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# **Children and child burial in medieval England**



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**Newnham College, Cambridge**

**September 2015**

**This dissertation is submitted to the University of Cambridge**

**for the degree of Doctor of Philosophy**

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## **Abstract**

This thesis presents an investigation into children in medieval England through burial, the most archaeologically-visible evidence for the treatment and conceptualisation of children in life. It examines whether children were distinguished in burial from adults in parish cemeteries of the 10<sup>th</sup>-16<sup>th</sup> centuries. Selected cemeteries are analysed in detail to establish whether or not children received different burial treatment to adults. The burials of biologically-immature individuals are compared with the remainder of the burial population, totalling c.4,700 individuals, assessing whether the provision of burial furniture, burial in a shared grave and location of graves varied by age at death. The dissertation includes a discussion of archaeological and historical approaches to children and child burial, both general and medieval, medieval attitudes to children, death and burial, before discussing the case study sites in depth. From this, the methodological issues of undertaking such a study are considered and a sympathetic methodology developed, before the presentation of analysis, discussions and conclusions.

I demonstrate that a variety of burial practices were used during the medieval period and that differentiation by age at death occurred. The results show that burials of juveniles are commonly differentiated, particularly infants aged 0-1 year or children aged 12 years or younger, by furniture, inclusion in a multiple burial and location. The thesis concludes that a variety of factors affected how an individual was buried, with age a strong determining factor for those dying at a young age. The influence of age is interpreted as resulting from medieval attitudes to infants, children and adolescents based on active, socially-identified characteristics, indicative of age-based appropriate burial treatment on both familial and community levels due to emotional, social, religious and economic concerns.

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## **Chapter One: Introduction**

Recent studies have sought to identify children and the positions they occupied within past societies. Questions have addressed how they were conceptualised and treated and to what extent they were shaped by, and shaped, the environment around them. Archaeology has also lately focused on medieval burial in England, seeking to identify what it was like and clarify questions regarding perceived lack of variation compared to earlier periods. These two topics have begun to cross over, suggesting interesting insights into the social positions of children and attitudes to their deaths. These, if investigated in depth, have the potential to contribute greatly to both medieval archaeology and studies of children. However, no such examination of children via medieval burial has yet occurred. The thesis will investigate this topic and focuses on the 10<sup>th</sup>-16<sup>th</sup> centuries AD.

### ***Aims***

The aim of the thesis is to first address the lack of academic attention that burials of medieval children have received by identifying the manner in which they were buried. A methodology created specifically for this purpose will be used to address the key research questions of whether variation can be identified in medieval churches and churchyards that is associated with the age of the deceased. Through how any differences are characterised and comparison with adult burials, analysis will focus on what, if anything, may be suggested about contemporary attitudes to children. Integration of developmental, social and cultural beliefs of the period alongside excavated burial data will contribute to the first comprehensive

assessment of medieval children and attitudes to their deaths via archaeology. The study will aid contextualisation of existing knowledge of the position children occupied within medieval society, how they were understood and treated based on their ages and advance archaeological knowledge of burial practice within medieval England.

I begin with the hypothesis that age at death was a determining factor in how an individual was buried. Complementary sources of information are examined to provide an overview of contemporary social attitudes to children during life before I focus on their treatment after death. The main evidence utilised are the burials of biologically-immature individuals, using osteological ages provided in the reports for c.4,700 individuals from five excavated churches and churchyards. Investigation of burial practices with reference to osteologically-derived ages and medieval socio-religious context will allow patterns in burial treatment by age to be determined.

The investigation addresses these questions via three types of burial treatment: provision of furniture, the burial of multiple individuals within one grave and the ordering of funerary space. The burials of juveniles (birth to 17 years) are compared to those of adults (18 years or older) to provide a picture of burial at each site, before investigating the possibility of age-appropriate patterns in burial treatment. Other factors, such as sex, status and death-event, are also considered.

### ***Structure***

The research will shed new light onto medieval attitudes to juveniles, both social and religious, through the nature of their burials, how burial changes over time and comparisons of burial between different sites to provide new interpretations of the status and treatment of children within medieval England.

**Chapter Two** provides an overview of the history and archaeology of children, showing how children, and by default childhood, have been approached and understood, firstly by historians via secular and religious literary or artistic material before discussing medieval attitudes to ageing and characteristics of stages of the life course; a strong influence on the thesis' methodology. The chapter also analyses approaches and interpretations of children via material culture and burial archaeology to show the successes that have been achieved but also demonstrate the need for interdisciplinary approaches.

**Chapter Three** begins with medieval attitudes to death, the afterlife and emotional responses to the loss of children. Summaries of current interpretations of children within Anglo-Saxon and medieval burial archaeology in England and identified gaps in academic knowledge that informed the questions addressed are presented as context for subsequent chapters.

**Chapter Four** summarises how the data was chosen and introduces the burial archaeology of the five case study sites, focussing on the archaeological findings, established chronologies, osteological analysis and interpretations. Use of the data in secondary works will also be presented to provide a summary of subsequent discussions of burials from each site.

**Chapter Five** outlines the methodology. Discussion of age and the use of descriptive terms will be considered alongside osteological techniques and how these influenced the standardised method employed. The approach uses a framework of age-stages to order the burials based on osteologically-derived ages sympathetic to each site's preferred techniques and attitudes to ageing identified in previous historical and archaeological works. The aims and questions will be discussed, followed by the nature of the database, statistical methods used to investigate patterns and the structure of the analysis.

**Chapter Six** presents the results, focusing on burial furniture, multiple burials and burial location on a site-by-site basis, firstly for the entire medieval period and then phased burials.

**Chapter Seven** discusses and interprets the results, ordered by burial rite. Trends are identified and similarities and differences between the sites highlighted, with additional burial sites and relevant information introduced to contextualise the findings. What the findings contribute to the aims of the research and to our understanding of medieval children will be presented. I also suggest recommendations for future work based on insights that arose from the thesis.



## **Chapter Two: The history and archaeology of children**

### **Introduction**

The study of children and childhood is a growing discipline, and approaches within the humanities have increased our understanding of the position children occupied in past societies. This chapter first discusses the medieval child as understood from historical sources by scholars, before moving on to the information derived from medieval artistic and literary sources. The chapter then addresses the attitudes that can be inferred from these sources and discusses how they may reveal contemporary understandings of children and their position within society. The next aim is to show that medieval children were viewed as different from adults and that the differences were defined by a mixture of biological and social characteristics. It is these aspects of child identity that are used as a basis for categorising the burials which form the dataset and approaching the project questions.

The second half of the chapter focuses on archaeological approaches to children. It begins by discussing the issues that have faced archaeologists who sought to identify and discuss children using the archaeological record. I then discuss the two themes which have been used to investigate children and childhood; material culture and burial archaeology. This section shows the level of success that has been achieved in including the narrative of children in archaeological debates, particularly in relation to funerary archaeology where juveniles are most observable. It is argued that data from artistic and literary representations is also required to facilitate better understanding of children in the medieval period. The chapter seeks to stress the importance of an interdisciplinary approach, which influences

later analysis. That the life of a child was recognised as different to that of an adult, separated into distinct age stages characterised by varying social attitudes and types of material culture, is a key conclusion. This chapter aims to present the contextual knowledge needed for understanding how the project's methodology (Chapter Five) was created to be sympathetic to the discipline and existing interpretations of medieval child burial (Chapter Three).

### **A historiography of medieval children and childhood**

The following selective discussion introduces the studies that have influenced medieval archaeology and childhood the most. This section shows that historians consider children as a distinct group with a history of their own (for histories of the debates in full, see Wilson, 1980, Shahar, 1992; Hanawalt, 2002, King, 2007 and Lewis, 2014). Discussion of the historical discipline must begin with Ariès' *Centuries of Childhood* (Ariès, 1996). Though criticisms abound (see below), *Centuries of Childhood* and the debates which followed focused attention on a previously-unconsidered topic and began the development of the historical study of children and childhood. Though focused mainly on the post-medieval period, this remains the starting point for most discussions of historical childhood, if only to show how different understanding of this topic is today. Ariès' argued that childhood as a state had been invented in the 17<sup>th</sup> century; before this point there had been children, but no childhood. The new-found love for the child was explained as a result of decreasing infant mortality, which led to greater investment from adults in their upbringing by being tutored and moralised (Ariès, 1996, 125; Phillips, 1996, np).

The following quotation summarises well the main contributions Ariès work had on early understandings of medieval children:

‘No one thought of keeping a picture of a child if that child had either lived to grow to manhood or had died in infancy. In the first case, childhood was simply an unimportant phase of which there was no need to keep any record; in the second case, that of the dead child, it was thought that the little thing which had disappeared so soon in life was not worthy of remembrance: there were far too many children whose survival was problematical.’ (Ariès, 1996, 36).

This first concept was based primarily on his observations of medieval art that depicted children as small-scale adults, described as representing an ‘ignorance of children’ (Ariès, 1996, ii). Realistic portrayals were described as of little interest or relevance before the 13<sup>th</sup> century, when children (generally exceptional children) were depicted in a more lifelike manner, such as sentimental representations of the Virgin Mary and infant Jesus. Ariès considered the first portraits of specific, named children, on funerary effigies from the 16<sup>th</sup> century, to be remarkable and interpreted them as demonstrating that children ceased to be anonymous and that their deaths were no longer seen as inevitable. This led to an awareness of the special qualities of children and childhood in the post-medieval period. The relevance of the second quote, below, relates to that of the first; once an infant had survived their first few perilous years of life, they were immediately part of the adult sphere of the community:

‘The idea of childhood is not to be confused with affection for children: it corresponds to an awareness of the particular nature of childhood...which distinguishes the child from the adult...In medieval society, this awareness was lacking. That is why, as soon as the child could live without the constant solicitude of his mother, his nanny or his cradle-rocker, he belonged to adult society’ (Ariès, 1996, 125).

Simplistic as they may now seem, these interpretations influenced social history considerably. One review of the book soon after publication (Camp, 1961, 441-2) made no criticisms, despite mentioning how Ariès drew on ‘the ideational quality of medieval art’. Kephart (1966, 375) described the book as fascinating, having used ‘massive research and documentation’, commenting that ‘[T]hough it may be difficult to believe, “There was no place for childhood in the medieval world”’ and describing it as ‘difficult to detect flaws’. Another (Bernard, 1963, 503), discussing Ariès’ use of pictures, iconography, games, clothing and literature to support his interpretations, stated ‘[T]o a non-specialist in these art-forms, they are convincing’. Ultimately, it appears that a lot of the praise given to the work was as a result of the lack of previous research on the topic so that the publication became a reference-point (Wilson, 1980, 136).

The aspects of the book that suggested that the medieval period was one particularly unfavourable to children were small and seem somewhat perfunctory looking back, a chief interpretation no means unsubstantiated in later decades. deMause saw the understanding and treatment of children as a process of evolution, with the medieval period characterised by indifference, abandonment and infanticide (deMause, 1974, 29, 32-3). Ariès’ suggestion that high mortality rates led to a lack of affection for the young was still a prominent theory almost two decades later when Shorter (1976, 169-70) recorded that infants under the age of two were typically unloved to the point of apathy. Stone (1977, 101) concluded such treatment would have had a negative effect on the child that may have affected the care of subsequent generations. That there was an indifference to medieval children was perhaps the most prevalent theme in the following decades (Deckert and Groenendijk, 2012, 137). However, the tide had perhaps begun to turn around the same time. Martin McLaughlin (1974, 101-82), though still focusing on exceptional children, discussed their emotional lives and the devotion of parents at a time when others still described a dearth of love and

affection. This new introduction of emotional understanding becomes an increasingly clear theme in approaches taken by social historians. Wilson (1980, 132-53) provided the first comprehensive critique, focusing on the limitations of Ariès' chosen sources, lack of explanation of the developments he saw, lack of chronological clarity and frequent tendency to compare the past to the present on a like-for-like basis. The latter is a primary criticism of Wilson's; how Ariès' 'fails to disclose the nature of medieval attitudes towards the child' and instead focuses on modern sentiment 'as a correct understanding' (Wilson, 1980, 138-9).

Another criticism of *Centuries of Childhood* and the themes derived and repeated from it is that the medieval period received less attention than later centuries and that this resulted in interpretations based on insufficient evidence. If the treatment of children was so different in the medieval period, it would require more than a superficial discussion. The evolutionary perspective that childhood was invented in the post-medieval period and that the treatment of children gradually improved, initiated by Ariès, provoked the counter-argument that such an interpretation was biologically-inconceivable, as parental indifference would have meant a decision between life and death that went against human nature (Deckert and Groenendijk, 2012, 138-9). That such a bond would have existed between young children and older carers soon became accepted and led to the rejection of the 'bad, becoming better' approach. For the medieval period, a focus on childhood and the lives of children was first undertaken by Hanawalt with *The ties that bound: peasant families in medieval England* in 1986 and *Growing up in medieval London: the experience of childhood in history* in 1993. These works had a fundamental impact on the study of children both historically and archaeologically and were particularly influential on the current project in addition to others (Crawford and Lewis, 2009, 9; Lewis, 2009, 86-108). Hanawalt's child-centric focus, using sources which directly related to children (see below) was a departure from previous approaches. A wider variety

of sources was needed to infer attitudes to children, rather than a reliance on the most explicit visual and literary sources, some of which are discussed, below (Hanawalt, 2002, 441). Hanawalt's research is especially influential because she sought to ascertain what typical children's lives were like, how they were influenced, and how children were treated, assessing further factors such as the impact of biology and environment (Nicholas, 1987, 681). Around the same time, Shahar's *Childhood in the Middle Ages* (1992) published the first overall survey of medieval childhood, and though reliant on many of the sources for which Ariès drew criticism, Shahar was able to 'uncover evidence of actual practice and sentiment' and conclude that childhood, as a distinct social stage, did exist (Farmer, 1992, 198, Shahar, 1992, 181). Both Hanawalt and Shahar were able to identify similarities between the modern and medieval worlds that led to the ultimate conclusion that children were loved, cared-for and in receipt of appropriate treatment by perceived developmental stage, in contrast to the conclusions of Ariès' and his disciples. Though the information derived from coroner's inquests demonstrated similarities between the developmental rates of medieval and modern children (Hanawalt, 1986, 171) with biology further affecting child survival, cultural influence is identified as key to their survival through socialisation (Hanawalt, 1986, 171; 1993, 9; Shahar, 1992, 1). The suggestion that there may have been a perceptible change in attitudes around adolescence instigated by understandings of puberty in which the role of culture became greater than biology, such as appropriateness of certain life choices and paths, for example employment, marriage of childbearing, rather than physical development (van Gennep, in Hanawalt, 1993, 10-3; also Orme, 2003, 3) also provides an interesting base for attempts to identify variation or changes in treatment as a result of biologically-derived age and may suggest different conceptualisations existed for children and adolescents. That they demonstrated the importance of biology (Hanawalt, 1986:171) and psychology (Shahar, 1992, 21) on medieval children's development and

socialisation, rather than a reliance on cultural factors such as social expectations to work or marry, is perhaps their greatest achievement from the point of view of the archaeologist, considering the primary datasets (osteological evidence) available.

Current research directions are based on several factors derived from the progressive socio-historical approaches that have characterised the historical study of children over the past three decades. First is an understanding that infant mortality did not have a significant effect on parental affection and that other variables, such as region, landscape setting and class, were also influences; in a sense, the social and cultural context of the child and their family. Secondly, that accounts of medieval children and childhood need to draw on a range of information, including archaeological, to compose a more accurate illustration than can be created by relying on, for example, elite portraits or saint's lives (see below; Hanawalt, 2002, 445-6). Thirdly, successive works (Finucane, 1997; Orme, 2003) have demonstrated that it is possible to identify contemporary attitudes and emotional responses towards children that indicate the young were cared for, loved and mourned despite levels of high juvenile mortality, and that sentiment could vary according to the stage of life of the child (Hanawalt, 2002, 456). Medieval society considered children (plus infants and adolescents) as a distinct social group, requiring differing care and material culture.

Aside from these major contributions, the legacy of Ariès' *Centuries of Childhood* has been revisited many times, to the extent that it has been remarked '[M]edievalists never seem to tire of proving Ariès' to be wrong' (Cunningham, 2005, 27). It is unfair to overly criticise the publication, as it was the first of its kind and initiated discussion of medieval childhood (and arguably, children). That it took almost two decades for the conclusions of Ariès and associated scholars to be re-examined and put aside shows the academic value that was attributed to his work. The above three points were the foundations on which this project was structured. It examines firstly whether age (accessed via osteology) informed the

treatment of medieval children in burial due to contemporary social and/or cultural understandings, and secondly, whether treatment further varied based on the developmental stage of the juvenile. Accessing the reasons behind such variation will be challenging, but the demonstration that parents and carers in the medieval period did love, care and grieve for their children is a good place to start.

### **Historical sources for medieval children and childhood**

As outlined above, historians have sought to identify the concept of childhood, perceptions of younger members of society and discover on what basis definitions were created. Coroner's rolls and miracle stories are particularly useful for investigating infancy, childhood and adolescence among the lower classes as chronicles and saint's lives primarily discussed elite children (Gordon, 1991; Hanawalt, 1993, 14). Here discussion is intended to be representative of the typical medieval child, from poor to wealthy, who may be accessible through funerary studies and related perceived general attitudes of adults; it does not include detailed discussions of religious children, such as Hugh of Lincoln or William of Norwich (Orme, 2003, 105-6) or the concept of the Holy Innocents (Gilchrist, 2012, 207; Shahar, 1992, 181). Normalised perceptions of children were recorded in theological, religious and secular writing, with the greater number of sources of the later medieval period providing historians (and archaeologists) with a larger dataset for investigating children's lives than in previous centuries (Alexandre-Bidon and Lett, 1999, 3; Shahar, 1992, 3). Here three types are discussed to demonstrate the types of common attitudes and themes that are accessible via medieval source material. The topics of funerary images and coroner's rolls have received a great deal of discussion and are especially relevant to this work. In contrast, miracle stories remain underutilised, though they possess great potential. These sources



provide a historical framework for approaching attitudes to children, and more specifically, child death, in the medieval period through archaeology which forms the later part of the thesis.

### *Funerary images*

This first category of data is perhaps the least useful for accessing representative contemporary attitudes. The majority of people of all ages were buried in anonymous graves in medieval England and the few examples of funerary images typically date to the end of the period, with children less frequently represented on monuments than adults. The paucity of funerary representations of infants and children has led to the suggestion, which I concur with, ‘that a more accurate assessment of medieval attitudes towards the death of children can only be gained by also considering the archaeological evidence for their burials’ (Gilchrist, 2012, 197). Attitudes that can be inferred from monuments featuring children are a useful reference point. The nature of funerary images as artefacts mainly created by the elite for their own family means that the symbolism within them often represents multiple agendas. Taken with an awareness of their biases, they provide useful information regarding attitudes to children and their position within medieval elite society. This has, at the broadest level, included the conclusion that ‘[T]he supposed absence of children on monuments – or of monuments to children – does not prove absence of affection’ (Oosterwijk, 2010, 45-6, 59; 2007).

The first examples of named burials of children are tombs of the royal and elite. Katherine (d.1257), the sickly and probably deaf-mute daughter of Henry III and Eleanor of Provence, died aged 3 years and was buried in an elaborate tomb in Westminster Abbey. Also in Westminster Abbey were two inlaid slabs of siblings Margaret (d.1276) and John de Valence

(d.1277). The tomb of Edward III depicted his children as adults, some of whom may have died as juveniles (Oosterwijk, 2010, 49, 50). Sometimes called ‘weepers’, they are interpreted as showing their parent’s fertility and dominance in the family hierarchy (Orme, 2003, 81-2). That the children often have an individual identity, including their name, and are depicted to some degree of accuracy, such as their age or order of birth, shows that these were not anonymous representations purely to show family lineage or dynastic power. The thirteen children on the brass to Philippe Carrue (d.1414) are named, though the repetition of ‘John’, ‘William’ and ‘Agnes’ suggests some had predeceased their younger siblings and parents (Oosterwijk, 2010, 47). Ways of illustrating ages of children on funerary monuments revealed visual signatures of age in life that were used as symbols in death. This included the ‘chrysom’ child effigy, which originating in the 14<sup>th</sup> century, is specific to and suggestive of individuals who died in infancy (Oosterwijk, 2010, 57-59).

This also demonstrates another chief motive around the depiction of children; religion or piety. Awareness of the afterlife as a physical place to be journeyed through on occasion led to realistic age-based representations being ignored, with the deceased instead shown as an ideal. This included showing children who died in infancy as youths or adults with gendered dress or hairstyles, interpreted as representing theological concepts of the ideal age based on Jesus (33 years) and the Virgin Mary (12 or 15 years; Oosterwijk, 2010, 53, 55-7). This arguably has less to do with the child itself but concerns for their salvation or their membership of a family who wished to demonstrate religious devotion or patronage. That this was a concern was demonstrated to greatest effect during the Renaissance, when representations of children included assurances of their entry into heaven, through illustration with the Holy Innocents and idealised depictions of children sleeping, awaiting their awakening into salvation. The motif of the martyr’s palm, common on monuments of children dying before their seventh birthday, again depicted their innocence, while other later

medieval motifs associated children with untimely cut-down or plucked plants (Wilson, 1990, 57-8, 60). Stressing the innocence of children in death appears to have been important to the deceased's family, possibly providing comfort to the grieving. However, such medieval imagery generally depicted the wealthy and so cannot be the dominant source for investigating general perceptions of childhood.

### *Coroner's rolls*

Data derived from coroner's rolls was used by Hanawalt (1986) as part of her remarkable research into the medieval peasant family in England. Her results are repeatedly used by archaeologists discussing medieval childhood and topics ranging from methodological approaches, toys and play, children in the household to welfare and infanticide (most recently Gilchrist, 2012; Hadley and Hemer; 2014; Hall, 2014, Lewis, 2009, 2014; Mellor, 2014; Smith, 2014). The following summary outlines Hanawalt's conclusion that children had worth in medieval English society and illustrates the valuable contribution her conclusions have made to this project by providing a background to facilitate understanding and approaching the questions of the treatment of children in death.

Coroner's rolls were detailed legal documents which recorded accidents that occurred in the domestic environment of people who were not elite or exceptionally-religious (Hanawalt, 1986, 13; Orme, 2003, 99). Through her examination of 3118 accounts of accidental deaths from Norfolk, Cambridgeshire, Lincolnshire, Northamptonshire, Bedfordshire and Wiltshire, ranging the late 13<sup>th</sup>-early 15<sup>th</sup> centuries, Hanawalt concluded that deaths of children were particularly noted, as accurate recording of age occurred up to 12 years but was less common for older individuals (Hanawalt, 1986, 12-3, 270; 2002, 449; Orme, 2003, 8). This suggests a greater desire to accurately record the ages of the youngest who had

accidents, perhaps a greater attachment or level of concern for the youngest in the community. It also demonstrates that the ages of children were known and remembered by carers, and formed part of a child's identity.

A further useful product was the identification of the activities of children and dangers encountered. Causes of death for young children were typically within the domestic environment; infants aged 0-1 year died when neglected by parents or carers, from animal trampling or insufficient care from older siblings (Hanawalt, 1986:175-6; Orme, 2003, 100). Deaths of older children occurred due to their increased mobility; their curiosity led to an increased number of fatal accidents outside the home, in public places and the homes of others (Hanawalt, 1986: 160). That many of these activities can be linked to biological (and cultural) development, such as increased mobility and involvement in domestic tasks, such as fetching water or assisting with ploughing, demonstrates how the physical development of children informed on their behaviour and position within the household. Some gender divisions were also apparent, with the finder of a dead child typically a woman, whether mother or other female kin (Hanawalt, 1986, 81). As children became older, their accidents became more like those of adults, as a result of undertaking increasingly gendered, adult tasks (Hanawalt, 1986: 273, Tables 6 and 7).

Hanawalt also suggested from the coroner's rolls that infanticide and child murder accounted for less than 0.1% of deaths; she was also unable to identify any examples of convictions for infanticide (Hanawalt, 1986:103, 156). This has contributed to the rejection of the hypothesis that the medieval period was characterised by frequent, acceptable, infanticide (deMause 1974, 367; Hanawalt, 2002, 452-3). As Hanawalt notes, 'infanticide would have been more frequent if children were viewed as simply encumbrances' (Hanawalt, 1986:156). That the injuries and deaths of children were investigated further demonstrated that they were not neglected encumbrances and that worth was attached to not only providing adequate

investigation into manner of death, but recording them accurately. Hanawalt therefore concludes that children were in receipt of the same legal rights to an inquest into their deaths as adults in medieval England because they were valued.

### *Miracle stories*

A third source, miracle stories, is useful because from these stories it is possible to access emotions felt toward children in medieval Europe and to see how parents and carers reacted to threats of death to their young. Though Finucane's 2007 study *The Rescue of the Innocents: Endangered Children in Medieval Miracles* also discusses causes of death, here it is the emotional responses to the calamities that befell children that will be highlighted. Miracle stories, generally more emotive than coroner's documents, provide useful context for assessing motives that may have influenced the burial treatment of children that this project addresses. This type of evidence has yet to be used to complement archaeological investigations to the extent of coroner's rolls and is discussed in greater length in an attempt to demonstrate the value of this source. Six hundred cases of children in miracle stories were identified, with the majority aged 0-4 years, with fewer accounts of older children up to 15 years of age (Finucane, 1997, 97, 142-3, figs. 1.1 and 4.1).

Finucane demonstrated parental attitudes through anxiety towards childbirth and stillbirth, with death before baptism a particular source for grief. Such concern was manifested through the appeal for respite miracles, where infants, having died unbaptised, were revived by saints at the request of distraught mothers; once the baby had been baptised, they died again but were no longer damned (Finucane, 1997, 38-9, 42-3). This has been interpreted as suggesting reluctance by parents to believe their deceased children would not be saved (Alexandre-Bidon and Lett, 1999, 28), which is compelling given the fate that awaited such

unfortunate dead (see next chapter). Another possible contribution for archaeology is that Finucane may have identified in the miracle stories where the unbaptised may have ended up, such as pits and dung heaps (Finucane, 1997, 45-8) though Gilchrist's catalogue of infant burials in domestic contexts (Gilchrist, 2012, 284-5) has gone some way to undermine this by showing how few instances have been identified in the archaeological record.

One of the most significant conclusions was the identification that parents felt loss and grieved when their children died, even to the point of denial (Finucane, 1997, 91, 92). A mother who fell asleep, smothering her baby, screamed and contemplated suicide before the baby was revived after being taken to the shrine of St Edmund at Pontiguy, France (Finucane, 1997, 50). When the 10 year old son of Jordan, a Yorkshire knight, was presumed dead from illness, the author said that he did not need to record the grief of the parents, as it was easily imagined (Finucane, 1997, 89). This reveals something about the subject, the recorder and the reader of this piece; that all were familiar with the deaths of children and the typical or appropriate reactions to such events. The reluctance of parents to accept their children as dead, and to part with the body, is another theme, though not everybody at the time was as sympathetic. While at church Countess Matilda, the wife of Roger the earl of Clare (d.1173), was told her infant son had died. She cried, inconsolable, for over two hours; her chaplain is recorded saying "What's got into you, my lady? You're behaving foolishly; you're being silly, even mad to carry on and speak thus...Stop this: put down the child and treat it as a dead infant". Matilda grieved for another two hours, before the child returned to life; she walked barefoot, along with her son and companions, to Canterbury to testify to the miracle (Finucane, 1997, 90-1, 153). The stories also include parental responses of anger and shame, for example when a death was seen as a result of negligence, such as a parent telling their child to wash, who then fell into water and drowned (Finucane, 1997, 134-5).

The findings of miracle stories have been used to great effect in discussions of childhood and the recording of superstition and folk magic (Gilchrist, 2008; 2012). That several of the object types used in such rites are excavated from burials (see next chapter) links the tangible material culture of the period to intangible cultural and religious attitudes. Four coins were placed with the 10 year old son of Jordan, a Yorkshire knight, when he showed signs of resuscitation when presumed dead, two of which were bent to represent the parents and two to show the father's willingness to offer his son to Canterbury as a martyr (Finucane, 1997, 89-90). Parents sought to cure or revive their offspring by taking them to shrines and making offerings, particularly if the child was stillborn, ill or 'suddenly dead'; for example, giving silver or wax images was believed to cure swellings, while wearing an emerald and saying vows could cure epilepsy (Finucane, 1997, 10-11, 12-3, 61, 77). In addition to describing treatments attempted in the miracles, such as warming the child, holding them upside down and touching them in different ways when they were feared drowned, Finucane also showed who was carrying-out such actions; parents, kin and neighbours (Finucane, 1997, 134). This runs counter to the interpretation by Schmitt that many of such accounts of healing initiated by mothers (as well as folk stories such as the Saint Guinefort ritual) where the child is usually in the sole care of its mother, rather than a nurse or extended family, demonstrated how 'women and child [had to] confront illness and fate on their own' (Schmitt, 1983, 82, 86). Coupled with the identification of extended family members at the scenes of accidents by Hanawalt (1986, 81, 180-1) and the results of Finucane's analysis, it would appear that this interpretation does not consider all the evidence. Gilchrist (2008, 122, 152) has suggested, using 10<sup>th</sup>-11<sup>th</sup> century sources as a basis for later centuries, that women, either as mothers or carers, were influential in the inclusion of objects in medieval graves. That the miracles record parents, kin and neighbours trying non-supernatural cures on children has the potential to provide literary explanations for some of the unusual practices observed in

medieval burial contexts. That examples from the miracles also include such treatments carried out beyond the immediate family may also explain why some funerary rites appeared more than once or over multiple generations, as community-wide appropriate treatment. Ultimately, such actions would have been the result of multiple concerns by the living to the dead. If age, and social attitudes related to that age, was indeed a factor for the burial of the young, the next task is to attempt to identify such attitudes and how they are characterised, before seeking to integrate them with archaeological evidence.

### **Medieval attitudes to ageing**

Attitudes to ageing in the medieval period were varied, complex and influenced by several approaches. Stages of childhood were not theoretical but noted in everyday life (Shahar, 1992, 1) and the definitions of when these stages were understood to begin or end could be rigid or fluid (Hanawalt, 1993, 6). Literary sources remain the dominant resource for accessing medieval attitudes to and conceptualisations of age, with personal, theological and scientific opinions detailing functional, social, emotional and cognitive ages (Lewis-Simpson, 2008, 6). The myriad forms of ‘Ages of Man’ literature, such as the number of stages, shows the variety between different approaches, though all demonstrate that medieval society identified life stages and labelled them appropriately. As well as reflecting human life, ages of man were related to other temporal developments using scientific, biological and astrological methods, such as the four seasons, months of the year, age and history of the earth, as well as the body and its humours, particularly for advising age-appropriate medical treatment (Sears, 1986, 9-10, 26-7; Burrow, 1988, 2; Gilchrist, 2012, 35). Ages of man divided the natural life of a single hypothetical individual based on established norms, and though versions existed with varying numbers of stages, all included at least one stage



of childhood or adolescence. Despite the variation that will be demonstrated, it will become apparent that common themes can be identified. One in particular, the influence of biological growth, is especially significant in later chapters, as it will be established that the age stages attributed to children were closely defined and highly influenced by physical development, in contrast to adults.

### *Characteristics of division*

To begin a discussion of the ages of man and their importance it must be remembered that differences in both the number of preferred stages and the categorisations of such stages varied by the approach taken in the past. For ease of discussion, the examples of medieval ages of man and their classical influences have been divided into three subtypes; nature and the world, cultural and biological. This is intended to present both a broad understanding of ages of man literature and a focused appreciation for how their use has aided the creation of a persuasive and effective framework for approaching medieval understandings of age and development in this thesis.

Authors of ages of man inspired by nature used the scientific approach of categorising the world around them as their chief influence. Hippocrates characterised his four-stage version based on the qualities of moist, hot, dry and cold, representing the infant, youth, adult and aged person. These developed into medieval definitions including Bede's c.725 *De Temporum Ratione* and Byrhtferth's (c.970-1020) *Manual* (Orme, 2003, 6). Later medieval variants within books of Hours, allied the four ages of man to the four seasons as well as the four humours and elements (earth, wind, fire and water), theorising human life as a microcosm of the larger world (Gilchrist, 2012, 34). These qualities were considered alongside personality traits and physical characteristics by differing ages, such as

temperament and build (Burrow, 1988, 12, 13, 14). They could also be used to infer appropriate lifestyles; John Lydgate's (d.1449) *Secrees of Old Philisoffres*, advised that diet for women should vary with the seasons, in which spring is like a young girl, summer a bride, autumn a mature matron and winter an old woman (Burrow, 1988, 30). Categorisation of nature also influenced the creation of the twelve ages of man, in which the human life was further divided based on the twelve months of the year (Sears, 1986, 113, 117-8). Ages of this type reveal more about the scientific approaches behind them, such as the desire to explain life through categorisation with comparable cycles than how people in the past actually viewed human life-stages. They are an ideal, used as literary and artistic motifs, rather than an accurate division of the human life-cycle. Not typically linked with the human body, there is no association made between identified stages from nature and physical development. This lack of coupling with the human form renders such ages of man of limited use in identifying the particular human characteristics of ageing, how they are divided, and how they may be used alongside archaeological populations.

More useful are the ages which appear to be based on cultural definitions. Though the number of stages again varied, that they were characterised by material culture or activities that appear appropriate by age links them to the physical, living world. That many of the age-appropriate objects or activities were closely aligned to biological development further contributes to their usefulness as accurate representations of medieval attitudes. Illustrations depicted observed characteristics which were used to define divisions, such as posture, size, bodily hair, length and colour, clothing and possessions (Sears, 1986, 5). The *Marriage at Cana* (c.1180) at Christ Church Cathedral, Canterbury, depicts the *infantia* as a seated child, the *puerita* as a boy in a short tunic with a stick and ball toy and the *adolescencia* with a sceptre, symbolising learning (Sears, 1986, 72-3). A 14<sup>th</sup> century example from London depicts six stages as a suckling babe, a boy playing with a top, a falconer, a soldier, a bearded

male and an old man with a stick (Sears, 1986, 125-6). Depictions were also popular for decorating houses, showing their relevance and presence in wider society. An incomplete example from Longthorpe Tower near Peterborough, c.1330, in the first floor hall shows the *infans* asleep in a cradle and the *puer* as a boy in a short tunic with a toy (Sears, 1986, 137). Ages of man developed into variants such as wheels, trees and steps of life, in which the stages of children are again defined by their activities, such as using a babywalker, writing on a tablet, or chasing a bird (Sears, 1986, 145-6, 152-3). Though the repetition of motifs and material culture with different age stages should not be taken as true representations of ages or medieval life, as Gilchrist has pointed out ‘they provide some insight to the material culture that was considered by contemporaries to be characteristic of the respective age groups’ (Gilchrist, 2012, 36).

That age stages could also be based on appropriate activities was demonstrated by Galen, a Greek philosopher of the 2<sup>nd</sup> century, who described 7 years as when a child could ride a horse (Sears, 1986, 44). His works were influential on medieval variants, including how social expectations demonstrated that perceptions of age could differ by gender. Girls and boys were discussed for the *infantia* stage together, but for the *puerita* stage (7-12/14 years, depending on gender) they were separated and more discussion devoted to boys and their education; this is repeated for the *adolescencia* stage, where girls received less attention due to their lack of social and legal privileges. The transition from childhood to adulthood for females was faster than for males, often marrying at a younger age without a transitional stage of learning or training (Shahar, 1992, 29-30). Transitions from one life stage to another, such as from childhood to adolescence, have been hard to identify. Examples of transitions may include baptism, apprenticeships and schooling, though the latter two lasted for several years, suggesting a need for fluidity in understanding how the beginning or end of childhood and adolescence was conceptualised.

Ages of man on occasion included representation of the extended life course beyond the biological lifecycle (Gilchrist, 2012, 37). These demonstrate that both people yet to exist (in the womb) and people that had ceased to exist (in the grave) had an existence, if not a tangible one, within the material world. The existence of a stage before birth (after conception, the male foetus was theorised as possessing life after 46 days and the female from 90 days) meant that a foetus was 'ensouled' before six months gestation, and therefore already a being, with their own character (Gilchrist, 2012, 20). This is represented in an early 15<sup>th</sup> century German Tree of Wisdom which includes the prenatal stage as the first age. Death was also conceptualised as a stage. The 13<sup>th</sup> century Wheel of Life in Leominster church, Herefordshire includes representations of death (a coffin on a bier) and the afterlife (tomb in the churchyard); this is replicated in the 14<sup>th</sup> century De Lisle Psalter, which dedicates two ages to death and the afterlife in the manner of a memento mori (Gilchrist, 2012, 37). Looking at the archaeological implications of such understandings, observed mortuary practices, such as use of furniture or location of burial, may be interpreted as influenced by the continuation of a person's life beyond the earthly human life span. This is nothing new. However, that a person had a social or cultural presence *before* their human life span began, namely before birth, may have potential to explain, as an additional factor to concern for the innocent dead (see next chapter), why the newly-born who died received unusual or special treatment in medieval cemeteries, such as burial with another individual or under the eaves of churches.

The discussion of cultural conceptualisations of age ultimately leads to the most useful classification for ages of man: biology. Many medieval examples were popular following the translation of their classical origins. Biological three-stage cycles were based on an age of growth (youth), stasis (adulthood) and decline (old age), first highlighted by Aristotle (Sears, 1986, 4, 7; Burrow, 1988, 5-6). Around c.1270 William of Moerbeke translated the

Aristotelian age of man into Latin, and later, Dante divided a 70-year lifespan into a noble life which followed a path of growth (*adolescenza*) from birth-25 years, maturity (*gioventute*) from 25-45 years, decline (*senettute*) from 45-70 years plus an additional stage (*senio*) for the eighth decade (Burrow, 1988, 7, 32, 33). Thomas of Cantimpré, a 13<sup>th</sup> century Dominican friar defined *infantia* as the stage until a child speaks, *puerita* the stage until the 15<sup>th</sup> year and *adolescencia* from 14-35 years (Sears, 1986, 125, 126; Burrow, 1988, 2). The seven-stage variation was also popular. The Hippocratic seven ages of man, originating before the 1<sup>st</sup> century BC, was translated into Latin around the late 9<sup>th</sup>-mid 10<sup>th</sup> century, and alongside Macrobius' early 5<sup>th</sup> century seven ages (Sears, 1986, 40-1, 43; Burrow, 1988, 19, 39), seven became a basis for division of the perfect life. *Puerulus* was the stage up to 7 years and characterised by the arrival of permanent dentition, *puer* up to 14 years by the emission of sperm, and *adolescens* to 21 years by the appearance of a beard. The same divisions, labelled *infantia*, *puericia* and *adolescencia*, are within a 10<sup>th</sup> century manuscript from Chartres, France (Sears, 1986, 40-1, 47). More specific ages used the number 7 in the creation and classification of further stages, such as 7 months (when teeth appear), 14 months (when a child can sit unaided), 21 months (when words can be formed), 28 months (when a child can stand and walk) and 35 months (when a child ceases suckling; Sears, 1986, 43).

It is evident that many types of ages of man had their basis in biological and physical development. That the defining characteristics of 'infantia' included the inability to speak, as well as a lack of teeth and gracile mobility, with older children defined by their ability to speak and take on gendered social roles, shows that physical growth of juveniles, and their increasing similarities with adults, was perhaps the dominant influence on the divisions accessible in ages of man. References based on biological and psychological development lead to the chronological distinctions of age that were defined in ages of man. Ascertaining the duration of such age stages in medieval consciousness is more problematic (see below),

but that attitudes were associated with stages of development that can be identified today via surviving biological remains, namely the skeleton, is a valuable finding for this project.

### *Age bands of the medieval period*

Rather than noting specific calendar years, most ages of man relied on broad age ‘grades’ (Gilchrist, 2012, 37). Though the first impression may be one of a lack of clarity regarding how these could be applied, many can be used to infer relative categories and define their characteristics. However, though commonalities can be identified, variations are also present. The use of four age stages by medical men such as Avicenna (c.980-1037) and Constantinus Africanus (d.1087) of boyhood, maturity, old age and decrepitude are noted as having ‘unfixed terminology and uncertainties about where the age-divisions should be located’ with boundaries varying by around 5 years (Burrow, 1988, 22), though when at the end of an age stage, a person may be described as having ‘reached the border’ (Shahar, 1992, 22). Variation in the length of older stages, such as ‘adolescentia’ as well as adult stages, characterised by sexual puberty and maturity, independence and greater agency, has also been observed (Gilchrist, 2012, 34). The length of stages also varied due to the number of stages, leading Burrow to conclude that such terms cannot be assumed to ‘bear any relation to the social or biological realities of the time’ (Burrow, 1988, 34). The above demonstration of the influence of biology on the youngest age-stages is clear, as is the observation that though the number and classification of stages of older years varied, the early stages were generally fixed and related to bodily changes. For adults, many of the distinguishing features are social, whereas for children, they appear developmental. The utilisation of ages of man in determining age bands for juveniles will therefore be more successful.

Creating a methodology for the assessment of age variation for juvenile burial that uses ages of man as indicators of medieval attitudes requires a discussion of how the biological changes identified affected social and cultural definitions, rather than simply stating what they were. Ages at which infancy, childhood and adolescence ceased and maturity was reached were variable and based on myriad factors that demonstrate that biology through physical and cognitive development, and cultural responses to it, was dominant. Some similarities have been identified between medieval divisions of life stages and discussions of age stages by modern psychology. Shahar has shown how two modern approaches mirror medieval conceptions. Piaget divided childhood into four stages based on cognitive development; 'infancy' (birth-18 months/2 years), 'early childhood', (2-7 years), 'middle childhood' (7-11/12 years) and 'adolescence' (11/12 years-adulthood; Piaget, 1968; Shahar, 1992, 21). Erikson divided life into eight stages based on personality development, with five defining the period to adulthood; 'infancy' (birth-15 months), 'early childhood' (15 months-2½ years), 'the age of play' (2½-6 years), 'school age' (6 years-sexual maturation) and 'youth' (until 20 years of age; Shahar, 1992, 21). Division of childhood into four stages of mental development has also been defined; the sensorimotor stage (0-2 years), indicated by movement without control based on reflexes and experience of the world through senses; the preoperational stage (2-7 years), where children have basic movements, learn to talk and possess an improved ability to conceptualise, remember and reference; the concrete-operational stage (7-11 years), where motor skills are developed and the child can think logically and independently, and the formal operational stage (11-16 years and onwards), where children develop abstract reasoning (Piaget, 1973; Imsen, 2001, 96-100, in Mygland, 2010).

Physical development informed social and cultural markers and when and how a juvenile progressed from one age stage to another. Infancy was typically considered to end around 2

years, when a child had its first teeth, could speak and toddle, was suitable for weaning and less likely to die of childhood ailments. The next stage ended at 5 or 7 years, when a child could speak properly and wore simple gowns without sleeves (Shahar, 1992, 23, 24; Gilchrist, 2012, 79-80). Older children were able to express themselves and tell the difference between right and wrong and could be betrothed, begin schooling or apprenticeships (Shahar, 1992, 23, 24). Clothing changed for children older than 7 years, with the addition of sleeves, shaping of gowns and fasteners such as buckles, pins and laces to fix headdresses and shoes (Gilchrist, 2012, 80, 81, 82).

Physical puberty, and by relation, social puberty, was the dominant marker for the end of childhood. Twelve was seen as an appropriate age for an individual to be confirmed (Shahar, 1992, 23) and betrothals and marriages of girls below 12 years and boys below 14 years were not binding. Children younger than 12 years also did not have criminal responsibility (Crawford, 2000:172), and according to writers such as Thomas Aquinas (d.1274), should be punished more leniently than older individuals. Adolescence was a less-defined stage, ending at 21, 28, 30 or 35 years in various versions and the lenient attitude towards punishing sins could be extended up to those aged 20 years (Shahar, 1992, 24, 25, 28). Variations in the length of the adolescent stage may also have been affected by the duration of physical puberty that caused later ages of menarche and prolonged puberty into the third decade. Along with development, social and economic definitions could be markers for the end of adolescence, such as when a man married, gaining a dowry or possessed land or property (neither of which may have occurred for some). Economic independence may have coincided with physical, spiritual and intellectual maturity, which Dante set at 25 years (Shahar, 1992, 28). Ages of marriage, though generally in the 20s, varied during the medieval period and by rural or urban location (Gilchrist, 2012, 38). An 'extended adolescence' may have been both physical and social, creating a medieval 'temporal



biology' of ageing 'constructed by cultural practices in combination with environmental conditions' (Gilchrist, 2012, 41-2, 66).

Though it may not be possible to pin-down specific age categories of individual, nor access to what extent these were widespread or understood, it has been demonstrated that medieval conceptualisation of age-stages for juveniles was based firmly on their development. That this development can be accessed via bioarchaeological analysis makes medieval attitudes tangible to the archaeologist. From the fact that such development informed cultural treatment through the formation of appropriate material culture or activities, it is reasonable to hypothesise that manner of burial could also be appropriate by age, and it should be possible to access medieval attitudes to children via their burials. This has had a strong impact on the research that follows. The identification of both age stages and age-appropriate treatment from medieval literary sources supports the decision to firstly investigate whether and to what extent age at death had an effect on burial, and secondly, the division of burial populations into age bands (see Chapter Five). The next section brings the focus of the thesis back to archaeology by assessing how biological, social and cultural definitions of childhood have been approached by others in the discipline using the two types of evidence most accessible; material culture and burial archaeology.

### **Archaeological study of children**

Age has been an important research theme in archaeology, particularly for children, for some time. Age was a social reference for a person's identity and their position within society. From this realisation, different methods emerged for the identification of age and of archaeological evidence of its effect. However it has been commonly stated that this is

difficult for children, who are generally assumed to be without agency, not having the power or ability to affect the social, cultural and physical world and therefore not identifiable in the archaeological record (Wilkie, 2000, 100). The remains of children are also often underrepresented (Sofaer Derevenski, 1994, 8). Techniques derived from complementary disciplines of ethnography and anthropology have shown how age may be understood in other populations, demonstrating that biological, cultural and chronological factors all have influence (Gowland, 2006, 143). Children have also been described as a distinct social class, where age and stage of life are as important as other identities, such as gender (Wilkie, 2000, 111).

Discussions of age use the physical remains of dead children, material culture attributed to children and the context of these artefacts. Theoretical discussions (Lillehammer, 2000; Sofaer Derevenski, 2000) have highlighted how multiple children, rather than one single 'archaeological child', existed in the past. Difficulties in identifying ontological distinctions between childhood and adulthood may hinder the identification of some archaeological artefacts as for children or adults; the origins of the difference between children and adults may be social or cultural, and it may be hard to address the identities of children through burial archaeology, focusing instead on the child's social position. Though it has been said that childhood can be intangible and not always possible to link with the body (Sofaer Derevenski, 2000, 11, 12), it will be argued that burial archaeology can provide a method in which to overcome this perceived obstacle. The following examples demonstrate with some confidence that age at death was a factor influencing the burial of children in many past societies. What is visible archaeologically is the trace-remains of actions undertaken by the burying population in relation to social attitudes and beliefs at the time of burying the deceased; the variety that can be identified informs upon our understanding of age and its importance. That these attitudes may be hard to access cannot be denied, particularly for

communities for which no written records are available. When better historical context and sources for burial treatment are available, as for the medieval period, greater success is likely to be achieved in considering contemporary attitudes and variety exhibited in the funerary record, with the physical body of the child the connection between the two.

### *Identifying the archaeological child*

Archaeological children are most frequently discussed through their bodies, with Western attitudes often reflected back in the creation of an 'embodied child'. Studies have taken different approaches. Sofaer Derevenski (1994, 11) suggested investigating children via a feminist perspective, because of parallels in how feminist archaeology sought to challenge structuralist assumptions rather than solely identify women in the archaeological record. Socialisation is another approach, as children learned or were taught to become part of and contribute towards society during the social construct of childhood. Children are not necessarily passive learners but social actors, as socialisation, as 'a cultural process that transcends the culturally specific construction of age and sex categories' occurs across generations (Baxter, 2005, 3, 23-4). Lillehammer (2010) noted firstly the constructionist view, where the child is a social agent, an individual acting on and being shaped by their habitus, in the production and reconstruction of social attitudes across generations, much as has been discussed for adults. Another is the phenomenological approach, which discusses whether the knowledge and understanding of adults, as parents or carers, should form the basis for the study of children, or whether the adult world should be investigated through the world of children (Lillehammer, 2010, 10). As exciting as it may be to think that the past and the lives of children could be seen through the eyes of children themselves, this is problematic and near-unachievable. Children appear to have left few traces of how they

viewed the word, at least in the current state of the discipline. Perhaps more significant is that those carrying out such studies are no longer children; we as adults attempt to view the child in the past. The adult view also forms the basis for understanding historical attitudes towards the medieval child. Children's burials are more likely to possess potential for investigating the attitudes of adults towards children.

Discussions of material culture and the importance of a child's physical and social body, how it changes and is interpreted, have shown they are related to cultural processes that allow the body to have a symbolic value in social transitions (Sofaer Derevenski, 2000, 9). It is likely that these social transitions informed on the burial of a child when they died. This was developed in concepts of 'child data' and 'data child'. 'Child data' refers to the corporeal body, in archaeology the surviving skeletal remains, and any information that derived from it. Therefore, an approach that considers 'child data' uses the age, health, diet and if identifiable, sex to inform on the life of that child by viewing the physical remains as an artefact to be analysed. 'Data child' refers instead to how the body of the child relates to nearby associated features such as the grave and artefacts and the people – the living – who decided on the form and nature of the burial. Derevenski highlights the benefit of this approach of considering both the child and their burial as artefacts as allowing the dead child and its' burial to be analysed in a comparable way to the living child and their material culture to permit conclusions about the meaning of both as has been done in studies of living populations. She also describes it as a useful means of ensuring that archaeologists do not elevate either 'child data' or 'data child' above the other, as both need to be considered with reference to one another (Derevenski, 2000, 9-10, 11). Just as an artefact may lose its meaning when it is discussed without the context of the child's grave, so the worth of the child itself is reduced to osteological data alone if the associated artefacts are not part of the conversation. These two concepts and the use of them together have the potential to make a

significant contribution to this research, which seeks to investigate the medieval child through their excavated osteological remains ('child data') and the manner in which they were buried ('data child'). A danger may be the possibility of incorrectly assuming a universal child existed in the past by overgeneralising or overplaying the influence of the body on the creation of childhood and not considering other factors, such as social or cultural practice. One way in which I suggest this can be addressed is by grouping burial populations into multiple categories (or 'age-bands') based on the human skeleton, to avoid wide chronological definitions of children. The other is to incorporate attitudes from medieval literary sources as a complement to the physical nature of the burial and the available osteological ages.

Other approaches to identify and define the child include those which drew analogies between child and adult in considering evidence for children 'in the context of known and expected archaeological material' (Lillehammer, 2000, 20, 22). The use of methodologies that use 'child' and 'adult' are divisive, exclusive and based on modern Western concepts, with different stages of development not discriminated and 'child' often an umbrella term for individuals of varying ages (Sofaer Derevenski, 1994, 8). Investigation of age as a modern, rigid distinction of child/adult does not include a consideration of the fluid nature of age and ageing (Gowland, 2006; also related to gender and sexuality, Lucy, 1994, 23), nor that more than these two stages may have existed. The manner in which this project seeks to remedy this issue is outlined later (see Chapter Five). Gowland suggested a reflexive approach to identifying thresholds of age to better understand the symbolic and social significance ages may have had (Gowland, 2006, 152). This considers the physical body, how it develops and how this may have affected age and social identity. Osteological analysis of skeletal remains can identify age at death, but this may provide little insight into past attitudes to age and how age was understood without the addition of other sources of

information, such as material culture or social position, that may also have been influenced by age. Ethnographic and anthropological studies have shown that developmental stages such as weaning or puberty often coincide with age-related social transitions, though how the cultural interpretation of such development is realised and understood is harder to investigate; as Gowland states ‘[T]he identity conferred on members of a particular age group is not the naturalised manifestation of their physical development’ (Gowland, 2006, 144). So, what does it mean when the burials of children deviate from the normative funerary tradition? Are we seeing the ‘world of children’? Whose world/s is/are visible? Do we understand children through the actions of adults, such as how they bury children, or does this depict more about adults than children? (Lillehammer, 2000, 20). Burials of children that deviate from adult burials, classified on chronological and biological age, through grave type, location and the inclusion of artefacts, should be considered in relation to wider social, historical and cultural contexts.

### *Artefacts and living children*

Objects identified as having specific association with children are generally missing from archaeological contexts. This is because adults have typically been assumed to have been the main actors of site formation, with children rendered unimportant due to Western notions of children as dependent and unproductive (Finlay, 1997, 204; Sofaer Derevenski, 1997, 193; Baxter, 2005, 2; Gowland, 2006, 145; Crawford, 2009, 55, 57). There are several problems with this assumption, but the most detrimental one is that it overlooks the material evidence of children. Such items can be representative of how children ordered the world, how adult’s ordered the world of children and relationships between children and adults (Lillehammer, 2010, 11).

A keen eye and sympathetic analysis has led to success in identifying types of objects that children interacted with. The identification of a flintknapper at Solvieux, France, has been interpreted as potentially representing a child learning to knap by reusing a discarded core of an experienced knapper-tutor (Grimm, 2000, 56-7, 60). The spatial distribution of the debitage of at least two knappers, one unexperienced, was used to infer one way in which children and adults, or novices and experts, may have interacted. The process of learning to knap has therefore been interpreted as a process of socialisation, with the learner eventually becoming a full member of the community as they learn the skill (Grimm, 2000, 62-3, 66). Eleven lumps of resin from the Early Mesolithic site of Huseby klev, have been identified as chewed by several individuals aged 5-6 to 16-18 years. That the resin was only chewed by children and adolescents, perhaps in preparation for use, has been suggested as a way in which children contributed towards (adult) manufacturing in a social context (Kjellström et al., 2010, 59-60, 61). Children and their activities has also been introduced as a topic for explaining the purpose of artefacts in the archaeological record. That objects of unknown use may have been used by children (rather than having a 'ritual' purpose) has been suggested for carved stone balls from Neolithic Skara Brae, Orkney and two decorated miniature quernstones from Viking Age Lagore Crannog, Westmeath, Ireland, based on their sizes and properties (Brookshaw, 2009, 370). Such approaches which consider children as an active force in the construction and use of objects, especially if the interpretation differs from traditional interpretations, benefit both the study of material culture and the study of children.

Moving into historical periods, where the identification of children's objects can be easier when they are recorded in images or documentary sources, attention appears to have been focused on understanding such artefacts from adult perspectives. This has frequently led to the categorisation, or assigning, of artefacts to play, clothing and education, an adult-bias of

perception that has also influenced presentation in museums (Brookshaw, 2009, 376). Few objects are suggested as being made by children themselves. When children's material culture are identified, their interpretation remains incomplete, with 'the material culture of childhood' (objects made for children by adults) dominant over 'the material culture of children' (objects made or adapted by children; Brookshaw, 2009, 379, 281). Seeing living children through the eyes of adults is an academic bias that is difficult to overcome. Artefacts may be useful in approaching certain topics, for example socialisation, by dividing artefacts into those of "children" (biological and quantitative) that are chosen, designed or created by a child and "childhood" (social and qualitative), which are the choice, design or creation of an adult (Lillehammer, 2010, 11, 13). Correctly identifying which items may belong to which category is difficult, without ease of identification of child objects or the lack of a clear picture of attitudes to children during the period in question. Medieval archaeology has recently been at the forefront of such approaches, with the following case studies demonstrating how the identification of children and who created material culture associated with them has been sought.

Historical archaeology has been described as having the greatest potential in approaching an understanding of children, whether singly or as a group, as social actors (Wilkie, 2000, 101). Material culture studies have demonstrated this by identifying child-specific objects. Mygland (2010) demonstrated the presence of children in medieval Bergen, Norway. By looking at toys and shoe soles, Mygland showed that most artefacts related to children aged 7-12 years. She concluded from the quantities found that the proportion of children within the town's population changed over the medieval period, suggesting that the role of children in society also varied. The toys also provided an insight into what the roles of children were. Around half were miniatures of adult tools and utensils, interpreted as direct evidence of children's involvement in socialisation and learning, with some gender division inferred for



the later medieval period, when more boys than girls' artefacts were identified, signifying they were resident in greater numbers, possibly as apprentices. Differences in objects also showed how shoe manufacturers produced designs which varied by the age of the consumer. Analysis of shoe soles showed some styles were only made in adult sizes, and that children aged 0-3 years, 3-7 years and 7-12 years wore different styles to older individuals. The greatest differences of types were observed between adults and those aged 0-3 years, with greater similarity in form evident for older children's shoes and those of adults. The research showed that children in medieval Bergen were understood differently according to age and existed as a distinct social category with material culture perhaps indicating transitions through social age-stages (Mygland, 2010, 90-91). It is also possible to infer that from the age of 12 years, juveniles were increasingly part of the 'adult' world, demonstrating that age and age transitions can be seen via archaeology.

The use of different styles of shoes in medieval Bergen and their relation to age shows how objects construct the world of the individual, possess social and symbolic values and assist in socialisation. That toys could be labour-associated artefacts can be used to see how children may have interacted and contributed to society using an approach to objects as 'active' with multiple meanings. This follows Sorensen's discussion of 'the fluidity of meaning', in which objects may possess multiple meanings linked to factors such as age, gender or status of which the importance or relevance of the different meanings of each object may be stressed or changed (Sofaer Derevenski, 1994, 12-4; Sørensen, 1991). Was the main function of the toy for recreation or education? Are these mutually-exclusive, or equally important? Realising and understanding these meanings can be difficult. Toys and child-specific artefacts represent attempts by adults to affect the behaviour of children (Wilkie, 2000, 101; Baxter, 2005, 46). Toys, indicative of play and symptomatic of the existence of stages separate and different from adult stages, can be theorised and identified

(Crawford, 2009) and a medium for communication between children and adults, and children and children (Wilkie, 2000, 106). The classification of items as toys, such as dolls, tops and rattles and sometimes miniatures of full-size (adult) artefacts, is often successful through comparison or analogy with written or pictorial sources. However, definitions of 'toys' are provided by adults, both in the past and present, which excludes any material culture that children might have actually played with, some of which may not survive archaeologically (Crawford, 2009, 59-60, 61). Appropriateness of objects by age may mean that children do not interact, and are not observed archaeologically, with 'unsuitable' artefacts (Crawford, 2009, 64). Items from domestic contexts with no perceived practical use, such as pierced bones, have been interpreted as musical toys due to their association with children in other medieval contexts, with further objects perhaps interpretable as children's objects through association (Crawford, 2009, 65-6). Research has attempted to identify activities in which toys were used in late medieval rural settlements through features that may not be discussed or are attributed to the vague category of light industrial activity, such as mounds, depressions, cleared spaces and stones, again via comparison to play activities from written and pictorial sources (Lewis, 2009, 98, 105). These again stress the importance of utilising medieval information from disciplines other than archaeology. The recent studies of Crawford (2009) and Lewis (2009) have shown that toys were often primitive, unrefined and quickly produced, contrasting medieval visual depictions of children's games and toys often idealised in non-traditional environments. The relevance attached to children's possessions can also have limited appeal to adults. An investigation into objects attributed to children aged 1-14 years from a 14<sup>th</sup>-17<sup>th</sup> century site in Lithuania showed that toys were not placed in children's graves and that children were treated as adults in burial from 13-14 years (Blaževičius, 2010, 96). Instead, artefacts originated from settlement contexts, perhaps at locations where they were last used or forgotten about, with

the wide variety of toy-types demonstrating the social significance of children (Blaževičius, 2010, 102). It has not yet been possible to attribute ages of individuals for artefacts tentatively classified as toys or features created by play activities, nor has age-based differentiation been identified. The next section brings the focus back to burial archaeology, where objects identified as associated with children in burial contexts may be active and possess multiple meanings, not all of which may be related to the dead child; living individuals or communities may have utilised the meanings of objects placed in graves.

### *Children in burial*

Children remain most visible in burial, though their under-representation has had a negative impact on developing theoretical frameworks for their discussion (Sofaer Derevenski, 1997, 193; Baxter, 2005, 93). Recent developments in biological, anthropological and osteoarchaeological research have improved our ability to tell who is and is not entering the archaeological record, and to determine whether the child burials uncovered are normal or exceptional (Chamberlain, 1997, 250). Though the information available from burials is the result of multiple influencing factors (age, identity, culture, status etc.) at a specific period of time and people die at all ages, children are more visible in the burial record than in other archaeological assemblages. Though the choices made in burying children may reflect the actions of adult mourners (Baxter, 2005, 94), that children are developing members of society who are perhaps not yet fully integrated is explicit through the differing burial practices they received. Therefore, it is possible to hypothesize with some degree of confidence that age at death influenced how children were buried. Biological ages can be successfully estimated via osteology, and more precisely for children due to their rapid physical development. Osteological analysis gives the biological age, which for burial

archaeology must be the starting point. It is important, though difficult, to consider which age(s) were being referenced through burial, whether social, symbolic or biological. It has been noted that it can be difficult to understand how the main influences of biological and social on age interact in the construction of age identity (Lillehammer, 2010, 10). As discussed in a previous section, that members of society determine childhood, its phases and lengths, the cultural and social definitions of juvenile stages can vary significantly by location and time and be fluid (Kamp, 2001, 4; Lebegyev, 2009, 16). However, as demonstrated above commonalities in definitions can be used to show how and to what extent biological and social factors interacted in the creation of age identities.

A dominant view is that mortuary practices are symbolic representations of social hierarchies, beliefs and worldviews that can be interpreted, stressed, downplayed and manipulated (Baxter, 2005, 95). Though variations in mortuary practice often occur as a result of social changes (Lewis-Simpson, 2008, 5), it is telling that the burials of children are often differentiated across sites of different periods and locations. This would suggest that multiple societies, though separated by millennia, had an understanding of children as different, and further supports this investigation. Carr examined the strength of influences of multiple factors and identified age, specifically the distinction between 'child' and 'adult' as the second most dominant social factor after vertical position. For mortuary practice, age was a determining factor in where graves was located, the level of variation accorded, how the body was prepared and how much energy was expended on its construction (Carr, 1995, 152, 156, 188-9; Baxter, 2005; 95-6). The level of investment given to a burial provides insight into the importance of the deceased, their identity and position in society; that age was a stronger influencing than others such as gender, shows that age was frequently drawn upon as a reference for appropriate practice. How a body is treated in burial is a stage for the

production and reproduction of society through ritual and symbolism, where social identities and roles are re-enacted and reinforced (Lucy, 1994, 24).

Less accessible archaeologically are responses to the deaths of children. Emotion and grief are factors which should be considered, as it is the mourners, and not the deceased, who are active in burial. The importance of relating the intentional, emotive and embodied experience of burying an individual, where 'death is a deeply moving, personal experience' with the potential to affect 'individual responses, not necessarily driven by social aspirations' was highlighted two decades ago (Meskell, 1994, 42). Exploring the reasons for mourners choosing certain types of burial treatment is not easy to investigate. Age differentiations 'are an active creation of the mourners, who felt it important to make such distinction' and may be informed by tradition or be spontaneous (Lucy, 1994, 24). Only by looking at an entire specific burial population can we begin to understand what differentiation may have meant to the mourners; exceptions therefore become significant. This approach was taken in this research, as the meaning of distinctions such as age differentiation may only be understood on a local, community level; a wider approach 'would blur such distinctions, rendering them meaningless' (Lucy, 1994, 25). It has also been observed that burials of children reflect a society's attitudes to children who died, rather than their attitudes to children generally (Baxter, 2005, 94). Though this may be indicative of attitudes to child mortality, it would still provide an insight into how society viewed children and reacted to their deaths. This may also explain why the young have been observed buried in atypical ways. Infant burials in particular have received special attention, which is a focus for discussion below and for analysis in subsequent chapters.

### *Recent examples from burial archaeology*

Analyses that sought to discuss the nature of burial archaeology in a specific area or period including the treatment of children have proved especially fruitful in recent years. These demonstrate again and again that differentiation occurred, via burial location and objects included with the deceased. Many of the observations, informed by osteological ages, have been used to infer social organisation, the positions of children and how and at what ages juveniles may move from one social category to another.

Fahlander (2012) identified an understanding of separate age-stages at Skateholm, southern Scandinavia, for those aged 0-1 year, 1-7 years and 8-13 years during the Late Mesolithic period (c.550-4000 BC). Around 7-8 years, children increasingly became part of the adult world, until 14 years when their graves became the same as adults (Fahlander, 2012, 20, 27, 28). Specific ages for transitions has also been shown at the Early Bronze Age cemetery at Mokrin, where infants aged 0-1 year were absent, interpreted as purposeful exclusion, whereas those aged 1-20 years were represented, with a milestone of personhood or community membership therefore suggested around 1 year (Rega, 1997, 235-6, 239). This would suggest that those dying within their first year of life were not conceived as really part of the community, or that there was something else 'other' about them that necessitated burial in a separate area. A similar interpretation has been suggested for Mycenaean Greece, where children were treated with different customs and burial offerings than adults. Lebegyev (2009) identified age-stages for children from birth to 1-2 years, 1-2 years to 5-6 years and 5-6 years and older. Adults and older children were buried in formal cemeteries and possessed similar grave goods, interpreted as a threshold of gendered identity, whereas infants and young children were buried in habitation zones with child-specific grave goods, reflecting their liminal state as not full members of society (Lebegyev, 2009, 21-2, 25, 27-29).

Caution should be exercised when comparing adult and child burials that consider adult burials to be normative (Baxter, 2005, 96), interpreting those of children as representative of their non or incomplete membership of society. Analyses of spatial organisations of how child burials relate to adult burials have shown how burials of children may have possessed wider social significance. Using data from two Japanese middle Yayoi period (3<sup>rd</sup> or 4<sup>th</sup> century BC) cemeteries, Mizoguchi (2000) inferred that the graves of infants (birth-3/4 years) and children (3/4 years-12/15 years) were used by communities to refer to the past, present and future, where the dead child and their grave form part of ‘a spatio-temporally mapped genealogy’ as well as representing a ‘marker of an unfulfilled future’ (Mizoguchi, 2000, 149). The referencing of burials of ancestors for a new child burial may represent parental or community concern for the child linked with both the living and the dead and a method of recreating and reproducing relationships (Mizoguchi, 2000, 142-3). This interpretation is compelling, as it allows for children to have worth in the burial record and a similar position with the community of the dead as once held in the living. The inclusion of child graves, including the insertion of children into existing adult graves, demonstrates concern on a social and familial level, and perhaps also an attempt to ensure the care of children in the afterlife (Mizoguchi, 2000, 145, 146, 148).

Child differentiation in burial is also evident in examples closer to the subject of this thesis. In Roman Britain, Gowland identified a two-stage childhood from grave goods, one for children aged 1-3 years with gender-neutral artefacts, and another for those aged 4-12 years with artefacts indicative of the acquisition of a gendered identity. Location was also used as a factor for differentiation of the very youngest. Burial within settlements in shallow pits was appropriate for infants who died younger than six months, suggesting that the marginalisation of infants based on their social differentiation had liminal relevancy in the ritual domestic environment (Gowland, 2001, 157-160, 163; Moore, 2009, 33, 48). For

Anglo-Saxon England, Lucy demonstrated how children were perceived as a separate category (Lucy, 1994, 23). Ten to twelve years of age has been identified as the end of childhood in England from grave goods, indicated by burial in adult dress (Stoodley, 2000:463; Crawford, 2000, 172; Lee, 2008, 23). Another study suggested that this is unlikely to represent a true transition from childhood to adulthood, as some objects associated with adults, such as swords or bronze vessels, were only observed with those aged 20-50 years, which could simply mean that adults of a certain age or status were buried with those items (Lee, 2008, 23-4). The use of objects could therefore vary and probably were used to express multiple identities and agendas. Though extremes of wealth through grave goods are noted, perhaps representative of future status had they lived, no object types are observed solely with children (Crawford, 2000, 171, 175). Children, underrepresented from Anglo-Saxon furnished cemeteries and burial ritual 'because their place lay within other realms of social expression', have also been observed with a smaller range of objects, some of which may be damaged 'adult' objects, of symbolic, rather than literal, importance (Crawford, 2000, 172-3, 177). Gowland suggested age-based differentiation, with children aged 4-7 years buried with both a greater variety and quantity of grave goods than younger children. Female-gendered artefacts in graves increased at some sites with those aged 8-12 years and at others with children aged 13-17 years, with the burials of the latter group 'adult' in style. Types of brooches varied by age, leading Gowland to infer an age transition firstly around 8-12 years with increasingly gendered objects, and a second around 18 years, perhaps signifying marital status (Gowland, 2006, 148). An increase in male burials with weapons for those aged 18 years or older also suggested a transition occurred for men (Gowland, 2006, 151). This is similar to Viking Age burials from Gotland (AD800-1050), where Thedéen identified a two-stage childhood for female individuals. Girls aged 0-5 years of age were buried with a few beads and an arm-ring, compared to those aged 5-15 years who were buried in dress similar



to adult women and more ornate assemblages of beads as well as arm-rings. Thedéen concluded that these grave goods had an important role in creating relational age-based identities in their depiction of a 'social age' (Thedéen, 2009, 78) and it is likely that these social ages reflect a difference in treatment in contemporary society.

Sayer (2010a) recently developed an approach which sought to use the variation apparent in Anglo-Saxon burials to refine dates assigned to burials and identify levels of association between them. The usefulness of this is that it aimed to provide access to viewing and assessing which burials within a wider group may have been interred around the same time. He used three Anglo-Saxon cemeteries to establish a dating scheme for burials using 'generational information' alongside spatial location, age, life course, gender and grave goods. By looking at life-time chronologies and social time, focusing on both life courses and social identities and memories of the deceased and the buriers, Sayer proposes 'a methodology for augmenting traditional chronologies by determining generational relationships and degrees of contemporaneity of individuals and burials within a cemetery'. Cemeteries were understood as zones of real family and community history, with patterns in funerary practice perhaps indicative of generational trends. Sayer demonstrated that by isolating the 'wealthy' burial in a group dating to the same generation, it is possible to see the head of the household. Stressing the relevance of the burying group and understanding their motives, Sayer seeks an understanding of the 'social time' of the funerals in a period where considerable variation has been identified at small community cemeteries (Sayer, 2010a, 60-3). By looking at a generation with perhaps two generations alive at any one time, how they interacted and related to one another based on their own and other's life-courses and experiences, it was possible to plot horizontal stratigraphies of burials by generation and understand social time. Assigning burials to a generation enabled estimation of the beginning of each person's 'period of influence' (Sayer, 2010a, 65-6, 67-9). Using the wealthiest

graves, categories of age at death, grave orientation, biological sex and gender were determinable alongside each burial's generation and differentiation was observed (Sayer, 2010a, 71, 72). The identities of both generational family groups and the individuals within them related to and transformed the identities and social memories of later generations, and were expressed through the reinterpretation of funerary practices (Sayer, 2010a, 79, 80, 81). Sayer concluded that by investigating the intentions and agencies of past burying populations alongside social time 'it is possible to observe the transformation and transmission of complex social identities', giving 'the temporal context within which society operated and memory was transmitted'. The strengths of this approach include considering age alongside chronological information, to subdivide horizontal stratigraphy and identify groups which may have shared social time but differentiated themselves through burial to better investigate the living and the dead (Sayer, 2010a, 82). Sayer's methodology may hold potential for the medieval period in investigating variation in burial practice as generational, rather than one based on community or religious belief. However, medieval cemeteries, generally being larger, longer-lived and with poor non-artefact based dating, may not possess the dating and clustering required.

In addition, both Mizoguchi's and Sayer's methodologies are adult-centric. Mizoguchi suggests child burials are arenas for the representations of lost expectations of parents, carers and the wider community, and Sayer that clusters of burials may inform on generational and inter-generational relationships and the construction of social memory. What about the children themselves, both dead, and alive in the community? What about the influences of other emotions, such as loss and grief, and religious beliefs? There may be greater potential in addressing such questions through the burials of medieval communities along with known historical and religious context.

## **Conclusion**

This chapter has demonstrated the approaches that have sought to identify the medieval and archaeological child and the evidence that is often used to study them. A particular challenge is deciding how best to do this via material culture, in identifying which objects were used by children, how and for what purpose, and through archaeological features that have, tentatively, been interpreted as the result of children's activities. Ultimately, it is difficult to attribute such items conclusively to children without associated physical evidence for the children themselves.

This can be overcome by investigating children through burial data, as the above studies have shown. How children were buried should be approached as if the burial were an artefact. Through this 'data child' approach, I will investigate direct relationships between the physical child and material culture, for example grave goods, or archaeological features, such as the construction of the grave. The physical child will provide the biological age that is the first reference for analysis of differentiation by age. The surrounding evidence of how the child was buried will provide the contextual information from which to investigate attitudes to children and their deaths. It is the connection between the two forms of evidence that will facilitate the discussion of children in the medieval period through their burials.

This investigation focuses on the burials of children, and does not examine the attitudes of children themselves to either their own mortality or the mortality of others. Burial would have been a family or community decision, and these decisions are likely to have been those of adults. The historical sources that provide a reference to medieval attitudes to children were also the observations of adults. This study has of necessity taken an adult-centric position to investigating the medieval child. A further theme which was discussed above, but was not pursued within this thesis, is the effects of loss and grief on the burial of children.

Though the emotional responses of the mourners will be referenced as influences on child burial, at this stage it is not possible to address this topic thoroughly. This is mainly because at the beginning of this project, the groundwork necessary to enable such an analysis had yet to be undertaken. It is hoped that this research will demonstrate that age at death was indeed a factor in the burial of children in the medieval period, providing a foundation for addressing emotional responses. While the motivations for such differentiation can be suggested, it is hoped this will become a focus for archaeological analysis in the future. To conclude, previous research has shown that markers of difference by age can be identified from both historical sources and archaeological data. The importance of contextualising the osteological child with the social or cultural definitions or attitudes, from both archaeology and history, has been demonstrated. That this has yet to occur for the medieval child will be demonstrated in the next chapter, and addressing this forms the main purpose of this thesis.

## **Chapter Three: Children and burial in medieval England**

### **Introduction**

The aim of this chapter is to illustrate current academic understanding of children and their burial in medieval England. The chapter provides necessary context for the period in general by showing what burial was like in the preceding centuries and what is known and thought about child burial in the medieval period. The following will also identify knowledge gaps that will be revisited in later discussions, namely that the influence of age on medieval burial has not been adequately addressed.

In addition to examples of historical attitudes to death and the afterlife, the chapter provides a synthesis of how children have been approached via Anglo-Saxon burial. Though later medieval burial practice in England is receiving increasing academic attention, the Anglo-Saxon period (5<sup>th</sup>-11<sup>th</sup> centuries) has received greater discussion. This is partly due to the visibility and appeal of the archaeology as well as contemporary religious and social developments. Approaches have focused on the geographical origins of the buried as well as wealth, status and contemporary social organisation through community cemeteries. Anglo-Saxon burial is relevant as the period preceding this study's remit and one in which much variation, commonly assumed to cease after the 11<sup>th</sup> century, has been identified. Burial archaeology has the potential to allow insights into the identity, beliefs and motives of the individual within the grave and the burying population. Success has been achieved in inferring differential treatment based on life stage at death, as well as status, sex and disability. Also summarised are discussions of Anglo-Saxon burial in relation to children,

before medieval burial archaeology and the context and treatment of medieval children is discussed.

### **Early medieval attitudes to death and the afterlife**

Written sources provide limited understanding of ideas held by ordinary people and most are normative rather than narrative. Orderic Vitalis (1075–c.1142) described visitors to the shrine of Guthlac at Crowland Abbey ‘all seeking to be healed in body or in soul’ (Chibnall, 1969, vol. 2, 333, 339). From the 11<sup>th</sup>-12<sup>th</sup> centuries peasants paid a ‘soul-scot’ for burial and intercessory prayers for souls by priests as part of the financial obligations owed by parishioners, while the peasantry and small landowners were donating money and land to shrines and monasteries in return for positive intervention for their bodies and souls (*Textus Roffensis*, c.1122-1124; also land holdings in *Domesday Book*; Williams and Martin, 2003). The late 10<sup>th</sup>-early 11<sup>th</sup> century church was characterised by diversity through theological debate and an evolving framework of pastoral care that may have led to parish communities developing localised strategies for dealing with their concerns. Old English laws describe individuals denied burial in churchyards and Anselm of Canterbury (c.1033–1109) described how the bodies ‘of those that have been surprised by death can be placed in the church and buried in the cemetery, if it is done in such a way that their blood and fluids do not soil the church’ (Daniell, 1997:103; Lauwers, 2005:172 in Crawford, 2010:98). The wicked dead would be unable to transition from the living world to the next because the corpse would retain part of their negative identity; they could be buried deviantly in a liminal location, decapitated, buried prone or piled with stones (Reynolds, 2009:14, 37, 248). Beliefs about the dangerous dead are detailed in ghost stories, such as William of Malmesbury’s (c.1095/6 – 1143) *Gesta Regum* and William of Newburgh’s (c.1136?–98?) *Historia Anglicarum*.

These include the ‘witch of Berkeley’, a morality tale involving a reanimated corpse and the idea of the punishment of the body as well as the soul after death; Malmesbury disliked such folk beliefs which described how a corpse could walk as a result of a sinful soul or demonic possession (Mynors et al., 1998, 377-80). William of Newburgh’s similar accounts of revenants also detail how a letters of absolution were needed to stop a risen corpse; peasant superstitions preferred dismemberment and burning (Stevenson, 1858, pt. 1, vol. 5 CHAP.xxiv, 656-661).

Written sources also suggest anxiety about children in the afterlife. Peter of Cornwall (d.1221) records how his grandfather had a dream about his son, who had died at around 12 years, which caused anxiety about the afterlife his son was experiencing and what he himself would experience. The father dreamed that he met his son, who had been sent by God to console him, and to show his father the beautiful place where he now lived (Orme, 2003, 127-8). Another is the late 14<sup>th</sup> century poem *Pearl* in which a father falls asleep on the grave of his infant daughter and dreams he sees her on the opposite side of a river. He learns that she has become resurrected as a maiden and is Christ’s bride and queen, despite her young years, and living in a lavish city (Orme, 2003, 128; Gilchrist, 2012, 20, 208). The unbaptised were the cause for most concern for writers, though Crawford (2010:99) shows how silent the sources are about how they should be buried. Later medieval examples, discussed below, may originate from earlier attitudes.

### **Medieval attitudes to death and the afterlife**

The most important theological influence on death and burial was the development of Purgatory. Originating in the writings of Augustine (d.430), where purgatorial fire could allow purging of sin after death in lieu of adequate penance in life, and Gregory (d.604) for

the purging of minor sins, Purgatory was developed by writers such as Peter Lombard (d.1164), who identified it as a physical place where the majority of the Christian dead would progress (Colish, 1994:583-609). Peter the Chanter (d.1197) developed practical advice for the ordinary laity to confess their sins and complete the journey through Purgatory (Baldwin, 1970, 191) and Thomas Aquinas (d.1274) systematised existing ideas about contrition, confession and absolution while stressing that the living could benefit the dead (Ombres, 1981, 279). By the late 12<sup>th</sup> century, masses for the dead became increasingly popular due to beliefs that contrition during life would not be sufficient and individuals increasingly began to focus their prayers on the known dead, including paying for priests to say masses, sometimes in perpetuity. Manuals instructed priests on how to inform parishioners of the fundamental aspects of the increasingly conformist and centralised faith after the Fourth Lateran Council, c.1213-1215 (Tanner, 2000:113-4). Purgatory therefore created relationships of obligation of the living, prolonging the presence of the dead.

Purgatory caused anxieties about dying unprepared. To have a Good Death, as explained in the *Ars Moriendi*, two early 15<sup>th</sup> century Latin texts which detail how a person could “die well”, an individual should have undertaken good works, arranged for prayers to be said in their memory, confessed their sins, received extreme unction, reaffirmed their faith and ordered their affairs before dying in the presence of companions and a priest. Benefactors could further limit the time they would spend in Purgatory by being buried in monasteries or hospitals (Gilchrist and Sloane, 2005:19-20; Gilchrist, 2012, 189). Failure to achieve a Good Death could have negative effects for the deceased and cause distress to family and friends (Binski, 1996:33, 41; Duffy, 2005:322). A Bad Death occurred suddenly and without adequate preparation. Such individuals could be feared and banned from burial in consecrated ground if it was felt their presence would defile holy soil; they might also be buried in ‘unorthodox’ ways (Gilchrist and Sloane, 2005:71). Ghost stories and morality



tales were used to warn parishioners about the potential dangers of an undesirable death. The Byland Abbey ghost stories, c.1400, were written to teach about sin and the importance of confession (Shinners, 2006). 'The Book of the Preacher of Ely', written in the 15<sup>th</sup> century, includes a ghost story in which a deceased woman appears before a friend; when he inquires after her health she replies "[N]ot well. But you can help me if you are willing" as she requires masses to be said on her behalf (Joynes, 2006:40-41). These ghost stories differ from late Anglo-Saxon examples in that rather than the ghosts being dangerous they are souls in need of aid. The story of 'The Three Living and The Three Dead', appears in several versions, where three corpses in various stages of decomposition warn three living young men of their fate (Binski, 1996:134-138, Hadley, 2001:90) and remind the living of their obligations to deceased ancestors (Gilchrist, 2012, 193). Holbein's 15<sup>th</sup> century engravings depicted death as a human corpse warning the living or taking them away to die (Orme, 2003:113). Such macabre images were repeated in churches within an artistic and literary framework influenced by contemporary outbreaks of plague and famine and extended to portable material culture through *memento mori* objects (Gilchrist and Sloane, 2005:12).

Unbaptised children died a Bad Death and as such were unclean, dangerous and spent eternity in *limbus inferni* or 'the edge of hell' (Orme, 2003:124; Shahar, 1992:51-2; Gilchrist and Sloane, 2005:72). Unbaptised infants would not progress to salvation, and such was the fear of this that midwives could perform emergency baptisms (Gilchrist, 2012, 185). Though burial of unbaptised infants on consecrated ground was forbidden by doctrine, evidence suggests it may have taken place. A royal license (c.1389) to enclose the cemetery of Hereford Cathedral cites one reason to prevent secret, nocturnal burials of the unbaptised (Orme, 2003:126).

Particular anxiety regarding the death of children may have existed because it was debatable how much they could prepare for a Good Death. Estimations of child mortality are as high

as a third for those under 10 years of age (Schofield and Wrigley, 1979 in Lewis, 2007:22; Orme, 2003:113). In the 12<sup>th</sup> century, pre-pubescent children were viewed as mentally and physically immature and perhaps as a result not accountable for sin (Orme, 2003:123). Stories also detail further anxieties; Bishop Bartholomew of Exeter (c.1161-84) was awoken by crying infants whose souls were not being prayed for. Another from the Byland Abbey folk stories details how a traveller comes to the aid of his dead unbaptised son; such a tale has parallels with John Wycliffe's *Triologus* (c.1382) where he questioned the concept that unbaptised children could not be saved (Orme, 2003:123-4, 126-7).

Historical evidence has suggested that in burial baptised children were treated like adults (Orme, 2003:117-9). Others detail that the burials of infants were different, with babies buried in their chrisom cloth if they died before the churching of their mother (Gilchrist and Sloane, 2005:23-4, Orme, 2003:119). Deaths of children were felt emotionally; Peter of Cornwall wrote with sadness and loss about the death of his infant niece, buried in her chrisom, between the legs of her recently-deceased grandfather (Orme, 2003:121). Documentary evidence alongside eaves-drip and church burial of young children caused Hadley to conclude that such actions may 'have been part of the emotional and spiritual response to the deaths of the very young' (Hadley, 2010:109; Thompson 2004:10-11). However, there is a lack of accounts of how child death was viewed and understood in the medieval period. The emotions of medieval populations have until recently been of little interest though as Orme notes 'there is no reason to assume that this caused parents to sorrow less, to remember them less, and to cherish the survivors less than would be the case today' (Orme, 2003, 9; also Hadley, 2010, 107).

## **Children and Anglo-Saxon burial archaeology**

This thesis is not concerned primarily with Anglo-Saxon burial, about which a great amount has been written, including for children (for recent works, see Buckberry and Cherryson, 2010; Crawford, 1999; Devlin, 2007; Lucy, 2000; Reynolds, 2009; Sayer, 2013). This discussion provides a brief overview to contextualise the medieval period, with no sharp break but continuity between the two periods. The discussion is intended to provide a comparative account for the later medieval period by demonstrating how child burials have been studied and the information gathered in the earlier period. Other archaeologists of the later medieval period have used Anglo-Saxon studies as foils for their own research (Gilchrist, 2008), indicating the usefulness of such inclusions. Examples of child burial practice identified in 9<sup>th</sup>-11<sup>th</sup> century churchyards which have the potential to overlap chronologically with the later medieval period, such as zoning, will be used to investigate continuity or change.

Early Anglo-Saxon burial is characterised by furnished burial in community cemeteries of varying size based on family or kin groups represented by variation in orientation, body position and types of grave goods, based on multiple social factors. By the middle Anglo-Saxon period, greater variation is evident, with burial following earlier traditions, in new Christian sites or short-lived, small cemeteries in later urban centres. West-east aligned, generally unaccompanied burial in formally-designated locations, overseen by ecclesiastical figures for entire settlement populations eventually became the norm (Lucy, 1994, 25-6).

