryland | stray | pre 95 stray |
| **10523** | 2A | 2Aa_2Ab | Huntow (Grindale), Bridlington | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10524** | 2A | 2Ab | Danes Graves, Kilham | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10525** | 1C | 1Cb | Maiden Castle | Dorset | CuA | Hillfort | deposit | pre 95 exc |
| **10526** | 1C | 1Cb? | Maiden Castle | Dorset | CuA | Hillfort | deposit | pre 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10527** | 1C | 1Cb? | Maiden Castle | Dorset | CuA | Hillfort | deposit | pre 95 exc |
| **10528** | 1B | 1Bb | Meare Village West | Somerset | CuA | Sment | deposit | pre 95 exc |
| **10529** | 2A | 2Ab | Meon Hill, Stockbridge | Hampshire | Fe | Sment | pit | pre 95 exc |
| **10530** | 2A | 2Ab | Mildenhall | Suffolk | CuA | Dryland | stray | pre 95 stray |
| **10531** | 2A | 2Aa | Otford | Kent | CuA | RB Sment | unstrat | pre 95 exc |
| **10532** | 1C | 1Ca | Rahoy, Morven | Argyll and Bute | CuA | Hillfort | unstrat | pre 95 exc |
| **10533** | 1B | 1Ba | Russley near | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10534** | 2A | 2Ab | Old Farm, Sawdon | E. Riding of Yorkshire | CuA | Cemetery? | burial? | pre 95 stray |
| **10535** | 1C_2A | 1Ca_2Aa | Swallowcliffe Down | Wiltshire | Fe | Sment | pit | pre 95 exc |
| **10536** | 2A | 2Ab | Swallowcliffe Down | Wiltshire | Fe | Sment | pit | pre 95 exc |
| **10538** | 1C | 1CbV | Wedhampton | Wiltshire | Fe | Dryland | stray | pre 95 stray |
| **10539** | 1C | 1Ca | Winchester | Hampshire | CuA | Unknown | UN | pre 95 stray |
| **10540** | 1A | 1A | Woodcuts | Dorset | CuA | Sment | unstrat | pre 95 exc |
| **10541** | 1A | 1Aa | Blaise Castle, Bristol | Bristol | CuA | Hillfort | pit | pre 95 exc |
| **10542** | 1A_1C | 1A_1Ca | Bromfield | Shropshire | Fe | Cemetery | burial | pre 95 exc |
| **10544** | 2C | 2Ca | Castle Lime Quarry, Ancaster | Lincolnshire | Fe | Sment | unstrat | pre 95 exc |
| **10545** | 2B | 2Ba | Balloch Hill | Argyll and Bute | CuA | Hillfort | deposit | pre 95 exc |
| **10546** | 2C | 2Cb | Beckley | Oxfordshire | CuA | Dryland | stray | pre 95 stray |
| **10547** | 2C | 2Cb | Cold Kitchen Hill, Brixton Deverill | Wiltshire | CuA | Ritual? | unstrat | pre 95 exc |
| **10548** | 2C | 2Ca | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10549** | 2C | 2Cb | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10550** | 2C | 2Ca | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10551** | 2C | 2Cb | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10552** | 2C | 2Ca | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10553** | 2A | 2Ab | Croft Ambrey | Hereford and Worcs. | Fe | Hillfort | Pit? | pre 95 exc |
| **10554** | 2A | 2Ab | Croft Ambrey | Hereford and Worcs. | Fe | Hillfort | deposit | pre 95 exc |
| **10555** | 2C | 2Ca | Danes Graves, Kilham | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10556** | 2B | 2Ba | Thames West, Datchet, Old Ford | Buckinghamshire | CuA | Watery | watery | pre 95 stray |
| **10557** | 2C | 2Cb | Eastburn. Kirkburn | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10558** | 2C | 2Ca | Frilford, Noah's Ark Field | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |
| **10559** | 2C | 2Ca | Hod Hill, Stourpaine | Dorset | CuA | Hillfort | unstrat | pre 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10560** | 2B | 2Ba | Danes Graves, Kilham | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10561** | 2C | 2Cb | Princes Street, London | London | CuA | Dryland | stray | pre 95 exc |
| **10562** | 2C | 2Cb | Meare Village East | Somerset | CuA | Sment | deposit | pre 95 exc |
| **10563** | 2B | 2Ba | Middle Hill, Woodeaton | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |
| **10564** | 2C | 2Cb | Middle Hill, Woodeaton | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |
| **10565** | 2C | 2Cb | Middle Hill, Woodeaton | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |
| **10569** | 2E | 2E | Middle Hill, Woodeaton | Oxfordshire | CuA | Ritual | unstrat | pre 95 exc |
| **10570** | 2B | 2Bb1 | Meare Village East | Somerset | CuA | Sment | deposit | pre 95 exc |
| **10571** | 2B | 2Bb1 | Wetwang Slack | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10572** | 2B | 2Bb1 | Wetwang Slack | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10573** | 1B | 1B | Edington | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10574** | 2B | 2Ba | Maiden Castle | Dorset | CuA | Hillfort | rampart | pre 95 exc |
| **10575** | 2B | 2Ba2 | Newnham Croft | Cambridgeshire | CuA | Cemetery | burial | pre 95 exc |
| **10595** | 1B | 1Ba | unknown | Unknown | CuA | Unknown | UN | pre 95 stray |
| **10608** | 2A | 2Aa? | Woldingham, near Warlingham | Surrey | CuA | Dryland | stray | pre 95 stray |
| **10609** | 2B | 2Bb2 | WELFORD | Berkshire | CuA | Dryland | stray | PAS |
| **10613** | 1A | 1A | Gussage All Saints | Dorset | CuA | Sment | pit | pre 95 exc |
| **10614** | 1A | 1A | Boxley | Kent | CuA | Dryland | stray | pre 95 stray |
| **10615** | 1A | 1Aa | Worth | Kent | CuA | Ritual | stray | post 95 md |
| **10616** | 1B | 1Bb | Woodcock Hall, Saham Toney | Norfolk | CuA | Watery | deposit | pre 95 stray |
| **10617** | 1B | 1B? | Heybridge | Essex | CuA | Sment | pit | post 95 exc |
| **10618** | 1B | 1B | Meols, Mersey Shore | Cheshire | CuA | Watery | watery | pre 95 stray |
| **10620** | 2B | 2Ba1 | Arras | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10621** | 1C_2A | 1Cb_2Ab | Danes Graves, Kilham | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10624** | 2C | 2Ca | Farningham Hill | Kent | Fe | Sment | ditch | pre 95 exc |
| **10627** | 1B | 1Bc | Ashville, Abingdon | Oxfordshire | CuA | Sment | pit | pre 95 exc |
| **10628** | 1B | 1Bc | Balksbury Camp, Upper Clatford, Andover | Hampshire | CuA | Hillfort | pit | pre 95 exc |
| **10629** | 1B | 1Bb | Calstone Wellington, field on Spray's Farm | Wiltshire | CuA | Sment | unstrat | pre 95 exc |
| **10631** | 1B | 1Bc | Dragonby | Lincolnshire | CuA | Sment | deposit | pre 95 exc |
| **10632** | 1B | 1Bb | Flag Fen | Cambridgeshire | CuA | Ritual | deposit | pre 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10633** | 2A | 2Aa? | Trevone | Cornwall | Fe | Cemetery | burial | pre 95 exc |
| **10634** | 1A? | 1A? | Westhampnett | West Sussex | CuA | LIA Cemetery | deposit | post 95 exc |
| **10635** | 1B | 1Bc | Woodcock Hall, Saham Toney | Norfolk | CuA | Watery | watery | pre 95 stray |
| **10639** | 1B | 1B | Silchester | Hampshire | CuA | RB Sment | stray | pre 95 stray |
| **10642** | 1C_2A | 1Cb_2Ab | Meare Village East | Somerset | CuA | Sment | deposit | pre 95 exc |
| **10643** | 1B | 1Bb | Meare Village East | Somerset | CuA | Sment | deposit | pre 95 exc |
| **10644** | 1C_2A? | 1Ca_2Aa? | Bonchester Hill, Hobkirk | Scottish Borders | Fe | Hillfort | house | pre 95 exc |
| **10645** | 1B | 1Ba? | The Bridles 2002, Barnetby-le-Wold | Lincolnshire | Fe | Cemetery | burial | pre 95 exc |
| **10646** | 2B | 2Ba | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10647** | 2A | 2Ab | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10648** | 2A | 2Aa | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10649** | 2A_2C | 2Ab_2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10650** | 2B | 2Bb3 | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10651** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10652** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10654** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10655** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10656** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10657** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10658** | 2C | 2Ca? | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10659** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10660** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10661** | 2C | 2Ca_2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10662** | 2C | 2Ca_2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10663** | 2A | 2Ab | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10664** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10665** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10666** | 2C | 2Ca_2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10667** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10668** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10669** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10670** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10671** | 2A | 2Ab | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10672** | 2A | 2AbV | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10673** | 2A_3 | 2Aa_3Bv? | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10674** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10675** | 2A | 2Ab | Mount Batten, Plymouth | Devon | CuA | Sment | residual | pre 95 exc |
| **10676** | 1C | 1Ca? | Slonk Hill, Shoreham | West Sussex | CuA | Sment | pit | post 95 exc |
| **10677** | 2C | 2Ca | Slonk Hill, Shoreham | West Sussex | Fe | Sment | burial | post 95 exc |
| **10678** | 2C | 2Ca | Slonk Hill, Shoreham | West Sussex | Fe | Sment | pit | post 95 exc |
| **10679** | 2C | 2Ca | Slonk Hill, Shoreham | West Sussex | Fe | Sment | pit | post 95 exc |
| **10681** | 1B | 1Bb | Winson, near Cirencester | Gloucestershire | CuA | Sment | ditch | post 95 exc |
| **10683** | 2C | 2Cb | Ryton-on-Dunsmore | Warwickshire | Fe | Sment | pit | post 95 exc |
| **10684** | 2C | 2C | Stanwick Villa vicinity, Wellingborough | Northamptonshire | CuA | Sment | unstrat | pre 95 exc |
| **10685** | 2C | 2Ca | Beckford | Hereford and Worcs. | CuA | Sment | deposit | post 95 exc |
| **10687** | 2A | 2Ab | Coygan Camp, Laugharne | Carmarthenshire | Fe | Hillfort | deposit | pre 95 exc |
| **10689** | 2A | 2Ab | Meare Village East | Somerset | Fe | Sment | deposit | pre 95 exc |
| **10690** | 2C | 2Ca | Meare Village East | Somerset | CuA | Sment | unstrat | pre 95 exc |
| **10691** | 2C | 2Ca | Meare Village East | Somerset | Fe | Sment | deposit | pre 95 exc |
| **10692** | 2C | 2Ca | Meare Village East | Somerset | Fe | Sment | deposit | pre 95 exc |
| **10698** | 2L | 2La | Snodland | Kent | CuA | Dryland | stray | pre 95 stray |
| **10699** | 1B? | 1BV | Upper Upham, Aldbourne | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10700** | 1B? | 1B? | BROADSTAIRS | Kent | CuA | Dryland | stray | PAS |
| **10701** | 2L | 2La | SHOREHAM, SEVENOAKS | Kent | CuA | Dryland | stray | PAS |
| **10702** | 2L | 2La | HIGHAM | Kent | CuA | Dryland | stray | PAS |
| **10703** | 2L | 2Lb | BOUGHTON ALUPH | Kent | CuA | Dryland | stray | PAS |
| **10704** | 1C? | 1C? | East Wear Bay villa, Folkestone | Kent | Fe | LIAsment | residual | post 95 exc |
| **10705** | 1B? | 1B? | Wrotham | Kent | CuA | Dryland | stray | post 95 md |
| **10707** | 1B | 1Bb | Keston | Kent | CuA | Sment | deposit | post 95 exc |
| **10708** | 1B | 1B | Milton Regis, Sittingbourne | Kent | CuA | Dryland | stray | pre 95 stray |
| **10709** | 1B | 1Bc | UTTLESFORD | Essex | CuA | Dryland | stray | PAS |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10710** | 1B? | 1B? | BRAINTREE | Essex | CuA | Dryland | stray | PAS |
| **10711** | 1A_1B | 1A_1B | UTTLESFORD | Essex | CuA | Dryland | stray | PAS |
| **10712** | 1B | 1Bc | UTTLESFORD | Essex | CuA | Dryland | stray | PAS |
| **10713** | 1B | 1Bc | CHELMSFORD | Essex | CuA | Dryland | stray | PAS |
| **10714** | 1B | 1Bc | EPPING FOREST | Essex | CuA | Dryland | stray | PAS |
| **10715** | 1B | 1Bb | Cavendish, St Edmundsbury | Suffolk | CuA | Dryland | stray | PAS |
| **10716** | 1A_1B | 1A_1B | MILDENHALL | Suffolk | CuA | Dryland | stray | PAS |
| **10717** | 2B | 2Ba | THELNETHAM | Suffolk | CuA | Dryland | stray | PAS |
| **10718** | 2B | 2Ba | ISLEHAM, CAMBS | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10719** | 2B? | 2Ba? | KENTON | Suffolk | CuA | Dryland | stray | PAS |
| **10720** | 2B | 2Ba3 | LANGLEY WITH HARDLEY | Norfolk | CuA | Dryland | stray | PAS |
| **10721** | 1B | 1B | POSTWICK WITH WITTON | Norfolk | CuA | Dryland | stray | PAS |
| **10723** | 2B | 2Ba3 | SEDGEFORD | Norfolk | CuA | Dryland | stray | PAS |
| **10724** | 1B | 1B | MATTISHALL | Norfolk | CuA | Dryland | stray | PAS |
| **10725** | 1B | 1Bc | CONGHAM | Norfolk | CuA | Dryland | stray | PAS |
| **10728** | 1A | 1A | STOKE FERRY | Norfolk | CuA | Dryland | stray | PAS |
| **10729** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10730** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10731** | 2C | 2Cb | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10732** | 2C | 2Ca? | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10733** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10734** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10735** | 2C | 2Ca? | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10736** | 2C | 2C? | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10737** | 2C | 2Ca | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10738** | 2A | 2Ab | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10739** | 2C | 2C? | Grandcourt Farm, Middleton | Norfolk | CuA | Ritual | deposit | post 95 exc |
| **10740** | 2B | 2Ba | GODMANCHESTER | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10741** | 1B | 1Bb? | Newton Moor, Penllyn | Vale of Glamorgan | CuA | Dryland | stray | PAS |
| **10742** | 1B | 1B | PENLLYN MOOR | Vale of Glamorgan | CuA | Dryland | stray | PAS |
| **10743** | 1B | 1Ba | COW DOWN, Longbridge Deverill | Wiltshire | CuA | Sment | unstrat | PAS |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10744** | 2B | 2Ba | BRAMPTON HILL, MADLEY | Hereford and Worcs. | CuA | Dryland | stray | PAS |
| **10745** | 1B | 1B | Llancarfan | Vale of Glamorgan | CuA | Dryland | stray | PAS |
| **10746** | 1B | 1B? | BROUGHTON GIFFORD | Wiltshire | CuA | Dryland | stray | PAS |
| **10748** | 2A | 2Ab? | Braich-y-Ddinas, Penmaenmawr | Conwy | CuA | Hillfort | house | pre 95 exc |
| **10749** | 2C | 2Cb | Coygan Camp, Laugharne | Carmarthenshire | Fe | Hillfort | house | pre 95 exc |
| **10751** | 1A | 1A | New School, Portskewett, | Monmouthshire | CuA | Sment | unstrat | post 95 exc |
| **10753** | 2A_2C | 2Ab_2Ca | Breiddin, Criggion | Powys | Fe | Hillfort | deposit | pre 95 exc |
| **10754** | 2C | 2Ca | Breiddin, Criggion | Powys | Fe | Hillfort | posthole | pre 95 exc |
| **10755** | 2C | 2Ca | Breiddin, Criggion | Powys | Fe | Hillfort | deposit | pre 95 exc |
| **10756** | 2A_2C | 2Ab_2Ca | Breiddin, Criggion | Powys | Fe | Hillfort | posthole | pre 95 exc |
| **10757** | 2A_2C | 2Ab_2Ca | Breiddin, Criggion | Powys | Fe | Hillfort | deposit | pre 95 exc |
| **10758** | 1A | 1A | Castell Henllys, Meline | Pembrokeshire | CuA | Hillfort | unstrat | post 95 exc |
| **10759** | 2C | 2Cb | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10760** | 2C | 2Ca | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10761** | 2C | 2Ca | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10762** | 2C | 2Ca | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10763** | 1A | 1Aa | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10764** | 2A_2C | 2Ab_2Ca | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10765** | 2A | 2Ab | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10766** | 2C | 2Cb | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10767** | 2C | 2Ca | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10768** | 2A | 2Ab | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10769** | 2A_2C | 2Ab_2Ca | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10770** | 2C | 2C? | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10771** | 2? | 2? | Castell Henllys, Meline | Pembrokeshire | Fe | Hillfort | unstrat | post 95 exc |
| **10772** | 2A | 2Ab | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10773** | 2A_2C | 2Ab_2Ca | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10774** | 2A | 2Ab | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10775** | 2A | 2Ab | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10776** | 2A | 2Ab? | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10777** | 2C | 2Ca? | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10778** | 2A_2C | 2Ab_2Ca | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10779** | 2C | 2Ca_2Cb | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10780** | 2A | 2Ab | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10781** | 2A | 2Ab | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10782** | 2C | 2C? | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10784** | 2C | 2Cb | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10785** | 2C | 2Ca | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10786** | 2C | 2C? | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10787** | 2C | 2Cb | Luce Sands | Dumfries & Galloway | CuA | Watery | stray | pre 95 stray |
| **10788** | 2L | 2La | Ditchling Beacon? Sussex | East Sussex | CuA | Dryland | stray | pre 95 stray |
| **10791** | 2L | 2La | Thames W Ldn, Wandsworth | London | CuA | Watery | watery | pre 95 stray |
| **10799** | 2B | 2Ba2 | Cold Kitchen Hill, Brixton Deverill | Wiltshire | CuA | Ritual? | unstrat | pre 95 exc |
| **10800** | 2B | 2Bb3 | NW of Casterley Camp, Upavon | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10801** | 2L | 2La | Upavon | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10802** | 2B | 2Ba3 | Upavon | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10803** | 2B | 2Ba3 | Suffolk | Suffolk | CuA | Unknown | UN | pre 95 stray |
| **10804** | 2B | 2Ba3 | Bledlow | Buckinghamshire | CuA | Dryland | stray | pre 95 stray |
| **10805** | 2B | 2Ba3 | Norfolk | Norfolk | CuA | Unknown | UN | pre 95 stray |
| **10806** | 2B | 2Ba1 | Bunwell | Norfolk | CuA | Dryland | stray | pre 95 stray |
| **10807** | 2L | 2La | Bishop Burton | E. Riding of Yorkshire | CuA | Dryland | stray | PAS |
| **10808** | 2B | 2Bb1 | Flag Fen | Cambridgeshire | CuA | Ritual | deposit | post 95 exc |
| **10809** | 2L | 2La | Horncastle Near, | Lincolnshire | CuA | Dryland | stray | post 95 md |
| **10810** | 2B | 2Ba3 | CHENIES | Buckinghamshire | CuA | Dryland | stray | PAS |
| **10811** | 2L | 2Lb | GAYHURST | Buckinghamshire | CuA | Dryland | stray | PAS |
| **10812** | 2L | 2La | Hurst Green, Oxted | Surrey | CuA | Dryland | stray | pre 95 stray |
| **10814** | 2L | 2Lc | Chorleywood | Hertfordshire | CuA | Dryland | stray | post 95 md |
| **10815** | 2L | 2Lb | FRESHWATER | Isle of Wight | CuA | Dryland | stray | PAS |
| **10816** | 1B | 1B? | East Wear Bay villa, Folkestone | Kent | CuA | LIAsment | residual | post 95 exc |
| **10817** | 1A? | 1A? | RADNAGE | Buckinghamshire | CuA | Dryland | stray | PAS |
| **10818** | 1A | 1A | GAYHURST | Buckinghamshire | CuA | Dryland | stray | PAS |
| **10819** | 1B | 1Bc | GLEMSFORD | Suffolk | CuA | Dryland | stray | PAS |

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10820** | 1B | 1B | BURY ST EDMUNDS near | Suffolk | CuA | Dryland | stray | PAS |
| **10821** | 1B_2L | 1Bc or 2LV? | SHREWSBURY | Shropshire | CuA | Dryland | stray | PAS |
| **10822** | 2B | 2Bb3 | FRILSHAM | Berkshire | CuA | Dryland | stray | PAS |
| **10823** | 1A | 1Aa | LANCASTER | Lancashire | CuA | Dryland | stray | PAS |
| **10824** | 2B | 2Ba2 | BARROW | Cumbria | CuA | Dryland | stray | PAS |
| **10825** | 2B | 2Ba1 | WONSTON CP | Hampshire | CuA | Dryland | stray | PAS |
| **10826** | 1B | 1Ba | COLLINGBOURNE WINSTON | Wiltshire | CuA | Dryland | stray | PAS |
| **10827** | 1B | 1Bc | SALISBURY | Wiltshire | CuA | Dryland | stray | PAS |
| **10828** | 2C | 2Cb | FULL SUTTON | E. Riding of Yorkshire | CuA | Dryland | stray | PAS |
| **10831** | 1B | 1Bb | RAYLEIGH | Essex | CuA | Dryland | stray | PAS |
| **10832** | 1B | 1Bc | ASTWICK | Bedfordshire | CuA | Dryland | stray | PAS |
| **10833** | 2B | 2Bb2 | WELFORD | Berkshire | CuA | Dryland | stray | PAS |
| **10834** | 2B | 2Bb2 | WEST HANNEY | Oxfordshire | CuA | Dryland | stray | PAS |
| **10835** | 1A? | 1A? | EAST SUSSEX | East Sussex | CuA | Dryland | stray | PAS |
| **10836** | 1B | 1Bc | FIRLE, LEWES | East Sussex | CuA | Dryland | stray | PAS |
| **10837** | 1B | 1Ba | CHICHESTER NEAR | West Sussex | CuA | Dryland | stray | PAS |
| **10838** | 1B | 1Bc | LANCING | West Sussex | CuA | Dryland | stray | PAS |
| **10839** | 1A_1B | 1A_1B | GORING BY SEA, ANGMERING | West Sussex | CuA | Dryland | stray | PAS |
| **10840** | 1B | 1B | COLLINGBOURNE KINGSTON | Wiltshire | CuA | Dryland | stray | PAS |
| **10841** | 1B | 1Bc | BIGHTON CP | Hampshire | CuA | Dryland | stray | PAS |
| **10842** | 1B | 1Bc | Owslebury, Winchester | Hampshire | CuA | Dryland | stray | PAS |
| **10843** | 1A? | 1A? | SPETCHLEY | Hereford and Worcs. | CuA | Dryland | stray | PAS |
| **10844** | 1B | 1Bc | Thames W Ldn, Wandsworth, Putney | London | CuA | Watery | watery | PAS |
| **10845** | 1B | 1Bc | HEIGHINGTON | Lincolnshire | CuA | Dryland | stray | PAS |
| **10846** | 2A | 2Aa? | EAST LINDSEY | Lincolnshire | CuA | Dryland | stray | PAS |
| **10847** | 1B | 1Bb | WARLINGHAM | Surrey | CuA | Dryland | stray | PAS |
| **10848** | 2A | 2Ab? | Twyn-y-Gaer, Cwymyoy | Monmouthshire | Fe | Hillfort | unstrat | post 95 exc |
| **10849** | 1B | 1Bc | STOKE BRUERNE | Northamptonshire | CuA | Dryland | stray | PAS |
| **10850** | 1A | 1A | ALDERBURY WITH CARDESTON | Shropshire | CuA | Dryland | stray | PAS |
| **10851** | 1B | 1B | CHETWYND ASTON AND WOODCOTE | Shropshire | CuA | Dryland | stray | PAS |

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10852** | 1A | 1Aa | POCKLINGTON AREA | E. Riding of Yorkshire | CuA | Dryland | stray | PAS |
| **10853** | 1B | 1Ba | SALISBURY | Wiltshire | CuA | Dryland | stray | PAS |
| **10854** | 1B | 1Ba | KINGSTON DEVERILL | Wiltshire | CuA | Dryland | stray | PAS |
| **10855** | 1B | 1Ba | BOWER CHALKE | Wiltshire | CuA | Dryland | stray | PAS |
| **10856** | 2B | 2Bb3 | BAYDON | Wiltshire | CuA | Dryland | stray | PAS |
| **10858** | 1B | 1Bc | Bgonor Regis | West Sussex | CuA | Watery | watery | pre 95 stray |
| **10859** | 1B | 1Ba | Cold Kitchen Hill, Brixton Deverill | Wiltshire | CuA | Ritual? | unstrat | pre 95 exc |
| **10860** | 1B | 1Ba | Cold Kitchen Hill, Brixton Deverill | Wiltshire | CuA | Ritual? | unstrat | pre 95 exc |
| **10861** | 1B | 1Ba | Cold Kitchen Hill, Brixton Deverill | Wiltshire | CuA | Ritual? | unstrat | pre 95 exc |
| **10862** | 2A | 2A? | Cold Kitchen Hill, Brixton Deverill | Wiltshire | Fe | Ritual? | unstrat | pre 95 exc |
| **10863** | 2A | 2Ab | All Cannings Cross | Wiltshire | Fe | Sment | deposit | pre 95 exc |
| **10864** | 2A | 2Ab | All Cannings Cross | Wiltshire | Fe | Sment | deposit | pre 95 exc |
| **10865** | 2E | 2E | All Cannings Cross | Wiltshire | Fe | Sment | deposit | pre 95 exc |
| **10866** | 2A | 2Ab? | All Cannings Cross | Wiltshire | Fe | Sment | deposit | pre 95 exc |
| **10867** | 2C | 2Cb | Maiden Bradley | Wiltshire | Fe | Dryland | stray | pre 95 stray |
| **10868** | 2B | 2Bb1 | Maiden Bradley | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10869** | 1B | 1Ba | Upavon Parish | Wiltshire | CuA | Dryland | stray | pre 95 stray |
| **10870** | 1A | 1A | Alfred's Castle, Lambourn | Berkshire | CuA | Hillfort | pit | post 95 exc |
| **10871** | 2A | 2Ab | Gussage All Saints | Dorset | Fe | Sment | pit | pre 95 exc |
| **10872** | 1C | 1CaV | Meare Village West | Somerset | CuA | Sment | deposit | pre 95 exc |
| **10873** | 1B | 1Ba | Danebury | Hampshire | CuA | Hillfort | unstrat | pre 95 exc |
| **10875** | 2A | 2Aa | Market Deeping (?Frognall) | Lincolnshire | Fe | Watery | watery | post 95 exc |
| **10876** | 2C | 2Cb | Croft Ambrey | Hereford and Worcs. | Fe | Hillfort | deposit | pre 95 exc |
| **10877** | 2C | 2Cb | Croft Ambrey | Hereford and Worcs. | Fe | Hillfort | deposit | pre 95 exc |
| **10878** | 2A | 2Ab | Croft Ambrey | Hereford and Worcs. | Fe | Hillfort | deposit | pre 95 exc |
| **10879** | 2C | 2Ca | Croft Ambrey | Hereford and Worcs. | Fe | Hillfort | deposit | pre 95 exc |
| **10880** | 2C | 2Ca_2Cb | Croft Ambrey | Hereford and Worcs. | Fe | Hillfort | posthole | pre 95 exc |
| **10882** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10883** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10884** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10885** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10886** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10887** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10888** | 2A_3A | 3Aa_2Ab | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10889** | 2C | 2Cb? | Wetwang Slack | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10890** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10891** | 2A | 2Ab | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10892** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10893** | 2A | 2Aa | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10894** | 2A | 2Ab | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10895** | 2A | 2Aa | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10896** | 2A | 2Aa | Wetwang Slack | E. Riding of Yorkshire | CuA | Cemetery | burial | pre 95 exc |
| **10897** | 2D | 2D | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10898** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10899** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10900** | 2A | 2Ab | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10901** | 2A | 2Ab | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10902** | 2A | 2Ab? | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10903** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10904** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10905** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10906** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10907** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10908** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10909** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10910** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10911** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10912** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10913** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10914** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10915** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10916** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10917** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10918** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10919** | 2C | 2Ca | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10920** | 2C | 2Cb | Wetwang Slack | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10921** | 2A | 2Ab | Garton Slack, North Humberside | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10922** | 2A_2C | 2Ab_2Ca | Eastburn. Kirkburn | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10923** | 2C | 2C? | Eastburn. Kirkburn | E. Riding of Yorkshire | Fe | Cemetery | burial | pre 95 exc |
| **10924** | 2A | 2Ab | Cadbury Castle, South Cadbury | Somerset | Fe | Hillfort | deposit | pre 95 exc |
| **10925** | 2A? | 2Ab? | Meon Hill, Stockbridge | Hampshire | Fe | Sment | ditch? | pre 95 exc |
| **10926** | 1C? | 1C? | Etchilhampton Down | Wiltshire | Fe | Dryland | stray | pre 95 stray |
| **10927** | 1B | 1BV | Ham Hill | Somerset | Fe | Hillfort | unstrat | pre 95 exc |
| **10928** | 2D | 2D | Wetwang Slack | E. Riding of Yorkshire | Fe | Sment | pit | pre 95 exc |
| **10929** | 2A | 2Ab | Cadbury Castle, South Cadbury | Somerset | CuA | Hillfort | ditch | pre 95 exc |
| **10938** | 2C | 2Ca | Danebury | Hampshire | Fe | Hillfort | pit | pre 95 exc |
| **10940** | 2D | 2D | Maiden Castle | Dorset | Fe | Hillfort | house | pre 95 exc |
| **10941** | 2C | 2Ca | Maiden Castle | Dorset | Fe | Hillfort | deposit | pre 95 exc |
| **10942** | 2C | 2Ca | Maiden Castle | Dorset | Fe | Hillfort | pit | pre 95 exc |
| **10943** | 2A | 2Ab | Maiden Castle | Dorset | Fe | Hillfort | pit | pre 95 exc |
| **10946** | 1C | 1Cb? | Worth Matravers, south of Compact Farm | Dorset | CuA | Sment | pit | post 95 exc |
| **10947** | 2C | 2Ca | Fison Way, Thetford | Norfolk | Fe | Ritual | pit | pre 95 exc |
| **10948** | 2C | 2Cb | Trethellan Farm, Newquay | Cornwall | Fe | Cemetery | burial | pre 95 exc |
| **10949** | 2? | 2? | Tongham, near Aldershot | Surrey | CuA | Sment | pit? | pre 95 exc |
| **10951** | 1A | 1Aa | Northumberland Bottom, Southfleet | Kent | CuA | Sment | pit | post 95 exc |
| **10952** | 1C | 1Ca? | Tollgate, Cobham | Kent | Fe | Sment | pit | post 95 exc |
| **10953** | 1B? | 1B? | West of Blind Lane, Sevington | Kent | CuA | Sment | posthole | post 95 exc |
| **10954** | 1B? | 1BV | Hartsdown Community Woodland, Margate | Kent | Fe | Sment | pit | post 95 exc |
| **10955** | 1B | 1BcV | Mount Batten, Plymouth | Devon | Fe | Sment | unstrat | pre 95 exc |
| **10958** | 2A | 2Ab? | Slonk Hill, Shoreham | West Sussex | CuA | Sment | pit | post 95 exc |