A variety of examples of treatment of children have been identified. Increased formality of burial has been suggested as explaining the greater visibility of children in terms of burial locations, the increasingly rigid burial frameworks that followed the conversion and burial of children in deeper graves, with spatial differentiation between child and adult burials

remaining a theme (Crawford, 1999:78-9; Hadley, 2010:109; Lucy, 1994, 27, 29). Buckberry readdressed the recovery of child remains from 23 5<sup>th</sup>-12<sup>th</sup> century sites in England. Fewer than expected burials of infants were recovered from 5<sup>th</sup>-7<sup>th</sup> and mid 7<sup>th</sup>-mid 8<sup>th</sup> century cemeteries but more infant were identifiable from cemeteries of the 8<sup>th</sup> century onwards. Buckberry concluded this higher figure was not a result of changing burial practices for children, but 'rather a change in the location, and hence the geology, of cemetery locations' (Buckberry, 2000, np). Hadley has suggested Christian concern for the dead and the importance of status through family as further reasons for their increased visibility (Hadley, 2010:107; 2011:294), while Crawford suggested that the lack of child remains recovered from late Anglo-Saxon domestic contexts may also be relevant (Crawford, 2008:202). Cemeteries of the middle Anglo-Saxon period (roughly 7<sup>th</sup>-early 9<sup>th</sup> centuries), without attendant churches, had a high levels of organisation through burial in rows, usually extended-supine, aligned west-east (Stoodley, 2000; Buckberry, 2010:2). Cemeteries without churches include Yarnton in Oxfordshire (Crawford, 2011:94) and Buckberry's study of cemetery diversity in mid-late Anglo-Saxon Lincolnshire and Yorkshire demonstrated that fourteen of sixty excavated cemeteries may not have had churches (Buckberry, 2010:19). Though burials from earlier centuries have been excavated in association with churches, churchyard burial is now thought to have originated in the 10<sup>th</sup> century, coinciding with the first records of burial tax at minster churches, increased classification of consecrated ground and the first mentions of burial practices in documentary sources (Crawford, 2010:94; Gittos, 2002; Tinti, 2005:32-5, in Hadley, 2011:290-1; Hadley and Buckberry, 2005:121-47).

Though a decrease in provision of grave goods did occur, 'the diversity of burial rites confirms the silence of the written record, and...belies assumptions periodically expressed that the Church ushered in an egalitarian burial rite' (Hadley, 2011:291). New trends in later

Anglo-Saxon cemetery studies have been identified that contradict the long-held assumption that burial became increasingly uniform (Craig and Buckberry, 2010:129). Burials have been observed with dress accessories, jewellery, knives and wooden objects and furniture such as coffins, graves with linings of stone, chalk, spreads of ash or charcoal, wooden 'wands', organic head pillows, stone covers and evidence for markers (Hadley, 2010:103; 2011:291, Rodwell, 2007:27), leading to the conclusion 'there was no such thing as a Christian burial' (Thompson, 2004:32). Variety also informed the suggestion that family or local community members may have been involved in burying individuals rather than religious officials, with a similar interpretation proposed for the different arrangements of stones observed in graves at Raunds (Boddington, 1996; Hadley, 2011:291).

Explanations suggested for such variety has included the association of ash and charcoal with penance, humility (Kjølbye-Biddle, 1992:231) and the corruption of the body (Thompson, 2004:122-6, Hadley, 2010:103), as well as functional uses as an absorbent, marker or high status symbol. Holloway concluded the practice did not favour one particular group, being observed with religious individuals, adults, children and infants over a wide region and within a variety of cemeteries, though the practice possessed a symbolic meaning linked with the identity of each individual or group (Holloway, 2010b:83-92). Hadley describes 8<sup>th</sup>-11<sup>th</sup> century practices as 'a series of regularly-occurring variables...which seem both to have been acceptable to the Church and to have had meaningful currency within later Anglo-Saxon society' that were typically observed within one group (such as a family) rather than individuals of a particular age or sex (Hadley, 2011:293-4). Family was also a factor for higher occurrences of multiple burial in the later Anglo-Saxon period than previous centuries (Stoodley, 2002). Later Anglo-Saxon burials may reference earlier burials in the clustering of individuals that may be genetically-related, such as the 'founder's graves' of

adult males and associated juvenile burials at Raunds and Wharram Percy (Boddington, 1996:50; Hadley, 2010:110, 2011:294, Mays et al., 2007:224-6).

Recovery of infant burials close to the outer church walls at Raunds led to the suggestion of the concept of 'eaves-drip' burials, where rainwater running off the church roof may have had a baptismal benefit, coinciding with the introduction of fonts, in the 10<sup>th</sup>-11<sup>th</sup> centuries (Boddington, 1996:55, 69; Crawford, 1993:88; Hadley, 2008). Neonate and infant eaves-drip burials have been observed at multiple sites (Crawford, 1999; Hadley, 2008; Ferrante di Ruffano and Waldron, 2000, 15), with burial in this location and churches as at Raunds and Burnham, Lincolnshire perhaps 'a means by which families made specific social and spiritual commitments to their local church' (Boddington, 1996:8; Coppack, 1986:39, in Hadley, 2010:109). A recent discussion of eaves-drip burial by used several early Christian examples and re-examined the interpretation of the practice as providing a secondary blessing as recorded in the 19<sup>th</sup> century (Craig-Atkins, 2014, 102; Crawford, 1999, 85-9; Wilson, 2000, 216). Craig-Atkins used examples of earlier, non-Christian, burial traditions for infants, such as in or under the eaves of buildings (Roman) or away from main cemeteries in settlement contexts (early and middle Saxon) to suggest that the impetus for the practice may instead have been factors such as chronological age or rites of passage linked to physical development (Craig-Atkins, 2014, 104-5). That the rite may be unrelated to infant baptism, of which the level of adoption is unclear at this time, is an interesting alternative. Craig-Atkins' theory that infants were buried in eaves-drip locations during the later phases of Raunds, Pontefract and Hereford because they were no longer in use by the local community and as such were liminal and appropriate for the burial of the unbaptised and socially-excluded is not entirely plausible. There are examples of cemeteries in use before and beyond the 10<sup>th</sup>-11<sup>th</sup> centuries exhibiting eaves-drip burial both before and after this time; St Olave's, Creting, Suffolk between the 12<sup>th</sup>-13<sup>th</sup> centuries and Rivenhall, Essex during the late Anglo-

Saxon period-late 19<sup>th</sup> century (pers. comm. Carenza Lewis, March 2011 and incomplete unauthored site report; Rodwell and Rodwell, 1985:101). Though challenging for the medieval period, the infrequent observations of infants in domestic contexts (see below) may be examples of similar exclusion and account for the often-reported underrepresentation of infant remains from churchyards. More convincing is Craig-Atkins' hypothesis that adult women buried in eaves-drip locations may have been interred there as their manner of death (childbirth or similar maladies) or gender (as mothers, midwives or carers) conferred on them a shared identity with infants and a special status that led to special burial treatment (Craig-Atkins, 2014, 108-9). The continuation of eaves-drip burial beyond the 11<sup>th</sup> century has received little attention, though it has been said that the phenomenon 'seemed to die out after 1066' (Lewis, 2007:32; also Daniell, 1997).

Clustering and zoning of child burials in other areas has also been observed. At Great Chesterford, Essex (late 5<sup>th</sup>-early 7<sup>th</sup> centuries), infant and child burials were clustered whereas adult burials were spaced, interpreted as the reservation of areas for children. Child burials were also ordered at Barrington, Edix Hill, Cambridgeshire and Apple Down, Sussex, though such groupings were believed to be less common in medieval cemeteries because of spatial constraints on consecrated ground (Boddington, 1996:49-50; Lee, 2008, 26-7). Areas for child burial were noted at Hartlepool and north of the middle Anglo-Saxon church at Brandon, Staunch Meadow, Suffolk (Lee, 2008, 31). Such clustering often included infants as well as older children and when commenting on the observations of infant remains buried in the area described as a children's graveyard at Whithorn, Dumfries and Galloway (8<sup>th</sup>-9<sup>th</sup> centuries), Crawford concluded their presence 'suggests that such babies were considered fit for burial...though it seems unlikely that all of them, particularly the stillborn, can have been baptised' (Crawford, 2008:202).

Bio-anthropological approaches have also assessed juvenile remains and recent publications have focused on children. Integration of bio-anthropological approaches and social archaeology through cemetery analysis (following Robb et al., 2001:213) has been a recent focus for Craig and Buckberry (2010). Their case study of Raunds used biological indicators of stress alongside grave furniture and burial location. They concluded that social stratification was evident in burial as osteological evidence suggested ‘that individuals who suffered more biological stress were often those commemorated by less elaborate burial and *vice versa*’ (Craig and Buckberry, 2010:138); a similar approach was taken by Dawson (see below). This may suggest juveniles were viewed as lower status, as at Raunds stone was used in greater frequency in adult burials (Boddington, 1996, 39). Hadley (2010) analysed burials dated c.700-1100 with evidence for elaborate or unusual burial, including the 10<sup>th</sup>-11<sup>th</sup> century founder’s burials at Raunds, Great Houghton and Wharram Percy. Hadley concluded these burials were suggestive of both ‘the privileging of adult male graves’ and an attempt to use these important burials to give protection to burials of young children (Hadley, 2010:109,110). Buckberry produced similar conclusions for bias in favour of males during her study of late Anglo-Saxon cemeteries in Yorkshire and Lincolnshire in noting that adult males were more likely to be buried in a more prestigious location or manner than women (Buckberry, 2007, Craig and Buckberry, 2010:130). Other burials interpreted as high-status males, such as members of religious communities, were sometimes buried in close proximity to churches, in particular on the southern sides, during the late 9<sup>th</sup>-11<sup>th</sup> centuries (Hadley, 2010:104). Evidence for bias for burials of women is only evident at Raunds, where 57% of adult burials north and west of the church were female, compared to 38% elsewhere in the churchyard (Boddington, 1987: 420).

The opposite may have been true for low-status individuals or those suffering from physical conditions. Burials within or outside the churchyard boundaries during the 11<sup>th</sup> century at



North Elmham, Norfolk include an adult male with a deformed left leg buried east-west rather than west-east and another whose skeleton had multiple sword injuries (Wade-Martins, 1980, 189; Hadley, 2010:104-5). Three males were buried on the limits of the churchyard at Raunds; all experienced impairments such as shortened and atrophied long bones and leprosy, and one man with injury to his knee had stones placed under it, perhaps to provide support (Boddington, 1996:41-2, 69; Crawford, 2010:94; Powell, 1996:118, 120; Hadley, 2010:106-7, 110-112). A study of multiple burials showed over half (57.3%) were adults with juveniles, and that the younger they were, the more likely they would be buried with an adult. For adults, age was not a significant factor but younger non-adults tended to be buried with adult females and older non-adults with adult males (Stoodley, 2002:112-3). Stoodley also interpreted multiple burials of children with adults as not always with related individuals but with those with physical impairments (Stoodley, 2002:120). Two adult skeletons with evidence for leprosy, overlain by two small children at the 5<sup>th</sup>-6<sup>th</sup> century Cemetery A, Beckhampton, Hereford and Worcester, the burial of an adult male with notable pathology buried with a child, and the spatial proximity of burials of both children and adults affected by disease in the 6<sup>th</sup> century cemetery at Barrington, Edix Hill may be further examples (Lee, 2008, 28-9). Children buried with sick adults may indicate that it was viewed as appropriate to bury such individuals together because they possessed similarities in life, such as age (whether social, cognitive or emotional), status or biological relation. Lee concludes that this does not signify they were viewed as lesser people, and that it was their shared liminality, unable to contribute towards 'adult' society, that related the two groups (Lee, 2008, 28, 36). An inability to explain illnesses or impairments in rational, medical terms may also have led individuals to equate them with sin or evil spirits, which in turn may have affected burial ritual (Crawford, 2010:95-97). However, several high-status burials of afflicted individuals suggest sympathetic and inclusive attitudes towards disability in Anglo-

Saxon England, at least in burial (Lee, 2008, 30). Such attitudes likely continued into the Christian period through the burial of a child and woman with terminal illness together at the possible mortuary chapel at Flixborough, Lincolnshire and the burial of a possible leper near the eaves-drip burials at Raunds (Lee, 2008, 31). While individuals who experienced injury or disease were not excluded from regular Christian burial, their burial location may have been used to display that these individuals were different to the rest of the local population in having an altered social position. This may have been particularly appropriate for the burial of children and has potential to be explored for individuals that may not have displayed physical symptoms of illness during life or with unknown causes of deaths but who were buried in noteworthy locations. Examples for children could include those clustered by church walls or in zones of the churchyard, within multiple burials or in association with certain artefacts.

### **Children and medieval burial archaeology**

Recent research has focused on burial of the whole period rather than a particular form of burial, excavated site or sub-division based on a historical classification. Historical and art-historical sources have been used alongside archaeology, resulting in literature which combines these areas. The subject also has profited from the integration of theoretical approaches to identity, gender and social archaeology as well as the life course. Though there is unexplored potential, existing research has demonstrated the wealth of information available for study.

An early work was *Medieval Death: Ritual and Representation* which, though predominantly art-historical, considered historical and archaeological evidence, focussing on Christian examples of the Roman Empire to the 16<sup>th</sup> century. Binski explained the

development of attitudes to death that evolved through to the late medieval period in Europe, illustrated with manuscripts, religious and secular architecture and monuments alongside attitudes to the bodily corruption and morality tales (Binski, 1996:134-140). Archaeology was not a main source for information, nor was detailed consideration given to children.

*Death and Burial in Medieval England 1066-1550* (Daniell, 1997) dedicated several chapters to archaeological evidence alongside historical information. Discussion of the geography of burial (Daniell, 1997:87-115) describes how consecrated ground was defined and ordered and includes contemporary accounts of choice of burial location by the influential. A study of 4,700 wills dated 1389-1475 from the diocesan Exchequer Court of York (Daniell, 1997:97-103) documented that the preferred locations for burial were the choir, chantry, near altars and images of saints with two liminal areas also favoured; the porch and the rood-screen. Preferred within cemeteries were the south side and near monuments such as crosses. Wills also mentioned desire to be buried near family, most frequently for wives to be buried near or with their husbands and parents to be buried near their children (Daniell, 1997:101-2).

The book contains the first collective discussion of issues surrounding the excavation, preservation, analysis and discussion of medieval human remains (Daniell, 1997:116-144). It is also the first book significantly discussion cemetery ordering, grave goods and furniture. Daniell mentions the zoning as 'relatively common, especially in the case of child burials' (Daniell, 1997:124, 150-74) at the east and west ends of churches and eaves-drip burial, which he suggests ceased with the Conquest. Daniell reports contemporary attitudes towards clothed burial that was appropriate for members of religious orders or high status individuals. Rarer were plant remains, including grass and rush pollen within graves at Hulton Abbey, a

burial at Winchester Cathedral on a bed of leaves, as well as the body of Prince Arthur (d.1502) which was treated with spices. Motives for lime, chalk and mortar linings were unclear but perhaps linked to high status, suggested by burial location. Daniell disputes Durandus' explanation that coal was used to mark the location of burials as not supported by the majority of cases where charcoal was beneath the body; instead he prefers explanation as an absorbent or linked with status and penitence. He suggests age was not a factor for charcoal burial (Daniell, 1997:158-60). He dates stones exceptional beyond the 12<sup>th</sup> century and indicative of local trends through their higher occurrence with adult women at St Nicholas Shambles, adult men at Raunds and uncoffined burials at St Helen-on-the-Walls. As well as penitence and humility, he argues their presence in church burials and burials with charcoal 'seems to suggest varying degrees of prestige rather than punishment' (Daniell, 1997:160). Stone lined graves may have been less prestigious versions of monolithic/ composite stone coffins or wood coffins because a stone lining may have required less effort and expenditure. Dates are not presented for stone coffins or cists though wooden coffins are observed throughout and beyond this period. Items reused as coffins such as wooden chests (including a child buried in a chest with in the 9<sup>th</sup> century at Whithorn) may have had meanings as heirlooms.

Daniell also discussed burial with objects. Pebbles, as observed in the mouths of four mature adults at St Nicholas Shambles and one young adult at Raunds, are interpreted as to prevent talking at the Resurrection. He was unable to posit a reason for examples of quartz pebbles from burials, though he mentions a 1384 decree which condemned 'stone-castings' in cemeteries (Chambers, 1971:72, in Daniell, 1997:165). For stone and tile in graves he makes an important point by highlighting that they 'are only made into Christian symbols by guesswork', unlike papal bulla, patens and 'wands' which he discusses within a religious

framework known from documentary sources (Daniell, 1997:166-172). Objects that may have had healing or amuletic properties, using excavated examples linked to miracle stories of St Cuthbert and St Anselm, come mainly from monastic cemeteries (Daniell, 1997:173-4). Though he does not give this topic detailed consideration his statements are echoed by Thompson (2004) and Hadley (2011) when he suggests that during the later Anglo-Saxon period 'the lack of legislation about burial practices indicates the Church was not particularly concerned' (Daniell, 1997:174).

*Death in Medieval England: An Archaeology* (Hadley, 2001) is a survey of research that explores the period c.600-1500. Similar approach to Daniell, it focuses on archaeological evidence alongside literary, documentary and monumental sources. The book mainly draws on evidence from Derbyshire, Lincolnshire, Nottinghamshire and Yorkshire, as the information from these counties is good and exhibits regional peculiarities (Hadley, 2001:10). The length of the study period allowed for a consideration of trends in practice from the pagan Anglo-Saxon to medieval period though the majority of the book is concerned with medieval Christian burial and attitudes (Hadley, 2001:56-91, 125-173). A chapter addresses the geography of death, considering the cemetery within its settlement and landscape context (Hadley, 2001:17-31). For the later medieval period (c.1200-1500), Hadley focuses more on the average parishioner than Daniell when discussing evidence for zoning in, through separate areas for the laity and monastic communities. Hadley argues there is little evidence that the north side of churchyards was less favoured, or that women or men were occasionally buried in separate areas, though popularity of certain areas, such as the southern churchyard, may have affected available burial space (Hadley, 2001:47). Child burials close to church walls, as a predominantly Anglo-Saxon phenomenon, represented regional rather than universal beliefs, and Hadley gives two examples of later

clustering: a group of juveniles buried outside the east end of the chancel at Kellington and a cluster of infant burials north of the tower at Bolsover (Hadley, 2001:48). Recovery of infant remains from domestic contexts is also mentioned, with infanticide or dying unbaptised suggested as explanations (Hadley, 2001:51).

Hadley's discussion also suggests that burial became increasingly uniform. Though the examples of grave goods she describes are religious in nature, such as seals, chalices, patens, wooden rods and vestments, examples of grave furniture do show variation. Wooden coffins are linked to status (Hadley, 2001:115), though the frequency with which they are observed means coffins were not used solely by a minority. Stone coffins were more common in the later medieval period than the Anglo-Saxon for secular individuals of high status, such as patrons. Double burials are also discussed as indicative of family relationships with wills supporting evidence (Hadley, 2001:118).

Daniell and Hadley's publications used considerable corpuses of information, synthesized for the academic and general reader and so not including all possible aspects of the topic. Neither publication considered age as separate categories, nor are 'infants', 'children' or 'adolescents' separately indexed. They highlight unusual burials, whether in terms of grave goods, form and location, or burials of high-status secular or religious individuals. Meaning of burial practice in relation to the population as a whole is generally considered from the perspective of theology and religious teachings, rather than addressing other concerns. The focus is on the interpretation of burial's significance in terms of the buried rather than those who were the chief agents in the burial and its creation. Burial location and the character of graves were discussed separately, and thus not related.

*Requiem: The Medieval Monastic Cemetery in Britain* (Gilchrist and Sloane, 2005) drew together much of the unpublished and published data from monastic cemeteries; parish cemeteries were not the focus but were included on occasion alongside plague and Jewish cemeteries. Focusing on c.1050–1600, c.8000 medieval graves (Table 1 and Appendix 10.2) were analysed to show how people were buried using quantitative, spatial analysis and a cross-cultural framework influenced by anthropology (Gilchrist and Sloane, 2005:13). The study investigated cemetery development and geography, the grave and its contents alongside age, sex, identity, status, manner of death and health as influencing factors. Evidence of the burying population as agents was suggested through practices they may have used to benefit the dead (Gilchrist and Sloane, 2005:227-230). They concluded that burial within monastic contexts demonstrated a variety of practices indicative of local and regional variation and concern to represent individual or group identities (Gilchrist and Sloane, 2005:218, 223-227).

Child burials comprised around 20% of the monastic cemetery population. Infants and younger children were observed in lower frequencies than children aged 11-15 years (Gilchrist and Sloane, 2005:204). Zoning was identified, for example within the lay cemetery at the Augustinian Priory of SS Peter and Paul, Taunton, where twenty infants were clustered in the south-west area, as well as grouping near particular features, such as six infant burials at the northern cemetery boundary at the Benedictine Priory of St James, Bristol (Gilchrist and Sloane, 2005:67). Zoning for unbaptised infants was suggested for twenty-four infants at Castle Green, Hereford due to the unplanned appearance of the graves. The latest burials were nearly all infants or young children, supporting the reasoning behind the royal license (see above; Shoesmith, 1980:51; Gilchrist and Sloane, 2005:72). Children were also observed in multiple burials, such as the coterminous burial of an adult female and an infant

in the western cemetery of Holyrood Abbey in the 14<sup>th</sup>-15<sup>th</sup> centuries and a late 14<sup>th</sup>-mid 16<sup>th</sup> century family burial vault at the Franciscan friary in Bristol (Ponsford, 1975:14; Gilchrist and Sloane, 2005:156-9, 190). Multiple individuals identified within the same coffin have been suggested as mother and child; in 1290 Durandus wrote that stillborn children should be buried with their mothers when death in childbirth occurred (Gilchrist and Sloane, 2005:127).

Gilchrist and Sloane also demonstrated a higher incidence of women and children in coffins than men, such as at St Mary Graces, and suggested medieval medicinal concepts of the bodies of children and women as wet and/or soft as perhaps causing a belief they were more susceptible to putrefaction and more in need of coffins (Gilchrist and Sloane, 2005:221-2; Granger and Phillpots, 2011). Grave goods were observed in non-adult graves, including pilgrim badges, crosses, coins, dress items, fossils, beads and pottery fragments, explained as perhaps having symbolic relevance as heirlooms or possessing protective qualities that motivated their inclusion by parents or guardians (Gilchrist and Sloane, 2005:97, 101, 223-4). Children were also positioned on their sides as if sleeping, a 'position...so seldom seen in respect of adult burials that it must be deliberate' (Gilchrist and Sloane, 2005:155-6). Neonates and infants were also on occasion observed in a prone position, an unusual practice commonly considered to have negative connotations (Gilchrist and Sloane, 2005:72).

Despite apparent continuity from the late Anglo-Saxon period, a change may have occurred around the end of the 12<sup>th</sup> century. For the mid 11<sup>th</sup>-12<sup>th</sup> centuries in monastic contexts Gilchrist and Sloane identified the emergence of burial practices and grave goods solely for the clergy that set them apart as a distinct social group, whereas lay burials changed c.1200-1300 'when the adoption of a diverse range of treatments of the corpse and grave coincided



with major social transformations' such as increased social stratification and the concept of the individual (Gilchrist and Sloane, 2005:215, 225-7, 230).

Burial of children with objects was reviewed in *Magic for the Dead? The Archaeology of Magic in Later Medieval Burials*. Gilchrist (2008) sub-divided objects into religious, natural, antique and demonic, and by comparing them to similar examples from 7<sup>th</sup>-9<sup>th</sup> century graves, concluded that such objects represented established patterns of folk magic implemented by female relations; a practice both condemned and tolerated by clergy (Gilchrist, 2008:122-123, 151-2). Objects in graves are highly-visible and the low instances (approximately 2%) 'may help to identify these mortuary practices as meaningful: we can consider medieval magic by definition to be exceptional, and alternative to normative rites' (Gilchrist, 2008:124). Gilchrist identifies wooden staffs/rods as protective charms linked with travelling or the Resurrection, supported by a 11<sup>th</sup> century journeying charm, as well as perhaps suggestive of the healing of children and protection from serpents. Other religious objects have been identified, such as a pilgrim souvenir buried with a 7-10 year old child after c.1350 at St Augustine's Abbey, Canterbury (Gilchrist, 2008:126-8, 129, Table 1).

Some objects represent 'traditional' mortuary amulets based on 7<sup>th</sup>-9<sup>th</sup> century Anglo-Saxon graves. These include a limestone spindlewhorl and a whelk shell with a 3-6 month old from Upton, Gloucestershire, buried in unconsecrated ground, perhaps indicative of the protection of the home, magical links with spinning, an unwillingness to pay burial fees and/or a desire to conceal the baby (Gilchrist, 2008:133, Table 2; Rahtz, 1969, 87-8). A silver halfpenny within an adolescent burial dated 1350-1540 at St Augustine's Abbey, Canterbury is interpreted as representing healing charms through contracts with saints to undertake pilgrimage (Gilchrist, 2008:133-4, Tables 2, 3). Stones, plants and animal bones may also have been interpreted as possessing occult power. Gilchrist cites two medieval examples,

both with children; a 12<sup>th</sup> century grave of an 18 months-2 year old at Wharram Percy (though the report dates this burial as post-medieval; Mays, 2007b, 345) and an infant buried in the Jewish cemetery at Winchester, 1177-1290 (Gilchrist, 2008:135-7; Clark, 2007: 270). An ash flanged cross, deliberately broken, from a 6-10 year old child's grave at St Mary Sandwell is used to support the association of ash with healing (Gilchrist, 2008:137). Examples of jet crosses, one from an infant grave within the priory church at Gisborough, Cleveland between c.1120-1200, and another from the 13<sup>th</sup>-15<sup>th</sup> century grave of a child within the church at the Cluniac priory in Pontefract, West Yorkshire are compared to suggestions by Pliny and Bede that the material was linked to the soul entering Purgatory and could provide protection from snakes (Bellamy, 1965, 93; Gilchrist, 2008:139-40, Table 4; Jackson, 1995, 93-4). Another category is 'antique' objects; Roman beads from a 12<sup>th</sup>-15<sup>th</sup> century grave of a child from St Bartholomew, London, are an example of a European practice of protection from the evil eye; Roman pottery and tile may have had similar purposes. A Roman coin on the chest of a 12<sup>th</sup>-13<sup>th</sup> century child at Gorefields, Buckinghamshire and a silver penny of Burgred of Mercia (852-74) with a post-11<sup>th</sup> century burial of an adolescent girl at St Helen-on-the-Walls, York may have bestowed healing properties (Gilchrist, 2008:141-3, Table 5; Dawes and Magilton, 1980:15). Demonic magic for beneficial or malign purposes are explanations for grave linings such as ash, typically a late 13<sup>th</sup>-mid-15<sup>th</sup> century practice (Gilchrist, 2008:144-7). Gilchrist suggests such treatment was used to protect the dead from evil forces and that infants and children in particular required such protection. She also suggests that post-mortem connection of the soul and the body is suggested archaeologically by the presence of medical items interred with corpses (Gilchrist, 2008:148-9), which may be relevant to later Anglo-Saxon examples (discussed by Hadley, above).

Recent research has also approached child burial in relation to health and status, looking directly at their skeletal remains. Dawson (2011) used 262 non-adult skeletons from the priories of SS Peter and Paul, Taunton (1158-1539), St Oswald, Gloucester (1120-1539; Heighway and Bryant, 1999) and St Gregory, Canterbury (1086-1539; Hicks and Hicks, 2001) and investigated the status of children mainly through skeletal indicators of health but also burial location (Dawson, 2011:289-308). She used age stages sourced from historical studies, as opposed to osteoarchaeological age groupings, and though the main focus was osteoarchaeological, she concluded that children were more likely to be buried in a standardised location than adults (Dawson, 2011:310-1). She also identified differentiation in practice; at Taunton, children were more likely than adults to be buried in favourable places, such as the west of the church and at Gloucester, infant burials occurred in higher numbers in the north churchyard as at St Martin's, Wharram Percy (Dawson, 2011:311; Mays, 2007a:86-7).

*Medieval Life: Archaeology and the Life Course* (Gilchrist, 2012) includes the most recent discussion of medieval burial and analyses the experience of living through the development of the medieval extended life course, in which the body and soul moved through life, death and the afterlife (Gilchrist, 2012:19-22). Only the most relevant discussions of children in this work are summarised.

Demonstrating how recent archaeological evidence has challenged assumptions of orthodoxy in later medieval burial practice, the greatest variation is identified in the construction and marking of the grave and the propensity and variety of practices, such as 'ear-muffs', pillow-stones and stone linings, differs across cemeteries (Gilchrist, 2012, 200). Objects were noted in approximately 2% of graves, similar to monastic contexts, indicative

of local variation (Gilchrist, 2012, 210, 257-9, 277-822). Despite the low incidence, Gilchrist still considers them meaningful. Including objects and furniture in burial are termed 'pararituals', defined as 'complementary actions that were developed by the laity to express deeply held beliefs' as well as 'enhan[cing] the funeral liturgy and encourag[ing] an active role for the family in rites of death and mourning', in which it becomes possible to analyse the performance of such rituals (Gilchrist, 2012, 10, 201). Gilchrist's study of parish cemetery burial by age focused on grave goods and not other furniture such as coffins or stones. The results showed that children were not the most likely group to be buried with objects with 'the strongest correlation of grave goods placed with adult males (24% of total grave goods in the sample), children (19%), adult females (18%) and older adult females (18%), with lower associations observed for older adult males (14%) and infants under two years of age (4%)'. This contrasts a previous study from monastic sites (Gilchrist and Sloane, 2005), where burials of adult women and children had the highest proportion of objects (Gilchrist, 2012, 210-1).

Gilchrist suggests a lack of burial ordering by age. Though it is occasionally possible to suggest rows of family burials, only those of children (and occasionally older adults) are observed in clusters. Clusters west of churches are interpreted as representing the area children entered the church, both physically and spiritually through baptism, at the beginning of their life course. Gilchrist further interprets western zoning as possessing similar intentions to late Anglo-Saxon eaves-drip burial, linked with belief in the resurrection and how any baptised children dying before 2 years of age would be resurrected among the 'Holy Innocents' (Gilchrist, 2012, 205-6, 207). The purity of the infant as a Holy Innocent may have extended to other individuals if they shared a grave with the child, perhaps also true for pregnant women or women and children who died during childbirth, despite burials of

‘unpure’ women and their unbaptised baby being forbidden on consecrated ground (Gilchrist, 2012, 209-10). Such attitudes may have led to concealed burial. Gilchrist discusses babies ranging in age from foetal to six months from twelve urban and rural domestic contexts of the 12<sup>th</sup> century onward as secret burial activities and evidence for the ambiguous ontological status of infant corpses (Gilchrist, 2012, 220-1, 284-5). The careful nature of some of the burials and the inclusion of grave goods are interpreted as the actions of women concerning an object (the deceased infant) that may have possessed occult power linked to fertility rites, with known medieval charms providing supporting evidence (Gilchrist, 2012, 222-3). Stillborn or unbaptised babies were conceptualised and treated as *things* rather than true persons, to be feared due to their taint of Original Sin, lack of baptism and potential as dangerous dead (Gilchrist, 2012, 219-20). Gilchrist’s life course approach highlighted further transitions that may be reflected in burial practice, such as 1-2 years, a time of weaning and increased mobility, based on a concentration of infant burials north of the nave at St Martin’s Wharram Percy. Another is suggested at 7 years, as children aged up to 7 years comprised half of burials in the north-eastern ditch at St James and Mary Magdalene, Chichester (Gilchrist, 2012, 208). An interesting concept Gilchrist discusses as a reason for the lack of investment of resources in some children’s burials, is whether funerary rites were omitted because they were superfluous. As such practices may have been used to encourage the prayers of the living for the benefit of the dead, ‘medieval people believed that those who died without sin did not require the benefit of intercessory prayers by the living’ (Gilchrist, 2012, 208).

## **Conclusion**

Despite interesting examples of child burial being highlighted, the overall character and significance of burial practice relating to children remains little understood because individual sites have not been examined as a whole and then compared with other sites.

The review has demonstrated that it is hard to access the attitudes of ordinary people. References have demonstrated anxiety about the deaths and afterlives of children, especially the unbaptised, who were also potentially spiritually and socially challenging. Contradictory sources suggest children could be treated as adults in burial or alternatively had their own rituals.

Examination of the Anglo-Saxon Christian period has demonstrated a variety of rites rather than exclusivity of practice that included customs which favoured children. Perceived qualities of the young have been interpreted as the impetus for some variation and several of these have been construed as indicative of sympathetic attitudes that may have permitted burial or benefitted the juvenile. Such attitudes are themes in later medieval burial, suggesting that certain ways of behaving and/or thinking may have continued into succeeding centuries.

Discussion has shown that there has been inadequate consideration of the burials of medieval children. Debates have focused on the variation of practices observed, highlighting exceptional rites, such as eaves-drip burial and included objects, rather than looking at normative practice. Infants and young children have received most discussion, with less focus on older children and adolescents. The burial of adolescents requires attention, to establish the nature of their burial and whether the lack of attention they have received is justified by a lack of archaeological differentiation or to different conceptualization of age

stages in the middle ages. At what point was adulthood reached? The relationship between age and furniture has also not been investigated. Previous projects have suggested greater standardisation in the burial of children, but this remains inconclusive, partly due to dependence on small datasets. The motives of the burying community have not been adequately considered, particularly regarding multiple burial. There has also been the suggestion, sometimes assumed, that burial variation is uncommon after the Norman Conquest or the 12<sup>th</sup> century. No matter how infrequent variation medieval burial in general and child burial in particular may be, one thing that is certain is that meaning was probably attached to such variation. What is uncertain is how much of an influence age was on the burials of children, to what extent variation occurred, what the nature of the variation is and to what degree any disparity may be indicative of firstly, social attitudes to children as a distinct age group and secondly, childhood as a distinguishable social phase to which the burial community may have been reacting.

These issues have been the motivation for this thesis. The thesis presents a consideration of juvenile burial that has taken a multifaceted approach. The aim is to analyse individual cemeteries to identify patterns of variation in burial which can be related to age, especially for non-adults. The case study cemeteries are then compared to provide a basis for general conclusions about child burial in the medieval period. Three themes are used: burial furniture, included objects and grave location, to ascertain the degree of differentiation, if present, and whether variation occurs across multiple sites, comparing burials of the biologically-immature to older individuals. The dataset is introduced in Chapter Four, and the aims and methods of the research outlined in Chapter Five. The following chapters will provide a new understanding of child burial in the 10<sup>th</sup>-16<sup>th</sup> centuries in England through an investigation of age-based differentiation, focussing on the analysis of case studies in their wider context.

## **Chapter Four: Introduction to the sites**

### **Introduction**

This chapter introduces the sites, using information from their primary publications and other associated literature. It shows how the sites were chosen and focuses on burial practice through discussion of excavation context and appropriate osteological information. Terminologies below are those used in the reports and differ between excavations; standard terms (Chapter Five) will be used subsequently.

### **Selection of sites**

An assessment of cemetery and church excavations was undertaken in 2010 and early 2011. Historic Environment Records and archaeological units were searched and/or contacted, producing a list of 29 excavations (Table 1). Medieval burial normally occurred in consecrated graveyards, of which multiple types existed, such as those for lay or monastic communities, in rural or urban locations, or on the differing scales of parish and cathedral. Burial in monastic contexts has been extensively discussed (Gilchrist and Sloane, 2005) and does not need repeating. Large cathedral cemeteries have rarely had large-scale excavations (Winchester is an exception but it remains unpublished) and they are likely to feature a disproportionate number of elite burials. Smaller urban and rural graveyards are likely to be typical of the wider lay medieval population and are therefore the focus of this research. Five such cemeteries were selected based on their potential for further research or academic importance, primarily by possessing the following qualities:



- A large area of open excavation
- Medieval date of at least some burials
- Recovery of a considerable proportion of the burial population, including children
- Osteological analysis
- Burial location plans
- Complete excavation report

The rarity of sites of this nature is surprising; though there have been a large number of excavations, many are unsuitable because they were piecemeal in nature (for example, focused on a small area or particular period in isolation) or do not have complete or accessible archives. To better contextualise the project, additional sites, including some of those which did not have all of the desired qualities, are included in discussions when relevant or complementary data is observed; this is partly due to the relative rarity of these excavations but also to increase the geographical spread of the research, particularly into southern and western England, and to address how typical child burial at the five sites may or may not be.

Site Name	Date	No. of burials	Reference
St. Michael's, Leicester	1100-1500	282 (at least 71 sub-adult = 25%)	Higgins et al. 2009; Morris et al, 2009; Jacklin, 2009a
St. Peter's, Leicester	900-1600	1271 (447 sub-adult = 35%)	Gnanaratnam, 2009; Buckley et al., 2009; Jacklin, 2009b
Botolph Bridge, Peterborough	Medieval	-	HER and OAE
Church Street and Church Hill, Norwich	Pre-1500	63	Norfolk HER

Ormesby St Margaret, Norwich	11 <sup>th</sup> -14 <sup>th</sup>	62 (17 sub-adult = 27.4%)	Anderson and Wallis, 2009
St. Faith's Lane, Norwich	900-1600	-	Forthcoming
St. Mary Graces, Cistercian Abbey, London	1350-1540	378 (less than 18% sub-adult)	Grainger and Phillpotts, 2011
Guildhall Yard, London	11 <sup>th</sup> -12 <sup>th</sup>	68 (21 sub-adult = 31%)	Bowsher, 2007
St. Benet Sherehog, London	Late medieval	39 (15 sub-adults = 38%)	White and Tankard, 2008
Augustinian Priory of St Peter and St Paul, Taunton, Somerset	Medieval	192 (83 sub- adults = 43%)	Report unfinished; Context One
St Mary's Priory and St John's church, Hertford.	Medieval	256 (58 <16 years = 22.7%)	Hertford HER
St. Mary the Virgin, Kensworth	Medieval	67 (37 sub-adult = 55%)	Report unfinished; Network Archaeology
Crowland Road, Haverhill, Suffolk	11 <sup>th</sup> -16 <sup>th</sup>	355 (at least 103 aged <15 years = 29%)	Suffolk HER
5 Stratford Road, Warwick	Medieval	-	Report unfinished; Warwickshire HER
Church End, Cherry Hinton, Cambs	Saxon – 1200.	683	Cambridge HER
St. Martin's, Wharram Percy, Yorks	950-1850	687 (315 sub- adults = 45.9%)	Mays et al., 2007
Raunds, Northants	10 <sup>th</sup> -12 <sup>th</sup>	363 (151 sub- adult = 41.6%)	Boddington, 1996
St. Mark's, Lincoln	10 <sup>th</sup> -16 <sup>th</sup>	248 (107 sub- adults = 38.8%)	Gilmour and Stocker, 1986; Lincolnshire HER
St. Helen's, Cumberworth, Lincs	12 <sup>th</sup> -15 <sup>th</sup>	-	Lincolnshire HER

St. Olave's, Creeting, Suffolk	11 <sup>th</sup> -16 <sup>th</sup>	-	Incomplete report, suggested by C. Lewis
St. Martin's, Wallingford	10 <sup>th</sup> -14 <sup>th</sup>	187	Northamptonshire Archaeology
Southampton Friary	Medieval	20% juveniles	Southampton Arch. Unit
Trowbridge, Wiltshire	950-1200	289 (84 sub-adults = 29.1%)	Graham and Davies, 1993
St. Stephen's, York	11 <sup>th</sup> -14 <sup>th</sup>	118	YAT
St. Helen-on-the-Walls, Aldwark, York	950-1550	1037 (281 sub-adults = 27%)	Magilton, 1980; Dawes and Magilton, 1980; YAT and Yorkshire Museum.
St. Andrew, Fishergate York	11 <sup>th</sup> -16 <sup>th</sup>	402	Stroud and Kemp, 1993; Kemp and Graves, 1996 and YAT
Brighton Hill South (Hatch Warren)	11 <sup>th</sup> -14 <sup>th</sup>	52 (31 <15 years = 59.6%)	Fasham and Keevil, 1995 and Hampshire County Museums Service
St. Peter's, Barton-on-Humber	950-1855	1974 (approx. 600 <15 years = 33%)	Waldron, 2007; Rodwell and Atkins, 2011a, 2011b
St. Nicholas Shambles, London	1000-1200	180 (54 sub-adults = 23.1%)	White, 1988.

Table 1: Shortlist of excavations (correct as of spring 2011)

Choice of sites was also influenced by two, different, motivations. St Martin's, Wharram Percy, St Peter's, Barton-upon-Humber and St Andrew, Fishergate are three church and cemetery excavations which are considered representative examples of medieval burial practice due to the evidence recovered and were chosen for this reason. As well-excavated, published sites with accessible data, they have received considerable academic attention.

These three sites are used time and time again in discussions of medieval burial and appear often in secondary literature, as demonstrated below. St Martin's is well-known as part of the Wharram Percy project, but also due to the large number of infant and child burials recovered, far higher than usually identified. Excavations at St Peter's uncovered exceptional levels of organic preservation that revealed the materials and methods used for multiple types of burial furniture, allowing the dating of such artefacts and their associated burials to narrower intervals than those generally possible at other sites. Chronological phasing at St Peter's was more successfully achieved than at Wharram Percy but both offer significant numbers of burials dated to the medieval period. St Andrew's, where burial practices of unusual type and high status were observed for a mixture of lay and monastic populations, provides examples of burial within an urban location that complements St Martin's in its rural hinterland as well as demonstrating how burial can vary by social position. The re-examination of three well-known and understood sites in relation to the topic of the burial of children has the potential to provide valuable new insights into accepted cemetery excavations.

St Peter's and St Michael's, both in Leicester, were included as new, unpublished sites with good reports and accessible archives. As they have yet to receive academic discussion, they are a valuable addition to this project. The inclusion of information from two new excavations in comparison with Wharram Percy, Barton-upon-Humber and Fishergate will test whether the conclusions drawn from these well-known sites can be confirmed as typical examples of medieval practice. Investigation of the five sites will also allow for assessment of levels of similarity in burial practice between four areas of north-eastern England and the Midlands.

## **Strengths and weaknesses**

The five sites are not the only excavations that produced evidence for medieval burial practice and are considered representative of the period. St Helen-on-the-Walls, Aldwark, York (Dawes and Magilton, 1980) produced over one thousand in-situ burials. However it does not have a plan in which the locations of individual burials were recorded, which (as will be demonstrated) is essential for the analysis of burials by location. Raunds Furnells (Boddington, 1996) is seen as an example of late Anglo-Saxon Christian burial practice, particularly notable for its use of stone in burial and the identification of the eaves-drip phenomenon. Cherry Hinton, Cambridgeshire dates to a similar period and produced comparable burial practices but the report is incomplete (interim report; McDonald and Doel, 2000). Both Raunds and Cherry Hinton went out of use in the high medieval period, and were not deemed appropriate for this analysis which is intended to cover the whole medieval period. Other sites that produced interesting burial assemblages were too small to be considered representative, for example, Brighton Hill South (Hatch Warren) with only 52 burials; (Fasham and Keevill, 1995), or were sites where threatened areas were excavated rather than a larger proportion of the churchyard such as St. Martin's, Wallingford; (Soden, 2010);. It was also necessary to limit the size of the dataset to allow the project to be achievable within the timeframe by one individual by focussing on a smaller number of excavations that have a representative number of burials with high-quality information, rather than including a larger number of sites of varying sizes and quality of record.

The individual site accounts will also highlight methodological differences between approaches to identify and collect osteological data. Though all the osteologists sought to age and sex the human remains and identify pathology and trauma, the techniques employed varied between the sites. It was beyond the remit of this study to re-examine the remains of so many individuals using one osteological methodology, particularly as this project focuses

on burial practice rather than human remains, so the information presented in the reports was used. The techniques used at each site are included to demonstrate the number of differently-authored methods utilised; osteological discussion of the merits of each method are within the individual reports. These ages will be rationalised to allow the different sites to be compared (Chapter Five).

### **St Martin's, Wharram Percy**

St Martin's is located within the deserted settlement of Wharram Percy on the Yorkshire Wolds approximately 20 miles north-east of York. Largely abandoned since the early 16<sup>th</sup> century, archaeological investigation began in 1950 and continued for four decades, with the church and cemetery excavated 1962-74. Thirteen reports in a large series, referenced in volume XI 'The Churchyard', and one book are the main publications of the excavations at Wharram Percy. The most relevant are Beresford and Hurst 1990, which provides an overview of the project, and Mays et al., 2007, dedicated to the churchyard and burials.

The estimated settlement size was thirty houses in 1368, sixteen in the mid-15<sup>th</sup> century and a single vicarage by 1546, which remained the only occupation together with a farmstead (Beresford, 1987, 10, Table 1, 15). The church was used by four neighbouring townships but due to the dwindling parish population was in an increasingly bad state of repair; burial ceased in 1906 and the last formal repairs occurred in 1923 (Bell, Beresford et al., 1987, xvi; Beresford, 1987, 37). A possible timber church indicated by post-holes, succeeded by the first stone church, originated in the late 10<sup>th</sup>-early 11<sup>th</sup> centuries as a two-celled structure (Harding and Wrathmell, 2007, 327). The church was extended during the mid-12<sup>th</sup> century, contemporary with the creation of the parish, and increased in size before contracting from the early 15<sup>th</sup> century onwards (Beresford and Hurst, 1990, 57-8, 59). The decreasing size of

the parish is attested by the early post-medieval parish register, suggesting a parish population not exceeding 150 people (Beresford, 1987, 13). Registers of 1570-1906 suggest at least 966 burials, with post-medieval burials primarily located south of the church where little excavation occurred (Beresford and Hurst, 1990, 109; Harding and Marlow-Mann, 2007, 29).

Sampling excavation methodology of the churchyard provided skeletons of the medieval rural population, particularly north and west of the church where burial was considered to cease after the 16<sup>th</sup> century (Beresford and Hurst, 1990, 64-5; Harding and Marlow-Mann, 2007, 30, Harding, 2007, 62). Trial-trenches were expanded annually due to the short excavation seasons and the unstable nature of the church (Bell, 1987, 47). Planning, drawing and measuring of graves did not occur in all areas; burials within the nave, chancel, outside the post-medieval chancel and to the west of the church were planned, whereas the majority of those to the north, east and south of the nave were not (Bell, 1987, 49; Heighway, 2007, 216). Around one third of the churchyard (Figure 1) was excavated with disarticulated bones suggesting many burials had been disturbed (Mays, 2007a, 88). Burials were phased by radiocarbon dates, stratigraphic relationships, post-medieval coffin fittings and in relation to the church (Heighway, 2007, 216-221). Four historical periods were defined: Phase 1 (950-1066/Late Anglo-Saxon), Phase 2 (1066-1348/Earlier medieval), Phase 3 (1348-1540/Later medieval) and Phase 4 (1540-1850/Post-medieval).

Use of the northern churchyard began during the mid-10<sup>th</sup> century ‘over a wide area...with scattered multiple foci’ (Harding, 2007, 36). Subsequently, at least five layers of burials dated before the late 15<sup>th</sup>/mid-16<sup>th</sup> century occurred, with graves regularly spaced and aligned in rows. At least two graves had post-holes suggesting markers; order suggested as representing division by kin groups, sudden concentrations of burial resulting from deaths over a short period and/or the favouring of certain areas due to ease in digging graves.

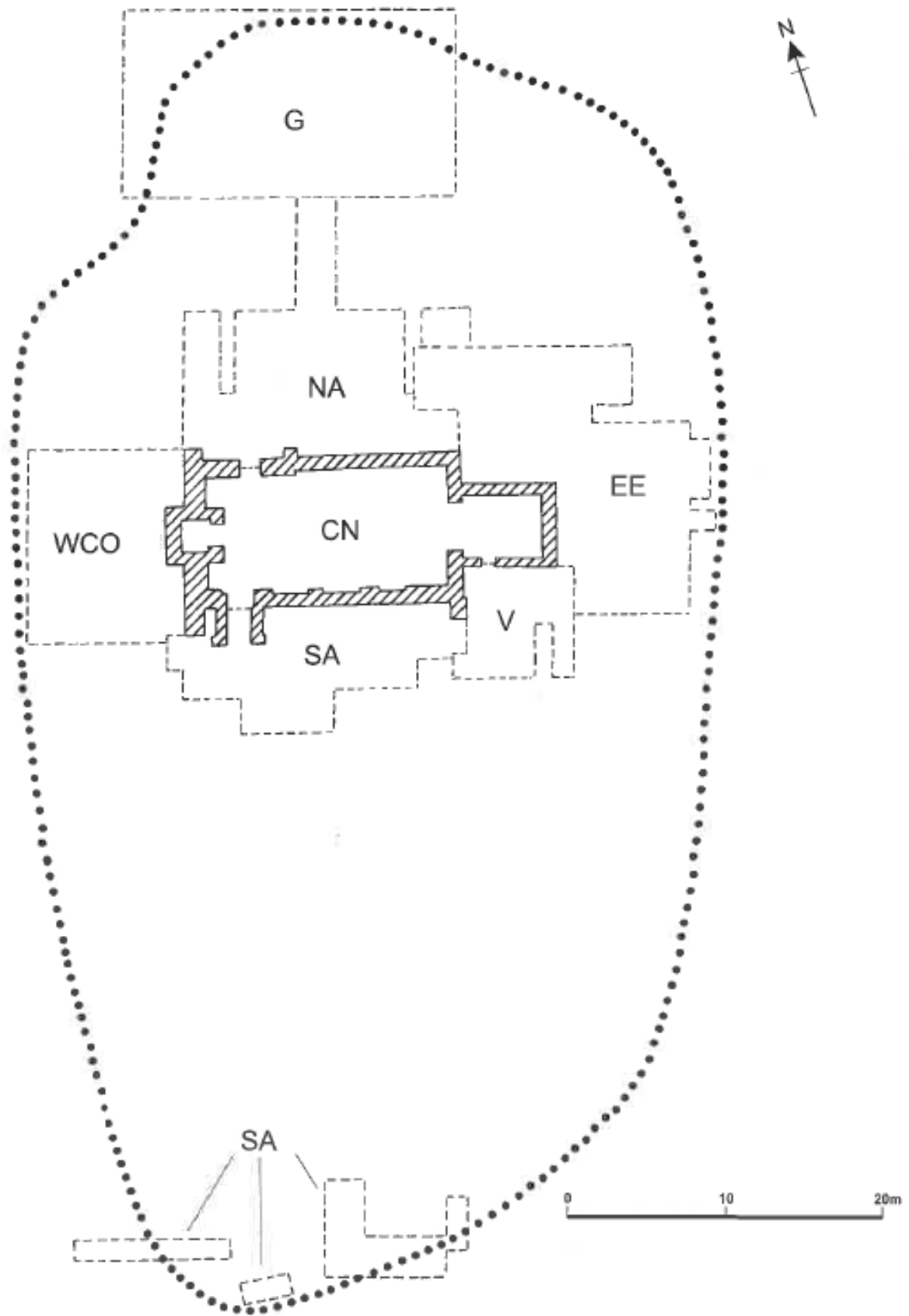


Figure 1: Excavation zones, limit of burial and standing remains at St Martin's, Wharram Percy (E. Marlow-Mann; Mays, 2007a, 78, fig. 115)



Burials, grave soils and traces of domestic and industrial activities suggested that less than one burial in three years may have occurred. South of the church, excavation revealed the southern churchyard was heavily used before the construction of the south aisle in the late 12<sup>th</sup> century (Bell, 1987, 86; Heighway, 2007, 224). Late-Saxon grave slabs were observed in the south-east churchyard, some used in the Norman foundations and south walls of the church (Beresford and Hurst, 1990, 64). In areas 41, 52 and 80, at least sixteen early medieval burials were observed, though explanations for burials far south of the church (and also to the north in Site 26) have not been successfully provided. It is unlikely demand for space was sufficiently high by the 11<sup>th</sup> century to warrant such expansion; one explanation is that these areas for specific families or settlements (Harding, 2007, 45, 64-67, 69-70, 75). The excavation of the church and cemetery produced over six hundred burials. The majority were either dated as simply ‘medieval’ or unphased, with just under half (221 adults and 68 juveniles; 42.0%) phased (Table 2).

Phase	No. of juvenile burials	No. of adult burials	No. of burials, no information	Total
1 (950-1066)	9	9	4	17
1/2 (950-1348)	23	147	0	170
1/3 (950-1540)	2	1	2	5
2 (1066-1348)	33	43	0	76
2/3 (1066-1540)	0	13	0	13
2/4 (1066-1850)	0	1	0	1
3 (1348-1540)	0	0	9	9
3/4 (1348-1850)	1	7	0	8
Unphased	258	101	16	375
<b>TOTAL</b>	<b>326</b>	<b>322</b>	<b>31</b>	<b>674</b>

Table 2: Burials assigned to each phase of St Martin’s, Wharram Percy (from Mays et al., 2007)

### ***Burial practice***

Seventeen per cent of burials (117) were observed with some form of burial practice other than interment in a grave (Heighway, 2007, 229-30, 237-8; Clark et al., 2007, 270).

Coffins were the most common furniture, with evidence recovered from 55 graves. The majority of these were unphased (27), with fewer examples dated to Phase 1 (3), Phase 1-2 (10), Phase 1-3 (3), Phase 2 (9) and Phase 2-4 (3), suggesting coffins were in their greatest medieval use 950-1348.

The most frequent material was stone, in association with 49 individuals, either at the head and/or feet (20), as ear muffs (13), in the construction of cists (8), covers (6), or less frequently, as upright markers at the head and feet (2). Eighteen of these burials were unphased, with the remainder dated to Phase 1 (5), Phase 1-2 (18), Phase 1-3 (2), Phase 2 (5) and Phase 2-3 (1). Based on these dated examples, the use of stone as a grave furnishing material was interpreted as an early-high medieval practice that had ceased by c.1300. The absence of burial furniture such as stones or coffins, from burials west of the church was used to suggest that this was an area of burial for the poorest in the community, as well as perhaps the preferred location for the later medieval population, suggested by pottery recovered from this area (Heighway, 2007, 217-8).

Objects were recorded with twenty-one individuals. It is unclear how many of these were purposeful or accidental inclusions, though the nature of some artefacts (see below) may support deliberate placement. The variety of the objects is considerable. Some types were noted in graves of multiple phases, such as pins (unphased and Phase 1-3), pebbles (unphased, Phase 1-2 and Phase 2), strap fragments or fittings (unphased, Phase 2 and Phase 3-4), coins (a styca of Aethelred II c. 841-49/50 in an unphased grave and a cut halfpenny of Henry II c.1158-80 dated to a Phase 2 burial), loomweight fragments (Phase 1-2 and Phase

2) and a chalice and/or paten (Phase 1-2 and Phase 2-3). Single examples of objects were a medieval bone stylus and a late 1<sup>st</sup>-early 2<sup>nd</sup> century Romano-British glass bangle in two unphased graves, a copper-alloy hook in a Phase 1 burial an iron nail in the mouth of a skeleton dated to Phase 1-2 and a possible pilgrim staff in a Phase 2-3 burial.

Fourteen burials were within the church, though only four had enough remains to provide age and date information; one dated to Phase 1-2, two to Phase 2-3 and the fourth to Phase 3-4. The other ten burials had been exhumed, and with the exception of one dated to Phase 1, all were dated to Phase 3.

Less frequently recorded was the use of organic remains, such as five examples of shroud fabrics (three unphased, one dated to Phase 1 and the other to Phase 1-2) and one of a fragment of binding strap (dated to Phase 1-2), though these low numbers are likely due to differences in preservation rather than unusual burial treatment. Three burials had evidence for markers, either as a socket stone (one burial of Phase 1) or as a posthole, possibly for a marker (two burials of Phase 2).

### ***Child burial***

An area (within 'EE', the churchyard north and north-east of the east end of the church; see Figure 1) was dubbed a 'children's graveyard' because as many as half of the burials were juveniles or children under 10 years (Heighway, 2007, 229). Statistical testing of burial location and age achieved significant results. Bias towards burying children north of the church was most explicit for those aged 0-1 year while infant burials were also identified within 30ft of the north church wall (Mays, 2007a, 87, Table 17). A change in appropriate burial location was suggested between 1-2 years of age, perhaps linked to baptism. Though children aged 1-17 years were buried in greater frequency in the NA zone than adults to a

statistically-significant level, the greater proportion of children of different ages was generally observed outside the NA zone. Adults were recovered in a higher proportion south (SA) and west (WCO) of the church; this strong relationship between age and burial location is interpreted as reflecting the transition from childhood to adulthood (Mays, 2007a, 86-87).

Less clear is whether any differentiation through furniture was occurring. Four of the seven cist arrangements were with juveniles, all unphased, and four of the five individuals buried with shrouds were also children (Clark et al., 2007, 270; Heighway, 2007, 241-2, Table 127). This suggests differentiation may have been occurring on another level. Differential treatment for children through the inclusion of furniture or items in the grave has not been thoroughly investigated for St Martin's, Wharram Percy, and requires attention.

Multiple burials were another burial form in which children appear disproportionately. All eight examples contained at least one child. Each was a double burial of either two juveniles (3) or one juvenile with an adult (5), with three unphased, one dated to both Phase 1 and Phase 1-2 respectively, and three to Phase 2, suggesting it was a medieval tradition and particularly of the 11<sup>th</sup>-14<sup>th</sup> centuries. The physical relationship between the individuals was generally side-by-side or in two cases, with an infant on the chest of an older individual. Interpretations suggested in the report were that such burials were as a result of burying children with adults who died around the same time or women dying during pregnancy and/or child-birth (Mays, 2007a, 85-6, Table 12).

### ***The osteological analysis***

The techniques used for the estimation of sex are detailed in Table 3. Wharram Percy is unique in that attempts were made to sex juvenile skeletons; the collection was sexed into four groups; M = male adult, F = female adult, U = unsexed adult and J = unsexed juveniles.

A question mark (?) used as a suffix indicated probable sex in adults and as a prefix, either one or two, probable sex in juveniles (Mays, 2007a, 77).

Age group	Skeletal element	Method
Perinatal infants	Sciatic notch morphology	Mays (1998)
Children (5-18 years)	Craniofacial morphology	Molleson et al (1998)
Adults	Pelvic and cranial morphology Skeletal robusticity	Brothwell (1981)

Table 3: Osteological techniques for sexing used at St Martin's, Wharram Percy (after Mays, 2007a, 85)

A greater number of adults were sexed male (n= 211) than female (n= 140), an imbalance not interpreted as the result of unexcavated female burials, nor higher numbers of infant deaths for female babies, but perhaps as evidence for emigration of female adolescents (Mays, 2007a, Table 21, 91-2).

Ages were provided age in years unless otherwise stated (Table 4; Mays, 2007a, 77). The proportion of individuals across all periods dying younger than 16 years was 45% (n= 312). Adult remains were also sorted into three groups (18-29 years; 30-49 years and 50+ years; Mays, 2007a, 85, 89-90). Twenty-one per cent (n= 65) died between 18-29 years, 39% (n= 116) between 30-49 years and 40% (n= 119) died aged 50 years or older (Mays, 2007a, Table 22, 92).

Age group	Skeletal element	Method
Immature individuals	Dental development	Schour and Massler (1941)
		Garn et al. (1962)
		Anderson et al (1976)
Perinatal infants	Long-bone length	Scheuer et al. (1980)
Adolescents/young adults	Epiphyseal fusion	Workshop of European Anthropologists (1980)
Adults	Dental wear	Miles (1963)
	Ante-mortem tooth loss	Mays et al. (1995)
	Pubic symphysis morphology	Suchey et al (1987; 1988)
	Cranial suture closure	Perizonius (1984)

Table 4: Osteological techniques for ageing used at St Martin's, Wharram Percy (after Mays, 2007a, 84-5)

Burials at St Martin's were often intercut, which affected their overall completeness. Preservation was evaluated based on subjective assessment as 'poor', 'moderate' or 'good'. The soil was conducive to bone survival, though lack of on-site sieving was likely to have been a factor in lesser skeletal completeness of infants (Mays, 2007a, 79-80, 88). Twelve per cent of adults were assessed with 20-40% skeletal completeness compared to 29% of infants, and 36% of adult skeletons were at least 80% complete compared to only 8% of infants. The majority of infant remains (n= 35/101 or 35%) had 60-80% skeletal completeness (Mays, 2007a, Table 5, 80).

The burial population exhibited marked nutritional stress (Mays, 2009, 184). Stable isotope analysis suggested infants were breastfed until 1-2 years. No difference in diet by sex was observed though difference by age was identified, with children aged 4-8 years consuming

a diet heavier in plant-based foods and lower in protein than older children and adults, whose diets consisted primarily of terrestrial sources of food with small but significant amounts of marine protein (Mays, 2007a, 93-95 and fig. 76). Poor nutrition and health during childhood affected bone growth, resulted in shorter heights during childhood and prolonged periods of pubertal growth to eventual final adult stature (Mays, 2007a, 100-1, 190).

Evidence for physical health (Mays, 2007a, 133-192, Tables 66, 81, 84) demonstrated that of 194 juveniles studied, 31 had dental caries, with 6 of 190 also having dental abscesses, and the majority of adults were affected by caries. Enamel dental hypoplasia, indicative of a nutritionally-deficient diet and poor health, affected at least 93 individuals and most frequently formed around 2-3 years, forming at an earlier age in those who died as children than survived to adulthood. Harris lines, which record stress episodes that slowed or stopped longitudinal bone growth, demonstrated insufficient nutritional resources for children to return to their original growth trajectory when the period of stress ceased (Mays, 2007a, 101). Porotic hyperostosis, indicated by cribra orbitalia and suggesting anaemia, was observed in 30.8% of juveniles and 19.2% of adults, with lesions more commonly active in juveniles at death than adults. This was also true for rickets; eight children had rickets at time of death, whereas no cases affecting adults were noted. Fifty-eight individuals, 20 adult males, 8 adult females, one unsexed adult and 29 juveniles, had non-specific periostitis indicative of infection affecting bone and two specific infectious diseases were identified: tuberculosis, with nine adults and advanced leprosy, visible on the face, of a 10 year old child. Three juveniles and 69 adults had evidence of fractures, including one 5-6 year old child with unhealed blunt trauma to the skull.

### *Chronological variation*

Identification of chronological changes in burial practice was difficult due to the problems of dating burials (also see Heighway, 2007, 216-7). This was most challenging in areas that contained a high proportion of furnished burials and juvenile burials, such as north and east of the church.

Detectable chronological changes were implied for the use of stone. Three examples of ear-muffs were radiocarbon dated to 900-1300 and stone-settings from the most northerly cemetery were dated as used in greatest frequency between 10<sup>th</sup>-13<sup>th</sup> centuries (Heighway, 2007, 239, 241), suggesting stones ceased to be used in burials by the later medieval period. The absence of stones (at the head, as markers, stone settings or in cists) and coffins in burials west of the church was used to suggest these burials were late medieval. This was contradicted by radiocarbon dating, which suggested burial west of the church occurred for as much as seven hundred years from the 10<sup>th</sup>/11<sup>th</sup> centuries, as it did in the northern cemetery (Heighway, 2007, 218).

The only detectable chronological changes identified were the establishment of church burial in the 12<sup>th</sup> century and the preference from the late 11<sup>th</sup> century for the arrangement of arms on the body and hands on or near the pelvis; before this change, arms by the sides was equally popular (Heighway, 2007, 229). The positioning of arms and hands in medieval burials is not investigated in this study, as the information is not always accurately recorded.

An attempt was made to identify chronological variation by the author during preliminary analysis. By calculating the proportion of burials with each identified practice for every phase, it was possible to see quickly the periods they were identified and in what frequency; this was also done for each age band of individual (see Appendix: Section Four). Variation in the use of coffins, stones and inclusion of objects over time could not be identified due to



the high proportion of burials either unphased or phased to overlapping periods. Some preference may be suggested for greater dissimilarity in burials of the early/high medieval period, as all phased examples of ear-muffs, stone covers and organic remains were dated pre-1348.

### **St Peter's, Barton-upon-Humber**

St Peter's has received significant discussion both in its primary publications and in secondary use as a case study. Though the scope for further original research is limited it is important to include for comparison with other less well-studied sites.

Barton-upon-Humber is a small market town in the north of Lincolnshire on the south bank of the river Humber. St Peter's is positioned at the eastern end of the medieval town and was added by the mid 11<sup>th</sup> century to a pre-existing 10<sup>th</sup> century Christian cemetery located west of a middle Saxon enclosure associated with Tyrwhitt Hall, the later medieval manor. The town expanded during the medieval period, partially due to the success of its markets, the wool trade and a new harbour. From the later medieval period Barton was suffering economically and became a large village with vacant plots and inhabitants more dependent on farming than trade, before returning to residential and economic popularity in the 18<sup>th</sup> century (Rodwell and Atkins, 2011a, 1-8, 29-68). Following the church's closure in 1970, confirmed redundancy in 1972 and public ownership from 1978, archaeological investigation was encouraged. Excavation took place 1978-2005 with an interim report of the 1978-81 seasons (Rodwell and Rodwell, 1982) before the excavation was published in two volumes. Volume one (Rodwell and Atkins, 2011a and 2011b) records the church's context, earlier archaeological activity and focuses on the church's use from the Anglo-Saxon to the modern period beside discussions of burial. The second volume (Waldron,

2007) focuses on the human remains and derived osteological and palaeopathological information.

Excavation occurred over approximately a third (1,245 sq.m.) of the site (Figure 2) but not in the chancel, vestry and organ chamber, interior of the south porch and parts of the southern churchyard. The expected burials were ‘tackled positively’ with ‘the importance of according the same attention to the excavation and recording of Christian burials as...given to earlier interments’ a project aim (Rodwell and Atkins, 2011a, 25-6). Over 2,750 skeletons, dating from the late Anglo-Saxon to the mid-19<sup>th</sup> century, were excavated, studied and deposited in an on-site ossuary in 2008 (Sayer, 2010b, 119). Graves were assigned to one of five phases (Table 5); 950-1150/Phase E (Anglo-Saxon and Norman); 1150-1300/Phase D (early medieval); 1300-1500/Phase C (late medieval); 1500-1700/Phase B (early post-medieval) and 1700-1855/Phase A (Georgian and Victorian) though many burials overlap two phases (Rodwell, 2007, 29; Rodwell and Atkins, 2011a, 27).

Phase	No. of juvenile burials	No. of adult burials	No. of burials, no information	Total
E – c.950-1150	113	339	1	453
D/E – c.950-1300	154	282	7	443
D – c.1150-1300	72	112	4	188
C/D – c.1150-1500	124	245	5	374
C – c.1300-1500	21	64	0	85
B/C – c.1300-1700	159	296	7	462
<b>TOTAL</b>	<b>643</b>	<b>1338</b>	<b>24</b>	<b>2005</b>

Table 5: Burials assigned to each medieval phase St Peter’s, Barton-upon-Humber (after Waldron, 2007)

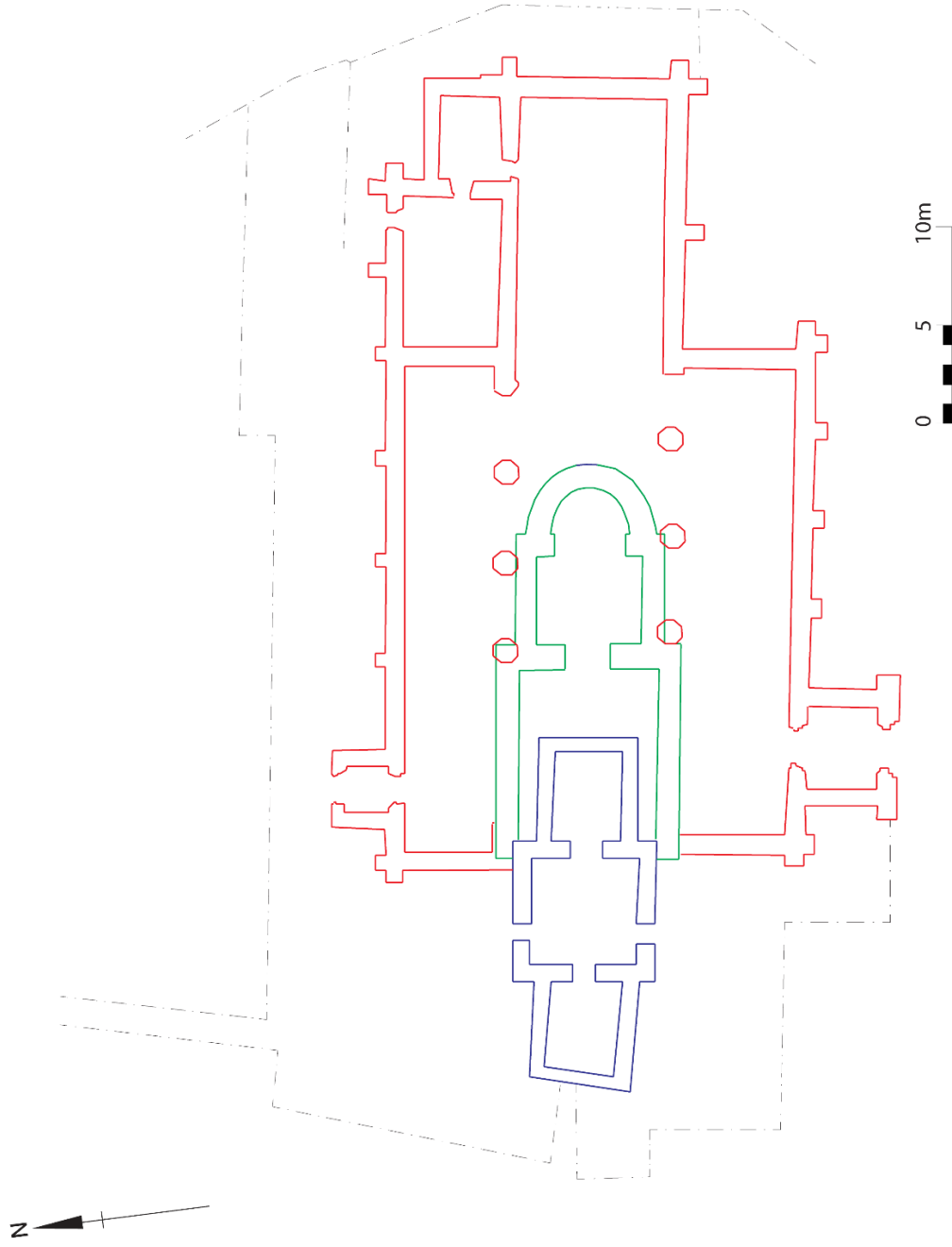


Figure 2: Excavation area of St Peter's, Barton-upon-Humber with the late 10<sup>th</sup>-early 11<sup>th</sup> C church in blue, mid-late 11<sup>th</sup> C church in green and mid-late 19<sup>th</sup> C church in red (after Simon Hayfield; Rodwell, 2007, fig. 30)

### ***Burial practice***

Over a third (35.5%) of individuals were observed with burial practice other than supine interment. An unusual degree of information was available for some early burials as many were well-preserved within waterlogged conditions (Rodwell and Atkins, 2011a, 169-236, 634-8; 2011b, 619-39).

Coffins (651) accounted for the majority of furniture. Most examples date from Phase E (244), where unusual organic preservation demonstrated examples of unusual construction, such as a wicker-work base or carved from a single trunk. Coffins were one of a few types of furniture observed throughout the medieval period (174 individuals in Phase D/E, 37 in Phase D, 65 in Phase C/D, 19 in Phase C and 112 in Phase B/C). The exceptional preservation allowed for construction methods to be assessed, such as skewed pegging that allowed the lids to be removed, suggesting corpses were viewed by mourners (Rodwell and Atkins, 2011a, 219, 221).

The second most common recovered were included objects, with sixty-four individuals. The most frequent were ceramics, such as pottery fragments (including Roman and Saxon examples) or medieval tiles, noted in 27 burials and from all phases. Also recovered from all phases were dress fittings such as buckles, studs and strap-ends, from ten graves. Ten individuals were noted with preserved hazel, willow or poplar rods interpreted as wands, all dated as early to high medieval (Phases E and D/E) and interpreted as possessing a symbolic function suggestive of regeneration and eternal life. Coins were noted in four graves, across the period, whereas two examples of chalices and patens were both from burials dated to Phase D. The remaining identifiable items were recovered once; animal bones positioned on the feet of an individual and a struck flint (Phase E), a boar tooth 'amulet' and a glass bead (Phase D/E), a bead, a bone die and a flint pebble (Phase D) and cloth of gold (Walton Rogers, 2011a, 634-8 and 2011b, 638-9), a silver crucifix and finger-ring (Phase C).

Stones were observed with sixty-two individuals, as ear muffs (42 burials), pillow stones (13), stones around or on the body (6) or as a stone cover (1). The majority of examples were early (40 in Phase E), becoming less frequent over time (in 17 burials of Phase D/E, 3 of Phase D, and with 1 burial in Phase C/D and Phase C). The number of graves utilising stone would have originally been much higher, as sixty-three fragments of stone coffins and grave covers dated to the 14<sup>th</sup> century were noted, with seventeen built into the church (Hall et al., 2011, 647).

Less frequent furniture included six coffins, all dated to Phase E, filled with clay and defined as ‘mud burials’, representing a rare tradition over a period of approximately 100 years. Three explanations are suggested for this practice; as a preservation technique, to contain unpleasant fluids and odours or to contain infectious disease, with the latter two favoured (Rodwell and Atkins, 2011a, 182-3, 194-5). Wooden boards, often charred, were noted with fourteen burials and generally early to high medieval in date (7 dated to Phase E, 4 to Phase D/E, 2 to Phase D and 1 to Phase C/D). Remains of organic items were also uncommon. With the exception of one grass pillow, an unusual discovery dated to Phase E, the remaining five examples were interpreted as textiles such as shrouds or clothing (one from Phase E, two from Phase D, one from Phase C/D and one from Phase C). The use of linings was noted in only five graves, with two of timber (both in Phase E), one of charcoal (also Phase E), one of a mortar layer beneath the coffin (Phase D/E) and the last of lime deposited over the skull and upper body (Phase D). Markers were suggested for three graves, the first being the burial of a 25-35 year old woman, possibly marked at the feet by a reused grave-cover fragment, aligned to the north door of the tower (Rodwell and Atkins, 2011a, 189-90). The remaining two are discussed under child burials, below. The anthropomorphic shaping of graves was identified twice, both before 1300 (Phase D/E and Phase D respectively).

A minority of burials (95, or 5%) were within the church; four in Phases E and D, seven in Phase D/E, two in Phase C/D, sixty-three in Phase C and six in Phase B/C, suggesting church

burial was infrequent prior 1300. One burial may have been in unconsecrated ground during Phase E and at least two individuals, including an infant also dated to this period, were reburied.

Twenty individuals were observed in eight multiple burials; six double burials, one triple burial and one quintuple burial. Four, three double and the quintuple, were dated to Phase E, two double burials to Phase C, both within the church, with the remaining two, a double burial and a triple, to Phase B/C, suggesting it was predominately an early medieval practice but one observed throughout the period. Each multiple burial contained at least one child (Rodwell and Atkins, 2011a, 181).

### *Child burial*

A third (32.5%) of aged burials were juvenile, a higher proportion than typically identified and one within the range of estimates of pre-Industrial child mortality (Schofield and Wrigley, 1979; Lewis, 2007; 20-30). Good preservation also demonstrated the ways in which some children were buried. The atypical preservation of early burials showed that local oak was the dominant material for coffin construction, though a single baby burial of the first half of the 12<sup>th</sup> century, used pine. The construction was also different, suggesting it had been made by different manufacturers; it had also partially come apart and was orientated the wrong way (Rodwell and Atkins, 2011a, 215, 218, figs. 217-21).

Children and women also featured in areas interpreted as high status from the mid-12<sup>th</sup> century, such as the north-eastern corner of the churchyard. A hypothesis is that they were the inhabitants of Tyrwhitt Hall and that men of the family may have been buried in the church due to their higher status (Rodwell and Atkins, 2011b, 622-3). Four burials of children aged less than 10 years were also buried in this area during Phase C/D. A pattern of burying children

close to adult women continues through the occasional insertion of infants into the graves of adult females, such as two infants within the grave of a female, buried in a lime-filled coffin in the south aisle of the church during Phase D/E.

Of the eight multiple burials, all contained at least one child. Some of the more unusual graves or burials included children, such as the quintuple burial. Further examples of child burials were used to suggest that resources were invested in the burying of juveniles and that they could display status. An exhumed grave originally holding a stone coffin for a child, an infant within its own grave in the church and the burial of children in the north-east corner of the churchyard were used as evidence to suggest money was spent on children's burials. A further example of high-status juvenile burial may be two jewellery items, a silver alloy decorated finger-ring and a solid silver crucifix pendant with the figures of Christ and the Virgin and Child, with a female adolescent buried in the church during Phase C (Mould, 2011, 633; Rodwell and Atkins, 2011b, 621-2).

There was some evidence to suggest child burials could be marked. Though a posthole at the corner of an infant burial was interpreted as more probably associated with the nearby porch rather than a marker, another marked burial was a possible shrine burial. Located 5m to the north-east of the Anglo-Saxon chancel, the exhumed grave had a timber post at each corner and probably originally contained a coffined individual of 'modest size...which suggests...an older child or sub-adult', which was exhumed in the late 11<sup>th</sup> century for construction of the Saxo-Norman church (Rodwell and Atkins, 2011a, 189-90).

The reports do not suggest that the burials of children differed from those of older individuals, though to what extent this topic was investigated is unclear. For Phases E and D/E, the authors state no evidence was identified to suggest the age or sex of an individual affected their manner of burial other than a general tendency to bury infants and young children near to the church

walls (Rodwell and Atkins, 2011a, 113, 235). The unusual nature of some child burials, as shown above, suggests there may have been differentiation, but it is currently unclear to what extent this occurred.

### ***The osteological analysis***

The techniques used to sex and age individuals are not explicitly mentioned, though Waldron says he used 'standard methods' and references several publications (Waldron, 2007, 34-5, 174). Sexing used sexually-dimorphic traits and as such was not attempted for pre-pubertal individuals. Ageing was undertaken for children through known stages of tooth formation and eruption, long bone length and epiphyseal fusion and for adults used the changing structure of the pelvis and ribs plus dental wear.

A third of adult skeletons could not be aged, and of those, a third could also not be sexed. Lower than expected numbers of male and female adults aged 35-44 years may be explained by them being under-aged osteologically and instead assigned to the 25-34 years category. The ratio of male-to-female adults of 1.12:1 was not suggested as representing a significant imbalance (Waldron, 2007, 35-6).

Twenty-nine per cent of individuals died younger than 15 years (n= 810; Waldron, 2007, 36, Table 4). Of burials dated pre-1500, 6.8% were infants aged 0 year, 1.7% infants aged under 1 year and 20.6% children aged 1<15 years. There was a relatively even spread of child deaths from 2 years, though a high number of deaths at age 6 years and a low number of deaths at the ages of 13 and 14 years is explained as ageing bias and mistaken attribution (Waldron, 2007, 37, Table 7, Fig. 37). The difficulties in ageing adult remains were shown by the identification of a greater proportion of young female-sexed individuals than expected and a lower than



expected proportion of older adult females (Waldron, 2007, 35-6). Estimations of life expectancy suggested that once an individual had lived to 20 years, they might expect to die around 56-58 years; at birth, life expectancy was far lower (22-30 years), reflecting the high mortality levels among children (Waldron, 2007, 39).

For each skeleton an estimate was made of the proportion present and the general condition of the bones. Assessment of preservation showed over half of skeletons were at least 40% present and around 20% of skeletons virtually complete though infant and juvenile remains were typically less complete than those of sexed adults; an average of 55.2% of male-sexed adult skeletons were present, 54.55% of female-sexed adult skeletons, 56.9% of juvenile skeletons and 47.9% of infant skeletons (Waldron, 2007, 34-5, Tables 2 and 3).

Discussion of human remains used both the archaeological phases and a pre-1500/post-1500 division. The population was generally well or adequately-nourished with 'unremarkable' levels of disease (Waldron, 2007, 129). An estimated 25 deaths may have occurred annually, based on a population of around 1000, with a quarter of this number recovered. Similar proportions of infants died aged 0-1 year across all periods with the health of children aged 1-15 years substantially worse pre-1500 than post-1500 (Waldron, 2007, 34-8, Table 4). The analysis (Waldron, 2007, 53-120) showed the population was affected by conditions frequently identified at other sites; ten individuals dated to the late medieval/early post-medieval period or earlier were observed with osteomyelitis, a bone infection, two of which were children (Waldron, 2007, 73-4, Table 38). Instances of periosteal new bone (elsewhere called *periostitis* – see Waldron, 2007, 79-81), perhaps indicative of infection or stress, were noted on the ribs of a child and two adult men. Fractures were noted on two children and 150 adults; one of the children exhibited a well-healed skull fracture that was probably violent in origin but unrelated to their death. A burial dated 1150-1300 of a child aged 13 years had a congenital shoulder dislocation that would have affected movement and another child who died at around 10 years

had an unhealed cut on their tibia; an 'injury...sustained shortly before death' that exhibited signs of infection (Waldron, 2007, 83-4, 88-9). Rickets, noted in 10 individuals, included three children aged 0-5 years. Two women, one a young adult aged 15-24 years and another unaged adult who died in the late and early medieval periods respectively, had developmental dysplasia of the hips which would have occurred in infancy and resulted in difficulty walking. Palaeopathological conditions also suggested clustering of biologically-related burials; two clusters of three and four adult burials respectively dated 950-1150 were identified following the plotting of individuals with spondylosis, an inherited condition affecting the vertebrae (Waldron, 2007, 92-4, fig. 84).

### ***Chronological variation***

Burial in the church became frequent after 1300 and were rare before this date (Rodwell and Atkins, 2001b). Preliminary analysis by the author (see Appendix: Section Four) suggested further variation and favouring of practices over time. All examples of clay-filled coffins were dated 950-1150 and every example of boards, ear-muffs, pillow stones and grave lining was dated pre-1300, as were most examples of included objects. Organic remains in graves, though few, post dated 1150. Only coffins and stones were recovered from burials throughout the medieval period.

### **St Andrew, Fishergate, York**

The church, Gilbertine priory and cemeteries of St Andrew at 46-54 Fishergate, York, were excavated 1985-86. The site was located south of the medieval suburb and east of the confluences of the rivers Ouse and Foss. The church is first mentioned in Domesday Book, and

become a priory between 1195-1202; after the Dissolution the site became fields until a glassworks was built in 1797. The first Ordnance Survey (1852) suggests the presence of surviving, upstanding stonework and a later version (1931) refers to stone coffins found in 1928 (Kemp and Graves, 1996, 43-4). The site was excavated after the factory site closed in 1985. Published in two volumes by York Archaeological Trust, the main references are the cemetery and osteological analysis (Stroud and Kemp, 1993) and the report and plans of the church and priory buildings (Kemp and Graves, 1996).

The excavation was motivated by redevelopment, with both open area and narrow trenches over approximately c.2,500m<sup>2</sup>. As much as half the potential archaeology had been destroyed by the factory (Kemp, 1993, 123, Kemp and Graves, 1996, 44-5). Approximately 11% of the monastic complex was excavated and the site was divided into several areas, some of which were based on the priory layout with 'period' and 'sub-period' used to organise the stratigraphy chronologically (Kemp and Graves, 1996, 47-8).

Four hundred and two skeletons were excavated (Table 6), with the examination of differences in health and demography a key aim for osteological analysis. The full extent of the cemeteries was not established with more burials probably originally existing to the south and east (Stroud and Kemp, 1993, 121-3, 129-30, Stroud, 1993a, 160). Ten periods were identified, of which Periods 4 (late 10<sup>th</sup>–late 12<sup>th</sup> century; Figure 3) and 6 (1195-late 16<sup>th</sup> century; Figure 4) are relevant; the former characterised by construction of the church and the beginning of burial and the latter by the change in function to Gilbertine priory until the Dissolution. No burials were dated to Period 5, as this refers to a change in ownership of the priory not represented in the archaeological record (Kemp and Graves, 1996, 70-71, 72-3).