Appendix 1 Research Database of EIA and MIA brooches

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Site Type | Context | Source |
|---|---|---|---|---|---|---|---|---|
| **10959** | 2A | 2Ab? | Croft Ambrey | Hereford and Worcs. | Fe | Hillfort | unstrat | pre 95 exc |
| **10960** | 2C | 2Cb | Croft Ambrey | Hereford and Worcs. | Fe | Hillfort | unstrat | pre 95 exc |
| **10967** | 1C | 1Ca? | Watchfield | Oxfordshire | Fe | Sment | ditch | pre 95 exc |
| **10972** | 2B? | 2Ba? | Flag Fen | Cambridgeshire | Fe | Ritual | deposit | post 95 exc |
| **10973** | 1A | 1A | Ham Hill | Somerset | CuA | Hillfort | unstrat | pre 95 exc |
| **10976** | 2C | 2Cb | Wetwang Village | E. Riding of Yorkshire | Fe | Cemetery | burial | post 95 exc |
| **10978** | 1B | 1Ba | Flint Farm, Goodworth Clatford | Hampshire | CuA | Sment | posthole | post 95 exc |
| **10979** | 1B | 1Ba | Fullerton | Hampshire | CuA | RB Sment | deposit | post 95 exc |
| **10982** | 2B | 2Bb3 | Danebury | Hampshire | CuA | Hillfort | stray | pre 95 stray |
| **10983** | 1B | 1Bb | Cambria Farm, Taunton | Somerset | CuA | RB fields | ditch | post 95 exc |
| **10984** | 1B | 1BcV | Chedworth Villa | Gloucestershire | CuA | RB Sment | unstrat | post 95 exc |
| **10985** | 1B | 1B | Thames West Ldn, Hammersmith | London | CuA | Watery | watery | pre 95 stray |
| **10986** | 1C_2A | 1Cb_2Ab | Stokeleigh Camp, Long Ashton | Somerset | Fe | Hillfort | unstrat | pre 95 exc |
| **10987** | 2K | 2K | Swansea | Swansea | CuA | Dryland | stray | PAS |
| **10988** | 2L | 2Lb | SOBERTON | Hampshire | CuA | Dryland | stray | PAS |
| **10989** | 2B | 2Ba3 | SOHAM | Cambridgeshire | CuA | Dryland | stray | PAS |
| **10990** | 2B? | 2Ba? | Finlaggan Loch, Islay | Argyll and Bute | CuA | Watery | stray | post 95 md |

| Find no | Reference | Find ID | HHNo. | Location |
|---|---|---|---|---|
| **10001** | Cunliffe & Poole 2000, 119 | 2.16 | - | UN |
| **10002** | Parfitt 1995, 86-7, Brooch 2, G112 | 1990,0102.25 | - | British |
| **10003** | H&H 119 pl.33 | Deal Brooch 1. Artefact X6 (D58) | 4991 | Deal |
| **10004** | Parfitt 1995, 97 | Deal Brooch 3. Grave 127 | - | UN |
| **10006** | Parfitt 1995, 97 | Deal Brooch 5. Grave 108 | - | UN |
| **10007** | Webley et al. 2007, 94 | SF 44. Fig. 3.17, 3 | - | UN |
| **10008** | Webley et al. 2007, 94 | SF 148. Fig. 3.17,4 | - | UN |
| **10009** | Brown et al. 2007, 147 | 26. OR 819, Fig.104 | - | Ponte |
| **10010** | Luke 2008, 188 | RA60 | - | UN |
| **10011** | Lambrick & Allen 2004, 362 | SF 196 | - | UN |
| **10012** | Lambrick & Allen 2004, 363 | SF 528 | - | UN |
| **10013** | Lambrick & Allen 2004, 364 | SF 539 | - | UN |
| **10015** | Lambrick & Allen 2004, 365 | SF 574 | - | UN |
| **10016** | Powell at al. 2008, 33, 48 | ON 1400 | - | Wessex Arch. |
| **10018** | Parfitt 1999, 376-8, Fig.1 (1) | MD find no. 554 | - | Dover |
| **10019** | Parfitt 1999, 376-8, Fig.1 (2) | MD find no. 63 | - | with finder |
| **10020** | Colin Haselgrove p-ex report | Object 1 | - | Mucking archive |
| **10022** | British Museum | 1989.6-1.188 | - | British |
| **10023** | British Museum | 1989.6-1.189 | - | British |
| **10024** | British Museum | 1989.6-1.190 | - | British |
| **10025** | British Museum | 1989.6-1.191 | - | British |
| **10026** | British Museum | 1989.6-1.192 | - | British |
| **10027** | British Museum | 1989.6-1.193 | - | British |
| **10028** | British Museum | 1989.6-1.194 | - | British |
| **10029** | British Museum | 1989.6-1.13 | - | British |
| **10030** | British Museum | 1989.6-1.15 | - | British |
| **10031** | British Museum | 1989.6-1.24 | - | British |
| **10032** | British Museum | 1989.6-1.25 | - | British |
| **10033** | British Museum | 1989.6-1.200 | - | British |
| **10035** | PAS | SF-2EADE5 | - | with finder |
| **10037** | PAS | KENT-C03661 | - | with finder |
| **10038** | PAS | CAM-1A0B95 | - | with finder |
| **10039** | PAS | CAM-19F3E6 | - | with finder |
| **10041** | PAS | KENT1061 | - | with finder |
| **10043** | PAS | SUR-41D522 | - | Leatherhead |
| **10044** | PAS | KENT4356 | - | with finder |
| **10045** | PAS | KENT1378 | - | with finder |
| **10046** | PAS | GLO-9BD1B2 | - | with finder |
| **10047** | PAS | BUC-4A8DF7 | - | with finder |
| **10049** | PAS | SOMDOR-505E27 | - | with finder |
| **10050** | PAS | NMS-A45B55 | - | with finder |
| **10051** | PAS | KENT-17A7E8 | - | with finder |
| **10052** | PAS | HAMP-A7DA68 | - | with finder |
| **10054** | PAS | SF-7D2B91 | - | with finder |
| **10055** | PAS | NARC-83B8F8 | - | with finder |
| **10056** | PAS | SUR-36D9E1 | - | with finder |
| **10057** | PAS | NARC1068 | - | with finder |
| **10059** | PAS | WMID-3F4FE1 | - | with finder |
| **10060** | PAS | LIN-AC1321 | - | with finder |
| **10061** | PAS | SUSS-E66835 | - | with finder |

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|---|---|---|---|---|
| **10062** | PAS | WAW-3342C7 | - | with finder |
| **10063** | PAS | WAW-9958D2 | - | with finder |
| **10064** | PAS | SOMDOR-4D3957 | - | with finder |
| **10065** | PAS | BERK-E5E422 | - | with finder |
| **10066** | PAS | SF-938992 | - | with finder |
| **10067** | PAS | SF6657 | - | with finder |
| **10068** | PAS | SUR-604411 | - | with finder |
| **10069** | PAS | BERK-717093 | - | with finder |
| **10070** | PAS | HAMP3425 | - | with finder |
| **10071** | PAS | SUSS-F573B1 | - | with finder |
| **10072** | PAS | SF-FAE788 | - | with finder |
| **10073** | PAS | NMS-0F0C67 | - | with finder |
| **10074** | PAS | NMS-A19EA5 | - | with finder |
| **10075** | PAS | SUR-26EB83 | - | with finder |
| **10076** | PAS | SUR-2CD136 | - | with finder |
| **10077** | PAS | SUR-F6E4E1 | - | with finder |
| **10078** | PAS | BERK-510306 | - | with finder |
| **10079** | PAS | BUC-E0D317 | - | with finder |
| **10080** | PAS | HESH-E8A211 | - | with finder |
| **10082** | PAS | WILT-1A7B46 | - | with finder |
| **10083** | PAS | IOW-0C22D6 | - | with finder |
| **10084** | PAS | IOW-4EB966 | - | with finder |
| **10085** | PAS | WILT-AA8524 | - | with finder |
| **10086** | PAS | SOMDOR1354 | - | with finder |
| **10087** | PAS | SUR-AB9114 | - | Guildford |
| **10088** | PAS | SF4607 | - | with finder |
| **10089** | PAS | KENT305 | - | with finder |
| **10090** | PAS | IOW-433641 | - | with finder |
| **10091** | PAS | SOMDOR-C03400 | - | with finder |
| **10092** | PAS | SUSS-708D77 | - | with finder |
| **10093** | PAS | ESS-551B03 | - | with finder |
| **10094** | PAS | HAMP-63AB61 | - | with finder |
| **10096** | PAS | SUSS-CC9790 | - | with finder |
| **10097** | PAS | SUSS-CCB9F8 | - | with finder |
| **10099** | PAS | BUC-EB8654 | - | with finder |
| **10101** | PAS | ESS-D08FE1 | - | with finder |
| **10102** | PAS | KENT-624225 | - | with finder |
| **10103** | PAS | SF-7AD178 | - | with finder |
| **10104** | PAS | SUSS-911483 | - | with finder |
| **10105** | PAS | SUSS-DF8440 | - | with finder |
| **10106** | PAS | SUSS-1F0FC7 | - | with finder |
| **10107** | PAS | SUSS-1F1A64 | - | with finder |
| **10108** | PAS | SUSS-940CE3 | - | with finder |
| **10109** | PAS | SUSS-96E258 | - | with finder |
| **10110** | PAS | BH-5998D5 | - | with finder |
| **10111** | PAS | DOR-41F0C6 | - | with finder |
| **10112** | PAS | HAMP-22C4F4 | - | with finder |
| **10114** | PAS | WILT-34F374 | - | with finder |
| **10115** | PAS | WILT-39C227 | - | with finder |
| **10116** | PAS | CAM-63B0A7 | - | with finder |
| **10117** | PAS | WILT-79DCB7 | - | with finder |
| **10118** | PAS | NMS-B9D7B7 | - | with finder |

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|---|---|---|---|---|
| **10119** | PAS | KENT-16A194 | - | with finder |
| **10120** | PAS | SOMDOR-604420 | - | with finder |
| **10121** | PAS | HAMP1704 | - | with finder |
| **10122** | PAS | HAMP-12B648 | - | with finder |
| **10123** | PAS | SUR-1247F2 | - | with finder |
| **10124** | PAS | SOM-0FDE32 | - | with finder |
| **10125** | PAS | IOW-3475B5 | - | with finder |
| **10126** | PAS | NLM5885 | - | with finder |
| **10127** | PAS | ESS-8512D3 | - | with finder |
| **10128** | PAS | BUC-304BD2 | - | with finder |
| **10129** | PAS | BUC-3197B7 | - | with finder |
| **10130** | PAS | BUC-D4C803 | - | with finder |
| **10131** | PAS | NMS-692032 | - | with finder |
| **10133** | PAS | NMS-FA9CA3 | - | with finder |
| **10134** | PAS | SF-E03A05 | - | with finder |
| **10135** | PAS | SUR-598558 | - | with finder |
| **10136** | PAS | SUSS-2DEC26 | - | with finder |
| **10137** | PAS | SUSS-B78E98 | - | with finder |
| **10138** | PAS | SUSS-DF00F6 | - | with finder |
| **10139** | PAS | SUSS-EBE508 | - | with finder |
| **10140** | PAS | DEV-4A8792 | - | with finder |
| **10141** | PAS | SF-D417A3 | - | with finder |
| **10143** | PAS | WMID-C83644 | - | with finder |
| **10145** | PAS | YORYM-0215C1 | - | with finder |
| **10146** | PAS | CAM-CA7B05 | - | with finder |
| **10148** | PAS | SWYOR-399938 | - | with finder |
| **10149** | PAS | SF7411 | - | with finder |
| **10150** | PAS | BERK-B9D492 | - | with finder |
| **10151** | PAS | NLM-A01FB1 | - | with finder |
| **10152** | PAS | NLM646 | - | with finder |
| **10153** | PAS | SOMDOR505 | - | with finder |
| **10154** | PAS | CAM-4D3F05 | - | with finder |
| **10155** | PAS | NMS-CD7817 | - | with finder |
| **10156** | PAS | NMGW-EFAFA3 | - | with finder |
| **10157** | PAS | NMS-E6DA67 | - | with finder |
| **10158** | PAS | LIN-1ADE67 | - | with finder |
| **10159** | PAS | SUSS-9A8068 | - | with finder |
| **10160** | PAS | BERK-91FC62 (AN2004.68) | - | Ashmolean |
| **10161** | Needham 2000, 77 | Fig. 3.6 | - | UN |
| **10162** | Ellis & Powell 2008, 44 | Fig. 4.2, 1, Object no. 3042 | - | UN |
| **10163** | HER: FBC7399 | N/A | - | Bucks |
| **10164** | HER: FBC2011 | N/A | - | Bucks |
| **10165** | Allen and Dalwood 1983 | N/A | - | Bucks |
| **10166** | HER: FBC7394 | N/A | - | UN |
| **10171** | H&H 119 pl.34 | 1904,1213.1 | 2919 | British |
| **10172** | British Museum | 1978,1202.1 | - | British |
| **10173** | British Museum | 1978,1202.10 | - | British |
| **10174** | British Museum | 1978,1202.12 | - | British |
| **10175** | H&H 140 pl.40 | 1978,1202.14 | 4377b is | British |
| **10176** | British Museum | 1978,1202.19 | - | British |
| **10177** | British Museum | 1978,1202.2 | - | British |
| **10178** | British Museum | 1978,1202.25 | - | British |

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|---|---|---|---|---|
| **10179** | British Museum | 1978,1202.27 | - | British |
| **10180** | British Museum | 1978,1202.28 | - | British |
| **10181** | British Museum | 1978,1202.31 | - | British |
| **10182** | British Museum | 1978,1202.33 | - | British |
| **10183** | British Museum | 1978,1202.5 | - | British |
| **10184** | British Museum | 1978,1202.6 | - | British |
| **10185** | British Museum | 1978,1202.8 | - | British |
| **10186** | British Museum | 1978,1202.37 | - | British |
| **10187** | H&H 102 pl.30 | 1876,0209.1 | 2915 | British |
| **10188** | H&H 98 pl.28 | 1978,1203.16 | 4374 | British |
| **10189** | British Museum | 1978,1203.12 | | British |
| **10190** | British Museum | 1978,1203.13 | | British |
| **10191** | British Museum | 1978,1203.3 | | British |
| **10192** | British Museum | 1978,1203.5 | | British |
| **10193** | British Museum | 1978,1203.7 | | British |
| **10195** | H&H 79 pl.24 | 1906,1113.1 | 2912 | British |
| **10196** | H&H 101 pl.29 | 1908,1016.1 | 2924 | British |
| **10197** | H&H 81 pl.25 | 1878,1101.272 | 6670 | British |
| **10198** | H&H 100 | 4.1978 | 3692 | Wiltshire |
| **10200** | H&H 126 | 1879,1209.2073 | 6846bis | British |
| **10201** | H&H 159 pl.44 | 1918,0710.1 | 2245 | British |
| **10205** | H&H 125 pl.36 | 1937,0716.6 | 4280 | British |
| **10208** | H&H 123 pl.36 | 1898,0618.24 | 2926 | British |
| **10209** | H&H 108 pl.32 | 1898,0618.25 | 2925 | British |
| **10211** | British Museum | 1893,0601.164 | | British |
| **10215** | H&H 81 pl.23 | 1927,1212.8 | 3531 | British |
| **10216** | H&H 104 pl.31 | 1986.2 | 5426 | Wiltshire |
| **10217** | H&H 120 pl.34 | 1939,1011.146 | 7981 | British |
| **10218** | H&H 105 pl.31 | Britannia. Brooch No.2 fig. 8.2 | 3889bis | Norwich Castle |
| **10219** | British Museum | 1975,0401.82 | - | British |
| **10220** | British Museum | 1991,1001.12 | - | British |
| **10221** | British Museum | 1991,1001.3 | | British |
| **10222** | British Museum | 1975,0401.13 | | British |
| **10223** | British Museum | 1975,0401.18 | | British |
| **10224** | British Museum | 1975,0401.25 | | British |
| **10225** | British Museum | 1975,0401.27 | | British |
| **10226** | British Museum | 1975,0401.29 | | British |
| **10227** | H&H 159 pl.44 | 1975,0401.36 | 4376 | British |
| **10228** | British Museum | 1975,0401.38 | | British |
| **10229** | British Museum | 1975,0401.44 | | British |
| **10230** | British Museum | 1975,0401.45 | | British |
| **10231** | British Museum | 1975,0401.48 | | British |
| **10232** | H&H 127 pl.38 | 1975,0401.5 | 4375? | British |
| **10233** | British Museum | 1975,0401.57 | | British |
| **10234** | British Museum | 1975,0401.59 | | British |
| **10235** | British Museum | 1975,0401.63 | | British |
| **10236** | British Museum | 1975,0401.65 | | British |
| **10237** | British Museum | 1975,0401.68 | | British |
| **10238** | British Museum | 1975,0401.73 | | British |
| **10239** | British Museum | 1975,0401.8 | | British |
| **10240** | British Museum | 1975,0401.80 | | British |

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|---|---|---|---|---|
| **10241** | British Museum | 1975,0401.89 | | British |
| **10242** | British Museum | 1975,0503.14 | | British |
| **10243** | British Museum | 1975,0503.21 | | British |
| **10244** | British Museum | 1975,0503.22 | | British |
| **10245** | British Museum | 1975,0503.24 | | British |
| **10246** | British Museum | 1975,0503.27 | | British |
| **10247** | British Museum | 1975,0503.33 | | British |
| **10248** | British Museum | 1975,0503.4 | | British |
| **10249** | British Museum | 1975,0503.44 | | British |
| **10250** | British Museum | 1975,0503.7 | | British |
| **10251** | British Museum | 1976,0504.2 | | British |
| **10252** | British Museum | 1991,1001.19 | | British |
| **10253** | British Museum | 1991,1001.23 | | British |
| **10254** | British Museum | 1991,1001.24 | | British |
| **10255** | British Museum | 1991,1001.25 | | British |
| **10256** | British Museum | 1991,1001.26 | | British |
| **10257** | British Museum | 1991,1001.27 | | British |
| **10258** | British Museum | 1991,1001.29 | | British |
| **10259** | British Museum | 1991,1001.6 | | British |
| **10264** | H&H 80 pl.25 | 1930,1023.2 | 2237 | British |
| **10266** | H&H 108 pl.32 | 1862,0212.5 | 2923 | British |
| **10268** | British Museum | 1994,0102.1 | - | British |
| **10269** | H&H 80 pl.23 | 1938,0507.153 | 3646 | British |
| **10273** | H&H 52 pl.20 | N/A | 3745 | Truro |
| **10274** | H&H 52 pl.20 | N/A | 3746 | Truro |
| **10275** | H&H 52 pl.20 | N/A | 3720 | Truro |
| **10276** | H&H 51 pl.20 | N/A | 3984 | Plymouth |
| **10277** | H&H 52 pl.20 | N/A | 3985 | Plymouth |
| **10278** | H&H 66 pl.22 | 1948.942 | 2278 | Cambridge Uni |
| **10281** | H&H 63 pl.21 | 1898,0618.27 | 4282 | British |
| **10282** | H&H 65 pl.22 | N/A | 3560 | Mus of London |
| **10285** | Jackson 1999, 70 | sf.58 | - | UN |
| **10287** | Kelly 1991, 338 & 340 Fig. 1,3 | 1990.102/1 | - | Maidstone |
| **10288** | Kelly 1985, 267-269 | N/A | - | with finder |
| **10294** | H&H 64 pl.21 | N/A | 4282b is | Mus of London |
| **10295** | Knight 1986, 36-7 | N/A | - | UN |
| **10296** | H&H 65 pl.22 | N/A | 8293 | Northampton |
| **10297** | H&H 65 pl.2 | AN 1937.820 | 7039 | Ashmolean |
| **10306** | PAS | WAW-DD1642 | - | with finder |
| **10316** | H&H 114 pl.33 | 1935,1018.48 | 3856 | British |
| **10318** | British Museum | 1990,1005.1 | - | British |
| **10399** | H&H 66 pl.22 | AN 1896-1908 R.0064 | 7029 | Ashmolean |
| **10403** | H&H 89 pl.27 | 27.654 | 2933 | Cambridge Uni |
| **10404** | H&H 92 pl.27 | N/A | 8444 | Leicester |
| **10406** | H&H 94 pl.27 | N/A | 3093 | Wiltshire |
| **10407** | Crummy forthcoming no. 9818 | 41A | - | Ipswich |
| **10408** | Crummy forthcoming, Pl. B.5 no. 3102 | 34/16 | - | Colchester |
| **10409** | H&H 89 pl. 27 no.0001 | Colchester Mus. | | Colchester |
| **10410** | H&H 142 pl.41 | N/A | 3195 | Wiltshire |
| **10411** | H&H 131 pl.38 | N/A | 3538 | Rothesay |

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| **10412** | H&H 145 pl.42 | 1951,1102.1 | 2248 | British |
| **10414** | H&H 105 pl.31 | N/A | 3089 | Brighton Dome |
| **10415** | H&H 89 pl.27 | fig.81, 6 | 2087 | Dorset |
| **10416** | H&H 106 pl.31 | AN 1933.1617 | 7008 | Ashmolean |
| **10418** | H&H 104 pl.30 | Salisbury | 2619 | Salisbury |
| **10419** | H&H 106 | 35.389/627 box PH5.23 | 8071 | Nat Mus Wales |
| **10420** | H&H 82 pl.23 | N/A | 3081 | Winchester City |
| **10421** | H&H 80 pl.25 | 216.61 | 2441 | Reading |
| **10422** | H&H 105 pl.30 | 302 | 2833 | Wiltshire |
| **10423** | H&H 82 | N/A | 3080 | private coll. |
| **10424** | H&H 105 pl.31 | Salisbury Museum | 5918 | Salisbury |
| **10425** | H&H 83 pl.24 | N/A | 6759 | P. Dixon |
| **10426** | H&H 83 pl.24 | N/A | 7980 | P. Dixon |
| **10427** | H&H 80 pl.24 no. 1235 | 1.24. Find 37 | | Andover |
| **10428** | H&H 79 pl.23 | N/A | 2928 | Northampton |
| **10429** | H&H 79 pl.23 | N/A | 2929 | Northampton |
| **10430** | H&H 81 pl.25 | AN 1932.0515 | 3530 | Ashmolean |
| **10431** | H&H 79 pl.23 | 49.107/996 | 3084 | Mus of London |
| **10432** | H&H 82 pl.24 | N/A | 3623 | UN |
| **10433** | H&H 82 pl.23 no.2082 | Fig. 81,1 | | Dorset |
| **10434** | H&H 84 pl.26 | 29.208 (on display in 2011/2012) | 3383 | Nat Mus Wales |
| **10435** | H&H 84 pl.26 | 83.59H (on display in 2011/12) | 8188 | Nat Mus Wales |
| **10436** | H&H 81 pl.25 | 1966.1876 | 7829 | Ashmolean |
| **10437** | H&H 82 pl.25 | ? Not found at Ashmolean Dec 2010 | 7067 | Ashmolean |
| **10438** | H&H 84 pl.26 | N/A | 3581 | Hereford |
| **10439** | H&H 81 pl.23 | Incorrect no. in H&H | 3534 | British |
| **10440** | H&H 81 | RB3226 | 4385 | Guildford |
| **10441** | H&H 79 pl.23 | 1880,1214.13 | 2918 | British |
| **10442** | H&H 100 pl.28 | N/A | 3091 | Wiltshire |
| **10443** | H&H 100 pl.29 | N/A | 4562 | Hull |
| **10444** | H&H 100 pl.29 | N/A | 5952 | Salisbury |
| **10445** | Bell 1977 | N/A | 9574 | UN |
| **10446** | H&H 98 pl.28 | N/A | 8064 | Bristol City |
| **10447** | H&H 99 pl.28 | 1892,0901.1572 | 2910 | British |
| **10448** | H&H 100 pl.29 | 27.639 | 2935 | Cambridge Uni |
| **10449** | H&H 99 pl.28 | N/A | 2832 | Wiltshire |
| **10450** | H&H 100 pl.29 | 75.84 | 4980 | Reading |
| **10451** | H&H 100 pl.29 | Salisbury Museum | 5955 | Wiltshire |
| **10452** | H&H 84 pl.26 | 1879,1209.535 | 2930 | British |
| **10453** | H&H 100 pl.29 | N/A | 3200 | Wiltshire |
| **10454** | H&H 100 pl.29 | 137/39 | 5934 | Salisbury |
| **10455** | H&H 90 pl.27 | N/A | 2909 | Salisbury |
| **10457** | H&H 100 pl.28 | N/A | 3103 | Somerset |
| **10458** | H&H 100 | ? Not found at Ashmolean Dec 2010 | 9115 | Ashmolean |
| **10459** | H&H 99 pl.28 | 6.66 | 2920 | Reading |
| **10460** | H&H 101 pl.29 | 1952.36.9 | 9003 | Dorset |
| **10461** | H&H 99 pl.28 | 1101 | 2913 | Wiltshire |

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| **10462** | H&H 99 pl.28 | N/A | 2911 | private coll. |
| **10463** | H&H 99 pl.28 | 950 | 2914 | Wiltshire |
| **10464** | H&H 99 pl.28 | N/A | 2831 | Wiltshire |
| **10465** | H&H 99 pl.28 | N/A | 2834 | Wiltshire |
| **10466** | H&H 102 pl.30 | N/A | 3092 | Wiltshire |
| **10467** | H&H 91 pl.27 | N/A | 9219 | Scunthorpe |
| **10468** | H&H 89 | 24.659 | 2932 | Cambridge Uni |
| **10469** | H&H 103 pl.30 | N/A | 2282 | Wiltshire |
| **10470** | H&H 89 pl.27 | reg. C.J.1888 | 2934 | Cambridge Uni |
| **10471** | H&H 103 | Find No.106. | 2908 | Chedworth |
| **10472** | H&H 106 | N/A | 7783 | Mus of London |
| **10473** | H&H 114 pl.33 | N/A | 6705 | H. A. Fawcett |
| **10475** | H&H 103 pl.30 | Ex. London Mus. A19178 | 3082 | Mus of London |
| **10477** | H&H 104 pl.31 | 26.239/1 (on display in 2011/12) | 3078 | Nat Mus Wales |
| **10478** | H&H 102 pl.30 | N/A | 3808 | Salisbury |
| **10479** | H&H 104 pl.31 | N/A | 3075 | Plymouth |
| **10480** | H&H 104 | N/A | 3076 | Plymouth |
| **10481** | H&H 102 pl.30 | N/A | 3079 | Winchester City |
| **10482** | H&H 103 pl.30 | N/A | 6932 | Letchworth |
| **10483** | H&H 89 pl.27 | AN 1927.874 | 3074 | Ashmolean |
| **10484** | H&H 101 pl.29 | Salisbury | 2618 | Salisbury |
| **10485** | H&H 103 pl.31 | Britannia. Brooch No.4 fig. 8.4 | 6876 | Norwich Castle |
| **10486** | H&H 102 pl.30 | N/A | 7344 | UN |
| **10487** | H&H 102 pl.30 | N/A | 2835 | Wiltshire |
| **10488** | H&H 103 pl.30 no.1099 | THZ624, BZ17 (exc. Find no.) | | UN |
| **10489** | H&H 103 pl.30 | Cheltenham | 2236 | Cheltenham |
| **10490** | H&H 137 pl.39 | 95.533/9 | 7831 | Mus of London |
| **10491** | H&H 113 pl.33 | N/A | 2921 | Reading |
| **10492** | H&H 89 pl.27 | AN 1896-1908 Pr.0400 | 2916 | Ashmolean |
| **10493** | H&H 109 pl.32 | 2.15232 | 2931 | Cambridge Uni |
| **10494** | H&H 108 pl.32 | 91. Ex Guildhall 2870 | 5359 | Mus of London |
| **10496** | H&H 109 pl.32 no.2083 | Fig.81 no. 2 | | Dorset |
| **10497** | H&H 108 pl.32 | 95.533/8 | 7376 | Mus of London |
| **10498** | H&H 109 pl.32 | AN 1896-1908 Pr.0401 | 2917 | Ashmolean |
| **10499** | H&H 113 pl.33 | LM.A21465 | 7193 | Mus of London |
| **10500** | H&H 114 pl.33 | LM.A22304 | 7195 | Mus of London |
| **10501** | H&H 114 pl.33 | LM.A22304 | 7194 | Mus of London |
| **10502** | H&H 113 pl.33 | LM.A11927 | 3083 | Mus of London |
| **10503** | H&H 113 pl.33 | N/A | 2922 | Reading |
| **10504** | H&H 131 pl.38 | GP30 | 2238 | Nat Mus Scotland |
| **10505** | H&H 90 pl.27 | N/A | 2891 | Wiltshire |
| **10506** | H&H 125 pl.36 | N/A | 2891b is | Wiltshire |