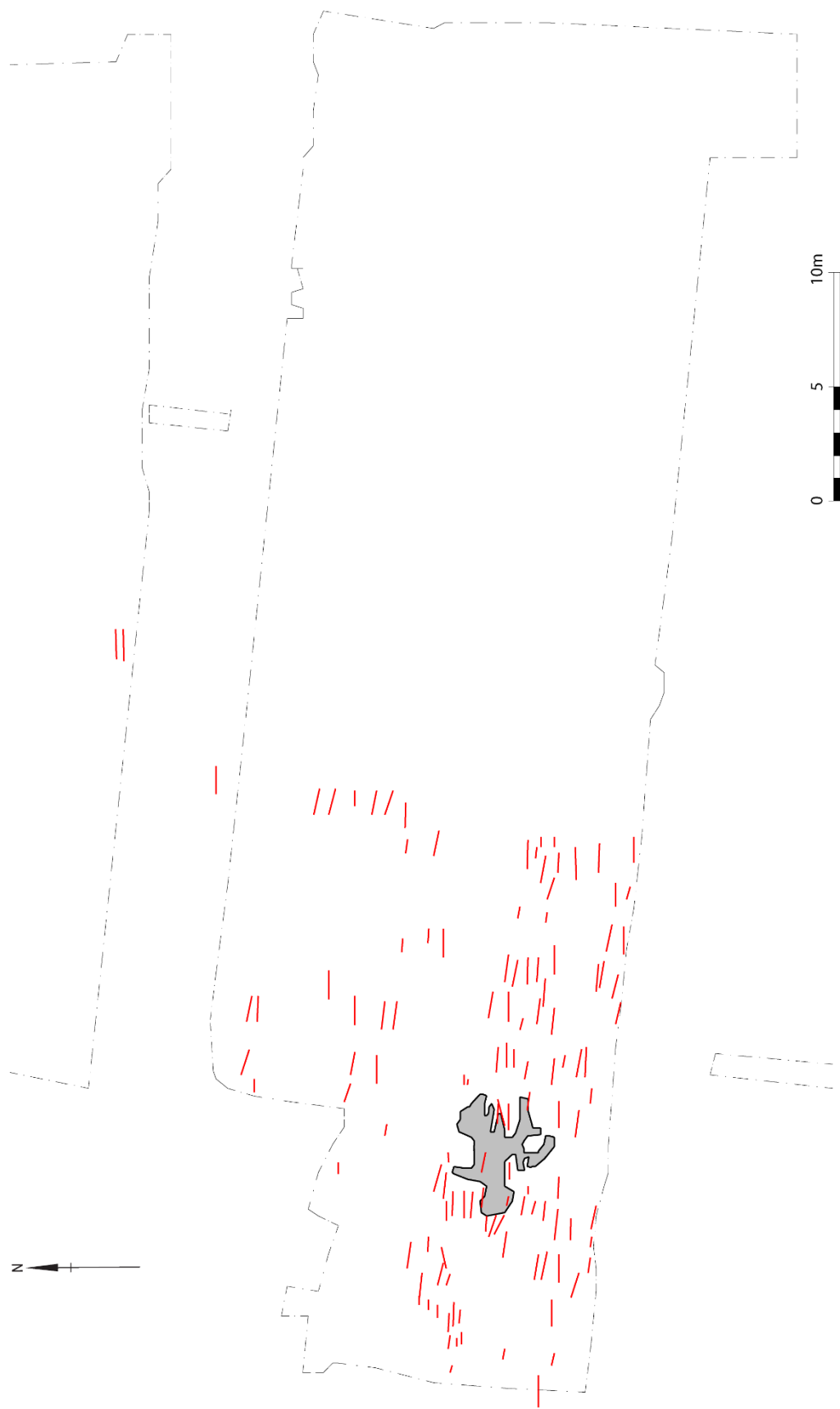


Figure 3: Excavation limits of St Andrew, Fishergate, Period 4; the clay floor of the first church is in grey and burials in red (after Stroud and Kemp, 1993, fig. 33)

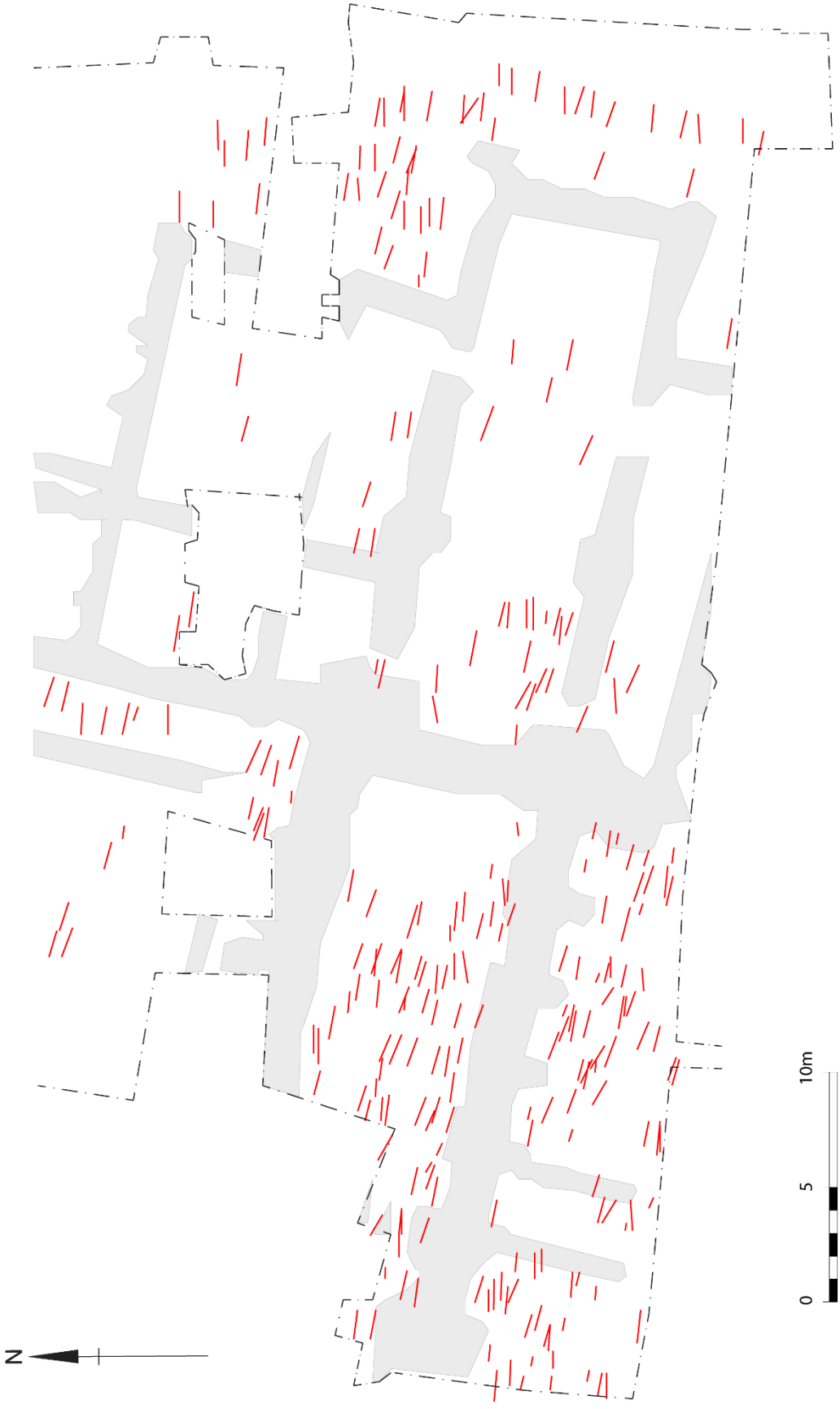


Figure 4: Excavation limits of St Andrew, Fishergate, Period 6, showing the footings of the priory buildings in grey and burials in red (after Stroud and Kemp, 1993, fig. 35)

Period	No. of juvenile burials	No. of burials, no information	No. of adult burials	Total
4 – Late 10 <sup>th</sup> –late 12 <sup>th</sup> C	44	4	83	131
6 – c.1195 –late 16 <sup>th</sup> C	38	5	228	271
<b>TOTAL</b>	<b>82</b>	<b>9</b>	<b>311</b>	<b>402</b>

Table 6: Burials assigned to each period of St Andrew, Fishergate, York (after Stroud and Kemp, 1993)

### *Burial practice*

Fewer than 10% (7.2%) of burials had observable traces of burial practice, with similar proportions recorded for both periods (7.6% and 7.0%; Stroud and Kemp, 1993, 145-59).

A large proportion (137; 34%) were located within the church or buildings of the later priory complex. Four burials of Period 4 were definitively concluded to have been interred within the church, though a further twelve cut its clay floor and it is uncertain whether these burials may have been located within the church or were buried within its footprint after it had been demolished towards the end of Period 4. The majority of church burial occurred in Period 6, in the nave (73 individuals), crossing (25), cloister alley (18), cloister garth (5), north transept chapel (5), presbytery (4) and chapter house (3). Many of these burials were characterised as high status, both by location and use of burial furniture, such as stone or wooden coffins (Stroud and Kemp, 1993, 137; Kemp and Graves, 1996, 102-3). High religious status was suggested by positioning for some of the graves, such as four adult males buried near an altar in the presbytery. The status of three male adults buried within the cloister garth is uncertain; buried within a single grave orientated west-east, they had evidence for blade injuries including decapitation (Stroud and Kemp, 1993, 143; Kemp and Graves, 1996, 118).

Stones were recorded with eleven burials, as coffins or cists (7), markers (2), cobbles supporting the head (1) or lining (1), with the majority (9) dated to Period 6, suggesting the elaboration of graves with stone was a predominately post-12<sup>th</sup> century practice. The single example of cobbles was with an adult male who had been decapitated. Six burials (four from Period 4 and two from Period 6) had traces of wooden coffins, including an example with an iron strap hinge, suggesting reuse of a chest (Stroud and Kemp, 1993, 133, 138; Kemp and Graves, 1996, 77, 80-1 and Figs. 30, 89).

Objects were recovered from six graves; one triple burial of Period 4 and five single burials of Period 6. The artefacts were a 10<sup>th</sup>-14<sup>th</sup> century fragment of decorated buckle plate, a late 13<sup>th</sup>-early 15<sup>th</sup> century iron knife with an ivory handle, a cancelled seal matrix with secular imagery, two perforated copper alloy plates recovered at the knee of an adult male and two examples of a lead alloy chalice and/or paten. Less commonly noted was evidence for shrouds, in one grave dated to Period 4, an individual also buried in an unusually wide grave and believed due to have redeposited there sometime after original burial in another location.

More individuals were noted within multiple burials than in association with other practices. Twenty-one people were buried within one triple and nine double burials, though five are part of an unusual subset. This group was comprised of twenty-four adult males (Period 4), half of whom had blade, arrow or crossbow bolt injuries. Ten adults were interred in double burials, including one whose arms were placed around another as if embracing. The blade injury group were identified in rows and clusters, interpreted as deaths from injuries sustained at the battles at Fulford and Stamford Bridge in 1066 and/or York Castle in 1067-9 (Kemp and Graves, 1996, 81, 91). The other multiple burial of Period 4, two adult males with an adult female placed diagonally above them, was interpreted as high-status due to its location within the church (Kemp, 1993, 131; Kemp and Graves, 1996, 78, 89). The multiple burials of Period 6 were all double burials located within the nave.

Significant discussion was given to differences between lay and monastic burial during the priory phase. The high number of young adult males skewed the burial population in favour of male adults. Discussion suggested generally uniform styles of burial throughout the 12<sup>th</sup>-early 14<sup>th</sup> centuries with spatial segregation between lay and monastic individuals. Fewer burials occurred after early-mid 14<sup>th</sup> century renovations, when the eastern cemetery and east cloister alley went out of use and segregation of burial ceased, perhaps due to a smaller monastic community and fall in popularity for lay burial (Stroud, 1993b, 253). Statistical analysis demonstrated a significant difference in burial of male adults by age between the eastern cemetery and the combined locations of the south of the nave and priory buildings; older adult males were typically buried in the eastern cemetery and younger adult males elsewhere (Stroud, 1993a, 171, 173, Table 30). Areas characterised by men, women and subadults, many in elaborate graves within the priory, are suggested as representing wealthy or socially-significant lay patrons or families. This idea was substantiated by the observance of genetic traits, such as congenitally-missing teeth, between some of the eighteen individuals buried in this location before the mid-14<sup>th</sup> century (Stroud and Kemp, 1993, 139; Kemp and Graves, 1996, 145). Lay burials in simpler graves in the nave and crossing are interpreted as individuals of lower economic status. The report notes ambiguity for the southern cemetery and the quadrangle, with the demography of the former inferred as burials of a resident lay workforce and poorer members of the parish and the latter as revered individuals who died a violent death. Difference between individuals by location was also suggested through body positions; burials believed to represent resident members, such as those in the eastern cemetery, typically had their arms placed on their bodies, whereas those in the southern cemetery had arms placed to the sides (76% versus 43% respectively; Stroud and Kemp, 1993, 149-50).



### *Child burial*

A fifth (21.0%) of aged burials were juvenile, which rises to over a third (34.6%) for the parish phase alone, showing the effect the change in use of the site had on demography. The report generally did not discuss burial practices by age, instead focusing on sex and lay versus monastic burial. It is possible to extrapolate from the published tables discussing body positions (Stroud and Kemp, 1993, 145, 150, Tables 22, 23) that in Period 4, subadults (n= 23) were placed in 5 of 7 burial positions noted, including the sole example of a shroud or wrapping; a greater number of positions than adult women (3) but not as many as adult men (6). Legs extended and arms at the side was most common for juveniles and legs extended and arms on the body most common for adults; this latter type was most common for all age groups in Period 6.

Child burials were also noted with some of the least common practices, including one of two graves with upright stone slabs at the head (a rough limestone slab) and both examples of burial within stone-lined graves (Stroud and Kemp, 1993, 133, 153-5, figs. 44d+f, 157; Kemp and Graves, 1996, 80-1). Another unusual burial dated to Period 4 was a subadult aged 12-14 years, buried 'in an exceptionally wide grave' aligned east of the church; position of the bones suggests that the body had been tightly bound in a shroud and redeposited from another location into a new grave; a similar explanation is offered for the 'unnatural position' of another burial located in the south-west cemetery (Stroud and Kemp, 1993, 131, 157, 159; Kemp and Graves, 1996, 76). There was also one example of a child in a multiple burial with an adult male, located within the nave during Period 6.

Child burials were also observed in zones, with 76% of children aged 0-5 years, including a group of infants, buried in the western third of the cemetery (Stroud, 1993b, 253). Two-thirds of Period 6 juvenile burials were in the south cemetery and areas of lay burial (Stroud, 1993b,

253). Twelve infant graves were recovered near the south wall of the priory cemetery, with a further two close to the porch (Stroud and Kemp, 1993, fig. 35).

### *The osteological analysis*

Sexing was attempted for individuals older than 18-20 years through the subjective assessment of the morphological traits of the pelvis and the skull based on techniques by Brothwell (1981) and Phenice (1969) and occasionally bone measurements. In total 225 of the 312 adult skeletons were sexed, with fifty-six female and 169 male. The demography of the two burial phases was discussed separately; for Period 4, forty-seven were male (35.9% of burials), thirty-four female (26.0%), a ratio of 1.4:1, and two unsexed (1.5%), whereas for Period 6, 173 burials were males (63.8%), fifty-five were females (20.3%) and one unsexed (0.4%; Stroud, 1993a, 161-70, 252). There was a higher proportion of young adult female burials within Period 4 than older adult female burials, whereas in Period 6 more adult females were aged 50 years or older, a pattern also true for male adults, with almost half of Period 4 dying before the age of 30 years and approximately half of Period 6 adult males dying after the age of 40 years (Stroud, 1993a, 171; Kemp and Graves, 1996, 91).

Skeletons were aged based on the techniques in Table 7. For subadults, age was typically determined to within a 2-3 year range for those aged younger than 8 years and 4-5 year range for older juveniles (Stroud, 1993a, 168).

Age group	Skeletal element	Method
Subadults	Dental eruption	Ubelaker (1978)
	Long-bone diaphysial measurements	Workshop of European Anthropologists (1980)
	Epiphyseal fusion	Gray's Anatomy (1980)
Adults	Pubic symphysis	Meindl et al. (1985) Suchey et al. (unpublished)
	Auricular surface	Lovejoy, Meindl, Pryzbeck and Mensforth (1985)
	Sternal end of ribs	Iscan et al. (1984a; 1984b; 1985)
	Dental attrition	Brothwell (1981) Miles (1962)
	Cranial suture closure	Meindl and Lovejoy (1985)

Table 7: Osteological techniques for ageing used at St Andrew, Fishergate, York (after Stroud, 1993a, 162)

Juveniles comprised a higher proportion of burials within Period 4 than Period 6. In Period 4, there were 48 juveniles and 83 adults (36.6% and 63.4% of burials respectively), whereas for Period 6, there were 42 juveniles and 229 adults (15.5% and 84.5%; Stroud, 1993a, 170-1). Of the Period 4 juveniles, just over half were aged 0-5 years though no such bias was evident for the juvenile burials of Period 6, with underrepresentation suggested as a result of the monastic site becoming more exclusive.

Disturbance of burials was demonstrated by the excavation of disarticulated remains, including two charnel deposits each representing at least fourteen individuals (Stroud, 1993a, 164). Preservation of human remains was generally good, with 60% of inhumations classified as in good or very good condition, 25% in fair condition and 15% poorly preserved. Approximately

half of the individual inhumations were over 80% complete and little difference in completeness was apparent between phases (Stroud, 1993a, 160).

Skeletal remains were analysed and the health of the cemetery populations discussed. Several conditions indicated varying levels of health (Stroud, 1993a, 160-241; 1993b, 242-60). Caries, abscesses and calculus affected juveniles though were more common with adults and dental pathologies were generally higher in Period 6 than Period 4. Enamel hypoplasia lines were identified to the greatest extent in juveniles (76.2%) and young adults (72.7% of females and 73.3% of males aged 20-30 years) though were generally more common for young adult males than females in Period 6. Cribra orbitalia was observed to statistically-significant levels in remains of subadults, affecting 64% of child skulls compared to 37% of adult female skulls and 17% of adult male skulls. Consistently high in both periods, cribra orbitalia suggests anaemic children may have been more likely to die in childhood. Three cases of porotic hyperostosis were all identified with subadults of Period 4. Approximately half as many adults of both sexes were affected by cribra orbitalia in Period 6 than in Period 4, suggesting an improvement in diet or the burying of individuals of higher status than had previously occurred. Prevalence of dental calculus suggested that Period 4 individuals had a coarse diet heavy in sinewy meat and fibrous vegetables with Period 6 burials indicating better quality meat, greater types of cereals and vegetables as well as a possible increase in sugar consumption. Significant build-up of calculus in one 5-8 year old child, who also exhibited cribra orbitalia, is suggested of the child being fed a soft diet, suggesting chronic illness. Eight individuals affected by periosteal inflammation, three of which were children aged 4-6 years, 5-7 years and 5-8 years respectively, may have had tuberculosis; six were dated to Period 6 with all but one buried in the southern cemetery. Though injuries affecting the bones were only observed with adult individuals (13 women and 52 men) several healed cases had occurred in childhood, such as a

30-40 year old female buried in the chancel who had a shortened left femur and tibia and a 40-50 year old male who had damage to the end of a tibia.

Also discussed are remains which exhibited blade injuries (Stroud, 1993a, 232-4; Stroud, 1993b, 259-60; Watson, 1993, 249). Twenty-nine individuals, nineteen from Period 4 and ten from Period 6, had unhealed blade injuries consistent with slicing, thrusting or penetration by arrow or bolt, most frequently occurring in multiple frequencies on the skull or torso. Adult males in association who did not exhibit signs of violent injury to the skeleton may have died from flesh wounds.

### ***Chronological variation***

Little discussion was given to change in burial practice. Initial investigation by the author suggests some difference in preferred furniture between the parish and later priory phases. Wooden coffins were more frequent in the parish phase than later periods, whereas all examples of cists/stone coffins and grave linings were dated to the late 12<sup>th</sup> century onwards. Only markers and included objects were recorded in both phases.

### **St Michael's, Leicester**

The church and churchyard of St Michael's was excavated by University of Leicester Archaeological Services in a developer-led excavation between 2004-6. The total site covered approximately 6300 m<sup>2</sup> within the north-east quarter of Roman and medieval Leicester (Higgins et al., 2009, 1-2). Desk-based assessment indicated the church originally lay in one of Leicester's back streets (as did St Peter's, see below), with both churches later foundations on less valuable land away from the main street (Courtney, 1998, 118, 133). Previous

excavation suggested intensive domestic occupation until the mid-13<sup>th</sup>-14<sup>th</sup> centuries, supported by documentary evidence; by the 14<sup>th</sup> century, no houses were present and the tithes were too small to provide for the vicar (Connor and Buckley, 1999, Martin, 1990, 1, 5, 4; Higgins et al., 2009, 3-7, 203, 233-4). The first record of St Michael's, in Bishop Hugh's c.1220 matriculus, mentions it as poorly funded, and by the end of the 15<sup>th</sup> century the parish had become adopted by neighbouring St Peter's, perhaps having been dependent on St Peter's for some time (Courtney, 1998, 133, 136; Martin, 1990, 1, 3-4). By the end of the medieval period, habitation was occurring in the southern and western regions of the excavation area, perhaps related to the Guild of St Michael's; two bequests were made in the late 14<sup>th</sup> century and the *Chronicon Henrici Knighton* notes the presence of an anchorite canon from Leicester Abbey establishing himself within the church. This may also suggest that the plot was falling out of use as anchorites sought to separate themselves from the world (Martin, 1990, 4; Higgins et al., 2009, 279-80). The excavation report is currently unpublished, so the full text of the report was kindly provided by Richard Buckley (ULAS). The first volume is the stratigraphic report (Higgins et al., 2009), the second the specialist reports including the artefact analysis (Morris, Cooper and Buckley, 2009) and the third, the human bone report (Jacklin, 2009a).

Two hundred and seventy-one burials were excavated (Table 8). The full extent of the churchyard was not revealed, and heavy modern truncation had occurred (Higgins et al., 2009, 259). Excavation took place as areas became available, with emphasis placed on those due for destruction by piling. The church and churchyard were located within Plot Seven (Figure 5), an area approximately 1600 sq.m in size, associated with the remains of a late 3<sup>rd</sup>-early 5<sup>th</sup> century Roman large masonry building that became the focus for the church (Higgins et al., 2009, 143, 203). The location of the church from the 12<sup>th</sup> century was suggested by sections of wall-footings of east-west orientation and contemporary inhumations (Higgins et al., 2009, 203, 233, 280). Each inhumation was numbered and grouped (G) with other burials who shared

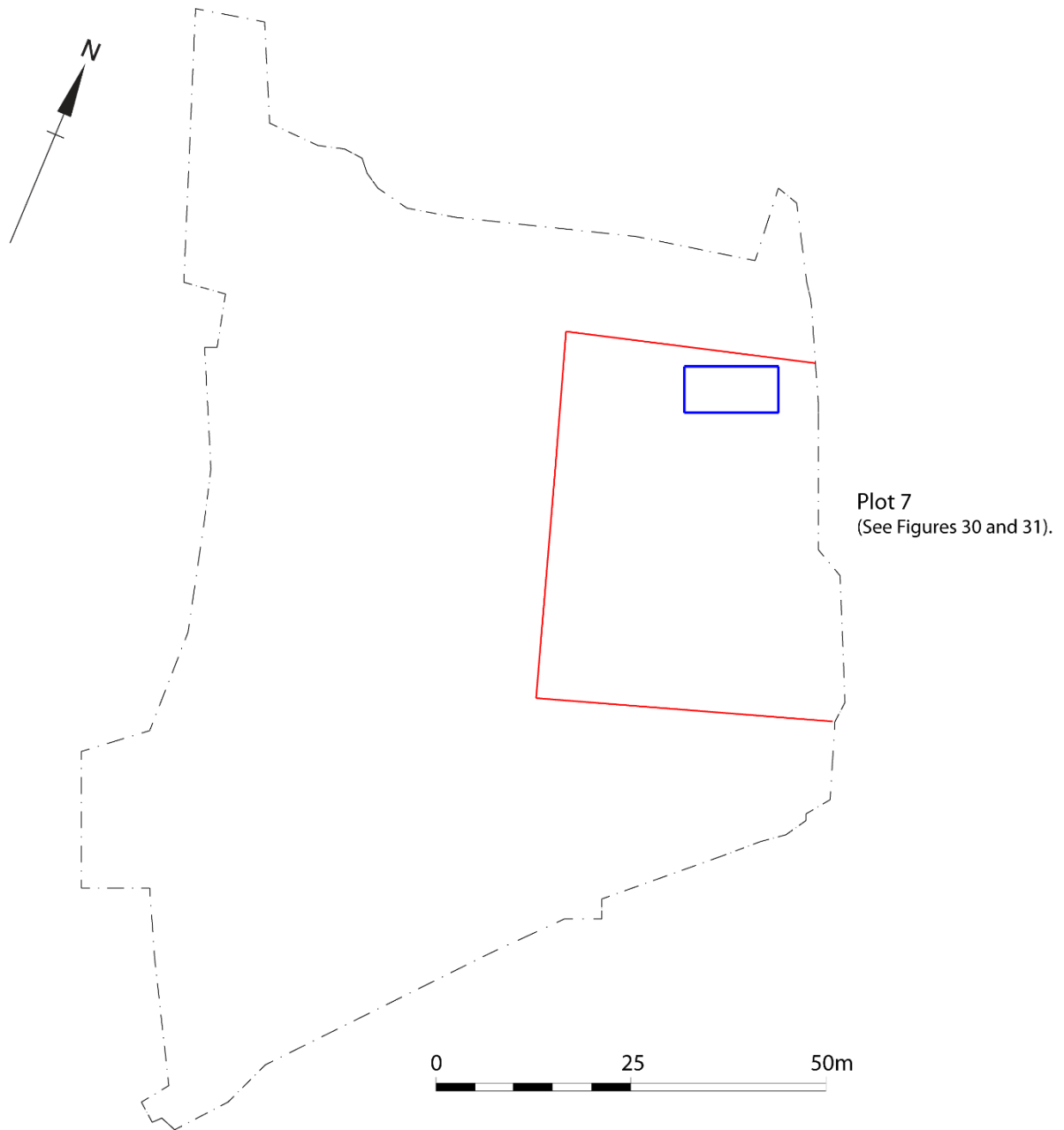


Figure 5: Location of St Michael's (in blue) and churchyard (in red) within Plot 7 and the excavation area (after Higgins et al, 2009, fig. 116)

stratigraphic or interpretative associations. The medieval archaeology and inhumations were dated to the following phases: earlier medieval (Phase 8/1100-1250), medieval (Phase 9.1/1250-1400 and 9.2/1300-1400) and late medieval (Phase 10/1400-1500, Higgins et al., 2009, 11-12).

Phase	No. of juvenile burials	No. of adult burials	No. of burials, no information	Total
8 – c.1100-1250	4	6	0	10
9.1 – c.1250-1400	52	140	25	219
9.2 – c.1300-1400	0	1	0	4
10 – c.1400-1500	10	27	0	38
<b>TOTAL</b>	<b>66</b>	<b>174</b>	<b>25</b>	<b>271</b>

Table 8: Burials assigned to each phase from St Michael's, Leicester (after Jacklin, 2009a)

### ***Burial practice***

Fewer than ten per cent (7.4%) of in-situ individuals were noted with furniture, objects or within a multiple burial. The majority of artefacts were objects, in eleven graves. Five burials, one dated to Phase 8 and the remainder to Phase 9.1, contained fragments of medieval pottery. There were also two burials with buckles, one an annular late 14<sup>th</sup>-century example near the hip of an adult male. In six burials were a possible knife blade, a ring, an iron nail and an unidentified circular object respectively, also dated to Phase 9.1. At least two burials had charnel from disturbed graves arranged around them. Only two of the burials with objects were considered to represent deliberate inclusions; the 14<sup>th</sup> century buckle and ring. It is 'distinctly possible' many of the buckles, buckle plates and strap fittings associated with 1250-1400 contexts may originally have been deposited with bodies in graves (Cool, 2009, 209-16, 231; Higgins et al., 2009, 269).



Six burials dated to Phase 9.1 had coffins, though little information was available for their construction or shape. One also had two pillow stones, the only example of stone placed around the head from this site. Dating to the same period were two individuals who had stones on their torsos, one of whom was also within an anthropomorphic grave.

There were also two multiple burials, both double. The first comprised a young adult woman who died during pregnancy and the consecutive burial of two adults, one female; all were within the church during Phase 9.1. A further thirteen burials were located within the church, five dated to Phase 8, seven to Phase 9.1 and one to Phase 9.2 (Higgins et al., 2009, 226, 233, 249, 252).

The majority of inhumations (218) were laid out west-east, with five exceptions. Three middle-aged women south of the porch had 'loosely flexed legs' and twisted torsos which the excavators deemed indicative of clumsy burial; greater variation in arm placement was observed with female individuals than male, including an unusual example of a woman aged 50+ years with her hands arranged in prayer. The other two burials in unusual positions were west of the porch; a middle-aged male aligned south-north and an unsexed middle-adult orientated north-south (Higgins et al., 2009, 264-5). These burials were among the last inhumations and represent 'a unique, contemporary, localised burial tradition' (Higgins et al., 2009, 252, 265). This is further supported by the continued burying of individuals beyond the lifecycle of the church, suggesting the churchyard remained an appropriate place for burial; two adult male inhumations dated 1650-1750, represent the latest phase of significant archaeological activity (Higgins et al., 2009, 289).

Locations favoured for burial were the west and south-western areas with burial near the Roman structure generally avoided (Higgins et al., 2009, 242). Favoured areas were indicated by higher proportions of sequential burial; north of the church, 69% of inhumations were buried

sequentially and the west of the church, 83% of graves were sequential and up to five-deep; the western churchyard also had the most burial activity with the majority disturbed post-deposition (Higgins et al., 2009, 262). Burial became less dense to the north, east and west as distance from the church increased (Higgins et al., 2009, 261). Areas south-west and south of the church had lower densities of burial, in particular around structure G876 (four unexcavated post-holes interpreted as supports for a cross or lych-gate) with this lack of focal areas suggesting gradual expansion of the churchyard (Higgins et al., 2009, 260, 262).

Limited discussion of burial based on age and sex was undertaken. Male burials were more common in the northern half of the churchyard, particularly around the church, which the report explains ‘cannot be considered exceptional as we would expect to find more male interments in an area of the churchyard already established as being the preferential place of burial’ (Higgins et al., 2009, 262). Though the reasoning is unclear, it may suggest that north side of the churchyard was not favoured for burials of women, contrary to discussions elsewhere (Boddington, 1987: 420; Gilchrist, 1994: 133-5, 138). That the north churchyard was preferred also contrasts discussions which have cited areas south and east of churches as preferred (Rodwell, 1981, 134; 2007, 17-8). Areas most densely used for adult burial were west and south-west of the church where they comprise 80% of the population, explained as the congregation choosing areas of high social and spiritual significance. More male adults than female were buried south of structure G876, suggesting further patterning (Higgins et al., 2009, 262-4).

### ***Child burial***

Over a quarter (27.5%) of aged individuals were juvenile, which is reasonable given the high levels of post-medieval disturbance that occurred. Discussion of child burial was limited.

Examples of child burials with some kind of additional treatment were two children aged 4-5 years (along with three female adults aged 25-50 years) buried within the church during Phase 8. The single example of pillow stones, perhaps as ear-muffs, were also within a juvenile grave, with an infant aged 6 months-1 year (Higgins et al., 2009, 252, 269). There was also the suggestion that the burial of juveniles may have been considered less important, as 38% of pre-adults were observed in the southern churchyard, representing 40% of all burials in this zone. Little variation in the distribution of pre-adults was evident elsewhere, though they represent 28% of burials north of the church (Higgins et al., 2009, 263-4).

***The osteological analysis***

Adults were sexed using the criteria in Table 9. Adults were ‘Male’ or ‘Possible Male’ (18.44% of burials), ‘Female’ or ‘Possible Female (29.08%) with the remainder ‘Non-Sexable Adult’ (28.37%). Sexing of juveniles was not attempted due to lack of sexual dimorphism (unless on the cusp of the division, such as 18-21 years) and were classified as ‘Non-adult’ (24.11%; Jacklin, 2009a, 6).

Age group	Skeletal element	Method
Adults	Ox coxae and cranial morphology	Buikstra and Ubelaker (1994)
	Femoral/humeral head diameter, clavicle length and femoral circumference	Bass (1995)
	Epiphyseal fusion	Gray’s Anatomy (1980)

Table 9: Osteological techniques for sexing used at St Michael’s, Leicester (after Jacklin, 2009a, 5)

Ageing was undertaken using the methods below (Table 10). The population comprised 66.3% adults, 24.1% non-adults and 9.6% bridging the adult/non-adult categories (Jacklin, 2009a, 8).

Age group	Skeletal element	Method
Juveniles	Epiphyseal fusion	Scheuer and Black (2000)
	Dental eruption	Bass (1995)
	Cranial/port cranial metrics	Gray's Anatomy (1980)
Adults	Dental attrition	Brothwell (1981)
	Auricular surface	Buikstra and Ubelaker (1994)
	Cranial suture closure	Meindl and Lovejoy (1985)
	Rib end morphology	Schwartz (1995)
	İşcan rib phase casts	İşcan, Loth and Wright (1984; 1985)
	Suchey-Brooks Female Age and Male Age Determination Sets	Brooks and Suchey (1990)

Table 10: Osteological techniques for ageing used at St Michael's, Leicester (after Jacklin, 2009a, 5)

Skeletons were assigned to age categories; the main ones are shaded, with the remainder overlapping categories when refined ageing was not possible (Table 5.6). Burials were affected by clearance and disturbance associated with subsequent burials and activity. The majority were 0-25% and 25-50% complete, (29.43% of burials for both), followed by 21.63% being 50-75% complete and 19.5% were 75-100% complete. Almost two thirds (61.7%) were classified as having good preservation, a third (33.69%) with fair preservation and less than 5% (4.61%) poorly preserved (Jacklin, 2009a, 4-5, figs. 2 and 3). The cemetery's minimum number of individuals (MNI) was estimated to have been reduced by up to 50% by truncation and the cemetery continuing beyond the limits of excavation. Age at death for non-adults was

shown to be highest for those aged 2-3 years or 4-8 years. For adults, the majority died within the middle-aged bracket, in particular between 42-50 years (Jacklin, 2009a).

Age category	Definition
Foetus	Pre-birth
Foetus to infant	Pre-birth-3 years
Infant	Birth-3 years
Infant to child	Birth-12 years
Child	4-12 years
Child to adolescent	4-20 years
Adolescent	13-20 years
Adolescent to young adult	13-35 years
Adolescent to middle adult	13-50 years
Young adult	21-35 years
Young to middle adult	21-50 years
Middle adult	36-50 years
Middle adult to older adult	36-51 years
Older adult	51+ years

Table 11: Age categories used at St Michael's, Leicester (after Jacklin, 2009a, 8)

Assessment of health demonstrated almost 54% of skeletons had dental caries, indicative of poor dental hygiene, of which 4.0% were non-adults. Approximately 9.5% of individuals had evidence for periostitis; 25% of males, 7.32% of females and 11.76% of non-adults; for all eight non-adults the condition was active at death. Over 44% of skeletons had hypoplasia lines with a fifth of non-adults affected; for adults, it was more common in males than females. Some individuals, such as SK300 dated to 1250-1400 and aged 5-6 years, had hypoplasia lines and

active periostitis indicating 'serious, possibly infectious, disease' (Jacklin, 2009a, 22). The population were also affected by cribra orbitalia, to a greater extent for the biologically-immature than adults (over 27% compared to 11%) and more frequent in female adults (18.92%) than males (5.88%). There was one case of rickets with an infant aged 2-3 years, signs of tuberculosis affecting 130 individuals (41 male and 69 female) and fractures in association with adults of both sexes, though with more males than females. These conditions, among other more specific conditions discussed in the report indicate that the burial population were affected by common conditions associated with both the period and poor health.

### *Chronological variation*

Investigation of change over time was impeded by post-medieval truncation and the lack of identifiable burial practices. All four examples of objects were dated 1250-1400, which might suggest a high/late medieval trend for including items in graves. The same date was also given to the single example of stones and a coffin. Burial appears to have been taking place in the church from the 9<sup>th</sup> century onwards, perhaps suggesting less restriction on this location of burial (or less post-burial disturbance) than observed elsewhere.

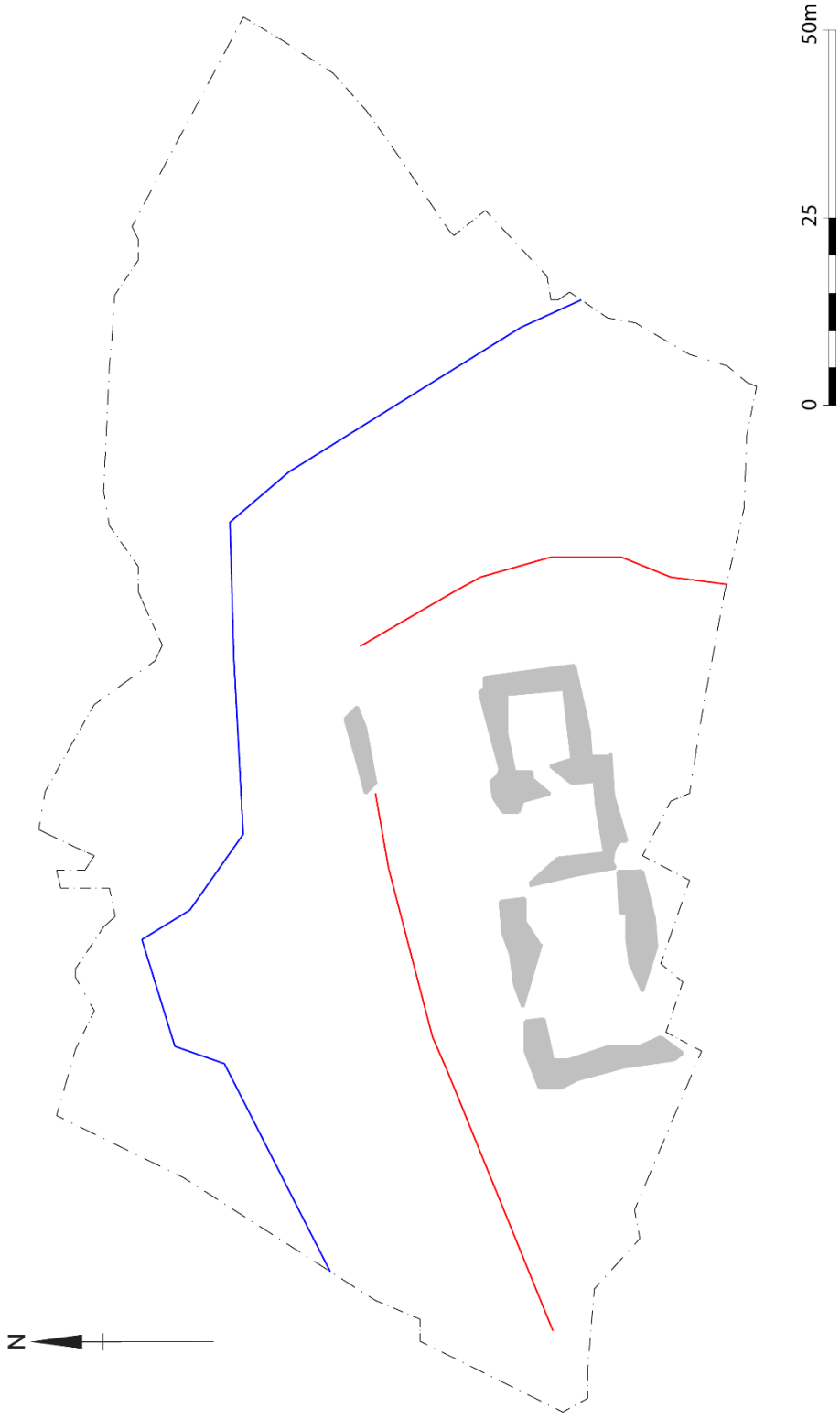


Figure 6: Cemetery boundaries (late Saxon in red and late medieval in blue) and excavated area of St Peter's, Leicester (after Gnanaratnam, 2009, fig. 40)

## **St Peter's, Leicester**

Excavation occurred in 2005 in advance of construction work over an area of approximately c.1.830 sq.m (Figure 6) within north-east historic Leicester (Gnanaratnam, 2009, 1). Desk-based assessment (Connor and Buckley, 1999) suggested that during the medieval period, the area was characterised by domestic occupation, street frontages and cultivated plots. St Peter's may have been associated with structures in nearby Dead Lane, such as a stone hall south of the cemetery, perhaps home to the original or an early benefactor, and a 13<sup>th</sup> century town house (Courtney, 1998, 133). The existence of the cemetery was known from the early 1960s, a later watching brief and trial trenching in 2003 (Rayner, 2000; Gnanaratnam, 2009, 4-5, 6). The first record of the church is in a matriculus dated c.1220 and though poor, St Peter's was wealthier than nearby St Michael's. After the Dissolution the church became ruinous by 1555 and in 1573 was demolished and partially reused in the construction of a nearby school; use of the churchyard is also presumed to have ended during the mid-16<sup>th</sup> century (Gnanaratnam, 2009, 74-5, 77, 83). Despite the end of the use of St Michael's and transferal of parishioners to St Peter's around the second half of the 15<sup>th</sup> century (Martin, 1990, 4) it was not possible to identify related enlargement of the churchyard or increased demand on burial space (Gnanaratnam, 2009, 69). The reports for St Peter's church and cemetery are also unpublished and were provided by Richard Buckley. The first volume is the stratigraphic sequence (Gnanaratnam, 2009), the second the specialist reports (Buckley et al., 2009) and the third the skeletal analysis (Jacklin, 2009b).

The project's objectives included ascertaining the nature and decline of the parish and the character of the cemetery population. Dating was hindered by the inability to excavate features to their full extent due to time constraints (Gnanaratnam, 2009, 10-11). The church was located in the southern part of the excavation area and the western, northern and eastern parts of the churchyard were revealed. The first church was of 3-celled construction, approximately 17.8m



in length with a maximum width of 5.25m and probably pre-Conquest, based on the dating of early burials to cal AD 860-1020 and 980-1160 (95% probabilities; Gnanaratnam, 2009, 20, 21). The excavation did not reveal significant evidence for churchyard boundaries, which were extended at least four times, indicated by lines of burials over sealed features (Gnanaratnam, 2009, 20, 25, 94-5).

Medieval activity was divided into four phases (Table 12); Phase 7/850-1100, Phase 8/1150-1300 (subdivided into Phases 8A/1100-1190, 8B/1150-1250 and 8C/1200-1250), Phase 9/1250-1400 (subdivided into Phases 9A/1250-1350 and 9B/1300/50-1375/1400) and Phase 10/1375/1400-1550.

Phase	No. of juvenile burials	No. of adult burials	No. of burials, no information	Total
7 – c.850-1100	5	9	0	14
7/8A – c.850-1190	1	0	0	1
8A – c.1100-1190	2	1	0	3
9A – c.1250-1300	0	1	0	1
9B – c.1300/50-1375/1400	0	1	0	1
10 – c.1375/1400-1550	3	5	1	10
Unphased	496	686	4	1288
<b>TOTAL</b>	<b>507</b>	<b>703</b>	<b>5</b>	<b>1318</b>

Table 12: Burials assigned to each phase of St Peter's, Leicester (after Jacklin, 2009b)

### ***Burial practice***

Most burials were observed in graves with no determinable cuts. Less than a fifth (16.8%) had furniture, objects and/or were present in a multiple burial (Gnanaratnam, 2009, 102-36). This

proportion may be higher if further items noted in burial contexts are discussed as deliberate inclusions (discussed in Chapter Six).

Boards were one of the most frequently-observed furniture types, noted with 59 individuals in 4.5% of graves. Two cases, one of a charred board, were early and dated to Phase 7; except for one radiocarbon dated example (cal AD1010-1160) all were unphased.

Fifty-six people were recovered from the church, representing 4.2% of individuals. A lack of burials or disarticulated human bone suggested burial did not occur within the church before 1300 (Gnanaratnam, 2009, 38, 42). Two burials were dated to Phases 9A and 9B respectively, and are discussed below as they contained objects. Of the remaining forty-four, ten were dated to Phase 10. Four survived partially in the chancel, with iron nails suggesting they were coffined. Six were in the north aisle and interpreted as a private burial group, all in coffins and three also ash burials. The arrangement of these six contrasted with the more dispersed nature of graves in the south aisle and were interpreted as individuals of a guild rather than the same family due to a lack of infants. Though limited excavation occurred in the south aisle, five burials are noted. Two, one within an anthropomorphic grave, are 'clearly early'; a further three were related stratigraphically, one of which was buried with a silver penny (1413-22) of Henry V.

Lining of graves was the second most common practice, with forty-three individuals, or 3.3% of burials. Thirty used stone, charcoal or the two together, most likely an early medieval practice as twelve dated to Phase 7, generally close to the church (Gnanaratnam, 2009, 20, 113, 146-9, image 94B, fig. 80). The burials were discussed following Thompson's (2004, 238, 231) definition of charcoal burials as a rite linked to penitence and dated to the late Saxon-12<sup>th</sup> century (Gnanaratnam, 2009, 112-3). The remaining thirteen were ash burials, with four (Phases 9B or 10) suggesting a later medieval date for the practice; all were coffined and with

the exception of one, adults. The ash, similarly interpreted as showing penance as well as a possible desire for purification or association with separation from the living, had been placed in the coffins to an approximate depth of 10mm. Small fragments of burnt orange clay or sandstone were in the ash layers of at least three burials, a newly-identified practice (Gnanaratnam, 2009, 118-9).

Included objects were observed within twenty-eight burials, or 2.1% of graves. The majority were unphased, with objects as varied as pins (5), copper buttons (3), coins (2), decorative mounts or inlays (2), decorated ceramics and plaster (2) and glazed pebbles (2), as well as single examples of a buckle, a ring, a jet bead, lead window fragment, an iron arrowhead, a lead weight, a bone skate, a possible iron box lid with lettering and a Roman trumpet brooch as well as several unclassifiable objects. Three phased examples were within the church. A coin in the mouth, a lead object and a copper alloy pin were recovered from the burial of an adult man (Phase 9A), with osteological analysis suggesting this person enjoyed a rich diet. Dated to Phase 9B was the ash burial of an adult female within a coffin with a Papal bulla of Pope Innocent VI (1352-62) positioned, written side up, beside the woman's left hand (Gnanaratnam, 2009, 45-47, 49-50). Three tiles had been placed under the head of a middle-aged adult male, with the burial dated to Phase 10. The location of the tiles may be linked to the identification that the male had suffered (healed) trauma to the head.

Ear-muffs were recovered from 2.0% (26) of graves, three dated to Phase 7 with the remainder unphased. Thirteen people were interred with stones on their bodies; one dated to Phase 7, another radiocarbon to cal AD980-1160 and eleven unphased, as was the one example of pillow stones.

Twenty individuals were within ten double burials, representing 1.5% of the burial population. Two were dated to Phase 7 and demonstrated further distinction through ear-muffs and/or

charcoal and stone linings. A further burial was dated (Phase 7/8A) with seven unphased, two of which had evidence for boards covering at least one of the individuals. The remains of at least twenty-two people were recovered from a communal burial pit in the south-west corner of the cemetery and dated to Phase 8A; interpreted as the result of a single catastrophic event such as infectious disease, this is not considered further (Gnanaratnam, 2009, 28, fig. 41, 42-3).

Evidence for coffins was infrequent, detected in 0.5% of burials. Four examples were identified in the church during Phase 10, with one unphased example in the churchyard and another located outside the cemetery (discussed below).

Four adult individuals (three female, one unsexed) had their arms arranged as if in prayer, with their location in a line northwest of the church possibly also having significance. A further unusual observation was the single example of an individual buried prone. This burial, unaged and unsexed, was not attributed to a phase.

Variation in burial by location was also observed. An unsexed middle-aged adult was buried within the footprint of an abandoned stone-built hall outside the cemetery, constructed before the mid-12<sup>th</sup> century and out of use a century later; this burial may have been located here as it failed to meet the requirements for burial on consecrated ground (Gnanaratnam, 2009, 69). For the later medieval period, well-defined rows of burials were identified within the eastern churchyard and variation in alignment was identified in the northern and north-western churchyard; for the former focused on the newly-built north aisle while for the latter, either the church's west wall or the western churchyard boundary. Areas west and east of the church were most densely used for burial, partly due to their longevity, in contrast to the area immediately north of the church which is suggested as lower status. The abovementioned early medieval charcoal burials were close to the church whereas ash burials were generally inside. Eight

burials within the western nave were interpreted as a deliberate concentration, though little study could be done for groups in other locations, such as the nave, chancel and bell-tower, due to heavy truncation.

### *Child burial*

Over forty per cent (41.9%) of aged burials were juvenile. Discussion of burial by age was limited. The categorisation of juveniles as those aged up to 21 years is likely to account partly for the high number of juveniles. Fewer than expected burials of infants and children were explained by their 'extreme delicacy and shallower graves'. No evidence suggested that certain areas of the churchyard that were set aside for the burial of infants and instead that apparent concentrations reflected general densities of burial (Gnanaratnam, 2009, 104).

The general absence of child burials from the church suggests this was not an appropriate location for their burial. Other, less typical, forms of differentiation is suggested by the observation that at least one child was buried clothed, indicated by the recovery of belt fittings (Gnanaratnam, 2009, 127). Further special treatment is suggested from an unusual double burial of two juveniles, an adolescent and a child. The grave of the older individual, perhaps underneath a wooden cover, was opened to allow the younger individual to be interred beside. Significant decomposition of the first individual was underway; their left hand was moved from their thigh and placed on top of the right hand of the new individual, indicated by the presence of the articulated left thumb which was left and observed in the pelvic cavity of the older individual during excavation (Gnanaratnam, 2009, fig. 86, 122, fig. 92, 131).

### *The osteological analysis*

The human remains from St Peter's were assessed by the same team as the St Michael's assemblage, using the same methods (Tables 10 and 11). The proportion of male-sexed individuals was 13.77%, female-sexed individuals comprised 21.87% and 25.65% were non-sexable adults. The remaining 38.71% were non-adults (Jacklin, 2009b, 6-8). Most burials were 75-100% complete (29.98% of individuals); of the remainder 27.54% were 25-50% complete, 21.79% were 50-75% complete with the remaining 20.69% only 0-25% complete. Approximately 43% had fair preservation and good preservation, with poor preservation noted for the remaining 13.1% (Jacklin, 2009b, Figs. 1 and 2, 5).

A total of 1271 skeletons were analysed 2006-2009 (Jacklin, 2009b), likely to be less than half of the individuals originally interred, with approximately eleven burials per year based on estimations of burial density, cemetery size and post-medieval truncation. For the non-adult population death most frequently between 2-3 years, 4-8 years and 17-20 years. For adults, death was most common in middle-age, particularly towards the older end of this age, with more women surviving into old age than men. Regarding health, just over 50% of individuals had evidence for dental caries, which were more common in adults than non-adults with 12.61% of adults also having dental abscesses. A small number of adults had evidence for infections affecting the bone such as osteomyelitis, acquired syphilis and tuberculosis, which also affected at least two adolescents. Periostitis on bone was identified for approximately 10% of females, 20% of males and 12% of non-adults, frequently observed with other indicators of poor health such as hypoplasia lines, cribra orbitalia, porotic hyperostosis and rickets, plus a few cases of extreme illness such as possible meningitis or gastro-intestinal tuberculosis. Trauma affected fifty-five individuals and almost twice as common in male adults (over 14%) than females (just over 7.5%) and uncommon in non-adults (1%). Stable isotope analysis

(carbon and nitrogen) of twelve individuals suggested a terrestrial diet with little marine protein and little difference in diet between individuals buried in the church and the churchyard. The overall health and diet of the St Peter's population is similar to assemblages from other sites, in particular St Michael's, due to their shared locales, and symptomatic of the period.

### ***Chronological variation***

Any attempt at meaningful discussion of change in burial practice over time is hindered by the overwhelming proportion of unphased burials (97.7%). Examples of some burial rites as well as the significant number of burials in the church can allow some broad variation to be identified.

Burials furnished with stone, charcoal or both were among the earliest burials at St Peter's, with their clustered arrangement in the churchyard likely indicative of the same family being interred during a short timeframe. In contrast, the ash burial rite was a later medieval tradition in which the majority of examples (10/13) were located within the church. Representing high or special status practices, though separated by centuries, they suggest a change in fashion of differentiation over time. Such a change in preferences can also be proposed for burial within the church, which did not occur before 1300; preceding the 14<sup>th</sup> century, greater variation in burials within the churchyard may be hypothesised.

### **The sites and their wider academic context**

The next section examines how the sites have been discussed in secondary works to provide an integrated consideration of the five case studies that will demonstrate why they are an appropriate selection. It will show how the sites have been interpreted and what they suggest

about attitudes to children in the medieval period. Apparent themes for child burial are summarised and inform the analysis of later chapters.

### ***Burial practice***

Burial practices from each site, particularly when unusual, have received significant academic attention. Daniell uses the burial of individuals in hollowed-out tree trunks from Barton-upon-Humber, among other sites, as one example of burials within a category he calls ‘the odd and unusual’, suggesting they may derive from earlier traditions (Daniell, 1997, 108-9), though it is uncertain what these are. Hadley also highlights the unusual preservation of coffins at Barton and suggests caution in equating the use of wooden coffins with status, particularly when they reused domestic furniture (Hadley, 2001, 103-4, 178; also Daniell, 1997, 164). Thompson noted the coffins at Barton were ‘so flimsy that they might be interpreted as grave-liners’ and not strong enough to carry a body (Thompson, 2004, 125).

The functional properties of other forms of furniture have also directed discussion. Hadley suggests stones around the head of a decapitated individual from Fishergate served a functional purpose to support the head, rather than perhaps linked to status, in contrast to Daniell, who prefers status or expressions of humility (Daniell, 1997, 160). Hadley also used stones around the heads of individuals from later Anglo-Saxon graves at Barton-upon-Humber to conclude the practice was unusual beyond the 11<sup>th</sup> century (Hadley, 2001, 30, 96-7, 100, 108, 118-9). Similarly focusing on the later Anglo-Saxon period, Thompson (2004, 120-1) discusses charcoal burial and cites the single example from Barton-upon-Humber located south of the church as problematic, asking ‘could it sometimes have been reserved for those who were thought to be in need of particular help, who had failed for whatever reason to die...with decency?’ She concludes that the practice most probably indicates local variation perhaps



linked to penitence and cleansing ‘rather than a nationally applicable grammar’. Holloway’s (2010a, 83-92; 2010b, 136, 142-4) study of charcoal burial identified over 300 examples from more than thirty-five sites including Barton-upon-Humber, Wharram Percy and Fishergate and suggested caution in interpreting them as ‘normal’ in opposition to ‘deviant’. He concluded that though examples occurred in highest frequency in association with high-status urban minsters and in the south and south-west of England, the rite itself was used in a variety of cemeteries as part of a wider array of practices which may have been utilised by different people for differing reasons. This contrasts explanations for other minority rites, such as the filling of coffins and graves with mud or clay. Gilchrist and Sloane agree with the interpretation suggested by Rodwell and Atkins (above) that mud was possibly used as a sealant, but also that clay may have had a symbolic function beyond, or instead of, a function of sealing the corpse. This is supported by four adult male graves filled with clay from the Benedictine priory of St James, Bristol, located in the north-east corner of the cemetery close to the church and interpreted as displaying status (Gilchrist and Sloane, 2005, 183). Gilchrist and Sloane also suggest a symbolic function for the 13<sup>th</sup>-early 14<sup>th</sup> century example of a grave of an older man that contained lime from Fishergate, as well as a second similar burial from St Helen-on-the-Walls, suggesting the practice was unlikely to represent a local tradition and but instead an attempt to illuminate the grave (Gilchrist and Sloane, 2005, 143-4). Daniell similarly suggested that this example may be an important burial due to its location in the presbytery and unique use of lime. He posited a similar explanation based on symbolism for the use of tile, as noted within two graves at St Andrew’s, as representing ‘soldiers of Christ’ alongside a practical function as grave lining; Gilchrist and Sloane agree these graves must have been of ‘worthy or wealthy’ people (Daniell, 1997, 157, 165-6; Gilchrist and Sloane, 2005, 141). Stone coffins from Fishergate were also linked to status. Identified as a predominantly later medieval tradition among high status laity, Hadley exercises caution again in assigning status in such a

manner, suggesting the graves without coffins in the church crossing and presbytery as important ‘despite their relative material poverty’ (Hadley, 2001, 115-7). Daniell similarly finds the stone-lined or composite stone coffins problematic, suggesting that they might have been less favoured than both monolithic stone coffins and wooden coffins as they probably took less time to construct (Daniell, 1997, 161).

### ***Included objects***

Artefacts recovered from four of the five sites have been used in recent discussions of the power of objects in graves by Gilchrist. These include two coins from burials at Wharram Percy; a mid-9<sup>th</sup> century styca in an 11<sup>th</sup> century grave and a mid-late-12<sup>th</sup> century cut halfpenny of Henry II in the grave of a young adult female, interpreted as possessing power, the explanation also offered for fossils, such as one from the 12<sup>th</sup> century grave of an 18 month-2 year old child. Wooden rods of hazel, ash or willow, as recorded from early burials at Barton-upon-Humber, may have been associated ‘with the performance of a protective charm’ during burial. Another posited interpretation links the rods with the practising of charms, with ash particularly linked to the healing of children, due to the use of the species in domestic structures and healing as ‘example[s] of the hybridity of Christian burial customs with earlier magic’ (Gilchrist, 2008, 126-7; see also Gilchrist and Sloane, 2005, 126, 171-4). Rods have also received more traditional, religious interpretations, as symbolic representations of the Resurrection or power of Christ by Daniell, who supports this with a 15<sup>th</sup> century burial sermon which suggest rods were an indicator that the deceased was to enter eternity and be judged (Daniell, 1997, 167-8). Williams (2006, 122) largely concurs with this explanation and associates rods with expressions of penance and humility similar to pilgrim’s staffs. Though they favour a

‘supernatural’ explanation, Gilchrist and Sloane (2005, 172-3) agree that rods had a symbolic function and conclude they were objects created specifically for the mortuary ritual.

Medieval artefacts discussed as items of folk magic include a broken seal matrix from St Andrew, Fishergate. Hadley, following Daniell (1997,151-2) uses the matrix and documentary evidence to suggest that breaking objects was associated with death and later medieval burial practices, an interpretation also favoured by Gilchrist and Sloane (Hadley, 2001, 121; Gilchrist and Sloane, 2005, 176). Another medieval example is a mid-14<sup>th</sup> century papal bulla of Innocent VI from an ash burial in the nave at St Peter’s, Leicester, one of multiple examples mainly recovered in adult burials. Gilchrist suggests this example may originally have had a papal indulgence attached and, as a consecrated object, may have become an amulet or ‘secondary relic’ through physical contact with a corpse (Gilchrist, 2008, 128-31). The ash burials from St Peter’s, Leicester were discussed with other late 13<sup>th</sup>-mid 15<sup>th</sup> century examples in relation to demonic magic, as the ash had been collected from a domestic hearth. As most examples dated to around the time of the Black Death, Gilchrist interprets later medieval ash burials as a rite of domestic purification of cleansing the home after the death of an individual and to prevent them returning ‘to seek the warmth of the hearth’. The Phase E example from St Peter’s, Barton-upon-Humber of a coffin with a wickerwork base is another example suggested as representing folk practices and domestic purification rites, as a hybrid between beds and coffins (Gilchrist, 2008, 145-7, 150-1; 2012, 213).

The orientation of individuals in their graves with their heads to the east rather than the west is another unorthodox practice suggested as having a particular motivation or meaning. Daniell highlights the single west-facing, decapitated skeleton from St Andrew’s as perhaps sinister in origin, with different orientations given to burials of criminals ‘as a way of containing the evil within layers of monastic holiness’ (Daniell, 1997, 149; 2001, 220-5). Gilchrist and Sloane argue that there is no pattern apparent in cases of east-west burial and that explanations based

on punishment or penance are tenuous, as other burials of individuals who suffered violent death were in typical orientations (Gilchrist and Sloane, 2005, 153). Considered to be more purposeful is the unusual body position of an adult male buried with his hands and arms above his head. Alongside a number of similar cases from monastic cemeteries, Gilchrist and Sloane suggest that the arms may have been positioned in prayer or supplication (Gilchrist and Sloane, 2005, 155-6; Stroud and Kemp, 1993, 147, fig.42g).

Items of antiquity, or curated objects, may have possessed increasing power over time. Examples from Wharram Percy include a Roman glass bangle from a 12<sup>th</sup> century coffined burial and Anglo-Saxon dress pins within three 15<sup>th</sup> century graves near the chancel (Gilchrist, 2008, 123, 134, 137, 142-3, Tables 3 and 5; Gilchrist, 2012, 143, 213). Further objects Gilchrist terms 'amuletic' include a worn pig's tooth from a 10<sup>th</sup>-13<sup>th</sup> century coffined burial of 1-3 year old, a half coin from the grave of an adult male and beads from two adult graves, potentially to ward off the evil eye, as well as bone dice which may represent gaming or divination occurring in churchyards, all recovered from Barton-upon-Humber (Gilchrist, 2012, 81, 167, 210, 213-4, 244; also Waldron, 2007, 167). Interpretations of these artefacts as active and fulfilling a purpose of protection contrasts with the sentimental explanation given to the bone stylus from a child's grave at Wharram Percy, as 'a personal object prized by a young person who was learning to read and write' (Gilchrist, 2012, 212).

Other items suggestive of the identity or possessions of the deceased are chalices and patens. The example of a chalice and paten in a grave from St Martin's, Wharram Percy, was used in a discussion of grave goods dating to the 13<sup>th</sup> century or later; a time by which the inclusion of objects was believed to be uncommon (Hadley, 2001; 113). Gilchrist has suggested chalice and patens were used with other religious items such as vestments as possible indicators of the masculine identity of the priest, rather than simply religious status, and as a way of demonstrating the place of a priest within the male hierarchy (Gilchrist, 2009). Priest burials

had developed their distinct mortuary nature by c.1100, concurrent with reform and taking responsibility for burial (Gilchrist, 2012, 181). Chalices 'represent the exclusive right of the priest to mediate with the divine' and in burial may be representative of the deceased individual possessing a highly exclusive medieval concept of masculinity (Gilchrist, 2009, 241, 242-3). Such graves should perhaps be investigated in a similar way to other elite male burials, such as founder's graves.

### *Age and sex*

Despite the variation apparent in burial among her examples of cemetery diversity that included the later Anglo-Saxon cemetery phases of Wharram Percy, Barton-upon-Humber and Fishergate, Buckberry (2007, 121) found no difference in sex and grave type, nor was sex identified as affecting location. Variation by sex and age may be suggested by the rows of eight pre-1300 burials of adult women and child in the north-eastern corner of the cemetery at Barton-upon-Humber. Gilchrist has highlighted evidence from written sources, churches and nunneries that the north of the church and churchyard was linked with women. These include Middle Byzantine references to women's places on the left of the church (viewed from the west), iconographic representations of female and male saints displayed in the north and south of churches, that the north side of a church was viewed as cold and female compared to the south, which was viewed as warm and male, as well as traditions of burying women in the north churchyards in pre-13<sup>th</sup> century Sweden, Iceland and early Christian Greenland (Gilchrist, 1994: 133-5). Therefore, from Rodwell's suggestion that the favoured locations for burial were south and east of the church an underrepresentation of women and children should be expected from these areas (Rodwell, 1981, 134). This may be contradicted by Fishergate in which the poorer burials were located south of the priory. Gilchrist (1994, 61) has also

suggested that the east end of the church was a typical location for the burial of women, and a grave at the east end of the south aisle of St Peter's, Barton-upon-Humber of a woman (Phase C) may be an example.

In contrast to a lack of variation by sex, Buckberry did identify age-related variation between 700-1100 at Barton-upon-Humber and Wharram Percy and concluded more elaborate burial was probable as the age of the deceased increased, especially for coffins, which were buried with more adults aged 46 years or older than younger adults (also see Hadley, 2010, 104). Further bias in burial by age and sex has also been suggested by Hadley for the same period when she suggests a higher number of graves were opened to allow the insertion of infants or children into existing burials than in the preceding centuries; Hadley also suggested that when multiple burials of children with adults occurred they were more often with male adults than females, another change from earlier Anglo-Saxon phases (Hadley, 2010, 110). Gilchrist (2012, 208-9) suggests this may represent a cultural taboo that preferred the burial of children with a companion rather than alone, perhaps if they were seen as vulnerable or requiring guidance. A discussion of the reasons influencing such multiple burials by Hadley suggested they may represent burials of family members, using examples from St Andrew, Fishergate and St Helen-on-the-Walls (Hadley, 2001, 106, 118; 2002, 219-20).

The importance of family burial is developed further by Hadley in her use of Stocker's (2007, 285-6) discussion of a potential founder's burial at Wharram Percy. Hadley suggests such burials demonstrate how infant and young children may have been buried near prominent adult burials to aid the protection and commemoration of their resting place while reinforcing the importance of the adult (Hadley, 2010, 109-10). Differential treatment of young children through location was also suggested by Gilchrist by the concentration of burials of children under 5 years in the western churchyard at St Andrew, Fishergate, with Gilchrist suggesting such burials, defined by age, were representative of distinct age-cohorts of persons with a

shared identity, rather than individuals of such ages being considered less favourably than others (Gilchrist, 2012, 206). These groups at St Andrew's may have represented, and particularly before the 13<sup>th</sup> century, children given up to monasteries by their parents (Mays, 2006, 181).

Artefacts recovered from child burials have also been used to suggest the graves of juveniles could receive special or different treatment. A tradition for burying children in their clothes was suggested by Gilchrist in a discussion of gendered clothing which mentions a pin found under the skull of an eight year old girl buried at St Martin's, Wharram Percy, that likely fixed a headdress worn in burial (Gilchrist, 2012, 81). In contrast, a buckle found with a one year old from St Peter's, Barton-upon-Humber, is interpreted as a grave good, as the majority of other examples identified were in with children aged 7 years and older; an age group more likely to be buried clothed (Gilchrist, 2012, 81). The arrangement of infant bodies during burial has also been highlighted. An infant, positioned on its side within its grave, in the southern cemetery of St Andrew, Fishergate between 1200-75 is among a number of examples used by Gilchrist and Sloane to suggest that this sleeping position was popular for infants and young children in monastic cemeteries (Gilchrist and Sloane, 2005, 155-6; Stroud and Kemp, 1993, 147, fig.42g).

### ***Health and disease***

The human bone assemblages, particularly from Wharram Percy and Fishergate, have been used to investigate several osteological topics. The first is age at death, which for juveniles, was found to peak in the age range of 2.6-6.5 years using remains from Wharram Percy, St Helen's and Chichester, with at least one violent child death suggested (Lewis, 2002, 220; 2007, 171; for comparisons see Gilchrist 2012, 52-3). Another study of infant mortality that used data from Wharram Percy suggested all types of infant death were represented, which

differed from the other case studies, indicating the collection is more representative of mortality patterns than other sites (Lewis and Gowland, 2007). The excavated population from Wharram Percy has also been used to assess the effects of age, sex and lifestyle on bone quality (Agarwal et al., 2004).

Skeletal remains from St Martin's have been used in discussions of medical conditions. Some have focused on children, such as rickets (Mays et al., 2006), tuberculosis (Mays, S et al., 2001) and spondylolysis lesions (Mays, 2007c). Others have focused on more specific cases. Knüsel's article (1995), which discusses the burial of a mature adult male from Fishergate who had copper alloy plates associated with a disabled knee, suggests that the Gilbertine house had access to advanced late 13<sup>th</sup> century medicine, as few examples of this practice have been observed. Gilchrist and Sloane use this as evidence to suggest personal and religious identities were important and that there existed 'a persistent belief in the literal resurrection of the body, but...also...an effort to represent the personal detail of an individual life and death' (Gilchrist and Sloane, 2005, 103-4, 230). Evidence for advanced medical practice was also suggested for a possible 10<sup>th</sup>-11<sup>th</sup> century example of trepanation on a male adult aged 35-45 years from Wharram Percy (Mays, 2005, 95).

Identity, particularly shared identity, has been suggested for the collection of adult males recovered from Fishergate with evidence for blade injuries on their skeletons. Daniell (1997, 137-8) suggests such marks may represent deaths from battle injuries. Reynolds (2009, 41) identifies burials with battle injuries as rare in community cemeteries but supports Daniell's assertion that similarities between the burials support the hypothesis that the deaths were the result of a single event such as a local battle. For later blade injury burials from the site of the 12<sup>th</sup>-14<sup>th</sup> centuries and all in prestigious locations, Daniell suggests they may represent deaths as a result of separate events such feuding, trial by combat, or that the priory specialised in the treatment of weapon injuries (Daniell, 2001, 223; Reynolds, 2009, 42-3).



## *Diet*

Investigation of infant feeding and weaning practices using stable carbon and nitrogen isotopes extracted from individuals from Wharram Percy suggested cessation of breastfeeding between 1-2 years and the consumption of a 'childhood' diet up to 9 years (Mays et al., 2002; Richards et al., 2002). Examining the effects of breastfeeding on mothers and infants using bone mineral density, Mays (2010) concluded that though breastfeeding allowed growth comparable to modern populations for infants for the first eighteen months, growth slowed during weaning; investigation of adult females aged 30-49 years showed bone mineral density levels fell in the pre-menopausal period, suggesting they also had poor nutrition. Such results alongside studies analysing stress indicators and their relationship to physical development (Mays, 1995) led Gilchrist to suggest that prolonged juvenile physical development occurred as a result of poor nutrition. Also observed at Barton-upon-Humber, delays in reaching physical maturity may have implications for understanding stages of the medieval life course. She proposes the importance of considering 'temporal biologies', particularly how poor nutrition and extended pubertal growth may have affected the life course and social institutions such as marriage (Gilchrist, 2012, 3).

Remains from St Andrew, Fishergate allowed the investigation of the presence of variation in diet between different sections of the community. Using carbon isotope ratios, Mays demonstrated the members of the monastic house consumed a diet higher in marine protein than the lay community (Mays, 1997, 564). More recently, Müldner (2009) has provided a detailed account of stable isotope analysis that investigated diet and what it may suggest about gender, age and social groups. Müldner showed how the early medieval transition from a primarily terrestrial diet in the Anglo-Saxon period to a diet including marine protein in the centuries after was particularly demonstrable at St Andrew's. A small group of individuals of the late 11<sup>th</sup>-early 12<sup>th</sup> centuries consumed a diet far higher in marine protein than the majority

of contemporary burials, and when sex was investigated, it was discovered that female individuals had a more conservative diet than male individuals within the sample. This was found to be more explicit in a small group of young adult males, aged 18-28 years at death, who regularly consumed large amounts of marine protein (Müldner, 2009, 334-5). One explanation is that men had greater geographic mobility than women; another is that the men were fishermen, a suggestion supported by 'Fishergate' being a combination of the Old English word for 'fishermen' and the Scandinavian/Norse term for 'street', plus the presence of a fish market nearby in the 11<sup>th</sup> century (Kemp and Graves, 1996, 95-6). Müldner concludes that differences in diet between individuals is an indication of occupation rather than attitudes to male and female 'appropriate' diets (Müldner, 2009, 336-7). During the Gilbertine phase, though marine protein became part of the diet of all individuals by the 13<sup>th</sup> century, female individuals still consumed less fish than males. No differences in stable isotope ratios were identified between males buried in the church and the south cemetery, or between those males those buried in the 'monastic' cemetery in the east priory complex and the other male individuals in the sample (Müldner, 2009, 337-339). This is in disagreement with a previous study of bone stable isotopes by Mays, who interpreted his results as indicating the male brethren of the priory were adhering to a monastic diet which preferenced the consumption of fish over meat, resulting in the consumption of a higher amount of marine protein than lay individuals (Mays, 2006, 183).

Identification of a separate social group via diet was suggested by analysis of the blade injury group. Most provided evidence for a lower consumption of marine protein, whereas one individual had consumed a diet exceptionally high in marine protein. This individual was buried in the chapter house, used to suggest they was of differing high or special status. Müldner suggests his diet and burial location may represent a migrant from a fish-producing region within the North Atlantic or Scandinavia, or a high-status clergy member from a richer

house (Müldner, 2009, 340-1). That the members of the religious community were of higher social status than their lay contemporaries is also suggested by Mays, who in a study of activity patterns concluded the male adults of the monastic community did less heavy physical activity than might be expected (Mays, 1999). The different social background of the blade injury group is suggested as evidence corroborating the suggestion that the Gilbertine priory had a specialist hospital for those afflicted by violent injury, or an unrecorded tradition of burying those who had succumbed to such injuries (Müldner, 2009, 339-40). More contemporary examples of individuals exhibiting blade injuries were identified at contemporary cemeteries in York such as St Helen-on-the-Walls (Dawes and Magilton, 1980) and Jewbury (Lilley et al., 1994).

### *Medieval perceptions of children*

Most discussions from which attitudes to children during the medieval period can be inferred focuses on the objects recovered from their graves. The overwhelming attitude is one of concern in death and the afterlife; objects in association with juveniles, especially infants and young children, are interpreted as possessing protective, amuletic, healing properties to a greater extent than those with adults, whose artefacts are also interpreted as related to status.

That concern was a motivator can be further suggested by the positioning of juveniles within their graves and the locations of the graves themselves. Examples of the burying of children either within or close to existing burials in the later Anglo-Saxon period suggests a preference for accompanied burial for the youngest in society that was greater than the wish to display their status. However, the identification of family burial plots may undermine this interpretation as unlinked to status, and is untested to what extent such patterning extends beyond the 11<sup>th</sup> century.

## **Conclusion**

Children's burials from the case studies have received discussion in the secondary literature, demonstrating the impact burial evidence from some of these sites, namely Wharram Percy, Barton-upon-Humber and Fishergate, has had on the subject, providing classic examples for interpretation. However, the synthesis has also shown how uneven examination has been, with irregular coverage over the period causing a fragmentary understanding of medieval child burial

Examination of the first centuries of churchyard burial has identified traditions across multiple sites in which child burials feature. For later Anglo-Saxon burial, this has focused on the inclusion of child graves in family burial groups of distinct type, in which the child/ren are seen as contributing to the social position of the family, rather than important in their own right. Conversely, the practice of eavesdrop burial, mentioned in a previous chapter and identified at Barton-upon-Humber and Wharram Percy, is interpreted as focusing on the spiritual significance of the youngest, with the age-based social differences of infants resulting in the creation of a specific mortuary practice to provide divine assistance after death. From these two contrasting practices, conflicting interpretations of family-based and age-based social and mortuary relevance for child burials are implied.

For the post-11<sup>th</sup> century medieval period, the overall picture is more cohesive but is based on restricted types of evidence. Conclusions about children have produced confident interpretations that variations in burial were as a result of concern by the living for the fate of the dead, with such anxiety greater for the young. However, such assertions have primarily been based on objects recovered from graves rather than other types of furniture, such as coffins, stones or linings. This is partly because such variation is often assumed to be uncommon beyond the later Anglo-Saxon period and not in enough frequency to allow

meaningful analysis. Quirks of burial location have also been used to suggest differential treatment for juveniles in death, but only when obvious in a particular location, such as Wharram Percy's north churchyard or the western churchyard at St Andrew, Fishergate, and it is not clear when or from where such trends originated. Further, multiple burials of the medieval period remain an unexplored resource.

Also apparent is that child burials have not received focus in the majority of the original reports. Where it has been discussed, attention has been directed to examples that are unusual, either by type or location. This is true for the majority of burials from the five sites, with age rarely a factor for investigation beyond osteological analysis. Further, different levels of investigation were undertaken at each site, which is unsurprising given the differing motivations behind the excavations and the timeframes in which the projects took place. Though some patterns in child burial have been identified and formed the basis for discussion in secondary studies, there appears to be little agreement or similarities between the five sites. This section has also demonstrated gaps in our existing understanding of medieval children and child burial. To aid investigation of this developing topic, several interesting and challenging questions can be suggested.

Firstly, building on the greater body of work which has focused on late Anglo-Saxon child burial, is there any evidence for the continuation of child burial practice that originated in the Saxon churchyard into the succeeding centuries? Do child graves continue to feature prominently in family burial groups? Does the eaves-drip burial practice continue beyond the 11<sup>th</sup> century?

Secondly, what is the nature of child burial in the medieval period? Do new trends emerge, is there evidence to suggest trends developed from existing ones, or do some disappear? Is the explicit differentiation identified for included objects in child graves seen with other varieties

of burial furniture? How do children feature in multiple burials, and with whom? Were they differentiated from adult burials and if so, how and why? What, if anything, can we tell about medieval attitudes to children through their burial, and how does this vary from interpretations of later Anglo-Saxon attitudes and insights gained from previous studies?

I will be taking the analysis beyond the works reviewed and synthesized in order to address such questions in a more focused and nuanced manner than has been previously achieved. The following investigation focuses on ascertaining whether age had an influence on how a person was buried via the analysis of burial furniture, grave location and inclusion in a multiple burial. Focusing on the graves of juveniles, the results will inform opinions on the social and cultural position of children during the medieval period via comparison with the remainder of the aged burial population. Looking at child burials within the wider context of the cemeteries in which they are found is a key aspect of this research, avoiding the bias or distortion which might result from selecting child burials to study in isolation. The analysis will also attempt to identify whether changes occurred for child burial over time, namely from the later Anglo-Saxon period to the later medieval, and what this may indicate about contemporary attitudes to children, as well as burial. The next chapter discusses the methodology and how data from five different sites was ordered to allow comparison and meaningful analysis within the project.

## **Chapter Five: Methodology**

### **Introduction**

Investigation firstly involves the addressing of methodological issues and the limits of reliability of the data must be established. Identification of burial practices is often relatively straightforward when preservation allows, and as such, the data regarding burial practice does not warrant much discussion; the evidence is either there and identified, or it is not. There is greater variation between sites in the methods for ageing and sexing, with different techniques and descriptive terms used. Though this thesis is not concerned with osteological techniques and their relative merits, some discussion is needed as they affect the presented ages of individuals on which this project is dependent and inform the methodology created.

This chapter first discusses the aims and questions to be addressed. After demonstrating that the perceived lack of preservation of juvenile remains does not exist and is not a barrier to investigation, the chapter focuses on the use of age-descriptive terms and provides examples of approaches of other archaeologists. I discuss how I have addressed these issues via age bands which divide the burials into age categories that consider biological and cultural factors. The form of the database is also presented, before the chosen method of statistical analysis is discussed and definitions of the three areas of burial practice to be examined are defined.

## **Aims and questions to answer**

The thesis addresses medieval children through burial by investigating if they were buried differently to adults and, if so, whether age at death was a factor in how an individual or individuals were buried. Though other factors may have affected burial, such as wealth, status and health, previous chapters have shown how the burials of people of certain ages, namely children, display differentiation that has been attributed to their age.

The analysis began with the hypothesis that age was a determining factor. Though the thesis focuses on the burials of children, the entirety of the medieval burial assemblages from each site were considered as only by comparing ‘unusual’ burials to those conforming to the ‘normal’ or majority burial practice can differentiation be identified. Gowland used this approach in a study of five early Anglo-Saxon cemeteries, where she considered burials of all ages ‘in order to contextualise the treatment of these individuals within that of the entire life course’ (Gowland, 2006, 145). Gowland identified age-related funerary practices, such as the deposition of objects as expressions of social identity, to identify age thresholds that represented changes in social status by using a dataset high in grave goods. For the medieval period, when fewer grave goods are identified, furniture, location and shared graves may be more indicative of age differentiation, though care must be taken to avoid over-simplistic interpretation of material culture. Such treatment may also be indicative of sex and/or gender, though for immature individuals this is difficult to address. If there are no grave goods, except in burials in high status locations, such as churches, is it possible to investigate status for churchyard burials? It may be that wider considerations, such as social and religious attitudes, are more accessible.



## **Preservation of skeletal remains**

Several factors affected the survival of skeletal remains. Soil and environmental conditions and intercutting/truncation of burials can compromise investigation by removing elements that can be used to improve the archaeological picture. The assumption that the remains of children are too small and fragile to survive has been discussed and shown to be unfounded (Lewis, 2007; 20-30). A recent study used 214 non-adult skeletons (17 years or younger) from five Anglo-Saxon and medieval sites where proportions of non-adult skeletons ranged 14-49% (Manifold, 2010:47). Representation of skeletal elements demonstrated the small bones of the face, were underrepresented, alongside bones of the hands and feet, the patella, sternum, sacrum and coccyx. Larger, denser bones, such as limb bones, ribs and vertebrae were better represented, alongside those of the skull and jaw (Manifold, 2010, 51, 54-5, 56). At all sites funerary practice, body position and depth of burial were affecting factors, but sufficient remains were present to allow age, growth and pathology to be investigated. An incomplete skeleton is not a barrier to analysis if osteological analysis is successful and estimations of how many non-adult skeletons should be within a cemetery are taken as a guideline rather than a rigid benchmark.

## **Age and use of descriptive terms**

A study of differentiation by age must begin by addressing the interplay of biological, chronological, social and cultural concepts in discussing age. The archaeological study of age has been a recent focus of attention, though organising skeletal assemblages into a format allowing ease of discussion is often difficult. This section briefly introduces the ways in which age has recently been approached, the issues of investigating age and how this may affect the construction of methodologies.

### *Age and life courses*

The life course is a currently favoured method that arose as a result of critique of approaches which focused on particular age categories of people. The approach uses age as a theme alongside embodiment, ritual, memory and material culture. Studies of the lifecycle ‘unite the human body with natural and cultural cycles, and highlight the place of age in constructing personal and social identities’ (Gilchrist, 2000, 325). The approach is based on the understanding that analysis of one life phase can only be successful when related life course stages are also considered, including stages before birth and after death, because such individuals, though disembodied, had a social existence before and after their period of human life. Generations, age cohorts and the family are among the contexts life courses relate to (Gilchrist, 2012, 1, 4-5). The approach is useful because the medieval period has considerable historical sources to provide context for chronological ages (see Chapter Two). The life course and associated identities are relevant in understanding ‘life pathways’ and preventing discontinuity through focussing on ‘a series of demarcated age groups’. Another benefit is that the approach is fluid and flexible and considers how identities may shift and change throughout a person’s life (Gowland, 2006, 145). This study has not focused on one age group, such as infants. It has subdivided juveniles into seven age bands, avoiding a homogenous study of juveniles as one group. The burials of older individuals, within three age-groups, were included to allow for relevant comparison of burials of individuals who died during different stages of their life course.

Another approach uses the sociological and anthropological concept of cohorts and age stages (Gowland, 2006; Sayer, 2010a). These showed how the experiences of groups of people born during different historical periods will vary, and that there will be no single experience of, for example, youth or old age; instead, experiences specific to period or generation will exist, (Gowland, 2006, 144-5). The short term nature of age cohorts means it is hard to apply this

within medieval cemeteries due to the difficulty of dating graves to narrow periods. Consideration of generations of burials through age cohorts may explain why certain small-scale trends in burial practice are observed for short periods of time, as generational trends.

### ***Descriptive terms and the construction of age bands***

Archaeologists often use a variety of descriptive terms that refer to biological, chronological and socio-cultural time and may be informed by biological and socio-cultural factors. Such ages are generally under-theorised and distinctions between physical/biological age, chronological age and social age are sometimes ignored, despite age categories (such as 0-2 years, 2-12 years, 12-18 years, over 18 years and over 35 years) often being described using terms such as infant, child, adolescent, adult and ageing adult; (Gowland, 2006, 143-4). As Lewis has stated, '[P]hysiological age is a biological reality, whereas 'child' is a culturally loaded term', with biological development both affecting and informing the cultural view and treatment of a child (Lewis, 2007:5). 'Child', 'adolescent' and 'adult' may be subjective and have arbitrary definitions with the methods of classification and reasons for employing such terms not explicit. Individuals of different ages have been classified as children by different archaeologists (Kamp, 2001:3; Lucy, 1994, 22-3; also Crawford, 1991). As shown (Chapter Two), biological age is a strong determinant factor for social age. Clothing and apparatus were provided and responsibilities prescribed based on a child's biological age and state of development. Developmental stages have been suggested as a methodology for investigating child mortality, particularly death may have occurred as a result of developmentally-characteristic activities (Hanawalt, 1986; Lewis, 2011, 2-3).

Investigations of burial populations are still dependent on the use of developmental, chronological ages, even if the cultural age bands are removed. Though numerical ages may

relate to modern understandings of human development, due to the nature of osteological techniques, it is more difficult to match skeletal ageing and maturity with development in the past (Sofaer Derevenski, 1994, 8-9). Age cannot be reduced to a binary opposition of biological versus cultural age (Gowland, 2006, 152). It is still possible to use osteological ages within a consideration of life courses, particularly focusing on rites of passage and how these were expressed in the funerary record (Gowland, 2006, 145). It was therefore necessary to base constructions of age categories on skeletal development through osteological analysis and past socio-cultural understandings of ageing. Sympathetic and conscious approaches to age-stages and use of descriptive terms must be based on a historical interpretations of how childhood was defined.

### **Standardising terminology**

The new scheme built upon the age ranges of the conventions at each site. It took the osteological ages and fitted them into one scheme that could be used across the five sites. The starting point was the standard used for the Leicester sites, as these were the broadest. From this, a scheme was created for which it was deemed desirable to divide the youngest individuals into age-ranges of short duration; for older individuals, the age-ranges are wider due to the relative lack of diagnostic biological development. These groups were given a letter as their label for the purpose of analysis. Some categories also referenced medieval cultural divisions or transitions believed to be relevant which this project investigates, such as around 7 years, 12 years and the end of adolescence. At St Martin's, Wharram Percy, St Peter's, Barton-upon-Humber and St Andrew, Fishergate the end of adolescence was classified as 18 years, whereas at St Michael's and St Peter's, Leicester at 21 years due to the different ageing conventions used between the five sites and was accepted as this project focuses on juveniles over adults.

Descriptive terms are also used for ease of discussion (Table 13). The primary terms allow for sub-division and refined examination, while the secondary terms are for more general discussion. These reference the conventions used in some of the reports and secondary discussions, and though to an extent subjective, describe age-stages during life which relate to both common cultural and biological definitions and understandings of age in a further attempt to standardise terminology.

Letter identifier	Age range (years)	Primary term	Secondary term	Tertiary term
A	Pre-birth/foetal	Infant	Young infant	Juvenile
B	0-1		Older infant	
C	1 year, 1 day-3		Young child	
D	4-7	Child	Older child	
E	8-12		Young adolescent	
F	13-15	Adolescent	Old adolescent	
G	16-17/20		Young adult	
H	18/21-35	Middle adult		
I	36-50	Older adult		
J	50 years, 1 day+	Juvenile	-	-
K	Unaged juvenile	Adult	-	-
L	Unaged adult	Individual	-	-
X	Unaged/no information			

Table 13: Descriptive terms

The use of these terms were to an extent determined by the ability to age skeletal remains to narrow ranges using a methodology which fits with the cultural terms. Lewis highlights the

importance of consistency in the skeletal data to allow for successful examination of past life courses (Lewis, 2011, 2). This is not always possible, especially in a study which is reliant on the osteologically-derived ages provided by others, employing techniques which may differ.