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| **10507** | H&H 125 pl.36 | N/A | 2892 | Wiltshire |
| **10508** | H&H 141 pl.41 | N/A | 2902 | Wiltshire |
| **10509** | H&H 125 pl.36 | N/A | 3094 | Wiltshire |
| **10510** | H&H 120 pl.34 | N/A | 3098 | Wiltshire |
| **10511** | H&H 141 pl.41 | 1054 | 3143 | Wiltshire |
| **10512** | H&H 139 pl.40 | N/A | 3157 | Wiltshire |
| **10513** | H&H 139 pl.40 | N/A | 7335 | Wiltshire |
| **10514** | H&H 139 pl.40 | N/A | 7336 | Wiltshire |
| **10515** | H&H 139 pl.40 | N/A | 7337 | Wiltshire |
| **10516** | H&H 158 pl.44 | N/A | 6889 | Truro |
| **10517** | H&H 120 pl.34 | N/A | 3101 | with finder |
| **10518** | H&H 122 pl.34 | N/A | 3085 | Somerset |
| **10519** | H&H 125 pl.36 | N/A | 4264 | Somerset |
| **10520** | H&H 126 pl.37 | AN 1965.497 | 7066 | Ashmolean |
| **10521** | Ballin Smith 1994, fig.31 | N/A | - | Kirkwall |
| **10522** | H&H 101 pl.29 | 1891,0320.17 | 2927 | British |
| **10523** | H&H 138 pl.39 | AN 1927.0877 | 3412 | Ashmolean |
| **10524** | H&H 121 pl.35 | ?KINCM: 1942.3024 | 3102 | Hull |
| **10525** | H&H 124 pl.36 no.2084 | Fig.81 no. 3 | | Dorset |
| **10526** | H&H 125 pl.36 | Fig.81 no. 4 | 2085 | Dorset |
| **10527** | H&H 124 pl.36 | Fig.81 no. 5 | 2086 | Dorset |
| **10528** | H&H 93 pl.27 | EE9 | 3086 | Somerset |
| **10529** | H&H 127 pl.38 | N/A | 4275 | Winchester City |
| **10530** | H&H 125 pl.36 | A04,150 | 3087 | Cambridge Uni |
| **10531** | H&H 136 pl.39 | 1990.46. On display in 2011 | 4285 | Maidstone |
| **10532** | H&H 131 pl.38 | HH.420.1938.61 | 3052 | Nat Mus Scotland |
| **10533** | H&H 124 pl.36 | AN 1955.204 | 3095 | Ashmolean |
| **10534** | H&H 140 pl.40 | 1.47.1 | 3798 | Scarborough |
| **10535** | H&H 120 pl.34 | 2006.29.45 (W.A.M. 43, 83 pl.XI no. C36) | 3100 | Wiltshire |
| **10536** | H&H 141 pl.41 | 2006.29.25 | 4286 | Wiltshire |
| **10538** | H&H 124 pl.36 | 1934, 213-14, plate 1xvii, 9 (neg,305) | 2839 | Wiltshire |
| **10539** | H&H 120 pl.34 | N/A | 8671 | Winchester City |
| **10540** | H&H 82 pl.26 | N/A | 2600 | Salisbury |
| **10541** | H&H 83 pl.23 | N/A | 8163 | Bristol City |
| **10542** | Hughes 1994 | N/A | - | UN |
| **10544** | H&H 161 pl.46 | N/A | 9220 | Scunthorpe |
| **10545** | H&H 150 pl.43 | N/A | 3800 | Nat Mus Scotland |
| **10546** | H&H 163 pl.47 | AN 1886.1141 | 2244 | Ashmolean |
| **10547** | H&H 166 pl.49 | N/A | 2246 | Wiltshire |
| **10548** | H&H 160 pl.46 | N/A | 2247 | Wiltshire |
| **10549** | H&H 165 pl.48 | N/A | 3194 | Wiltshire |
| **10550** | H&H 162 pl.46 | N/A | 5475 | Wiltshire |
| **10551** | H&H 165 pl.48 | N/A | 5476 | Wiltshire |
| **10552** | H&H 162 pl.46 | N/A | 5477 | Wiltshire |
| **10553** | H&H 121 pl.35 | SF299 | 5440 | Hereford |
| **10554** | H&H 126 pl.37 | SF299 | 5441 | Hereford |
| **10555** | H&H 158 pl.44 | 930.2.48 | 2243 | Yorkshire |
| **10556** | H&H 148 pl.43 | N/A | 2249 | Eton, Myers |

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| **10557** | H&H 161 pl.47 | KINCM:1942.3028 | 4289 | Hull |
| **10558** | H&H 158 pl.44 | AN 1938.1248 | 3071 | Ashmolean |
| **10559** | H&H 158 pl.44 | N/A | 9016 | Dorset |
| **10560** | H&H 151 pl.42 | KINCM:1946.65.2.1 | 2250 | Hull |
| **10561** | H&H 166 pl.49 | LM 29.58 | 2242 | Mus of London |
| **10562** | Coles 1987 | EE66.56 | - | Somerset |
| **10563** | H&H 152 pl.43 | N/A | 2728 | with finder |
| **10564** | H&H 163 pl.47 | N/A | 3070 | Missing Ashmol. |
| **10565** | H&H 164 pl.47 | AN 1954.684 | 4281 | Ashmolean |
| **10569** | H&H 186 | AN 1937.822 | 2729 | Ashmolean |
| **10570** | Coles 1987 | EE21 | - | Somerset |
| **10571** | H&H 154 pl.44 | KINCM:2010.7.3 | 7893/4 | Hull |
| **10572** | H&H 154 pl.43 | KINCM:2010.7.237 | 7902 | Hull |
| **10573** | H&H 105 pl.31 | 115.1981 | 5426tris | Wiltshire |
| **10574** | H&H 146 pl.42 | Fig.82 | 2089 | Dorset |
| **10575** | H&H 147 pl.42 | 1903.211 | 4283 | Cambridge Uni |
| **10595** | H&H 98 | N/A | 3906 | Missing Ashmol. |
| **10608** | H&H 137 pl.39 | now lost | 4284 | Lost |
| **10609** | PAS | BERK-4EFFC6 | - | with finder |
| **10613** | Wainwright 1979, 109-110 Fig. 84 | object 3031 | - | Dorset |
| **10614** | Kelly 1991, 339-340 | N/A | - | with finder |
| **10615** | Parfitt 2000, 374-5 | N/A | - | with finder |
| **10616** | H&H 104 pl.31 | Britannia. Brooch No.1 fig. 8.1 | 3889/99 | Norwich Castle |
| **10617** | Essex County Council | sf. 1555 | - | UN |
| **10618** | Smith, 1868, 99 & 104 | N/A | - | UN |
| **10620** | H&H 144 pl.42 | 907.48 | 3693 | Yorkshire |
| **10621** | H&H 126 | yorkshire mus. 930.3.48 | 6846 | Yorkshire |
| **10624** | Philp 1984, 35-6 | find: KMW-12-24 | - | UN |
| **10627** | Parrington 1978 | N/A | - | UN |
| **10628** | Wainwright 1995 | SF 1058 p.32-33 Fig.39.1 | - | UN |
| **10629** | H&H 106 | N/A | 2915bis | Wiltshire |
| **10631** | H&H 110 pl.32 | N/A | 5855 | Scunthorpe |
| **10632** | Coombs, 1992 514-5 | N/A | - | Flag fen |
| **10633** | H&H 104 pl.32 | N/A | 6888 | Truro |
| **10634** | Fitzpatrick 1997, 93 & 109, fig. 54 | ON 27178 | - | UN |
| **10635** | H&H 109 pl.32 | Britannia. Brooch No.3 fig. 8.3 | 3899tris | Norwich Castle |
| **10639** | H&H 105 | Photo bneg. 1790 | 2920bis | with finder |
| **10642** | Coles 1987 | EE4 | - | Somerset |
| **10643** | Coles 1987 | EE18 | - | Somerset |
| **10644** | H&H 131 pl.38 | N/A | 7201 | Nat Mus Scotland |
| **10645** | Bray et al. 2003 | BBAF 9 | - | UN |
| **10646** | Adams et al. forthcoming | FN5 | - | APS Arch. |
| **10647** | Adams et al. forthcoming | FN99 | - | APS Arch. |
| **10648** | Adams et al. forthcoming | FN187 | - | APS Arch. |
| **10649** | Adams et al. forthcoming | FN164 | - | APS Arch. |
| **10650** | Adams et al. forthcoming | FN119 | - | APS Arch. |

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| **10651** | Adams et al. forthcoming | FN70 | - | APS Arch. |
| **10652** | Adams et al. forthcoming | FN40 | - | APS Arch. |
| **10654** | Adams et al. forthcoming | FN140 | - | APS Arch. |
| **10655** | Adams et al. forthcoming | FN121 | - | APS Arch. |
| **10656** | Adams et al. forthcoming | FN91 | - | APS Arch. |
| **10657** | Adams et al. forthcoming | FN177 | - | APS Arch. |
| **10658** | Adams et al. forthcoming | FN176 | - | APS Arch. |
| **10659** | Adams et al. forthcoming | FN101 | - | APS Arch. |
| **10660** | Adams et al. forthcoming | FN109 | - | APS Arch. |
| **10661** | Adams et al. forthcoming | FN43 | - | APS Arch. |
| **10662** | Adams et al. forthcoming | FN66 | - | APS Arch. |
| **10663** | Adams et al. forthcoming | FN51 | - | APS Arch. |
| **10664** | Adams et al. forthcoming | FN77 | - | APS Arch. |
| **10665** | Adams et al. forthcoming | FN56 | - | APS Arch. |
| **10666** | Adams et al. forthcoming | FN159 | - | APS Arch. |
| **10667** | Adams et al. forthcoming | FN31 | - | APS Arch. |
| **10668** | Adams et al. forthcoming | FN85 | - | APS Arch. |
| **10669** | Adams et al. forthcoming | FN148 | - | APS Arch. |
| **10670** | Adams et al. forthcoming | FN157 | - | APS Arch. |
| **10671** | Adams et al. forthcoming | FN94 | - | APS Arch. |
| **10672** | Adams et al. forthcoming | FN125 | - | APS Arch. |
| **10673** | Adams et al. forthcoming | FN149 | - | APS Arch. |
| **10674** | Adams et al. forthcoming | FN49 | - | APS Arch. |
| **10675** | H&H 128 | N/A | 3042 | Plymouth |
| **10676** | Hartridge 1978, 87-99 | N/A | - | UN |
| **10677** | Hartridge 1978, 87-100 | N/A | - | UN |
| **10678** | Hartridge 1978, 87-101 | N/A | - | UN |
| **10679** | Hartridge 1978, 87-102 | N/A | - | UN |
| **10681** | Cox 1985, 246 | UN | - | UN |
| **10683** | Warwickshire County Council 2012 | sf 5. pit fill 133 | - | UN |
| **10684** | Neal 1989, 149-169 | finds no.40637 | - | UN |
| **10685** | Jackson 1999, 70 | sf.305 | - | UN |
| **10687** | Wainwright 1967, 107 Fig.25.25 | 67.514/9.225 Box PH5.31C | - | Nat Mus Wales |
| **10689** | Coles 1987 | I59B | - | Somerset |
| **10690** | Coles 1987 | EE15 | - | Somerset |
| **10691** | Coles 1987 | I84 | - | Somerset |
| **10692** | Coles 1987 | EE20 | - | Somerset |
| **10698** | British Museum | 1993,0501.1 | - | British |
| **10699** | H&H 105 pl.31 | 139.198 | 5426bis | Wiltshire |
| **10700** | PAS | KENT-FFDBB7 | - | with finder |
| **10701** | PAS | KENT-508AE6 | - | with finder |
| **10702** | PAS | KENT4989 | - | with finder |
| **10703** | PAS | KENT-020EA5 | - | with finder |
| **10704** | Parfitt 2012 | SF856, Ctxt 724 | - | C.A.T. |
| **10705** | Burr 1999, 9 Pl. 6 Fig. 6 | N/A | - | with finder |
| **10707** | Philp et al. 1991, 171 | SF 91 | - | un |
| **10708** | Maidstone Museum | 1911.37 On display in 2011 | - | Maidstone |
| **10709** | PAS | BH-E2DED1 | - | with finder |
| **10710** | PAS | ESS-0FC2B7 | - | with finder |
| **10711** | PAS | ESS-27ACD5 | - | with finder |
| **10712** | PAS | ESS-457525 | - | with finder |

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| **10713** | PAS | ESS-DAE533 | - | with finder |
| **10714** | PAS | LON-5DF0D1 | - | with finder |
| **10715** | PAS | SF-3CFB81 | - | with finder |
| **10716** | PAS | SF9830 | - | with finder |
| **10717** | PAS | SF9940 | - | with finder |
| **10718** | PAS | SF10308 | - | with finder |
| **10719** | PAS | SF-DCDAA3 | - | with finder |
| **10720** | PAS | NMS-505A53 | - | with finder |
| **10721** | PAS | NMS-7DFB40 | - | with finder |
| **10723** | PAS | NMS-B6CD42 | - | with finder |
| **10724** | PAS | NMS-C4F3A2 | - | with finder |
| **10725** | PAS | NMS-CBD9B3 | - | with finder |
| **10728** | PAS | NMS-F07EB3 | - | with finder |
| **10729** | Adams et al. forthcoming | FN12 | - | APS Arch. |
| **10730** | Adams et al. forthcoming | FN23 | - | APS Arch. |
| **10731** | Adams et al. forthcoming | FN26 | - | APS Arch. |
| **10732** | Adams et al. forthcoming | FN44 | - | APS Arch. |
| **10733** | Adams et al. forthcoming | FN50 | - | APS Arch. |
| **10734** | Adams et al. forthcoming | FN95 | - | APS Arch. |
| **10735** | Adams et al. forthcoming | FN98 | - | APS Arch. |
| **10736** | Adams et al. forthcoming | FN142 | - | APS Arch. |
| **10737** | Adams et al. forthcoming | FN162 | - | APS Arch. |
| **10738** | Adams et al. forthcoming | FN198 | - | APS Arch. |
| **10739** | Adams et al. forthcoming | FN110 | - | APS Arch. |
| **10740** | PAS | CAM-DC0942 | - | with finder |
| **10741** | National Museum Wales | NMGWPA:2000.112.1 | - | with finder |
| **10742** | National Museum Wales | NMGWPA:2002.4.1 | - | with finder |
| **10743** | PAS | PUBLIC-B3A686 | - | with finder |
| **10744** | PAS | NMGW-8809A8 | - | with finder |
| **10745** | PAS | NMGWPA | - | with finder |
| **10746** | PAS | NMWPA 2011.221.1 | - | with finder |
| **10748** | Savory 1976, 69 | AC.1912,174. fig.4 | - | Nat Mus Wales |
| **10749** | Wainwright 1967, 107 Fig.25.28 | N/A | - | Nat Mus Wales |
| **10751** | Clark 1999 | PSK TT2 | - | Nat Mus Wales |
| **10753** | Musson 1991, 144. Fig.58 | 81.78h/184 | 1185? | Nat Mus Wales |
| **10754** | Musson 1991, 144. Fig.58 | 81.78H/183 | | Nat Mus Wales |
| **10755** | Musson 1991, 144. Fig.58 | 81.78H/185 | | Nat Mus Wales |
| **10756** | Musson 1991, 144. Fig.58 | 81.78H/186 | | Nat Mus Wales |
| **10757** | Musson 1991, 144. Fig.58 | 81.78H/187 Box: PH5.55A | | Nat Mus Wales |
| **10758** | National Museum Wales | N/A | - | Nat Mus Wales |
| **10759** | National Museum Wales | 2000.45H/1.49 | - | Nat Mus Wales |
| **10760** | National Museum Wales | Box PH5.151 | - | Nat Mus Wales |
| **10761** | National Museum Wales | 2000.45H/1.138 | - | Nat Mus Wales |
| **10762** | National Museum Wales | 2000.45H/1.139 | - | Nat Mus Wales |
| **10763** | National Museum Wales | 2000.45H/1.89 | - | Nat Mus |

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|---|---|---|---|---|
| | | | | Wales |
| **10764** | National Museum Wales | 2000.45H/1.131 | - | Nat Mus Wales |
| **10765** | National Museum Wales | 2000.45H/1.133 | - | Nat Mus Wales |
| **10766** | National Museum Wales | 2000.45H/1.137 | - | Nat Mus Wales |
| **10767** | National Museum Wales | 2000.45H/1.57 | - | Nat Mus Wales |
| **10768** | National Museum Wales | 2000.45H/1.129 | - | Nat Mus Wales |
| **10769** | National Museum Wales | 2000.45H/1.71 | - | Nat Mus Wales |
| **10770** | National Museum Wales | 2000.45H/1.72 | - | Nat Mus Wales |
| **10771** | National Museum Wales | 2000.45H/1.49 | - | Nat Mus Wales |
| **10772** | National Museum Wales | 90.109H/14.2 | - | Nat Mus Wales |
| **10773** | National Museum Wales | 90.109H/35 | - | Nat Mus Wales |
| **10774** | National Museum Wales | 90.110H/7 | - | Nat Mus Wales |
| **10775** | National Museum Wales | 90.110H/8 | - | Nat Mus Wales |
| **10776** | National Museum Wales | 90.110H/9 | - | Nat Mus Wales |
| **10777** | National Museum Wales | 90.110H/20 | - | Nat Mus Wales |
| **10778** | National Museum Wales | 90.109H/10 | - | Nat Mus Wales |
| **10779** | National Museum Wales | 90.109H/11 | - | Nat Mus Wales |
| **10780** | National Museum Wales | 90.110H/13 | - | Nat Mus Wales |
| **10781** | National Museum Wales | 90.110H/12 | - | Nat Mus Wales |
| **10782** | National Museum Wales | 90.110H/6 | - | Nat Mus Wales |
| **10784** | National Museum Wales | 90.110H/11.1 | - | Nat Mus Wales |
| **10785** | National Museum Wales | 90.109H/8 | - | Nat Mus Wales |
| **10786** | National Museum Wales | 90.111H/7 | - | Nat Mus Wales |
| **10787** | Hunter 2009, 143-155 | N/A | - | UN |
| **10788** | H&H 64 pl.21 | N/A | 4282tr is | UN |
| **10791** | Cotton & Merriman, 1994, 33-57 | N/A | - | UN |
| **10799** | H&H 153 pl.43 | DZSWS:1988.266.19 | 7139 | Wiltshire |
| **10800** | Wiltshire Museum | 1985.182 | - | Wiltshire |
| **10801** | Hattatt 1982, no. 1440 | Hattatt 1440 | - | Wiltshire |
| **10802** | Hattatt 1982, no. 1441 | Hattatt 1441 | - | UN |
| **10803** | Hattatt 1982, no. 1444 | Hattatt 1444 | - | UN |
| **10804** | Hattatt 1982, no. 721 | Hattatt 721 | - | UN |
| **10805** | Hattatt 1982, no. 720 | Hattatt 720 | - | UN |
| **10806** | Hattatt 1982, no. 722 | Hattatt 722 | - | UN |
| **10807** | PAS | LEIC-564681 | - | with finder |
| **10808** | Coombs, 1992 514-5 | N/A | - | Flag fen |
| **10809** | UK Finds Database | N/A | - | with finder |
| **10810** | PAS | BUC-3E10D0 | - | with finder |
| **10811** | PAS | BUC-514B73 | - | with finder |

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|---|---|---|---|---|
| **10812** | Surrey Arch Coll. 1994 | N/A | - | Guildford |
| **10814** | British Museum | N/A | - | British |
| **10815** | PAS | IOW-4DA383 | - | with finder |
| **10816** | Parfitt 2012 | SF954, ctxt 928 | - | with finder |
| **10817** | PAS | BUC-321804 | - | with finder |
| **10818** | PAS | BUC-B4BBC3 | - | with finder |
| **10819** | PAS | CORN-1A86F4 | - | with finder |
| **10820** | PAS | SF-23DA43 | - | with finder |
| **10821** | PAS | HESH-51D447 | - | with finder |
| **10822** | PAS | BERK-CA5154 | - | with finder |
| **10823** | PAS | LANCUM-685EF5 | - | with finder |
| **10824** | PAS | LANCUM-520697 | - | with finder |
| **10825** | PAS | HAMP-7EA4C1 | - | with finder |
| **10826** | PAS | WILT-8AA693 | - | with finder |
| **10827** | PAS | WILT-AFC6D1 | - | with finder |
| **10828** | PAS | SWYOR-B18B81 | - | with finder |
| **10831** | PAS | NARC-8B4467 | - | with finder |
| **10832** | PAS | BH-5D6C20 | - | with finder |
| **10833** | PAS | BERK-8C4F34 | - | with finder |
| **10834** | PAS | BERK-F5AF04 | - | with finder |
| **10835** | PAS | SUR-8C5EB1 | - | with finder |
| **10836** | PAS | SUSS-05DAF3 | - | with finder |
| **10837** | PAS | SUSS-10A575 | - | with finder |
| **10838** | PAS | SUSS-544102 | - | with finder |
| **10839** | PAS | SUSS-B1AB83 | - | with finder |
| **10840** | PAS | WILT-8B1178 | - | with finder |
| **10841** | PAS | HAMP-2A8CA1 | - | with finder |
| **10842** | PAS | HAMP-D793F5 | - | with finder |
| **10843** | PAS | WMID2555 | - | with finder |
| **10844** | PAS | SUR-0B2C37 | - | with finder |
| **10845** | PAS | LIN-DF7CA7 | - | with finder |
| **10846** | PAS | DENO-0E5093 | - | with finder |
| **10847** | PAS | KENT-19E470 | - | with finder |
| **10848** | National Museum Wales | 90.109H/24 | - | Nat Mus Wales |
| **10849** | PAS | BUC-7C8417 | - | with finder |
| **10850** | PAS | HESH-49FBD8 | - | with finder |
| **10851** | PAS | WMID-5918F1 | - | with finder |
| **10852** | PAS | YORYM-21A9A2 | - | with finder |
| **10853** | PAS | WILT-95EB90 | - | with finder |
| **10854** | PAS | SOM-7CDC28 | - | with finder |
| **10855** | PAS | WILT-D29D65 | - | with finder |
| **10856** | PAS | WILT-E2D3B2 | - | with finder |
| **10858** | Pitts 1979, 258 Pl. 6, Fig.24 | Lewes. No. 1970.2 | - | Lewes |
| **10859** | Wiltshire Museum, Devizes | DZSWS 1101 | - | Wiltshire |
| **10860** | Wiltshire Museum, Devizes | DZSWS 1988.266.20 | - | Wiltshire |
| **10861** | Wiltshire Museum, Devizes | DZSWS 1988.266.1 | - | Wiltshire |
| **10862** | Wiltshire Museum, Devizes | 1078 | - | Wiltshire |
| **10863** | Cunnington 1923 | Pl.2 E4 (brooch 9) DZSWS: 2006.1.102 | - | Wiltshire |
| **10864** | Cunnington 1923 | Pl.2, J6 (object 7) DZSWS: 2006.1.140 | - | Wiltshire |
| **10865** | Cunnington 1923 | 142 | - | Wiltshire |
| **10866** | Cunnington 1923 | 150 | - | Wiltshire |

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|---|---|---|---|---|
| **10867** | Hattatt 1982, no. 2058 | DZSWS: 1988.266.12 | - | Wiltshire |
| **10868** | Hattatt, 1982, no.2353 | DZSWS: 1988.266.23 | - | Wiltshire |
| **10869** | Wiltshire Museum, Devizes | DZSWS: 1987.350 | - | Wiltshire |
| **10870** | Zena Kamash pers. comm. University of Oxford | OXCMS 2006.148 | - | Oxford Uni/Unit |
| **10871** | Wainwright 1979, 109-110 Fig. 84 | object 3031 | - | Dorset |
| **10872** | Bulleid & Gray 1953, Coles 1987 | EE3 | - | Somerset |
| **10873** | Cunliffe 1984b, 162-166 | 1.89 | - | Andover? |
| **10875** | Fitzpatrick 2010, 289-291 | Context 383, SF 409 | - | un |
| **10876** | H&H 161 pl.46 | SF117 | 5440a | Hereford |
| **10877** | H&H 161 pl.46 | SF21 | 5440b | Hereford |
| **10878** | H&H 160 pl.45 | SF124 | 5774 | Hereford |
| **10879** | H&H 162 pl.46 | SF171 | 5806 | Hereford |
| **10880** | H&H 162 | SF250 | 5806b is | Hereford |
| **10882** | Hull Museum | KINCM:2010.7.233 | - | Hull |
| **10883** | Hull Museum | KINCM:2010.7.224 | - | Hull |
| **10884** | Hull Museum | KINCM:2010.7.62 | - | Hull |
| **10885** | H&H 127 pl.37 | KINCM:2010.7.76 | 8072 | Hull |
| **10886** | Hull Museum | KINCM:2010.7.74 | - | Hull |
| **10887** | Hull Museum | KINCM:2010.7.63 | - | Hull |
| **10888** | Hull Museum | KINCM:2010.7.93 | - | Hull |
| **10889** | Hull Museum | KINCM:2010.7.1675 | - | Hull |
| **10890** | Hull Museum | KINCM:2010.7.81 | - | Hull |
| **10891** | H&H 127 pl.37 | KINCM:2010.7.89 | 7868 | Hull |
| **10892** | Hull Museum | KINCM:2010.7.84 | - | Hull |
| **10893** | H&H 121 pl.35 | KINCM:2010.7.90 | 7840 | Hull |
| **10894** | Hull Museum | KINCM:2010.7.86 | - | Hull |
| **10895** | H&H 121 pl.35 | KINCM:2010.7.94 | 7837 | Hull |
| **10896** | Hull Museum | KINCM:2010.7.2 | - | Hull |
| **10897** | H&H 168 pl.50 | Hull unknown number | 8008 | Hull |
| **10898** | Hull Museum | KINCM:2010.7.87 | - | Hull |
| **10899** | Hull Museum | KINCM:2010.7.85 | - | Hull |
| **10900** | H&H 127 pl.37 no.0728 | KINCM:2010.7.88 | | Hull |
| **10901** | Hull Museum | KINCM:2010.7.91 | - | Hull |
| **10902** | H&H 121 pl.35 no.0013 | KINCM:2010.7.92 | | Hull |
| **10903** | Hull Museum | KINCM:2010.7.95 | - | Hull |
| **10904** | Hull Museum | KINCM:2010.7.73 | - | Hull |
| **10905** | Hull Museum | KINCM:2010.7.77 | - | Hull |
| **10906** | Hull Museum | KINCM:2010.7.78 | - | Hull |
| **10907** | Hull Museum | KINCM:2010.7.79 | - | Hull |
| **10908** | Hull Museum | KINCM:2010.7.80 | - | Hull |
| **10909** | Hull Museum | KINCM:2010.7.82 | - | Hull |
| **10910** | Hull Museum | KINCM:2010.7.83 | - | Hull |
| **10911** | Hull Museum | KINCM:2010.7.67 | - | Hull |
| **10912** | Hull Museum | KINCM:2010.7.69 | - | Hull |
| **10913** | Hull Museum | KINCM:2010.7.70 | - | Hull |
| **10914** | Hull Museum | KINCM:2010.7.71 | - | Hull |
| **10915** | Hull Museum | KINCM:2010.7.72 | - | Hull |
| **10916** | Hull Museum | KINCM:2010.7.59 | - | Hull |
| **10917** | Hull Museum | KINCM:2010.7.60 | - | Hull |
| **10918** | Hull Museum | KINCM:2010.7.61 | - | Hull |
| **10919** | Hull Museum | KINCM:2010.7.65 | - | Hull |

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|---|---|---|---|---|
| **10920** | Hull Museum | KINCM:2010.7.66 | - | Hull |
| **10921** | H&H 126 pl.37 no. 1554 | KINCM:2006.11303.828 | | Hull |
| **10922** | H&H 162 pl.47 | KINCM:1942.3029 | 4289tris | Hull |
| **10923** | H&H 162 pl.47 | KINCM:2010.762.2 | 4289bis | Hull |
| **10924** | Barrett et al. 2000, 299 & 370 | Fig.134.12 | - | UN |
| **10925** | H&H 128 pl.38 | N/A | 4275bis | Winchester City |
| **10926** | H&H 120 | N/A | 3773 | Wiltshire |
| **10927** | H&H 120 | N/A | 3832 | Somerset |
| **10928** | H&H 168 | KINCM:2010.7.235 | 8008bis | Hull |
| **10929** | Olivier 2000, 197-202 & p.360-361 | Fig.100.2 | - | UN |
| **10938** | Cunliffe 1984b, 162-166 | 2.197 | - | Andover? |
| **10940** | H&H 168 | Fig.85.32 | No # | Dorset |
| **10941** | Sharples 1991 | 1074 | - | Dorset |
| **10942** | Sharples 1991 | 7887 | - | Dorset |
| **10943** | Sharples 1991 | 8632 | - | Dorset |
| **10946** | Lillian Ladle pers. comm. | N/A | - | Dorset |
| **10947** | Gregory 1991 | N/A | - | UN |
| **10948** | Nowakowski 1991, 5-242 | N/A | - | UN |
| **10949** | Hayman 1996, 189 | N/A | - | UN |
| **10951** | Champion 2011, 221-222 | N/A | - | Oxford/Wessex |
| **10952** | Champion 2011, 221-222 | N/A | - | Oxford/Wessex |
| **10953** | Champion 2011, 221-222 | N/A | - | Oxford/Wessex |
| **10954** | Perkins 1996, 278, Fig. 6.4 | N/A | - | Thanet |
| **10955** | Boudet 1988, 71-2 fig. 35 | Object 136 | - | Plymouth |
| **10958** | Hartridge 1978, 87-102 | N/A | - | UN |
| **10959** | Stanford 1974, 162-3 fig.75, 2 | SF161 | - | Hereford |
| **10960** | Stanford 1974, 162-3 fig.75, 2 | SF99 | - | Hereford |
| **10967** | Scull 1992, 124-281 | N/A | - | UN |
| **10972** | Coombs, 1992 514-5 | N/A | - | UN |
| **10973** | Somerset County Museum | Site 11.6B | - | Somerset |
| **10976** | British Museum | 2001,0401.21 | - | British |
| **10978** | Cunliffe & Poole 2008a | N/A | - | UN |
| **10979** | Cunliffe & Poole 2008b | N/A | - | UN |
| **10982** | Mackreth 2011, 175, Pl. 188 no. 11282 | Winchester | - | Winchester City |
| **10983** | Jones 2010 | Sf3 | - | Wessex Arch? |
| **10984** | Jones 2011 | N/A | - | Wessex Arch? |
| **10985** | Cotton & Wood 1996, 22, Fig.11.30 | N/A | - | Lost |
| **10986** | Haldane 1965, 31-8 | N/A | - | UN |
| **10987** | PAS | PUBLIC-923241 | - | with finder |
| **10988** | PAS | HAMP-24E208 | - | with finder |
| **10989** | PAS | CAM-C4D8E2 | - | with finder |
| **10990** | Hunter 2009, 143-155 | x.L.1998.2 | - | Nat Mus Scotland |