Ageing of individuals is often affected by a lack of skeletal characteristics for the attribution of age; this is also the case for the attribution of sex. The database contains 94 burials for which either no age was provided, or the individual's age bridges multiple categories. To exclude such burials would have been a mistake, as they are part of the assemblage. Age information was available for 98% of the 4,681 individuals. Almost three-quarters (72% - 3330) were assigned to one age band, including the unaged/no information category (Table 14):

Letter identifier	Age range (years)	Number of burials	Proportion (%)
A	Pre-birth/foetal	35	0.7
B	0-1	284	6.1
C	1 year, 1 day-3	137	2.9
D	4-7	230	4.9
E	8-12	167	3.6
F	13-15	81	1.7
G	16-17/20	51	1.1
H	18/21-35	607	13.0
I	36-50	588	12.6
J	50 years, 1 day+	145	3.1
K	Unaged juvenile	83	1.8
L	Unaged adult	868	18.5
X	Unaged/no information	94	2.0

Table 14: Number of burials within each of the age bands

Remains of 1311 (28%) individuals did not allow for refined estimation and as such overlap multiple age bands (Table 15). As the majority overlapped only two categories, the inability to assign all burials to one age band is not considered a major methodological issue.

No. of age bands overlapped	No. of burials	Proportion (%)
2	1175	25.0
3	40	0.9
4	87	1.9
5	9	0.2

Table 15: Number of burials assigned to more than one age band

### **Age, dating and phasing**

The proportions of burials aged to a specific date range or archaeological period varied considerably between the sites and it was challenging to examine whether differences in burial changed over time. As the burial of children is the primary focus of this research, the analysis first investigated burial practice by age irrespective of date or period, before attempting to identify change over time. This approach allows the interpretation of attitudes to children in the medieval period as a whole, considering the age at which differentiation, if any, occurs before considering temporal variation where feasible. The dates of some noteworthy juvenile burials are an important aid in discussing potential motivations for their manner of burial and context within burial populations, particularly with regards to other factors, such as family or status. Wherever possible, such information is used to complement interpretations, but a lack of date for some examples is not a barrier to understanding child burial. When it is appropriate or necessary to refer to specific periods of time, the following descriptive terms are used (Table 16).

Chronological time	Primary classification	Secondary classification
Pre-1066	Late Anglo-Saxon	-
1066-1540	Medieval	-
11 <sup>th</sup> , 12 <sup>th</sup> and 13 <sup>th</sup> centuries	-	High medieval
14 <sup>th</sup> , 15 <sup>th</sup> and 16 <sup>th</sup> centuries	-	Late medieval

Table 16: Definitions of dates and phases

## The database

Excel was used to organise the data within a database (see Appendix: Section Four). The aims of the database were to hold the information from each site and provide a useful platform for the identification and analysis of burial in different ways. Excel allows for different factors to be selected and investigated from multiple angles, such as focusing on a particular age of individual, type of burial practice or location. The database was structured to allow each site to be analysed in a uniform way. Each site had its own page, allowing comparisons to be made. Each individual was given its own separate entry and columns were used to record data relevant for each burial without the use of extended sentences. The database can be loosely discussed as divided into three sections.

UID	Skeleton ID	Burial ID	Context/Feature ID	Location	Distance from church (m)	Orientation

The first section contains the identifying data of each skeleton. The first column contains a unique identifying number, or 'UID', for each. These are used in the analysis rather than the project's own skeleton/burial/context/feature identifier, though these are included to allow



reference to the reports. ‘Location’ refers to the in-situ location of each skeleton; these are either ‘church’, a zone within the church or a geographical zone within the churchyard, allowing burials within each division to be investigated. ‘Distance from church (m)’ was chosen to aid the investigation of eaves-drip burial. ‘Orientation’ recorded burials which deviated from the typical west-east alignment.

The second section records chronological, osteological and pathological information. It begins with the date of the skeleton (‘Date’), from radiocarbon dating, association with artefacts or phases of church building. ‘Phase’ records the date range burials were assigned to, though many were unphased. ‘Age’ records the osteological age and ‘Age band’ the group age the skeleton was assigned to. Pathological conditions were also recorded when noted. ‘Position’ refers to body positions other than supine.

Date	Phase	Age	Age band	Sex	Pathology	Position

The third group of headings focus on the grave and evidence for mortuary practice. The ‘Burial practice’ column records via a yes/no option whether the skeleton was observed with burial furniture, while the remaining fields record the presence of furniture types, chosen based on practices discussed in previous studies and the reports. If the type was noted, ‘Yes’ was entered, alongside the number observed if recorded, for example, when there was more than one pillow stone. The position of the furniture was also recorded, such as whether stones were at the head or feet, above or under the body, alongside the material when noted, such as chalk blocks. When a burial practice was not observed, the field was left blank.

Burial practice	Coffin	?Coffin	Board	Ear muffs	Pillow stones	Stone cover	Stones	Cist
Marker	Lining	Organic	Other	Objects	Multiple burial	Grave shape	Comments	

Other column headings recorded further types of furniture, as well as a field for atypical practices not covered by the headings ('Other'). The presence of objects was recorded and artefacts subdivided to one of seven categories; dress, ceramics, nature, religious, coins, beads/jewellery, and other. Whether the individual was identified within a multiple burial was also noted. 'Grave shape' was used to record unusual shapes, such as a niche for the head, rather than the shape of every grave, as the reports commonly complained of indistinct grave cuts. The 'Comments' column was the place for additional notes, such as page references and the identification number of accompanying individuals if observed in a multiple burial.

### **Methods of analysis**

Analysis was divided into three sections based on the areas identified for investigation; burial furniture, multiple burials and location. Whether age at death was the primary/sole dependent variable on how an individual was buried would be difficult to investigate via one form of burial practice alone. Consequently, three distinct varieties of burial differentiation were examined to contribute to our understanding of the effect of age.

Statistical examination was used to investigate to what extent variation by age can be observed, based on the below null and alternative hypotheses:

*H<sub>0</sub>: burial practice is equal across individuals of all ages*

*H<sub>a</sub>: burial practice is not equal across individuals of all ages*

Testing of  $H_0$  used contingency tests which are applied when the independence of two random variables are being questioned; in this case, is burial practice influenced by age at death? (Larsen and Marx, 2012, 519). Fisher's exact test (two-tailed) is a type of Chi-squared test which is used for the analysis of data classified into categories. Following conversion of the

burials into quantitative data (for example, the number of burials of each age band located north of the church) Fisher's exact test was used to examine whether the two variables (age and location) were independent (no influencing relationship) or dependent (probability of an influencing relationship) within 2x2 contingency tables (Larsen and Marx, 2012, 524). Chi-squared tests assess the correspondence between categories by comparing them to a theoretical population to ascertain the probability that such variation occurred by chance (Shennan, 1997, 104-8). Fisher's exact test was chosen because it possesses the strengths of a Chi-squared test but is particularly useful when sample sizes are small as it produces exact, rather than approximate, probabilities (Blalock, 1979, 292). The test aided the analysis by examining whether burials of individuals of different ages have the same proportional division by the two mutually exclusive categories in question. This detected the degree, if any, of variation, forming the basis for discussing if burial was influenced by age at death, using  $H_o$  and  $H_a$  to a significance level equal to or less than 0.05 at 5% level, known as the  $P$ -value. This level was chosen as the criterion for either rejecting or supporting  $H_o$ , though it should be remembered that a rejection of  $H_o$  does not necessarily mean it is not true, but rather the level of probability that it is not true. The  $P$ -value assesses the probability of getting a value as extreme as or more extreme than what was observed, based on  $H_o$  being true, with small  $P$ -values therefore interpreted as evidence against  $H_o$  (Larsen and Marx, 2012, 354-9).

Tests were undertaken using GraphPad (<http://graphpad.com/quickcalcs/contingency1/>), software and the formula for the test is shown below, when  $n$  is the sample size and  $a$ ,  $b$ ,  $c$  and  $d$  the four cells of the contingency table (Shennan, 1997, 109-13):

$$x^2 = \frac{n(ad - bc)^2}{(a + b)(c + d)(a + c)(b + d)}$$

	Outcome 1	Outcome 2
Group 1	a	b
Group 2	c	d

It was anticipated that Fisher's exact test would be most useful for the investigation of differences in location by age, where the locations of all burials are known and examined. For in-grave practices of furniture and multiple burial it was predicted it would be harder to identify to what extent age is an influence due to the small number of examples recorded and to be included. It was also anticipated greater success would be achieved when broader age ranges were considered (for example, 12 years or younger) which included more examples of the practice in question.

It is necessary to relate the results of the statistical tests to the archaeological question and examine to what extent they were useful in addressing the project's aims. Fisher's exact test only shows when, and to what extent, variables differ from expected values and the probability that a relationship exists, not what the relationship between the variables is. The larger the sample, the greater the level of confidence that a statistically significant relationship is real, whereas if a sample is small it will be harder to identify relationships unless any difference is explicit (Shennan, 1997, 115). Such results should not be taken necessarily as supportive of  $H_0$ , but be considered independently of statistical examination, as it is likely social significance was attached to practices of rarity or with persons of a particular age. Though testing may not suggest statistical significance due to small numbers, burials which display difference would have been important in medieval society, particularly if there was one example. All of the burials observed, however typical, unusual or elaborate were active decisions of the burial population, chosen for a reason, and should not be considered to lack social relevance because statistical significance is not proven.

## **Definitions of burial practice**

### *Burial furniture*

Grave furniture was defined as any non-skeletal material that was within the grave or associated with the skeletal remains of an individual or individuals. The term ‘furniture’ is used as such artefacts often equipped or provided for the individual in some way, such as by holding, supporting or accompanying the body. The thesis investigated whether there are any patterns in the provision of grave furniture by age at death, focussing on children, first looking at furniture in general and then different categories.

Investigation began on a site-by-site basis, beginning with the whole burial population and then specific phases. Firstly the proportion (%) of individuals of each age band with furniture was calculated. Sex, in addition to age, was investigated for older juveniles and adults when possible, to see if there were any patterns by sex which may provide insight into the motivations behind the use of furniture. Secondly, the proportion of individuals observed with each type of furniture was calculated.

Though useful for suggesting patterns and gaining a better understanding of the excavated evidence, the above method was not wholly successful. Small numbers of individuals aged to a certain age band could skew interpretations; for example; if there were two G-aged individuals within a period, both buried in coffins, the proportion of burials of that age observed in coffins would be 100%; if there were 100 H-aged individuals of the same period, of which 30 were buried in coffins, the proportion would be 30%. On face value this may be interpreted as suggesting G-aged adolescents were more likely to be buried in coffins than H-aged adults, when in reality, a lower-than-expected number of G-aged burials may be the cause of such a high percentage. As a result, the in-grave evidence was also statistically-tested using Fisher’s

exact test (two-tailed) and focused on the presence of furniture within graves for each age band for the medieval period and by phase.

### ***Multiple burials***

Multiple burials were defined as any grave which contained more than one person. Where no grave cut was observed, multiple burials were suggested by close spatial relationships between individuals. Examples were presumed to have been coterminous unless there was evidence to the contrary. This section investigated whether children are disproportionately represented in multiple burials.

The number of individuals within a grave ranged from two to five, with both coterminous and consecutive burials represented. The proportion of individuals recovered from multiple burials of each site was calculated for the whole period and by phase. Patterns were observed, such as higher number of individuals of certain ages within multiple burials, before the data was tested using Fisher's Exact Test (two-tailed). Unaged, unsexed individuals (X band) were excluded, as were double burials of the burial injuries group at St Andrew, Fishergate, as these were not likely to represent typical burial practice.

### ***Burial location***

Investigation was undertaken to see if any patterns were apparent in the locations of burials of individuals at different ages at death, such as in zones or clusters, which may suggest certain areas were focuses for child burial. Attention was also given to whether the north side of

cemeteries were a focus for the burials of children (and also women) and whether there is evidence for clustering of infant and child burials through eaves-drip burial.

Investigation of burial location by age considered the conclusions presented in the respective reports of each site and built upon them by analysing each site under the same methodology. Differing degrees of analysis were undertaken at each site using different techniques and the methodology had to be sympathetic to the available data and modified as necessary. Digitised plans were available for St Peter's, Barton-upon-Humber and St Michael's, Leicester. The locations of the burials for St Peter's, Leicester were provided in GIS format. Plans of St Martin's, Wharram Percy and St Andrew, Fishergate, York were accessible on paper through each project's archive. Each cemetery was divided into three types of zones; inside and outside the church, to the north or south of the church, and burial within further, demarcated zones. The churchyards were divided north-south by drawing a line through the centre of each church, west to east. This formed the basis for further division for Barton-upon-Humber and the Leicester sites where zones were geographically-orientated, such as NW, N, NE, SE, S and SW. For St Martin's, the zones of excavation were used, as the original locations of some burials are not known. Analysis of St Andrew, Fishergate also used the zones discussed in the reports as the complex nature of the site did not make it possible to investigate burial location in relation to the church during the first phase.

Investigation began by calculating the percentages of burials of each age band in each zone and comparing this figure to the overall proportion of the burial population that they represented. This method allowed for the investigation and discussion of age-related burial locations irrespective of area size or whether or not the cemetery had been completely excavated, and was used for St Helen-on-the-Walls, Aldwark, York (Dawes and Magilton, 1980). Clustering of burials was also investigated where possible. The identification of clusters was to an extent

subjective and hindered at times by post-depositional damage and was not attempted when good phasing was lacking. The removal of graves may create gaps in the churchyard, suggesting spaces between burials where none originally existed. A cluster was defined as a group of burials which appear to be distinct either by close spatial association or by their location some distance from other burials. Clustering was therefore conceptualised as different from high burial density. Clustering of burials with the same burial furniture was also investigated as was eaves-drip burial by establishing the approximate distance of each burial recorded on the plans from the respective church walls. Burials were classified as eaves-drip if they were located one metre or less from the church walls. For each zone the proportion and statistical significance of the numbers of individuals of different ages and sex where applicable located within these areas were assessed for the medieval period and by phase using Fisher's Exact Test (two-tailed).

## **Conclusion**

Creating a methodology to consider burial variation by age using data from five different sites inevitably proved challenging, as approaches to ageing and sexing individuals varied between the sites. An early decision was that it was important to include the burials of people of all ages in the study, firstly in order to understand the nature of burial at each site and the majority burial practice, and secondly to provide context for the burials of children in relation to those of older age at death. Excluding the burials of adults would lead to an incomplete understanding and perhaps an under or overplaying of the social and statistical significance of juveniles and their burials.

A key question was the relationship between biological and social age. The methodology utilised the concept of biological, developmentally-based ageing for the categorisation of child



burials to aid the understanding of any age-based cultural or social attitudes. The concept of age cohorts and thresholds between age groups has also been incorporated to identify shifts in burial variation by age that may reflect social attitudes to juveniles of different ages and perhaps ages at which social transitions occurred.

It is hoped that the age-band approach presented will allow a successful and sympathetic analysis of burial by age at five sites within one methodology. The consideration of both the conventions used at each site and medieval cultural age-based divisions (as discussed in Chapter Two) has addressed and minimized bias and permitted a standardised approach to lead to a better understanding of child burial and facilitate comparison between the sites. Identification of differentiation by age were tested by an appropriate statistical method and related to the wider archaeological picture to assess whether age was a factor in the burial of children, and to what extent, via three types of burial. It was not appropriate or possible to investigate all themes for some of the sites and where this occurs, it is clearly explained in the text.

This chapter has carefully considered the factors that will influence understanding of the data and affect the success of the project. First among them was biological age and its relationship to social age. This required discussion of the differing descriptive terminologies and interpretative approaches used in defining age for osteological populations. It also considered the approaches of comparative projects which have taken age as a focus. Following the creation of a robust methodology, how the data was organised has been outlined and how the data was tested using an appropriate statistical method, explained. This, alongside an open approach to discussing variation in burial that may be indicative of age-based differentiation, facilitates the investigation of the project aims and aids understanding of medieval attitudes to children and

child burial, beginning with the question ‘what is the nature of child burial in the medieval period?’

## **Chapter Six: Results**

### **Introduction**

This chapter analysed the burial data under three themes: furniture, multiple burial and location. The analysis began with the whole burial populations for each site, to establish whether, and if so, what, patterns could be identified for each theme in turn. The data is presented in tables, Appendices: Sections One-Three, from which patterns or hypotheses were proposed. These were then examined via Fisher's exact test, to test their validity and check that none had been overlooked. Though the consideration of the entire burial assemblages will not allow for refined chronological conclusions, it was hoped, and confirmed, that such an approach would provide general patterns that were to some extent supported by statistical analysis.

From these broader patterns, focused analysis followed to identify firstly whether any particular practices took place within narrower time frames, and secondly, whether use of the three burial rites changed over time. This aim was confounded at times by the dating quirks of certain sites and not all topics could be investigated for each site; where this is so, it is explained in the text. The chapter addresses each theme separately, discussing the medieval period and then chronological variation. The chapter does not include discussions of the three themes and the results of the analysis of all five sites together, as this is the focus of the next chapter.

## Section One: Burial furniture

### St Martin's, Wharram Percy

Statistical testing of furniture by type (Table A1) for children only supported suggested significance for coffined burial for those aged 8 to 12 years ( $P= 0.0183$ ). Provision of burial furniture in general was significant for foetal/perinatal infants ( $P= 0.0298$ ), infants aged 0 to 1 year ( $P= 0.0227$ ) and unaged children ( $P= 0.0298$ ). Preferential burial treatment can be suggested through the greater provision of burial furniture for infants aged 0-1 year and children aged 12 years or younger.



Figure 7: IN2472, a 44 weeks-in-utero foetus buried in a cist (Original site photograph, taken from the north; Mays et al., 2007, Plate 100)

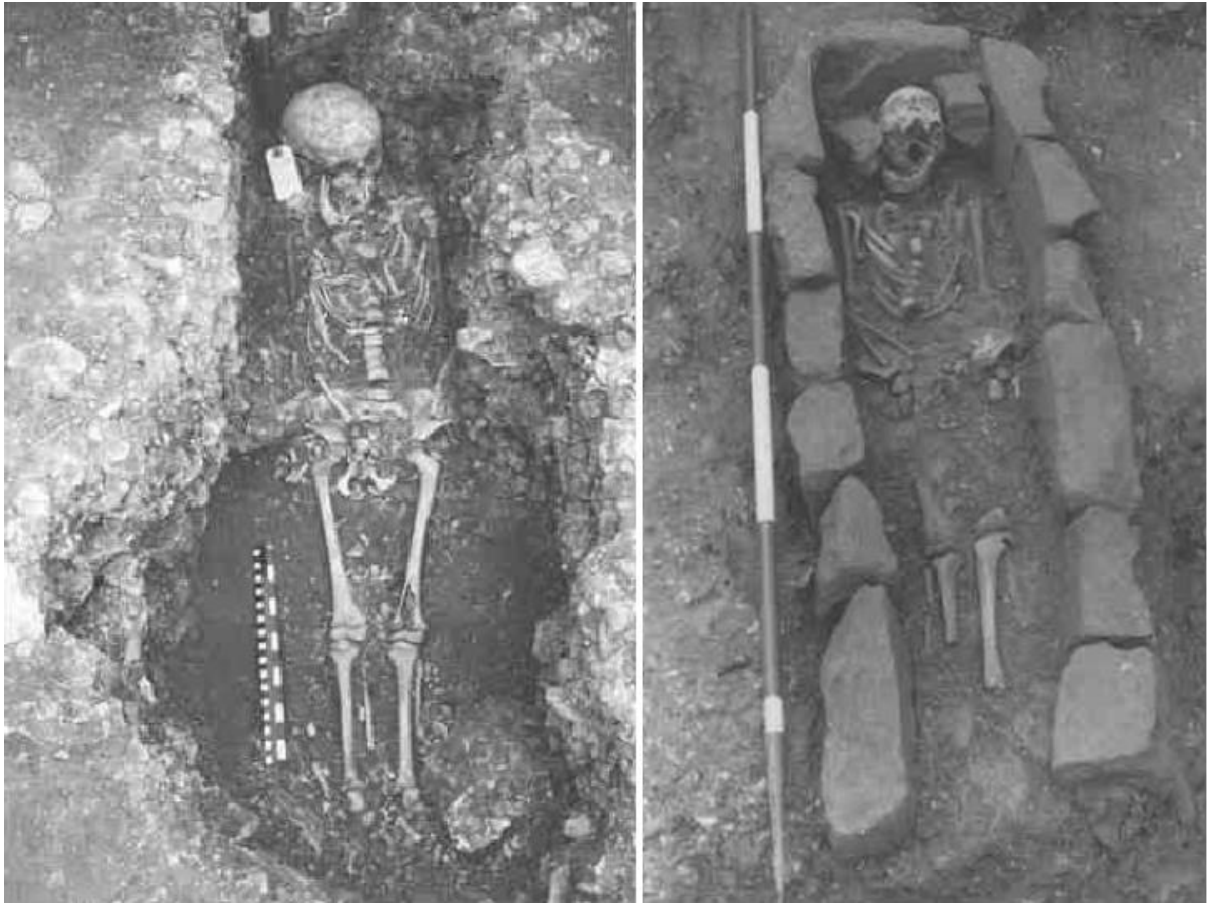


Figure 8: IN2090, a ten year old child with stones at the head and feet and IN2542, a twelve year old child buried in a cist with ear muffs (Original site photograph, taken from the west; Mays et al., 2007, Plates 94, 98)

Examination of furniture proportions demonstrated further bias towards juveniles (Table A2). A higher proportion of juveniles were within cists than older or unaged adults (Figure 7). High proportions of juveniles were also buried in coffins or with ear muffs, along with middle-aged and older adults, though for stones, adult graves had the greater percentage. Juvenile burials have been noted with stone covers, though they are more numerous, along with markers, for adult graves. The picture is less clear for objects. There is some difference between the types of artefacts observed with juveniles and adults; a pin, a fossil, pebbles, a copper-alloy hook and a bone stylus compared to fragments of loomweight, two chalices (one with a paten and another a staff/tree root) strap fittings, a pebble, a halfpenny, a nail and a Romano-British glass bangle. The apparent natural qualities of items with juveniles is an important distinction, with such

items possibly gathered from the local landscape or domestic environment. For adult objects, the inclusion of religious items is more likely to reflect spiritual belief or religious identity than rites linked to the home and everyday life. That dress objects and organic remains were observed predominantly in adult graves may suggest that adults were more likely to be buried clothed. There is a relative absence of furniture with adolescents and individuals bridging the adolescent/young adult age bracket (F, G and G/H); only two of thirty-three burials of these ages had evidence for furniture. Individuals of this age may have had lower status in death due to lower economic status in life than older members of the community, or perhaps were seen as requiring less help or support in death and the afterlife than may have been deemed necessary for those who died at a younger age.

When sex was analysed, no significance was suggested for furniture in general within male (13.8%;  $P= 0.1212$ ) or female (16.5%;  $P= 0.8966$ ) graves (G or older). Individual furniture types, when tested for each age, demonstrated a similar lack of differentiation, with two exceptions. Both markers and objects produced statistically significant results with young adult women ( $P= 0.0398$  and  $0.0480$  respectively). This suggests that though furniture could be used in the burials of a variety of ages of male and female burials, bias was present for young adult women that was perhaps indicative of a patterning of preference similar to those noted for young infants and children. That these ages and sex of persons were also buried in similar burial locations (see below) may further reinforce this interpretation.

It is also possible to demonstrate bias in the use of cists and ear muffs with children, as their burials disproportionately featured these rites (Figure 8). Such furniture may have been appropriate for, and perhaps ritually significant in, the burial of young children. This bias favoured those aged 12 years or younger, but was most explicit for infants aged 0-1 year and those at a threshold of adolescence around 8-12 years.

## **St Peter's, Barton-upon-Humber**

Adult burials were more likely to be furnished than juvenile burials, with the exception of the youngest and to a lesser extent, those nearing adulthood. Use of furniture (Table A8) was extremely statistically significant ( $P = <0.0001$ ) for adults aged 18-35 years (H), 45 years or older (IJ) and unaged adults (L). Proportions were very significant for infants aged 0-1 year (B;  $P = 0.0083$ ) and significant for adolescents aged 13-15 years (F;  $P = 0.0172$ ).

Investigation of furniture types further reinforced this pattern. Coffins were the most frequent furniture (651 examples) and in extremely significant proportions with adults aged 18-35 years (H), 45 years and older (IJ) and unaged adults (L) ( $P = <0.0001$  respectively). Coffins in the graves of infants aged 0-1 year (B) were very significant ( $P = 0.0025$ ). Next most frequent were objects (64 examples), in significant frequencies with adults (H, IJ and L). Of the examples with juveniles (17), seven were with infants aged 0-1 year, which though not supported statistically, may be significant socially, particularly given the characteristics of some of these items (see below). Ear muffs were the third most common rite (42 cases) and the last to follow the trend of favouring adults, noted in greater and significant quantities with young and older adults (H and IJ;  $P = 0.0006$  and  $P = 0.0260$  respectively). As the most common burial furniture practices in use during the medieval period, it may be that general burial attitudes by age can be accessed via these types.

The remaining types occurred in fewer than 15 graves. These may be examples of unusual practices used for atypical reasons. No statistical significance was suggested for clay-filled coffins (6 examples), linings (5), shaped graves (2) and stone covers (1). This is most likely due to their infrequency, though they were all probably socially meaningful, particularly as some were also only in use for a short period (see 950-1150, below). Some age-based bias can be suggested for boards, in which the overrepresentation with infants aged 0-1 year (B) was

statistically significant ( $P= 0.0455$ ). Organic materials (6 examples) were only significant for older adults (IJ;  $P= 0.0251$ ), but this may be nothing more than a quirk of preservation. In contrast, pillow stones and stones (13 and 6 cases respectively) were more frequent in adult graves, a bias supported for young adults with pillow stones (H;  $P= 0.0118$ ) and older adults with stones (IJ;  $P= 0.0251$ ).

Investigation of furniture by proportion again suggested a bias towards the differentiation of adults in death (Table A9). The highest proportions of boards and clay-filled coffins were with middle-aged adults (I), lining, objects, organic remains and shaped graves with adults aged 45 years or older (IJ) and coffins with older adults (J). The only practices noted in greatest frequency with juveniles were ear muffs and pillow stones with those aged 16-17 years (G) and stones with 0-1 year old infants (B). These latter types were infrequent, which may suggest they were unusual and that they were chosen because of a specific and uncommon motivation. For the youngest juveniles, their age at death and related cultural attitudes may be a suggested stimulus; for older adolescents, the impetus may have been the liminality of their social position by age as they transitioned into adulthood.

No statistical significance was suggested for furniture with juveniles (F and G) of either sex. Differentiation was apparent by sex for adults. Statistical analysis suggested use of furniture was biased in favour of adult males ( $P= <0.0001$ ) to a greater extent than females ( $P= 0.0019$ ), which was also reflected in the proportions (46.6% and 41.6% respectively). Significant results were observed with young adult women in coffins ( $P= 0.0001$ ) and with ear muffs ( $P= 0.0115$ ) and for women aged 45 years or older with boards ( $P= 0.0280$ ) and objects ( $P= 0.0010$ ). For men, young adults had significant proportions of coffins ( $P= 0.0025$ ), ear muffs (0.0436) and objects ( $P= 0.0309$ ) and for males aged 45 years or older with coffins ( $P= <0.0001$ ), ear muffs ( $P= 0.0279$ ), objects ( $P= 0.0220$ ) and organic remains ( $P= 0.0063$ ), plus objects with unaged adult men ( $P= 0.0388$ ). This suggests greater provision and restriction of types for adult men,



favouring young and mature adults. In contrast, adult women were less likely to have furniture provision in burial, perhaps with greater variation/less restriction in type with increasing age.

### **St Andrew, Fishergate, York**

Seven per cent (7.2%), or 29 of 402 burials, extremely significantly with middle-aged adults (I;  $P = <0.0001$ ). As over a third (38.3%) of the population were within this bracket, there should be caution in attributing particular social relevance to this age. The frequency of furniture with older infants (C) produced a result close to significance ( $P = 0.0591$ ) which may suggest bias to the young. Eight types were identified (cists/stone coffins, coffins, ear muffs, lining, markers, objects, organic remains and shaped graves); the lack of furniture in the graves of young infants and children is notable (Table A22).

Inclusion of objects was statistically significant within the burials of young adults (H;  $P = 0.0324$ ), with four of 8 examples with this age group. The single examples of a shaped grave and organic remains, with an F-aged juvenile, also produced a significant result ( $P = 0.0124$ ). This burial is significant, both statistically and socially, because of its uniqueness within the assemblage.

The proportions of furniture types by age band suggest a different pattern for bias (Table A23). The highest proportions of coffins, grave linings and markers were noted with infants aged 1 year, 1 day-3 years (C). The relative rarity of infants within the assemblage from St Andrew, Fishergate, and the infrequency of these practices, suggests that they were unusual. Though only one example apiece, that they were bestowed on the youngest may suggest importance associated with this age. When these infant burials are compared to the other adult examples, family status may be inferred as an impetus for variation.

Investigation of sex demonstrated that a higher proportion of female-sexed burials had furniture (n= 8/89; 9.0%) than male (17/223; 7.6%), though neither was statistically significant. Objects in the burials of young adult women (n= 2) was significant (P= 0.0362) suggesting bias for objects with this age favoured women, who were underrepresented compared to men. A lack of further significant results may be due to the small numbers furnished graves; this relative infrequency may be motivated by factors other than age and/or sex, such as highlighting status and family relationships, rather than other identities, such as membership of a religious order.

### **St Michael's, Leicester**

Twenty of 272 burials had furniture (Table A28), representing 7.4% of the recovered population, with five types recorded. Consideration of furniture only achieved significant results with unaged children (12 years or younger; P= 0.0450), though the small number of individuals (five, two with furniture) casts doubt on the validity of this result as indicative of bias. The proportion of middle adults (21-50 years) with furniture was close to significant (P= 0.0527) and may also suggest bias.

Investigation by furniture types only suggested the proportion of unaged children with objects (n= 2/5) was statistically significant (P= 0.0166). The number of examples may suggest a preference for burying items within the graves of children aged 12 years or younger, as a quarter of burials with objects were of this age. The lack of statistical significance for other types is due to their infrequency; all occur in one or two examples for represented age bands. It is probable that these burials, such as the single examples of pillow stones (with a BC-aged child), stones (on the torso of an I-aged adult) and the unique combination of an anthropomorphic grave cut and stones (also on the torso of a DE-aged child) were socially

significant because of their infrequency. This suggests some bias for specific or unusual treatment with infants and children.

Analysis of the proportions (Table A29) showed coffins occurred in greatest proportion within graves of infants aged 0-1 year (BC; n= 2 - 9.5%), followed by children aged 4-12 years (DE; n= 1 – 3.7%). For objects, the highest proportions were with unaged children, as previously mentioned. If this is misleading, proportional bias may be suggested for adolescents aged 13-20 years (FG; n= 1; 8.3%), followed by young adults (H; n= 2 – 7.4%). However, the small number of burials with objects again makes it difficult to draw meaningful conclusions.

It was also difficult to identify bias by sex. The proportions may suggest a higher provision of furniture with males (n= 5/47; 10.6%) over females (n= 3/77; 4.0%), though the greater number of female-sexed burials may be causing this observation, which was not supported statistically. Only the association of objects with young to middle adults aged 21-50 years (HI, n= 2/7; P= 0.0387) was significant.

### **St Peter's, Leicester**

Assessment demonstrated that 16.8% (n= 221/1318) of individuals had evidence for furniture, with eight types identified; boards, coffins, ear muffs, lining, objects, pillow stones, shaped graves and stones (Table A34). Analysis produced extremely statistically significant results for proportions with infants aged 0-3 years (BC; P= 0.0007) and adults aged 36-50 years (I; P= 0.0002) and significant results for adults aged 21-50 years (HI; P= 0.0100) and 36 years or older (IJ; P= 0.0172). This suggests high, disproportionate furnishing of graves of infants and adults, especially adults in their middle or older years at death.

Analysis of included objects was undertaken in two ways; objects noted in the report, and all objects recovered in association with burials as noted on the context sheets during excavation. The discussion below makes it clear which group of objects are being interpreted. ‘Objects (report)’ refers to artefacts identified as deliberate inclusions in the report, which excludes items like pottery sherds, animal bone and building materials, whereas ‘Objects (context sheets)’ refers to all objects mentioned on the context sheets for each skeleton, some of which are likely to be deliberate inclusions, while others may have been accidental. The positioning of several objects suggest deliberate inclusion that the report failed to consider. Examples include a piece of slate over the chest and under the right arm of a young adult male, a probable pig tooth on the left hand and poultry bones at the throat of a middle-aged adult female and a large sherd of pottery between the legs of an unsexed middle-aged or older adult (Table A36). Much lower in number, objects mentioned in the report (Table A37) are generally high value or unusual.

Investigation of specific furniture produced results which follow the above pattern. The frequency of objects (context sheets) in infant graves was extremely statistically significant (BC;  $P = <0.0001$ ). This may reflect the rarity of the rite, as there was only one such infant burial. For objects (report), a greater number were with adults, also apparent when objects (context sheets) are considered, with statistically significant results again achieved for adults aged 36 years or older (I, II and J). Consideration of objects (context sheets) extends statistical significance to infants. The number of each object type by age of individual are detailed (Table A35); dress (n= 14); ceramics (n= 74); natural (n= 16); religious (n= 2), coins (n= 8); beads/jewellery (n= 4) and ‘other’ (n= 40). The full list of objects recorded on the context sheets shows the variety of objects recovered (Table A36).

On closer examination the prevalence of stone furniture with juveniles (ear muffs, pillow stones, stones and stone grave lining), greater in number than with adults, was statistically

significant for children aged 4-12 years ( $P= 0.0222$ ), suggesting this may be a burial rite biased in favour of children rather than infants or adolescents (Figure 9). Middle adults (I) were recovered with boards to extremely significant proportions ( $P= 0.0009$ ) and very significant proportions with grave linings ( $P= 0.0074$ ) and objects (context sheets;  $P= 0.0051$ ). Older adults with objects (context sheets) produced a result of  $P= 0.0364$ , though there should be caution with interpreting this result as only 20 (of 1318) individuals were of this age. Increased provision of furniture with adults of older age may be supported by objects (context sheets), also showing significance with middle-aged to older adults (II;  $P= 0.0439$ ). Though infrequent, coffins were significant with unaged adults (L;  $P= 0.0157$ ), though the wide age-range of this group makes it difficult to draw conclusions.



Figure 9: IN3742, an adolescent aged 13-20 years and IN3752, both with stones and ear muffs (Original site photographs, taken from the east; Gnanaratnam, 2009, fig. 81, 82)

Looking at furniture proportions by age (Table A38), a mixed picture appears. Boards, coffins and objects (report) occurred in their highest proportions in adult graves (I, II and L). Objects (context sheets) were identified in greater proportions with middle and older adults, followed by infants. Ear muffs, stones and the one example of pillow stones all favoured children and adolescents (DE and FG). In contrast, linings were most prevalent in the burials of young to middle adults and children (HI and DE). These observations broadly support the assertion that it was the graves of adults, particularly older adults, which were more likely to be furnished. That the burials of juveniles heavily featured stone fittings, to a greater extent than adults, suggests that there was a motivation dependant on their age that affected the choice of furnishing, with one material particular favoured or deemed appropriate.

Analysis of sexed burials showed a higher percentage of male-sexed burials were furnished (25.6%; n= 52/203) than female (21.5%; n= 56/260), suggesting favouring for elaboration in male burials. This may be supported by the male result (P= 0.0597) being almost significant. A bias for men may be suggested by four significant results for stones with adolescent males (P= 0.0389; n= 1), boards with young adult males (P= 0.0332; n= 4), lining with middle adult males (P= 0.0233; n= 7) and objects (report) with middle and older adult males (P= 0.0155; n= 4), plus one extremely significant result (objects (context sheets) with middle adult males; P= 0.0002; n= 20). This is in contrast to three significant results for adult women (boards with middle adult women (P= 0.0370; n= 9) and objects (context sheets) with middle and older adult women (P= 0.0478; n= 11 and P= 0.0476; n= 3 respectively). Preference by sex could not be investigated for coffins, pillow stones or shaped graves, as none of the burials were assigned a sex. Though the frequencies for some are small, there are enough to suggest a privileging of adult males of all ages in burial, and for women, when death occurs in middle or older age.

## **Burial furniture and change over time**

The following analysis focuses on the burials from each assemblage that were assigned a date. Investigation did not include unphased burials, which were discussed among the all phases section. For Wharram Percy, it should be remembered that a large proportion of juvenile burials did not have dates and they therefore comprised a greater percentage of the unphased assemblage than may be representative chronologically. The next section therefore focuses on burials of known date in an attempt to identify whether there is any differentiation in the use of furniture by age over time, in addition to whether change over time is identifiable at all.

### **St Martin's, Wharram Percy**

#### ***950-1066***

Of the few burials (n= 17; Table A3), two child burials had furniture, including one beneath a stone cover. Though not statistically significant, such burials will have been socially relevant and indicative of high or special status, as seen in other contemporary examples with adults at St Martin's.

#### ***950-1348***

Many furniture types occurred with individuals of different ages in one or two cases (Table A4). Proportions by age for furniture by type (Table A5, in descending order) show that, on occasion, the highest proportions were with juveniles. These are coffins, with older infants (C) and ear muffs with older children (E). A higher proportion of children than adults were buried in coffins, suggesting coffined burial was particularly appropriate for the young. Only ear muffs

with children aged 8-12 years (E) was statistically significant ( $P= 0.0278$ ) and the remainder were with adults. Objects and stones were also within adult graves, as were the single examples of a cist and a stone cover. The four burials with objects were a chalice and paten with an unaged adult male (also with a fragment of binding strap), a loomweight fragment with a young adult female, a pebble with a middle-aged or older adult male (also with a pillow stone) and a nail with an older adult male (also with ear muffs). The two examples of organic remains, with a young child (a shroud fragment) and an unaged adult (above) suggest both adults and children could be in shrouds or other wrappings.

When sex was investigated, a higher proportion of female adults (18.1% -  $n= 10/55$ ) had furniture than males (11.2% -  $10/89$ ). Though neither of these proportions nor specific furniture types were significant, that greater variety of furniture was with adult men (six compared to three) may suggest a preference for differentiating men over women in burial.

### ***1066-1348***

Though most examples of burial furniture were with adults (Table A6), coffins were concentrated in the burials of juveniles aged 12 years or younger, significantly-so with children aged 8-12 years (E;  $P= 0.0355$ ). Differences between female and male adults were also apparent and supported statistically; for markers ( $P= 0.0274$ ) and objects ( $P= 0.0146$ ) with young female (H) adults and stones with young/middle-aged (HI) males ( $P= 0.0395$ ), perhaps suggesting greater bias for differentiating the burials of young adult women and young to middle aged adult men.



## ***1066-1540***

Of the few burials (n= 13; Table A7), none were juveniles, and only young and middle-aged adults had furniture. A young adult male had a coffin, a middle-aged male had a chalice and a wooden item described as a pilgrim staff/tree root, and another middle-aged male, had a coffin and stones at the feet. No statistical significance was suggested, though the adult male burials are likely to represent important individuals.

### ***Observations***

Establishing whether use of furniture changed over time at Wharram Percy, including by age, is hindered by the large percentage of unphased burials and assignation of burials to broad chronological ranges. Looking at individual phases tells a similar picture to the collated analysis. The burials of children aged 12 years or younger are consistently privileged in burial with focus on those dying before the end of their first year of life and those transitioning childhood and adolescence.

During 950-1066, the burial of an unaged child under a stone cover may form part of a subset of family burial, discussed below, in a display of social status that also preferences adult men. For all phased examples, the burials of adolescents were consistently underrepresented or devoid of furnishings, replicating a pattern observed within the whole population.

Preferencing of the burials of men continues throughout the medieval period, with a greater variety of types observed than in burials of women; only between 1066-1348 are similar levels of display apparent, particularly for young adult women. The highlighting of burials of children aged 8-12 years begins as early as 950, principally with coffins and ear-muffs, to both high proportions and significant levels.

## **St Peter's, Barton-upon-Humber**

### ***950-1150***

A very significant result was achieved for provision of furniture with young adults ( $P= 0.0013$ ), with results of lower significance achieved for infants aged 0-1 year ( $P= 0.0205$ ) and unaged adults ( $P= 0.0144$ ).

Coffins were most numerous (Table A10). The majority of boards, coffins, ear muffs, objects and pillow stones were within the graves of adults, often to statistically significant levels (Table A10); only with clay-filled coffins was little differentiation by age demonstrated. Four object types were observed; dress ( $n= 2$ ; an AE strap-end with a young adult male and a possible iron buckle with an unsexed, unaged adult) and ceramics, with ten burials (Roman pottery with an unaged male; Saxon pottery with an young adult female and an unaged female; medieval pottery with a B-aged infant also within a coffin, with a young child also within a coffin with three pillow stones, with an older adolescent in a coffin, with a young adult female, with a young adult male also observed with a flint fragment, one ear muff and in a coffin, with a young adult female within a coffin; with a middle-aged male, with two females aged 45 years or older, the latter also with a coffin or charred board and with an unaged, unsexed adult also within a coffin). Eleven graves contained natural objects, such as flint (above), animal bones on the feet of a male aged 45 years or older, and either one or more wands, within a coffined multiple burial of a B-aged infant and a young adult female, who also had two ear muffs and with seven coffined adults aged 45 years or older (two female, one with pillow stones; and five male, one with three ear muffs and two with the organic remains). Also noted was a coin, with a female aged 45 years or older. All cases of linings, organic remains (one, a grass pillow, with a male adult aged 45 years or older also recovered with a wand) and stones were within adult graves.

Investigation of proportions of furniture produced differing results (Table A11). Boards, clay-filled coffins, ear muffs and pillow stones were all observed in their highest proportions within the graves of infants and/or young children (B-D). For coffins, linings and objects, the highest proportions were with young and middle-aged or older adults (H, IJ and J). This may suggest further subtlety in furniture use by age than apparent above, such as privileging of graves of infants and young or older (male) adults.

No statistical significance was suggested for furniture for sexed older adolescents (G). For adults, analysis suggested differences by sex. The proportion of males with furniture was extremely significant ( $P=0.0006$ ), with weaker significance suggested for females ( $P=0.0434$ ). A greater range of furniture was observed with males than females, and grave linings (charcoal and timber), organic remains (including a grass pillow) and stones were only with men, most of whom were aged 45 years or older. Bias towards men was also observable statistically when sex and age was considered. Ear muffs were significant with young adult men ( $P=0.0391$ ), as was grave lining ( $P=0.0249$ ). Significance was suggested for men aged 45 years or older with organic remains ( $P=0.0150$ ) and stones ( $P=0.0150$ ). The proportions of young adult women with ear muffs ( $P=0.0342$ ) and women aged 45 years or older with objects ( $P=0.0165$ ) were also statistically significant.

### ***950-1300***

Burial furniture (Table A12) was observed with 42.2% of burials ( $n=186/443$ ). Provision was statistically significant for young adults ( $P=0.0310$ ), adults aged 45 years or older ( $P=0.0279$ ) and unaged adults ( $P=0.0094$ ). Coffins were the most common furniture and the only one observed with all ages. Objects were the second most frequent; examples were pottery with a 0-1 year old infant, an older infant with a boar tooth 'amulet', three young children, one with

a coin and two with pottery, two older children with pottery and a bronze stud respectively, two young adults, one female with a wand and the second a possible reburial of a male with a bronze object, a middle-aged male with a bronze object, a male adult aged 45 years or older with a glass bead and two unaged female adults, one recovered with unspecified metalwork and the second with pottery. Inclusion of unusual objects, namely a boar tooth and a coin, with young juveniles may be significant and represent strategies developed through objects sourced locally. All examples of linings and pillow stones and the majority of boards were with infants aged 0-1 years, suggesting further age-based differentiation. That the only examples of a shaped grave (with a male adult aged 45 years or older), a stone cover (with a young adult female) and stones (large cobbles on the chest of a women aged 45 years or older and a young male observed with river cobbles) were with adults may suggest specific furniture for adults, if confined to a few cases perhaps indicating ‘special’ individuals.



Figure 10: The pine coffin of IN1345, a child, dated 950-1300 and the oak coffin of IN1346, a woman aged 45+ years, dated 950-1150 (Original site photograph; Rodwell, 2007, fig. 16)

Bias in favour of adults and infants 0-1 year is also suggested by the proportions of furniture (Table A13). Excluding the single examples of a coffin with an older adolescent and ear muffs with an unaged juvenile, proportions favour infants (B) for boards, linings and pillow stones. Though children (D and E) feature highly for objects, provision of the remaining types (coffins, objects, shaped grave, stone cover and stones) are biased in favour of adults (Figure 10).

A higher proportion of male-sexed burials had furniture than female (51.3% compared to 44.8%), and testing for sex demonstrated a statistically supported bias of furniture provision with male adults ( $P= 0.0212$ ). Burials of young female adults and male adults aged 45 years or older with coffins both achieved very significant results ( $P= 0.0084$  and  $P= 0.0013$  respectively), perhaps linked to their status and lifecycle position at time of death.

### ***1150-1300***

Statistical analysis of burial furniture by age band produced an extremely significant result for young adults ( $P= 0.0001$ ) and a very significant result for unaged adults ( $P= 0.0062$ ).

No statistical significance was suggested for furniture with any juvenile age band (Table A14). Single examples of ear muffs (statistically significant), grave linings, pillow stones, shaped graves and stones were observed, all with adults, as were the examples of objects. Object types were ceramics (pot and tile with a young adult female), natural (a flint pebble with a young adult male), religious (two cases of chalices and patens, both with young adult males, one also with an unidentified iron object and the other with stones and a possible shroud), beads/jewellery (a bead with an adult, also in a coffin and a pillow stone) and 'other' (an AE band with a young adult woman and a bone die with a woman aged 45 years or older also

within a coffin). Coffins occurred in higher frequency in adult graves, also to statistically significant levels, and boards and organics, though infrequent, with children and adults.

The proportions provide a similar picture of age differentiation (Table A15). The highest proportions of coffins are with adult graves (H and IJ), and in lower proportions for infant and child burials. In addition is the burial of an unaged adult female, who was orientated with her head to the east, rather than the west. Given that the female was buried in a coffin, this atypical orientation may have been accidental.

In contrast to the previous phase where the proportion of male-sexed adults with furniture had greater statistical significance, significance is suggested for women and not men. Testing of the proportion of female adults with furniture achieved a very significant result ( $P= 0.0052$ ), as 40.9% of females were noted with furniture, compared to 32.5% of males. This is repeated for age and sex. Coffined burials were very significant ( $P= 0.0046$ ) and objects significant ( $P= 0.0465$ ) with young adult women and coffins ( $P= 0.0127$ ) for women aged 45 years or older. Significance was suggested for objects ( $P= 0.0145$ ) with young adult men and ear muffs with middle-aged men ( $P= 0.0266$ ). This may suggest a bias in favour of furniture with young and older women and young and middle-aged men.

### ***1150-1500***

The number of furniture types observed dropped to four, with 19.3% ( $n= 72/372$ ) of burials (Table A16). Coffins are the dominant type with rarer examples of stones and boards (the latter one statistically significant;  $P= 0.0215$ ). Observed with all ages, coffins appear in the greatest quantity with adults, rather than juveniles; for juveniles, a bias towards older children and adolescents (8-17 years) may be suggested. Two of the five objects, both pottery, were with

infants aged 0-1 year. The remaining three were with adult males; one with a buckle, another with two buckles (which may suggest they were buried clothed) and a third with a half coin. The single cases of boards and pillow stones respectively, both with adult males, are the latest-dated examples.

The assertion that furniture is more common within graves of adults than juveniles is also seen in the proportions (Table A17). That high proportions of coffins are in burials of older children and young adolescents, (E and F), rather than younger juveniles, is interesting as older children and adolescents were not favoured in previous phases. For adults, a slight bias in favour of coffined burial for older adults may be suggested.

Statistical significance was suggested for the proportion of male adults with furniture ( $P=0.0141$ ) but not female adults; the opposite observation to 1150-1300 and a return to the male bias exhibited for 950-1150 and 950-1300. Women were only observed with coffins, whereas greater variety was noted for men, with further sexed-based bias supported statistically for the presence of coffins ( $P=0.0475$ ) and objects ( $P=0.0351$ ) with young males and boards ( $P=0.0187$ ) with middle-aged males.

### ***1300-1500***

Furniture is associated with adults, rather than children, to a greater extent (Table A18). Coffins remain the dominant type, with most examples with young adults, a statistically significant observation ( $P=0.0304$ ). Provision of objects is also biased to adults (a young female adult in a coffin within the church with 'cloth of gold'; a young male adult in a coffin with a buckle and pottery; three adults aged 45 years or older within the church, two female with medieval tiles and one male with a bronze stud and one unaged female adult within the church with a

coin), though one older adolescent also had objects (a female within the church with a bronze crucifix and finger ring). The single example of stones, chalk lumps over the head and feet, occurred in the grave of an infant (C) and was statistically significant ( $P= 0.0118$ ), demonstrating that juveniles could still have unusual treatment. The example of surviving organic remains (a shroud or similar textile) was not significant. Examination of the highest proportions (Table A19) replicate that use of burial furniture focused on adults.

Statistical testing for sexed adults suggested bias in favour of burying women with furniture ( $P= 0.0200$ ) but not men. Fifty per cent of female adults had furniture ( $n= 13/26$ ), compared to 27.5% of males ( $n= 8/29$ ). Analysis of furniture types by age and sex did not produce further significant results. Religious objects, coins, beads/jewellery and 'other' objects ('cloth of gold'; Waldron, 2007: 136) were only with females, though all examples of dress items and the one surviving fragment of organic remains were with males. This greater variation in object types within female graves may be indicative of family wealth and the provision of appropriate items with women over men in the later medieval period.

### ***1300-1700***

Three types of furniture were noted, with a quarter of burials ( $n= 116/462$ ) and coffins remaining the dominant furniture type (Table A20). Coffins remain most numerous within adult graves, and aside from larger frequencies with infants (B) and children (D), little differentiation may be observed for coffins in juvenile graves. Excluding the one statistically significant example of organic remains with a young adult ( $P= 0.0001$ ), objects are the only other burial furniture. Observed to a statistically significant level ( $P= 0.0271$ ) were a buckle and a coin respectively with two infants aged 0-1 year; the remaining examples were a buckle



with an older child and pottery with a young adult male. That three-quarters of objects were with young children indicates bias.

Proportion of coffins again suggested a bias in favour of adults (Table A21). That the juvenile ages with objects have the second and third lowest proportions of coffins might suggest that in the absence of coffins, for whatever reason, objects may have been appropriate. Such a conclusion is made difficult by the small numbers of graves observed with objects.

With the exception of the sole example of organic remains, with a young female adult that was significant ( $P= 0.0498$ ), most likely because of its rarity, no statistical significance was suggested for adults by sex; however, a greater proportion of men ( $32/103 = 31.0\%$ ) were noted with furniture than women ( $22/86 = 25.5\%$ ), which may be indicative of bias favouring men.

### *Observations*

A change in burial furniture use may be suggested as occurring around 1300. With the exception of clay-filled coffins, which are only observed pre-1150, boards, charred or otherwise, ear-muffs, pillow stones (with one exception), stones (with one exception), linings, shaped graves, stone covers and 75.0% of objects were within graves dated pre-1300.

Only coffins and objects were deposited in graves among all six phases. From the high medieval period onwards, the number of furniture types decreases, from nine to three. Coffins predominate, with fewer examples of stones, organic remains and objects, with the latter typically items of dress, ceramics or high status, such as religious artefacts or items of personal adornment. The frequency of furniture also decreases, from within 58.7% of burials (950-1150) to 25.1% (1300-1700), with the decrease most notable post-1150.

As the burials were dated through the use of scientific techniques, such as stratigraphic relationships and radiocarbon dating, noted furniture was not used to date burials typologically. Such an obvious divide in the employment of the different furniture types may suggest that in the pre-1300 period, there was greater freedom for expression or experimentation in burial practice, whether personal, familial or other. This is typified by spatial cohesion between burials with some varieties, discussed below.

Investigation of burial furniture by age showed that throughout the medieval period, statistical significance is observed in favour of adults. Proportions of furniture in general only gave significant results for the first three phases, and these are biased in favour of adults; young adults pre-1300 and adults aged 45 years or older, 950-1300. The only juvenile age for which provision of furniture in general proved significant was infants aged 0-1 year, 950-1150.

Specific furniture in juvenile burials was noted with young infants (coffined burial, 950-1150, burial with boards, 950-1300 and included objects, 1300-1700) and for older infants (with ear muffs, 950-1150 and with stones, 1300-1500). This suggests infant burials were likely to be invested with furniture throughout the medieval period. Analysis of older adolescents with pillow stones, 950-1150, is the only juvenile age group older than 3 years for which significance was suggested. Whether individuals of this age were understood in life as adults is unclear, but that one of the closest age groups with furniture are adults suggests that older adolescents may have been treated in death as young adults.

Analysis of bias in favour of furniture with children aged 12 years or younger before 1300 (where burials of 950-1150, 950-1300 and 1150-1300 were grouped together) was supported by an extremely statistically significant result ( $P= 0.0001$ ). That high proportions of several burial furniture types, 950-1150 were with infants and children aged 7 years or younger (B-D; Table A11), in 950-1150 and 950-1300 with infants and children aged 12 years or younger (B-

E; Tables A11, A17) is evident. A change occurred in the high to late medieval period (1150-1500) which gradually favoured furniture with infants aged 0-1 year and older children and adolescents aged 8-15 years (B, E and F; Table A19). The proportions of children aged 12 years or younger observed with furniture in the post-1300 period were not statistically significant, suggesting that the examples observed were not indicative of bias, and were unusual, rather than typical.

Furniture types not in association with juveniles are shaped graves and stone covers, though these practices are only observed once, in 950-1300 and 1150-1300, and so may be unusual. Examples of furniture in small numbers or within specific phases may be indicative of a desire for highlighting individuals or families in burial, though other motivations, such as circumstances in life and/or death, are plausible. Provision of furniture in burials of adult men achieved statistically significant results throughout the medieval period (950-1500) but was most explicit 950-1150. Frequencies of furniture in graves of women suggest greater significance for burials of the high and later medieval periods (1150-1500). That burials pre-1150 most differentiated by sex are male may be indicative of privileging of male adults as suggested elsewhere (see Chapter Three). That this is less demonstrable post-1150 may be linked to practices of highlighting graves of patrons and related individuals. There is also evidence to suggest a sex-element to the higher quantities of furniture in association with young and mature adults, such as coffined burials with young female women and male adults aged 45 years or older in 950-1300. This may be linked to their lifecycles, with young women at the height of their reproductive power and older men as the patriarch of a kin group.

The most explicit differentiation between age at death and furniture for adults dates to pre-1300. This was particularly true for young adults between 950-1150 and 1150-1300, where results show statistically significant proportions of coffins, ear muffs, pillow stones and organic remains (Tables A10, A12), and to a lesser extent 1300-1500, when coffined burial was also

significant (Table A14). Statistical significance was also suggested for adults aged 45 years or older through the burial with coffins, objects, organic remains, shaped graves and stones pre-1300 (Tables A10, A12, A16). Provision of burial furniture was biased in favour of adults aged 18-25 years and 45 years or older respectively in the pre-1300 period, with younger adults a specific focus for such attention. Though observations with adults occur after this date, the fewer furniture types relegate the significance to one of the only three or four varieties, so it is less obvious.

### **St Andrew, Fishergate, York**

#### ***Late 10<sup>th</sup> century – 1195***

Several furniture types (ear muffs, markers, organic remains and shaped graves) were not observed more than once (Table A24). The ear muffs were cobbles around the head of a middle-aged male exhibiting blade injuries, whose grave cut the clay floor of the first church. The remaining three types with only one example were with juveniles; a limestone slab at the head of an older infant and a young adolescent buried tightly in a shroud within an unusually large grave (Figures 11 and 40). The treatment of this individual was unique and statistically significant ( $P= 0.0153$ ). The adolescent had been exhumed and redeposited in this wide grave during an advanced state of decomposition. A fragment of 10<sup>th</sup>-14<sup>th</sup> century decorated buckle plate was recovered from a multiple burial containing two young adults, one male and one female, and a middle-aged adult male.



Figure 11: IN3047, a 2-3 year old infant, with a grave marker and IN2763, a 12-14 year old adolescent reburied in a wide grave (Original site photographs, taken from the east; Stroud and Kemp, 1993, fig. 44d, 42i)

Coffins were the only furniture where more than one example was observed. The four examples were with one older infant, cutting the church's clay floor after its demolition, one young adult male and two middle-aged adults, one female and one male. Though few were identified, the example with a juvenile may be considered unusual and significant. Consideration of the proportions of coffined burials (Table A25), demonstrated that though there were more examples with adults, a greater proportion of infants had coffins. However, provision of burial furniture is still biased in favour of adults.

Though a higher proportion of male adult burials had burial furniture than female ( $n = 5/47 - 10.6\%$  and  $n = 2/34 - 5.8\%$  respectively), this was not statistically significant. Statistical significance was not suggested for individual adult ages with specific types of furniture or

furniture in general, or when specific types were investigated for adults of different ages and sex.

### *1195 – 16<sup>th</sup> century*

No statistical significance was suggested for any furniture types. Almost all examples were within adult graves (Table A26); the exception is the stone-lined grave of an older infant within the cemetery; the other examples of linings, two of tile and one of lime, were with adults. Cists and stone coffins were the most frequent type and one composite stone coffin of sixteen limestone blocks was with a middle-aged male. Markers were suggested in two cases, both with adult males aged 40 years or older (IJ); the first buried near a lectern base which may have been utilised as a reference, while the second had a stone headstone with a tile placed on-edge next to it. Objects were a late 13<sup>th</sup>-early 15<sup>th</sup> century iron knife with an ivory handle buried with a young female adult and a seal matrix with a secular image with a young male adult within a stone coffin; both were within the priory. The remaining three objects were all with middle-aged male adults in the cemetery; a lead alloy paten, a lead alloy chalice and paten and another who had two perforated copper alloy plates at his right knee. Also observed was the burial of a young male adult with blade injuries buried inside the cloister, orientated with the head to the east rather than the west. The lack of a coffin meant this unusual orientation could not have occurred accidentally, and it may have been linked to his manner of death.

Investigation of the individuals with different types of furniture by proportion (Table A27) may again suggest that the burial of an infant with grave lining is notable (Figure 12); though there was only one example, it comprises a higher proportion of C-aged infants than for middle-aged or older adults. Fewer infants than adults were buried at the site, and at least one of them was considered worthy of such treatment. With the exception of objects, a slight bias may be

suggested in favour of middle-aged and older adults than young adults, for cists/stone coffins, coffins, linings and markers; only for objects are the higher proportions with young adults.

A higher proportion of female burials (n= 6/55 - 10.9%) had furniture than male (n= 12/176 – 6.8 %). Notably fewer female adult burials were observed than male, and this difference was not supported statistically for female or male burials with furniture, nor when furniture types were investigated alongside specific ages and sex.



Figure 12: IN2733, a 1 year-18 month old infant in a stone-lined grave (Original site photograph; Stroud and Kemp, 1993, fig. 44f)

### *Observations*

The few examples of furniture from the parish phase are unusual and appear exceptional. The infant burial marked by a limestone slab was one of only two marked graves. The redeposited burial of a shrouded unsexed adolescent aged 12-14 years was in an unusual aligned and located east of the first timber church. The removal of this juvenile from a previous location when decomposition was advanced, along with the unusual width and notable location of the grave, suggests some statement was being made. This may have been related to the juvenile itself as

exceptional; another interpretation is that it was moved by members of the parish, such as founders or patrons, as a way of showing their position but also linking the family, past, present and future, with the church. The unnecessary width of the grave, perhaps intended for the burial of further individuals or for the placement of a cover or shrine, supports this interpretation. The few adult burials with furniture may also suggest that it was a conscious decision by the community that some graves were to be explicitly differentiated from the majority. A specific example is likely to be a middle-aged male whose grave cut the floor of the church, buried with the only example of ear muffs.

For the Gilbertine period, the example of an infant within a stone-slab lined grave stands out as a particular example of bias in favour of children. This infant, buried in an area interpreted as lay, was given an unusual treatment and the only juvenile be differentiated in burial. Whether this individual was a member of the lay community or a relation of adults buried within the priory, which may be supported by the shared material and similar form of the grave, is uncertain, but perhaps the infant was not permitted burial within the priory because of its young years. The death of this infant prompted a reaction that was at least partly manifested through this unusual burial practice.

Bias in favour of adults had also become more explicit by this period. Only one juvenile received elaborate treatment, and fewer were recovered. The favouring of adults indicates a consequence of the shifting function of the site as a focus for the burial of wealthy patrons or particularly religious individuals. The majority of examples like cists or stone coffins (though interesting not likely to be indicative of traditional high status in the majority of cases at Wharram Percy) were located within the priory. Furniture was biased in favour of middle-aged or older adults for the majority of types with the exception of objects, a number of which were religious, which favoured young adults. That no statistical significance was suggested for furniture with either male or female adults demonstrates the effect that burials of the lay had



on the overall picture of burial practice; though a higher proportion of female adults had furniture than male, this was not statistically significant.

## **St Michael's, Leicester**

### ***1100-1250***

Burial furniture was noted with one 4-12 year old child (D/E); a fragment of 12<sup>th</sup>-13<sup>th</sup> century pottery, an observation which did not produce a statistically significant result.

### ***1250-1400***

Statistical significance was not suggested for furniture with any age group (Table A30). Coffins were slightly more common with infants and children aged 12 years or younger (B/C and D/E; Figures 13 and 14) than with adults. This observation was not quite statistically significant ( $P=0.0868$ ) for coffined infant burials and coffined burials of juveniles aged 12 years or under ( $P=0.0782$ ). The example of pillow stones and one of the two cases of stones (on the torso) were also with young juveniles (Figure 15). No furniture was recorded with adolescents, which was not supported statistically. The example of an anthropomorphic grave was observed with the child buried with stones. The second example of stones was with a middle-aged adult. Objects were observed with an unaged juvenile (a single iron nail), two young females (an unidentified circular iron artefact and a ring respectively), two middle-aged males (a D-shaped iron buckle and a late 14<sup>th</sup> century annular copper buckle respectively, with the former male adult also orientated north-south) and one unsexed unaged adult (a possible iron knife blade). Only this last example was statistically significant. With the exception of the single iron nail, which may have been a chance inclusion, all recovered objects were with adults and, if the unidentified

object is also a buckle, were carried on the person. An unsexed young to middle-aged adult was also buried in a north-south orientation. Investigation of the proportions of individuals with furniture by age (Table A31) suggested that bias of furniture with child burials may have been practiced. Alongside an infant with pillow stones and a child with stones on their torso in an anthropomorphic grave, coffins occurred in their highest proportions within burials of infants and children aged 12 years or younger.

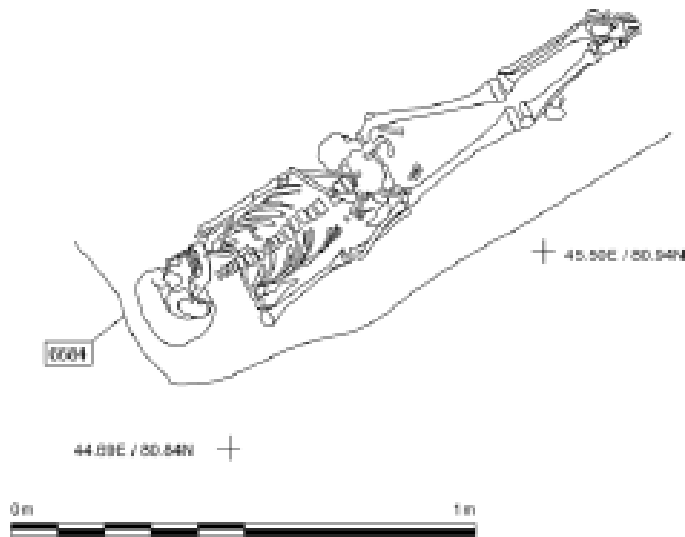


Figure 13: IN4515, a 4-12 year old child buried in a coffin (Higgins et al., 2009, fig.120)

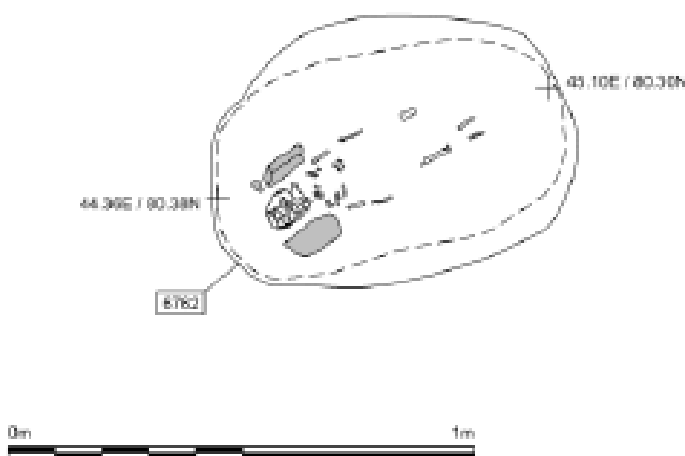


Figure 14: IN4522, a 0-3 year old infant buried with pillow stones (Higgins et al., 2009, fig.120)

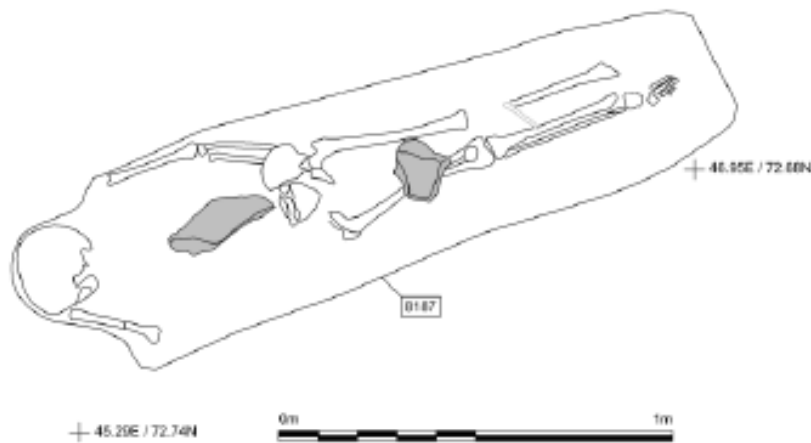


Figure 15: IN4576, a 4-12 year old child with stones on their torso (Higgins et al., 2009, fig.121)

No statistical significance was suggested for sex for either female or male adults. Investigation of specific furniture types alongside age and sex only suggested significance for objects with young female adults ( $P= 0.0492$ ).

### ***1400-1500***

Objects were the only furniture recorded (Table A32). Two juveniles, one unaged and the second an adolescent, were noted with 12<sup>th</sup>-mid 13<sup>th</sup> century pottery. Pottery fragments were also noted with two young to middle-aged males, dated to the mid 13<sup>th</sup>-14<sup>th</sup> century and 12<sup>th</sup>-mid 13<sup>th</sup> century respectively. The identification of only one type, their infrequency and the debate as to whether these pottery fragments represent purposeful or accidental inclusions makes it difficult to interpret meaning, though the proportions may indicate bias for juveniles (Table A33). The shared location of these burials may suggest further significance (see burial location section).

Both examples of objects with sexed adults were in association with males, which was almost significant. Due to the few examples, no further analysis of furniture for adults by age band and sex could be undertaken.

### *Observations*

St Michael's had the fewest examples and lowest levels of burial differentiation through furniture; for two phases, the only observed furniture was pottery. Though there may be bias in favour of juveniles, the small number and the possibility that the pottery represents chance inclusions/recoveries hinders interpretation. The lack of pottery from other graves, along with the absence of other furniture types in contemporary burials, may suggest that pottery was deliberately included and therefore significant.

The majority of furniture was within burials dated 1250-1400, and it is within this period that differentiation by age is demonstrable. There is a focus on those 12 years or younger and in particular infants, whose burials have a higher number of coffins than adult burials as well as several examples of unusual furniture, such as pillow stones and shaped graves and one of the two examples of stones on the torso. There is also an absence of furniture with older juveniles. Objects appear the only furniture biased in favour of adults. That these items were all typically carried on the person may suggest that these adults were buried clothed and/or that it was appropriate to bury them with personal possessions. Further differentiation for adults was identified for young females with objects which achieved statistical significance and the two burials orientated north-south, perhaps a specific burial treatment indicative of punishment or other negative motivation. Though it is difficult to suggest significant differentiation for adult burials beyond the handful of cases that are no doubt indicative of some wish to highlight these individuals, it may be possible to tentatively suggest a bias, stronger in the high-late medieval

period, for greater quantities and types of burial furniture with children dying aged 12 years or younger.

## **St Peter's, Leicester**

### ***850-1100***

The fourteen burials, a high proportion of which had furniture, may represent a group of related individuals of high or special status, reflected in their manner of burial (Table A39). Lining was the most frequent furniture, with nine graves possessing charcoal linings and three with linings of charcoal and stone. The majority of burials with stone linings (10/18) were aged 12 years or younger, with the remaining stone-lined burials all aged 21-35 years (n= 1) or 36 years and older (n= 7). The next most frequent types were boards, followed by two cases of ear muffs and stones (on the body). All ages of adults are represented, though only juveniles aged 12 years or younger. It is generally with adults aged 36 years or older (I and II) that more than one furniture type are observed; a lining of charcoal, stone or both, with either ear muffs or stones on the body and in three cases, objects (medieval pottery, plus one with animal bone and Roman pottery). Objects with middle-aged adults was statistically significant (P= 0.0410). The only other grave containing more than one furniture type was a 4-12 year old child with a board, charcoal lining and pottery. This may suggest that it was particularly the burials of middle and older adults that were differentiated, plus one especially noteworthy child. One burial, an unsexed middle adult, was not observed with furniture and may not be part of the group which were provided with shared accoutrements of differentiation. Two of the burials were also multiple burials (see below), and it is clear that this group were unusual. They may have been an influential early family, such as a founders group, as has been suggested for burial groups of similar periods elsewhere. These often include a male burial of particularly high status, and

it is frustrating that so many adult burials within this group were unsexed (n= 7/9). For the infant and child burials, this interpretation may suggest that it was their family status, rather than their ages at death, which was being highlighted.

### ***850-1190***

One burial of a child aged 4-12 years was dated 850-1190, and three burials (an infant aged 1-2 years, a female adolescent aged 13-20 years and a female adult aged 36-50 years) were dated 1100-1190. None of these individuals were observed with furniture.

### ***1200-1550***

Burials with furniture were all within the church. These include the burial of a middle-aged adult male with a coin in the mouth, a copper alloy pin and an unidentified lead object, dated 1200-1250 and a middle-aged female adult with a papal bulla located by their left hand, dated 1300/50-1375/1400. This was the only explicitly-religious item identified, within a grave lined with ash. A further two groups of burials were dated 1375/1400-1550 (Table A40).

The first group comprised four burials; a 4-12 year old child, an adolescent/adult and two unaged adults. None were sexed and all were within coffins. The second group, of six burials, was located within a private chapel. For one, no burial furniture was observed and no osteological information available; of the remaining five, three were ash burials (an unsexed adolescent also within a coffin; a middle-aged adult male and a middle-aged to older adult female). The middle-aged adult male also had a Roman coin, a flint scraper and three tiles as included objects. The nature of these items, such as the antiquity of the coin and the unusual/unfamiliar characteristics of the flint scraper, may necessitate their classification as

occult or natural objects that possessed apotropaic power, included for the benefit of the deceased. That the tiles were located under and around the head may be relevant to trauma to the skull, healed in life, this individual had received. The remaining burials were an unsexed adolescent and an older adult male, with the latter containing a copper-alloy, possible shroud, pin. No statistically significant results were achieved when these groups were tested. Though juveniles are represented, the majority of the burials were adults. It may be possible to suggest that differentiation of burials by status, including religious identity, was biased in favour of adults.

### *Observations*

The small number of burials given a date (31) means that the result of the all phases analysis, above, may be more indicative of typical variation by age in grave furnishing. The few phased burials suggest the burials of related individuals of similar, shared status that may include an element of religious status and differentiation. That burials of children featured suggests that it was their membership of a particular family or kin group that was being marked, rather than age. This is not to suggest that their ages at death were not significant; their deaths at a young age are likely to have been a cause of concern.

There is still evidence for variation by age in within the phased burials. Stone appears to have been a material appropriate for juveniles. Ash burials appear primarily with adult individuals; if the one example of ash lining within the burial of an adolescent aged 13-20 years represents an individual nearer to the 'adult' end of this spectrum, it would demonstrate further association of this rite with mature (whether biologically, economically or socially) individuals. This was not the case for the early medieval examples of charcoal linings, which may suggest a more rigid structure of burial rites by age developed in the high and later medieval periods. Though

it is difficult to identify further changes due to the large number of burials without a date (as shown from the other sites where stone was used in the high and later medieval periods, it cannot be assumed which period unphased examples may have originally belonged to), it can be demonstrated that differing furniture varieties were seen as appropriate for different ages of individual.

## **Section Two: Multiple burial**

### **St Martin's, Wharram Percy**

Sixteen individuals were observed in eight double burials (Table A41), comprising 2.4% of the total burial population (n= 16/675). Juveniles and adults of both sexes were noted, on occasion with furniture (Mays et al., 2007). Within were two perinatal infants (A), five infants aged 0-1 year (B), three children aged 4, 6 and 7 years (D), one child aged 12 years (E), four young adults (H), three female and one male, and one male middle-aged adult (I).

That infants aged 0-1 year were disproportionately represented was supported by a very significant result (P= 0.0077). Testing for children aged 12 years or younger was almost significant (P= 0.0738), which is unsurprising given that over two-thirds (68.8%) of people from these burials were within this age range. Juveniles aged 13-17 years did not feature within shared graves. For adults, the proportion of women was not significant, but the result for men was (P= 0.0138), due to their infrequency in this burial rite (1.0% of adult men, less than half the proportion of adult women; 2.4%).



### **St Peter's, Barton-upon-Humber**

Twenty individuals were within eight multiple burials (Table A42), representing 1.0% of the burial population (n= 20/1982). Six were double burials, with the remainder one triple and one quintuple burial (Waldron, 2007). Juveniles were one perinatal infant (A), five infants aged 0-1 year (B), one juvenile aged 0-4 years (B/C/D), one child aged 7 years (D), three children aged 8, 12 and 12 years (E) and one adolescent aged 15 years (F). Represented adult age bands were four young adult women (F), two adult males aged 45 years or older (I/J) and two unaged adults (L), one female, the second, unsexed.

Bias of young infants (A and B) was supported by a very statistically significant result (P= 0.0094). A comparable result was also achieved when examination was extended to children aged 12 years or younger (P= 0.0085). The one example of an adolescent, a 15 year old female, was not observed to be significant. For adults, no statistical result was achieved for either men or women. Despite this, some social distinctions can be suggested. The only two adult males were within a quintuple burial, an especially rare type with few parallels that is difficult to explain (see below). In contrast, the adult women, four of whom were aged 25-34 years, were buried with young infants. These burials may be representative of women and babies who died from a shared death-event such as childbirth or related maladies.

### **St Andrew, Fishergate, York**

Twenty-one individuals, in one triple burial and nine double burials, were observed, totalling 5.2% of the recovered burial population (n= 21/402; Stroud and Kemp, 1993). This is the largest proportion of the sites, though five are part of a subset which may not be representative, both in form and motive (Table A43). Adult males within the 'blade injuries' group have been excluded from this analysis. The remaining multiple burials contained one child aged 10-12

years (E), three young adults aged 20-30 years, one male and two female (H), six middle adults, two female and four male (I) and one older adult male (J). Analysis of the entire burial population did not produce statistically significant results for any age group or by sex for adults.

### **St Michael's, Leicester**

Four individuals were within two double burials (Table A44), representing 1.4% of the total burial population (n= 4/272). Three were adults; a female aged 21-35 years (H), a female aged 36-50 years (I) and an unsexed adult aged 21-50 years (H/I). The fourth was a foetus (A) recorded in the abdomen of the young female.

The foetal infant within the abdomen of the adult female was statistically significant (P= 0.0163), though it should be noted that this was the only infant of this age within the assemblage, and the result may support its rarity rather than the significance of its burial. That no other juveniles were within multiple burials is extremely unusual, and it is tempting to think there would have been examples which were missed archaeologically. Irrespective, it is difficult to conclude much about juveniles and multiple burials from St Michael's. This is also true for adults; neither the proportion of females or absence of males produced significant results. The examples, despite their infrequency, were significant at the time and should not be discounted as without meaning due to a lack of statistical support.

### **St Peter's, Leicester**

Twenty individuals were noted in ten multiple burials, all doubles (Table A45), representing 1.5% of the population (20/1318; Gnanaratnam, 2009). Twelve were juvenile; five aged prebirth-3 years (A/B/C and B/C), four aged 4-12 years (D/E), one 13-20 years (F/G) and two

were unaged, one aged 0-12 years and the second 4-20 years (K). Eight were adults; three unsexed young to middle adults aged 21-50 years (H/I), two middle adults aged 36-50 years (I), two middle to older adults aged 36 years or older, one female (I/J) and one unaged, unsexed adult (L).

The high proportion of infants produced a result short of statistical significance ( $P= 0.0809$ ) and no significant result was achieved for juveniles, though this was again almost significant ( $P= 0.0621$ ). That the majority were juvenile (60.0%) and a large fraction (45.0%) aged 12 years or younger suggests social significance was attached to these ages that could lead to disproportional representation of the young in multiple burials. For adults, adults were less likely to be buried within shared graves than juveniles. Only one adult was sexed and it was not possible to investigate sex as a factor. Though the absence of males was almost significant ( $P= 0.0585$ ), some of the seven unsexed adults may have been male, and as a result caution should be exercised when attempting to interpret this value.

### **Multiple burials and change over time**

Multiple burials were less common than grave furniture, and there may be less potential for the identification and discussion of how or whether the rite developed over time. Patterning over time is identified, with two themes of influence suggested. The wider range of multiple burials evident in earlier periods is interpreted as indicating greater freedom of expression in burial practice, with age not considered to be a major factor for this variation. Second is the theme of burying related individuals together, such as infants with adult women but also potentially other, less explicit family relationships, which appears consistently throughout the medieval period.

## **St Martin's, Wharram Percy**

### ***950-1066***

An adult female aged 21-25 years at death (C<sup>14</sup> dated 770-1030AD (95% probability)) was recorded with a 42-45 weeks-in-utero foetus "in situ". Though it is unclear what this referred to, the foetus was large and the adult female had a narrow pelvis, perhaps contributing fatal obstetric problems (Mays, 2007, 86). This baby was overdue, taking a normal gestation period as 40 weeks, so death during childbirth is a probable interpretation.

### ***950-1348***

An unsexed child aged approximately 6 years and an adult male aged 40-50 years (C<sup>14</sup> dated 990-1280AD (95% probability)) were positioned side-by-side, though the child was not underneath the stone cover associated with the adult. This double burial, along with others, have been suggested as a kin group, as discussed elsewhere in this project.

### ***1066-1348***

Three multiple burials were observed. The first contained a female adult aged 25-35 years (C<sup>14</sup> dated 1030-1300AD (95% probability)) and an unsexed child aged 4 years, with the child alongside the legs of the adult (Mays, 2007, 85). Within the second was a female adult aged 25-35 years and a 30 weeks-in-utero foetus. This infant was probably born too prematurely to have survived. The position of the foetus between the femora of the adult suggests this burial is likely to represent a mother and child, and that the adult female had tuberculosis may have contributed to their deaths (Mays, 2007, 86). The location of the foetus has been suggested as

the result of two possible events; the post-mortem expulsion of the infant as a 'coffin-birth', though unlikely, or the cutting free of the baby in an attempt to save its life (Mays, 2007:86), though dying after successful birth is another interpretation. The third multiple burial contained a male adult aged 19-21 years (C<sup>14</sup> dated 1020-1270AD (95% probability)) with stones at his feet, and an unsexed juvenile aged 1 year.

### *Unphased*

Three double burials were unphased, though their location suggested they were all medieval. All six individuals were aged 12 years or younger. The first contained two foetal infants, one aged 45 weeks-in-utero and the other 35-36 weeks-in-utero; the physical relationship between the two is unknown. Within the second was a 7 year old child and an infant aged approximately 9 months, where the body of the infant was placed on the child's chest. The third contained the oldest child, aged 12 years and buried in a cist with ear muffs, with an infant aged 0-1 year placed between or on the child's legs (Mays, 2007, 85). The physical closeness noted for the latter two examples perhaps suggests some familiarity in life, though the available space within the grave may have been a factor; unfortunately, grave cuts were rarely visible (Heighway, 2007, 216).

### *Observations*

Excluding the two multiple burials of foetal/neonatal infants and adult women, six of the nine infants and children were buried together. When statistical analysis focused on juveniles aged 1-12 years, both by phase and as one assemblage, no significance was suggested, despite all

juveniles observed in multiple burials being of this age. Despite this, it can still be suggested that infants and children were treated differently to older juveniles.

Explanations can be suggested for the inclusion of two adult females with foetal/neonatal infants, such as the deaths of both adult and infant as a result of complications from pregnancy or childbirth. With the absence of DNA testing to establish such a relationship, it should also be suggested that joint burials may have occurred as a result of associated deaths by event (such as illness) and/or time (within a short period). This may also explain the multiple burials of children and the child with the adult male. That is not to say that the digging of one grave, rather than two, was the primary motivation, as the physical relationships between some of the individuals, plus the observation of some burials with furniture, is indicative of some further, perhaps emotional, motivation for multiple burial that was most explicit for the young.

### **St Peter's, Barton-upon-Humber**

#### ***950-1150***

Twelve (2.6%) individuals were within four multiple burials. The first contained a neonate, an infant aged 0-1 year and a female adult aged 25-34 years. The second was a double burial of a female aged 25-34 years and an infant aged 0-1 year. Both were within the same coffin and the adult also had two ear muffs. Two wands were recorded within the coffin, and as other examples were in adult graves it is likely that these were in association with the adult. The third multiple burial was the only quintuple burial, and contained three children aged 7, 8 and 12 years respectively and two male-sexed adults aged 45 years or older. A photograph of the remains in-situ (Figure 16) shows that the children were placed on top of the adults and that the limbs of the individuals were interlinked. The fourth was a double burial of an unsexed adult aged 16 years or older and a child aged 0-4 years.



Figure 16: The quintuple burial of IN1226-IN1230 of three children aged 7, 8 and 12 years and two males aged 45+ years, 950-1150 (Original site photograph, taken from the east, Rodwell, 2007, fig.11)

### *1300-1500*

There were two double burials of this phase, both inside the church. Representing 4.7% of individuals, it is likely these were high-status individuals. The first contained a female aged 25-34 years and an infant aged 0-1 year, both within a coffin. Within the second was an unsexed child aged 12 years and an unsexed adolescent aged 15 years, positioned side-by-side (Figure 17).



Figure 17: A double burial of two adolescents IN0204, a 15 year old and IN0205, a 12 year old, buried in the church, 1300-1500 (Original site photograph, taken from above, facing west; Rodwell, 2007, fig.12)



### ***1300-1700***

Two double burials (0.8% of individuals) were noted. The first contained an unaged female adult and an infant aged approximately 7 months. Within the second was a female adult aged 25-34 years and a perinatal foetus.

### ***Observations***

For 950-1150 the proportion of children aged 12 years or younger was very statistically significant ( $P= 0.0041$ ). No further significance was suggested based on age, though the proportion of infants aged 0-1 year was almost significant ( $P= 0.0856$ ). These examples date to the period in which the greatest variation and provision of burial furniture was noted, and one of the multiple burials was furnished with coffins, ear muffs and wands. Discussion of the multiple burial containing five individuals suggested an accident or a fire caused these deaths (Rodwell and Atkins, 201, 181). Though the motivations behind this unusually large burial remain unclear, the close physical relationship between all five individuals suggests a level of intimacy in life that may have extended to their manner of death and consequently was appropriate for burial. The remaining early multiple burials, all of adult women and young infants, one perhaps representing twins, may be indicative of deaths related to pregnancy or childbirth, also a possible motivation for the poorly-preserved double burial of an unsexed adult and juvenile aged 0-4 years. Though perhaps suggesting a specific desire for the burial of young infants with a (female) adult, if such burials are of women and their babies who died in childbirth or childbed, it would be this relationship and shared death-event that should be interpreted as the influencing factor, rather than the young age of death of the infants.

A statistically significant result by age was produced for the juveniles within the burials of 1300-1500 ( $P= 0.0450$ ) but not for other ages. The example of a woman of childbearing age and an infant within a coffin suggests a close relationship and death related to childbirth. For the juvenile double burial, it is harder to conclude why joint burial was chosen without scientific testing. Church burial suggests membership of a wealthy or important group, which narrows the nature of any possible relationship between the two juveniles, and as such it may be that they belonged to the same family, such as siblings or cousins.

Less variety was noted for examples of 1300-1700, with both burials containing an infant and a female-sexed adult. The proportion of infants aged 0-1 year was the only statistically significant observation ( $P= 0.0296$ ). One of the infants observed with an adult female was aged 7 months, and interpretations may include the deaths of mother and child from other conditions, or the deaths of two individuals who were not mother and child but were buried together due to some other affiliation. This interpretation is supported by an historical account by Peter of Cornwall, who described how his infant niece was buried between the legs of her recently-deceased grandfather (Orme, 2003, 121).