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Source | Site Type | Context | Reference |
|---|---|---|---|---|---|---|---|---|---|
| **10005** | 3B | 3BV | Mill Hill | Kent | CuA | pre 1995 exc | Cemetery | burial | Parfitt 1995 |
| **10095** | 3C? | 3C or later? | SNETTISHAM | Norfolk | CuA | PAS | Dryland | stray | NMS-CCB0F6 |
| **10262** | 3B | 3B | Spettisbury Rings ('Crawford Castle') | Dorset | CuA | pre 1995 exc | Hillfort | burial pit | H&H 175 no.3506 |
| **10567** | 4 | 4 | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor | H&H 185 no.0082 |
| **10568** | 4 | 4 | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor | H&H 185 no.0083 |
| **10576** | 3B | 3B | Cold Kitchen Hill | Wiltshire | CuA | pre 1995 exc | Ritual? | unstrat | H&H 176 no. 3484 |
| **10577** | 3B | 3B_3C | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor? | H&H 175 no.0863 |
| **10578** | 3B | 3B_3C | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor? | H&H 176 no.0864 |
| **10579** | 3B | 3B | Maidstone, The Mount | Kent | CuA | pre 1995 stray | Dryland | stray | H&H 175 no. 2251 |
| **10580** | 3B | 3BV | Meare Village East | Somerset | CuA | pre 1995 exc | Sment | deposit | Crummy no.0965 |
| **10581** | 3B | 3B/3C? | Ardnave | Argyll and Bute | CuA | pre 1995 exc | Sment | unstrat | H&H 196 no. 3537 |
| **10582** | 3A | 3A | Maiden Castle | Dorset | CuA | pre 1995 exc | Hillfort | deposit | H&H 172 no.2088 |
| **10583** | 3A | 3A | Sudbury | Suffolk | CuA | pre 1995 stray | Dryland | UN | H&H 172 no.3131 |
| **10593** | 3B | 3B/3C | Hod Hill | Dorset | CuA | pre 1995 exc | Hillfort | pit | H&H 175 no.3506bis |
| **10594** | 3B | 3B/3C? | Bishops Saltings | Kent | CuA | pre 1995 exc | RB site | unstrat | BM 1981,1002.1 |
| **10682** | 6? | 6? | Lodge Hill Camp, Lodge Wood | Newport | Fe | post 1995 exc | Hillfort | ditch | Pollard et al. 2006 |
| **10686** | 3B | 3Bv_6V | Beckford | Hereford and Worcs. | Fe | post 1995 exc | Sment | deposit | Jackson 1999 |
| **10688** | 3B | 3B/3C? | Chalk Hill nr Ebbsfleet Farm | Kent | Fe | post 1995 exc | Sment | ditch | Fitzpatrick 1995 |
| **10693** | 3B | 3Bv | Meare Village West | Somerset | CuA | pre 1995 exc | Sment | deposit | H&H 176 no.341 |
| **10694** | 4? | 4? | Meare Village East | Somerset | Fe | pre 1995 exc | Sment | floor | Coles 1987 |
| **10695** | 6 | 6 | Meare Village East | Somerset | CuA | pre 1995 exc | Sment | deposit | Coles 1987 |
| **10696** | 6 | 6v | Meare Village East | Somerset | CuA | pre 1995 exc | Sment | floor | Coles 1987 |
| **10697** | 6 | 6v | Meare Village West | Somerset | CuA | pre 1995 exc | Sment | deposit | H&H 195 no. 3415 |
| **10726** | 6 | 6 | CONGHAM | Norfolk | CuA | PAS | Dryland | stray | NMS-E74824 |
| **10727** | 6 | 6 | NARBOROUGH | Norfolk | CuA | PAS | Dryland | stray | NMS-ECCC53 |
| **10874** | 3B | 3Bv | Danebury | Hampshire | CuA | pre 1995 exc | Hillfort | pit | Cunliffe & Poole 1991b |
| **10881** | 3B | 3Bv | Craig's Quarry, Dirleton | East Lothian | CuA | pre 1995 exc | Hillfort | House | H&H 177 no.2913 |
| **10937** | 3B | 3Bv | Cadbury Castle | Somerset | CuA | pre 1995 exc | Hillfort | ditch | Olivier 2000 |

Appendix 3 Brooches of LIA Types 3A-6

| Findno | Type | Subtype | Findspot | County | CuA/Fe | Source | Site Type | Context | Reference |
|---|---|---|---|---|---|---|---|---|---|
| **10939** | 3B | 3Bv | Danebury | Hampshire | Fe | pre 1995 exc | Hillfort | deposit | Cunliffe & Poole 1991b |
| **10944** | 3B | 3B | Maiden Castle | Dorset | CuA | pre 1995 exc | Hillfort | unstrat | Sharples 1991 |
| **10945** | 3B | 3B | Maiden Castle | Dorset | Fe | pre 1995 exc | Hillfort | pit | Sharples 1991 |
| **10950** | 3B | 3B_6 | Winnall Down | Hampshire | Fe | pre 1995 exc | Sment | pit | Fasham 1985 |
| **10956** | 3B | 3B | Maiden Castle | Dorset | Fe | pre 1995 exc | Hillfort | pit | Sharples 1991 |
| **10957** | 6 | 6 | Maiden Castle | Dorset | CuA | pre 1995 exc | Hillfort | pit | Sharples 1991 |
| **10961** | 6 | 6 | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor? | H&H 194 no.0880 |
| **10962** | 6 | 6 | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor? | H&H 194 no.0877 |
| **10963** | 6 | 6 | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor? | H&H 195 no.0878 |
| **10964** | 6 | 6 | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor? | H&H 195 no. 0876 |
| **10965** | 6 | 6v | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor? | H&H 195 no.0879 |
| **10966** | 6 | 6 | Glastonbury Lake Village | Somerset | CuA | pre 1995 exc | Sment | floor? | H&H 195 no.0884 |
| **10968** | 3B | 3B/C | Trethellan Farm | Cornwall | CuA | pre 1995 exc | Cemetery | burial | Nowakowski 1991 |
| **10969** | 6 | 6 | Trethellan Farm | Cornwall | CuA | pre 1995 exc | Cemetery | burial | Nowakowski 1991 |
| **10971** | 6 | 6 | Spettisbury Rings ('Crawford Castle') | Dorset | CuA | pre 1995 exc | Hillfort | burial pit | H&H 195 no.3505 |
| **10974** | 6 | 6 | Hod Hill | Dorset | CuA | pre 1995 exc | Hillfort | unstrat | H&H 196 no. 5645 |
| **10975** | 6 | 6v | Hod Hill | Dorset | CuA | pre 1995 exc | Hillfort | unstrat | H&H 196 no.5644 |
| **10977** | 3A | 3Ab | Makeshift Cemetery | E. Riding of Yorks. | Fe | pre 1995 exc | Cemetery | burial | H&H 50 |
| **10980** | 6 | 6V | Hunsbury | Northamptonshire | CuA | pre 1995 exc | Hillfort | unstrat | H&H 196 no.8294 |

## Appendix 4

## Details of EDXRF analysis

### Conditions of XRF process at the British Museum

| | Fe | Co | Ni | Cu | Zn | Pb | As | Ag | Sn | Sb |
|---|---|---|---|---|---|---|---|---|---|---|
| **Check standard** | | | | | | | | | | |
| UE51-2 | 0.73 | <0.1 | 0.31 | 83.20 | 3.80 | 4.00 | < 0.1 | <0.1 | 6.71 | 1.30 |
| Certified values | 0.77 | - | 0.29 | 83.90 | 3.90 | 4.00 | - | - | 7.10 | 1.50 |

Dungworth also recorded the presence of manganese (Mn) but not antimony (Sb) or silver (Ag). Where analysed, these elements were only present in miniscule quantities so do not affect the overall comparison between the two analyses.

### Semi-Quantitative results from analysis at the BM

Several brooches were heavily corroded and it was not possible to clean them satisfactorily down to good metal. These analyses are also shown in italics and are semi-quantitative only, e.g. they show higher tin than would be expected for the core metal.

| SAA Db | Type | Fe | Co | Ni | Cu | Zn | Pb | As | Ag | Sn | Sb | Mn | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Group C* | *0.11* | *<0.1* | *0.19* | *63.91* | *str* | *4.38* | *1.46* | *0.34* | *28.07* | *1.28* | | *semi-quantitative* |
| *10452* | *1Aa* | *0.14* | *<0.1* | *<0.1* | *82.57* | *<0.2* | *0.63* | *0.44* | *str* | *16.05* | *<0.2* | | *semi-quantitative* |
| *10031* | *1Ba* | *0.38* | *<0.1* | *str* | *82.16* | *<0.2* | *1.31* | *0.27* | *0.10* | *15.55* | *str* | | *semi-quantitative* |
| *10698* | *2L* | *0.31* | *<0.1* | *<0.1* | *77.23* | *<0.2* | *1.69* | *0.31* | *str* | *20.19* | *str* | | *semi-quantitative* |
| | *3C* | *0.62* | <0.1 | *0.07* | *83.62* | *3.35* | *2.24* | str | *0.17* | *9.60* | *0.29* | | *Surface analysis* |

# Appendix 5

**Scientific report on the Raman analysis**

**Investigation using Raman Spectroscopy of the material composition of decorative 'beads' on Iron Age jewellery for cemeteries in East Yorkshire**

**DEPARTMENT OF CONSERVATION AND SCIENTIFIC RESEARCH**

Melanie Keable and Janet Ambers

## Analysis:

The brooches were analysed using a Horiba Infinity Raman spectroscope with liquid nitrogen cooled detector and green (532 nm) and near infrared (785 nm) lasers at a maximum power of 4 mW at the surface with a spot size of a few microns. Care was taken to try and avoid areas of corrosion obscuring the decoration and any past conservation treatments when choosing a location for analysis.

The 532mn laser was used to analyse the brooches in the first instance as this will produce a strong florescence from the carotenoid component of suspected coral decoration. Those which did not produce a spectrum under this laser were also analysed using the 785 nm laser. The count time and number of repeats was determined separately for each sample in order to produce a spectrum with the best signal to noise ratio, this includes multiple repeats to avoid the effect of cosmic rays.

X-ray fluorescence analysis of brooches [10193] and [10255] was also carried out in order to confirm the results from the Raman analysis. XRF was carried out using a Bruker Artax spectrometer. The following conditions were used; tube voltage 50 kV, current 0.7 mA, collimated beam size 0.2 mm, live time 500 seconds, and carried out in a helium atmosphere.

X-radiographs were taken of brooches [10174], [10242], [10250] and [10252] in order to aid with Raman analysis. X-radiographic images were produced using a Siefert DS1 X-ray tube at 70 or 80 kV, with exposures of 3 mA and 7 minutes. The images were collected on Agfa Structrex D4 and D7 films held in rigid cartridges with 0.125 mm lead sheets on either side of the film. These films were then scanned using an Agfa RadView digitizer with a 50 mm pixel size and 12-bit resolution to allow digital manipulation and enhancement of the images.

## Results:

### Coral

Raman spectra obtained from the inlays in three of the brooches [10268], [10002] and [10412] show two strong peaks at*c.*1128 cm$^{-1}$ and *c.*1518 cm$^{-1}$, together with a smaller peak at 1087 cm$^{-1}$ (Figure 1). The 1128 and 1518 cm$^{-1}$ peaks are characteristic of the parrodiene component which provides the colour in certain pink or red corals, while the 1087 cm$^{-1}$ peak represents the calcite of the calcareous skeleton (Fritsch, 2012). The presence of parrodienes rather than carotenoids in the samples suggests the use of coral of the *Corallium* genera (Fritsch, 2012).

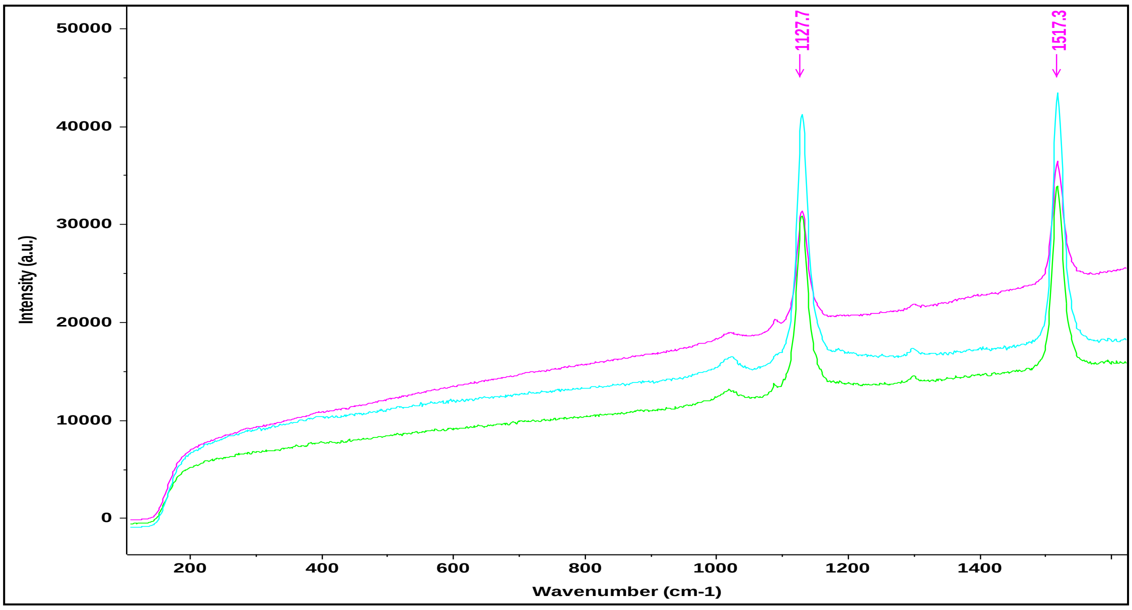



**Fig. 1:** Raman spectra for the decorative elements of [10268] (top), [10002] (middle) and [10412] (bottom) showing two sharp peaks at c.1128 cm$^{-1}$ and c.1517 cm$^{-1}$

## Calcium Carbonate

Brooches [10175] and [10255] which both contained distinct decorative beads are thought to be a coloured quarts, or a red limestone or marble. The Raman spectra show the presence of Calcium carbonate as a sharp peak at c.1090 $cm^{-1}$. With peaks at c.225, 296, 410 and 1319 $cm^{-1}$ arising from haematite which gives colour to the beads.

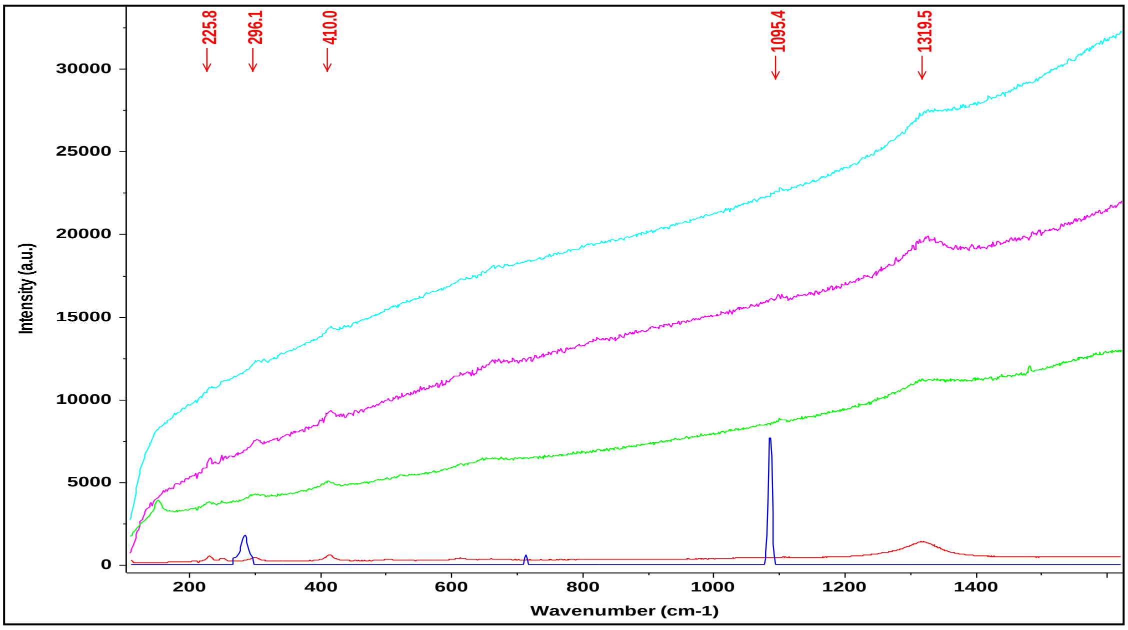



**Fig. 2:** Raman spectra for the decorative elements of [10175] (top) and [10255] (middle) with reference spectra for haematite and calcium carbonate (bottom)

Raman analysis of [10256] shows the presence of the sharp peak  at c.1090 of calcium carbonate (Fig. 3), however, the presence of a colorant is not discernable. The outer surface of the bead is obscured by a layer of corrosion; analysis was undertaken on a broken surface which revealed the cross section of the bead. It is suspected that this brooch contains limestone decoration.

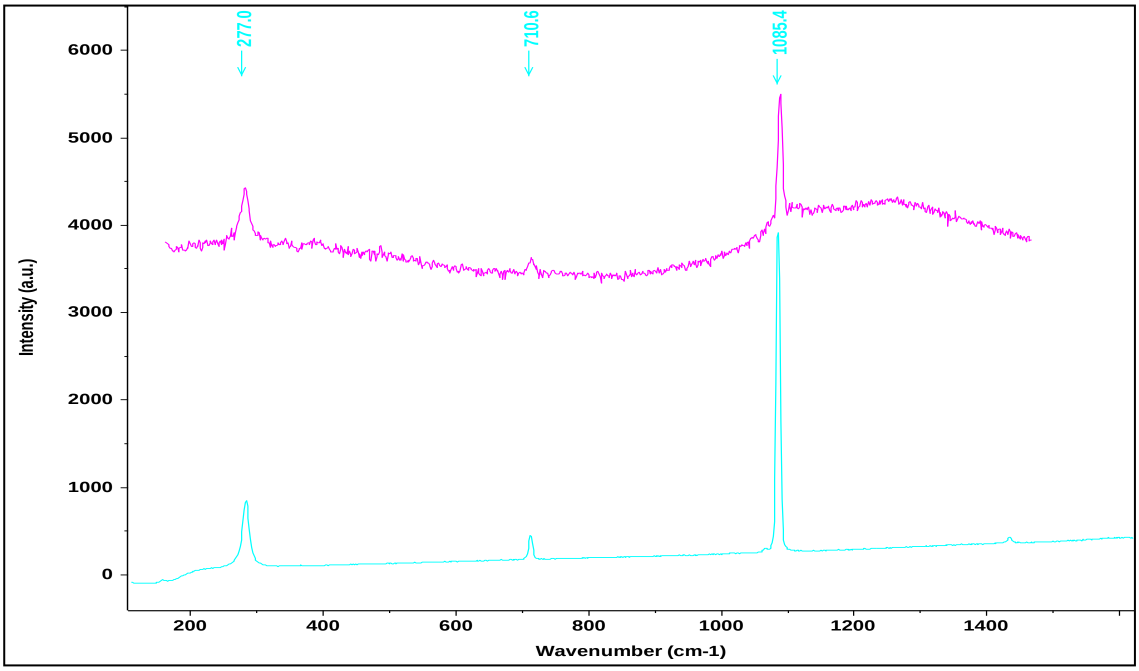



**Fig. 3:** Raman spectra of the decorative elements of [10256] (top) with a reference spectra of calcium carbonate showing the sharp peak at c.1090 cm

Heavily Degraded Glass

While the beads on brooches [10255] and [10193] contained clean surfaces and were not obscured by corrosion it was difficult to obtain a clear Raman spectra. The low intensity broad peak at c.1042 $cm^{-1}$ could indicate the beads are probably a heavily degraded glass (Fig. 4). XRF analysis was undertaken in a helium environment in order to confirm the presence of silica in the decoration on both of these brooches (Fig. 5 and 6). The XRF analysis can be seen to indicate the use of a heavily leaded glass with the use of a Copper based colorant.

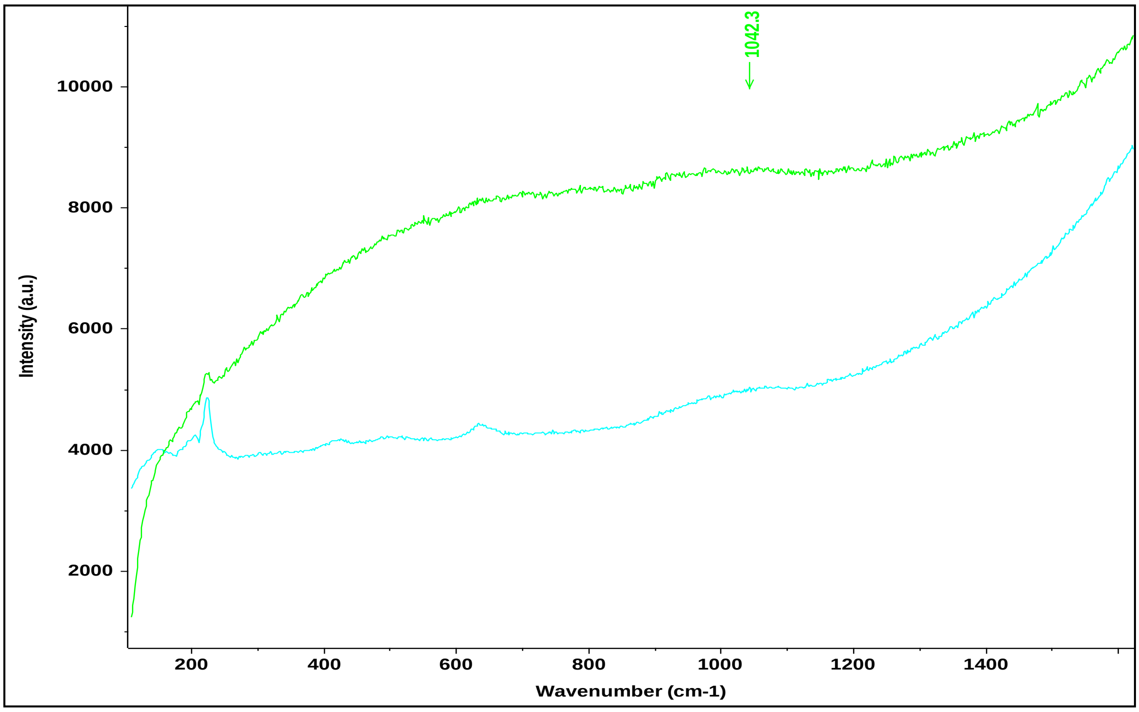



**Fig. 4:** Raman Spectrum of the decorative elements on [10193] (top) and [10255] (bottom) with a broad peak at c.1042 $cm^{-1}$ suggesting a heavily degraded glass

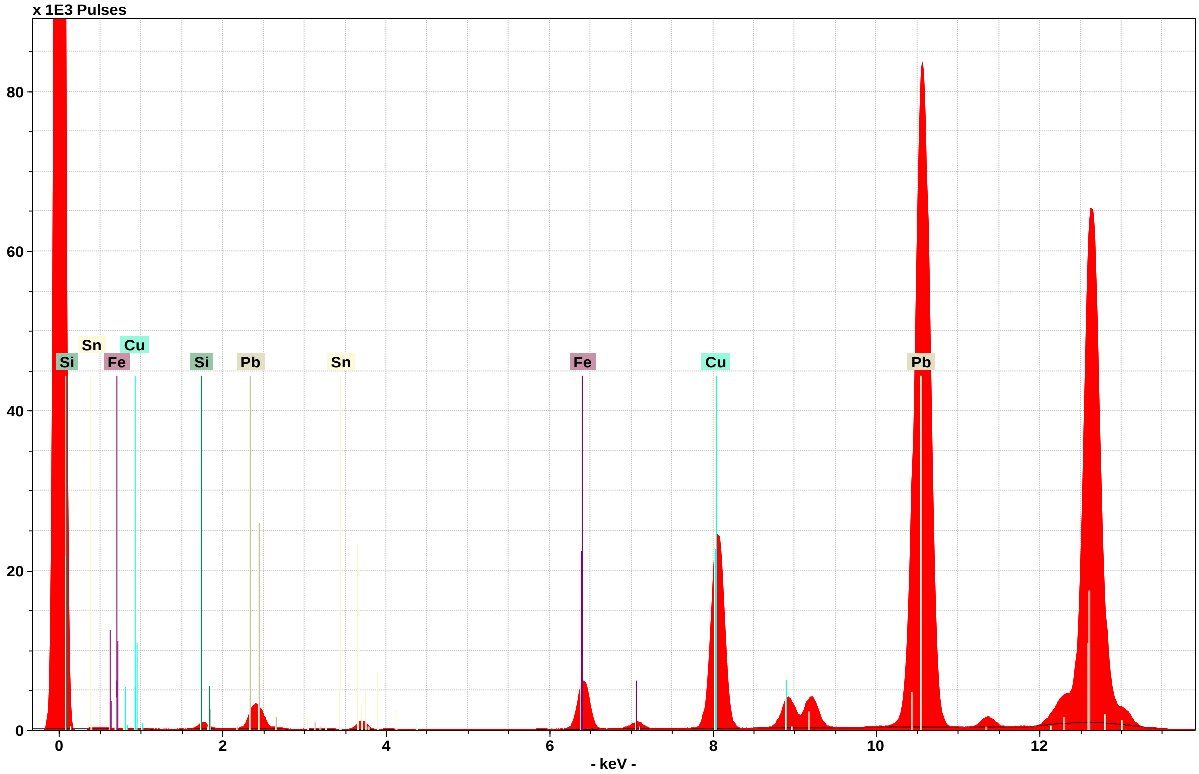
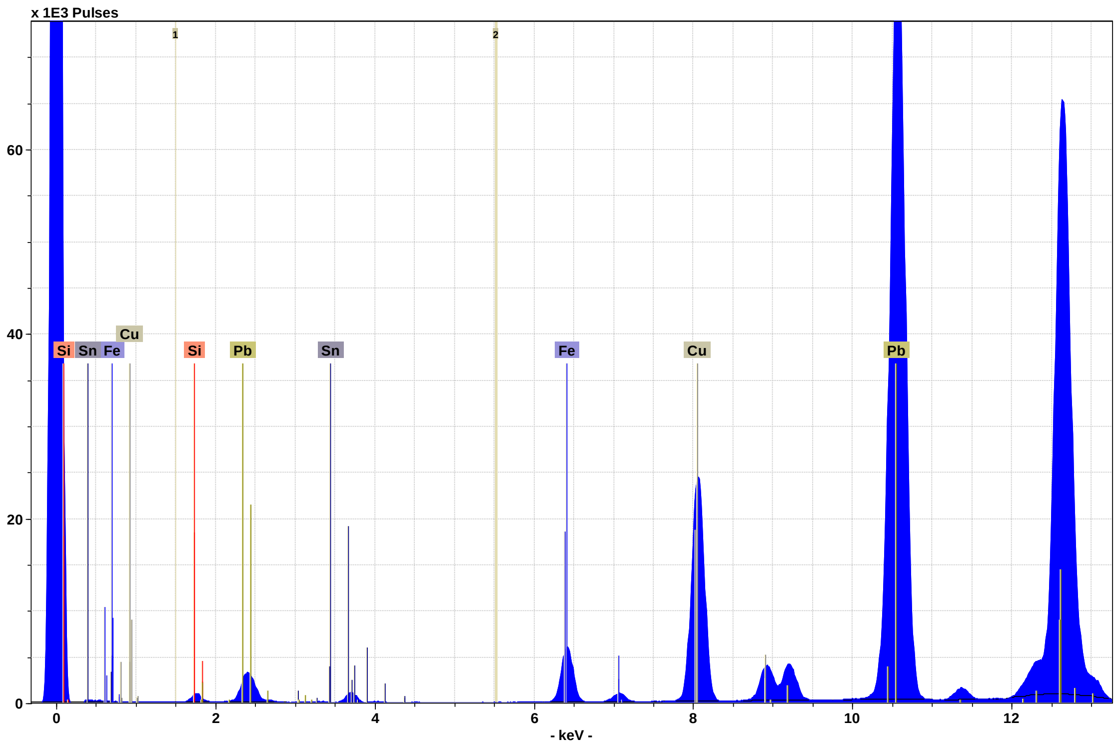



**Fig. 5:** XRF spectrum of decoration for [10193] showing the presence of silica, confirming identification as glass coloured with copper

**Fig. 6:** XRF spectrum of decoration for [10255] showing the presence of silica, confirming identification as glass coloured with copper




<u>Unknown</u>

X-radiographic images were taken of the remaining four brooches [10174], [10242], [10250]and [10252] in order to help target Raman analysis. However, it can be seen from the x-rays that the decoration is heavily degraded and obscured by overlying corrosion. There is little or no distinct surface layer remaining of the decorative beads. Therefore further identification of these cannot be undertaken without heavy cleaning or destructive analysis.

**Summary:**

| SAA Db no. | MERLIN N0. | Raman analysis | XRF analysis | X-Radiography |
|---|---|---|---|---|
| 10268 | 1994,0102.1 | Coral | | |
| 10002 | 1990,0102.25 | Coral | | |
| 10412 | 1951,1102.1 | Coral | | |
| 10221 | 1991,1001.3 | Haematite and calcium carbonate. Possibly coloured quartz, red limestone or marble | | |
| 10175 | 1978,1202.14 | Haematite and calcium carbonate. Possibly coloured quartz, red limestone or marble | | |
| 10255 | 1991,1001.25 | Heavily degraded glass containing a red colorant | Confirms presence of silica | |
| 10256 | 1991,1001.26 | Calcium carbonate, possible a limestone | | |
| 10193 | 1978,1203.7 | Heavily degraded glass containing a red colorant | Confirms presence of silica | |
| 10174 | 1978,1202.12 | Heavily degraded/obscured with iron corrosion | | X-ray reveals no analysable surface |
| 10242 | 1975.0503.14 | Heavily degraded/obscured with iron corrosion | | X-ray reveals no analysable surface |
| 10250 | 1975,0503.7 | Heavily degraded/obscured with iron corrosion | | X-ray reveals no analysable surface |
| 10252 | 1991,1001.19 | Heavily degraded/obscured with iron corrosion | | X-ray reveals no analysable surface |

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