### **St Andrew, Fishergate, York**

#### ***Late 10<sup>th</sup> century – 1195***

Six multiple burials were identified, containing 9.9% of the burial population. The triple burial (Figure 18) is the only multiple inhumation likely to be representative of typical practice and was also the only such burial located within the church. The burial contained a female adult aged 20-30 years, a male adult aged 20-30 years and a second male adult aged 40-50 years. In association was a 10<sup>th</sup>-14<sup>th</sup> century fragment of decorated buckle plate, which may have been

placed with one of the adults. The two adult males were arranged side by side, with the adult female positioned diagonally across them.

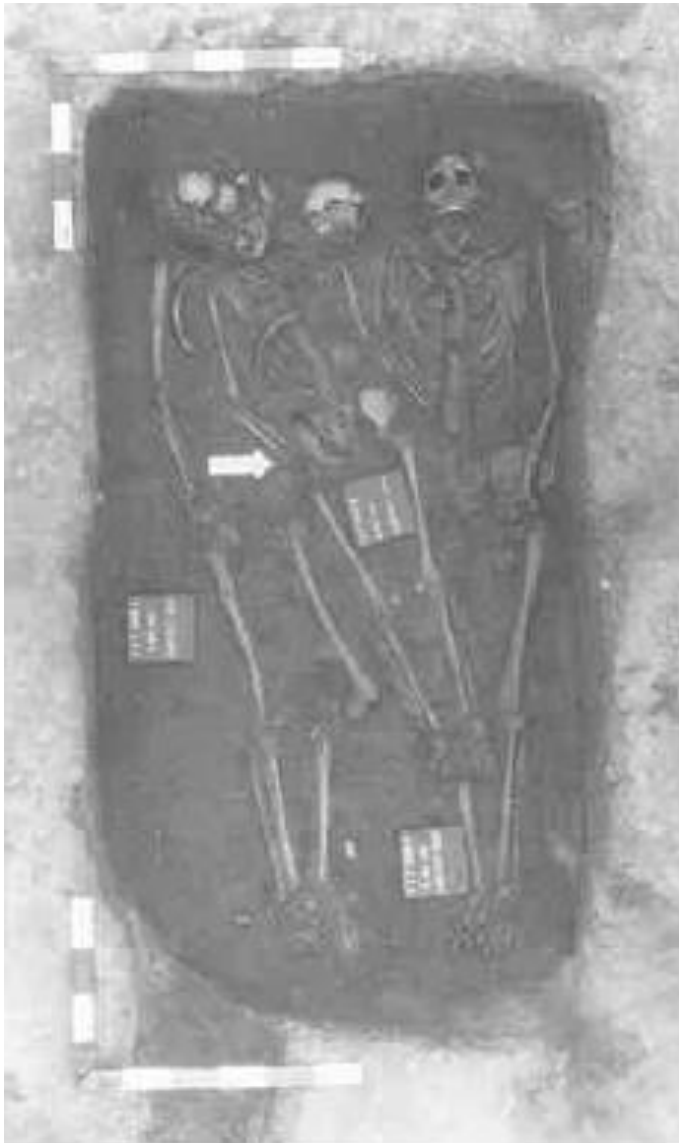


Figure 18: The triple burial of three adults, IN2746, IN2747 and IN2748 (Original site photograph, taken from above facing west; Stroud and Kemp, 1993, fig.31)

The remaining five, all doubles, were located within the contemporary churchyard and among a subset that exhibited blade injuries. Three contained two male individuals aged 20-30 years, and with one of these males positioned embracing another (Figure 19). Within the fourth burial was a male adult aged 20-30 years and a male-sexed adult aged 40-50 years, with the fifth of two male adults aged 30-40 years. The burial injuries group of the first phase has been discussed in detail in an earlier section. Excluding those in double burials, the remainder were within individual graves. One reason for the double burials may be convenience, with it easier

or preferential, perhaps due to time pressure, to dig fewer graves. However, the two adult men arranged in an embraced suggests there may also have been an emotional dimension; perhaps these brothers in arms were biologically-related as well. These double burials, presumably of casualties of war, are unlikely to be representative of traditional or typical mortuary practice due to the specific events associated with their deaths. Further burial treatment supports this assertion. There was close spatial association between these burials, with both individual and shared graves in rows. One male was the only individual with his arms positioned crossed above his head, whereas another had been decapitated and buried facing west (Stroud and Kemp, 1993, 148, 157, figs. 42k and 42l; Kemp and Graves, 1996, 76). Due to their untypical character, the blade injuries group are therefore excluded from the analysis.



Figure 19: Position of IN2782, with arm arranged around IN1887 (lifted) (Original site photograph, taken from above, facing west; Stroud and Kemp, 1993, fig.42k)

### *1195 – Late 16<sup>th</sup> century*

Four multiple burials, all doubles, were located within the nave of the church. Involving 3.0% of individuals, all but one were adults. The first contained an adult male aged 50 years or older and a female adult aged 40-50 years, with the adult male positioned over the adult female. The second was held a female aged 20-30 years and a male aged 30-40 years, side by side. This was the only double burial observed with furniture; a late 13<sup>th</sup>-early 15<sup>th</sup> century iron knife with an ivory handle, with the female adult. Within the third were two middle-aged adults aged 40-50 years, one possibly female and the other male. The fourth multiple burial was the only example to contain a juvenile; an unsexed child aged 10-12 years placed over the body of a male adult aged 30-40 years.

### *Observations*

The lack of infants and young children from multiple burials is notable; only one juvenile was recorded. Despite it being likely that the burial of this child was unusual and indicative of special contemporary action, the observation was not statistically significant. Neither was significance suggested for adult women or men, despite the far greater proportion of women represented (4.5% compared to 2.7%). It should instead be supposed that, though not supported statistically, women were more likely to be buried in multiple burials at St Andrew, Fishergate than men, though this was in all probability due to their different status to some men at the site, as lay patron versus members of the Gilbertine order.

All but one of the individuals in multiple burials were adults, which is a significant difference from the other sites, where children were more commonly represented and often to a statistically significant level. For the first phase, excluding the burial injuries group, only 2.3% (n= 3/131) of individuals were in multiple burials, one within the parish church. These three

individuals are likely to have been important members of the community, which may explain why they were the only individuals buried in a shared grave as well as among a minority buried in the church.

Adults continued to dominate multiple burials during the priory phase. The ages and sexes suggest family identity were being expressed, with the bias in favour of adults perhaps due to their economic and religious patronage; the one child may substantiate this claim. The multiple burials may also have displayed family positions and relationships, with the child perhaps a younger relative of the adult male. The presence of the child may also suggest the burial of a particularly loved or valued child, or a child of an influential family, for whom such burial was considered appropriate or desirable. Social and religious influence outside the immediate family or priory community may also have been demonstrated by the high-status location of these multiple burials, alongside other burials, within the nave.

## **St Michael's, Leicester**

### ***1250-1400***

Both double burials were within the footprint of the church and represent 1.9% of burials. The first contained a female-sexed adult aged 21-35 years and a foetus aged 12-14 weeks-in-utero. The grave was located centrally between two surviving wall fragments of the nave. The second was a female adult aged 36-50 years and an unsexed adult aged 21-50 years. This was a consecutive double burial; the grave of the unsexed adult had been opened to allow the later insertion of the adult female (Higgins et al., 2009:249, 269, 285).

## *Observations*

The presence of the foetal infant achieved statistical significance when 1250-1400 was analysed independently ( $P= 0.0206$ ) and as part of the entire burial assemblage ( $P= 0.0163$ ); however, this was the only foetal individual observed. That this infant was not one of two bodies placed within the grave, but instead within the abdomen of a woman who died during pregnancy, could be interpreted as the burial of one individual rather than two; the distinction depends on whether the burying community were aware of the female's condition and if this influenced her manner of burial. It may therefore be inappropriate to consider this a multiple burial. If so, only one multiple burial was observed and it is difficult to identify further patterns, as no significance was demonstrated for adults by sex. The consecutive burial of two adults may suggest a close relationship in life, whether by blood, marriage or other, that was decided should continue beyond death through the sharing of a grave. Though the maximum ages at death were 50 years for both individuals, based on the reported osteological ages the female adult may have been older than the unsexed adult by as much as 30 years at their respective times of death. It is possible that the female adult outlived the unsexed adult by several years but that they were buried together via opening of the grave.

## **St Peter's, Leicester**

### ***850-1100***

The first double burial contained two unsexed adults, one aged 36-50 years and the other 36 years or older. Both adults had ear muffs, with the first adult also within a charcoal lining and the second within a lining of charcoal and stone. Within the second was an unaged, unsexed adult and a child aged 4-12 years, both within a charcoal-lined grave. The positions of the individuals in both graves are unknown; it is presumed they were laid side by side.

## 850-1190

The one double burial contained an unaged, unsexed adult and a child aged 4-12 years, with the physical relationship unknown.



Figures 20 (left) and 21 (above): Double adolescent burial of IN4031, a 4-12 year old child and IN4032, a 13-20 year old adolescent, showing hand positions (Original site photographs, from above facing west; Gnanaratnam, 2009, fig.86, 92)

### *Unphased*

Seven double burials were unphased, of which six contained at least one juvenile. Within the first were an unsexed adult and an infant aged 0-3 years, with a small eroded coin recovered from the grave fill. The second contained a child aged 4-12 years and an adolescent aged 13-20 years, with the left arm of the child positioned overlaying the right arm of the juvenile. Within the third were two infants, with the fourth the only double burial to contain two adults. The fifth example was a consecutive, rather than contemporary, burial of a 4-12 year old child and a 13-20 year old adolescent (Figures 20 and 21). The older juvenile had been buried first, within a coffin or beneath a board, with the recovery of a pin also suggesting the body had been



within a shroud. Consecutive burial was suggested by the bones of the thumb of the adolescent's left hand located within their pelvic cavity, though the remainder of the hand was on the right hand of the child. This suggests that the grave of the adolescent was opened after a period of time in which decay of the connective tissues was advanced, to allow the body of the child to be inserted to the side of the adolescent (Gnanaratnam, 2009, 122, 131, fig.86). The touching of hands suggests a close relationship, while the opening of the adolescent's grave would have involved damage to burial furniture, such as the cutting open of the shroud and the disturbance of any coffin or board. Positioning of those within the sixth and seventh double burials also suggests a relationship between the individuals in life continuing beyond death. The sixth example contained a juvenile aged 0-12 years and a female adult aged 36 years or older with the juvenile observed overlying the upper right body of the adult. The seventh double burial contained an infant positioned curled into the left hip of an unsexed, middle-aged adult.

### ***Observations***

Statistical analysis for the three multiple burials dated 850-1190 did not suggest significance for the proportion of juveniles. When combined with the unphased assemblage, though a quarter of individuals were infants, this was not quite statistically significant ( $P= 0.0809$ ), as was the observation that half were aged 12 years or younger, ( $P= 0.0824$ ), and that 60.0% were juveniles aged 0-20 years ( $P= 0.0665$ ). Despite a lack of significance, that a higher number of juveniles, particularly children, featured within the double burials is important. The phased example may represent the burial of two related individuals within the same influential family group as suggested by shared burial furniture. This is also a potential interpretation for the phased adult burial, furnished with further materials of presumable high status.

At least one double burial was consecutive. The motivation for such a double burial, which is likely to have been grisly to undertake, may have resulted from a significant desire by the burying population for these two juveniles to be buried together, perhaps due to a sibling relationship or close friendship. That no burial furniture was observed in association with the second juvenile, but with the first, may suggest that either it was not affordable or practical to provide furniture for this second individual, or that the pre-existing juvenile, in providing some other form of protection, perhaps suggested by the positioning of their hands, fulfilled this role. Similar physical closeness was inferred from the context sheet illustrations of three of the remaining unphased examples. The similar positions of the two juveniles, recorded as arms touching, may be evidence of closeness and friendship in death as well as life. This can also be suggested for juvenile and adult burials. The juveniles positioned overlying the upper right body of a female adult, so that their heads were at a similar level, suggests a degree of familiarity and intimacy, also potentially for the infant positioned close to the unsexed adult's left hip, particularly as infants and young child are often carried in this position. The double burials of adults and children are likely to represent the deaths of related individuals of the same family or close community that occurred within a short timeframe, with this relationship depicted and represented through their close physical arrangement.

### **Section Three: Burial location**

Investigation of burial location attempted to answer eight questions (Table 17). Analysis of patterning was complicated by several factors, such as the lack of total excavation and dating or phasing that may compound attempts to identify zoning or clustering (for example, wide time frames).

Questions for the investigation of burial by location	
Q1	<i>Is the northern half of the cemetery less favoured than the south, and for different groups? Is there a higher proportion of children and women to the north of the church as commonly presupposed?</i>
Q2	<i>Are any particular zones favoured, or not favoured, for the burials of individuals of certain ages and/or sex?</i>
Q3	<i>Is there any difference between burials in the church to the churchyard based on age and/or sex? Are certain groups over or underrepresented?</i>
Q4	<i>Is there any evidence for the 'eaves-drip' phenomenon as suggested for other sites?</i>
Q5	<i>Is there any evidence for 'clustering' of graves?</i>
Q6	<i>Are there any burials beyond the boundaries of the cemetery?</i>
Q7	<i>Are any of the in-grave burial practices or multiple burials concentrated in particular zones?</i>
Q8	<i>Are there any other burials or groups of burials that stand out by their location?</i>

Table 17: Questions structuring investigation of burial by location

### **St Martin's, Wharram Percy**

The churchyard was divided into six zones, based on the methodologies of the excavation and this project. The excavated areas, with zones, and number of burials from each zone are within Table A46 and Figure 22.

#### ***The northern churchyard***

A total of 406 burials were excavated from the northern churchyard, representing 60.0% of the burial population (Table A47). When the proportion of an age group deviated from this percentage, it may indicate bias; if the proportion is greater than 60.0%, it may suggest bias towards burying this age of individual in the northern churchyard, and vice versa for those

occurring in quantities less than 60.0%. Burial in this area was interpreted as ceasing at the end of the medieval period (Harding, 2007, 62) and the results should be indicative of true medieval practice.

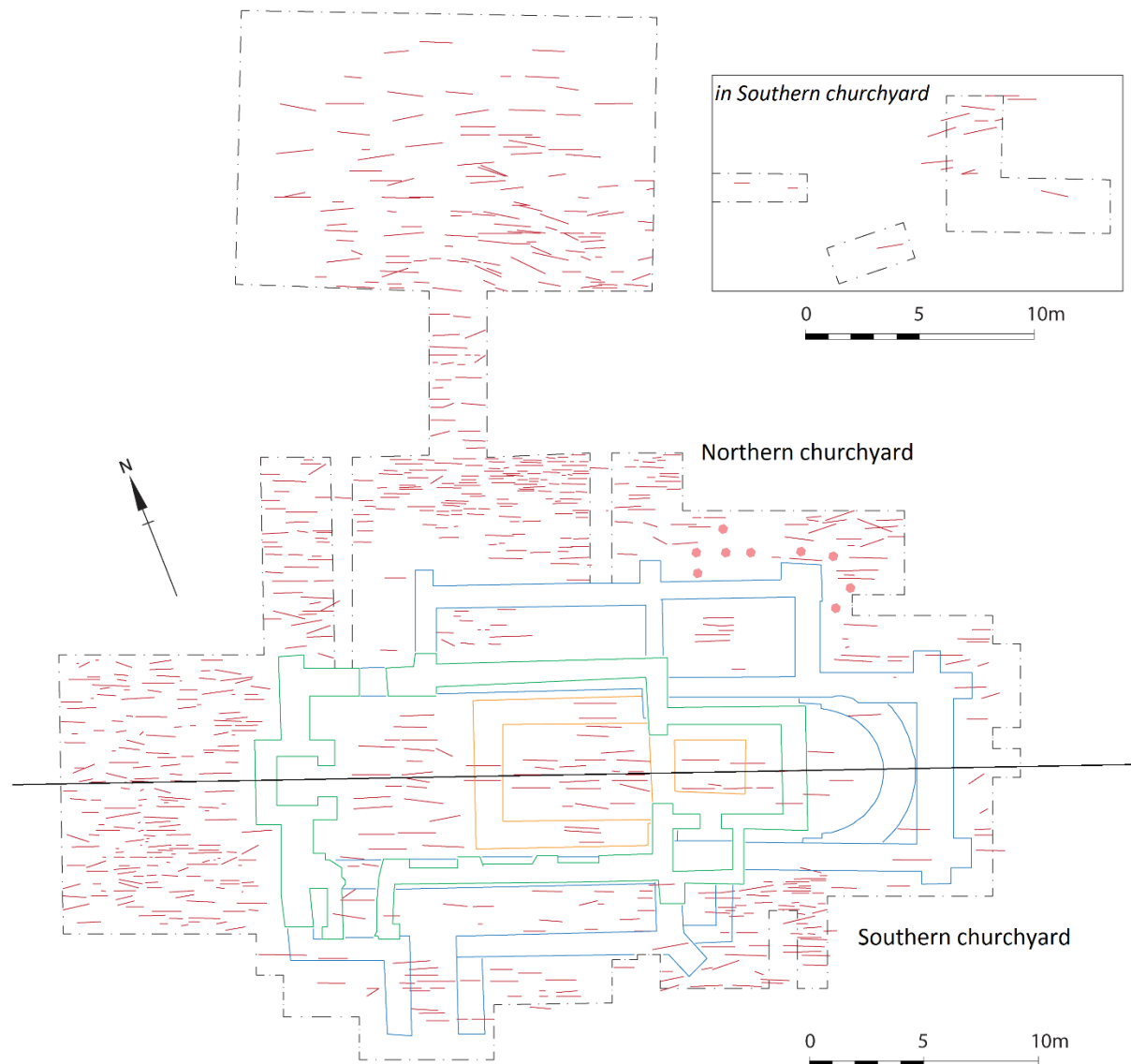


Figure 22: Division of the churchyard of St Martin's, northern and southern churchyards (after E.Marlow-Mann; Mays, 2007a, 218-9, fig. 115)

Taking the calculated percentages as a primary indicator of bias suggests that infants and children aged 7 years or younger were more likely to be interred north of the church than south,

with 73.4-84.4% of these child burials excavated from this location. A preference for northern churchyard burial may also be posited for children aged 8-12 years, though the proportion recovered north of the church (64.9%) may be too close to the overall proportion to indicate true bias. For all other age groups the proportion recovered from the northern cemetery was less than 60.0%. The smallest was 33.3%, for adolescents aged 13-15 years (F) and the greatest, 58.7% for adults aged 18-35 years (H). The number of age groups with 50-59% of burials represented in the northern churchyard (seven) makes it difficult to identify bias without statistical examination. For sexed adults, the proportions (Table A48) suggest a bias in favour of burying young women in the northern cemetery (71.7% of burials). The proportions do not suggest further variation because the majority are close to the 60.0% benchmark.

Investigation via Fisher's exact test supported the bias that the northern churchyard was a favoured location for the burial of infants and young children. This preference was strongest for those dying within their first year of life; assessment of age bands A and B produced very significant results ( $P= 0.0047$  and  $P= 0.0032$  respectively). For infants aged 1-3 years (C) and children aged 4-7 years (D), results of lesser significance were generated ( $P= 0.0166$  and  $P= 0.0103$ ). No further significant results were achieved for any of the other ages, which was to be expected given the lack of deviation from the standard 60.0% and the few examples of some age groups, such as G (4) and K (2). When sex was investigated, the results were somewhat surprising. The high proportion of young female adult burials was not shown to be statistically significant, despite almost three-quarters of such-aged burials originating from this location. Indirectly, the bias may be supported by the low proportion of young adult (46.5%) being significant ( $P= 0.0193$ ), suggesting it was less typical for young men to be buried in this area. This was also observed for middle-aged and older adult males (IJ), with their low proportion (35.7%) also significant ( $P= 0.0206$ ). No further significant results were achieved for adults by age and sex. Therefore, the results indicate that there was less restriction on where those aged

8 years or older could be buried during the medieval period. For those aged 0-7 years, specifically aged 0-1 year, they were more likely to be buried in the northern churchyard, suggesting a social and/or religious preference linked to their age. Adult men were less likely to be buried north of the church, with bias towards burying young adult women in this location. This favouring of infants, young children and young women is discussed, below.

### ***Zoning***

Burial was densest in the north and west zones and less common north east/east, south and south-east of the church (Figure 23). The assignation of dates to adult burials, and not juvenile burials, has made it difficult to identify patterns of location based on age, and so phased and unphased burials were combined (Tables A53-A62). As it is likely that burials north and west of the church predated the 16<sup>th</sup> century desertion, any patterns should be apparent within these zones.

Three hundred and forty-two burials were within the north zone (Table A53). That the majority of infant and child burials were located here was extremely statistically significant (A-C;  $P = <0.0001$ ) and to a lesser extent for young children (D;  $P = 0.0413$ ). A decrease in the numbers of older children (E) suggests they were more likely to be buried in another area. It is more difficult to interpret burial for adolescents (F and G) due to their low frequency in the burial assemblage and the proportion of their burials was not significant. Between a third and half of adults were buried in the north zone, with half of middle-aged adults (I) and around 40% of young (H) and older adults (J) noted. Only the proportion of older adults was significant ( $P = 0.0323$ ). Of the sexed adolescent/adult burials in the north zone ( $n = 135$ ), fifty-nine were female and seventy-six male (Table A58). The male burials achieved an extremely statistically significant result ( $P = <0.0001$ ), suggesting that the north zone was not a focus for the burial of

adult men. It is harder to identify sex-based patterning for narrower age-ranges. Almost 60% of young female adult burials (H) were in the north zone, almost double the proportion of young adult male burials, perhaps related to the high proportions of infant burials. Though not supported statistically, this may suggest bias for the burial of young women.

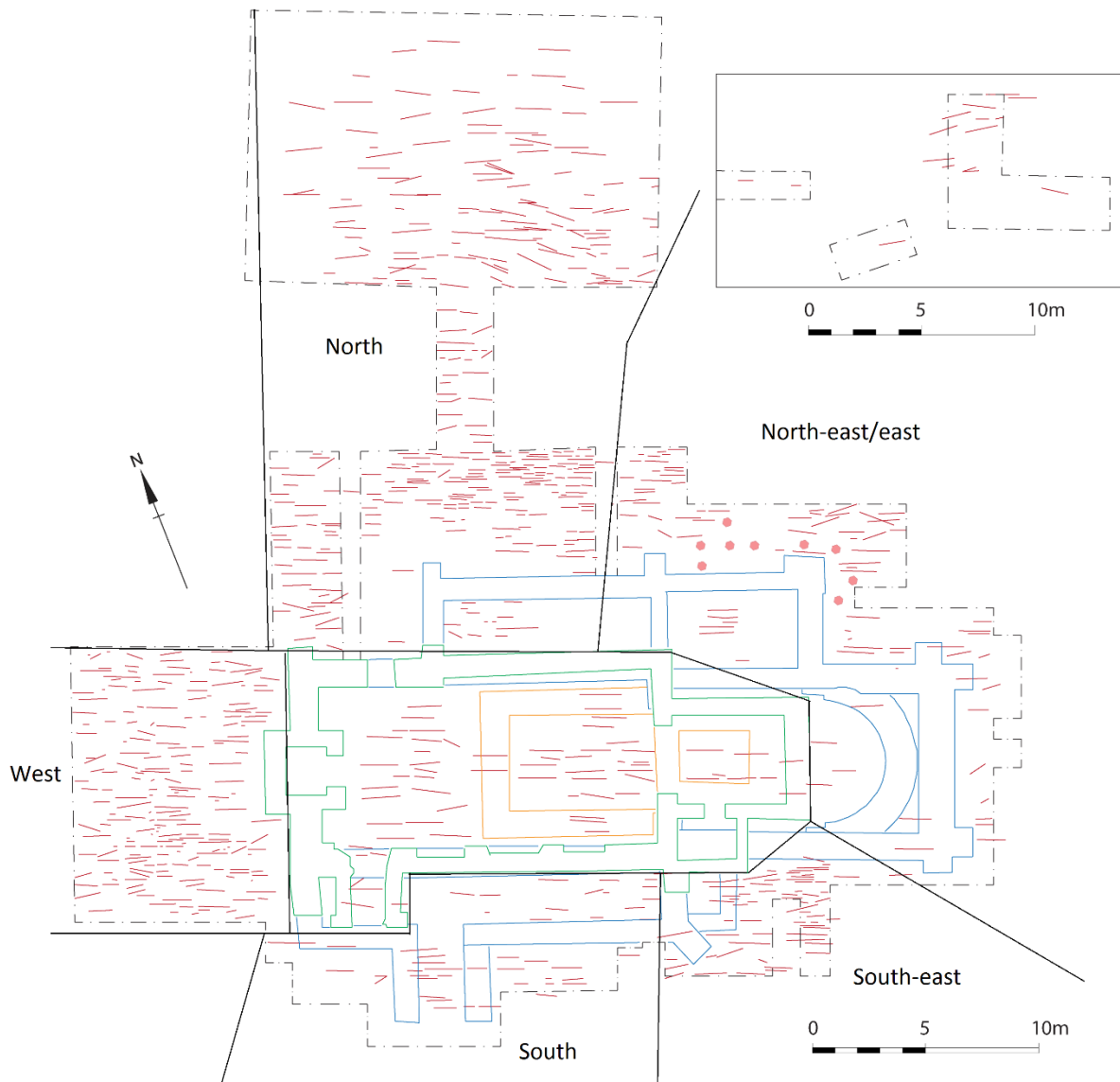


Figure 23: Division of the churchyard of St Martin's into zones (after E.Marlow-Mann; Mays, 2007a, 218-9, fig. 115)

Within the north-east/east zone (n= 107 burials; Table A54), similar frequencies of infants were located to the north zone, with higher proportions of children (D and E) that may account for their relative absence from this area. No adolescent burials were observed; instead, adult

burials, particularly those bordering adolescence/young adult, young-middle aged adults and older adults (G/H, H, H/I and J) were the most numerous, with lower frequencies of middle-aged adult burials. None of these observations were significant, which with the variety of ages may suggest family burial was occurring. Of the fifty-three sexed burials (Table A59), seventeen were sexed-female and thirty-six male. A significant result was achieved for the number of males in this zone ( $P= 0.0140$ ) but not for females, suggesting a bias in favour of male adults. A higher proportion of young women were buried in this zone than men (G/H, H and H/I), which switches around middle age to middle and older adult males (I, I/J and J). Though not quite supported statistically, this observation is similar to the north zone, and it may be that some of these burials represent women who died during their childbearing years who may have been buried alongside their children; the older adult males may have been their husbands, buried in the same general location after dying at an older age.

Few burials were located within the south-east zone ( $n= 48$ ; Table A55), where artefacts suggested a medieval date for some. No statistical significance was suggested for the proportions of any range of juvenile burials. The single burial of a young male adult was significant ( $P= 0.0140$ ), as were the burials of middle-aged adults ( $P= 0.0440$ ), though no significance was suggested for older adults. The burials may represent those of a particular status (see Chapter Four) such as an important family, with both the burials of children and adults continuing beyond the founding of the church and any associated burials. Despite the small number of sexed burials ( $n= 23$ ; Table A60), differentiation is apparent. The high proportion of middle aged adults of both sexes (I) and male middle aged or older adults (I/J and J) suggests that burial for adults favoured individuals of these ages and particularly men, who may have been patriarchs of kin groups.

Under fifty burials were observed within the south zone ( $n= 49$ ; Table A56). The few juveniles may suggest that it was primarily an area for adult burial and that there was something



exceptional or unusual about these juveniles; analysis of the low proportion of juvenile burials supported this interpretation ( $P = <0.0001$ ). Less variation is apparent for sexed burials ( $n = 24$  burials; Table A61). Few burials of middle-aged males (I) were recorded, which may not be surprising given that they are represented in greater numbers elsewhere. The relatively high number of burials of older adult males (J) may suggest, as in for the south-east zone, that the burials of males of status were occurring south of the church.

West of the church was the second greatest proportion of burials ( $n = 135$ ; Table A57). Burial for juveniles in this zone became more likely as age at death increased, supported statistically by the low number of infant and young child burials (around 5% of infants aged 0-1 year (B) and around 13% of juveniles aged 1 year, 1 day-7 years (C and D);  $P = 0.0005$  and  $P = 0.0283$  respectively), compared to a quarter of children aged 8-12 years and half of adolescents. Though burial may have become increasingly likely in this zone for older children and juveniles, that it was still less common than burial elsewhere was supported statistically ( $P = 0.0291$ ). The results may also suggest that as adults grew older, they were more likely to be buried the west of the church. Of the eighty-seven sexed burials, thirty-one were female and fifty-six male (Table A62). The higher number of male burials produced a very significant result ( $P = 0.0010$ ). Women were generally more likely to be buried west of the church as their age at death increased. For men, the opposite is observed; over a third of young and young/middle-aged males (H and H/I) were buried west of the church, along with almost half of middle/older males (I/J) and only a quarter of older adult male burials (J).

### ***Church burial***

Burial in the church was reserved for adults, and in particular, adult males including several identified as priests, with the remainder likely to have been wealthy individuals such as patrons.

The number of burials was not great; one had no osteological information and had probably been exhumed (Mays et al, 2007, 229-30). Ten of the fourteen medieval church burials in the church had been exhumed and as a result did not provide any osteological information because they had been moved, leaving empty graves. Three burials were also identified in a side chapel. Two further adult males were identified as priests; one unaged and another aged 35-45 years buried with a chalice and a wooden object identified as a pilgrim staff or tree root. Also within the church was the burial of an unaged adult woman, the only female burial recorded. Twelve of the fourteen burials dated to the high-later medieval period, with the latest having a C<sup>14</sup> date of 1420-1640AD (95% probability; (Mays et al., 2007, 230), suggested it was a rare burial location before the 13<sup>th</sup> century.

### ***Eaves-drip burial***

The data available did not allow for investigation of eaves-drip practice, as accurate burial locations could not be established. The report notes concentrations of infant burials within 30ft of the north church wall (Mays, 2007a, 87, Table 17) and it is possible to infer from the unphased nature of many of the burials that it may have been an enduring practice.

### ***Clustering***

As previously mentioned (see Chapter Four), an area north-east of the church was nicknamed the children's cemetery due to the high proportion of juvenile burials (Figure 24), and a cluster of burials located to the south-east of the church walls has been suggested as representing a burial of a male founder and his family. Clustering was also suggested for a group of over

fifteen 11<sup>th</sup> century burials south of the church, and it is likely that further grouping of related burials occurred.



Figure 24: Part of the children's graveyard (Original site photograph, taken facing south; Mays et al., 2007, Plate 95)

### ***Burial furniture and zoning***

The majority of furniture types, both in number and proportion (Tables A65 and A66), were observed in the north zone, where almost a fifth of burials had furniture, the highest of the zones with the exception of privileged burial areas south-east of and within the church. This included almost all the examples of ear muffs and the greater number of coffins, markers, objects, organic remains and stones.

One interpretation for the disparity of furniture between the two primary areas of medieval burial north and west of the church was that those west of the church were either poorer burials or later in date than those to the north (Heighway, 2007, 217-8). This is partly based on the

assumption that burials with furniture in the north zone displayed an expensive investment of resources. It is also possible that the high incidence of stone within the graves, rather than wood, may indicate the sourcing of free material from the local environment. Though the majority of burials with stone furniture were dated to earlier phases, the interpretation that these are likely to be burials of higher status than contemporaneous ones to the west (as burial was occurring in both areas from the 10<sup>th</sup> century) may be too simplistic. A considerable proportion of the burials observed with furniture in the northern zone were infants and children, which may suggest those aged 12 years or younger were being differentiated in burial by location as well as furniture to a greater extent than older individuals. Though it may be that burial became increasingly common west of the church during the later medieval period, going some way to explain why so few burials were observed with furniture in this zone, high proportions of furniture north of the church suggest that as well as greater variety within graves of pre-mid-14<sup>th</sup> century date, greater investment of resources, perhaps gathered nearby, is apparent for graves of infants and children than adults.

### ***Multiple burial and zoning***

Investigation of the locations of multiple burials produced further evidence for clustering of related individuals. Two such burials were located in the south-east zone among the founder's group. Both contained male individuals, one an adult, the other a child, alongside a younger child or infant. The remainder of the multiple burials, containing infants or young children on occasion alongside a (generally female) adult, were located in the north zone.

## **St Peter's, Barton-upon-Humber**

Six medieval burials were not on the published plans; a 1 year old infant dated 950-1150, a young adult male and an unsexed adult, dated 950-1300, a young unsexed adult dated 950-1500, and a 9 year old child and a 1 year old infant respectively dated 1300-1500. Two of these were reburials; the infant reburied in a ditch between 950-1150, and the young adult male. Representing only 0.3% of the burial assemblage, their exclusion is unlikely to be an issue. The number and percentage of burials within each zone are included (Table A75) and plans illustrate the division of the churchyard (Figure 25).

### ***The northern churchyard***

Over a thousand burials (1006) were recovered from the northern half of the churchyard, representing 49.9% of the burial population. It should be remembered that this is unlikely to be an accurate representation of the original northern burial population, as the successive expansion and rebuilding of St Peter's will have disturbed existing burials, as well as restricting the available space for new ones. However, as this is a large and well-phased cemetery it provides ones of the best samples for analysis.

For ease of analysis and comparison with calculated percentages, the proportion of burials in the northern half was rounded to 50.0%. From the proportions of each age band observed in the north cemetery (Table A76) there appears to be little variation indicative of bias, with ranges of 40.0-54.7% generally observed. That 100% of A-aged and K-aged juveniles were recovered north of the church is misleading as only one individual apiece were attributed to those age ranges. The low proportion of older adults (J; 33.3%) suggests they were more likely

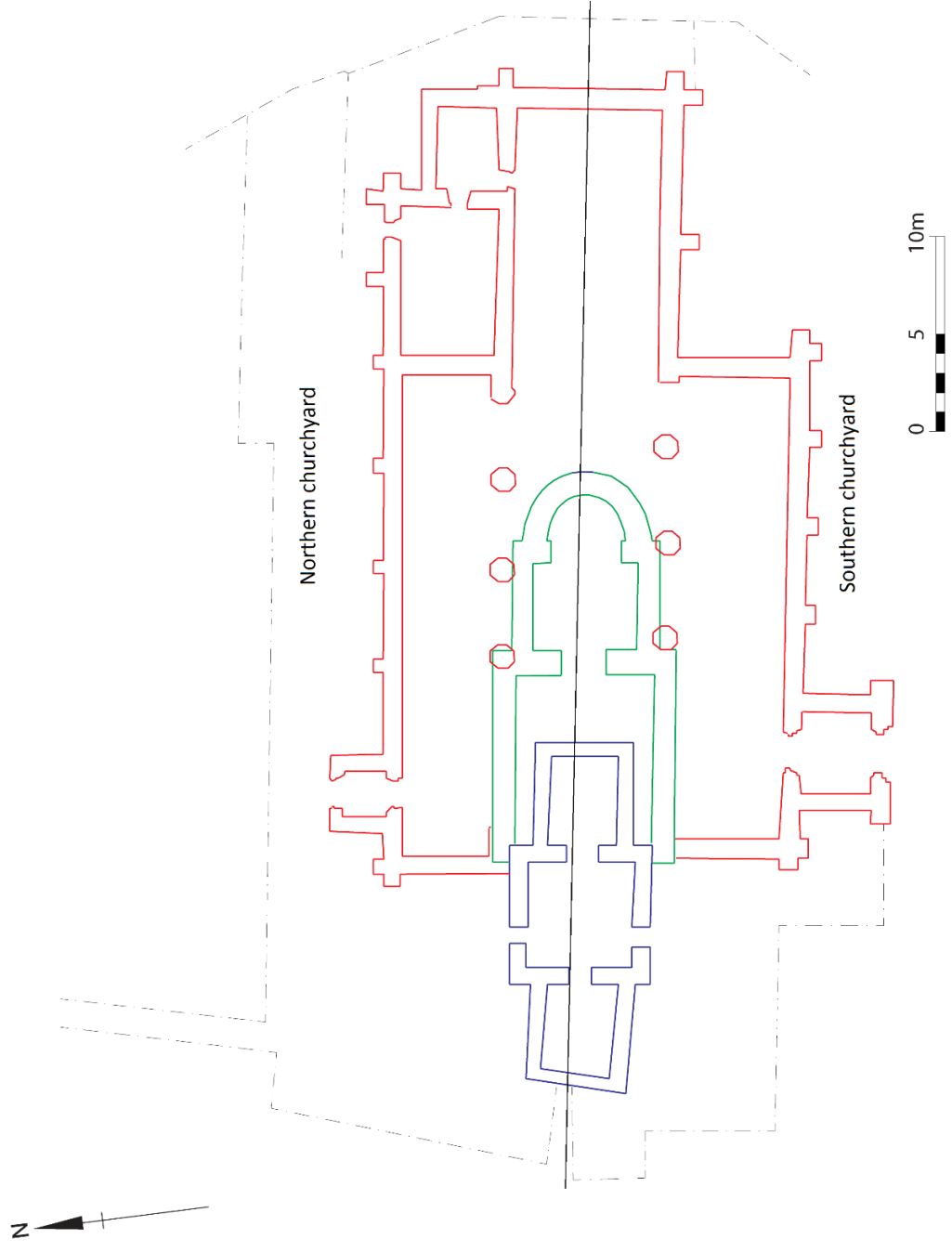


Figure 25: Division of the northern and southern churchyard of St Peter's, Barton-upon-Humber (after Simon Hayfield; Rodwell, 2007, fig. 30)

to be buried south of the church. Analyse of proportions by sex for adults suggests this bias may have been focused on older adult males (Table A77).

Statistical analysis did not suggest any bias in the burial of specific age categories of person in the north churchyard, nor for adults by age and sex. It is therefore possible to conclude that there is no evidence to support this oft-repeated claim for St Peter's, Barton-upon-Humber.

### *Zoning*

The churchyard at St Peter's was divided into six zones (NW, N, NE, SE, S and SW; Figure 26). Burial within the seventh zone, the church, is discussed separately.

Beginning with the north-west zone, 495 burials, or 24.6% of the burial population, were recovered from this area. Using this proportion and Table A84, underrepresentation of infants and young children (A-C) may be inferred. Little variation from the benchmark of 24.6% can be suggested for adults until we get to middle-aged or older adults (IJ and J), who again occur in lesser proportions than might be expected. Looking at sex (Table A85), bias against the burial of older adolescent males (G), middle-aged or older adult women (IJ) and older adult males (J) may be suggested by lower proportions. However, that there was only one example of each of the male burials makes purposeful bias or differentiation seems unlikely as few burials in total were aged to these categories (13 and 9 correspondingly).

Use of Fisher's exact test supported some of the above conclusions while also suggesting new ones. The underrepresentation of infants aged 0-1 year (B) was supported by a very statistically significant result ( $P= 0.0074$ ), as was the fewer than expected burials of middle-aged to older adults (IJ;  $P= 0.0122$ ). Analysis of sex plus age produced results that suggested young adult women (H) and middle-aged and older adult women were underrepresented ( $P= 0.0379$  and  $P=$

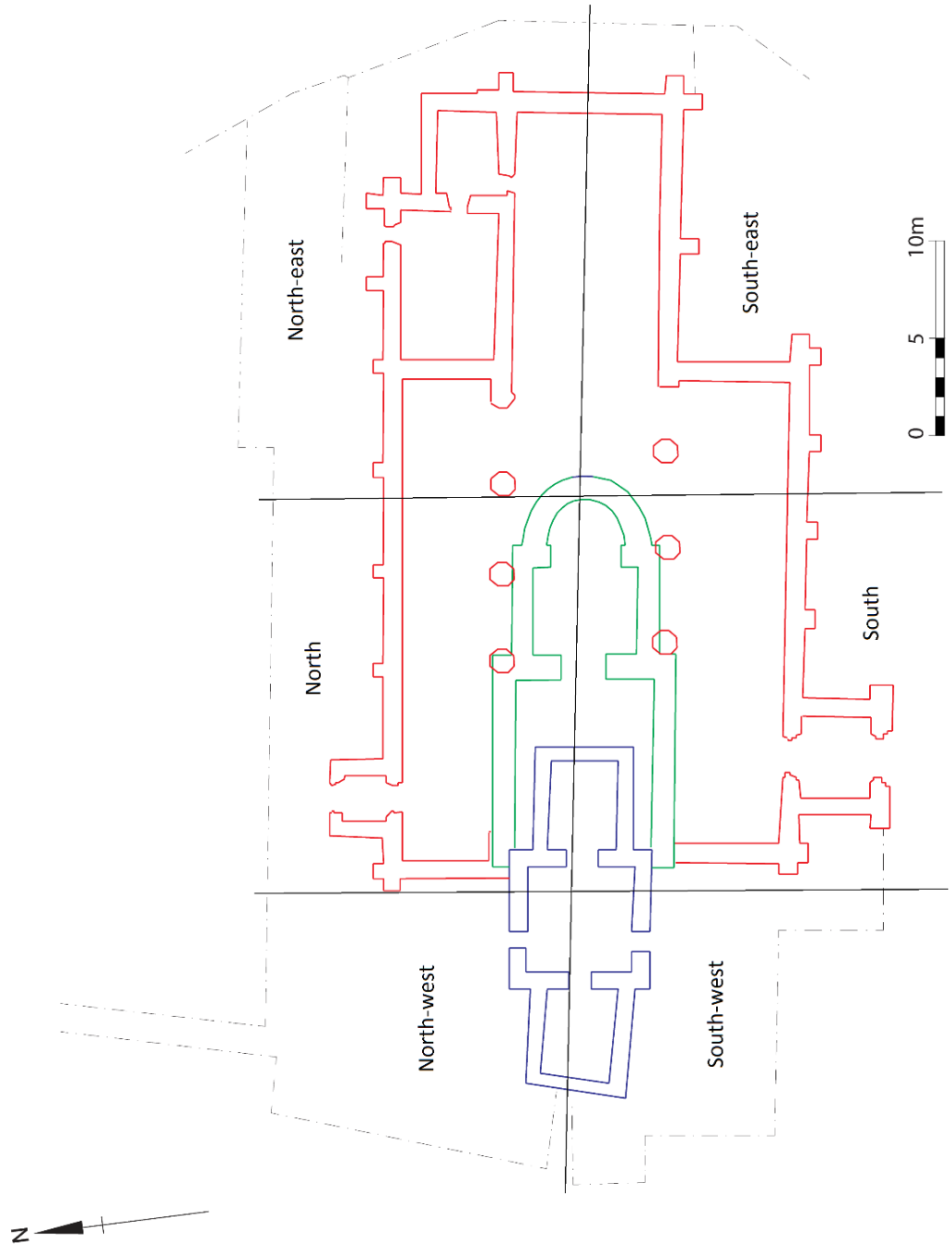


Figure 26: Zoning of the churchyard of St Peter's, Barton-upon-Humber (after Simon Hayfield; Rodwell, 2007, fig. 30)



0.0024 respectively). This may suggest it was less typical for young infants, young adult women and middle-aged to older adult women to be buried within the north-western area.

Moving onto the north zone, 279 burials originated from this area, comprising 13.8% of the total burial group. Comparison of this proportion (Table A86) implies fewer than expected burials of middle-aged adults (I) and an overrepresentation of young infants (B), older adolescents (G) and older adults (J). Consideration of sex alongside age (Table A87) suggests bias may be present for the burials of older adolescent (G) and older adult (J) males.

Statistical examination confirmed that the burials of young infants (B) were overrepresented via the significant result of  $P= 0.0316$ . No other ages produced significant results to support bias, neither did the added variable of sex alter the results for women aged 16 years or older; significance was only verified statistically for older adolescent males (G;  $P= 0.0245$ ). This last result is difficult to interpret, given that no further patterns appear clearly for males of older age ranges; it may be a quirk of the data, unless differentiation of individuals of this age and sex is observed elsewhere or in other ways. For young infants, bias or preference for burying them north of the church can be supported.

A little over ten percent (11.5%) of the burial population were excavated from the north-east zone, totalling 232 individuals. It is apparent that the majority deviate considerably from the 11.5% value (Table A88). A bias for the burying of those aged 0-4 (BCD) and adults (H, I and II) can be suggested with a bias against, or little differentiation apparent for, the remainder of age groups. Looking at sex (Table A89), the calculated percentages may imply a bias for young and middle-aged adult females (H and II) and middle-aged or older males (I and II).

The results of the statistical analysis were somewhat surprising as few of the percentages produced significant results despite the apparent variation between them. None of the proportions of juvenile burials were significant, so the overrepresentation of those of BCD age

was not supported. Nor was a significant result produced when the three burials attributed to BCD were combined with those of comparable age bands A, B, C and D ( $P= 0.9319$ ). The only ages indicated by their proportions as being overrepresented that were supported via Fisher's exact test were H and IJ, which generated very significant results of  $P= 0.0058$  and  $P= 0.0065$  respectively. Further bias was apparent for these ages by sex, with the bias directed to young adult females (H;  $P= 0.0032$ ) and middle-aged or older adult males (IJ;  $P= 0.0064$ ). The somewhat unusual demography of the individuals buried within the north-east zone requires further discussion; perhaps there was differentiation by age occurring that cannot be demonstrated statistically, or that the variation was the result of other factors.

Few burials were located within the south-east zone (121, or 6.0% of all recovered); an area in which burial became increasingly uncommon and where excavation was limited (see Chapter Four). The proportions of individuals by age (Table A90) suggests little differentiation, though perhaps an overrepresentation of those aged 36-50 years (I) or older (J). This also appears when the adult burials are divided by sex (Table A91); for both females (IJ) and males (I and J) aged 36 years or older at time of death.

As a result of the smaller number of burials, there were few results of significance. No significant values were achieved for individual age bands, though the value for IJ-aged burials (36 years and older) was almost significant ( $P= 0.0560$ ). When sex was analysed, this translated to a very significant result for females of IJ ( $P= 0.0029$ ). No further significant values were produced, suggesting either the numbers of burials from this zone were too small to produce significant results or that little or no differentiation by age was occurring.

Over three hundred (308) burials were excavated from the south zone, representing 15.3% of burials (Table A92). The burials of infants and young children (B, BCD and C) and older adults (J) may occur in greater frequency than expected. In contrast, burials of adolescents (F and G),

middle-aged adults (I) may be underrepresented, with little variation observable for other ages. This underrepresentation appears focused on older adolescent (G) and middle-aged males (I), while overrepresentation of older adults (J) seems biased towards males. Less or little variation is perceptible for women (Table A93).

Fisher's exact test did not produce any significant results that support the above observations. That the high proportions of the burials of infants and young children were not supported statistically is surprising. One result was close to significant, and that was the proportion of female burials recovered from the south zone which were middle-aged or older (IJ;  $P= 0.0581$ ). Greater success is anticipated for the examination of individual phases under the consideration of change over time.

Almost a quarter (479) of the burial population originated from the south-west zone; 23.8% (Table A94). Little variation by age was evident for the youngest individuals, though a general pattern appears that the likelihood of a juvenile being buried in this area may increase with age, especially those out of infancy (D, E, F and G). For adults, some age groups appear underrepresented, such as young adults (H) and middle-aged and older adults (IJ), though the latter may be partly explained by an overrepresentation of older adults (J). Adolescents (G) of both sexes also appear to feature disproportionately highly in this burial area (Table A95), while young adults (H) and middle-aged to older adults (IJ) seem underrepresented.

Testing produced some results which verified these observations. The underrepresentation of young (H) and middle-aged and older adult (IJ) was corroborated by significant and very significant values ( $P= 0.0190$  and  $P= 0.0090$  respectively). That the burials of young adolescents (F) were overrepresented was also supported by a result of  $P= 0.0025$ . Consideration of sex only demonstrated bias in favour of burying women aged 36 years and

older (I and IJ) in the south-east zone, with significant values of  $P= 0.0264$  and  $P= 0.0473$  generated. This may suggest a preference for the burying of older women in this area.

### ***Church burial***

Less than five percent of the burial assemblage (95 burials; 4.7%) were excavated from the church. Analysis using Tables A132 and A133 and Fisher's exact test was used to examine bias by age. Infants and children aged 12 years or younger (with the exception of a single child aged 5-15 years; DEF, see below) appear underrepresented. This changed for those aged 13 years or older, with adolescent and adult proportions closer to expected values; only adults aged between 18-50 years (H and I) may be overrepresented. Examination of sex also suggested bias in the numbers of adult men and women, to the greatest extent with middle-aged adult females (I; 25.0% of all observed).

Statistical analysis only identified significant bias for the single example of a 5-15 year old juvenile, buried within the church ( $P= 0.0471$ ), though the number of infants aged 0-1 year (B) was almost significant ( $P= 0.0537$ ). None of the sexed adolescent or adult ages were significant, probably because they did not deviate from expected norms or occurred in too few examples. From these results it can be inferred that it was unusual for children, and particularly infants, to be buried in the church; for those who died at an older age, there is not sufficient variation in their frequency to suggest age was a factor.

### ***Eaves-drip burial***

A greater number of burials were recovered within the eaves-drip margin of one metre or less from the church walls than within the church itself. One hundred and fifty-seven, or 7.8%, were

within this locale, and from Table A138, it is immediately clear that bias by age is occurring. Infants aged 3 years or younger (B; 20.9% and C; 15.5% respectively) comprised a far greater proportion of eaves-drip burials than would be expected if there was no bias by age. This bias becomes less explicit for children, adolescents and adults which occur in frequencies that do not suggest purposeful differentiation.

Testing produced results which verified the bias suggested for infants; for those aged 0-1 year (B) the value was extremely significant ( $P = <0.0001$ ) and for those aged 1 year, 1 day-3 years (C) of lesser significance ( $P = 0.0219$ ). The only other single age category for which their proportion within the eaves-drip band was significant was young adults (H), with the small number interpreted as indicating that they were less likely to be buried next to the church. No further bias by sex or age was supported, and therefore, as a rite occurring throughout the medieval period, the practice favoured the youngest, particularly those within their first year of life.

### ***Burial furniture and zoning***

It is problematic to focus analysis on specific furniture types for the whole burial assemblage, as it is difficult to ignore the fact that it has been shown that certain furniture types were used within specific chronological periods and not throughout the medieval period (see above). As a result, this section focuses purely on the number and proportions of furniture by location, taking the use of furniture irrespective of type as indicative of differentiation by cemetery geography. Specific furniture categories are discussed under the phased analysis, where more appropriate focus can be directed to spatial variations in furniture use.

Investigation of furniture variation by zone focused firstly on the number of examples of furniture type by area (Table A142) and secondly on the proportion of furniture type by area (Table A143). The greatest number of graves with furniture were in the south-west zone (190), followed by the north-west (136), south (131) and north-east areas (130), then the north (109) and south-east (77) zones, finishing with the church (34). The greatest variation by type was recorded for the north-east zone (9), followed by the south (8), north-west, north, south-east and south-west zones (7), with the least variation in the church (4). The proportions demonstrated that the highest proportion of graves with furniture were located in the south-west zone, where almost a quarter of burials (23.5%) contained apparatus. Next most frequent was furniture in the north-west (17.0%), south (16.2%) and north-east zones (16.1%), with the lowest proportions recovered from the north (13.5%) and south-east (9.5%) zones and the church (4.2%); a similar interpretation to that suggested by the numbers.

Statistical analysis of number of individuals buried with or without furniture in each zone demonstrated the extent to which bias may have been occurring. An extremely significant result ( $P = <0.0001$ ) was achieved for the north-west zone, where 17.0% of burials had furniture; another was produced for the north-east zone (16.1% had furniture;  $P = 0.0131$ ). These results go some way to supporting the interpretation that bias in the use of furniture could occur by burial location. The third and last result, another extremely significant value ( $P = 0.0003$ ), was generated for the south-east zone, where 9.5% of burials had furniture. This is interpreted as demonstrating how infrequent the use of furniture was in burials in the south zone. However, the picture is somewhat mixed and unconvincing; it is anticipated that investigation by phase (below) will be more successful and indicative of bias.

### ***Multiple burial and zoning***

Of the eight multiple burials, one each was located in the north-west, south-east and south zones respectively and two in each of the north, north-east and church zones (Table A150). Only two areas, those south-east and south of the church, did not produce multiple burials. Due to the small number of these burials, representing only 1.0% of the burial population, it is difficult to identify meaning in location for the majority. It is possible to infer more for three of the burials. The first is the triple burial excavated from within the eaves-drip margin on the north side of the church; both of these zones have been shown to have had a bias for young infants, and to a lesser extent, young adults, and the location of the triple burial may possess multiple symbolic messages linked to location, age, multiple burial and manner of death. The remaining two are those from the church. It may be that these burials represent related individuals of elevated social status, indicated by their shared burial and their presence in a traditionally high-status location. For the remaining multiple burials, see the phased analysis, below.

### **St Andrew, Fishergate, York**

It was not possible to investigate burial by location for the first phase. As the church was demolished in the second half of the period, it cannot be established whether some of the burials were interred before or after the demolition and zoning referencing the church's location cannot be investigated. Due to this, there is no 'all phases' analysis for St Andrew, Fishergate for some topics and the focus is on differences between church and churchyard burial; further spatial analysis is presented within the phased analysis, below.

### ***Church burial***

Over a third (34.1%) of burials were observed within the church or priory buildings. This high percentage reflects the nature of the site as a focus for religious devotion beyond the typical congregation. Based on the proportions of aged individuals buried inside a church or priory building (Table A158), infants and children appear underrepresented; only are those of E, F and G (ages 8-17 years) recorded in proportions which may suggest positive bias towards their inclusion. For adults, there appears to be little variation, though those of middle-age or older (I and J) may have been overrepresented. For sexed adults (Table A159), young and older females may be overrepresented (43.8% and 70.0% respectively), with less bias suggestable for other ages or males.

Analysis via Fisher's exact test did not produce any statistically significant results, either for individual ages or those considered alongside sex. It may be that the number buried within a church or building, specifically for infants, were too few to generate significant values. Their presence within these holy structures will have possessed meaning, and this is discussed in a later section.

### ***Burial furniture and zoning***

Table A164 shows that more graves with furniture were located within the church, though a greater number of furniture types were observed in the cemetery; seven types compared to six. Some types were only recorded in the cemetery, such as organic remains and shaped graves, or ear-muffs in the church. Variation in types by location can be suggested for coffins, which were more numerous in the cemetery, and for cists/stone coffins, observed in greater frequency within the church and buildings. Examination of the proportions of furniture in these two



locations (Table A165) demonstrates the same bias. The small number of examples and division of the dataset into two subsections did not permit statistical analysis. Despite this, preference in furniture types by location can be suggested for coffins and cists/stone coffins.

### ***Multiple burial and zoning***

Every example of multiple burial was located within the church, priory church, or associated buildings. Explanations for the practice at St Andrew, Fishergate may therefore be linked to expressions of family identity and relationships that characterise the burials from these shared or similar areas.

### **St Michael's, Leicester**

The number of burials within each zone (Four zones on Figure 27 with north-east on Figure 28) are presented (Table A170), and burials were assigned to one of seven zones, including the church, based on the excavation and project methodologies.

### ***The northern churchyard***

High levels of truncation across the churchyard did not allow for this question to be addressed beyond an appreciation of burial densities. The majority of burials were not located in the northern half of the churchyard; instead, they occurred south-west of the church.

## *Zoning*

Fifteen percent (15.4%) of the burial population, totalling 42 burials, was recovered from the north zone, a lower fraction than expected resulting from post-medieval disturbance. It is difficult to interpret whether bias by age for burial location was occurring north of the church. Adolescents aged 13-20 years may be overrepresented, as well as young to middle-aged men and women (Table A171 and A172), but perhaps unsurprisingly, none of these proportions were statistically significant.



Figure 27: Division of the churchyard of St Michael's, Leicester, 1250-1400 (after Higgins et al, 2009, fig. 116)

Lower numbers of burials originated from the north-east and south zones; 16 and 15 apiece, representing 5.9% and 5.5% of the burial assemblage (Tables A173-6). Little can be said about choice of burial location by age, as such a small number of burials is unlikely to be considered representative. This was confirmed by Fisher's exact test, which only generated one statistically significant result; the proportion of individuals aged FGHI, or 13-35 years, buried in the south zone (P= 0.0005). The small number of burials (4) attributed to this wide range means it is improbable to signify true bias.

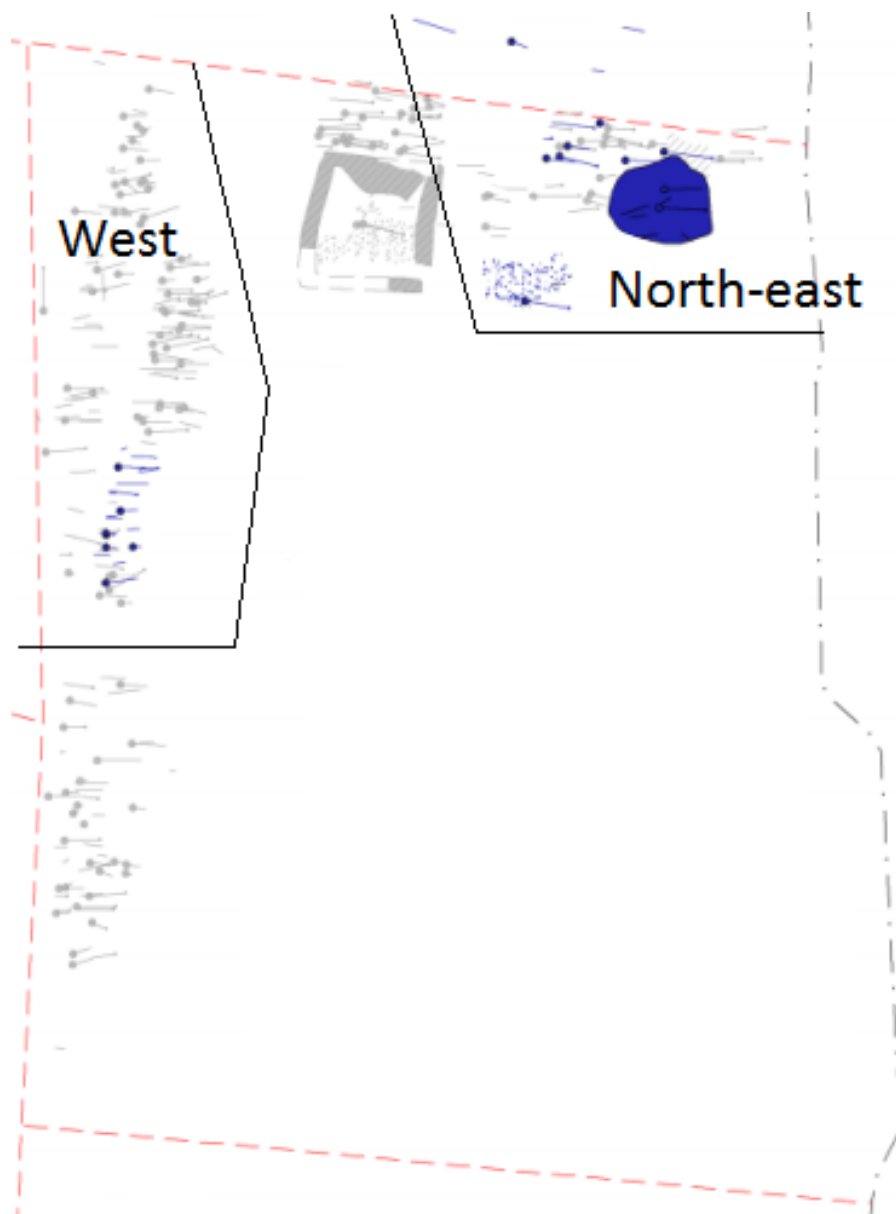


Figure 28: Division of the churchyard of St Michael's, Leicester, 1400-1500 (after Higgins et al, 2009, fig. 138)

Almost a quarter (23.5%, or 64 burials) of the burial population was excavated from the south-west zone (Table A177). It is possible to infer that infants aged 0-3 years (BC), children (DE), adolescents bridging adulthood (FGH) and adults (H, IJ and J) may have been buried in this area disproportionately; bias is only not suggested for adolescents (FG) and young to middle-aged adults (HI). Consideration of sex (Table A178) suggests this may extend to young adult males in particular, with close to half (42.8%) of such individuals recovered from the south-west area.

Fisher's exact test produced a significant result for the low number (4/41) of young to middle-aged adults buried south-west of the church ( $P= 0.0269$ ). This may suggest bias and it should be pointed out these individuals overlap with ages H and I; when these were combined (31 of 165 individuals, or 18.8%) a significant result was still produced ( $P= 0.0280$ ), suggesting underrepresentation of those aged 21-50 years. For adults, the added variable of sex (Table X) did not produce any significant results, signifying that sex was unlikely to have been a strong factor for burial in this location.

The greater number of burials were from the west zone (117; 43.0%). It is apparent (Table A179) that infants and young children (BC and DE) may occur in lower than expected frequency, as may young and older adults (H and J). Little variation is apparent for other ages, though there may be a slight bias in favour of middle-aged and older adults (HI, I and IJ), though there should be caution as these ranges overlap those of H and J. For sex (Table A180), bias is perceptible for women of all age ranges, but specifically young to middle-aged adults. For men, bias may be focused on young to middle-aged males alone.

Statistical examination did not produce significant results for any of the individual age bands, which was disappointing given the apparent variation perceived. That women of HI were overrepresented was supported by a very statistically significant result ( $P= 0.0026$ ); however,

a significant result was not produced when the female burials of HI were combined with those of H and I. Despite this, it may be that bias in burial location for young to middle-aged women did occur, as almost half (48.6%) of this age of individuals were buried west of the church.

### ***Church burial***

Few individuals (17; 6.3%) were recovered from within the footprint of the church (Tables A195 and A196). Due to this small number it is not possible to identify bias, and none of the proportions, either by age or age and sex, were statistically significant. What can be said is that adults were more likely to be buried inside the church than children, and that this favoured young to middle-aged adults.

### ***Eaves-drip burial***

Due to truncation immediately south and west of the church, and partly to the north, it was not possible to investigate eaves-drip burial at St Michael's. At least six juvenile burials were located within a metre of the north church walls, among others, suggesting the practice may have taken place.

### ***Burial furniture and zoning***

That burial furniture was relatively infrequent at St Michael's, Leicester, has already been demonstrated. The majority of examples of furniture were in the west zone, where the greater variety (all six observed types) were also identified (Table 201). Analysis (Table A202) shows

that a higher percentage of burials in the north zone had furniture than the west, though this was restricted to only one furniture type; objects.

None of these proportions were statistically significant, though the result for the west zone was close ( $P= 0.0775$ ). Though patterns can be observed, such as greater variation in the west zone, perhaps showing a stronger desire for differentiation in burial in this area, the patterns were not explicit enough to be supported statistically.

### ***Multiple burial and zoning***

Both examples of multiple burial were within the church, and as such location cannot be discussed beyond that the rite was perhaps reserved for influential patrons.

### **St Peter's, Leicester**

Burials within the churchyard were divided into six zones with the church the seventh zone; one burial was also noted outside the limits of the churchyard (Figures 29 and 30; Table A208). The spatial analysis also used ARCGIS and QGIS.

### ***The northern churchyard***

Just under two-thirds ( $n= 801/1261$ ; 63.5%) of excavated burials originated from the northern half (Figure 29). Burial is generally believed to be denser, and therefore favoured, south of the church and the presence of 33.3% of burials in the south-east zone ( $n= 439$ ), far smaller in space than the northern cemetery, supports this.



Figure 29: Division of the northern and southern churchyard of St Peter's, Leicester and the position of burial IN3240 outside consecrated ground

A lack of differentiation is apparent for the majority of age bands (Table A209). Focusing on burials with defined age ranges, differentiation can only be suggested for middle-aged and older adults (I/J; 36 years and older), who may be slightly underrepresented, and older adults (J; over 50 years of age), who may be slightly overrepresented. Due to the overlap between these age ranges, these percentages may not represent differentiation, supported by a lack of statistical significance both when the age bands were analysed separately and together. Investigation of sexed burials (Table A210), did not suggest statistical significance for proportions of female or male-sexed burials in the northern churchyard. Focusing on age ranges

H, I and J, bias was only suggested for older adult male burials, with 87.5% of all individuals of this age observed in the northern churchyard, though not supported statistically.

### ***Zoning***

The densest areas of burial were the south-east, north-east and north-west zones (Figure 30). The area to the north, though affected by post-medieval disturbance, appears to have been less favoured. Limited excavation to the south-west and south of the church does not allow interpretation of these areas.

Four hundred and six individuals were observed in the north-west zone (Table A216). No bias was suggested for juvenile burials, though the overrepresentation of young adults in this area (42.4%) was a statistically significant observation ( $P= 0.0186$ ). Analysis of sexed burials ( $n= 132$ ; Table A222) demonstrated neither the proportion of female or male burials was significant (Table A164). The high proportion of young adult women (H) was statistically significant ( $P= 0.0191$ ), whereas for middle-aged (I) and older adult males (J) the proportions were not quite significant ( $P= 0.0759$  and  $P= 0.0639$  respectively). This may suggest a bias of burying young adult women, and middle-aged and older adult men, in the north-west zone.

In the north zone ( $n= 186$  burials), a slight underrepresentation of infant (B/C) and child (D/E) burials may be observed that is not evident for adolescent burials (Table A217), though no statistical significance was achieved when juvenile age bands were analysed together or separately. The proportion of adult burials was also not significant, nor was the slight underrepresentation of adults aged 36 years or older (I/J and J). Analysis of differentiation by sex ( $n= 62$  sexed burials; Table A223) showed the observation of one burial of a young adult female achieved a significant result ( $P= 0.0148$ ), though this may not be indicative of true



exclusion as eleven burials were aged in the broader age category of young to middle-aged female (H/I).

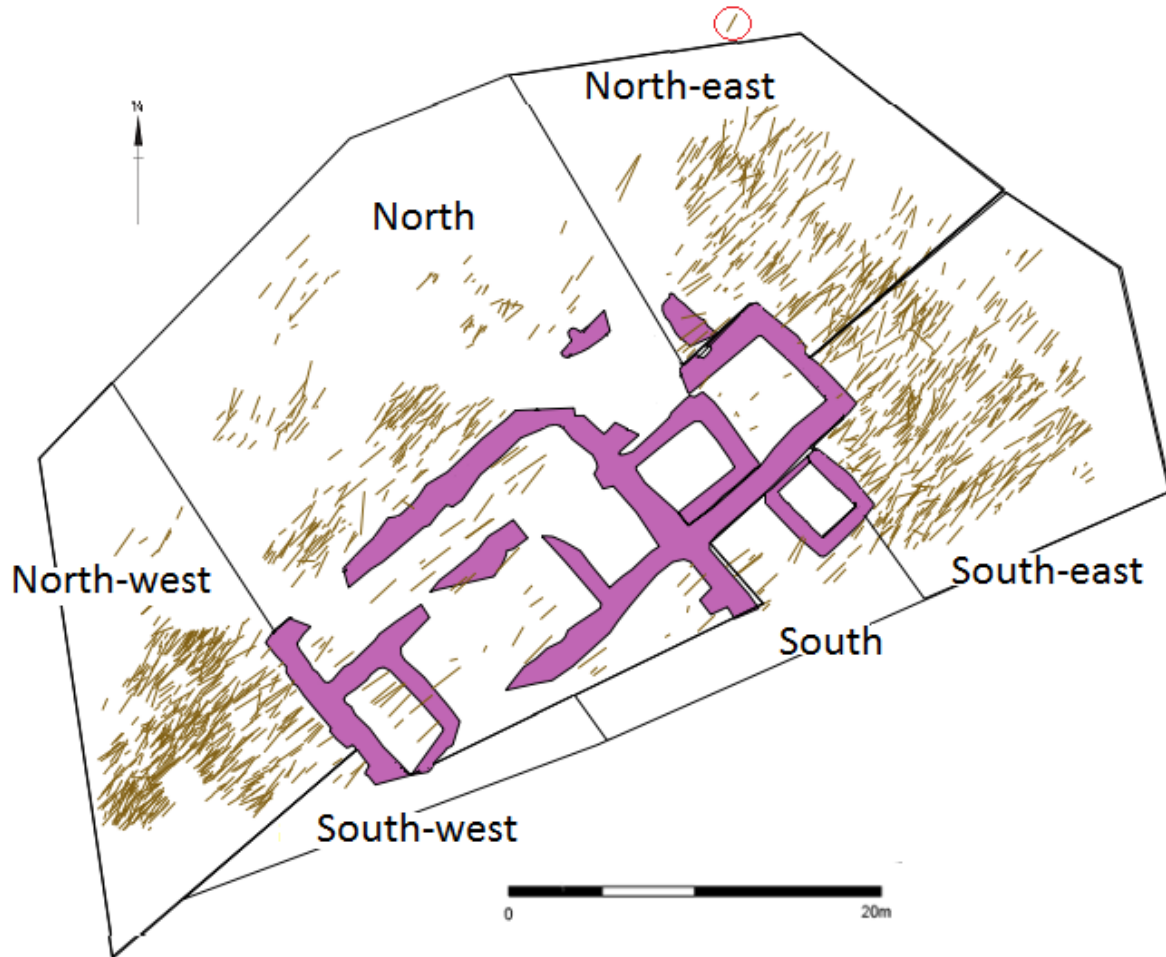


Figure 30: Zoning of the churchyard of St Peter's, Leicester.

For the north-east zone (n= 209 burials), infants appear overrepresented, with approximately 20 % of infant burials in this location (Table A218), a bias not quite supported by Fisher's exact test (P= 0.0961). No variation was identified for other juvenile and adult ages. Seventy-nine burials from the north-east zone were sexed (Table A224). Only overrepresentation of burials of middle-aged males was indicative of bias, supported by a result close to significance (P= 0.0516).

The majority of burials were located within the south-east zone (n= 439; 33.3%). Lack of differentiation is suggested by approximately a third of the burials of the majority of age bands originating from this area (Table A218). Exceptions were infants aged 3 years or younger, whose burials occur in greater proportions, and older adults, who are underrepresented, though neither of these observations was statistically significant. No differentiation was suggested for \*adult individuals of either sex (n= 152; Table A224), both when the age bands were combined and investigated independently.

Few burials were observed in the south zone (n= 17 burials; Table A220). This location close to the church was generally reserved for adults, supported by a very significant result (P= 0.0030). Only two juvenile burials, both 12 years or younger, were noted. Seven burials were sexed; five female and two male (Table A226). Neither of these proportions was indicative of bias supported statistically.

Four burials were within the south-west zone. Two were juveniles aged 12 years or younger, one was an individual aged 13-50 years and the last a middle-aged adult (Table A221). It is therefore not possible to investigate bias by age and as only one was sexed, a middle-aged female (Table A227), it was not possible to investigate bias by sex.

### ***Church burial***

A small proportion of burials (n= 56; 4.2%) were located within the church. Investigation (Table A228) demonstrated a relative absence of juveniles. Statistical analysis of the single infant burial achieved a significant result (P= 0.0105), though no significance was suggested for the proportion of child (D/E) or adolescent (F/G) burials. The seven burials of children aged 12 years or younger was very statistically significant (P= 0.0026), while the nine burials of

juveniles was extremely significant ( $P= 0.0004$ ), demonstrating how unusual it was for juveniles, particularly infants and children, to be buried within the church. The proportion of adult burials was not statistically significant. Analysis of burials of young, middle-aged and older adults also did not produce significant results. It was therefore not exceptional or unusual for adults of any age to be buried in the church, nor did consideration of sex (Table A229) produce statistically significant results when the age bands were investigated separately and together.

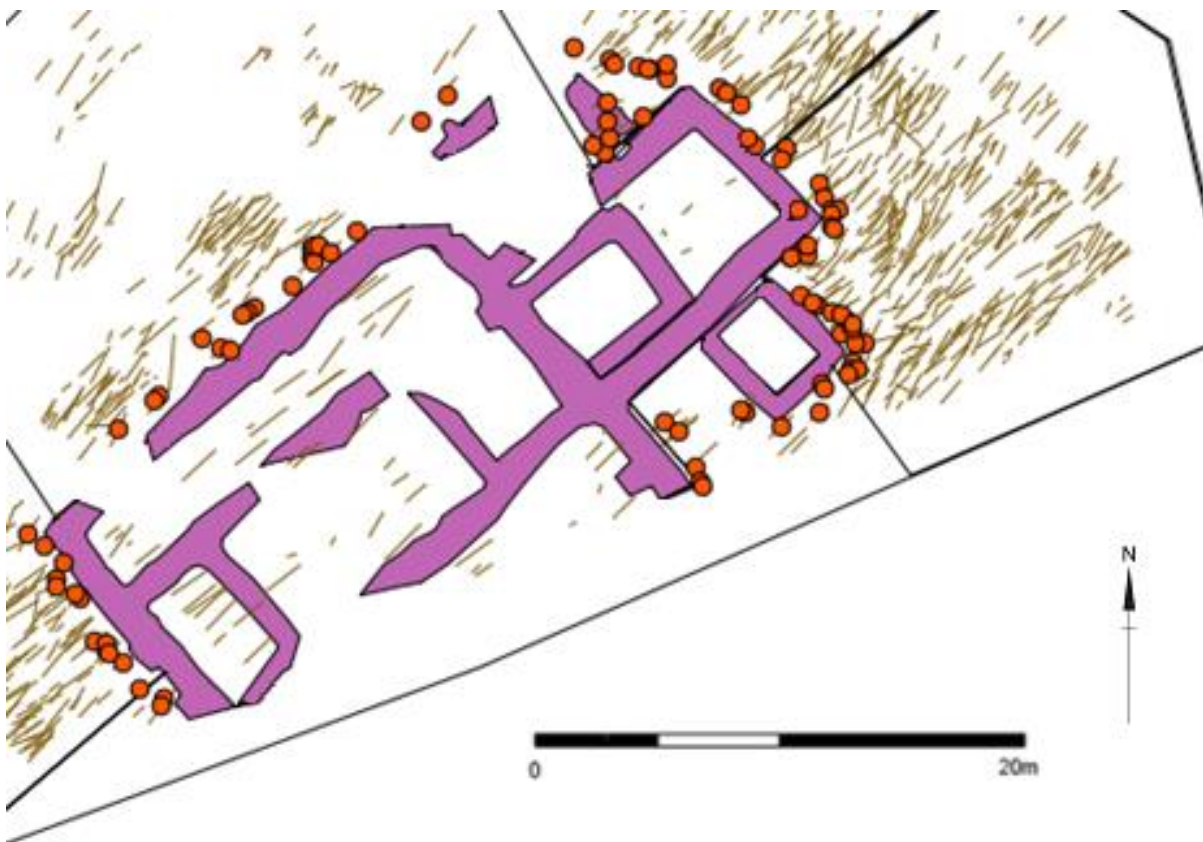


Figure 31: Burials within the eaves-drip margin, St Peter's, Leicester

### *Eaves-drip burial*

Analysis was undertaken in QGIS to establish which burials were located within one metre of the church walls (Figure 31). Eighty-three burials were identified within this margin (Table

A230); eighteen (21.7%) infants aged 3 years or younger (B/C), ten children (D/E; 12.0%) and five adolescents (F/G; 6.0%). A further seven were aged 0-12 years (8.4%) and one was aged 4-20 years (1.2%). Over 40% were aged 12 years or younger (42.2%; n= 35), and almost half (49.4%; n= 41) were juvenile. The high proportion of infants was very statistically significant (P= 0.0083), though the proportions of burials of children and adolescents were not. The observation of thirty-five burials of juveniles aged 12 years or younger in the eaves-drip margin was also statistically significant (P= 0.0189), as was that almost half were juvenile (P= 0.0361). No significance was suggested for the proportion of adult burials (50.6% n= 42) in general or by refined age. The proportion of female-sexed adult burials (n= 9) was significant (P= 0.0442), though the proportion of adult male burials (n= 7) was not. Analysis of sex alongside adult ages did not produce further significant results.

### ***Clustering***

Clustering can be suggested for groups of burials in the church, such as four parallel burials (4-12 year old child, an individual aged 13-50 years and two unaged adults, all unsexed) before the altar, and six burials (two unsexed adolescents, a middle-aged male adult, a middle-aged to older female adult, an older male adult and a burial without osteological information) within a probable private chapel. Further evidence for clustering can be suggested by burials with shared burial furniture.

### ***Burial outside the churchyard***

One burial of an unsexed adult aged 36 years or older, was excavated beyond the limits of the cemetery. Due to this unusual location, the observation was not statistically significant. It is

likely that this adult was excluded from burial in consecrated ground, perhaps as a criminal, someone who died an unnatural death, or as a result of a disability. The observation of a coffin may not suggest the adult was a criminal, and from the location (within the footprint of a demolished stone burial; Gnanaratnam, 2009, 69) it may be possible to interpret that it was desired that the adult be buried within the community with some status, though necessarily outside holy ground.

### ***Burial furniture and zoning***

The largest numbers of graves with furniture were located within the south-eastern (n= 57) and north-western zones (n= 55; Table A231). Proportions of burials by zone with furniture (all types; Table A232), achieved statistically significant results for the north-west zone (P= 0.0380), a very significant result for the south-east zone (P= 0.0098) and extremely significant result for the south (P= 0.0006) and church zones (P= <0.0001), but not for north, north-east or south-west of the church or the burial outside the churchyard. This shows a higher degree of differentiation was occurring in the church and south of the church, followed by the north-west area.

Greater varieties of furniture (six of seven types) were recorded in the north-west and south-east zones. The majority of burials with boards were located in the north-west zone, with three-quarters (n= 44; 75.6%) observed in the northern churchyard. Coffined burial was most common in the church, with the proportion extremely statistically significant (P= <0.0001); use of a coffin for the excluded burial outside the cemetery was also very significant (P= 0.0046). Linings were also most common within church burials, though observed throughout the churchyard, particularly the north-west zone. A bias for burials with linings was supported statistically for the south-east zone where the proportion produced a very significant result (P=

0.0049) and to a greater extent for the south zone and church, where extremely significant results were calculated ( $P = <0.0001$ ).

Little differentiation is observed for the locations of graves containing objects (report), with perhaps a slight bias for the north-east, north-west and church zones, though this was only supported for the church through an extremely significant result ( $P = 0.0007$ ). Analysis of objects (context sheets) demonstrated bias for the church, where the proportion of burials with objects was extremely significant ( $P = <0.0001$ ) and to a lesser extent the north-west zone, which was not quite significant ( $P = 0.0690$ ). The majority of ear muffs and stones were within burials in the south-east and south zones, which with one of the two examples of shaped graves in the south-east zone, may be examples of the favouring through differentiation of burials in the area. This was supported by the proportion of burials with ear muffs and/or with stones in the south zone, which achieved extremely statistically significant results ( $P = 0.0002$  and  $P = <0.0001$ ). Analysis of these two varieties of stone furniture combined supported the bias of this material with burials from the south zone with another extremely significant result ( $P = <0.0001$ ).

### ***Multiple burial and zoning***

Concentration of multiple burials occurred (Table A175). Half of the double burials were located in the north-west zone, though this bias was not quite supported statistically ( $P = 0.0846$ ). The observation that seven of the ten multiple burials originated from the northern half of the churchyard was not statistically significant. Clustering can only be supported for two multiple burials dated 8500-1100 and discussed below. That these individuals are differentiated through multiple burial, shared furniture and location is strongly indicative of shared status and a relationship in life, such as an important family or kin group.

## **Burial location and change over time**

### **St Martin's, Wharram Percy**

Burials were assigned to nine phases, excluding 'unphased', with 1-170 inhumations in each. Seventeen burials were dated 950-1066, 170 950-1348, 76 1066-1348 and 13 1066-1540; fewer than ten burials were dated to each of the other periods (950-1540, 1066-1850, 1348-1540, 1348-1850 and 1540-1850). A far greater proportion of adult burials were phased than juveniles; 66.3% compared to 20.4%. Therefore, it may be somewhat disadvantageous to investigate change over time. Despite this, analysis was carried out in an attempt to identify chronological change, focusing on the three overlapping phases of 950-1066, 950-1348 and 1066-1348.

### ***The northern churchyard***

#### ***950-1066***

Eleven of the 17 burials were located in the northern churchyard, ten of which were aged (Figure 22; Table 49). The sample size was too few to produce patterns or statistical significance, so no testing was undertaken.

#### ***950-1348***

The majority of juvenile burials (n= 21/22) were observed in the northern churchyard (Table A50), including all infants, which was statistically significant (P= 0.0165). Fewer than 20% of adult burials (H – L) were located in the northern half, with a greater proportion female (n= 43 – 78.2%) than male (n= 59 – 66.3%; Table A51). Only the number of male adult burials in the

north churchyard produced a statistically significant result ( $P= 0.0220$ ), perhaps suggesting that it was less typical for men to be buried here than women.

### ***1066-1348***

All but five of the 76 burials originated from the northern half of the cemetery (Table 52). Of the five, one was a young adult female buried south of the church, another a middle-aged to older adult male buried south-east of the church and three burials west of the church, of one middle-aged female and two middle-aged or older males respectively.

Testing of those ages and sexes of adults buried in locations other than the northern cemetery produced a very significant result for middle-aged to older adults (3 of 5;  $P= 0.0014$ ) not being buried in the northern churchyard, but west or south-east of the church instead; that all of these were male was also extremely significant ( $P= 0.0002$ ). This might suggest a privileging or differentiating of the burials of senior males in the early-high medieval community, expressed through separate burial locations.

### ***Zoning***

#### ***950-1066***

Due to the small number of burials (9 in the north, 4 in the north-east/east, 1 in the south and 2 in the south-east) this question was not investigated.



### **950-1348**

A hundred and twelve, or 65.9%, of burials were located in the north zone. Analysis of the ages (Table A65) suggested a high proportion of infants and children, with several ages (A, B, C and E) only buried in this area. Bias was not suggested for adolescents and lower proportions of adults, especially those of young and middle age, and none of these quantities were statistically significant. For sexed adults (Table A66), little patterning seemed apparent. That under half (45.8%) of older adult males (J) were buried in the north zone was statistically significant ( $P= 0.0356$ ), suggesting they were more likely to have been interred elsewhere

For the north/north-east zone, where forty-six or 27.1% of burials originated, there were no burials of those aged 12 years or younger (Table A67). The area appears to have been a focus for adult burial, perhaps biased towards those of younger and older age. The bias appears to delineate further by focusing on males (Table A68). Statistical testing produced a result close to significance ( $P= 0.0581$ ) for the large proportion of young adults, with this becoming more explicit when sex was examined, with the high proportion of young adult males producing a result of greater significance ( $P= 0.0190$ ).

Too few burials were observed from the south-east (3), south (4) and west zones (4) (Tables A69-71). Collectively comprising 6.6% of the 950-1348 burial population, these numbers were considered too small to be analysed.

### **1066-1348**

Of the 76 burials, 70, or 92.1%, were located in the north zone. One burial was observed in each of the north-east/east, south and south-east zone, and three in the west zone. As the

overwhelming number of burials were from the north zone, discussed as part of the northern churchyard question, above, it was decided not to undertake zoning analysis for this phase.

### ***Burial furniture and zoning***

This question was not investigated for phased burials. This was due to either the small number of burials with furniture (ten for 950-1066) or the lack of variety in burial locations (for example, 22 of 25 with furniture dated 950-1348 were from the north zone, as were all those with furniture for 1066-1348). The 'all phases' analysis is considered the better reference.

### ***Multiple burial and zoning***

Five double burials were dated, with four of them in the north churchyard (Tables A72-74). The one example that was not, dated 950-1348, was instead located in the south-east churchyard and part of a group interpreted as related. That the other four dated examples were all within the north churchyard is further indicative of the suitability for burial in this area for the young, particularly infants, and young adult (female) carers.

### ***Observations***

Discussion of changes in burial location over time was limited by the relative lack of dated burials. Despite this, it is possible to make some statements. The bias for burial in the northern churchyard began in the earliest centuries of burial, and, more importantly, this area was a preferred location for the burial of infants from the start. It was not favoured in the early-high medieval period for male burials, especially those of middle-age or older. That such individuals

were more likely to be buried elsewhere suggests other areas of the churchyard had greater significance for adult males within the community.

The investigation of zoning suggested further evidence for division of areas for burial by age and sex. The north zone was favoured for burial of infants and children, with all or the overwhelming majority of such phased burials excavated from this location. This suggests the young were excluded from burial in other areas, such as the north/north-east corner of the churchyard, which was instead characterised by the burials of adults, particularly men.

For multiple burials by zone, a trend appears that focuses the burials of young adult women and young children in shared graves within the north zone. This suggests that not only was this area suitable or appropriate for the burying of infants, but also their carers as well. These burials are representative of the majority of the community (in not being of high or special status) expressing family links and concern through burial. Those observed in areas of lower burial density, such as to the south-east or south of the church, suggest the separation or differentiation of socially-important, related individuals, that irrespective of status, still chose to bury related individuals together, perhaps due to the same concerns.

## **St Peter's, Barton-upon-Humber**

### ***The northern churchyard***

#### ***Pre-1300***

No statistical significance was suggested for juvenile burial in the northern half of the churchyard (Figures 32 and 33), nor when focused on the burials of B-aged infants, D-aged children or older children and adolescents (E, F and G). Neither was significance suggested for



Figure 32: The northern and southern churchyard of St Peter's, Barton-upon-Humber, Phase E; 950-1150 (Simon Hayfield; Rodwell, 2007, fig.30)



Figure 33: The northern and southern churchyard of St Peter's, Barton-upon-Humber, Phases D/E and D; 950-1300 and 1150-1300 (Simon Hayfield; Rodwell, 2007, fig.32)

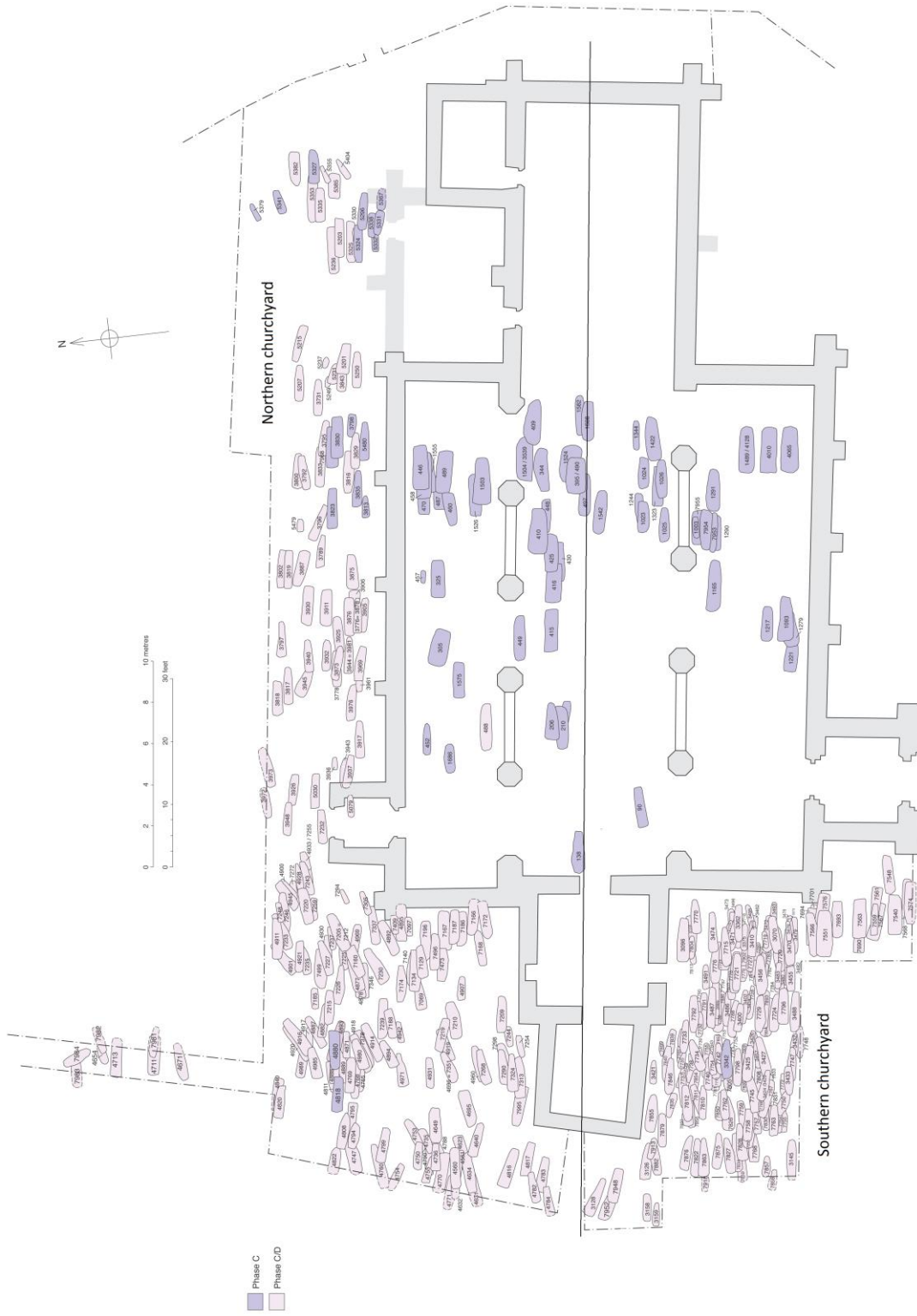


Figure 34: the northern and southern churchyard of St Peter's, Barton-upon-Humber, Phase C/D and C; 1150-1500 and 1300-1500 (Simon Hayfield; Rodwell, 2007, fig.33)

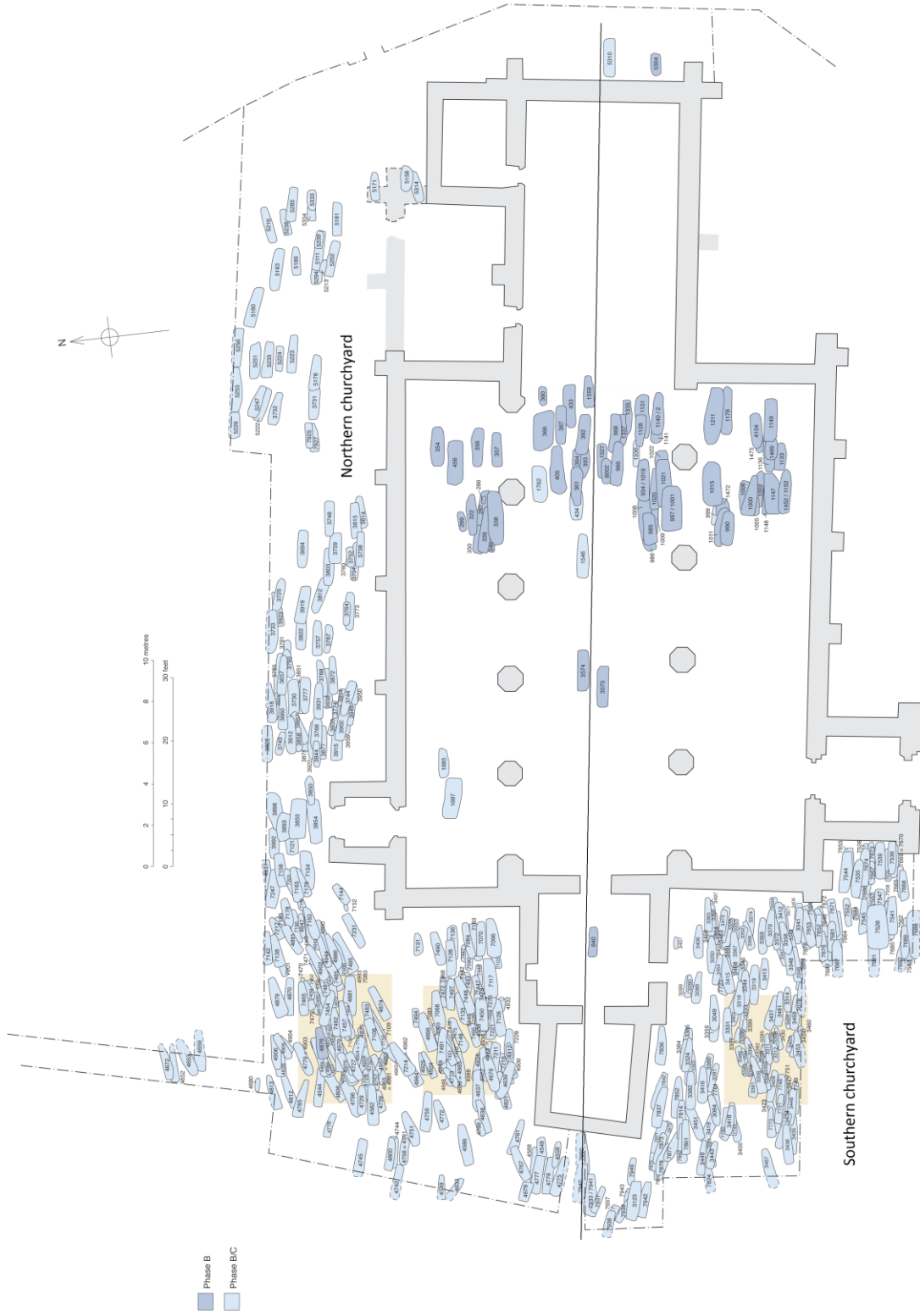


Figure 35: the northern and southern churchyard of St Peter's, Barton-upon-Humber, Phase B/C; 1300-1700 (Simon Hayfield; Rodwell, 2007, fig.34)

female (n= 124 – 47.3%) or male-sexed burials (n= 157 – 49.2%), suggesting that sex was not a factor (Tables A78 and A79).

### ***1150-1500***

The proportion of juvenile burials (41.5%; Table A80 and A81) was statistically significant (P= 0.0294). That less than half of juveniles were observed in this area, which is demonstrably larger than the southern churchyard (Figures 33 and 34), may not suggest that the northern churchyard was a focus for juvenile burial as the majority were buried in the smaller, and therefore denser, south churchyard or the church. That the proportions of juveniles aged 12 years or younger, infants aged 0-1 year (B), older children aged 8-12 years (E) and older children and adolescents (E, F and G) were not statistically significant suggests that no particular age group were being differentiated. This demonstrates a change from pre-1300 burials, where no significance was suggested for juvenile burials, to favouring of the southern churchyard for child burials in the high medieval period. Consideration of sex did not produce statistically significant results, and women were therefore not more likely to be buried in the northern churchyard than men.

### ***Post-1300***

Analysis (Tables A82 and A83) showed that over half of juvenile burials (n= 96 - 53.3%) and juveniles aged 12 years or younger (n= 78 - 56.1%) were located in the northern churchyard (Figures 34 and 35), though neither produced statistically significant results. Burials of those aged 16 years and older (G-L), of which 54.6% (n= 203) were located in the northern churchyard, was also not significant. By the later medieval period, less variation is apparent



for juvenile burials located in the northern churchyard than for 1150-1500. Just over half of female-sexed burials (n= 63; 52.5%) and male burials (n= 71; 53.4%) were located in the northern churchyard; neither were statistically significant.

## ***Zoning***

### ***Pre-1300***

The tables for burial location pre-1300 are within the appendix (Tables A96-101) followed by analysis by sex (Tables A102-7). The zones are shown in Figures 36 and 37.

For the north-west zone, no statistical significance was suggested for the high proportion of B-aged infants, D-aged children or juvenile burials. Investigation showed an underrepresentation of IJ-aged adults that was supported statistically (P= 0.0284). Neither the proportion of female or male burials was statistically significant, nor when age was considered with sex.

For the north zone, infant burials (B and C) were overrepresented to a statistically significant level (P= 0.0161), as was the proportion of juveniles (P= 0.0205). No statistical significance was suggested for female or male-sexed burials.

The low proportion of infants (B) recovered from the north-east zone was statistically significant (P= 0.0466), as was the proportion of children aged 12 years or younger (P= 0.0336) and juveniles (B-G; P= 0.0418). For sexed burials, the proportion of male-sexed burials was almost significant (P= 0.0613).

Analysis of juvenile burials, children aged 12 years or younger or adolescents (F and G) located in the south-east zone did not produce statistically significant results. Perceived

underrepresentation of young (H) adults and overrepresentation of middle-aged to older (I/J) adults were also not significant, nor were the proportions of male or female-sexed burials.

A statistically significant result ( $P= 0.0162$ ) was produced for the large proportion of juvenile burials in the south zone, which became very significant ( $P= 0.0021$ ) when narrowed to those aged 12 years or younger; a significant result was also achieved for infants ( $P= 0.0220$ ). Statistical examination did not support the suggested lower than expected number of young and middle-aged and older adult burials (H and I/J) or the proportions of female or male burials.

Investigation of juvenile burials, either as a group or narrower age bands, for the south-west zone did not produce statistically significant results, though the proportion of older children and adolescents (8-17 years) was almost significant ( $P= 0.0750$ ). This may suggest burial in the south west was more likely for adolescents than younger juveniles. No biases were suggested for burial by age or sex for adults.

### ***1150-1500***

Burials of 1150-1300 and 1300-1500 were combined with those of the broader phase 1150-1500 for testing by age (Tables A108-13) and sex (Tables A114-9) and are shown in Figures 37 and 38.

The low proportion of juveniles in the north-west zone was very statistically significant ( $P= 0.0025$ ), as was the low proportion of children aged 12 years or younger ( $P= 0.0031$ ), infants aged 0-3 years ( $P= 0.0050$ ) and infants aged 0-1 year ( $P= 0.0095$ ). That the north-west area was for adult burial was further supported by a very statistically significant result for the number of adult burials ( $P= 0.0055$ ), though this did not extend to specific adult ages or sex.



Figure 36: Zoning of the churchyard of St Peter's, Barton-upon-Humber, Phase E; 950-1150 (Simon Hayfield; Rodwell, 2007, fig.30)

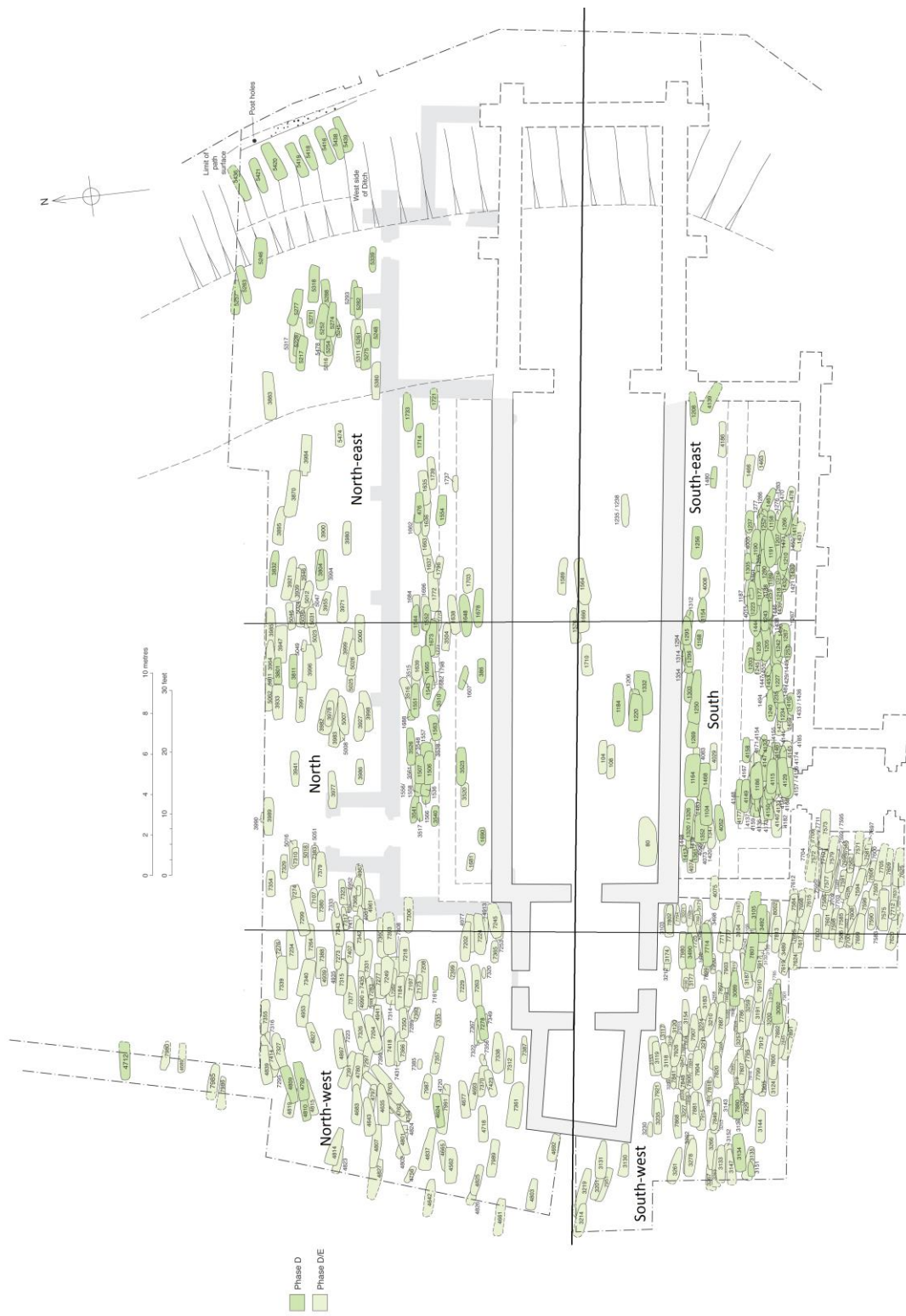


Figure 37: Zoning of the churchyard of St Peter's, Barton-upon-Humber, Phases D/E and D; 950-1300 and 1150-1300 (Simon Hayfield; Rodwell, 2007, fig.32)



Figure 38: Zoning of the churchyard of St Peter's, Barton-upon-Humber, Phase C/D and C; 1150-1500 and 1300-1500 (Simon Hayfield; Rodwell, 2007, fig.33)

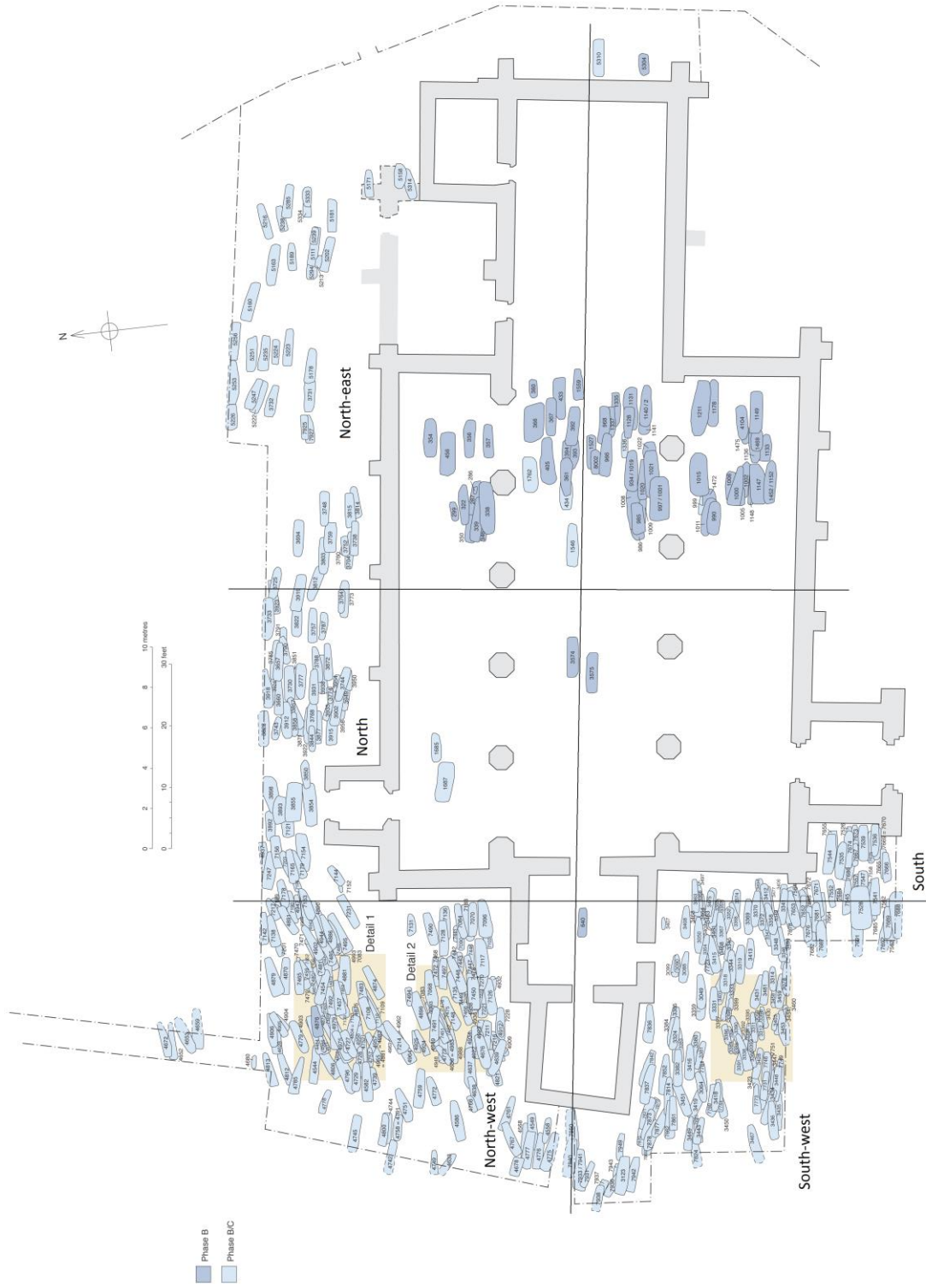


Figure 39: Zoning of the churchyard of St Peter's, Barton-upon-Humber, Phase B/C; 1300-1700 (Simon Hayfield; Rodwell, 2007, fig.34)



The north zone was favoured for juvenile burials, with the high proportion almost significant ( $P= 0.0954$ ), though not for narrower age-ranges. The lower proportion of adult burials also produced an almost significant result ( $P= 0.0537$ ), though not for adult age bands.

For the north-east zone, the high number of infant burials aged 0-1 year was not significant, nor was the proportion of juvenile burials. The only bias identified statistically was favouring of burials of young adults (H;  $P= 0.0312$ ), though sex was not supported as a factor.

No burials within the south-east zone were dated 1150-1500 or 1300-1500; see the discussion of pre-1300 burials. For the south zone, significance was suggested for the high proportion of burials of infants aged 0-3 years (B and C;  $P= 0.0209$ ), and for children aged 12 years or younger ( $P= 0.0149$ ). The underrepresentation of adults was almost significant ( $P= 0.0911$ ). Though no significance was calculated for female or male-sexed burials, that this was a favoured location for the burial of young males (H) was almost significant ( $P= 0.0909$ ).

The greater proportion of juvenile burials buried in the south-west zone than adult burials produced an almost significant result ( $P= 0.0842$ ), though analysis of narrower age ranges did not. The proportion of adult burials was also not significant; neither was an apparent bias that suggested young adult burials were less likely and burials of adults aged 45 years or older more likely in the south west zone. No significance was suggested by sex.

### ***Post-1300***

Analysis of zoning post-1300 combined burials of 1300-1500 with those of 1300-1700. Burial locations by age (Tables A120-5), and sex (Tables A126-31) are within the appendix and are shown on Figures 38 and 39

Beginning with the north-west zone, the low proportion of juveniles was not quite statistically significant ( $P= 0.0785$ ) and the overrepresentation of adults was statistically significant ( $P= 0.0422$ ), though neither could be refined. No bias was supported statistically for adult burials by sex.

That there was little differentiation apparent for juvenile burial in the north zone was supported by a lack of statistical significance. The overrepresentation of burials of young (H) adults was almost statistically significant ( $P= 0.0554$ ). No significance was suggested for either sex, or for a bias in favour of burials of males aged 45 years or older.

For the north-east zone, testing of infant burials (B) produced a very statistically significant result ( $P= 0.0013$ ). That little differentiation occurred for older juveniles was supported by a lack of statistical significance. Further bias for the favouring of young (H) and middle-aged (I) adults was also supported statistically ( $P= 0.0325$ ), as was bias for burials of young adult (H) women ( $P= 0.0130$ ).

The proportion of juvenile burials in the south zone did not produce statistically significant results. Bias in favour of the burial of adults aged 45 years or older (I/J) was also not significant, though favouring of this location for females aged 45 years or older was very statistically significant ( $P= 0.0044$ ). Also very significant was the infrequency of male burials ( $P= 0.0043$ ), suggesting the south zone was not typical for burials of men aged 16 years and older.

For the south-west zone, burial for infants aged 0-1 year (B) was not significant, despite over a third of infant burials originating from this location. The high proportion of young adolescents (F) and adolescents in general (F and G) was significant ( $P= 0.0164$  and  $P= 0.0433$ ). That no bias was occurring for those aged 0-12 years was evident by a lack of statistical significance. That the south-west zone was not favoured for the burials of young adults (H) or adults aged



45 years or older (I/J) was supported by an extremely statistically significant result ( $P= <0.0001$ ). Bias by sex was observed in favour of women ( $P= 0.0145$ ).

### ***Church burial***

Phased analysis focused on burials that either pre- or post-dated 1300; two burials dated 1150-1500 (a 5 year old child and another without any osteological information) were excluded. The proportions of burials are 1.4% ( $n= 15$  burials) and 14.0% ( $n= 78$  burials) respectively, suggesting church burial became established during the later medieval period.

### ***Pre-1300***

Fifteen burials were dated pre-1300 (Table A134). Unsurprisingly, statistical analysis of the presence of burials in the church produced a very significant result ( $P= 0.0078$ ). The majority ( $n= 12$ ) were adults, and though the small number of juvenile burials was not statistically significant, it is likely that these juveniles were in some way exceptional. Analysis of sexed burials ( $n= 10$ ; Table A135), six male and four female, did not achieve statistically significant results for either sex.

### ***Post-1300***

The low number of juvenile burials ( $n= 69$  burials; Table A136) was very statistically significant ( $P= 0.0088$ ). The burials of 30% of middle-aged adults (I), just over a quarter of adults aged 45 years or older (I/J) and just over a fifth of young adults (H) were within the church. The proportion of young adults was significant ( $P= 0.0154$ ), as were those of adults

aged 45 years or older ( $P= 0.0129$ ). Analysis of sexed burials ( $n= 51$ ; Table A137), twenty-six female and twenty-five male, produced a very significant result ( $P= 0.0016$ ) for female burials, compared to a result of lower significance ( $P= 0.0235$ ) for male burials, suggesting it was more unusual for women to be buried in the church than men.

### ***Eaves-drip burial***

#### ***Pre-1300***

Seven per cent ( $n= 77$ ; 7.1%) of pre-1300 burials were within the eaves-drip margin (Table A139). Over a third were aged 0-1 year (B), which was extremely statistically significant ( $P= <0.0001$ ), accounting for a quarter of all burials of infants aged 0-1 year. Almost two-thirds ( $n= 48$ ; 62.3%) were aged B-E, which was also extremely significant ( $P= <0.0001$ ), suggesting eaves-drip burial was focused on those aged 10 years or younger, and in particular, infants. Statistical analysis of sexed burials produced a significant result for female burials ( $P= 0.0378$ ) and a very significant result for male burials ( $P= 0.0043$ ), suggesting that men over the age of 16 years were less likely to be buried in the eaves-drip zone than women.

#### ***1150-1500***

Over ten per cent ( $n= 67$ ; 11.9%) of burials were within one metre of the church (Table A140), with just over half ( $n=36$ ; 53.7%) in the southern area. A quarter were aged 0-1 year (B); an extremely significant proportion ( $P= 0.0002$ ). That almost half were 12 years or younger ( $n= 31$ ; 46.3%) was very significant ( $P= 0.0010$ ). More significant was that over forty per cent ( $n= 29$ ; 43.3%) were aged 7 years or younger (B-D;  $P= <0.0001$ ), suggesting burial close to the church walls again favoured infants and young children. Testing of the absence of older

children and adolescents aged 8-17 years (E-G) did not achieve statistical significance. There is little evidence to support differentiation for adult burials by age or sex, and no bias for either was supported statistically.

### ***Post-1300***

Six per cent (n= 36; 6.6%; Table A141) of burials were within the eaves-drip margin. Fewer were infants than in earlier phases, though they remain dominant. Five (13.9%) were aged 0-1 year and nine (25.0%) 12 years or younger (B-E), though neither observation was statistically significant; nor was the proportion of adolescents (F) or juvenile burials in general. For adult burials, no statistical significance was suggested, nor was a bias in favour of women or men supported statistically. This suggests that by the later medieval period, eaves-drip practice has ceased or was no longer predominately for the young.

### ***Clustering***

It was not possible to identify clusters of burials due to post-depositional damage, particularly later grave digging and church extension.

### ***Burial outside the churchyard***

Though no formal boundaries were identified, one adult male may have been buried beyond the cemetery's limits to the north-east between 950-1150 (Rodwell and Atkins, 2011a, 173).

## *Burial furniture and zoning*

### *Pre-1300*

Locations of graves with furniture show that the greatest proportions were within the church, north-eastern and south-eastern zones (Table A145); the only zones in which more than 50% of burials had furniture. The greatest variety occurred in the north-east, south-east and southern zones, suggesting desire for differentiation was strongest in these areas. That ear muffs, objects and pillow stones occurred in their greatest numbers (Table A144) and proportions (A145) in the northern zones, may suggest a favouring of such practices, perhaps representing personal items or items from the home or local environment, north of the church. Whether the motivations may be anxieties surrounding death and the afterlife, folk practice or indicators of status, is unclear, as the north-western and northern zones are not generally interpreted as high status areas. This is also complicated by the lack of furniture types in association with burials within the church; nine examples of coffins and one of ear muffs within a coffined burial.

If furniture does represent status, particularly high status, what does this mean for the lack of furniture types in church burial compared to the churchyard? One interpretation may be that less freedom existed in choice of furniture for church burial, due to greater regulation. Another may be that rather than being representative of status linked to wealth or family position as traditionally inferred, in the early-high medieval period furniture was utilised due to a variety of factors linked to wider social, religious, and perhaps superstitious or folk, attitudes, as well as age or manner of death, perhaps also true for multiple burials.

### ***1150-1500***

Favouring of the church, north-eastern and south-eastern zones for burials with furniture is apparent (Tables A146 and A147); however, a greater proportion of graves with furniture are in the southern and south-western zones. The north-western and northern zones continue to display the lowest proportions of furnished graves, and a move towards greater differentiation in the southern zones can be suggested. The majority of boards, coffins, linings, the one shaped grave and one of two graves with stones were recorded in the southern zone. For the north-western and northern zones, the inclusion of objects and pillow stones, though infrequent, alongside coffins and organics, may suggest again that items from the local environment were being utilised over other types. That coffins, objects and organic remains are the only furniture in the church may again suggest a closer regulation of burial furniture, with furniture chosen that held the body or represented religious and/or social status.

### ***Post-1300***

The smaller number of furniture types observed graves occurred in greatest frequency in the north-western, south-western and church zones (Table A148), and in greater proportions in the south-western, southern and church zones (Table A149). That the high density of burial in the southern zones goes hand-in-hand with high proportions of furniture not observed for previous phases further suggests change had occurred. The few types and examples were likely indicators of status and more often located in graves in areas of high burial density and are therefore less likely to be indicative of other factors, such as anxiety around death or folk practice. Though the proportion of graves in the north-eastern zone with coffins may suggest continuing burial of a related group, this is less explicit and marked by less differentiation than pre-1300.

### ***Multiple burial and zoning***

Four multiple burials were dated pre-1150 (Table A151). All were in the northern churchyard, one of which (IN0700 and IN0701) was within the north-eastern group buried with wands and another, the only triple grave (IN0235, IN0236 and IN0237) within a metre of the church walls. Though all of these contained at least one child aged 0-12 years, no bias was suggested statistically for the burial of children in the northern half of the churchyard, so it cannot be that the inclusion of children determined their location. There is greater variation in the locations of post-1300 multiple burials (Table A152), suggesting this was not a practice occurring in a regulated location.

### ***Burial unusual by location***

Two burials were reburials; a one year old in a ditch fill dated 950-1150 and a 25-34 year old male burial dated 950-1300. That the infant was reburied in a ditch fill might suggest illicit burial or exhumation from a grave within the churchyard of an infant who should not have been buried on consecrated ground. The burying of infants in ditches has been identified at earlier Saxon sites and interpreted as the burying of individuals with negative status in liminal locations (Hey, 2004, 161; Reynolds, 2002:188). Another burial whose location stands out is the possible shrine burial (see Chapter Four; Rodwell and Atkins, 2011a, 189-90).

### ***Observations***

Because of the good phasing, greater success can be achieved in assessing whether and how burial by location changed over time. Analysis of the three primary burial phases demonstrates a favouring of the southern churchyard throughout the medieval period. Burials in the

excavated portion of the southern cemetery dated 950-1150 were more densely-packed than in the northern cemetery, with more intercutting and less space between burials. This observation is replicated for 1150-1300, where over half (n= 112) of burials were excavated from the southern half, which again demonstrated higher burial density. Burials of the broader, overlapping phases replicated this pattern of favoured burial in the southern churchyard, though there is evidence to suggest that this begins to change in the later medieval/early post-medieval period, perhaps due to constraints on space. Over half of burials of 950-1150 were in the southern churchyard (n= 221 – 50.1%). For 1150-1500, just under half (n= 174 – 47.1%) were from in the southern section, with a similar pattern noted for 1300-1700, where 39.4% (n= 182) of burials originated in the southern half, though the extension of the church into the southern zone and less than complete excavation will have affected this number. The highest burial densities are noted for the north-west and south-west zones, suggesting a shift to the western area as a focus for burial, probably as a result of less available burial ground to the south.

Differentiation via zoning is evident to a greater extent for juveniles than for adults between 950-1300. The north-west zone was not favoured for burials of older adults. Juveniles, especially infants, were overrepresented in the north zone but underrepresented in the north-east zone. A large proportion of juveniles, particularly those aged 0-12 years, were buried within the south zone, whereas adolescents were more likely to be buried in the south-west zone than younger juveniles. Children aged 10 years or younger, but particularly infants aged 0-1 year, dominated burial within a metre of the church, with eaves-drip burial more unusual for men than women. The highest proportions of burial furniture were from the church, north-eastern and south-eastern zones, with the greatest variation in the north-east, south-east and southern zones, suggesting less desire for variation through furniture in the north-west, north and south-west zones. Furniture in the northern zones is suggested as indicative of the sourcing

of materials from the local environment, suggesting that furniture, and perhaps also multiple burial, was employed due to a variety of socio-religious factors rather than status alone.

By 1150-1500, locations of juvenile burials continued to demonstrate greater differentiation, though predominantly adult burial areas were also identified. Juveniles were underrepresented in the north-west zone which was instead a focus for adult burial. Juvenile burial occurred in the northern half of the churchyard to a statistically significant level 1150-1500, but did not concentrate on specific age-ranges. The north zone remained a focus for juvenile burial, though this was less explicit than in earlier phases while the south zone was characterised by an overrepresentation of juveniles aged 0-12 years. Bias for adults was only supported statistically for young adults in the north-east zone. Eaves-drip burial remained popular for children aged 12 years or younger and with infants aged 0-1 year in particular, though no bias was demonstrated for adults by age or sex. Furniture continued to favour burials within the church, north-eastern and south-eastern zones, but is observed in a greater proportion south and south-west of the church, suggesting an increasing desire for differentiation in these areas. The north and north-western zones continue to suggest a sourcing of local materials for furniture, though provision of furniture in all areas was becoming less frequent.

After 1300, greater differentiation is evident for adults and adolescents than previously, including by sex, with less for infants and children. The north-west zone continued to be a focus for adult burial. The north-east zone had become a focus for infants dying aged 0-1 year, which may represent a change in appropriate burial location away from eaves-drip burial. The south zone was favoured for the burials of women and adults aged 45 years or older. The south-west zone was also favoured for women and demonstrated an overrepresentation of adolescents, though young and middle-aged to older adults were more likely to be buried elsewhere. Other popular locations for burials of young adults included the church, where male burials were more common than female, which may explain the overrepresentation of female



burials in the north-east, south and south-western zones. Burial furniture was most common in graves of the north-western, south-western and church zones, suggesting a continuing favouring of differentiation within and south-west of the church and an increased desire for differentiation in the north-western area, now more favoured than previously. The lower frequencies of furniture in high-status locations suggest a move away from their use as a result of socio-religious anxiety and status to status alone.

### **St Andrew, Fishergate, York**

The nature of the site necessitated the consideration of the churchyard of St Andrew's as one large zone for the parish phase of burial and as such, zoning could not be investigated. There was no northern churchyard due to lack of excavation, and therefore could not be investigated. Limited investigation of clustering could be undertaken due to heavy post-medieval truncation. Analysis of locations of burial focused on differences between burials within priory rooms to the cemetery and those interpreted as brethren and lay (see Chapter Four). Rooms containing burials were the chapter house, church, cloister alley, cloister garth, crossing, north transept chapel, nave and presbytery, and these are referred to as 'the priory' with regards to burial, below. For the priory phase, analysis follows the zones used within the reports. As this thesis focuses on burial of juveniles, rather than monastic burial, it considers the priory buildings as one zone, mentioning specific areas as necessary.

### ***Zoning; 1195 – late 16<sup>th</sup> century***

Fifty-one burials were within the eastern cemetery (Figure 40). All but one, a 5-8 year old child, were adults (Table A154). Sixty per cent (n= 31) were middle-aged (I) and almost a quarter



Figure 40: Zoning of the priory and churchyard of St Andrew's, Fishergate, 1195-late 16<sup>th</sup> century (after Stroud and Kemp, 1993, fig.36)

(n= 12; 23.5%) older adults (J). There were few burials of young adults (H; n= 4; 7.5%), suggesting the area was predominantly for burial of older individuals. The one child burial produced a very statistically significant result ( $P= 0.0032$ ), supporting the assertion that this child may have been exceptional. Ninety per cent (n= 45) of sexed burials were male (Table A156), suggesting a favouring of burials of men which was extremely statistically significant ( $P= <0.0001$ ). Over half (56.0%) were middle-aged adults (I) and just under a quarter (24.0%) older adults (J); both of these findings were statistically significant ( $P= 0.0004$  and  $P= 0.0040$ ). Burials of younger adult males (H) were poorly represented, representing only 8.0% of burials in the eastern cemetery, though this was not statistically significant. The three female burials, all middle-aged adults, are problematic and their atypical burial location was supported by a very significant result ( $P= 0.0033$ ).

Over a quarter of burials south of the priory church (n= 23; 26.4%) were juveniles (Table A155), which was extremely significant ( $P= 0.0002$ ). There was a particular concentration of infants and young children, with either all or the majority in this area. Testing of the high proportion of child burials (A-D/E), all aged 0-10 years, produced a result of greater significance ( $P= <0.0001$ ). Burials of older children and adolescents (E, F and F/G) appear in lower proportions or are absent, suggesting that they were more likely to be buried elsewhere, though this was not supported statistically. The burials of almost a third of young adults (H), over a quarter of middle-aged adults (I), which produced a significant result ( $P= 0.0362$ ), and a sixth of older adults (J), also significant ( $P= 0.0357$ ), were located in this zone, suggesting that the older an adult at death, the less likely they were to be buried south of the priory. Though male burials predominate, comprising almost three-quarters of sexed-burials, there is less variation than in the eastern cemetery and a higher proportion of female-sexed burials (n= 16; 25.4%; Table A157). Age bands for which a higher proportion of female burials are observed than male are the middle-aged (I) and unaged (L) adult categories. This, along with the few

burials of young adult (H) females (1) compared to young adult males (11), may suggest that young women were more likely to be buried in a different zone, which was less true for women dying at an older age.

### *Church burial*

#### *Late 10<sup>th</sup> century – 1195*

The four individuals buried in the church (1.5%) were all adults (Table A160); a triple burial (see above) and a middle-aged male who exhibited blade injuries. No statistical significance was suggested for burial of adult males or females within the church (Table A161), though the unique nature of the two burials, in addition to their location, suggests these individuals were of high or special status. Several burials cut the clay floor of the church after it was demolished, suggesting that this area continued to be a desired burial location.

#### *1195 – Late 16<sup>th</sup> century*

Almost half of burials were located in the priory, and some differentiation by age and sex is apparent (Table A162). The majority were adults, with only 11.3% (n= 15) juvenile. Of the juveniles, most (n= 13) were aged five years or older (D-F/G), with only two older infants (one aged 9-15 months and the other, 2-3 years) noted; this did not achieve a statistically significant result, nor did the proportion of juvenile burials in the priory (church, cloister alley, cloister garth and crossing) compared to the cemetery. A lower proportion of the adult burials were male (n= 82; 61.6%) than observed in the cemetery (n= 94; 81.7%), partly because the eastern cemetery was likely an area for burial of (monastic) males. Statistical testing of the proportion of female burials in the priory (cloister alley, crossing, north transept chapel and nave) achieved

a very significant result ( $P= 0.0098$ ), though testing of male burials did not (Table A163). This suggests there was greater exclusion in burial location for women than men. The higher proportion of female burials than male suggests the burial of wealthy or important secular individuals; male burials, occurring in greater numbers, represent both secular individuals and members of the monastic community.

### ***Eaves-drip burial***

This question could not be investigated due to the removal or truncation of the church walls and surrounding areas. Buckberry (2007, 121, 124) has suggested an increased density of infants and children near the church walls.

### ***Clustering***

It was not possible to investigate clustering beyond what is mentioned in the reports (summarised in Chapter Four) due to post-medieval truncation.

### ***Burial furniture and zoning***

#### ***Late 10<sup>th</sup> century – 1195***

Six graves had furniture (Tables A166 and A167). The majority were located in the cemetery; only two in the church had furniture. Within the cemetery was the only example of coffins, one example of a limestone slab with an infant aged 2-3 years, and one large, wide grave with evidence of organic remains. This individual is mentioned in more detail below.

### ***1195 – Late 16<sup>th</sup> century***

Burials within the priory were more likely to have furniture than those located elsewhere (Tables A168 and A169), though this was not quite statistically significant ( $P= 0.0976$ ). This includes all of the stone coffins (though a cist of sixteen limestone blocks was observed in the southern cemetery), all examples of coffins and the majority of lined graves. The use of stone in similar constructions such as solid and composite coffins may suggest related individuals. Only the few markers and objects were observed in similar or greater quantities in the two cemetery zones.

### ***Multiple burial and zoning***

One non-blade injury multiple burial was buried within the church between the late 10<sup>th</sup> century–1195, whereas for 1195-late 16<sup>th</sup> century, all multiple burials were within the nave.

### ***Burial unusual by location***

An unsexed adolescent aged 12-14 years was redeposited in an unusually and unnecessarily wide grave, aligned east of the first timber church (Figure 41). One interpretation for the grave's shape may be that it was originally intended to contain more than one individual, being large enough to contain at least two further bodies. Another possibility is that the grave was dug to contain, or did contain, a support for a cover or shrine, as suggested for an early burial in a similar location of a similarly-sized individual at St Peter's, Barton-upon-Humber. The special nature of the individual is difficult to interpret other than that they were exceptional in some way. That they were an adolescent, and not an adult, as typical for founder's burials, is interesting.



Figure 41: Adolescent IN2763 buried in a wide grave east of the church (Original photograph taken from the east; Stroud and Kemp, 1993, fig.39)

### *Observations*

The two different functions of the site and cemetery alter interpretations for burial by location between the two respective phases. Differences for both ultimately come down to status, be it social or religious. Zoning in the priory phase was differentiated by brethren or lay and/or high or low status. Men, interpreted as monastic individuals, dominated the eastern churchyard, particularly as their age at death increased; burials of a juvenile and three women are unusual

and exceptional. Juveniles, particularly aged 10 years or younger, were typically buried in the southern cemetery, with older juveniles more likely to be buried elsewhere, such as within the priory. The younger an adult at death, the more likely they were to be buried south of the church, though young adult women were more often buried within the priory than in the southern churchyard. Church burial was restricted to adults during the parish phase and adults comprised the majority of burials within the priory. Burial of women in the priory, indicative of patrons, was significant, suggesting greater exclusion by location for women. Juvenile burial in the priory favoured children aged 5 years or older rather than infants. Though differentiation by location favoured adults, the young adolescent reburied in a wide grave during the parish phase suggests an important and revered juvenile. More examples of burial furniture were observed in the parish churchyard than church for the first phase, whereas for the priory phase, furniture was more common within the priory. This suggests expressions of status and/or family identity through the shared use of furniture types for burials, and multiple burials, generally clustered in the same locations.

### **St Michael's, Leicester**

Ten burials (3.7%) were dated 1100-1250, with the majority (n= 219; 80.5%) dated 1250-1400, four 1300-1400 (1.5%) and a further thirty-eight (14.0%) to 1400-1500. Burials were assigned to one of seven zones, including the church, based on the methodologies of the excavation and this project.



## ***Zoning***

### ***1100-1250***

Five burials were noted west of and five within the church. To the west were two children aged 4-12 years (D/E) and three unsexed adults aged 21-50 years (H/I). In the church were two children aged 4-12 years (D/E) and three female-sexed adults; one young (H) and two middle-aged (I).

### ***1250-1400***

Thirty-eight burials (17.4%) were within the north zone (Table A181), ten of which were juveniles, with a quarter of child burials (D/E) and a fifth of adolescent burials (F/G) from this area; no significance was suggested for juvenile burials of any age. Almost half (n= 18; 47.4%) of the burials were middle-aged adults, with over a fifth of all middle-aged adult burials noted, though this observation was not supported statistically. A greater number of female burials were observed (n= 14; H, H/I and I), compared to a lower number of adult males (n= 7), all of which were middle-aged (Table A185) and no statistical significance was suggested.

For the south zone (n= 12 burials; 5.5%), eight burials were aged, with all but one young or middle-aged adults (Table A182 and A186). Thus too few burials were observed to produce statistical-significance.

The south-west zone contained the second largest proportion of the burial population (n= 64 burials; 29.2%). Over a third (n= 22; 34.4%) were juvenile (Table A183), a statistically significant observation (P= 0.0214). Bias was most explicit for those dying aged 0-12 years (B-E and K; P= 0.0124). Four sexed burials were identified (Table A138); all were female, middle-aged adults, which was not significant. Around 40% of young adult (H), 20% of

middle-aged adult (I) and the majority of middle-aged to older adult (I/J and J) burials were from the south-west zone. The lower proportion of burials of middle-aged adults was statistically significant ( $P= 0.0225$ ). Eleven burials were female and eleven male (Table A87), with middle-aged (I) adults favoured and the proportion of female burials very statistically significant ( $P= 0.0094$ ). As no significance was suggested for male burials this may indicate bias favouring women, further supported by a statistically significant result for burials of middle-aged women ( $P= 0.0339$ ).

The western zone contained the largest proportion of burials ( $n= 94$ ; 42.9%; Table A188). Less than 20% (19.1%) were juvenile, a low proportion not supported statistically. The high proportion of adult burials was almost significant ( $P= 0.0643$ ). Approximately half of middle-aged adults and a third of older adults were recovered here, though not significant. The greatest number of sexed burials was also in this zone (Table A191); thirty-one female and twenty male, though neither was significant. Significance was only suggested for the high proportion of younger to middle-aged adult (H/I) females ( $P= 0.0405$ ). Due to the broad age-range of these burials, it may not be indicative of true differentiation.

### ***1300-1400***

There were too few burials to undertake analysis of zoning. Of the four burials, three, all unsexed individuals aged 13-50 years, were excavated from the south. The fourth was a young to middle-aged male (HI) located within the church porch and likely a priest or patron (Higgins et al., 2009, 279). These burials are better considered as part of phase 1250-1400; however, the lack of age and sex for three means they contribute little to the aims of the question.

### ***1400-1500***

By this period, the south and south-western zones were no longer a focus for burial. Only four burials (10.5%) were observed in the north area (Table A189); two juveniles aged 0-12 years (K), one adolescent (F/G) and one young to middle-aged adult male (H/I). No pattern by sex was evident (Table A192).

Almost half of burials originated from the north-east zone (n= 16 burials; 42.1%). Eleven were adults, plus an adolescent/adult (Table A190). No significance was suggested for proportions of juvenile or adult burials, nor for the observation that almost two-thirds (63.6%) of middle-aged adults were buried here. Six burials were sexed; two female, one young and one middle-aged, and four middle-aged adult males (Table A193) though no bias for either was supported statistically. That all of the burials of middle-aged males were in this zone was statistically significant ( $P= 0.0247$ ), which though few in number, may suggest a bias in favour of burying males of this age in the north-east zone.

For the western zone (Table A191), where almost half of 1400-1500 burials were observed (n= 18; 47.4%), the majority (n= 14) were adults, with juveniles (n= 4) poorly represented; neither proportions were statistically significant. Eight adult burials were sexed (21.1%); seven female and one male (Table A194). Bias in favour of female adults was supported by an extremely significant result ( $P= <0.0001$ ). The ages of the female burials did not allow for testing of a specific sex-bias by age, due to the majority (n= 4) aged to the broad, young to middle-aged adult (H/I) category.

## ***Church burial***

### ***1100-1250***

Half (n= 5) the burials were observed in the church; two aged 4-12 years (Table A197) with the remainder one young (H) and two middle-aged (I) adults. There were too few early burials in the church to produce a statistically significant results. All three adults were female (Table A198), and with the other three adult burials, all in the churchyard, unsexed, it was not possible to investigate bias by sex.

### ***1250-1400***

The church was the location for eleven burials (5%); all adults (Table A199). The foetal infant (A) is unlikely to represent a double burial (discussed above). No other juveniles were observed in the church, which may be socially significant and illustrative of local attitudes to children and access/appropriateness for church burial. The small proportion of adult burials (n= 9; 6.4%), all aged 21-50 years, was statistically significant (P= 0.0142) and likely to be indicative of individuals of special social or religious status, such as patrons or priests. More burials were sexed-female (n= 5) than male (n= 1; Table A200), which may be a continuation of a bias noted in the previous phase, though this was not supported statistically.

### ***1300-1400***

One burial dated 1300-1400 was noted in the church; an adult male, 21-50 years, who may have been a priest. Church burial was infrequent at St Michael's and had ceased by the end of the medieval period.

## ***Clustering***

Other than ordering of burials in rows, areas of clustering can be suggested, such as the five burials dated 1100-1250, located west of the church. Four post-holes dated 1250-1400, unfortunately unexcavated but interpreted as a base for a cross or lych-gate, were in the western churchyard, approximately 11m from the church. Burials in this area respected the feature and clustered around it, particularly to the north (Higgins et al., 2009, 260). A further cluster may be four graves dated 1400-1500 and all observed with pottery, located in the far north of the cemetery in an area of new burial resulting from the northward extension of the cemetery.

## ***Burial furniture and zoning***

### ***1100-1250***

One burial had furniture; within the church, a 4-12 year old child with 12<sup>th</sup>-mid 13<sup>th</sup> century pottery.

### ***1250-1400***

The locations of graves with furniture show the majority were within the western zone (Table A203). Also in this zone was the greatest variety of furniture, with all types (coffins, objects, pillow stones and stones) noted, including every example of stone furniture and the highest proportion of burials with furniture (Table A204); a concentration of furniture that was very statistically significant ( $P= 0.0095$ ). That furniture was not observed in graves in the southern churchyard may suggest these burials were of the poorest individuals or those of the lowest social standing, in a location not favoured for burial and some distance from the church. Objects

with a burial in the north zone (a ring with a young adult female) and two burials in the southwestern zone (an unidentified circular iron object with a young adult female, and a single iron nail, with a child aged 0-12 years) may suggest that the former was an area of high status and the latter of lower status, with fewer instances of furniture that may have been personal possessions or chance inclusions. These may also represent the sourcing of items from the local or domestic environment, chosen due to various concerns linked to religion or wealth as the primary motivating factors; that no furniture was identified with burials from the church may hinder the interpretation that furniture was reserved for those of high status.

### ***1300-1400***

The four burials were not observed with furniture.

### ***1400-1500***

Four burials had furniture; all were pottery (Tables A205 and A206). If these items are indicative of deliberate, rather than accidental, inclusion, it may be that these individuals shared a type of furniture as they shared an area of burial; perhaps they were related in some way, as part of the same family or community, or they died within a narrow time frame and were buried in an area newly-available for burial. The poor material wealth of these objects and the lack of furniture elsewhere in the churchyard at this time, as well as the absence of burials in the church, may be further evidence of the poverty of the parish and its diminishing importance (Higgins et al., 2009, 279-80).

## *Multiple burial and zoning*

### *1250-1400*

Both multiple burials were located within the church (Table A207). It is probable that one was not a true double burial, as discussed above. The other, a consecutive burial of two adult women, is suggestive of a relationship in life that the burying community wanted to continue into the afterlife.

### *Observations*

Burial began within and west of the church, focusing on available space, and spread southwards and across the site over time, occasionally clustering around churchyard features. Little differentiation was supported statistically other than a bias for burying juveniles, especially those aged 12 years or younger, within the south-west zone 1250-1400, when burial in this area also favoured young and older adults and women over men. The western zone appears predominantly an area of adult burial. Furniture was observed in greatest quantity and variation within the western zone, with the southern and south-western zones demonstrating less differentiation and lower status, though furniture was not observed within the church, compared to the north and west. Only adults, all young or middle-aged, were buried within the church, suggesting this was an age-appropriate burial location. This was also the location for multiple burial, suggesting a link to family as well as status through burial in this location.

At the end of the medieval period (1400-1500), the few burials in the north zone did not suggest differentiation by age in location, though they were the only burials with furniture, whereas for the north-east zone only the higher proportion of burials of middle-aged males was significant, indicating bias by age and sex. Bias for burial in the western zone demonstrated a favouring of

this location for women. Burial had stopped in the southern and south-western zones, indicating the cemetery and church ceased to be popular.

### **St Peter's, Leicester**

The majority of burials were not dated to a range narrower than the medieval period (9<sup>th</sup>-16<sup>th</sup> centuries). The following analysis focuses on the small number (31) of phased burials. Some of these were combined to provide groups of larger numbers. These include the 14 burials dated 850-1100, two 850-1190 and three 1100-1190 (thus 19 burials under a new phase of 850-1190) and the one burial apiece dated 1250-1400 and 1300/50-1375/1400 respectively (2 burials under phase 1250-1400). The ten burials dated 1375/1400-1550 remain one group together. Despite the small number it is still possible to demonstrate change over time.

### ***The northern churchyard***

#### ***850-1190***

Twelve burials were recovered from the northern churchyard. The remaining seven originated from the south zone (Table A211). Though all infant burials (BC and C; four individuals) were within the northern churchyard, there are too few examples and a lack of other burial locations for this period to interpret this theme further.



### *1250-1400 and 1375/1400-1550*

None of the 12 burials from these periods were located in the churchyard, therefore this question cannot be tested. They are also not considered under the discussion of zoning, below.

### *Zoning*

#### *850-1190*

Burials from this early period originated from four areas of the churchyard; north-west, north, north-east and south (Tables A212-5). Due to the small number of burials in each zone (8, 2, 2 and 7 respectively), with few sexed adolescents or adults (two female from the north-west zone, one female from the south and one male from the north-east, not shown in tables), no patterns could be identified and no statistically significant proportions calculated. Some of these burials are discussed further, under '*Clustering*'.

### *Church burial*

#### *1250-1400*

Two church burials were dated 1250-1400; both were middle-aged adults (I). One was male whose burial in the western nave cut a bell-casting pit. The male was buried with a coin of Edward I (1272-1307) in his mouth and had consumed a rich diet during life, indicated by the condition DISH (Diffuse idiopathic skeletal hyperostosis) and indicative of high status (Gnanaratnam, 2009, 45). The second was a female buried in the nave near the south door. Interred within a coffin in an ash-lined grave, the woman had a papal bulla of Pope Innocent

VI (1352-62) positioned beside her left hand (Gnanaratnam, 2009, 49, 121). Explanations for both of these burials are that they were important secular individuals, such as patrons.

### ***1375/1400-1550***

The ten inhumations were all from within the church. Six are discussed in greater detail below, under '*Clustering*'. The remaining four were excavated from the nave. One was a child aged 4-12 years (DE), a second an individual aged 13-50 years (FGHI) and the remaining two were unaged adults; none of these individuals were sexed. All were buried in coffins.

### ***Eaves-drip burial***

#### ***850-1190***

Over half (52.6%; 10 of 19) of burials were located within one metre of the church walls. Six were located south of the church, four in two double burials, and all featured charcoal and stone as burial furniture in some way or another; this group are examined further under '*Clustering*'.

The remaining four were observed north of the church; three in the north-west zone; an infant within a charcoal-lined grave, a child buried under a board also with a grave lined with charcoal and a fragment of pottery, and a middle-aged, unsexed adult male with no recorded burial furniture. The last burial in this location was of a possibly-male young adult, buried in the north-east zone under a wooden board (Gnanaratnam, 2009, 20, 148-9).

The burials in both locations, but in particular those to the south and north-west of the church, suggest that the eaves-drip margin was firstly, a favoured location for burial at this early time, and secondly, a focus for the expression of differentiation in burial.

## *Clustering*

### *850-1190*

The seven inhumations may be considered a cluster of associated burials. All used charcoal as linings, plus stone as linings (3 examples), ear muffs (2 examples) or positioned on the body (2 examples). Two of the burials were double burials located within a metre of the church walls; the first contained a middle-aged (I) and middle-aged or older adult (IJ), both unsexed with ear muffs, charcoal and stone linings, and the second, with linings of charcoal, an unaged, unsexed adult (L) and a child aged 4-12 years (DE). The burials, broadly contemporary and associated both spatially and by furniture, likely represent related individuals, such as a family, who chose to demarcate their kin in burial during the first centuries of the churchyard's use. This same interpretation may be suggested for burials in other zones, such as the two juvenile charcoal burials from the north-west zone, and others in close spatial association.

### *1375/1400-1550*

Of the later medieval church burials, there were two unsexed adolescents (FG), a middle-aged to older female (IJ), two male adults aged 36-50 years and 50 years or older respectively, and one burial with no osteological information. These burials were interpreted as an associated group due to their presence in a possible side chapel in the north aisle (Gnanaratnam, 2009, 60). Three were interred in coffins (the female, middle-aged male and an unsexed adolescent) as well as being ash burials, which may suggest further association, such as members of the same family. The middle-aged male was also buried with three medieval tiles, one decorated, a Roman coin and a flint scraper, whereas the grave of the adolescent contained coffin fixings, a coin and a copper band, discussed elsewhere.

### ***Burial furniture and zoning***

#### ***850-1190***

Burials of this period in which zoning by furniture can be identified have been discussed, above.

#### ***1250-1400 and 1375/1400-1550***

Nine of the 12 burials within the church had furniture. Each of the types observed (four coffins, four ash linings, three of which had included objects, and a further individual buried with an object) were likely linked to the dual concerns of holding the body and providing assistance for the deceased in the afterlife in addition to burial within the church. Excluding items which may be typical burial accoutrements, such as copper alloy (shroud) pins, this can be inferred from the characteristics of several of the objects as either explicitly religious, such as the papal bulla, or in possession of potentially apotropaic qualities, such as the antique or natural objects of a Roman coin and flint scraper.

### ***Multiple burial and zoning***

#### ***850-1190***

One further multiple burial was dated, 850-1190, in addition to the two mentioned above (see '*Clustering*'). The burial held two juveniles, a child aged 4-12 years and an infant aged 0-3 years (Table A44). That only three of the ten multiple burials were phased means that the question of whether particular areas were favoured for such inhumations for specific phases could not be taken further.

### *Observations*

Chronological change can really only be seen for the ways in which the elite or high status chose to differentiate themselves via burial location. The few dated examples demonstrate that, in the early use of the churchyard, clusters of family burials, including those of children, occurred that were characterised by shared burial furniture within concentrated locations, such as stone and/or charcoal linings south of the church, 850-1100. By the later medieval period, such family-led differentiation had moved from the cemetery to inside the church, either through burial in shared areas perhaps indicative of family chapels, or the use of practices, such as ash burial 1375/1400-1550. Children appear to have been less likely to be buried in concentrations of family burials within the church than in the churchyard approximately four centuries earlier, perhaps indicating changing attitudes to children and their place within the family mortuary landscape. Not to be taken in isolation, these phased examples require discussion alongside comparable non-phased burials and examples from the other sites, which is undertaken in the next chapter, to ascertain the extent to which infant and child burials may have been excluded from noteworthy family burial groups in the later medieval period compared to earlier centuries.

## **Chapter Seven: Children and child burial in medieval England**

### **Introduction**

The previous chapter detailed the results of the analysis. This chapter begins by discussing these results for each theme in turn, bringing the evidence from each site together and highlighting similarities and differences between them. This will show that age at death was a factor in how children were buried in all the sites analysed. Commonalities in the ages at which differentiation was occurring demonstrates that particular ages, and age-based social transitions, influenced juvenile burials. The discussion includes complementary case studies to give a wider context. The results of the investigation of child burial through burial furniture, multiple burial and burial location, and conclusions about contemporary attitudes to children and burial, are presented.

This is followed by reflection on the main achievements of the project, what has been learned and the significance of the findings. It assesses the benefits of using historical sources and archaeological evidence, and the methodology used in the analysis. It is argued that the project has been successful in demonstrating that age had an effect on burial during the medieval period especially in relation to children. It will also be argued that social attitudes regarding juveniles by age or life-stage was an important influence. The chapter ends with recommendations for future work based on insights from the thesis.

## **Children and burial furniture in medieval England**

The results show bias in the provision of burial furniture towards juveniles aged 12 years or younger, but particularly infants and older children aged around the transition to adolescence, often supported statistically. In contrast, lower frequencies of furniture are observed with adolescents. Further bias is observed in the materials used, such as the frequent use of stone as ear muffs, pillow stones, cists and linings, but exclusion of others such as ash linings and wands. Bias is also observable through a tendency for objects within child burials to be sourced from the domestic environment or local landscape, with objects carried on the person, such as buckles, knives and jewellery, more typical with adults.

Examination of the whole burial populations showed several of these observations were visible on a broad chronological scale. Juveniles were treated differently in the burial record to adults, with their ages a factor in their manner of burial. This treatment referenced particular ages, indicative of social understandings of age as identified from contemporary sources. This section of analysis, which looked at all the burials from the medieval period together for each site, demonstrates that there was a universal understanding of and appropriate use of burial furniture for the young in medieval society.

Though such broad understanding could be demonstrated, the results show both similarities and differences between the sites and the specific ages each community was referring to when burying their young. At St Martin's, Wharram Percy, St Peter's (Barton-upon-Humber) and St Michael's, Leicester this was explicitly biased in favour of those dying in the first year of life, by the use of furniture in general or specific varieties. For St Andrew, Fishergate and St Peter's (Leicester), infants aged 0-3 years were the focus for such differentiation; variation for infants was characterised by coffins, boards, stones and objects. At St Martin's, St Michael's and St Peter's (Leicester), both statistically significant proportions and high frequencies of furniture

(ear muffs, pillow stones and stones) showed that those aged 0-12 years were treated differently in burial to older persons, suggesting again that they were conceptualised as possessing their own distinct age-based identity throughout the medieval period. That 12 years was an approximate age for the transition from one life-stage to another was suggested by changes in burial treatment between those aged either side of this age at St Peter's (Barton-upon-Humber), characterised by significant frequencies of furniture and use of ear muffs and pillow stones and St Andrew, Fishergate, where elaboration was unusual and reserved for a single individual.

Analysis of dated burials suggest decreasing variety in furniture throughout the high and later medieval periods, with the differentiation of juvenile graves most explicit pre-1300 and later phases demonstrating differentiation for infants and, to a lesser extent, adolescents only. Despite these biases, greater significance is often attributed to adult graves. Though some evidence may suggest a bias for furniture with adults of different age bands, such as greater varieties and proportions, at each of the sites adults of various ages were provisioned with furniture to statistically significant levels, suggesting that status, as well as age and the life course, was a factor in adult burial ritual. The sex of adult burials was also a factor, with male burials privileged through furniture to a greater extent than female burials throughout the period. When dating allowed, this was shown to be most explicit in the 10th-12th centuries, with greater significance in female-sexed burials from the high medieval period onwards.

Discussion of objects owes much to recent research (Gilchrist and Sloane, 2005, Gilchrist, 2008, Gilchrist, 2012). Comparison of objects from medieval graves with those from furnished Anglo-Saxon and Viking burials has resulted in the identification of a hybrid process that combined earlier magic with Christian burial customs. The argument that objects were included in graves because they possessing power, whether protective, restorative, occult or demonic, and are therefore representative of supernatural or spiritual beliefs, is particularly convincing (Gilchrist, 2008). Objects such as wands, crosses, rings and papal bullae have been interpreted



as high status amulets, including an example from St Peter's, Barton-upon-Humber, with religious items possessing or providing continuing protective power beyond death (Gilchrist and Sloane, 2005, 88, 95, 99; Gilchrist, 2008, 130).

Attempts were made by the Church to either align or discredit the association of objects with Christianity. These include animal remains, pebbles, fossils, flint and beads, of items which within the dataset are perhaps indicative of 'traditional' charms following their comparison with conversion-period graves. These are generally associated with women, where they are interpreted as natural occult items whose properties determined their choice in ritual (Gilchrist, 2008, 132-9). Not interpreted as personal possessions, magical objects were observed with individuals of a variety of ages, but as discussed (Chapter Three), were overrepresented in the graves of infants and children (Gilchrist, 2008, 148-9). This association was also observed in this study. That many of the objects could be sourced from the immediate surroundings may also be indicative of the role of women as users of folk magic in the care of their families that continued after death through the treatment of the corpse (Gilchrist, 2008, 152). This further indicates the strong link of women with motherhood that is also represented in the association of women and infants in multiple burials (see next section). The results of this project concur with Gilchrist's conclusion that though observed with adults, particularly males, greater consistency can be viewed in the special treatment of infants and children, such as included objects, and that young juveniles were viewed as especially appropriate for such treatment.

Dress fittings and shroud pins are all likely to be indicative of the clothing of the corpse. Unusual examples, such a child within a multiple burial with a buckle on their finger as a ring at St Margaret Fyebriggate in Combusto, Norwich, may suggest that such items could be buried with individuals due to other factors (Stirland, 2009). The buckle may represent a personal possession or 'toy', and this interpretation should be suggested for examples of objects with children such as buckles, studs and bands but also fragments of larger items, such as decorative

mounts. Typically observed with those aged 12 years or younger, though some are recorded as chance inclusions, such as the bone stylus with an adolescent from St Martin's, Wharram Percy, cal 980-1280AD (95% probability; Mays et al., 2007, 207), purposeful deposition of the possessions of juveniles cannot be discounted.

Furniture other than objects has generally been interpreted as either functional, indicative of the deceased's status or linked to superstition, folk magic and intercession for aid in the afterlife (see Chapter Four and above). From the dataset some examples of furniture are likely to be indicative of status, such as stone in burials of family, kin or adult males in the late Anglo-Saxon period. That Christian churchyard burial during the late Anglo-Saxon period should be characterised with such high quantity and variation of burial practices is unsurprising given the traditions of furnished burial during previous centuries and the burial of separate family and kin groups in a regulated, centralised church location. Discussions of furniture in the late Anglo-Saxon to early medieval period (see Chapter Three) have suggested sympathetic attitudes in life towards individuals of differing status and health were replicated through differentiation in burial. The results of this study suggest age, linked to contemporary religious and social concepts of age and the life course, both during life and during the afterlife, were also dominating factors.

The enduring use of burial furniture into the medieval period suggests a continuing desire for differentiation or highlighting of certain identities. Due to the contemporary religious context, including the concept of the afterlife as a physical place and another life-stage to be experienced, it is improbable that status was the primary factor influencing burial practice. Though evidence from this project suggests the privileging of male adult graves and their kin continued beyond the late Anglo-Saxon period, though perhaps changing location in the high medieval period (see location section), the frequency of burial furniture, often of similar type, with burials not typically understood as high status indicates other motivations. Age can be

supported as a factor. The high and often statistically-significant proportion of infants and children aged 12 years or younger observed with furniture are a group typically not viewed as high status in the conventional sense; evidence for infants and children consuming an inferior diet to older individuals at St Martin's, Wharram Percy (Mays, 2007a, 93-95 and fig. 76) attests to this, though this group were often buried with stone furniture, coffins and objects. The exclusion of certain furniture from child graves, such as wands at St Peter's, Barton-upon-Humber and ash linings at St Peter's, Leicester further suggests appropriateness by age. This is likely to be as a result of differing social attitudes to infants and children than older individuals, and suggests a change in the social conception and treatment occurred between childhood and adolescence that was replicated in the burial record.

Infrequent furniture types, observed with juveniles and adults, are harder to discuss. They are either low in number, such as markers or shaped graves, or defined to narrower chronological periods, such as clay-filled graves. The treatment of adolescents in a wide grave, at St Andrew, Fishergate and a possible shrine burial at St Peter's, Barton-upon-Humber, suggests exceptional importance and reverence. Where defined to a short period or a few individuals, such practices are likely to be the result of social factors such as wealth and status, health or manner of death. The relative absence of furniture with adolescents suggests that from around the age of 12 years, burial became increasingly linked with status, perhaps related to social factors such as increased economic productivity. This is also an interpretation for adults by the favouring of adult males with burial furniture over adult females. Though stages of the life course were also a factor, such as bias towards young and older adults, conventional status in the form of wealth and social power is likely to have been a greater influencing force on the burials of adults than children and is supported by the evidence.

If conventional status cannot be suggested as a primary motivating factor for differentiation in infant and child burials through furniture (aside from high-status examples, such as in the

church, in which the hierarchical position of infants and children and the social power of their parents will have influenced manner of burial), what can be supported instead? I argue that social attitudes surrounding the deaths of infants and children, linked to their youth, cultural and religious ideas of innocence and conception of the afterlife as a physical place, as the motivating factor. Contemporary sources (see Chapter Two) have demonstrated that children, particularly infants, were viewed as a different sort of person within a different life stage to adults, and their deaths led to emotional responses of loss, grief and anxiety, both religious and social, that are likely to have influenced their manner of burial through higher levels of differentiation through furniture (as well as multiple burials and burial location; see next sections).

The variety of furniture, in use throughout the medieval period, suggests agency in burial practice that could be employed as a result of a series of contemporary factors, of which one, age, was much more deterministic than previously supposed. One interpretation for the decreasing use of furniture may be effort by the church to remove worship from the community and increasingly into the domain of the clergy. This can be supported by a discussion of developments of the Mass by the later medieval period in which ‘the ceremony...acquired in the popular mind a mechanical efficacy in which the operative factor was not the participation of the congregation, who had become virtual spectators, but the special power of the priest’ (Thomas, 1971, 36). This would suggest an increased regularisation and conformity of burial practice, increasingly away from the pararituals that allowed an active role of families in death, burial and mourning (Gilchrist, 2012, 10). The provision of intercessory power by family or kin, perhaps through grave furniture and included objects, switched to a greater reliance on acts of religious devotion such as prayer and donation. Beyond the 13th century, such practices may be interpreted as linked to piety and social position, or deviant as increasingly unusual or atypical rites.

## **Children and multiple burial in medieval England**

Only seventy-one individuals shared graves. Equating to 1.5% of the dataset, this shows how infrequent the practice was. From the analysis there was no suggestion for change over time in the use of multiple burials or the ages of people within them. Nevertheless, patterns are visible. Statistical analysis of the combined sites and phases supported the suggested bias of this practice in favour of infants aged 0-1 year ( $P= 0.0160$ ). Bias in favour of infants aged 3 years or younger was almost significant ( $P= 0.0782$ ), as was bias for children aged 12 years or younger ( $P= 0.0846$ ). For adults, neither the proportion of female adults or male adults was significant, though the high number of young female adults was almost supported statistically ( $P= 0.0658$ ). It can be concluded that multiple burial was a favoured practice for children aged 0-12 years, and especially infants dying within their first year of life. For adults, a bias is suggested for young women.

Interpretation of motivations can be aided by studies of multiple burials from Anglo-Saxon cemeteries. A higher proportion of individuals were observed in multiple burials during this period (5.4% per site) of which 70% were contemporary and almost a quarter consecutive, with most examples containing an adult and a child or two adults (Stoodley, 2002, 103). Examples dated 5<sup>th</sup>-7<sup>th</sup> centuries are not explained as resulting from a lack of available space or an unwillingness to dig more than one grave but rather continuing social relationships between the living and the dead. Sequential, consecutive burial, along with clusters of family burial are interpreted as ‘statements of remembrance or association’ over an extended period in which earlier inhumations ‘retain meaning and a place in social memory’ (Crawford, 2007, 84). A similar interpretation was suggested through an attempt to establish a generation-based dating scheme, focusing on the life courses, social identities and memories of both the deceased and the burying community (Sayer, 2010a). For contemporary multiple burials, Crawford asserts that ‘there can have been no definite expression of the continued social presence of the dead in

the life of the living, nor any reinforcement of temporal links between one body and another' (Crawford, 2007, 84). However, is not the act of burying multiple individuals contemporaneously within the same grave likely to represent a continuation of some relationship held in life, whether linked to family, kin or community? The concept of the community of the dead supports this interpretation and is likely to be relevant for medieval Christian burial. The identification of family clusters of burial, in which multiple burials are represented, suggests a marking and remembrance of those interred.

The disproportionate number of children within such burials is intriguing. The age of juveniles, and not adults, seems to have been a determining factor for contemporary Anglo-Saxon multiple burials; the younger they were, the more likely they were to be buried in a shared grave. For adults, sex was an additional factor, with adult females more often buried with younger juveniles and adult males with older juveniles, interpreted as indicative of relationships in life (Stoodley, 2002, 112-3, 115). Interpretations of Anglo-Saxon examples include the burials of children who died simultaneously placed within a shared grave as a coping strategy by the community. Another is that children could have been used as an accessory in adult graves, particularly in association with impaired adults, in which the body of a child was treated as an object for the benefit of the adult, perhaps extending to the killing of the child (Crawford, 2007, 86, 87, 89). This explanation for the higher number of children in Anglo-Saxon multiple burials is restrictive, as it sees juveniles as secondary in the rite. Pairings of juveniles with adult males were less common in consecutive multiple burials, leading Stoodley to conclude, in contradiction to Crawford, that the choice of an existing grave for the burial of a second individual was a random process of reusing graves and that there was no association between the deceased (Stoodley, 2002, 114). Though Stoodley has argued against the suggestion of familial or kin relationships between those buried in shared graves, he still suggests that the burial of children with adults may be indicative of older members of

the community having responsibility and providing security for those of younger age after death (Stoodley, 2002, 121). Excluding the low incidences of infanticide suggested for the medieval period (Hanawalt, 1986, 156), this interpretation may be useful for later multiple burials if children were seen as social actors capable of representing and reinforcing the social position of the adult, as has been suggested for late Anglo-Saxon examples of founder's burials surrounded by infant and child burials (Boddington, 1996, 50; Hadley, 2010, 110; 2011, 294). This is likely to have been a motive for medieval high status burials, such as in the church, of family members; one aspect of a child's social identity is their shared group identity within a wealthy or important family. The representation of rank and social position is a known factor affecting the treatment of the body and the form of the grave (Gilchrist and Sloane, 2005, 6), and so the use of multiple burials in the medieval period cannot be discounted as a motif for displaying, and reinforcing, status. Though it may have been appropriate to bury individuals who died within a short time frame together in the same grave, during both the Anglo-Saxon and medieval periods, it is unlikely that all simultaneous deaths were treated in this way.

It is possible to infer the stimulus that informed multiple burial in the medieval period. Interpretation requires the consideration of factors believed to have influenced the practice during the early Anglo-Saxon period with additional, relevant medieval context such as the notion of the extended life course. Relationships in life are likely to have been the main motivation for burial of more than one person in a grave. For at least six of the multiple burials in this project, this relationship is likely to have been that of a mother and child. The physical positions of the remains suggest this for some, such as a foetus within a female's pelvic cavity. Similar examples, also interpreted as death during childbirth, have been observed elsewhere. A young adult female and a full-term foetus was observed at St Nicholas Shambles, London and dated 1000-1200 (White, 1988, 71-3). Two female adults buried at Cherry Hinton, Cambridge before the mid-12th century were also observed with unborn foetuses in-situ

(McDonald and Doel, 2000). Examples have also been noted in monastic contexts, such as the high-late medieval confined burial of a young female with a neonate between her knees within the presbytery at the Franciscan friary at Hartlepool and in Jewish cemeteries such as Jewbury, York (Gilchrist and Sloane, 2005, 127; Lilley et al., 1994, 339).

For other burials of adult women and infants, without the in-situ observation of the foetus such relationships cannot be confirmed without DNA analysis. Mother-infant relationships can be supported by estimates of maternal and infant mortality. Calculations of levels of maternal mortality in pre-industrial populations range around 20% for women aged 25-34 years, or a cumulative risk of 10-17% throughout a women's reproductive period. For infants, it is estimated 4-6% of foetuses who survived to 28 weeks gestation would have either been born dead or died with their mothers (Woods, 2006, 49; Schofield, 1986, 248). Death in childbirth was a common occurrence for both mother and infant, and it is likely that such deaths resulted in joint burial. The burial of unbaptised infants was forbidden on consecrated ground as they were considered unclean and dangerous. Writing in the 13th century, Durandus was sympathetic to the deaths of women in childbirth and recommended that they be buried in consecrated ground, despite not being churched and still tainted with the uncleanliness of pregnancy and labour; for deceased infants he reiterated that they should be buried on unconsecrated ground (Gilchrist and Sloane, 2005, 127).

In contrast to Anglo-Saxon examples, it may be that in the medieval period, the deceased neonate was the primary focus for multiple burial, and not secondary as an object, as burial with their deceased mother allowed them to be interred on consecrated ground; this may mean the infant was the source of most anxiety and benevolence and the mother therefore the 'accessory'. It may also be that mutual burial was beneficial and appropriate for both. Though such exclusion was defined by 1400, it was not universally agreed, and though the Council of Canterbury and the Council of Trèves made it unlawful to bury a woman who had died in



childbirth until the foetus had been cut from her (Gilchrist and Sloane, 2005, 72), these rules were perhaps neither understood nor followed. Evidence in support of such disobedience include, in addition to the in-situ examples of foetuses within adult women, the significant number of foetal infants noted at St Martin's, Wharram Percy (Mays, 2007) and over twenty infant burials in an area at Castle Green, Hereford (Shoemith, 1980, 51). From the 13th century, a legal birth was dependent on the baby crying as midwives were known to falsely say a baby had been born alive to permit burial, and a royal license granted in 1389 to enclose the cemetery at Hereford Cathedral was partly to prevent nocturnal burials of unbaptised infants; one example of such a burial, encouraged by a midwife, is known to have also taken place in London towards the end of the 15th century (Orme, 2003, 126). Anxiety around the death and burial of infants who died during pregnancy or in childbirth, as well as their mothers, is evident; what is also evident is that the burials of women and infants, particularly those in an advanced state of pregnancy or who died during childbirth, were treated in burial in a much more sympathetic manner than the contemporary legislation demanded. Medieval accounts of babies buried in unconsecrated locations, such as pits or dung heaps (Finucane, 1997. 45, 46) are few, as are archaeological examples of such activities (Gilchrist, 2012, Appendix 14). The shared burial of adult women and perinatal infants is one variety of multiple burial in which the inferred relationship between the individuals can be supported archaeologically and historically.

Interpretation of the motives is difficult for the remaining examples. The question should be asked whether it is correct to attempt to infer relationships between those in multiple burials. Another question to address is why they contain such a high proportion of children. One interpretation is that such burials 'represent a specific mortuary treatment of children from different families' (Gilchrist and Sloane, 2005, 157), which if so, would suggest differential treatment for contemporary deaths of children in a community evident through attitudes of

appropriateness of the multiple burial rite by age. Eight double burials contained juveniles. Though it is again likely that some relationship in life existed between them, such as siblings, cousins or friends, there is little evidence to support such interpretations. Examples from other sites, such as the burial of two children aged 6-7 years and 8-9 years at St Helen-on-the-Walls, Aldwark, York demonstrates sibling burial occurred elsewhere, indicated by the two possessing shared characteristic osteological features (Dawes and Magilton, 1980, 11, 87, Pl. IIc). Similarly, a double burial of two children aged 4 and 6 years was noted at the medieval church and cemetery at Crowland Road, Haverhill, Suffolk, in an area interpreted as a family group of burials (Murray, 2001). The consecutive double burial from St Peter's, Leicester, where the grave of an adolescent was opened to allow the burial of a child, may tentatively be interpreted as the burial of two related individuals. Positioning of juveniles hand-in-hand has been observed elsewhere. Four individuals within two double burials from excavations at Crowland Road, Haverhill, Suffolk, were placed in similar positions; firstly, a male adult and an older adolescent with adjoining hands clasped together, and a middle-aged female adult and a juvenile with their adjoining arms overlaying each other (Murray, 2001).

More problematic are reasons for the burials of adult women and non-foetal juveniles, adult males and juveniles, or multiple burials of adult individuals, who may have been related biologically, such as a sibling relationship, or socially through marriage. Perhaps the social responsibility of women or men as parents/carers was one of the roles being represented. Examination of congenitally missing teeth and spinal abnormalities suggested a genetic relationship between the adult male and child buried together in the nave at St Andrew, Fishergate; others buried in this location also possessed the same traits which were used to infer an area of family burial (Stroud and Kemp, 1993, 158). Scientific techniques, such as DNA analysis, may have potential to investigate motivations for some associations, such as father and child, but not others, such as stepfather and child, or husband and wife. Though the

quintuple burial of two older adult males and three children from St Peter's, Barton-upon-Humber has parallels, the relationships of those within similar examples are also unknown. At Ormesby St Margaret, Norfolk an older adult male, a child aged 5-6 years and an infant aged 2 years were buried within the same grave. Dated to the early 11th-late 14th century, the bodies were arranged with the adult male's head to the south of the grave, the infant placed above the adult's right shoulder while the child was positioned over the right chest and shoulder of the adult, close to the infant (Anderson and Wallis, 2009, 7-8). Another similar 14<sup>th</sup> century example from St Mary Merton, Surrey, of two adult males and a child buried in unconventional positions, has been interpreted as a result of deaths from famine or plague (Gilchrist and Sloane, 2005, 157). If deaths were caused by accident, disease or famine, those within multiple burials may not have been related in any way other than members of the same community or parish, with their manner of death the motivating factor, such as fear of contagion or shared 'bad deaths'. The unconventional arrangement of the corpses adds to the noted unusual nature of their burial. Without genetic testing and other sources, such as explicit written records, only through the physical placement of the bodies in the grave can the motivating relationships for multiple burials be suggested.

The available historical and religious context aids greater discussion, and explanation, of medieval multiple burial practice. Death was not seen as the end, with the afterlife represented in art and theology as a continuation of the life course. This may explain the joint burial of individuals. During the high-late medieval period, children who had not reached puberty were viewed as not in possession of the mental and physical capacity of adults (Orme, 2003, 122). This may be a reason why those dying aged 12 years or younger are disproportionately buried with at least one other individual.

That multiple burials of all types have been observed throughout the medieval period does not suggest that particular trends were introduced or developed. This is in contrast to burial

furniture and burial by location. It may be concluded that multiple burial was an option more likely chosen due to the type of death (such as maternal and infant mortality) or the event of death (for example, from disease or an accident) rather than factors such as age or status. Where no evidence for consecutive burial is suggested the deaths are likely to have occurred within a short timeframe. For examples of consecutive burials, that the deaths occurred some greater time apart suggests different motivations for shared burial. Such superimposed burials, observed in cemeteries of all types have been interpreted as ‘showing an emerging desire for burial with a loved one’ (Gilchrist and Sloane, 2005, 158). Though this is likely to have been a motivation for the contemporary burial of individuals in a shared grave, that significant time had elapsed between the deaths of those within consecutive burials, enough in one case for decomposition to be advanced, suggests that the impetus for multiple burial on occasion may have been greater for individuals who died some time apart.

It can be concluded that age was an important factor influencing multiple burial, as suggested and supported statistically for the overrepresentation of infants and children, though not the sole motivation. Multiple burials may be interpreted as pararituals, following Gilchrist’s definition of such rites as ‘complementary action[s] that enhanced the funeral liturgy and encouraged the active role for the family in rites of death and mourning’ (Gilchrist, 2012, 201). It is tempting to suggest that multiple burial was for the benefit of both the burying population, who decided to group individuals in death for their journey in the afterlife, perhaps as an aid towards dealing with their anxiety and grief, and for the dead themselves as a representation of the relationships they experienced in life.

## **Children and burial location in medieval England**

### *The northern churchyard*

Bias in favour of burying children and women in the northern half of the churchyard during medieval period can only be demonstrated for St Martin's, Wharram Percy, both statistically and proportionally, when all phases were considered together. Differences by age and sex were observed; at Wharram Percy, bias was focused on children aged 7 years or younger, specifically infants aged 0-1 years. Examination of the entire burial populations at both St Peter's, Barton-upon-Humber and St Peter's, Leicester did not suggest bias for burying children in this location. There was some suggestion of change over time occurring at St Peter's (Leicester), where bias was observed statistically for juveniles aged 8 years and older between 1150-1300 and those aged 16 years or older between 1300-1700. The lack of phasing at St Peter's (Leicester) may be concealing patterns or change over time that may once have existed but cannot be identified.

### *Zoning*

Favoured zones by age were identified. At St Martin's, Wharram Percy, the results for all phases together showed higher proportions of women of childbearing age buried in the north, the majority of children and infants in particular. Young adult women also tended to be buried in the northeast/east zone, perhaps linked to the high numbers of infants. Women dying at older ages were more likely to be buried west of the church; this pattern was also true for older children and adolescents. Bias in favour of middle aged to older adult males was suggested for the north, north-east/east, south-east and south zones, whereas younger male adults were more likely to be buried west of the church; the opposite observation to adult women. Burial in the

north-east/east zones and south-east zones is likely to represent areas of family burial. Similar interpretations can be suggested for St Peter's (Barton-upon-Humber) for the north-east zone, where the most probable interpretation for the variation in ages of the dead is that it was an area of burial for a subset of the community such as a family. Children were therefore included, but not the focus for burial. Patterning was also evident for other areas. Infants aged 0-1 year or adult women were less likely to be buried in the north-west zone than other areas. Instead, infant burials were more frequent in the north and south zones. In contrast, juveniles aged 4 years or older were overrepresented in the south-west zone. That many of these observations were statistically significant shows that these patterns characterised medieval burial. For St Peter's (Leicester), the analysis suggested few results indicative of bias, but those that are present favoured infants, and to a lesser extent, children. The north zone had fewer burials of infants and children, whereas the north-east and south-east zones had a higher proportion of infant burials than other areas. In comparison, the north-west zone produced more young adult burials than expected, especially of women and the south zone was similarly a focus for adult burial. However, the few statistically significant results show that overall, there was little differentiation observable in burial location for the medieval period at St Peter's (Leicester).

Examination of phases demonstrated further subtleties. Child burials at St Martin's interred between 950-1348 were either disproportionately or solely located in the north zone. They were absent from the north/north-east zone, with this area reserved for adults, particularly young adults and those sexed male. At St Peter's, Barton-upon-Humber, the north-west zone favoured for adults over juveniles throughout the period, though this became less explicit over time. Though juveniles, particularly infants, were not more likely to be located in the northern half of the churchyard, their overrepresentation in the north zone suggests this may have been an appropriate location for burial pre-1300, but not post-1300, suggesting this differentiation ceased over time. Lack of differentiation by age in the north-east and southeast zones pre-1300

suggests these were areas of family burial, also interpreted for Wharram Percy. Perhaps such patterning in rural churchyards resulted from smaller communities having greater freedom than in larger, urban cemeteries. These areas became more exclusive; 1150-1500 and post-1300, the north-east zone was favoured for burying infants and young and middle-aged adults, particularly young women, concurrent with the dilution of the domination of eaves-drip burial by infants. The south zone was highly favoured for burial of juveniles aged 0-12 years pre-1300 and 1150-1500, though this ceases towards the late medieval period, where the focus may switch to mature adult women. Further age-based choice of location linked to increasing age at death, less strict for adults, is evident from the high proportion of adolescent burials both pre- and post-1300 in the south-west zone. Post-1300, the south-west zone was also favoured for the burial of women. For the priory phase of St Andrew, Fishergate, burial in the eastern cemetery was reserved for male adults believed to be brethren; the single child burial may represent an oblate. The few female adults buried may have been socially or religiously-exceptional, such as patrons or nuns. Age-based differentiation in the southern cemetery focused on juveniles aged 10 years or younger and middle-aged or older adults, with older juveniles and young adults were more likely to be buried elsewhere. Age and sex-based differentiation was apparent for middle-aged and older women, whose burials were most frequent in the southern cemetery; the opposite for burials of young women. For St Michael's, Leicester, conclusions for age-based differentiation between 1250-1400 demonstrated bias favouring burying juveniles, particularly those aged 0-12 years, and women, especially if middle-aged, in the south-west zone. The western zone was dominated by adult burials. Little differentiation is apparent at St Peter's, Leicester for the majority of zones due to lack of phasing.

### ***Church burial***

At all sites, child burials in the church were less numerous than adults. This focused children aged 12 years or younger, in contrast to those of adolescents whose proportions are far more represented of expected values. However, they will still less likely to be buried within the church than adults. A similar picture is evident from St Andrew, Fishergate, where only older children and adolescents (aged 8-17 years) were buried within the church; there were no burials of infants or young children. The same finding is repeated for St Peter's (Leicester), with the rarity of both infant and child supported by statistically significant results.

Evidence from St Peter's, Barton-upon-Humber, the priory phase of St Andrew, Fishergate and St Peter's, Leicester may suggest that as the age of death of a juvenile increased, so did the likelihood that they would be buried in church, though this is also likely related to status. It also may explain why infants and young children were differentiated to a greater extent in churchyard burial. For adults, differentiation by age was suggested through a bias for the burial of younger and older adults buried in the church post-1300 at St Peter's, Barton-upon-Humber, whereas at St Michael's, Leicester, all adults were either young or middle-aged. Burial of female adults was shown to be more unusual at St Peter's, Barton-upon-Humber post-1300 and St Andrew, Fishergate, post-1195, which may suggest greater exclusivity in church burial for adults by sex developed in the high and later medieval periods.

### ***Eaves-drip burial and age***

Eaves-drip burial favoured juveniles, particularly infants, and was practiced throughout the medieval period. At St Peter's, Barton-upon-Humber, the high proportions of infants aged 0-1 year were statistically-significant throughout the medieval period, with results of lower



significance for those aged 0-3 years or 0-12 years. Eaves-drip burial was also favoured for women, though only statistically-so between 1150-1300. The trend was most explicit pre-1300, but also practiced post-1300, though more variation in the ages suggests a dilution of exclusivity or preference for infants and children. Similar results were observed at St Peter's, Leicester, where analysis was only possible for the medieval period in general, with bias again for juvenile burials that was most explicit for infants, and for adults, for women over men.

### *Clustering and age*

Examples of clustering suggest burial of related individuals together, interpreted as indicative of family burial, evidenced by the variety of ages of those represented.

### *Locations of furnished and multiple burials*

Zoning of burials with furniture at St Martin's, Wharram Percy was noted in privileged areas south-east and north of the church. Furniture recovered north of the church, especially stone furniture, suggests anxiety for differentiation for juveniles and women. This was observed when all burials were considered together and for phased examples. Multiple burials were either located in the north zone or south-east zone. Both are probably indicative of the burial of related individuals, though the two examples south of the church were within a group interpreted as an important family, suggesting the use of space to show status. At St Peter's, Barton-upon-Humber, examination of the entire burial population suggested a bias for differentiation via furniture within the north-west and north-east zones, the latter having been interpreted as an area of family burial or differentiation over multiple generations. Greater indication of variation by location was produced from the analysis of individual phases.

Locations of furnished burials suggests a privileging of burials in the church, north-east and south-east zones pre-1300 with shared types between burials of 950-1150 suggesting related individuals. The majority of multiple burials and burials with stone furniture were in the northern churchyard. That these practices could have been chosen irrespective of material wealth or status, including many objects recovered, may suggest a desire for greater differentiation outside the church and particularly in the north cemetery. Burial 1150-1500 demonstrated continued favouring of furniture within graves in the church and the north-eastern and south-eastern zones, though an increase in furnished burials to the south and south-west suggests differentiation by location was becoming diluted. The observation of the furnishing of graves with items from the local or domestic environment continues in the north-west and north zones. After 1300, a shift in locations of graves with furniture is apparent; though less frequent, they are now typically located in the church and north-west, south and south-west of the church. The decreasing use of furniture in the later medieval period may have caused types to be used in infrequent displays of status rather than representative of social or religious attitudes. This may also be suggested at St Andrew, Fishergate. Bias in the use of furniture by location was most obvious for graves within the church or priory, in particular for stone coffins and lined graves; that all of the multiple burials were located in the nave may also suggest status was a motivation or facilitated shared burial, also seen through the location of multiple burials within the church of St Michael's, Leicester. Here, the use of furniture during all periods and especially 1250-1400, both by type and number, was concentrated in the western zone, in contrast to St Peter's, Leicester, where use of furniture was greatest in the church, south, south-east and church zones and to a lesser extent north-west of the church. That the greatest variety was noted within the north-west and south-east zones may suggest a strong desire for differentiation within these areas. That the majority of multiple burials were within the north-west zone suggests shared burial was another mechanism of such differentiation.

Dated examples of furniture, such as the early medieval charcoal and stone burials south of the church and the late medieval ash burials within the church, further suggests display of furniture types associated with related individuals.

### ***Burials unusual by location***

Such burials occurred in prominent places, as reburials or beyond the limits of the cemetery. Close to the north-east chancel at St Peter's, Barton-upon-Humber was an early burial, originally of a coffined older child or adolescent, interpreted as a shrine burial. Of a similar period was the reburial of a young adolescent in a wide grave east of the church of St Andrew, Fishergate. Further reburials were identified at St Peter's, Barton-upon-Humber; a one year old infant in a ditch between 950-1150 and a young adult male between 950-1300. Other unusual locations of burial were a possible adult male buried beyond the boundaries of the cemetery of St Peter's, Barton-upon-Humber between 950-1150 and an unphased burial at St Peter's, Leicester, of a middle-aged or older adult within a coffin in a demolished structure.

### ***Observations***

The investigation has demonstrated appropriateness of burial location for individuals of different ages. Variation between the sites suggests local trends, rather than a regional or national rule. Commonalities can be identified through eaves-drip burial, which biases children but particularly infants, and zoning in the churchyard, which are similar by the ages of the juveniles differentiated. Infants received the most differentiation, followed by children, with those aged 0-12 years generally excluded from areas of adult burial and the church. Adolescents were more likely to be buried in zones characterised by burials of adults, including the church,

perhaps as a result of their developing social and economic age that was increasingly akin to adults than children.

Zoning in the medieval period is concluded as representing community-level choices that favoured social and family identity. When individuals of a similar age at death, observable as an osteological age but likely indicative of decisions based on social, developmental or cognitive age, are grouped together, whether close to the church or in a particular churchyard zone, this is suggestive of the burying community, both the immediate family and the wider parish community, possessing a joint understanding of patterning and appropriate locations for burial with this group-agency a conscious choice. The basis for the zoning of burials of similar ages is likely to be linked to the deceased's social identity and position. Children who knew each other in life, such as siblings or friends, and shared experiences, were part of a distinct social group within the community, recreated spatially in death.

The identification of burials of people of a variety of ages in close association and/or with shared furniture or osteological traits is indicative of the burial of related individuals. The relationships may have been biological or social, and were represented in burial through the expression of this social identity and any appropriate status. This suggests a further impetus affecting choice of burial location was family. For those of higher status, identified in clusters north-east of the church at St Peter's, Barton-upon-Humber, north-east and south-east of St Martin's church, Wharram Percy, west and north at St Michael's, Leicester and south and south-east at St Peter's, Leicester and within all five churches, family identity and relationships are represented and replicated past, present and future. Examples dating to the beginning of the period suggest explicit burial actions demonstrating patronage or ownership, through the privileging of male burials. Such concentrations also included women and juveniles. The burial of family members who died as children in these locations may represent anxiety and loss by the family at the failure of their offspring to live to adulthood as mature family members. Either

way, such family clusters of burial, and others which are likely to have existed but cannot be demonstrated through furniture and may be represented through aligning or intercutting graves, suggests group identity was another factor influencing burial location.

Another possible motivation is that patterning of juvenile burials by age occurred at times of increased mortality, such as disease or famine. This may suggest the creation of a coping strategy for the greater losses of the vulnerable or a folk practice used by the majority of the parish population, representative of anxiety and duties of care by the mourners. This may suggest family burial was more likely during periods of normative death rates, with the deceased buried in the locations, remembered or marked, of predeceased family members. It may also suggest that differentiation by location was reserved for leading families within the parish, with a larger area available for the burial of the majority who developed their own mechanism of differentiation through areas of appropriate burial by age.

What can be concluded is that the landscape of the churchyard was understood and ordered by contemporary populations, and though this may have changed over time leading to variations in trends rather than exclusivity of practice, the general trends, including those influenced by age, indicate that the locations of burials were known, remembered and considered consciously for new burials. This reinforced temporal links of family and community. Both relationships in life between individuals and relationships between predeceased members of their community, by social relationships such as shared age or family experiences, were replicated and reinforced over generations throughout the medieval period. Dilution or change in trends over time suggests that, as the developing religious context affected the use of burial furniture to show differentiation, so it may have affected local and community trends of differentiation through locations of burials. Communalities of ages of individuals most differentiated in burial location, namely infants and children together and adolescents increasing alongside adults, demonstrates individuals of differing ages and within different stages of the life course possessed an age-

based social identity that could, along with other factors, determine the location of their graves. The purpose of such action is likely to be indicative of a continuation of the community of the living into the community of the dead, ordered by age and/or family, across generations, with shared identities resulting in shared burial location. This ordering of the churchyard is indicative of a desire for continuing temporal and social links, particularly for the young and vulnerable, developed as a coping strategy for both the benefit of the living mourners and those already deceased.

## **Conclusion**

Though the analysis has shown that the burials of adults, particularly men, could possess greater differentiation than juveniles, the concentration of certain types of differentiation, such as appropriate zoning and furniture, is demonstrated to a greater extent for infants and children than older individuals. Furniture types are typically objects sourced from the local domestic environment or landscape and a greater propensity for stone furniture. Preferred burial zones were eaves-drip areas, especially for infants, and higher concentrations of infants and children in specific regions of the churchyard, with adolescents more likely to be buried with adults. That age was a determining characteristic in the use of multiple types of burial furniture, burial with another individual and choice of burial location demonstrates that the thesis' aims have been addressed. That this was most true for infants and children, and to a lesser extent for adolescents, indicates that contemporary populations were referencing age-based identities for burial of the young. These social and religious attitudes, as indicated through historical sources, resulted in age-based social attitudes that affected burial practice. Sympathetic, complementary funerary rites were used on a family and community level by the living for the benefit of the deceased and allowed mourners an active role in the burial rite. The variation observed

indicates the fluid and reactive nature of such local burial trends, both by site and chronologically.

As others have done previously using a smaller range of burial types, I have identified a transitional stage around the ages of 1 year and 12 years that was referenced for burial in both the later Anglo-Saxon and medieval periods. I therefore agree with the body of existing knowledge that the youngest members of medieval parish communities were treated differently in burial based on their age at death, though to a far greater extent than previously supposed. However, I have observed little evidence to support narrower transitional stages, such as around 7 years, and instead favour rites linked to a social transition around 12 years. Though previous studies have demonstrated bias in the provision of objects and zoning of burials, this comprehensive and in-depth analysis has brought complementary studies together to demonstrate how widespread and significant such practices were. That discussion of the entire medieval burial populations of each site has repeatedly shown that these practices occurred, often to statistically significant levels, also shows that they were widespread chronologically. Though the method of differentiation may have changed over time, that the defining ages were the same indicates the replication of specific burial practices for infants, children and adolescents throughout the period.

Using the age-band methodology, based on contemporary historical sources that classified age stages from observed characteristics of living juveniles, it can be concluded that juveniles were conceptualised via an age identity that was understood during life and referenced in burial after death. Appropriate burial treatment could refer to attitudes such as perceived innocence and vulnerability, in the case of infants, and the subsequent development of beneficial practices. For those aged 12 years or younger these referenced social age and shared experiences, whereas for adolescents their developed social and economic position was demonstrated through their increasing inclusion within adult burial areas. Another transition may be suggested for

adolescents on the cusp of adulthood, though less supporting evidence was noted. That infants aged 0-1 year were most in need of special treatment and differentiation through burial is indicative of greater social and religious anxiety regarding their deaths that resulted in the development of burial practices within, and tolerated by, the contemporary Christian framework. The further explicit bias in burial for juveniles aged 12 years or younger demonstrates that older infants and children were also conceptualised differently to adolescents and adults and also received differentiation or special treatment through socially-developed folk practices. The conceptualisation of such age-groups as different is influenced by their stage in the life course, characterised by their social, physical and cognitive development. That this differentiation ceases around 12 years indicates that older juveniles were understood as in possession of a differing social identity. Related to their differing stage in the life course, with greater social, physical and cognitive development, along with a social and economic identity more akin to adults than to infants or children, adolescents in death were in less need of differentiation.

Such differentiation was occurring on multiple levels. The placement of burials of similar age within the geography of the churchyard suggests social organisation in life was symbolised through ordering in death. This conscious reaction occurred on a community level by the mourning population based on determinative active social identities. Specific burial locations were known and understood by a local community comprised of multiple familial, social or economic relationships. In contrast, differentiation through furniture and/or shared graves, are concluded as intimate burial practices. Occurring during the placement of the corpse(s) in the grave, though such actions are repeated within the graves of individuals of different ages and/or sexes, across spaces and spheres of burial, they are suggestive of folk practices on a family level; this is further suggested by clustering of burials with shared furniture. That not all individuals had furniture or were accompanied in burial may be indicative of special strategies



developed for particular persons as a result of temporal quirks, such as the deaths of individuals within a short time frame, the shared death-event of multiple individuals or particular ages of individual for which special treatment was especially appropriate. The requirement and reciprocal benefits of intercessory help from the living for the benefit of the dead during this period is well known. This study has demonstrated the medieval use of complementary burial practices that allowed the living to aid the dead, while both receiving social and spiritual comfort, and take control over the religious act of burying their dead. More specifically, such practices provide an insight into contemporary social views of infants, children and adolescents from their treatment within burial.

This study has shown that previous identifications of differentiation in the burial of children (Chapter Three) provide an incomplete picture. The stressing of the ages of children occurred to a greater extent that has been hitherto supposed. It has shown that in addition to included objects, burial furniture, both in frequency of use and type, was used in reference to a child's age at death. Many of the motivations for this new observation may be the same, but that a wider vocabulary existed for elaborating the graves of children cannot be ignored. A comparable language of highlighting, or at least associating, the burials of children by location has also been demonstrated. Though by no means universal, taken as a guideline rather than a rule, the results show that age was a dominant reference on the burial of children during the medieval period. The benefits of using a methodology in part developed from contemporary social and cultural conceptualisations of juveniles has also been confirmed. This prevented the reduction of medieval children to their biological ages via osteoarchaeology and instead ensured an approach that sought to include more humanistic understandings. That the age-bands used both osteological and cultural definitions of age facilitated a more comprehensive and sympathetic analysis of children and child burial, and one that appears to have been successful.

The implications of these interpretations to existing knowledge are significant. The research adds to a growing corpus of work which demonstrates the social position of and attitudes to medieval juveniles and how they were conceptualised and treated. The identification that social and physical developmental age-stages recorded in historical sources can be observed in the archaeological record through burial treatment confirms that such stages were more than allegorical. The consistency of the ages at death that influenced burial trends also suggests such attitudes were widespread and understood, suggesting a socio-religious-folk framework influencing burial practice that can be identified archaeologically. Using five sites and concentrating on the high and later medieval periods, as well as demonstrating the variation and endurance of burial practices from the later Anglo-Saxon period, commonalities in differentiation suggest an ordering of burial by the identities of the deceased. These social identities were present during life and replicated after death through burial. Age was dominant, with social anxieties related to age at death for infants and children reflecting the greatest overall differentiation. Adolescents, at a further stage of the life course and increasingly within an adult social and economic sphere, were conceptualised as different to younger juveniles, with this period of transition to adulthood often reflected through more ambiguous burial, such as less investment of resources and differentiation by location. Such actions of the burying, presumably adult, population reflect attitudes to infant, child and adolescent deaths, and by consequence, to them during life. Concepts of appropriate burial by death (and life) event can be observed directly through the burial of related individuals in multiple burials, with anxieties further suggested through clustering of infants and children. Folk strategies developed in relation to social and age-based identities suggest the identification of characteristics specific to juveniles. The identification of age cohorts of juveniles and transitions between stages replicated through the funerary record demonstrates sympathetic social and religious conceptualisations and contemporary attitudes to juveniles by age. Observed differentiation is

therefore representative of conscious, complementary actions by medieval populations as a result of sympathetic attitudes to the deaths and identities of infants, children and adolescents.

### **Recommendations for future work**

Several areas of focus for continuing investigations into the burial of and attitudes to children in the medieval period can be suggested as a result of this work. The first would be to undertake a comparable project, perhaps using new sites or a larger dataset, in which the same methods of osteological analysis are used for the assessment of age for skeletal remains. The multiple methodologies of the case studies used here resulted in differing chronological ages, and fitting them into one age-based methodology was problematic. Though I believe I overcame this obstacle, it may have been possible to focus on variation by age to a more refined level if all burials had been aged using the same methods.

The second would be better or increased carbon dating of burials that exhibit differentiation in practice to better investigate change over time. Though the results show that variation by age occurred throughout the medieval period, the lack of dating at many of the sites did not allow for a detailed investigation to whether or how burial practices developed between the 11<sup>th</sup> and 16<sup>th</sup> centuries. This could be aided by identifying associated horizons of burials, believed to be generally contemporary, and dating a sample from them. The cost would not be huge and the benefits, potentially, could be great. Better dating would also allow for statistical analysis that considers larger groups of phased burials and therefore may be more likely to support perceived patterns.

My other recommendations focus on new topics for approaching and understanding child burial in the medieval period. Now that it has been shown that age was a factor, the next step should be to consider in-depth the reasons for such variation. This should attempt to ascertain whether attitudes to dead children, such as loss and grief, can be supported as motivations for manner of burial. Though it was attempted to infer the presence or influence on emotions in medieval burial during this project, limited success was achieved. Alongside emotional responses, the influence of other factors, such as status and health, and how they may interplay with age, should be included. Though identifying these influences and assessing their level of influence will be complex, contemporary historical sources, included personal writings, perhaps of the later medieval or early modern period, have potential to be of great benefit. This study has demonstrated the wealth of information available and how useful it can be in accessing how medieval people understood and conceptualised children. Such sources may have the potential to be useful in approaching less tangible attitudes.

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# **Children and child burial in medieval England**

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## Section One: Burial furniture

Statistically significant proportions are shaded.

### 1.1: St Martin's, Wharram Percy

Table A1: Number of individuals of age bands observed with burial furniture; all phases

Age bands	Cists/stone coffins	Coffins	Ear muffs	Markers	Objects	Organics	Stone covers	Stones	Number with burial furniture
A		1							1
B	2	2				1	1		6
C		5	2		2	1		2	10
D	2	7			1	2		2	13
E	1	10	3		1			1	14
F					1				1
GH		1							1
H		6	2	2	5			4	17
HI			1			1		1	3
I		6	1		1		1	2	8
IJ		1	1		1			1	3
J	1	6	1		2			4	12
K		1			1		1	1	2
L	1	2		1	1	2	1	1	6

Table A2: Proportion of individuals of age bands observed with burial furniture (highest to lowest); all phases

Cists/stone coffins	Coffins	Ear muffs	Markers	Objects	Organics	Stone covers	Stones
B	K	E	H	K	HI	K	K
D	E	HI	L	F	L	I+L	J
L	I	C		H	D	B	HI
E	C	IJ		C	C		H
J	D	H		IJ	B		C
	J	I		J			I
	H	J		I+L			IJ
	GH			E			D
	L			D			E
	IJ						L
	A						
	B						

Table A3: Number of individuals of age bands observed with burial furniture; 950-1066

Age bands	Cists/stone coffins	Coffins	Markers	Objects	Organics	Stone covers	Number with burial furniture
D		1					1
HI					1		1
J	1						1
K				1		1	1
L			1			1	2

Table A4: Number of individuals of age bands observed with burial furniture; 950-1348

Age bands	Cists/stone coffins	Coffins	Ear muffs	Objects	Organics	Stone covers	Stones	Number with burial furniture
C		1						1
D					1			1
E		2	2					3
H		2	2	1			3	6
HI			1					1
I		3				1	1	4
IJ			1	1			1	2
J		1	1	1			4	5
L	1	1		1	1			2

Table A5: Proportion of individuals of age bands observed with burial furniture (highest to lowest); 950-1348

Cists/stone coffins	Coffins	Ear muffs	Objects	Organics	Stone covers	Stones
L	C	E	IJ	D	I	J
	E	HI	L	L		IJ
	I	IJ	H + J			H
	H	H				I
	L	J				
	J					

Table A6: Number of individuals of age bands observed with burial furniture; 1066-1348

Age bands	Coffins	Ear muffs	Markers	Objects	Stones	Number with burial furniture
C	1	1		1		3
D	2				1	2
E	2					2
H	2		2	3	1	8
HI					1	1
I	1	1				1
IJ	1					1

Table A7: Number of individuals of age bands observed with burial furniture; 1066-1540

Age bands	Coffins	Objects	Stones	Number with burial furniture
H	1			2
I	1	1	1	2

## 1.2: St Peter's, Barton-upon-Humber

Table A8: Number of individuals of age bands observed with burial furniture; all phases

Age bands	Boards	Clay-filled coffins	Coffins	Ear muffs	Linings	Objects	Organics	Pillow stones	Shaped grave	Stone cover	Stones	Number with burial furniture
A												
B	4	1	47	2	1	7	1	1				55
BCD			3	3								3
C		1	16			1		1			1	20
D	2	1	42			4		1				46
DEF												
E			28			3						30
F			14									14
G			18	3		2		1				20
H	2	1	147	16	2	18	2	6		1	2	165
I	1	1	16	1		3						21
IJ	2		108	10	2	19	3	3	1		3	121
J			6									6
K			1									1
L	3	1	202	7		7			1			207

Table A9: Proportion of individuals of age bands observed with burial furniture (highest to lowest); all phases

Boards	Clay-filled coffins	Coffins	Ear muffs	Lining s	Object s	Organic s	Pillo w stones	Shape d grave	Ston e cover	Stone s
I	I	K	BCD	IJ	IJ	IJ	G	IJ	H	C
B	C	J	G	H	I	H	H	L		IJ
D	D	IJ	H	B	H	B	C			H
IJ	B	H	IJ		G		IJ			
H	H	G	I		B		D			
L	L	I	B+L		D		B			
		D			E					
		L			C					
		E			L					
		B								
		C								
		F								
		BCD								

Table A10: Number of individuals of age bands observed with burial furniture; 950-1150

Age bands	Boards	Clay-filled coffins	Coffins	Ear muffs	Linings	Objects	Organics	Pillow stones	Stones	Number with burial furniture
B	1	1	16			2				17
BCD			2							2
C		1	3	3				1		6
D	1	1	7			1		1		8
E			10							10
F			1							1
G			10	2		1		1		11
H	1	1	61	13	2	6		5		67
I		1	7			1				8
IJ	2		52	7	1	11	2	2	2	59
J			2							2
L	2	1	72	3		4				74



Table A11: Proportion of individuals of age bands observed with burial furniture (highest to lowest); 950-1150

Boards	Clay-filled coffins	Coffins	Ear muffs	Linings	Objects	Organics	Pillow stones	Stones
D	C	J	C	H	IJ	IJ	C	IJ
B	I	H	H	IJ	I		G	
IJ	D	E + G	G		H		D	
L	B	IJ	IJ		G		H	
H	H	L	L		D		IJ	
		D			B			
		B			L			
		F						
		I						
		BCD						
		C						

Table A12: Number of individuals of age bands observed with burial furniture; 950-1300

Age bands	Boards	Coffins	Ear muffs	Linings	Objects	Pillow stones	Shaped grave	Stone cover	Stones	Number with burial furniture
B	3	16	2	1	1	1				18
BCD		1								1
C		6			1					6
D		18			3					20
E		5			2					6
F		5								5
G		4	1							4
H	1	38	3		2			1	1	41
I		3			1					4
IJ		29	3		3		1		1	31
J		3								3
K		1								1
L		44	4		2					45

Table A13: Proportion of individuals of age bands observed with burial furniture; 950-1300

Boards	Coffins	Ear muffs	Linings	Objects	Pillow stones	Shaped grave	Stone cover	Stones
B	J	G	B	I	B	IJ	H	IJ
H	IJ	IJ		E				H
	F	B		D				
	H	H		IJ				
	D			C				
	G			H				
	I			B				
	BCD			L				
	L							
	B							
	E							
	C							

Table A14: Number of individuals of age bands observed with burial furniture; 1150-1300

Age bands	Boards	Coffins	Ear muffs	Linings	Objects	Organics	Pillow stones	Shaped graves	Stones	Number with burial furniture
B		5				1				6
C		1								1
D	1	4								5
E		1								1
H		11			5	1			1	16
I			1							1
IJ		9		1	2		1			9
L	1	6						1		7

Table A15: Proportion of individuals of age bands observed with burial furniture (highest to lowest); 1150-1300

Boards	Coffins	Ear muffs	Linings	Objects	Organics	Pillow stones	Shaped graves	Stones
D	H	I	IJ	H	H	IJ	L	H
L	IJ			IJ	B			
	D							
	B							
	C							
	L							
	E							

Table A16: Number of individuals of age bands observed with burial furniture; 1150-1500

Age bands	Boards	Coffins	Objects	Pillow stones	Number with burial furniture
B		2	2		4
C		2			2
D		4			4
E		7			7
F		5			5
G		1			1
H		11	2	1	14
I	1		1		2
IJ		9			9
L		24			24

Table A17: Proportion of individuals of age bands observed with burial furniture (highest to lowest); 1150-1500

Boards	Coffins	Objects	Pillow stones
I	IJ	I	H
	E	B	
	F	H	
	H		
	C		
	L		
	D		
	G		
	B		

Table A18: Number of individuals of age bands observed with burial furniture; 1300-1500

Age bands	Coffins	Objects	Organics	Stones	Number with burial furniture
B	1				1
C				1	1
E	1				1
G		1			1
H	9	2			9
I	2				2
IJ		3	1		6
L	3	1			4

Table A19: Proportion of individuals of age bands observed with burial furniture (highest to lowest); 1300-1500

Coffins	Objects	Organics	Stones
I	G	IJ	C
H	IJ		
E	H		
IJ	L		
L			
B			

Table A20: Number of individuals of age bands observed with burial furniture; 1300-1700

Age bands	Coffins	Objects	Organics	Number with burial furniture
B	6	2		8
C	4			4
D	9			9
E	4	1		5
F	3			3
G	3			3
H	17	1	1	18
I	4			4
IJ	7			7
J	1			1
L	53			53

Table A21: Proportion of individuals of age bands observed with burial furniture (highest to lowest); 1300-1700

Coffins	Objects	Organics
J	B	H
I	E	
H	H	
G		
L		
C		
D		
IJ		
B		
E		
F		

### 1.3: St Andrew, Fishergate, York

Table A22: Number of individuals of age bands observed with burial furniture; all phases

Age bands	Cists/stone coffins	Coffins	Ear muffs	Markers	Objects	Organics	Lining	Shaped graves	Number with burial furniture
C		1		1			1		3
F						1		1	1
H	1	1			4				5
I	4	3	1	1	4		2		15
J	1	1		1			1		4
L	1								1

Table A23: Proportion of individuals of age bands observed with burial furniture (highest to lowest); all phases

Cists/stone coffins	Coffins	Ear muffs	Markers	Objects	Organics	Lining	Shaped graves
I	C	I	C	H	F	C	F
J	J		J	I		J	
L	I		I			I	
H	H						

Table A24: Number of individuals of age bands observed with burial furniture; late 10<sup>th</sup> – 1195

Age bands	Coffins	Ear muffs	Markers	Objects*	Organics	Shaped graves	Number with burial furniture
C	1		1				2
F					1	1	1
H	1			2			3
I	2	1		1			4

\*One object noted in a multiple burial (3 individuals).

Table A25: Proportion of individuals of age bands observed with burial furniture (highest to lowest); late 10<sup>th</sup> – 1195

Coffins	Ear muffs	Markers	Objects*	Organics	Shaped graves
C	I	C	H	F	F
I			I		
H					

\*One object noted in a multiple burial (3 individuals).

Table A26: Number of individuals of age bands observed with burial furniture; 1195 - late 16<sup>th</sup> century

Age bands	Cists/ stone coffins	Coffins	Linings	Markers	Objects	Number with burial furniture
C			1			1
H	1				2	2
I	4	1	2	1	3	11
J	1	1	1	1		4
L	1					1

Table A27: Proportion of individuals of age bands observed with burial furniture (highest to lowest); 1195 – late 16<sup>th</sup> century

Cists/ stone coffins	Coffins	Linings	Markers	Objects
I	J	C	J	H
L	I	J	I	I
H		I		
J				

#### 1.4: St Michael's, Leicester

Table A28: Number of individuals of age bands observed with burial furniture; all phases

Age bands	Coffins	Objects	Pillow stones	Shaped grave	Stones	Number with burial furniture
BC	2		1			2
DE	1	1		1	1	3
FG		1				1
H	1	2				3
HI	1	2				3
I		2			1	3
K		2				2
L		1				1

Table A29: Proportion of individuals of age bands observed with burial furniture (highest to lowest); all phases

Coffins	Objects	Pillow stones	Shaped grave	Stones
BC	K	BC	DE	DE I
DE +	L			
H	FG			
HI	H			
	HI			
	DE			
	I			

Table A30: Number of individuals of age bands observed with burial furniture; 1250 - 1400

Age bands	Coffins	Objects	Pillow stones	Shaped grave	Stones	Number with burial furniture
BC	2		1			2
DE	1			1	1	2
H	1	2				3
HI	1					1
I		1			1	3
K		1				1
L		1				1

Table A31: Proportion of individuals of age bands observed with burial furniture (highest to lowest); 1250-1400

Coffins	Objects	Pillow stones	Shaped grave	Stones
BC	L	BC	DE	DE I
DE	K			
H	H			
HI	I			

Table A32: Number of individuals of age bands observed with burial furniture; 1400-1500

Age bands	Objects	Number with burial furniture
FG	1	1
HI	2	2
K	1	1

Table A33: Proportion of individuals of age bands observed with burial furniture (highest to lowest); 1400-1500

Objects
FG
K
HI

### 1.5: St Peter's, Leicester

Table A34: Number of individuals of age bands observed with burial furniture; all phases

Age bands	Boards	Coffins	Ear muffs	Linings	Objects (report)	Objects (context sheets)	Pillow stones	Shaped graves	Stones	Number with burial furniture
ABC						1				1
BC	7		2	3		1			2	11
DE	8	1	6	10	2	17			3	32
FG	5		4	1	2	11	1		1	18
FGH	2				1	1				2
FGHI	1	1			2	4		1		7
H	4		2	2	2	12			1	18
HI	3		2	2	3	8			1	14
I	21		5	15	7	35			4	60
IJ	6	2	4	6	7	23		1	1	38
J	1					5				5
K	1		1	2	2	9				11
L		2		2						4

Table A35: Number of object types for each age band: all phases

Age bands	1 Dress	2 Ceramics	3 Natural	4 Religious	5 Coins	6 Beads/jewellery	7 Other	Number with objects
ABC					1			1
BC		1						1
DE	1	14	1			1	2	17
FG	2	4	1		1	2	2	11
FGH							1	1
FGHI	1	3				1		4
H		4					8	12
HI	3	2	1		1		4	8
I	2	24	6	2	3		10	35
IJ	3	15	4		2		8	23
J	1	1	1				2	5
K	1	6	2				3	9
<b>TOTAL</b>	<b>14</b>	<b>74</b>	<b>16</b>	<b>2</b>	<b>8</b>	<b>4</b>	<b>40</b>	<b>127</b>



Table A36: Objects by age band and object type; all phases

Database I.N.	Age band	Sex (if applicable)	Object type	Objects (context sheets)
3140	ABC	-	Coins	Coin (eroded)
3557	BC	-	Ceramics	Pottery - early medieval
3443	DE	-	Dress	Possible bronze pin fragment
3205	DE	-	Ceramics	Pottery
3243	DE	-	Ceramics	Pottery – green glazed
3315	DE	-	Ceramics	Pottery
3328	DE	-	Ceramics	Roof slate with hole
3439	DE	-	Ceramics	Pottery
3564	DE	-	Ceramics	Pottery
3565	DE	-	Ceramics	Pottery
3737	DE	-	Ceramics	Pottery
3845	DE	-	Ceramics	Pottery, inc. green glazed
3670	DE	-	Ceramics	Pottery
3892	DE	-	Ceramics	Pottery
4346	DE	-	Ceramics	Pottery
4260	DE	-	Ceramics, Natural	Pottery, CBM and animal bone
3632	DE	-	Beads/Jewellery	Ring
3395	DE	-	Other	Iron arrowhead
3660	DE	-	Other	Decorative mount
3346	FG	-	Dress	Cu buckle
4032	FG	-	Dress	Pin (shroud?), left shoulder
3314	FG	-	Ceramics	Pottery
3551	FG	-	Ceramics	Pottery
3765	FG	-	Ceramics	Pottery
4088	FG	-	Ceramics	Pottery – green glazed
4139	FG	-	Natural	Small stone near right elbow
4347	FG	-	Coin, Beads/Jewellery, Other	Coin, copper band and coffin furniture
3360	FG	-	Beads/ jewellery	Jet bead
3489	FG	-	Other	Lead object
3952	FG	M	Other	Cu object
3896	FGH	-	Other	Unclassified
3781	FGHI	-	Dress, Ceramics	Pin (shroud?) and decorated floor tile
3251	FGHI	-	Ceramics	Pottery
3321	FGHI	-	Ceramics	Pottery
3118	FGHI	-	Beads/ Jewellery	Ring
3392	H	M	Ceramics	Glazed, patterned floor tile at head
3738	H	F	Ceramics	Pottery
3855	H	-	Ceramics	Pottery – green glazed
4327	H	M	Ceramics	Pottery
3293	H	M	Other	Piece of slate over chest/under right arm
3337	H	F	Other	Piece of lead

3366	H	F	Other	Piece of iron
3388	H	F	Other	Iron object
3457	H	F	Other	Possible iron box lid with lettering
3893	H	F	Other	Iron object
4107	H	M	Other	Copper object
4374	H	F	Other	Lead weight
3297	HI	F	Dress	Pin
3415	HI	-	Dress, Ceramics	Cu wire belt and pottery
3599	HI	F	Dress, Other	Copper button, iron object
4390	HI	-	Ceramics, Natural	Pottery and animal bone
3139	HI	-	Coins	Coin (eroded)
3707	HI	F	Other	Copper or lead object
3887	HI	-	Other	Unclassified
4336	HI	-	Other	Roman trumpet brooch, right shoulder
3859	I	M	Dress	Cu hook/pin
3992	I	M	Dress, Coin, Other	Cu pin, coin in mouth and lead object
3133	I	M	Ceramics	Pottery
3214	I	F	Ceramics	Pottery
3255	I	M	Ceramics	Pottery
3302	I	M	Ceramics	Pottery
3358	I	M	Ceramics	Pottery
3393	I	F	Ceramics	Pottery
3546	I	M	Ceramics	Pottery and CBM
3630	I	M	Ceramics	Pottery
3641	I	M	Ceramics	Pottery
3754	I	F	Ceramics	Pottery
3760	I	-	Ceramics	Pottery
3772	I	-	Ceramics	Pottery
3899	I	M	Ceramics	Pottery
4061	I	F	Ceramics	Pottery – green glazed
4209	I	F	Ceramics	Pottery
4321	I	M	Ceramics	Pottery – glazed
4364	I	M	Ceramics	Pottery
3142	I	M	Ceramics, Natural	Tile at feet, surrounded by stones
3741	I	F	Ceramics, Natural	CBM and animal bone
3774	I	M	Ceramics, Natural	Pottery and animal bone
4268	I	M	Ceramics, Natural	CBM, Roman pottery and animal bone
4320	I	M	Ceramics, Natural, Coin	Decorated tile, flint scraper and Roman coin
3333	I	M	Ceramics, Other	Pottery, reused slate and slag
3867	I	F	Ceramics, Other	Pottery, painted wall plaster, iron object
4157	I	F	Natural	Animal (pig?) tooth on left hand, animal bones (poultry?) at throat

4352	I	F	Religious	Papal bulla
3964	I	M	Coins	Coin
3589	I	F	Other	Small, domed object on shoulder
3627	I	M	Other	Lead sheet
3662	I	M	Other	Lead window came fragment
3827	I	-	Other	Cu fragments
4308	I	M	Other	Cu object
4376	I	F	Other	Metal object
3408	IJ	M	Dress	Pin
3649	IJ	-	Dress, Other	Copper button, iron object
3758	IJ	M	Dress, Other	Copper button, iron object
3183	IJ	-	Ceramics	Pottery – large sherd between legs
3184	IJ	F	Ceramics	Pottery
3300	IJ	F	Ceramics	Pottery
3518	IJ	F	Ceramics	Pottery and opus signinum
3658	IJ	F	Ceramics	Pottery
3721	IJ	F	Ceramics	Pottery
3722	IJ	M	Ceramics	Pottery
4095	IJ	F	Ceramics	Pottery
4338	IJ	-	Ceramics	Pottery
4341	IJ	F	Ceramics	Pottery
3740	IJ	F	Ceramics, Natural	CBM and animal bone
4199	IJ	-	Ceramics, Natural	Clay pipe (intrusive?), animal bone
3401	IJ	-	Ceramics, Other	Pottery and a single bone skate
3991	IJ	F	Ceramics, Other	Pottery, CBM and copper fragments
3993	IJ	F	Ceramics, Other	Pottery, tile and a copper object.
4235	IJ	M	Natural	White pebble on chest – hands arranged in prayer
3870	IJ	F	Natural, Other	“Glazed” pebble by left shoulder, lead object on stomach
3311	IJ	M	Coins	Coin
4184	IJ	M	Coins, Other	Coin (Henry V silver penny?) and coffin furniture
4120	IJ	-	Other	Two unclassified objects
4294	J	M	Dress	Cu alloy pin
3312	J	F	Ceramics	Pottery around ribs
4350	J	M	Natural	Worked flint
3954	J	F	Other	Unclassified
4241	J	F	Other	Iron object
3834	K	-	Dress	Decorated pin
3182	K	-	Ceramics	Pottery
4098	K	-	Ceramics	Pottery

4158	K	-	Ceramics	Glass fragment
4373	K	-	Ceramics	Pottery
3763	K	-	Ceramics, Natural	Pottery, animal bone and disarticulated long bones over body
3305	K	-	Ceramics, Natural, Other	Pottery, animal bone, copper object between ribs and left arm
3852	K	-	Other	Unclassified
4136	K	-	Other	Decorative inlay fragment

Table A37: Objects mentioned in the report, by age band and object type; all phases

Database I.N.	Report I.D	Age band	Sex (if applicable)	Object type	Objects (report)
3395	306	D/E	-	Other	Iron arrowhead
3660	581	D/E	-	Other	Decorative mount
3346	256	F/G	-	Dress	Buckle
3360	270	F/G	-	Beads/jewellery	Jet bead
3896	1093	F/G/H	-	Other	Unclassified object
3781	702	F/G/H/I	-	Dress, Ceramics	Pin and a decorated floor tile
3118	27	F/G/H/I	-	Beads/jewellery	Ring
3457	374	H	F	Other	Possible iron box lid with lettering
4374	1574	H	F	Other	A lead weight
3297	206	H/I	F	Dress	Possible pin
3599	519	H/I	F	Dress, Other	Copper button and an iron object
4336	1536	H/I	-	Beads/jewellery	Roman trumpet brooch next to shoulder
3859	1055	I	M	Dress	Plain pin
3992	1186	I	M	Dress, Coin, Other	Cu alloy pin, coin in moth and a lead object
4320	1520	I	M	Ceramics, Nature, Coin	Three tiles (one decorated) under/near head (trauma), a flint scraper and a coin
4352	1552	I	F	Religious	Papal bulla
3589	509	I	F	Other	Small domed copper object
3662	583	I	M	Other	Leads window came
3867	1063	I	F	Other	Odd iron object
3649	570	I/J	-	Dress, Other	Copper button and an iron object
3758	679	I/J	M	Dress, Other	Copper button and an iron object
3401	312	I/J	-	Nature	Single bone skate
3870	1066	I/J	F	Nature	Seemingly glazed white pebble on left chest
4235	1435	I/J	M	Nature	White pebble on left chest
3311	220	I/J	M	Coin	Coin
4184	1383	I/J	M	Coin, Other	Coin and coffin furniture
3834	1030	K	-	Dress	Decorated pin
4136	1335	K	-	Other	Fragment of decorative inlay

(after Gnanaratnam, 2009; Table 7).

Table A38: Proportion of individuals of age bands observed with burial furniture (highest to lowest); all phases

Boards	Coffins	Ear muffs	Linings	Objects (report)	Objects (context sheets)	Pillow stones	Shaped graves	Stones
FGH	L	FG	I	FGH	J	FG	FGHI	K
I	FGHI + IJ	DE	DE	I	ABC		IJ	DE + I
FG	DE	IJ	L	FGHI	I			BC
J		H	IJ	K	H			FG + H
BC		I	H	H	FG			HI
DE		HI	BC	FG	K			IJ
H		BC + K	HI	HI	DE			
IJ			FG	DE	FGHI			
HI					IJ			
FGHI + K					BC			

Table A39: Number of individuals of age bands observed with burial furniture; 850-1100

Age bands	Boards	Ear muffs	Linings	Objects	Stones	Number with burial furniture
BC	1		2			2
DE	1		2	1		2
H	1					1
HI			1			1
I		1	3	3	1	3
IJ		1	2		1	2
K			1			1
L			1			1

Table A40: Number of individuals of age bands observed with burial furniture; 1200-1550

Age bands	Coffins	Linings	Objects	Number with burial furniture
DE	1			1
FG	1	1	1	1
FGHI	1			1
I		1	1	1
IJ		1		1
J			1	1
L	2			2

## Section Two: Multiple burials

Table A41: Multiple burials at St Martin's, Wharram Percy

Phase	Database I.D.	Age and sex	Position	Burial furniture
950-1066	2418; 2419	Female, 21-25 years; infant, 42-45 WIU.	'Foetus in situ'	-
950-1348	2545; 2548	Male, 40-50 years; child, 6 years.	Side by side	Stone cover (adult only)
1066-1348	2144; 2149	Female, 25-35 years; child, 4 years	Child alongside legs of adult	-
1066-1348	2185; 2190	Female, 25-35 years; infant, 30 WIU	Foetus between thigh bones of adult	-
1066-1348	2210; 2211	Male, 19-21 years; infant, 1 year	Side by side	Stones at the feet of adult
Unphased	2309; 2310	Infant, 45 WIU; infant, 35-36 WIU	Unknown	-
Unphased	2352; 2356	Child, possibly female, 7 years; infant, 9 months	Infant on chest of child	-
Unphased	2542; 2547	Child, possibly male, 12 years; infant, 0-1 year	Infant between or on legs of child	Ear muffs with child, both in a cist

WIU = weeks in utero.

Table A42: Multiple burials at St Peter's, Barton-upon-Humber

Phase	Database I.D.	Age and sex	Position	Burial furniture
950-1150	235; 236; 237	Infant, 0 years; infant, 0 years; female, 25-34 years	-	-
950-1150	700; 701	Female, 25-34 years; infant, 0 years.	-	Coffin, two ear muffs with the adult; two wands
950-1150	1226; 1227; 1228; 1229; 1230	Child, 8 years; male, 45+ years; male, 45+ years; child, 7 years; child, 12 years	Children on top of adults, limbs intertwined	-
950-1150	2008; 2009	Adult, unaged and unsexed; juvenile, 0-4 years	-	-
1300-1500	190; 191	Female, 25-34 years; infant, 0 years.	-	Coffin
1300-1500	204; 205	Adolescent, 15 years; child, 12 years	Side by side	-
1300-1700	309; 310	Female, unaged adult; infant, 7 months		-
1300-1700	1364; 1365	Female, 25-34 years; infant, 0 years.	-	



Table A43: Multiple burials at St Andrew, Fishergate, York

Phase	Database I.D.	Age and sex	Position	Burial furniture
Late 10 <sup>th</sup> century – 1195	2746; 2747; 2748	Female, 20-30 years; male, 20-30 years; male, 40-50 years	Female laid diagonally across both males	Fragment of decorated buckle plate, 10 <sup>th</sup> -14 <sup>th</sup> C
Late 10 <sup>th</sup> century – 1195	2768; 2776	Males, 20-30 years	Side by side	-
Late 10 <sup>th</sup> century – 1195	2777; 2782	Males, 20-30 years	2782 has arms around 2777	-
Late 10 <sup>th</sup> century – 1195	2779; 2780	Male, 40-50 years; male, 20-30 years	Side by side	-
Late 10 <sup>th</sup> century – 1195	2854; 2855	Males, 20-30 years	Side by side	-
Late 10 <sup>th</sup> century – 1195	2858; 2863	Males, 30-40 years	Side by side	-
1195 – late 16 <sup>th</sup> century	2806; 2811	Male, 50+ years; female, 40-50 years	Male laid over female	-
1195 – late 16 <sup>th</sup> century	2808; 2810	Female, 20-30 years; male, 30-40 years	Unknown	Iron knife with ivory handle, late 13 <sup>th</sup> -early 15 <sup>th</sup> C
1195 – late 16 <sup>th</sup> century	2829; 2834	Possible female, 40- 50 years; male, 40-50 years	Unknown	-
1195 – late 16 <sup>th</sup> century	2248; 2270	Child, 10-12 years; male, 30-40 years	Child over adult	-

Those shaded are among the blade injuries group.

Table A44: Multiple burials at St Michael's, Leicester

Phase	Database I.D.	Age and sex	Position	Burial furniture
1250-1400	4423; 4677	Female, 21-35 years; infant, 12-14 WIU	Foetus in abdomen of adult	-
1250-1400	4434; 4435	Female, 36-50 years; unsexed, 21-50 years	Consecutive; grave of unsexed adult opened for female	-

WIU = weeks in utero.

Table A45: Multiple burials at St Peter's, Leicester

Phase	Database I.D.	Age and sex	Position	Burial furniture
850-1100	3760; 3761	Unsexed, 36-50 years; unsexed, 36+ years	Side by side	Ear muffs with both, charcoal and stone lining
850-1100	3770; 3771	Unsexed, unaged adult; child, 4-12 years	Side by side	Charcoal lining
850-1190	4211; 4212	Child, 4-12 years; infant, 0-3 years	Unknown	-
Unphased	3139; 3140	Unsexed, 21-50 years; infant, 0-3 years	Unknown	Small eroded coin
Unphased	3229; 3230	Child, 4-12 years; unaged older juvenile, 4-20 years	Left arm of child overlies right arm of juvenile	-
Unphased	3506; 3507	Infant, 0-3 years; infant, 0-3 years	Unknown	-
Unphased	3638; 3639	Unsexed, 21-50 years; unsexed, 21-50 years	Unknown	-
Unphased	4031; 4032	Child, 4-12 years; adolescent, 13-20 years	Consecutive; side by side and hand of each touching	Possibly board and shroud pin with adolescent?
Unphased	4180; 4182	Unaged juvenile, 0-12 years; female, 36+ years	Juvenile overlying upper right body of adult	-
Unphased	4213; 4214	Unsexed, 36-50 years; infant, 0-3 years	Infant curled/slumped into adult's left hip	-

## Section Three: Burial location

### 3.1: St Martin's, Wharram Percy

Table A46: number and percentage of burials located within each zone, all phases

Zone	Number	Percentage
N	342	50.6
NE/E	107	15.9
S	29	4.3
SE	48	7.1
W	135	20.0
Church	14	2.1

Table A47: burial in the northern half of the cemetery by age, all phases

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
A	27	6.6	84.4
B	55	13.5	76.4
C	39	9.6	76.5
D	58	14.3	73.4
E	37	9.1	64.9
F	4	1.0	33.3
G	2	0.5	50.0
G/H	9	2.2	52.9
H	54	13.3	58.7
H/I	9	2.2	45.0
I	30	7.4	56.6
I/J	14	3.4	46.7
J	39	9.6	54.9
K	1	0.2	50.0
L	28	6.9	53.8
Total	406		

Table A48: burial in the northern half of the cemetery by age and sex, all phases

Age band	No. in N churchyard, female	Prop. of N churchyard burials (%)	Prop. of individuals same age, female (%)	No. in N churchyard, male	Prop. of N churchyard burials (%)	Prop. of individuals same age, male (%)
G/H	-	-	-	6	1.3	54.5
H	33	8.1	71.7	20	4.9	46.5
H/I	2	0.5	40.0	7	1.7	50.0
I	13	3.2	54.2	13	3.2	54.2
I/J	7	1.7	53.8	5	1.2	35.7
J	15	3.7	62.5	23	5.7	51.1
L	7	1.7	63.6	13	3.2	46.4
Total	96	23.6	63.2	108	26.6	46.7

Table A49: burial in the northern half of the cemetery by age, 950-1066

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
B	1	10.0	100
C	1	10.0	100
D	1	10.0	100
H	4	40.0	100
H/I	1	10.0	100
J	1	10.0	50.0
L	1	10.0	50.0
Total	10		

Table A50: burial in the northern half of the cemetery by age, 950-1348

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
A	1	0.8	100
B	2	1.6	100
C	3	2.4	100
D	8	6.3	88.9
E	7	5.6	100
G/H	2	1.6	66.6
H	24	19.0	64.7
H/I	7	5.6	63.6
I	22	17.5	73.3
I/J	9	7.1	81.8
J	24	19.0	66.6
L	17	13.5	85.0
Total	126		

Table A51: burial in the northern half of the cemetery by age and sex, 950-1348

Age band	No. in N churchyard, female	Prop. of N churchyard burials (%)	Prop. of individuals same age, female (%)	No. in N churchyard, male	Prop. of N churchyard burials (%)	Prop. of individuals same age, male (%)
G/H	0	0	0	2	1.6	50.0
H	15	11.9	75.0	9	7.1	52.9
H/I	2	1.6	50.0	5	4.0	71.4
I	8	6.3	88.9	13	10.3	65.0
I/J	4	3.2	80.0	4	3.2	80.0
J	10	7.9	83.3	14	11.1	58.3
L	4	3.2	100	12	9.5	85.7
Total	43	34.1	78.2	59	46.8	66.3

Table A52: burial in the northern half of the cemetery by age, 1066-1348

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
A	3	4.2	100
B	6	8.4	100
C	10	14.1	100
D	10	14.1	100
E	3	4.2	100
G	1	1.5	100
H	18	25.4	94.7
H/I	1	1.5	100
I	6	8.4	85.7
I/J	2	2.8	40.0
J	6	8.4	100
L	5	7.0	100
Total	71		

Table A53: zoning in burial in the cemetery by age; north zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north zone	Prop. of burials in north zone (%)	Prop. of individual of same age (%)
A	7.5	27	7.9	84.4
B	16.5	53	15.5	73.6
C	9.6	37	10.8	72.5
D	15.7	49	14.3	62.0
E	12.3	27	7.9	47.4
F	3.2	2	0.6	16.7
G	0.8	2	0.6	50.0
G/H	3.7	6	1.7	35.3
H	6.9	41	12.0	44.5
H/I	1.6	8	2.3	40.0
I	3.2	27	7.9	50.9
I/J	3.2	10	2.9	33.4
J	5.9	27	7.9	38.0
K	0.3	1	0.3	50.0
L	5.6	21	6.1	40.4
X	4.0	4	1.3	12.9

Table A54: zoning in burial in the cemetery by age; north-east/east zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north-east/east zone	Prop. of burials in north-east/east zone (%)	Prop. of individuals of same age (%)
A	7.5	3	2.8	9.4
B	16.5	7	6.5	9.7
C	9.6	5	4.7	9.8
D	15.7	15	14.0	19.0
E	12.3	12	11.2	21.0
F	3.2	0	0	0
G	0.8	0	0	0
G/H	3.7	5	4.7	29.4
H	6.9	18	16.8	19.6
H/I	1.6	4	3.7	20.0
I	3.2	7	6.5	13.2
I/J	3.2	3	2.8	10.0
J	5.9	13	12.1	18.3
K	0.3	0	0	0
L	5.6	4	3.7	7.7
X	4.0	11	10.5	35.5

Table A55: zoning in burial in the cemetery by age; south-east zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south-east zone	Prop. of burials in south-east zone (%)	Prop. of individuals of same age (%)
A	7.5	2	4.2	6.2
B	16.5	8	16.7	11.1
C	9.6	1	2.1	2.0
D	15.7	5	10.4	6.3
E	12.3	3	6.2	5.3
F	3.2	3	6.2	25.0
G	0.8	0	0	0
G/H	3.7	0	0	0
H	6.9	1	2.1	1.1
H/I	1.6	0	0	0
I	3.2	8	16.7	15.1
I/J	3.2	4	8.3	13.3
J	5.9	4	8.3	5.6
K	0.3	1	2.1	50.0
L	5.6	7	14.6	13.5
X	4.0	1	2.1	3.2

Table A56: zoning in burial in the cemetery by age; south zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
A	7.5	0	0	0
B	16.5	0	0	0
C	9.6	1	3.4	2.0
D	15.7	0	0	0
E	12.3	1	3.4	1.7
F	3.2	1	3.4	8.3
G	0.8	0	0	0
G/H	3.7	1	3.4	5.9
H	6.9	8	27.6	8.7
H/I	1.6	1	3.4	5.0
I	3.2	3	10.4	5.7
I/J	3.2	1	3.4	3.3
J	5.9	8	27.6	11.3
K	0.3	0	0	0
L	5.6	2	7.0	3.8
X	4.0	2	7.0	6.5

Table A57: zoning in burial in the cemetery by age; west zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in west zone	Prop. of burials in west zone (%)	Prop. of individuals of same age (%)
A	7.5	0	0	0
B	16.5	4	3.0	5.6
C	9.6	7	5.2	13.7
D	15.7	10	7.4	12.7
E	12.3	14	10.4	24.6
F	3.2	6	4.4	50.0
G	0.8	2	1.5	50.0
G/H	3.7	5	3.7	29.4
H	6.9	24	17.8	26.1
H/I	1.6	7	5.2	35.0
I	3.2	7	5.2	13.2
I/J	3.2	12	8.9	40.0
J	5.9	19	14.1	26.8
K	0.3	0	0	0
L	5.6	15	11.1	28.8
X	4.0	3	2.1	9.7

Table A58: zoning in burial in the cemetery by age and sex; north zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Proportion of sexed burials in north zone (%)	Proportion of individuals of same age/sex (%)
G – female	0.3	0	0	0
G – male	0.3	2	1.5	100
G/H – female	0.5	0	0	0
G/H – male	2.7	5	3.7	41.7
H – female	2.4	27	20.0	58.7
H – male	4.5	14	10.4	30.4
H/I – female	0.3	2	1.5	40.0
H/I – male	1.1	6	4.4	42.9
I – female	2.4	11	8.0	45.8
I – male	0.8	14	10.4	51.9
I/J – female	1.6	5	3.7	38.46
I/J – male	1.6	4	3.0	25.0
J – female	1.9	10	7.4	41.7
J – male	4.0	17	12.6	36.2
L – female	1.4	4	3.0	36.4
L – male	4.0	14	10.4	40.0



Table A59: zoning in burial in the cemetery by age and sex; north-east/east zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-east/east zone	Proportion of sexed burials in north-east/east zone (%)	Proportion of individuals of same age/sex (%)
G – female	0.3	0	0	0
G – male	0.3	0	0	0
G/H – female	0.5	2	3.8	66.7
G/H – male	2.7	3	5.7	25.0
H – female	2.4	8	15.1	17.4
H – male	4.5	10	18.9	21.7
H/I – female	0.3	2	3.8	40.0
H/I – male	1.1	2	3.8	14.3
I – female	2.4	1	1.9	4.2
I – male	0.8	6	11.0	22.2
I/J – female	1.6	1	1.9	7.7
I/J – male	1.6	2	3.8	12.5
J – female	1.9	3	5.7	12.5
J – male	4.0	10	18.9	21.3
L – female	1.4	0	0	0
L – male	4.0	3	5.7	8.6

Table A60: zoning in burial in the cemetery by age and sex; south-east zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-east zone	Proportion of sexed burials in south-east zone (%)	Proportion of individuals of same age/sex (%)
G – female	0.3	0	0	0
G – male	0.3	0	0	0
G/H – female	0.5	0	0	0
G/H – male	2.7	0	0	0
H – female	2.4	0	0	0
H – male	4.5	1	4.4	2.2
H/I – female	0.3	0	0	0
H/I – male	1.1	0	0	0
I – female	2.4	4	17.4	16.7
I – male	0.8	4	17.4	14.8
I/J – female	1.6	1	4.4	7.7
I/J – male	1.6	3	13.0	18.75
J – female	1.9	2	8.7	8.3
J – male	4.0	2	8.7	4.2
L – female	1.4	1	4.4	9.1
L – male	4.0	5	21.6	14.3

Table A61: zoning in burial in the cemetery by age and sex; south zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south zone	Proportion of sexed burials in south zone (%)	Proportion of individuals of same age/sex (%)
G – female	0.3	0	0	0
G – male	0.3	0	0	0
G/H – female	0.5	1	4.2	33.3
G/H – male	2.7	0	0	0
H – female	2.4	4	16.6	8.7
H – male	4.5	4	16.6	8.7
H/I – female	0.3	0	0	0
H/I – male	1.1	1	4.2	7.1
I – female	2.4	2	8.3	8.3
I – male	0.8	1	4.2	3.7
I/J – female	1.6	1	4.2	7.7
I/J – male	1.6	0	0	0
J – female	1.9	2	8.3	8.3
J – male	4.0	6	25.0	12.8
L – female	1.4	1	4.2	9.1
L – male	4.0	1	4.2	2.8

Table A62: zoning in burial in the cemetery by age and sex; west zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in west zone	Proportion of sexed burials in west zone (%)	Proportion of individuals of same age/sex (%)
G – female	0.3	1	1.2	100
G – male	0.3	0	0	0
G/H – female	0.5	0	0	0
G/H – male	2.7	4	4.6	33.3
H – female	2.4	7	8.0	15.2
H – male	4.5	17	19.5	37.0
H/I – female	0.3	1	1.2	20.0
H/I – male	1.1	5	5.75	35.7
I – female	2.4	6	6.9	25.0
I – male	0.8	1	1.2	3.7
I/J – female	1.6	5	5.75	38.46
I/J – male	1.6	7	8.0	43.75
J – female	1.9	7	8.0	29.2
J – male	4.0	12	13.8	25.5
L – female	1.4	4	4.6	36.4
L – male	4.0	10	11.5	28.6

Table A63: locations of graves with burial furniture (number) by type; all zones, all phases

Burial practice	Number						Total
	N	NE/E	SE	S	W	Church	
Boards	0	0	1	0	0	0	1
Cist	2	0	4	2	0	0	8
Coffins	32	4	1	0	17	1	55
Ear muffs	12	0	1	0	0	0	13
Marker	3	1	0	0	0	1	5
Objects	8	4	5	1	1	2	21
Organics	4	0	0	0	1	1	6
Stones	15	4	1	0	0	0	20
Stone cover	1	2	3	0	0	0	6
Total number of graves with burial furniture	66	14	12	3	19	2	117

Table A64: locations of graves with burial furniture (proportion) by type; all zones, all phases

Burial practice	Percentage						Total
	N	NE/E	SE	S	W	Church	
Boards	0	0	100	0	0	0	100
Cist	25.0	0	50.0	25.0	0	0	100
Coffins	58.2	7.3	1.8	0	30.9	1.8	100
Ear muffs	92.3	0	7.7	0	0	0	100
Marker	60.0	20.0	0	0	0	20.0	100
Objects	38.1	19.0	23.8	4.8	4.8	9.5	100
Organics	66.7	0	0	0	16.65	16.65	100
Stones	75.0	20.0	5.0	0	0	0	100
Stone cover	16.7	33.3	50.0	0	0	0	100
Total percentage of graves with burial furniture	19.3	13.1	25.0	10.3	13.4	21.4	17.3

Table A65: zoning in burial in the cemetery by age; north zone, 950-1348

Age band	Prop. of entire located burial pop (%)	Number in north zone	Prop. of burials in north zone (%)	Prop. of individual of same age (%)
A	0.6	1	0.9	100
B	1.2	2	1.8	100
C	1.8	3	2.7	100
D	4.7	8	8.0	88.9
E	4.1	7	6.2	100
G/H	1.8	2	2.7	66.7
H	21.8	21	33.0	56.8
H/I	6.5	6	9.8	54.5
I	17.6	21	26.8	70.0
I/J	4.1	7	9.8	63.6
J	21.2	19	32.1	52.8
L	11.8	15	17.8	75.0

Table A66: zoning in burial in the cemetery by age and sex; north zone, 950-1348

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Proportion of sexed burials in north zone (%)	Proportion of individuals of same age/sex (%)
G/H – female	0.6	0	0	0
G/H – male	1.2	2	2.3	100
H – female	11.8	13	14.8	65.0
H – male	10.0	8	9.1	47.1
H/I – female	2.4	2	2.3	50.0
H/I – male	4.1	4	4.5	57.1
I – female	5.3	8	9.1	88.9
I – male	11.8	12	13.6	60.0
I/J – female	2.9	3	3.4	60.0
I/J – male	2.9	3	3.4	60.0
J – female	7.1	8	9.1	66.7
J – male	14.1	11	12.5	45.8
L – female	2.4	4	4.5	100
L – male	8.2	10	11.4	71.4

Table A67: zoning in burial in the cemetery by age; north-east/east zone, 950-1348

Age band	Prop. of entire located burial pop. (%)	Number in north-east/east zone	Prop. of burials in north-east/east zone (%)	Prop. of individuals of same age (%)
A	0.6	0	0	0
B	1.2	0	0	0
C	1.8	0	0	0
D	4.7	0	0	0
E	4.1	0	0	0
G/H	1.8	1	2.2	33.3
H	21.8	15	32.6	40.5
H/I	6.5	4	8.7	36.4
I	17.6	7	15.2	23.3
I/J	4.1	3	6.5	27.3
J	21.2	13	23.3	36.1
L	11.8	3	6.5	15.0

Table A68: zoning in burial in the cemetery by age and sex; north-east/east zone, 950-1348

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-east/east zone	Proportion of sexed burials in north-east/east zone (%)	Proportion of individuals of same age/sex (%)
G/H – female	0.6	1	2.2	100
G/H – male	1.2	0	0	0
H – female	11.8	6	13.0	30.0
H – male	10.0	9	19.6	52.9
H/I – female	2.4	2	4.3	50.0
H/I – male	4.1	2	4.3	28.6
I – female	5.3	1	2.2	11.1
I – male	11.8	6	13.0	30.0
I/J – female	2.9	1	2.2	20.0
I/J – male	2.9	2	4.3	40.0
J – female	7.1	3	6.5	33.3
J – male	14.1	10	21.7	41.7
L – female	2.4	0	0	0
L – male	8.2	3	6.5	21.4

Table A69: zoning in burial in the cemetery by age; south-east zone, 950-1348

Age band	Prop. of entire located burial pop. (%)	Number in south-east zone	Prop. of burials in south-east zone (%)	Prop. of individuals of same age (%)
A	0.6	0	0	0
B	1.2	0	0	0
C	1.8	0	0	0
D	4.7	1	33.3	11.1
E	4.1	0	0	0
G/H	1.8	0	0	0
H	21.8	0	0	0
H/I	6.5	0	0	0
I	17.6	1	33.3	3.3
I/J	4.1	0	0	0
J	21.2	0	0	0
L	11.8	1	33.3	5.0

Table A70: zoning in burial in the cemetery by age; south zone, 950-1348

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
A	0.6	0	0	0
B	1.2	0	0	0
C	1.8	0	0	0
D	4.7	0	0	0
E	4.1	0	0	0
GH	1.8	0	0	0
H	21.8	0	0	0
H/I	6.5	0	0	0
I	17.6	1	25.0	3.3
I/J	4.1	0	0	0
J	21.2	3	75.0	8.3
L	11.8	0	0	0

Table A71: zoning in burial in the cemetery by age; west zone, 950-1348

Age band	Prop. of entire located burial pop (%).	Number in west zone	Prop. of burials in west zone (%)	Prop. of individuals of same age (%)
A	0.9	0	0	0
B	1.8	0	0	0
C	2.7	0	0	0
D	8.0	0	0	0
E	6.2	0	0	0
G/H	2.7	0	0	0
H	33.0	1	25.0	2.7
H/I	9.8	1	25.0	9.1
I	26.8	0	0	0
I/J	9.8	1	25.0	9.1
J	32.1	1	25.0	2.8
L	17.8	0	0	0

Table A72: Locations of multiple burials at St Martin's, Wharram Percy; 950-1066

Database I.D.	Age and sex	Zone	Eaves-drip
2418; 2419	Female, 21-25 years; infant, 42-45 WIU.	N	N/A

WIU = weeks in utero.

Table A73: Locations of multiple burials at St Martin's, Wharram Percy; 950-1348

Database I.D.	Age and sex	Zone	Eaves-drip
2545; 2548	Male, 40-50 years; child, 6 years.	SE	N/A

Table A74: Locations of multiple burials at St Martin's, Wharram Percy; 1066-1348

Database I.D.	Age and sex	Zone	Eaves-drip
2144; 2149	Female, 25-35 years; child, 4 years	N	N/A
2185; 2190	Female, 25-35 years; infant, 30 WIU	N	N/A
2210; 2211	Male, 19-21 years; infant, 1 year	N	N/A

WIU = weeks in utero.

### 3.2: St Peter's, Barton-upon-Humber

Table A75: number and percentage of burials located within each zone

Zone	Number	Percentage
NW	495	24.6
N	279	13.8
NE	232	11.5
SE	121	6.0
S	308	15.3
SW	479	23.8
Church	95	4.7

Table A76: burial in the northern half of the cemetery by age, all phases

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
A	1	0.1	100
B	99	9.8	49.3
B/C/D	6	0.6	40.0
C	32	3.2	45.1
D	63	6.3	46.3
E	53	5.3	50.0
F	29	2.9	45.3
G	23	2.3	48.9
H	179	17.8	54.7
I	22	2.2	47.8
I/J	119	11.8	50.6
J	3	0.3	33.3
K	1	0.1	100
L	363	36.1	50.3
X	13	1.3	39.4
Total	1006		

Table A77: burial in the northern half of the cemetery by age and sex, all phases

Age band	No. in N churchyard, female	Prop. of N churchyard burials (%)	Prop. of individuals same age, female (%)	No. in N churchyard, male	Prop. of N churchyard burials (%)	Prop. of individuals same age, male (%)
G	12	1.2	44.4	6	0.6	46.2
H	82	8.2	54.7	84	8.3	53.5
I	2	0.2	50.0	19	1.9	47.5
I/J	33	3.3	40.2	79	7.9	55.2
J	-	-	-	3	0.3	33.3
L	102	10.1	49.5	84	8.3	49.4
Total	231	23.0	49.3	275	27.3	51.7

Table A78: burial in the northern half of the cemetery by age, pre-1300

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
B	57	11.1	46.0
B/C/D	5	1.0	41.7
C	18	3.5	40.9
D	33	6.4	48.5
E	18	3.5	39.1
F	10	1.9	62.5
G	13	2.5	48.1
H	97	18.8	50.0
I	13	2.5	52.0
I/J	83	16.1	50.6
J	3	0.6	42.9
K	1	0.2	100
L	156	30.3	45.5
X	8	1.6	66.7
Total	515		

Table A79: burial in the northern half of the cemetery by age and sex, pre-1300

Age band	No. in N churchyard, female	Prop. of N churchyard burials (%)	Prop. of individuals same age, female (%)	No. in N churchyard, male	Prop. of N churchyard burials (%)	Prop. of individuals same age, male (%)
G	6	1.2	46.2	5	1.0	45.5
H	43	8.3	47.8	47	9.1	50.5
I	2	0.4	66.7	11	2.1	52.4
I/J	28	5.4	44.4	50	9.7	52.6
J	-	-	-	3	0.6	42.9
L	45	8.7	48.4	41	8.0	44.1
Total	124	24.1	47.3	157	30.5	49.1



Table A80: burial in the northern half of the cemetery by age, 1150-1500

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
B	33	11.4	43.4
B/C/D	0	0	0
C	7	2.4	38.9
D	14	4.8	47.7
E	21	7.3	52.5
F	11	3.8	47.8
G	4	1.4	33.3
H	50	17.3	49.1
I	9	3.1	52.9
I/J	24	8.3	38.1
J	0	0	0
L	110	38.1	46.2
X	6	2.1	66.7
Total	289		

Table A81: burial in the northern half of the cemetery by age and sex, 1150-1500

Age band	No. in N churchyard, female	Prop. of N churchyard burials (%)	Prop. of individuals same age, female (%)	No. in N churchyard, male	Prop. of N churchyard burials (%)	Prop. of individuals same age, male (%)
G	2	0.7	25.0	1	0.3	33.3
H	26	9.0	55.3	20	6.9	39.2
I	0	0	0	8	2.8	53.3
I/J	9	3.1	33.3	12	4.2	37.5
J	-	-	-	0	0	0
L	30	10.4	39.5	25	8.7	53.2
Total	67	23.2	42.1	66	22.8	44.3

Table A82: burial in the northern half of the cemetery by age, post-1300

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
A	1	0.3	100
B	22	7.5	51.2
B/C/D	1	0.3	50.0
C	11	3.8	64.7
D	22	7.5	53.7
E	21	7.2	60.0
F	11	3.8	37.9
G	7	2.4	58.3
H	47	16.0	60.3
I	3	1.0	23.1
I/J	23	7.9	54.8
J	0	0	0
L	123	42.0	54.4
X	1	0.3	14.3
Total	293		

Table A83: burial in the northern half of the cemetery by age and sex, post-1300

Age band	No. in N churchyard, female	Prop. of N churchyard burials (%)	Prop. of individuals same age, female (%)	No. in N churchyard, male	Prop. of N churchyard burials (%)	Prop. of individuals same age, male (%)
G	4	1.4	50.0	1	0.3	100
H	22	7.5	64.7	23	7.8	57.5
I	0	0	0	3	1.0	25.0
I/J	2	0.7	16.7	21	7.1	72.4
J	0	0	0	0	0	0
L	35	11.9	53.8	23	7.8	46.0
Total	63	21.5	52.5	71	24.2	53.4

Table A84: zoning in burial in the cemetery by age; north-west zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north-west zone	Prop. of burials in north-west zone (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
B	11.4	34	6.9	16.9
B/C/D	1.1	1	0.2	6.7
C	4.1	13	2.6	18.3
D	6.3	30	6.1	22.1
D/E/F	<0.1	0	0	0
E	4.2	28	5.7	26.4
F	1.5	15	3.0	23.4
G	2.5	9	1.8	19.1
H	17.9	73	14.7	22.3
I	2.3	10	2.0	21.7
I/J	15.1	42	8.5	17.9
J	0.7	1	0.2	11.1
K	<0.1	0	0	0
L	31.6	230	46.5	31.9
X	1.1	9	1.8	27.3

Table A85: zoning in burial in the cemetery by age and sex; north-west zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-west zone	Prop. of burials in north-west zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	7	1.4	25.9
G – male	1.0	1	0.2	7.7
H – female	8.3	26	5.3	17.3
H – male	8.5	38	7.7	24.2
I – female	0.3	1	0.2	25.0
I – male	1.9	8	1.6	20.0
I/J – female	5.8	9	1.8	11.0
I/J – male	8.8	33	6.7	23.1
J – female	-	-	-	-
J – male	0.6	1	0.2	11.1
L – female	8.6	63	12.7	30.6
L – male	8.6	52	10.5	30.6

Table A86: zoning in burial in the cemetery by age; north zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north zone	Prop. of burials in north zone (%)	Prop. of individuals of same age (%)
A	<0.1	1	0.4	100
B	11.4	38	13.6	18.9
B/C/D	1.1	2	0.7	13.3
C	4.1	13	4.7	18.3
D	6.3	21	7.5	15.4
D/E/F	<0.1	0	0	0
E	4.2	16	5.7	15.1
F	1.5	10	3.6	15.6
G	2.5	10	3.6	21.3
H	17.9	53	19.0	16.2
I	2.3	3	1.1	6.5
I/J	15.1	37	13.3	15.7
J	0.7	2	0.7	22.2
K	<0.1	0	0	0
L	31.6	70	25.1	9.7
X	1.1	3	1.1	9.1

Table A87: zoning in burial in the cemetery by age and sex; north zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Prop. of burials in north zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	2	0.7	7.4
G – male	1.0	5	1.8	38.5
H – female	8.3	27	9.7	18.0
H – male	8.5	23	8.2	14.6
I – female	0.3	0	0	0
I – male	1.9	3	1.1	7.5
I/J – female	5.8	12	4.3	14.6
I/J – male	8.8	19	6.8	13.3
J – female	-	-	-	-
J – male	0.6	2	0.7	22.2
L – female	8.6	22	7.9	10.7
L – male	8.6	14	5.0	8.2

Table A88: zoning in burial in the cemetery by age; north-east zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north-east zone	Prop. of burials in north-east zone (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
B	11.4	27	11.6	13.4
B/C/D	1.1	3	1.3	20.0
C	4.1	6	2.6	8.5
D	6.3	12	5.2	8.8
D/E/F	<0.1	0	0	0
E	4.2	9	3.9	8.5
F	1.5	4	1.7	6.3
G	2.5	4	1.7	8.5
H	17.9	53	22.8	16.2
I	2.3	9	3.9	20.0
I/J	15.1	40	17.2	17.0
J	0.7	0	0	0
K	<0.1	1	0.4	100
L	31.6	63	27.2	8.7
X	1.1	1	0.4	3.0

Table A89: zoning in burial in the cemetery by age and sex; north-east zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-east zone	Prop. of burials in north-east zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	3	1.3	11.1
G – male	1.0	0	0	0
H – female	8.3	29	12.5	19.3
H – male	8.5	23	9.9	14.6
I – female	0.3	1	0.4	25.0
I – male	1.9	8	3.4	20.0
I/J – female	5.8	12	5.2	14.6
I/J – male	8.8	27	11.6	18.9
J – female	-	-	-	-
J – male	0.6	0	0	0
L – female	8.6	17	7.3	8.3
L – male	8.6	18	7.8	10.6

Table A90: zoning in burial in the cemetery by age; south-east zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south-east zone	Prop. of burials in south-east zone (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
B	11.4	12	9.9	6.0
B/C/D	1.1	1	0.8	6.7
C	4.1	4	3.3	5.6
D	6.3	8	6.6	5.9
D/E/F	<0.1	0	0	0
E	4.2	4	3.3	3.8
F	1.5	0	0	0
G	2.5	2	1.7	4.3
H	17.9	20	16.5	6.1
I	2.3	5	4.1	10.9
I/J	15.1	21	17.4	8.9
J	0.7	1	0.8	11.1
K	<0.1	0	0	0
L	31.6	43	35.5	6.0
X	1.1	0	0	0

Table A91: zoning in burial in the cemetery by age and sex; south-east zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-east zone	Prop. of burials in south-east zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	0	0	0
G – male	1.0	1	0.8	7.7
H – female	8.3	12	9.9	8.0
H – male	8.5	6	5.0	3.8
I – female	0.3	0	0	0
I – male	1.9	5	4.1	12.5
I/J – female	5.8	12	9.9	14.6
I/J – male	8.8	9	7.4	6.3
J – female	-	-	-	-
J – male	0.6	1	0.8	11.1
L – female	8.6	10	8.3	4.9
L – male	8.6	10	8.3	5.9

Table A92: zoning in burial in the cemetery by age; south zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
B	11.4	38	12.3	18.9
B/C/D	1.1	5	1.6	33.3
C	4.1	16	5.2	22.5
D	6.3	23	7.5	16.9
D/E/F	<0.1	0	0	0
E	4.2	17	5.5	16.0
F	1.5	7	2.3	10.9
G	2.5	5	1.6	10.6
H	17.9	43	14.0	13.1
I	2.3	4	1.3	8.7
I/J	15.1	41	13.3	17.4
J	0.7	2	0.6	22.2
K	<0.1	0	0	0
L	31.6	103	33.4	14.3
X	1.1	4	0.1	12.1

Table A93: zoning in burial in the cemetery by age and sex; south zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south zone	Prop. of burials in south zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	4	1.3	14.8
G – male	1.0	1	0.3	7.7
H – female	8.3	18	5.8	12.0
H – male	8.5	23	7.5	14.6
I – female	0.3	0	0	0
I – male	1.9	3	1.0	7.5
I/J – female	5.8	19	6.2	23.2
I/J – male	8.8	20	6.5	14.0
J – female	-	-	-	-
J – male	0.6	2	0.6	22.2
L – female	8.6	25	8.1	12.1
L – male	8.6	26	8.4	15.3

Table A94: zoning in burial in the cemetery by age; south-west zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south-west zone	Prop. of burials in south-west zone (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
B	11.4	46	9.6	22.9
B/C/D	1.1	2	0.4	13.3
C	4.1	17	3.5	23.9
D	6.3	40	8.4	29.4
D/E/F	<0.1	0	0	0
E	4.2	29	6.1	27.4
F	1.5	26	5.4	40.6
G	2.5	15	3.1	31.9
H	17.9	61	12.7	18.7
I	2.3	11	2.3	23.9
I/J	15.1	40	8.4	17.0
J	0.7	3	0.6	33.3
K	<0.1	0	0	0
L	31.6	184	38.4	25.5
X	1.1	5	1.0	15.2

Table A95: zoning in burial in the cemetery by age and sex; south-west zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-west zone	Prop. of burials in south-west zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	9	1.9	33.3
G – male	1.0	5	1.0	38.5
H – female	8.3	28	5.8	18.7
H – male	8.5	31	6.5	19.7
I – female	0.3	1	0.2	25.0
I – male	1.9	10	2.1	25.0
I/J – female	5.8	12	2.5	14.6
I/J – male	8.8	27	5.6	18.9
J – female	-	-	-	-
J – male	0.6	3	0.6	33.3
L – female	8.6	58	12.1	28.2
L – male	8.6	42	8.7	24.7



Table A96: zoning in burial in the cemetery by age; north-west zone, pre-1300

Age band	Prop. of entire located burial pop (%).	Number in north-west zone	Prop. of burials in north-west zone (%)	Prop. of individuals of same age (%)
B	11.4	20	10.2	16.2
B/C/D	1.1	1	0.5	8.3
C	4.1	4	2.0	9.1
D	6.3	15	7.6	22.1
D/E/F	<0.1	0	0	0
E	4.2	5	2.5	10.9
F	1.5	3	1.5	18.8
G	2.5	5	2.5	18.5
H	17.9	37	18.9	19.2
I	2.3	4	2.0	16.0
I/J	15.1	20	10.2	12.2
J	0.7	1	0.5	14.3
K	<0.1	0	0	0
L	31.6	76	38.6	22.2
X	1.1	6	3.0	50.0

Table A97: zoning in burial in the cemetery by age; north zone, pre-1300

Age band	Prop. of entire located burial pop (%).	Number in north zone	Prop. of burials in north zone (%)	Prop. of individuals of same age (%)
B	11.4	28	16.0	22.8
B/C/D	1.1	1	0.6	8.3
C	4.1	10	5.7	22.7
D	6.3	11	6.3	16.2
D/E/F	<0.1	0	0	0
E	4.2	8	4.6	17.4
F	1.5	4	2.3	25.0
G	2.5	6	3.4	22.2
H	17.9	30	17.1	15.5
I	2.3	3	1.7	12.0
I/J	15.1	29	16.6	17.7
J	0.7	2	1.1	28.6
K	<0.1	0	0	0
L	31.6	42	24.0	12.3
X	1.1	1	0.6	8.3

Table A98: zoning in burial in the cemetery by age; north-east zone, pre-1300

Age band	Prop. of entire located burial pop (%).	Number in north-east zone	Prop. of burials in north-east zone (%)	Prop. of individuals of same age (%)
B	11.4	9	6.3	7.3
B/C/D	1.1	3	2.1	25.0
C	4.1	4	2.8	9.1
D	6.3	7	4.9	10.3
D/E/F	<0.1	0	0	0
E	4.2	5	3.5	10.7
F	1.5	3	2.1	18.7
G	2.5	2	1.4	7.4
H	17.9	30	21.0	15.5
I	2.3	6	4.2	24.0
I/J	15.1	34	23.8	20.7
J	0.7	0	0	0
K	<0.1	1	0.7	100
L	31.6	38	26.5	11.1
X	1.1	1	0.7	8.3

Table A99: zoning in burial in the cemetery by age; south-east zone, pre-1300

Age band	Prop. of entire located burial pop (%).	Number in south-east zone	Prop. of burials in south-east zone (%)	Prop. of individuals of same age (%)
B	11.4	12	10.0	9.8
B/C/D	1.1	1	0.8	8.3
C	4.1	4	3.3	9.1
D	6.3	8	6.7	11.8
D/E/F	<0.1	0	0	0
E	4.2	4	3.3	8.7
F	1.5	0	0	0
G	2.5	2	1.7	7.4
H	17.9	20	16.7	10.4
I	2.3	5	4.2	20.0
I/J	15.1	20	16.7	12.2
J	0.7	1	0.8	14.3
K	<0.1	0	0	0
L	31.6	43	35.8	12.6
X	1.1	0	0	0

Table A100: zoning in burial in the cemetery by age; south zone, pre-1300

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
B	11.4	37	14.6	30.1
B/C/D	1.1	5	2.0	41.7
C	4.1	14	5.5	31.8
D	6.3	18	7.1	26.5
D/E/F	<0.1	0	0	0
E	4.2	14	5.5	30.4
F	1.5	2	0.8	12.5
G	2.5	5	2.0	18.5
H	17.9	38	15.0	19.7
I	2.3	4	1.6	16.0
I/J	15.1	32	12.6	19.5
J	0.7	1	0.4	14.3
K	<0.1	0	0	0
L	31.6	82	32.4	24.0
X	1.1	1	0.4	8.3

Table A101: zoning in burial in the cemetery by age; south-west zone, pre-1300

Age band	Prop. of entire located burial pop (%).	Number in south-west zone	Prop. of burials in south-west zone (%)	Prop. of individuals of same age (%)
B	11.4	17	9.6	13.8
B/C/D	1.1	1	0.6	8.3
C	4.1	7	3.9	15.9
D	6.3	9	5.1	13.2
D/E/F	<0.1	0	0	0
E	4.2	10	5.6	21.7
F	1.5	4	2.3	25.0
G	2.5	7	3.9	25.9
H	17.9	33	18.5	17.1
I	2.3	3	1.7	12.0
I/J	15.1	26	14.6	15.9
J	0.7	2	1.1	28.5
K	<0.1	0	0	0
L	31.6	57	32.0	16.7
X	1.1	2	1.1	16.7

Table A102: zoning in burial in the cemetery by age and sex; north-west zone, pre-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-west zone	Prop. of burials in north-west zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	3	1.5	23.1
G – male	1.0	1	0.5	9.1
H – female	8.3	11	5.6	12.2
H – male	8.5	21	10.6	22.6
I – female	0.3	1	0.5	33.3
I – male	1.9	3	1.5	14.3
I/J – female	5.8	5	2.5	7.9
I/J – male	8.8	15	7.6	15.8
J – female	-	-	-	-
J – male	0.6	1	0.5	14.3
L – female	8.6	21	10.6	22.6
L – male	8.6	20	10.2	21.5

Table A103: zoning in burial in the cemetery by age and sex; north zone, pre-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Prop. of burials in north zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	1	0.6	7.7
G – male	1.0	4	2.3	36.4
H – female	8.3	17	9.7	18.9
H – male	8.5	12	6.9	12.9
I – female	0.3	0	0	0
I – male	1.9	3	1.7	14.3
I/J – female	5.8	12	6.9	19.0
I/J – male	8.8	12	6.9	12.6
J – female	-	-	-	-
J – male	0.6	2	1.1	28.6
L – female	8.6	9	5.1	9.7
L – male	8.6	11	6.3	11.8

Table A104: zoning in burial in the cemetery by age and sex; north-east zone, pre-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-east zone	Prop. of burials in north-east zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	2	1.4	15.4
G – male	1.0	0	0	0
H – female	8.3	15	10.5	16.7
H – male	8.5	14	9.8	15.1
I – female	0.3	1	0.7	33.3
I – male	1.9	5	3.5	23.8
I/J – female	5.8	11	7.7	17.5
I/J – male	8.8	23	16.1	24.2
J – female	-	-	-	-
J – male	0.6	0	0	0
L – female	8.6	12	8.4	12.9
L – male	8.6	10	7.0	10.8

Table A105: zoning in burial in the cemetery by age and sex; south-east zone, pre-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-east zone	Prop. of burials in south-east zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	0	0	0
G – male	1.0	1	0.8	9.1
H – female	8.3	12	10.0	13.3
H – male	8.5	6	5.0	6.5
I – female	0.3	0	0	0
I – male	1.9	5	4.2	23.8
I/J – female	5.8	12	10.0	19.0
I/J – male	8.8	8	6.7	8.4
J – female	-	-	-	-
J – male	0.6	1	0.8	14.3
L – female	8.6	10	8.3	10.8
L – male	8.6	10	8.3	10.8

Table A106: zoning in burial in the cemetery by age and sex; south zone, pre-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in south zone	Prop. of burials in south zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	4	1.6	30.8
G – male	1.0	1	0.4	9.1
H – female	8.3	17	6.7	18.9
H – male	8.5	19	7.5	20.4
I – female	0.3	0	0	0
I – male	1.9	3	1.2	14.3
I/J – female	5.8	13	5.1	20.6
I/J – male	8.8	18	7.1	18.9
J – female	-	-	-	-
J – male	0.6	1	0.4	14.3
L – female	8.6	18	7.1	19.4
L – male	8.6	25	9.9	26.9

Table A107: zoning in burial in the cemetery by age and sex; south-west zone, pre-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-west zone	Prop. of burials in south-west zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	3	1.7	23.1
G – male	1.0	4	2.2	36.4
H – female	8.3	16	9.0	17.8
H – male	8.5	17	9.6	18.3
I – female	0.3	1	0.7	33.3
I – male	1.9	2	1.1	9.5
I/J – female	5.8	9	5.1	14.3
I/J – male	8.8	17	9.6	17.9
J – female	-	-	-	-
J – male	0.6	2	1.1	28.6
L – female	8.6	19	10.7	20.4
L – male	8.6	16	9.0	17.2

Table A108: zoning in burial in the cemetery by age; north-west zone, 1150-1500

Age band	Prop. of entire located burial pop (%).	Number in north-west zone	Prop. of burials in north-west zone (%)	Prop. of individuals of same age (%)
B	11.7	7	5.3	9.2
B/C/D	0.6	0	0	0
C	2.8	2	1.5	11.1
D	6.8	5	3.8	11.4
E	6.2	9	6.9	22.5
F	3.6	5	3.8	21.7
G	1.8	1	0.8	8.3
H	15.8	19	14.5	18.6
I	2.6	6	4.6	35.3
I/J	9.7	9	6.9	14.3
J	0.2	0	0	0
L	36.8	65	49.6	27.3
X	1.4	3	2.3	33.3

Table A109: zoning in burial in the cemetery by age; north zone, 1150-1500

Age band	Prop. of entire located burial pop (%).	Number in north zone	Prop. of burials in north zone (%)	Prop. of individuals of same age (%)
B	11.7	11	16.9	14.5
B/C/D	0.6	0	0	0
C	2.8	2	3.1	11.1
D	6.8	4	6.2	9.1
E	6.2	7	10.8	17.5
F	3.6	3	4.6	13.0
G	1.8	1	1.5	8.3
H	15.8	9	13.8	8.8
I	2.6	1	1.5	5.9
I/J	9.7	7	10.8	11.1
J	0.2	0	0	0
L	36.8	18	27.7	7.6
X	1.4	2	3.1	22.2

Table A110: zoning in burial in the cemetery by age; north-east zone, 1150-1500

Age band	Prop. of entire located burial pop (%).	Number in north-east zone	Prop. of burials in north-east zone (%)	Prop. of individuals of same age (%)
B	11.7	15	16.1	19.7
B/C/D	0.6	0	0	0
C	2.8	3	3.2	16.7
D	6.8	5	5.4	11.4
E	6.2	5	5.4	12.5
F	3.6	3	3.2	13.0
G	1.8	2	2.2	16.7
H	15.8	22	23.6	21.6
I	2.6	2	2.2	11.8
I/J	9.7	8	8.6	12.7
J	0.2	0	0	0
L	36.8	27	29.0	11.3
X	1.4	1	1.1	11.1

Table A111: zoning in burial in the cemetery by age; south-east zone, 1150-1500

Age band	Prop. of entire located burial pop (%).	Number in south-east zone	Prop. of burials in south-east zone (%)	Prop. of individuals of same age (%)
B	11.7	6	17.1	7.9
B/C/D	0.6	0	0	0
C	2.8	0	0	0
D	6.8	2	5.7	4.5
E	6.2	3	8.6	7.5
F	3.6	0	0	0
G	1.8	1	2.9	8.3
H	15.8	2	5.7	2.0
I	2.6	2	5.7	11.8
I/J	9.7	4	11.4	6.3
J	0.2	0	0	0
L	36.8	15	42.9	6.3
X	1.4	0	0	0



Table A112: zoning in burial in the cemetery by age; south zone, 1150-1500

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
B	11.7	15	17.1	19.7
B/C/D	0.6	2	2.3	50.0
C	2.8	5	5.7	27.8
D	6.8	9	10.2	20.5
E	6.2	3	3.4	7.5
F	3.6	3	3.4	13.0
G	1.8	0	0	0
H	15.8	12	13.6	11.8
I	2.6	0	0	0
I/J	9.7	10	11.4	15.9
J	0.2	1	1.1	100
L	36.8	27	30.7	11.3
X	1.4	1	1.1	

Table A113: zoning in burial in the cemetery by age; south-west zone, 1150-1500

Age band	Prop. of entire located burial pop (%).	Number in south-west zone	Prop. of burials in south-west zone (%)	Prop. of individuals of same age (%)
B	11.7	17	10.4	22.4
B/C/D	0.6	1	0.6	25.0
C	2.8	6	3.7	33.3
D	6.8	17	10.4	38.6
E	6.2	10	6.1	25.0
F	3.6	8	4.9	34.8
G	1.8	5	3.0	41.7
H	15.8	19	11.6	18.6
I	2.6	3	1.8	17.6
I/J	9.7	14	8.5	22.2
J	0.2	0	0	0
L	36.8	64	39.0	26.9
X	1.4	0	0	0

Table A114: zoning in burial in the cemetery by age and sex; north-west zone, 1150-1500

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-west zone	Prop. of burials in north-west zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	1	0.8	12.5
G – male	0.5	0	0	0
H – female	7.3	8	6.1	17.0
H – male	7.9	8	6.1	15.7
I – female	0.2	0	0	0
I – male	2.3	5	3.8	33.3
I/J – female	4.2	2	1.5	7.4
I/J – male	4.9	7	5.3	21.9
J – female	-	-	-	-
J – male	0.2	0	0	0
L – female	11.7	20	15.3	26.3
L – male	7.3	14	10.7	29.8

Table A115: zoning in burial in the cemetery by age and sex; north zone, 1150-1500

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Prop. of burials in north zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	0	0	0
G – male	0.5	1	1.5	33.3
H – female	7.3	4	6.2	8.5
H – male	7.9	4	6.2	7.8
I – female	0.2	0	0	0
I – male	2.3	1	1.5	6.7
I/J – female	4.2	2	3.1	7.4
I/J – male	4.9	3	4.6	9.4
J – female	-	-	-	-
J – male	0.2	0	0	0
L – female	11.7	3	4.6	3.9
L – male	7.3	3	4.6	6.4

Table A116: zoning in burial in the cemetery by age and sex; north-east zone, 1150-1500

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-east zone	Prop. of burials in north-east zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	1	1.1	12.5
G – male	0.5	0	0	0
H – female	7.3	14	15.1	29.8
H – male	7.9	8	8.6	15.7
I – female	0.2	0	0	0
I – male	2.3	2	2.2	13.3
I/J – female	4.2	5	5.4	18.5
I/J – male	4.9	2	2.2	6.3
J – female	-	-	-	-
J – male	0.2	0	0	0
L – female	11.7	7	7.5	9.2
L – male	7.3	8	8.6	17.0

Table A117: zoning in burial in the cemetery by age and sex; south-east zone, 1150-1500

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-east zone	Prop. of burials in south-east zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	0	0	0
G – male	0.5	1	2.9	33.3
H – female	7.3	1	2.9	2.1
H – male	7.9	1	2.9	2.0
I – female	0.2	0	0	0
I – male	2.3	2	5.7	13.3
I/J – female	4.2	3	8.6	11.1
I/J – male	4.9	1	2.9	3.1
J – female	-	-	-	-
J – male	0.2	0	0	0
L – female	11.7	3	8.6	3.9
L – male	7.3	4	11.4	8.5

Table A118: zoning in burial in the cemetery by age and sex; south zone, 1150-1500

Age band and sex	Proportion of entire located burial pop. (%)	Number in south zone	Prop. of burials in south zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	0	0	0
G – male	0.5	0	0	0
H – female	7.3	1	1.1	2.1
H – male	7.9	11	12.5	21.6
I – female	0.2	0	0	0
I – male	2.3	0	0	0
I/J – female	4.2	6	6.8	22.2
I/J – male	4.9	4	4.5	12.5
J – female	-	-	-	-
J – male	0.2	1	1.1	100
L – female	11.7	10	11.4	13.2
L – male	7.3	4	4.5	8.5

Table A119: zoning in burial in the cemetery by age and sex; south-west zone, 1150-1500

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-west zone	Prop. of burials in south-west zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	4	2.4	50.0
G – male	0.5	1	0.6	33.3
H – female	7.3	9	5.5	19.1
H – male	7.9	10	6.1	19.6
I – female	0.2	0	0	0
I – male	2.3	3	1.8	20.0
I/J – female	4.2	4	2.4	14.8
I/J – male	4.9	9	5.5	28.1
J – female	-	-	-	-
J – male	0.2	0	0	0
L – female	11.7	24	14.6	31.6
L – male	7.3	7	4.3	14.9

Table A120: zoning in burial in the cemetery by age; north-west zone, post-1300

Age band	Prop. of entire located burial pop (%).	Number in north-west zone	Prop. of burials in north-west zone (%)	Prop. of individuals of same age (%)
A	0.1	0	0	0
B	7.9	7	4.0	16.3
B/C/D	0.4	0	0	0
C	3.1	7	4.0	41.2
D	7.5	10	5.7	24.4
E	6.4	14	8.0	40.0
F	5.3	7	4.0	24.1
G	2.2	3	1.7	25.0
H	14.3	21	11.9	26.9
I	2.4	0	0	0
I/J	7.7	14	8.0	33.3
J	0.1	0	0	0
L	41.3	92	52.3	40.7
X	1.3	1	0.6	14.3

Table A121: zoning in burial in the cemetery by age; north zone, post-1300

Age band	Prop. of entire located burial pop (%).	Number in north zone	Prop. of burials in north zone (%)	Prop. of individuals of same age (%)
A	0.1	1	1.6	100
B	7.9	4	6.3	9.3
B/C/D	0.4	1	1.6	50.0
C	3.1	3	4.8	17.6
D	7.5	7	11.1	17.1
E	6.4	5	8.0	14.3
F	5.3	4	6.3	13.8
G	2.2	4	6.3	33.3
H	14.3	14	22.2	17.9
I	2.4	0	0	0
I/J	7.7	5	8.0	11.9
J	0.1	0	0	0
L	41.3	15	23.8	6.6
X	1.3	0	0	0

Table A122: zoning in burial in the cemetery by age; north-east zone, post-1300

Age band	Prop. of entire located burial pop (%).	Number in north-east zone	Prop. of burials in north-east zone (%)	Prop. of individuals of same age (%)
A	0.1	0	0	0
B	7.9	11	20.4	25.6
B/C/D	0.4	0	0	0
C	3.1	1	1.9	5.9
D	7.5	5	9.3	12.2
E	6.4	2	3.7	5.7
F	5.3	0	0	0
G	2.2	0	0	0
H	14.3	12	22.2	15.4
I	2.4	3	5.5	23.1
I/J	7.7	4	7.4	9.5
J	0.1	0	0	0
L	41.3	16	29.6	7.1
X	1.3	0	0	0

Table A123: zoning in burial in the cemetery by age; south-east zone, post-1300

Age band	Prop. of entire located burial pop (%).	Number in south-east zone	Prop. of burials in south-east zone (%)	Prop. of individuals of same age (%)
A	0.1	0	0	0
B	7.9	0	0	0
B/C/D	0.4	0	0	0
C	3.1	0	0	0
D	7.5	0	0	0
E	6.4	0	0	0
F	5.3	0	0	0
G	2.2	0	0	0
H	14.3	0	0	0
I	2.4	1	100	7.7
I/J	7.7	0	0	0
J	0.1	0	0	0
L	41.3	0	0	0
X	1.3	0	0	0

Table A124: zoning in burial in the cemetery by age; south zone, post-1300

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
A	0.1	0	0	0
B	7.9	1	2.9	2.3
B/C/D	0.4	0	0	0
C	3.1	1	2.9	5.9
D	7.5	4	11.8	9.8
E	6.4	2	5.9	5.7
F	5.3	2	5.9	6.9
G	2.2	0	0	0
H	14.3	2	5.9	2.6
I	2.4	0	0	0
I/J	7.7	5	14.7	11.9
J	0.1	0	0	0
L	41.3	14	41.2	6.2
X	1.3	3	8.8	42.9

Table A125: zoning in burial in the cemetery by age; south-west zone, post-1300

Age band	Prop. of entire located burial pop (%).	Number in south-west zone	Prop. of burials in south-west zone (%)	Prop. of individuals of same age (%)
A	0.1	0	0	0
B	7.9	15	10.1	34.9
B/C/D	0.4	0	0	0
C	3.1	4	2.7	23.5
D	7.5	14	9.4	34.1
E	6.4	9	6.1	25.7
F	5.3	14	9.5	48.3
G	2.2	3	2.0	25.0
H	14.3	12	8.1	15.4
I	2.4	6	4.1	46.2
I/J	7.7	2	1.4	4.8
J	0.1	1	0.7	100
L	41.3	65	43.9	28.8
X	1.3	3	2.0	42.9

Table A126: zoning in burial in the cemetery by age and sex; north-west zone, post-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-west zone	Prop. of burials in north-west zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.5	3	1.7	37.5
G – male	0.2	0	0	0
H – female	6.2	8	4.5	23.5
H – male	7.3	12	6.8	30.0
I – female	0.2	0	0	0
I – male	2.2	0	0	0
I/J – female	2.2	2	1.1	16.7
I/J – male	5.3	12	6.8	41.4
J – female	-	-	-	-
J – male	0.2	0	0	0
L – female	11.9	24	13.6	36.9
L – male	9.1	18	10.2	36.0

Table A127: zoning in burial in the cemetery by age and sex; north zone, post-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Prop. of burials in north zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.5	1	1.6	12.5
G – male	0.2	1	1.6	100
H – female	6.2	6	9.5	17.6
H – male	7.3	7	11.1	17.5
I – female	0.2	0	0	0
I – male	2.2	0	0	0
I/J – female	2.2	0	0	0
I/J – male	5.3	5	7.9	17.2
J – female	-	0	0	0
J – male	0.2	0	0	0
L – female	11.9	8	12.7	12.3
L – male	9.1	1	1.6	2.0



Table A128: zoning in burial in the cemetery by age and sex; north-east zone, post-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-east zone	Prop. of burials in north-east zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.5	0	0	0
G – male	0.2	0	0	0
H – female	6.2	8	14.8	23.5
H – male	7.3	4	7.4	10.0
I – female	0.2	0	0	0
I – male	2.2	3	5.6	25.0
I/J – female	2.2	0	0	0
I/J – male	5.3	4	7.4	13.8
J – female	-	0	0	0
J – male	0.2	0	0	0
L – female	11.9	3	5.6	4.6
L – male	9.1	4	7.4	8.0

Table A129: zoning in burial in the cemetery by age and sex; south-east zone, post-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-east zone	Prop. of burials in south-east zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.5	0	0	0
G – male	0.2	0	0	0
H – female	6.2	0	0	0
H – male	7.3	0	0	0
I – female	0.2	0	0	0
I – male	2.2	0	0	0
I/J – female	2.2	0	0	0
I/J – male	5.3	1	100	3.4
J – female	-	-	-	-
J – male	0.2	0	0	0
L – female	11.9	0	0	0
L – male	9.1	0	0	0

Table A130: zoning in burial in the cemetery by age and sex; south zone, post-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in south zone	Prop. of burials in south zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.5	0	0	0
G – male	0.2	0	0	0
H – female	6.2	1	2.9	2.9
H – male	7.3	1	2.9	2.5
I – female	0.2	0	0	0
I – male	2.2	0	0	0
I/J – female	2.2	4	11.8	33.3
I/J – male	5.3	0	0	0
J – female	-	-	-	-
J – male	0.2	0	0	0
L – female	11.9	4	11.8	6.2
L – male	9.1	1	2.9	2.0

Table A131: zoning in burial in the cemetery by age and sex; south-west zone, post-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-west zone	Prop. of burials in south-west zone (%)	Proportion of individuals of same age/sex (%)
G – female	1.5	2	1.4	25.0
G – male	0.2	0	0	0
H – female	6.2	3	2.0	8.8
H – male	7.3	7	4.7	17.5
I – female	0.2	0	0	0
I – male	2.2	6	4.1	50.0
I/J – female	2.2	1	0.7	8.3
I/J – male	5.3	1	0.7	3.4
J – female	-	-	-	-
J – male	0.2	1	0.7	100
L – female	11.9	16	10.8	24.6
L – male	9.1	19	12.8	38.0

Table A132: age of burials in the church, all phases

Age band	Prop. of entire located burial pop (%).	Number in church	Prop. of burials in church (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
B	11.4	4	4.2	2.0
B/C/D	1.1	1	1.1	6.7
C	4.1	2	2.1	2.8
D	6.3	2	2.1	1.5
D/E/F	<0.1	1	1.1	100
E	4.3	2	2.1	1.9
F	1.5	2	2.1	3.1
G	2.5	2	2.1	4.3
H	17.8	22	23.2	6.7
I	2.3	4	4.2	8.7
I/J	15.2	14	14.7	6.0
J	0.6	0	0	0
K	<0.1	0	0	0
L	31.6	28	29.5	3.9
X	1.1	11	11.6	33.3

Table A133: age and sex of burials in the church, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in church	Prop. of burials in church (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	2	2.1	7.4
G – male	1.0	0	0	0
H – female	8.3	10	10.5	6.7
H – male	8.5	12	12.6	7.6
I – female	0.3	1	1.1	25.0
I – male	1.9	3	3.2	7.5
I/J – female	5.8	6	6.3	7.3
I/J – male	8.8	8	8.4	5.6
J – female	-	-	-	-
J – male	0.6	0	0	0
L – female	8.6	11	11.6	5.3
L – male	8.6	8	8.4	4.7

Table A134: age of burials in the church, pre-1300

Age band	Prop. of entire located burial pop (%).	Number in church	Prop. of burials in church (%)	Prop. of individuals of same age (%)
B	11.4	0	0	0
B/C/D	1.1	0	0	0
C	4.1	1	6.6	2.3
D	6.3	0	0	0
D/E/F	0.1	1	6.6	100
E	4.3	0	0	0
F	1.5	0	0	0
G	2.5	0	0	0
H	17.8	5	33.3	2.5
I	2.3	0	0	0
I/J	15.2	3	20.0	1.8
J	0.6	0	0	0
K	0.1	0	0	0
L	31.6	4	26.6	1.7
X	1.1	1	6.6	8.3

Table A135: age and sex of burials in the church, pre-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in church	Prop. of burials in church (%)	Proportion of individuals of same age/sex (%)
G – female	1.2	0	0	0
G – male	1.0	0	0	0
H – female	8.3	2	13.3	2.2
H – male	8.5	3	20.0	3.2
I – female	0.3	0	0	0
I – male	1.9	0	0	0
I/J – female	5.8	1	6.7	1.6
I/J – male	8.8	2	13.3	2.1
J – female	0	0	0	0
J – male	0.6	0	0	0
L – female	8.6	1	6.7	1.1
L – male	8.6	1	6.7	1.1

Table A136: age of burials in the church, post-1300

Age band	Prop. of entire located burial pop (%).	Number in church	Prop. of burials in church (%)	Prop. of individuals of same age (%)
A	0.2	0	0	0
B	7.7	4	5.9	9.5
B/C/D	0.4	1	1.4	50.0
C	3.1	1	1.4	5.9
D	7.5	1	1.4	2.4
E	6.2	2	2.9	5.9
F	5.3	2	2.9	6.9
G	2.2	2	2.9	16.7
H	14.3	17	24.6	21.8
I	2.4	4	5.9	30.8
I/J	7.7	11	15.9	26.2
J	0.2	0	0	0
L	41.5	24	34.8	10.6
X	1.3	0	0	0

Table A137: age and sex of burials in the church, post-1300

Age band and sex	Proportion of entire located burial pop. (%)	Number in church	Prop. of burials in church (%)	Proportion of individuals of same age/sex (%)
G – female	1.5	2	2.9	25.0
G – male	0.2	0	0	0
H – female	6.2	8	11.6	23.5
H – male	7.3	9	13.0	22.5
I – female	0.2	1	1.4	100
I – male	2.2	3	4.3	25.0
I/J – female	2.2	5	7.2	41.7
I/J – male	5.3	6	8.7	20.7
J – female	0	0	0	0
J – male	0.2	0	0	0
L – female	11.9	10	14.5	15.4
L – male	9.2	7	10.1	14.0

Table A138: age and sex of eaves-drip burials, all phases

Project ID	Age band	Sex (if appropriate)	Zone	Prop. of individuals of same age (%)	Prop. of 'eaves-drip' burials (%)
IN0104	B	N/A	S	20.9	26.8
IN0106	B		S		
IN0109	B		SE		
IN0110	B		S		
IN0112	B		S		
IN0115	B		S		
IN0123	B		S		
IN0127	B		S		
IN0132	B		S		
IN0133	B		S		
IN0134	B		S		
IN0139	B		S		
IN0141	B		S		
IN0143	B		S		
IN0224	B		N		
IN0231	B		N		
IN0235	B		N		
IN0236	B		N		
IN0270	B		N		
IN0319	B		SW		
IN0322	B		S		
IN0328	B		SW		
IN0362	B		S		
IN0363	B		SW		
IN0389	B		SW		
IN0396	B		S		
IN0404	B		SW		
IN0440	B		SW		
IN0512	B		SW		
IN0677	B		NE		
IN0742	B		N		
IN0755	B		N		
IN1388	B		NW		
IN1449	B	N			
IN1455	B	N			
IN1456	B	NW			
IN1493	B	N			
IN1539	B	NW			
IN1571	B	NW			
IN1735	B	S			
IN1927	B	SW			
IN1943	B	SW			
IN0049	B/C/D	N/A	S	20.0	1.9
IN0050	B/C/D		S		
IN0384	B/C/D		SW		
IN0103	C	N/A	S	15.5	7.0
IN0163	C		S		
IN0261	C		N		
IN0361	C		S		
IN0694	C		N		
IN1357	C		NW		

IN1447	C		NW		
IN1638	C		S		
IN1851	C		S		
IN1852	C		S		
IN1961	C		SW		
IN0105	D		S		
IN0108	D		S		
IN0147	D		S		
IN0392	D		SW		
IN0411	D	N/A	SW	7.4	6.4
IN0524	D		SW		
IN0587	D		S		
IN0748	D		N		
IN1144	D		N		
IN1443	D		NW		
IN0140	E		S		
IN0330	E		SW		
IN0385	E		SW		
IN0583	E	N/A	S	6.6	4.5
IN1224	E		N		
IN1554	E		NW		
IN1738	E		S		
IN0321	F		SW		
IN1143	F		NW		
IN1457	F	N/A	N	9.4	3.8
IN1646	F		S		
IN1649	F		S		
IN1736	F		S		
IN0320	G	Male	SW		
IN0323	G	Female	S	6.4	1.9
IN1909	G	Female	SW		
IN0086	H	Male	S		
IN0092	H	Female	S		
IN0237	H	Female	N		
IN0260	H	Female	NE		
IN0316	H	Male	SW		
IN0691	H	Male	NE		
IN0696	H	Male	N		
IN0720	H	Male	NE	4.6	9.6
IN0768	H	Unsexed	N		
IN0870	H	Unsexed	S		
IN1276	H	Female	NE		
IN1367	H	Female	NW		
IN1415	H	Female	NW		
IN1859	H	Female	S		
IN1891	H	Male	SW		
IN1389	I	Male	NW		
IN2011	I	Unsexed	NW	4.3	1.3
IN0046	I/J	Female	SE		
IN0051	I/J	Female	S		
IN0114	I/J	Female	S		
IN0185	I/J	Male	S	6.8	10.2
IN0238	I/J	Male	N		
IN0318	I/J	Male	SW		
IN0331	I/J	Female	SW		

IN0349	I/J	Male	SW		
IN1295	I/J	Male	SE		
IN1439	I/J	Male	N		
IN1448	I/J	Male	N		
IN1497	I/J	Male	NW		
IN1562	I/J	Male	NW		
IN1659	I/J	Female	S		
IN1668	I/J	Male	S		
IN1733	I/J	Female	S		
IN0066	L	Female	SE		
IN0111	L	Female	S		
IN0129	L	Male	S		
IN0337	L	Male	SE		
IN0351	L	Unsexed	SW		
IN0584	L	Unsexed	S		
IN0637	L	Male	NE		
IN0743	L	Female	N		
IN0761	L	Unsexed	N		
IN0799	L	Unsexed	SE		
IN0848	L	Male	S		
IN0855	L	Male	S		
IN1019	L	Female	NW		
IN1110	L	Male	NW		
IN1113	L	Female	NW		
IN1141	L	Unsexed	NW		
IN1349	L	Male	NE		
IN1358	L	Female	NW		
IN1392	L	Male	NW	5.1	23.6
IN1402	L	Female	NW		
IN1433	L	Male	NW		
IN1454	L	Male	N		
IN1516	L	Male	NW		
IN1537	L	Unsexed	NW		
IN1586	L	Unsexed	NW		
IN1724	L	Unsexed	S		
IN1727	L	Female	S		
IN1732	L	Unsexed	S		
IN1734	L	Unsexed	S		
IN1753	L	Unsexed	S		
IN1760	L	Unsexed	S		
IN1877	L	Female	SW		
IN1890	L	Female	SW		
IN1893	L	Unsexed	SW		
IN1894	L	Female	SW		
IN1896	L	Male	SW		
IN1987	L	Male	SW		
IN0511	X	Unsexed	S		
IN0719	X	Unsexed	N		
IN0973	X	Unsexed	NW	15.2	3.2
IN1642	X	Unsexed	S		
IN1643	X	Unsexed	S		



Table A139: Age and sex of eaves-drip burials, pre-1300

Project ID	Age band	Sex (if appropriate)	Zone	Prop. of individuals of same age (%)	Prop. of 'eaves-drip' burials (%)
IN0104	B	N/A	S	24.4	39.0
IN0106	B		S		
IN0109	B		SE		
IN0110	B		S		
IN0112	B		S		
IN0115	B		S		
IN0123	B		S		
IN0127	B		S		
IN0132	B		S		
IN0133	B		S		
IN0134	B		S		
IN0139	B		S		
IN0141	B		S		
IN0143	B		S		
IN0224	B		N		
IN0231	B		N		
IN0235	B		N		
IN0236	B		N		
IN0270	B		N		
IN0322	B		S		
IN0328	B		SW		
IN0362	B		S		
IN0363	B		SW		
IN0389	B		SW		
IN0396	B		S		
IN0404	B		SW		
IN0440	B		SW		
IN1449	B		N		
IN1455	B		N		
IN1539	B		NW		
IN0049	B/C/D	N/A	S	25.0	4.0
IN0050	B/C/D		S		
IN0384	B/C/D		SW		
IN0103	C	N/A	S	13.6	7.8
IN0163	C		S		
IN0261	C		N		
IN0361	C		S		
IN1851	C		S		
IN1852	C		S		
IN0105	D	N/A	S	7.4	6.5
IN0108	D		S		
IN0147	D		S		
IN0392	D		SW		
IN0411	D		SW		
IN0140	E	N/A	S	8.7	5.2
IN0330	E		SE		
IN0385	E		SE		
IN1554	E		NW		
IN0323	G	Female	S	3.7	1.3
IN0086	H	Male	S	3.6	9.1
IN0092	H	Female	S		

IN0237	H	Female	N				
IN0260	H	Female	NE				
IN0316	H	Male	SW				
IN0870	H	N/A	S				
IN1859	H	Female	S				
IN0046	I/J	Female	SE	5.5	11.7		
IN0051	I/J	Female	S				
IN0114	I/J	Female	S				
IN0185	I/J	Male	S				
IN0238	I/J	Male	N				
IN0331	I/J	Female	SW				
IN0349	I/J	Male	SW				
IN1448	I/J	Male	N				
IN1562	I/J	Male	NW				
IN0066	L	Female	SE			3.2	14.3
IN0111	L	Female	S				
IN0129	L	Male	S				
IN0337	L	Male	SE				
IN0351	L	N/A	SW				
IN0799	L	N/A	SE				
IN0848	L	Male	S				
IN0855	L	Male	S				
IN1454	L	Male	N				
IN1537	L	N/A	NW				
IN1586	L	N/A	NW				
IN0973	X	N/A	NW	8.3	1.3		

Table A140: Age and sex of eaves-drip burials, 1150-1500

Project ID	Age band	Sex (if appropriate)	Zone	Prop. of individuals of same age (%)	Prop. of 'eaves-drip' burials (%)		
IN0104	B	N/A	S	25.8	25.4		
IN0106	B		S				
IN0109	B		SE				
IN0110	B		S				
IN0112	B		S				
IN0115	B		S				
IN0123	B		S				
IN0127	B		S				
IN0143	B		S				
IN0270	B		N				
IN0742	B		N				
IN1388	B		NW				
IN1456	B		NW				
IN1493	B		N				
IN1571	B		NW				
IN1927	B		SW				
IN1943	B		SW				
IN0049	B/C/D	N/A	S	66.6	3.0		
IN0050	B/C/D		S				
IN0103	C	N/A	S	23.5	6.0		
IN1357	C		NW				
IN1447	C		NW				
IN1961	C		SW				
IN0105	D	N/A	S	14.6	8.9		
IN0108	D		S				
IN0524	D		SW				
IN0748	D		N				
IN1144	D		N				
IN1443	D		NW				
IN0583	E	N/A	S	5.4	3.0		
IN1224	E		N				
IN0321	F	N/A	SW	13.6	4.5		
IN1457	F		N				
IN1649	F		S				
IN0320	G	Male	SW	20.0	3.0		
IN1909	G	Female	SW				
IN0086	H	Male	S	8.8	10.4		
IN0092	H	Female	S				
IN0260	H	Female	NE				
IN0720	H	Male	NE				
IN0768	H	N/A	N				
IN1276	H	Female	NE				
IN1415	H	Female	NW				
IN1389	I	Male	NW			15.4	3.0
IN2011	I	N/A	NW				
IN0046	I/J	Female	SE	13.7	10.4		
IN0051	I/J	Female	S				
IN0114	I/J	Female	S				
IN0318	I/J	Male	SW				
IN1439	I/J	Male	N				
IN1497	I/J	Male	NW				

IN1668	I/J	Male	S		
IN0066	L	Female	SE	6.6	20.9
IN0111	L	Female	S		
IN0743	L	Female	N		
IN0761	L	N/A	N		
IN1110	L	Male	NW		
IN1113	L	Female	NW		
IN1141	L	N/A	NW		
IN1392	L	Male	NW		
IN1402	L	Female	NW		
IN1516	L	Male	NW		
IN1753	L	N/A	S		
IN1760	L	N/A	S		
IN1893	L	N/A	SW		
IN1894	L	Female	SW		
IN0719	X	N/A	N	11.1	1.5

Table A141: Age and sex of eaves-drip burials, post-1300

Project ID	Age band	Sex (if appropriate)	Zone	Prop. of individuals of same age (%)	Prop. of 'eaves-drip' burials (%)
IN0319	B	N/A	SW	11.9	13.9
IN0512	B		SW		
IN0677	B		NE		
IN0755	B		N		
IN1735	B		S		
IN0694	C	N/A	N	11.8	5.6
IN1638	C		S		
IN0587	D	N/A	S	2.4	2.8
IN1738	E	N/A	S	2.9	2.8
IN1143	F		NW	10.3	8.3
IN1646	F		S		
IN1736	F		S		
IN0691	H	Male	NE	5.1	11.1
IN0696	H	Male	N		
IN1367	H	Female	NW		
IN1891	H	Male	SW		
IN1295	I/J	Male	SE		
IN1659	I/J	Female	S	7.1	8.3
IN1733	I/J	Female	S		
IN0584	L	N/A	SE	6.2	38.9
IN0637	L	Male	NE		
IN1019	L	Female	NW		
IN1349	L	Male	NE		
IN1358	L	Female	NW		
IN1433	L	Male	NW		
IN1724	L	N/A	S		
IN1727	L	Female	S		
IN1732	L	N/A	S		
IN1734	L	N/A	S		
IN1877	L	Female	SW		
IN1890	L	Female	SW		
IN1896	L	Male	SW		
IN1987	L	Male	SW		
IN0511	X	N/A	S		
IN1642	X	N/A	S		
IN1643	X	N/A	S		

Table A142: locations of graves with burial furniture (number) by type; all zones, all phases

Burial practice	Number							Total
	NW	N	NE	SE	S	SW	Church	
Boards	1	1	1	4	3	4	0	14
Clay-filled coffins	0	0	0	6	0	0	0	6
Coffins	114	84	89	56	106	174	26	649
Ear muffs	6	10	13	3	6	3	1	42
Linings	1	0	2	0	1	1	0	5
Objects	10	9	17	5	10	6	6	63
Organics	0	1	2	0	2	0	1	6
Pillow stones	3	3	4	0	2	1	0	13
Shaped graves	0	0	1	1	0	0	0	2
Stone cover	1	0	0	0	0	0	0	1
Stones	0	1	1	2	1	1	0	6
Total number of graves with burial furniture	136	109	130	77	131	190	34	807

Table A143: locations of graves with burial furniture (proportion) by type; all zones, all phases

Burial practice	Percentage							Total
	NW	N	NE	SE	S	SW	Church	
Boards	7.1	7.1	7.1	28.65	21.4	28.65	0	100
Clay-filled coffins	0	0	0	100	0	0	0	100
Coffins	17.6	12.9	13.7	8.6	16.3	26.8	4.0	100
Ear muffs	14.2	23.8	31.2	7.1	14.2	7.1	2.4	100
Linings	20.0	0	40.0	0	20.0	20.0	0	100
Objects	15.9	14.3	27.0	7.9	15.9	9.5	9.5	100
Organics	0	16.7	33.3	0	33.3	0	16.7	100
Pillow stones	23.1	23.1	31.0	0	15.4	7.7	0	100
Shaped graves	0	0	50.0	50.0	0	0	0	100
Stone cover	100	0	0	0	0	0	0	100
Stones	0	16.7	16.7	33.3	16.7	16.7	0	100
Total percentage of graves with burial furniture	17.0	13.5	16.1	9.5	16.2	23.5	4.2	100

Table A144: locations of graves with burial furniture (number) by type; all zones, pre-1300

Burial practice	Number							Total
	NW	N	NE	SE	S	SW	Church	
Boards	1	1	1	4	3	3	0	13
Clay-filled coffins	0	0	0	6	0	0	0	6
Coffins	73	73	82	56	89	73	9	455
Ear muffs	6	10	13	3	6	3	1	42
Linings	1	0	2	0	1	1	0	5
Objects	8	5	15	5	10	4	0	47
Organics	0	1	2	0	1	0	0	4
Pillow stones	3	3	3	0	2	1	0	12
Shaped graves	0	0	1	1	0	0	0	2
Stone cover	1	0	0	0	0	0	0	1
Stones	0	1	0	2	1	1	0	5
Total number of graves with burial furniture	79	80	80	62	99	79	9	-

Table A145: locations of graves with burial furniture (proportion) by type; all zones, pre-1300

Burial practice	Percentage							Total
	NW	N	NE	SE	S	SW	Church	
Boards	7.7	7.7	7.7	30.8	23.05	23.05	0	100
Clay-filled coffins	0	0	0	100	0	0	0	100
Coffins	16.0	16.0	18.0	12.3	19.6	16.0	2.1	100
Ear muffs	14.3	23.8	31.0	7.1	14.3	7.1	2.4	100
Linings	20.0	0	40.0	0	20.0	20.0	0	100
Objects	17.0	10.65	31.9	10.65	21.3	8.5	0	100
Organics	0	25.0	50.0	0	25.0	0	0	100
Pillow stones	25.0	25.0	25.0	0	16.7	8.3	0	100
Shaped graves	0	0	50.0	50.0	0	0	0	100
Stone cover	100	0	0	0	0	0	0	100
Stones	0	20.0	0	40.0	20.0	20.0	0	100
Total percentage of graves with burial furniture	40.1	45.7	55.9	51.7	39.1	44.4	60.0	-

Table A146: locations of graves with burial furniture (number) by type; all zones, 1150-1500

Burial practice	Number							Total
	NW	N	NE	SE	S	SW	Church	
Boards	0	0	0	2	0	1	0	3
Coffins	15	4	17	5	23	37	18	119
Ear muffs	0	0	1	0	0	0	0	1
Linings	0	0	0	0	1	0	0	1
Objects	1	4	2	2	3	1	6	19
Organics	0	1	0	0	1	0	1	3
Pillow stones	0	1	1	0	0	0	0	2
Shaped graves	0	0	0	1	0	0	0	1
Stones	0	0	1	0	1	0	0	2
Total number of graves with burial furniture	16	8	21	8	26	39	24	-

Table A147: locations of graves with burial furniture (proportion) by type; all zones, 1150-1500

Burial practice	Percentage							Total
	NW	N	NE	SE	S	SW	Church	
Boards	0	0	0	66.7	0	33.3	0	100
Coffins	12.6	3.4	14.3	4.2	19.3	31.1	15.1	100
Ear muffs	0	0	100	0	0	0	0	100
Linings	0	0	0	0	100	0	0	100
Objects	5.3	21.0	10.5	10.5	15.8	5.3	31.6	100
Organics	0	33.3	0	0	33.3	0	33.3	100
Pillow stones	0	50.0	50.0	0	0	0	0	100
Shaped graves	0	0	0	100	0	0	0	100
Stones	0	0	50.0	0	50.0	0	0	100
Total percentage of graves with burial furniture	12.2	12.3	22.6	22.6	29.5	23.8	34.8	-

Table A148: locations of graves with burial furniture (number) by type; all zones, post-1300

Burial practice	Number							Total
	NW	N	NE	SE	S	SW	Church	
Coffins	26	9	1	0	7	69	17	129
Objects	1	1	2	0	0	1	6	11
Organics	0	0	0	0	1	0	1	2
Stones	0	0	1	0	0	0	0	1
Total number of graves with burial furniture	27	9	3	0	8	70	23	-



Table A149: locations of graves with burial furniture (proportion) by type; all zones, post-1300

Burial practice	Percentage							Total
	NW	N	NE	SE	S	SW	Church	
Coffins	20.1	7.0	0.8	0	5.4	53.5	13.2	100
Objects	9.1	9.1	18.2	0	0	9.1	54.5	100
Organics	0	0	0	0	50.0	0	50.0	100
Stones	0	0	100	0	0	0	0	100
Total percentage of graves with burial furniture	15.3	14.3	5.5	0	23.5	47.3	33.3	-

Table A150: locations of multiple burials; all zones, all phases

Database I.D.	Age and sex	Zone	Eaves-drip
2008; 2009	Unsexed adult, unaged; infant/child, 0-4 years	NW	No
0235; 0236; 0237	Infant, neonate; infant, 0 years; female, 25-34 years	N	Yes
1364; 1365	Female, 25-34 years; infant, foetal	N	No
0700; 0701	Female, 25-34 years; infant, 0 years	NE	No
1226; 1227; 1228; 1229; 1230	Child, 8 years; male, 45+ years; male 45+ years; child, 7 years; child, 12 years	NE	No
0309; 0310	Female, 16+ years; infant, 7 months	SW	No
0190; 0191	Female, 25-34 years; infant, 0 years	Church	N/A
0204; 0205	Female, 15 years; child, 12 years	Church	N/A

Table A151: locations of multiple burials; all zones, 950-1150

Phase	Database I.D.	Age and sex	Zone	Eaves-drip
950-1150	0235; 0236; 0237	Infant, neonate; infant, 0 years; female, 25-34 years	N	Yes
950-1150	0700; 0701	Female, 25-34 years; infant, 0 years	NE	No
950-1150	1226; 1227; 1228; 1229; 1230	Child, 8 years; male, 45+ years; male 45+ years; child, 7 years; child, 12 years	NE	No
950-1150	2008; 2009	Unsexed adult, unaged; infant/child, 0-4 years	NW	No

Table A152: locations of multiple burials; all zones, post-1300

Phase	Database I.D.	Age and sex	Zone	Eaves-drip
1300-1500	0190; 0191	Female, 25-34 years; infant, 0 years	Church	N/A
1300-1500	0204; 0205	Female, 15 years; child, 12 years	Church	N/A
1300-1700	0309; 0310	Female, 16+ years; infant, 7 months	SW	No
1300-1700	1364; 1365	Female, 25-34 years; infant, foetal	N	No

### 3.3: St Andrew, Fishergate, York

Table A153: number and percentage of burials located within each zone

Zone	Number	Percentage
Cemetery (late 10 <sup>th</sup> -12 <sup>th</sup> century)	127	31.6
E cemetery (1195-16 <sup>th</sup> century)	51	12.7
S cemetery (1195-16 <sup>th</sup> century)	87	21.6
Church and assoc. buildings	137	34.1

Table A154: zoning in burial in the cemetery by age; eastern cemetery, 1195 – late 16<sup>th</sup> century

Age band	Prop. of entire located burial pop (%).	Number in eastern zone	Prop. of burials in eastern zone (%)	Prop. of individuals of same age (%)
B	1.5	0	0	0
B/C	0.4	0	0	0
C	1.8	0	0	0
D	2.6	0	0	0
D/E	1.8	1	2.0	20.0
E	1.1	0	0	0
E/F	1.5	0	0	0
F	1.1	0	0	0
F/G	2.2	0	0	0
F/G/H	0.4	0	0	0
G/H	1.5	0	0	0
H	13.6	4	7.8	10.8
I	43.9	31	60.8	26.1
I/J	0.4	0	0	0
J	13.6	12	23.5	32.4
L	12.6	3	5.9	8.8

Table A155: zoning in burial in the cemetery by age; southern zone, 1195 – late 16<sup>th</sup> century

Age band	Prop. of entire located burial pop (%).	Number in southern zone	Prop. of burials in southern zone (%)	Prop. of individuals of same age (%)
B	1.5	4	4.7	100
B/C	0.4	0	0	0
C	1.8	4	4.7	80.0
D	2.6	5	5.8	71.4
D/E	1.8	3	3.5	60.0
E	1.1	1	1.1	33.3
E/F	1.5	4	4.7	100
F	1.1	0	0	0
F/G	2.2	1	1.1	16.7
F/G/H	0.4	1	1.1	100
G/H	1.5	2	2.3	50.0
H	13.6	12	13.8	32.4
I	43.9	30	34.5	25.2
I/J	0.4	1	1.1	100
J	13.6	6	7.0	16.2
L	12.6	13	14.9	38.2

Table A156: zoning in burial in the cemetery by age and sex; eastern cemetery, 1195 – late 16<sup>th</sup> century

Age band and sex	Proportion of entire located burial pop. (%)	Number in eastern zone	Prop. of burials in eastern zone (%)	Proportion of individuals of same age/sex (%)
G/H – female	-	-	-	-
G/H – male	1.5	0	0	0
H – female	2.6	0	0	0
H – male	11.1	4	7.8	13.3
I – female	11.1	3	5.9	10.0
I – male	32.8	28	54.9	31.5
I/J – female	-	-	-	-
I/J – male	0.4	0	0	0
J – female	3.0	0	0	0
J – male	10.7	12	23.5	41.4
L – female	3.7	0	0	0
L – male	8.5	3	5.9	13.0

Table A157: zoning in burial in the cemetery by age and sex; southern cemetery, 1195 – late 16<sup>th</sup> century

Age band and sex	Proportion of entire located burial pop. (%)	Number in southern zone	Prop. of burials in southern zone(%)	Proportion of individuals of same age/sex (%)
G/H – female	-	-	-	-
G/H – male	1.5	2	2.3	50.0
H – female	2.6	1	1.1	14.3
H – male	11.1	11	12.6	36.7
I – female	11.1	9	10.3	30.0
I – male	32.8	21	24.1	23.6
I/J – female	-	-	-	-
I/J – male	0.4	1	1.1	100
J – female	3.0	1	1.1	12.5
J – male	10.7	5	5.7	17.2
L – female	3.7	5	5.7	50.0
L – male	8.5	7	8.0	30.4

Table A158: age of burials in the church/buildings, all phases

Age band	Prop. of entire located burial pop (%).	Number in church	Prop. of burials in church (%)	Prop. of individuals of same age (%)
B	2.7	0	0	0
B/C	1.0	1	0.7	25.0
C	3.2	1	0.7	7.7
C/D	0.5	0	0	0
D	3.7	2	1.5	13.3
D/E	2.2	1	0.7	11.1
E	1.0	2	1.5	50.0
E/F	2.0	0	0	0
F	5	3	2.2	60.0
F/G	2.7	5	3.6	45.5
F/G/H	0.3	0	0	0
G/H	2.0	2	7.1.5	25.0
H	17.1	23	16.8	33.3
I	38.3	60	43.8	39.0
I/J	0.3	0	0	0
J	10.4	19	13.9	45.2
L	11.2	18	13.1	40.0

Table A159: age and sex of burials in the church/buildings, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in priory church and buildings	Prop. of burials priory church and buildings (%)	Proportion of individuals of same age/sex (%)
H – female	4.0	7	5.1	43.8
H – male	12.9	16	11.7	30.8
I – female	11.4	18	13.1	39.1
I – male	26.9	42	30.6	38.9
J – female	2.5	7	5.1	70.0
J – male	8.0	12	8.7	37.5
L – female	4.2	5	3.6	29.4
L – male	6.5	13	9.5	5.0

Table A160: age of burials in the church, late 10<sup>th</sup> century – 1195

Age band	Prop. of entire located burial pop (%).	Number in church	Prop. of burials in church (%)	Prop. of individuals of same age (9%)
B	5.3	0	0	0
B/C	2.3	0	0	0
C	6.1	0	0	0
C/D	1.5	0	0	0
D	6.1	0	0	0
D/E	3.1	0	0	0
E	0.8	0	0	0
E/F	3.1	0	0	0
F	1.5	0	0	0
F/G	3.8	0	0	0
G/H	3.1	0	0	0
H	24.4	2	50.0	6.3
I	26.7	2	50.0	5.7
J	3.8	0	0	0
L	8.4	0	0	0

Table A161: age and sex of burials in the church, late 10<sup>th</sup> century – 1195

Age band and sex	Proportion of entire located burial pop. (%)	Number in priory church and buildings	Prop. of burials priory church and buildings (%)	Proportion of individuals of same age/sex (%)
H – female	6.9	1	25.0	11.1
H – male	16.8	1	25.0	4.6
I – female	12.2	0	0	0
I – male	14.5	2	50.0	10.5
J – female	1.5	0	0	0
J – male	2.3	0	0	0
L – female	5.3	0	0	0
L – male	2.3	0	0	0

Table A162: age of burials in the priory church and buildings, 1195 – late 16<sup>th</sup> century

Age band	Prop. of entire located burial pop (%).	Number in priory church and buildings	Prop. of burials in priory church and buildings (%)	Prop. of individuals of same age (%)
B	1.5	0	0	0
B/C	0.4	1	0.8	100
C	1.8	1	0.8	20.0
D	2.6	2	1.5	28.6
D/E	1.8	1	0.8	20.0
E	1.1	2	1.5	66.7
E/F	1.5	0	0	0
F	1.1	3	2.3	100
F/G	2.2	5	3.8	83.3
F/G/H	0.4	0	0	0
G/H	1.5	2	1.5	50.0
H	13.6	21	15.8	56.7
I	43.9	58	43.6	48.7
I/J	0.4	0	0	0
J	13.6	19	14.3	51.4
L	12.6	18	13.5	52.9

Table A163: age and sex of burials in the priory church and buildings, 1195 – late 16<sup>th</sup> century

Age band and sex	Proportion of entire located burial pop. (%)	Number in priory church and buildings	Prop. of burials in priory church and buildings (%)	Proportion of individuals of same age/sex (%)
G/H – female	-	-	-	-
G/H – male	1.5	2	1.5	50.0
H – female	2.6	6	4.5	85.7
H – male	11.1	15	11.3	50.0
I – female	11.1	18	13.5	60.0
I – male	32.8	40	30.1	44.9
I/J – female	-	-	-	-
I/J – male	0.4	0	0	0
J – female	3.0	7	5.3	87.5
J – male	10.7	12	9.0	41.4
L – female	3.7	5	3.8	50.0
L – male	8.5	13	9.8	56.5

Table A164: locations of graves with burial furniture (number) by type; all zones, all phases

Burial practice	Number		Total
	Cemetery	Church/buildings	
Coffins	4	2	6
Cists/stone coffins	1	6	7
Ear muffs	0	1	1
Lining	1	3	4
Markers	2	1	3
Objects	3	3	6
Organics	1	0	1
Shaped graves	1	0	1
Total number of graves with burial furniture	13	16	29

Table A165: locations of graves with burial furniture (proportion) by type; all zones, all phases

Burial practice	Percentage		Total
	Cemetery	Church/buildings	
Coffins	66.7	33.3	100
Cists/stone coffins	14.3	85.7	100
Ear muffs	0	100	100
Lining	25.0	75.0	100
Markers	66.7	33.3	100
Objects	50.0	50.0	100
Organics	100	0	100
Shaped graves	100	0	100
Total percentage of graves with burial furniture	44.8	55.2	100

Table A166: locations of graves with burial furniture (number) by type; all zones, late 10<sup>th</sup> century – 1195

Burial practice	Number		Total
	Cemetery	Church	
Coffins	4	0	4
Ear muffs	0	1	1
Markers	1	0	1
Objects	0	1*	1*
Organics	1	0	1
Shaped graves	1	0	1
Total number of graves with burial furniture	6	4	-

\*= one object in a triple grave

Table A167: locations of graves with burial furniture (proportion) by type; all zones, late 10<sup>th</sup> century – 1195

Burial practice	Percentage		Total
	Cemetery	Church	
Coffins	100	0	100
Ear muffs	0	100	100
Markers	100	0	100
Objects	0	100	100
Organics	100	0	100
Shaped graves	100	0	100
Total percentage of graves with burial furniture	4.7	100	-

\*= one object in a triple grave

Table A168: locations of graves with burial furniture (number) by type; all zones, 1195 – late 16<sup>th</sup> century

Burial practice	Number			Total
	Eastern	Southern	Church and priory buildings	
Cist/stone coffins	0	1	6	7
Coffins	0	0	2	2
Linings	0	1	3	4
Markers	1	0	1	2
Objects	1	2	2	5
Total number of graves with burial furniture	2	4	13	-

Table A169: locations of graves with burial furniture (proportion) by type; all zones, 1195 – 16<sup>th</sup> century

Burial practice	Percentage			Total
	Eastern	Southern	Church and priory buildings	
Cist/stone coffins	0	14.3	85.7	100
Coffins	0	0	100	100
Linings	0	25.0	75.0	100
Markers	50.0	0	50.0	100
Objects	20.0	40.0	40.0	100
Total percentage of graves with burial furniture	3.9	4.6	9.8	-



### 3.4: St Michael's, Leicester

Table A170: number and percentage of burials located within each zone

Zone	Number	Percentage
N	42	15.7
NE	16	6.0
S	15	4.5
SW	64	24.0
W	117	43.8
Church	17	6.0

Table A171: zoning in burial in the cemetery by age; north zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north zone	Prop. of burials in north zone (%)	Prop. of individuals of same age (%)
A	0.4	0	0	0
B/C	7.7	3	7.1	14.3
D/E	9.9	5	11.9	18.5
F/G	4.4	3	7.1	25.0
F/G/H	0.7	0	0	0
F/G/H/I	1.5	0	0	0
H	10.0	3	7.1	11.1
H/I	15.1	4	9.5	9.8
I	35.7	18	42.9	18.6
I/J	0.7	0	0	0
J	1.1	0	0	0
K	1.8	1	2.4	20.0
L	1.5	0	0	0

Table A172: zoning in burial in the cemetery by age and sex; north zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Prop. of burials in north zone (%)	Proportion of individuals of same age/sex (%)
H – female	5.9	3	7.1	18.8
H – male	2.6	0	0	0
H/I – female	4.8	2	4.8	15.4
H/I – male	2.6	2	4.8	28.6
I – female	16.5	9	21.4	20.0
I – male	11.8	7	16.7	21.9
I/J – female	0.4	0	0	0
I/J – male	-	-	-	-
J – female	0.7	0	0	0
J – male	0.4	0	0	0

Table A173: zoning in burial in the cemetery by age; north-east zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north-east zone	Prop. of burials in north-east zone (%)	Prop. of individuals of same age (%)
A	0.4	0	0	0
B/C	7.7	1	6.25	4.8
D/E	9.9	2	12.5	7.4
F/G	4.4	1	6.25	8.3
F/G/H	0.7	0	0	0
F/G/H/I	1.5	1	6.25	25.0
H	10.0	1	6.25	3.7
H/I	15.1	3	18.75	7.3
I	35.7	7	43.75	7.23
I/J	0.7	0	0	0
3J	1.1	0	0	0
K	1.8	0	0	0
L	1.5	0	0	0

Table A174: zoning in burial in the cemetery by age and sex; north-east zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-east zone	Prop. of burials in north-east zone (%)	Proportion of individuals of same age/sex (%)
H – female	5.9	1	6.3	6.3
H – male	2.6	0	0	0
H/I – female	4.8	0	0	0
H/I – male	2.6	0	0	0
I – female	16.5	1	6.3	2.2
I – male	11.8	4	25.0	12.5
I/J – female	0.4	0	0	0
I/J – male	-	-	-	-
J – female	0.7	0	0	0
J – male	0.4	0	0	0

Table A175: zoning in burial in the cemetery by age; south zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
A	0.4	0	0	0
B/C	7.7	0	0	0
D/E	9.9	1	6.7	3.7
F/G	4.4	0	0	0
F/G/H	0.7	0	0	0
F/G/H/I	1.5	3	20.0	75.0
H	10.0	0	0	0
H/I	15.1	2	13.3	4.9
I	35.7	5	33.3	5.2
I/J	0.7	0	0	0
J	1.1	0	0	0
K	1.8	0	0	0
L	1.5	0	0	0

Table A176: zoning in burial in the cemetery by age and sex; south zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south zone	Prop. of burials in south zone (%)	Proportion of individuals of same age/sex (%)
H – female	5.9	0	0	0
H – male	2.6	0	0	0
H/I – female	4.8	0	0	0
H/I – male	2.6	0	0	0
I – female	16.5	4	26.7	8.9
I – male	11.8	0	0	0
I/J – female	0.4	0	0	0
I/J – male	-	-	-	-
J – female	0.7	0	0	0
J – male	0.4	0	0	0

Table A177: zoning in burial in the cemetery by age; south-west zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south-west zone	Prop. of burials in south-west zone (%)	Prop. of individuals of same age (%)
A	0.4	0	0	0
B/C	7.7	9	14.1	42.9
D/E	9.9	8	12.5	29.6
F/G	4.4	3	4.7	25.0
F/G/H	0.7	2	3.1	100
F/G/H/I	1.5	0	0	0
H	10.0	10	15.6	37.0
H/I	15.1	4	6.3	9.8
I	35.7	17	26.6	17.5
I/J	0.7	1	1.6	50.0
J	1.1	2	3.1	66.7
K	1.8	2	3.1	40.0
L	1.5	0	0	0

Table A178: zoning in burial in the cemetery by age and sex; south-west zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-west zone	Prop. of burials in south-west zone (%)	Proportion of individuals of same age/sex (%)
H – female	5.9	4	6.3	25.0
H – male	2.6	3	4.7	42.8
H/I – female	4.8	0	0	0
H/I – male	2.6	1	1.6	14.3
I – female	16.5	6	9.4	13.3
I – male	11.8	6	9.4	18.8
I/J – female	0.4	0	0	0
I/J – male	-	-	-	-
J – female	0.7	1	1.6	50.0
J – male	0.4	1	1.6	100

Table A179: zoning in burial in the cemetery by age; west zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in west zone	Prop. of burials in west zone (%)	Prop. of individuals of same age (%)
A	0.4	0	0	0
B/C	7.7	8	6.8	38.1
D/E	9.9	9	7.7	33.3
F/G	4.4	5	4.3	41.7
F/G/H	0.7	0	0	0
F/G/H/I	1.5	0	0	0
H	10.0	10	8.5	37.0
H/I	15.1	23	19.6	56.1
I	35.7	45	38.5	46.4
I/J	0.7	1	0.8	50.0
J	1.1	1	0.8	33.3
K	1.8	2	1.7	40.0
L	1.5	4	3.4	100

Table A180: zoning in burial in the cemetery by age and sex; west zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in west zone	Prop. of burials in west zone (%)	Proportion of individuals of same age/sex (%)
H – female	5.9	5	4.3	31.3
H – male	2.6	4	3.4	57.2
H/I – female	4.8	11	9.4	84.6
H/I – male	2.6	2	1.7	28.6
I – female	16.5	20	17.1	44.4
I – male	11.8	15	12.8	46.9
I/J – female	0.4	1	0.9	100
I/J – male	-	-	-	-
J – female	0.7	1	0.9	50.0
J – male	0.4	0	0	0

Table A181: zoning in burial in the cemetery by age; north zone, 1250-1400

Age band	Prop. of entire located burial pop (%).	Number in north zone	Prop. of burials in north zone (%)	Prop. of individuals of same age (%)
A	0.5	0	0	0
B/C	8.7	3	7.9	15.8
D/E	9.1	5	13.1	25.0
F/G	4.6	2	5.3	20.0
F/G/H	0.9	0	0	0
H	10.9	3	7.9	12.5
H/I	12.3	2	5.3	7.4
I	38.3	18	47.4	21.4
I/J	0.5	0	0	0
J	1.4	0	0	0
K	0.9	0	0	0
L	0.5	0	0	0
X	11.4	5	13.1	20.0

Table A182: zoning in burial in the cemetery by age; south zone, 1250-1400

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
A	0.5	0	0	0
B/C	8.7	0	0	0
D/E	9.1	1	8.3	5.0
F/G	4.6	0	0	0
F/G/H	0.9	0	0	0
H	10.9	0	0	0
H/I	12.3	2	16.7	7.4
I	38.3	5	41.7	5.9
I/J	0.5	0	0	0
J	1.4	0	0	0
K	0.9	0	0	0
L	0.5	0	0	0
X	11.4	4	33.3	16.0

Table A183: zoning in burial in the cemetery by age; south-west zone, 1250-1400

Age band	Prop. of entire located burial pop (%).	Number in south-west zone	Prop. of burials in south-west zone (%)	Prop. of individuals of same age (%)
A	0.5	0	0	0
B/C	8.7	9	14.1	47.4
D/E	9.1	8	12.5	40.0
F/G	4.6	3	4.7	30.0
F/G/H	0.9	2	3.1	100
H	10.9	10	15.6	41.7
H/I	12.3	4	6.2	14.8
I	38.3	17	26.6	20.23
I/J	0.5	1	1.6	100
J	1.4	2	3.1	66.7
K	0.9	2	3.1	100
L	0.5	0	0	0
X	11.4	6	9.4	24.0

Table A184: zoning in burial in the cemetery by age; west zone, 1250-1400

Age band	Prop. of entire located burial pop (%).	Number in west zone	Prop. of burials in west zone (%)	Prop. of individuals of same age (%)
A	0.5	0	0	0
B/C	8.7	7	7.4	36.8
D/E	9.1	6	6.4	30.0
F/G	4.6	5	5.3	50.0
F/G/H	0.9	0	0	0
H	10.9	9	9.6	37.5
H/I	12.3	15	15.9	55.5
I	38.3	41	43.6	48.8
I/J	0.5	0	0	0
J	1.4	1	1.1	33.3
K	0.9	0	0	0
L	0.5	1	1.1	100
X	11.4	9	9.6	36.0

Table A185: zoning in burial in the cemetery by age and sex; north zone, 1250-1400

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Prop. of burials in north zone (%)	Proportion of individuals of same age/sex (%)
H – female	6.4	3	7.9	21.4
H – male	2.7	0	0	0
H/I – female	4.1	2	5.3	22.2
H/I – male	1.8	0	0	0
I – female	18.3	9	23.7	22.5
I – male	12.8	7	18.4	25.0
J – female	0.9	0	0	0
J – male	0.5	0	0	0

Table A186: zoning in burial in the cemetery by age and sex; south zone, 1250-1400

Age band and sex	Proportion of entire located burial pop. (%)	Number in south zone	Prop. of burials in south zone (%)	Proportion of individuals of same age/sex (%)
H – female	6.4	0	0	0
H – male	2.7	0	0	0
H/I – female	4.1	0	0	0
H/I – male	1.8	0	0	0
I – female	18.3	4	33.3	10.0
I – male	12.8	0	0	0
J – female	0.9	0	0	0
J – male	0.5	0	0	0

Table A187: zoning in burial in the cemetery by age and sex; south-west zone, 1250-1400

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-west zone	Prop. of burials in south-west zone (%)	Proportion of individuals of same age/sex (%)
H – female	6.4	4	6.3	28.6
H – male	2.7	3	4.7	50.0
H/I – female	4.1	0	0	0
H/I – male	1.8	1	1.6	25.0
I – female	18.3	6	9.4	15.0
I – male	12.8	6	9.4	21.4
J – female	0.9	1	1.6	50.0
J – male	0.5	1	1.6	100



Table A188: zoning in burial in the cemetery by age and sex; west zone, 1250-1400

Age band and sex	Proportion of entire located burial pop. (%)	Number in west zone	Prop. of burials in west zone (%)	Proportion of individuals of same age/sex (%)
H – female	6.4	5	5.3	35.7
H – male	2.7	3	3.2	50.0
H/I – female	4.1	7	7.4	77.8
H/I – male	1.8	2	2.1	50.0
I – female	18.3	18	19.1	45.0
I – male	12.8	15	16.0	53.6
J – female	0.9	1	1.1	50.0
J – male	0.5	0	0	0

Table A189: zoning in burial in the cemetery by age; north zone, 1400-1500

Age band	Prop. of entire located burial pop (%).	Number in north zone	Prop. of burials in north zone (%)	Prop. of individuals of same age (%)
B/C	5.3	0	0	0
D/E	7.9	0	0	0
F/G	5.3	1	25.0	50.0
F/G/H/I	2.6	0	0	0
H	5.3	0	0	0
H/I	26.3	2	50.0	20.0
I	28.9	0	0	0
I/J	2.6	0	0	0
K	7.9	1	25.0	33.3
L	7.9	0	0	0

Table A190: zoning in burial in the cemetery by age; north-east zone, 1400-1500

Age band	Prop. of entire located burial pop (%).	Number in north-east zone	Prop. of burials in north-east zone (%)	Prop. of individuals of same age (%)
B/C	5.3	1	6.3	50.0
D/E	7.9	2	12.5	66.7
F/G	5.3	1	6.3	50.0
F/G/H/I	2.6	1	6.3	100
H	5.3	1	6.3	50.0
H/I	26.3	3	18.8	30.0
I	28.9	7	43.8	63.6
I/J	2.6	0	0	0
K	7.9	0	0	0
L	7.9	0	0	0

Table A191: zoning in burial in the cemetery by age; west zone, 1400-1500

Age band	Prop. of entire located burial pop (%).	Number in west zone	Prop. of burials in west zone (%)	Prop. of individuals of same age (%)
B/C	5.3	1	5.6	50.0
D/E	7.9	1	5.6	33.3
F/G	5.3	0	0	0
F/G/H/I	2.6	0	0	0
H	5.3	1	5.6	50.0
H/I	26.3	5	27.8	50.0
I	28.9	4	22.2	36.4
I/J	2.6	1	5.6	100
K	7.9	2	11.1	66.7
L	7.9	3	16.7	100

Table A192: zoning in burial in the cemetery by age and sex; north zone, 1400-1500

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Prop. of burials in north zone (%)	Proportion of individuals of same age/sex (%)
H – female	2.6	0	0	0
H – male	2.6	0	0	0
H/I – female	10.5	0	0	0
H/I – male	5.3	2	25.0	100
I – female	7.9	0	0	0
I – male	10.5	0	0	0
I/J – female	2.6	0	0	0
I/J – male	-	-	-	-

Table A193: zoning in burial in the cemetery by age and sex; north-east zone, 1400-1500

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-east zone	Prop. of burials in north-east zone (%)	Proportion of individuals of same age/sex (%)
H – female	2.6	1	6.3	100
H – male	2.6	0	0	0
H/I – female	10.5	0	0	0
H/I – male	5.3	0	0	0
I – female	7.9	1	6.3	33.3
I – male	10.5	4	25.0	100
I/J – female	2.6	0	0	0
I/J – male	-	-	-	-

Table A194: zoning in burial in the cemetery by age and sex; west zone, 1400-1500

Age band and sex	Proportion of entire located burial pop. (%)	Number in west zone	Prop. of burials in west zone (%)	Proportion of individuals of same age/sex (%)
H – female	2.6	0	0	0
H – male	2.6	1	5.6	100
H/I – female	10.5	4	22.2	100
H/I – male	5.3	0	0	0
I – female	7.9	2	11.1	66.7
I – male	10.5	0	0	0
I/J – female	2.6	1	5.6	100
I/J – male	-	-	-	-

Table A195: zoning in burial in the cemetery by age; church, all phases

Age band	Prop. of entire located burial pop (%).	Number in church zone	Prop. of burials in church zone (%)	Prop. of individuals of same age (%)
A	0.4	1	5.9	100
D/E	7.9	2	11.8	7.4
H	5.3	3	17.6	11.1
H/I	26.3	5	29.4	12.2
I	28.9	5	29.4	5.2

Table A196: zoning in burial in the cemetery by age and sex; church, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in church	Prop. of burials in church (%)	Proportion of individuals of same age/sex (%)
H – female	2.6	3	17.6	18.8
H – male	2.6	0	0	0
H/I – female	10.5	0	0	0
H/I – male	5.3	2	11.8	28.6
I – female	7.9	5	29.4	11.1
I – male	10.5	0	0	0

Table A197: zoning in burial in the cemetery by age; church, 1100-1250

Age band	Prop. of entire located burial pop (%).	Number in church zone	Prop. of burials in church zone (%)	Prop. of individuals of same age (%)
D/E	40.0	2	40.0	50.0
H	10.0	1	20.0	100
H/I	30.0	0	0	0
I	20.0	2	40.0	100

Table A198: zoning in burial in the cemetery by age and sex; church, 1100-1250

Age band and sex	Proportion of entire located burial pop. (%)	Number in church	Prop. of burials in church (%)	Proportion of individuals of same age/sex (%)
H – female	10.0	1	20.0	100
H – male	0	0	0	0
I – female	20.0	2	40.0	100
I – male	0	0	0	0

Table A199: zoning in burial in the cemetery by age; church, 1250-1400

Age band	Prop. of entire located burial pop (%).	Number in church zone	Prop. of burials in church zone (%)	Prop. of individuals of same age (%)
A	0.5	1	9.1	100
B/C	8.7	0	0	0
D/E	9.1	0	0	0
F/G	4.6	0	0	0
F/G/H	0.9	0	0	0
H	10.9	2	18.2	8.3
H/I	12.3	4	36.3	14.8
I	38.3	3	27.3	3.6
I/J	0.5	0	0	0
J	1.4	0	0	0
K	0.9	0	0	0
L	0.5	0	0	0
X	11.4	1	9.1	4.0

Table A200: zoning in burial in the cemetery by age and sex; church, 1250-1400

Age band and sex	Proportion of entire located burial pop. (%)	Number in church	Prop. of burials in church (%)	Proportion of individuals of same age/sex (%)
H – female	6.4	2	18.2	14.3
H – male	2.7	0	0	0
H/I – female	4.1	0	0	0
H/I – male	1.8	1	9.1	25.0
I – female	18.3	3	27.3	7.5
I – male	12.8	0	0	0
J – female	0.9	0	0	0
J – male	0.5	0	0	0

Table A201: locations of graves with burial furniture (number) by type; all zones, all phases

Burial practice	Number						Total
	N	NE	S	SW	W	Church	
Coffins	0	0	0	0	6	0	6
Objects	5	0	0	2	3	1	11
Pillow stones	0	0	0	0	1	0	1
Shaped grave	0	0	0	0	1	0	1
Stones	0	0	0	0	2	0	2
Total number of graves with burial furniture	5	0	0	2	11	1	17

Table A202: locations of graves with burial furniture (proportion) by type; all zones, all phases

Burial practice	Number						Total
	N	NE	S	SW	W	Church	
Coffins	0	0	0	0	100	0	100
Objects	45.4	0	0	18.2	27.3	9.1	11
Pillow stones	0	0	0	0	100	0	100
Shaped grave	0	0	0	0	100	0	100
Stones	0	0	0	0	100	0	100
Total percentage of graves with burial furniture	11.9	0	0	3.1	9.4	5.9	6.3

Table A203: locations of graves with burial furniture (number) by type; all zones, 1250-1400

Burial practice	Number					Total
	N	S	SW	W	Church	
Coffins	0	0	0	6	0	6
Objects	1	0	2	3	0	6
Pillow stones	0	0	0	1	0	1
Shaped grave	0	0	0	1	0	1
Stones	0	0	0	2	0	2
Total number of graves with burial furniture	1	0	2	11	0	-

Table A204: locations of graves with burial furniture (proportion) by type; all zones, 1250-1400

Burial practice	Number					Total
	N	S	SW	W	Church	
Coffins	0	0	0	100	0	100
Objects	16.7	0	33.3	50.0	0	100
Pillow stones	0	0	0	100	0	100
Shaped grave	0	0	0	100	0	0
Stones	0	0	0	100	0	100
Total percentage of graves with burial furniture	2.6	0	3.1	11.7	0	-

Table A205: locations of graves with burial furniture (number) by type; all zones, 1400-1500

Burial practice	Number			Total
	N	NE	W	
Objects	4	0	0	4
Total number of graves with burial furniture	4	0	0	-

Table A206: locations of graves with burial furniture (proportion) by type; all zones, 1400-1500

Burial practice	Number			Total
	N	NE	W	
Objects	100	0	0	100
Total percentage of graves with burial furniture	100	0	0	-

Table A207: locations of multiple burials; all zones, 1250-1400

Phase	Database I.D.	Age and sex	Zone	Eaves-drip
1250-1400	4423; 4677	Female, 21-35 years; infant, 12-14 WIU	Church	N/A
1250-1400	4434; 4435	Female, 36-50 years; female, 21-50 years	Church	N/A

### 3.5: St Peter's, Leicester

Table A208: number and percentage of burials located within each zone

Zone	Number	Percentage
NW	406	30.8
N	186	14.1
NE	209	15.9
SE	439	33.3
S	17	1.3
SW	4	0.3
Church	56	4.2
Outside the cemetery	1	<0.1

Table A209: burial in the northern half of the cemetery by age, all phases

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
A	0	0	0
A/B/C	3	0.4	60.0
B/C	92	11.5	61.3
C	1	0.1	50.0
D/E	105	13.1	60.0
F/G	60	7.5	63.8
F/G/H	9	1.1	56.3
F/G/H/I	49	6.1	63.6
F/G/H/I/J	5	0.6	55.6
G/H	0	0	0
H	58	7.2	63.0
H/I	95	11.9	64.2
I	148	18.5	62.2
I/J	86	10.7	53.8
J	14	1.8	70.0
K	55	6.9	68.8
L	20	2.5	44.4
X	1	0.1	20.0
Total	801		

Table A210: burial in the northern half of the cemetery by age and sex, all phases

Age band	No. in N churchyard, female	Prop. of N churchyard burials (%)	Prop. of individuals same age, female (%)	No. in N churchyard, male	Prop. of N churchyard burials (%)	Prop. of individuals same age, male (%)
H	27	3.4	61.4	18	2.3	64.3
H/I	25	3.1	65.8	9	1.1	39.1
I	62	7.7	62.6	54	6.7	60.0
I/J	38	4.7	59.4	27	3.4	57.4
J	6	0.8	66.7	7	0.9	87.5
Total	158	19.7	62.2	115	14.4	58.7

Table A211: burial in the northern half of the cemetery by age, 850-1190

Age band	Number in N churchyard	Proportion of N churchyard burials (%)	Proportion of individuals of same age (%)
B/C	3	25.0	100
C	1	8.3	100
D/E	2	16.7	66.7
F/G	1	8.3	100
H	1	8.3	100
H/I	0	-	-
I	3	25.0	60.0
I/J	0	-	-
K	1	8.3	100
L	0	-	-
Total	12		

Table A212: zoning in burial in the cemetery by age; north-west zone, 850-1190

Age band	Prop. of entire located burial pop (%)	Number in north-west zone	Prop. of burials in north-west zone (%)	Prop. of individuals of same age (%)
B/C	15.7	2	25.0	66.7
C	5.3	1	12.5	100
D/E	15.7	2	25.0	66.7
F/G	5.3	1	12.5	100
H	5.3	0	0	0
H/I	5.3	0	0	0
I	26.3	2	25.0	40.0
I/J	10.5	0	0	0
K	5.3	0	0	0
L	5.3	0	0	0

Table A213: zoning in burial in the cemetery by age; north zone, 850-1190

Age band	Prop. of entire located burial pop (%)	Number in north zone	Prop. of burials in north zone (%)	Prop. of individuals of same age (%)
B/C	15.7	0	0	0
C	5.3	0	0	0
D/E	15.7	0	0	0
F/G	5.3	0	0	0
H	5.3	0	0	0
H/I	5.3	0	0	0
I	26.3	1	50.0	20.0
I/J	10.5	0	0	0
K	5.3	1	50.0	100
L	5.3	0	0	0



Table A214: zoning in burial in the cemetery by age; north-east zone, 850-1190

Age band	Prop. of entire located burial pop (%).	Number in north-east zone	Prop. of burials in north-east zone (%)	Prop. of individuals of same age (%)
B/C	15.7	1	50.0	33.3
C	5.3	0	0	0
D/E	15.7	0	0	0
F/G	5.3	0	0	0
H	5.3	1	50.0	100
H/I	5.3	0	0	0
I	26.3	0	0	0
I/J	10.5	0	0	0
K	5.3	0	0	0
L	5.3	0	0	0

Table A215: zoning in burial in the cemetery by age; south zone, 850-1190

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
B/C	15.7	0	0	0
C	5.3	0	0	0
D/E	15.7	1	14.3	33.3
F/G	5.3	0	0	0
H	5.3	0	0	0
H/I	5.3	1	14.3	100
I	26.3	2	28.55	40.0
I/J	10.5	2	28.55	100
K	5.3	0	0	0
L	5.3	1	14.3	

Table A216: zoning in burial in the cemetery by age; north-west zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north-west zone	Prop. of burials in north-west zone (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
A/B/C	0.4	2	0.5	40.0
B/C	11.4	45	11.1	30.0
C	0.2	1	0.3	50.0
D/E	13.3	54	13.3	30.8
F/G	7.1	33	8.1	35.1
F/G/H	1.2	4	1.0	25.0
F/G/H/I	5.8	26	6.4	33.8
F/G/H/I/J	0.7	2	0.5	22.2
G/H	<0.1	0	0	0
H	7.0	39	9.6	42.4
H/I	11.2	48	11.8	32.4
I	18.1	70	17.2	29.4
I/J	12.1	45	11.1	28.1
J	1.5	7	1.7	35.0
K	6.1	24	5.9	30.0
L	3.4	6	1.5	13.3
X	0.4	0	0	0

Table A217: zoning in burial in the cemetery by age; north zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north zone	Prop. of burials in north zone (%)	Prop. of individuals of same ag (%)
A	<0.1	0	0	0
A/B/C	0.4	1	0.5	20.0
B/C	11.4	16	8.6	10.7
C	0.2	0	0	0
D/E	13.3	21	11.3	12.0
F/G	7.1	16	8.6	17.0
F/G/H	1.2	4	2.2	25.0
F/G/H/I	5.8	15	8.1	19.5
F/G/H/I/J	0.7	1	0.5	11.1
G/H	<0.1	0	0	0
H	7.0	6	3.2	6.5
H/I	11.2	29	15.6	19.6
I	18.1	31	16.6	13.0
I/J	12.1	19	10.2	11.9
J	1.5	4	2.2	20.0
K	6.1	15	8.1	18.7
L	3.4	8	4.3	17.8
X	0.4	0	0	0

Table A218: zoning in burial in the cemetery by age; north-east zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in north-east zone	Prop. of burials in north-east zone (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
A/B/C	0.4	0	0	0
B/C	11.4	31	14.8	20.7
C	0.2	0	0	0
D/E	13.3	30	14.4	17.1
F/G	7.1	11	5.3	11.7
F/G/H	1.2	1	0.5	6.3
F/G/H/I	5.8	8	3.8	10.4
F/G/H/I/J	0.7	2	1.0	22.2
G/H	<0.1	0	0	0
H	7.0	13	6.2	14.1
H/I	11.2	18	8.6	12.1
I	18.1	47	22.5	19.7
I/J	12.1	22	10.5	13.8
J	1.5	3	1.4	15.0
K	6.1	16	7.6	20.0
L	3.4	6	2.9	13.3
X	0.4	1	0.5	20.0

Table A219: zoning in burial in the cemetery by age; south-east zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south-east zone	Prop. of burials in south-east zone (%)	Prop. of individuals of same age (%)
A	<0.1	1	0.2	100
A/B/C	0.4	2	0.5	40.0
B/C	11.4	57	13.0	38.0
C	0.2	1	0.2	50.0
D/E	13.3	64	14.6	36.6
F/G	7.1	32	7.3	34.0
F/G/H	1.2	7	1.6	43.7
F/G/H/I	5.8	19	4.3	24.5
F/G/H/I/J	0.7	3	0.7	33.3
G/H	<0.1	0	0	0
H	7.0	29	6.6	31.5
H/I	11.2	48	10.9	32.4
I	18.1	75	17.1	31.5
I/J	12.1	57	13.0	35.6
J	1.5	5	1.1	25.0
K	6.1	21	4.8	26.2
L	3.4	18	4.1	40.0
X	0.4	0	0	0

Table A220: zoning in burial in the cemetery by age; south zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south zone	Prop. of burials in south zone (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
A/B/C	0.4	0	0	0
B/C	11.4	0	0	0
C	0.2	0	0	0
D/E	13.3	1	5.9	0.6
F/G	7.1	0	0	0
F/G/H	1.2	0	0	0
F/G/H/I	5.8	0	0	0
F/G/H/I/J	0.7	0	0	0
G/H	<0.1	0	0	0
H	7.0	4	23.5	4.3
H/I	11.2	2	11.8	1.4
I	18.1	5	29.3	2.1
I/J	12.1	2	11.8	1.3
J	1.5	0	0	0
K	6.1	1	5.9	1.3
L	3.4	2	11.8	4.4
X	0.4	0	0	0

Table A221: zoning in burial in the cemetery by age; south-west zone, all phases

Age band	Prop. of entire located burial pop (%).	Number in south-west zone	Prop. of burials in south-west zone (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
A/B/C	0.4	0	0	0
B/C	11.4	0	0	0
C	0.2	0	0	0
D/E	13.3	1	25.0	0.6
F/G	7.1	0	0	0
F/G/H	1.2	0	0	0
F/G/H/I	5.8	1	25.0	1.3
F/G/H/I/J	0.7	0	0	0
G/H	<0.1	0	0	0
H	7.0	0	0	0
H/I	11.2	0	0	0
I	18.1	1	25.0	0.4
I/J	12.1	0	0	0
J	1.5	0	0	0
K	6.1	1	25.0	1.3
L	3.4	0	0	0
X	0.4	0	0	0

Table A222: zoning in burial in the cemetery by age and sex; north-west zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-west zone	Prop. of burials in north-west zone (%)	Proportion of individuals of same age/sex (%)
H – female	3.3	21	5.2	47.7
H – male	2.1	9	2.2	32.1
H/I – female	2.9	8	2.0	21.0
H/I – male	1.7	3	0.7	13.0
I – female	7.5	30	7.4	30.3
I – male	6.8	20	4.9	22.2
I/J – female	4.9	17	4.2	26.6
I/J – male	3.6	17	4.2	36.2
J – female	0.7	2	0.5	22.2
J – male	0.6	5	1.2	62.5
L – female	<0.1	0	0	0
L – male	<0.1	0	0	0

Table A223: zoning in burial in the cemetery by age and sex; north zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north zone	Prop. of burials in north zone (%)	Proportion of individuals of same age/sex (%)
H – female	3.3	1	0.5	2.3
H – male	2.1	2	1.1	7.1
H/I – female	2.9	11	5.9	28.9
H/I – male	1.7	3	1.6	13.0
I – female	7.5	14	7.5	14.1
I – male	6.8	13	7.0	14.4
I/J – female	4.9	8	4.3	12.5
I/J – male	3.6	6	3.2	12.8
J – female	0.7	3	1.6	33.3
J – male	0.6	1	0.5	12.5
L – female	<0.1	0	0	0
L – male	<0.1	0	0	0

Table A224: zoning in burial in the cemetery by age and sex; north-east zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in north-east zone	Prop. of burials in north-east zone (%)	Proportion of individuals of same age/sex (%)
H – female	3.3	5	2.4	11.4
H – male	2.1	7	3.3	25.0
H/I – female	2.9	6	2.9	15.8
H/I – male	1.7	3	1.4	13.0
I – female	7.5	18	8.6	18.2
I – male	6.8	21	10.0	23.3
I/J – female	4.9	13	6.2	20.3
I/J – male	3.6	4	1.9	8.5
J – female	0.7	1	0.5	11.1
J – male	0.6	1	0.5	12.5
L – female	<0.1	0	0	0
L – male	<0.1	0	0	0

Table A225: zoning in burial in the cemetery by age and sex; south-east zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-east zone	Prop. of burials in south-east zone (%)	Proportion of individuals of same age/sex (%)
H – female	3.3	15	3.4	34.1
H – male	2.1	8	1.8	28.6
H/I – female	2.9	11	2.5	28.9
H/I – male	1.7	13	3.0	56.5
I – female	7.5	32	7.3	32.3
I – male	6.8	30	6.8	33.3
I/J – female	4.9	20	4.6	31.2
I/J – male	3.6	18	4.1	38.3
J – female	0.7	3	0.7	33.3
J – male	0.6	0	0	0
L – female	<0.1	1	0.2	100
L – male	<0.1	1	0.2	100

Table A226: zoning in burial in the cemetery by age and sex; south zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south zone	Prop. of burials in south zone (%)	Proportion of individuals of same age/sex (%)
H – female	3.3	2	11.8	4.5
H – male	2.1	1	5.9	3.6
H/I – female	2.9	1	5.9	2.6
H/I – male	1.7	0	0	0
I – female	7.5	2	11.8	2.0
I – male	6.8	1	5.9	1.1
I/J – female	4.9	0	0	0
I/J – male	3.6	0	0	0
J – female	0.7	0	0	0
J – male	0.6	0	0	0
L – female	<0.1	0	0	0
L – male	<0.1	0	0	0

Table A227: zoning in burial in the cemetery by age and sex; south-west zone, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in south-west zone	Prop. of burials in south-west zone (%)	Proportion of individuals of same age/sex (%)
H – female	3.3	0	0	0
H – male	2.1	0	0	0
H/I – female	2.9	0	0	0
H/I – male	1.7	0	0	0
I – female	7.5	1	25.0	1.0
I – male	6.8	0	0	0
I/J – female	4.9	0	0	0
I/J – male	3.6	0	0	0
J – female	0.7	0	0	0
J – male	0.6	0	0	0
L – female	<0.1	0	0	0
L – male	<0.1	0	0	0

Table A228: age of burials in the church, all phases

Age band	Prop. of entire located burial pop (%).	Number in church	Prop. of burials in church (%)	Prop. of individuals of same age (%)
A	<0.1	0	0	0
A/B/C	0.4	0	0	0
B/C	11.4	1	1.8	0.7
C	0.2	0	0	0
D/E	13.3	4	7.1	2.3
F/G	7.1	2	3.6	2.1
F/G/H	1.2	0	0	0
F/G/H/I	5.8	8	14.3	10.4
F/G/H/I/J	0.7	1	1.8	11.1
G/H	<0.1	1	1.8	100
H	7.0	1	1.8	1.1
H/I	11.2	3	5.4	2.0
I	18.1	9	16.1	3.8
I/J	12.1	14	25.0	8.8
J	1.5	1	1.8	5.0
K	6.1	2	3.6	2.5
L	3.4	5	8.9	11.1
X	0.4	4	7.1	80.0

Table A229: age and sex of burials in the church, all phases

Age band and sex	Proportion of entire located burial pop. (%)	Number in church	Prop. of burials in church (%)	Proportion of individuals of same age/sex (%)
H – female	3.3	0	0	0
H – male	2.1	1	1.9	3.6
H/I – female	2.9	1	1.9	2.6
H/I – male	1.7	1	1.9	4.3
I – female	7.5	2	3.6	2.0
I – male	6.8	5	8.9	5.6
I/J – female	4.9	6	10.7	9.4
I/J – male	3.6	2	3.6	4.3
J – female	0.7	0	0	0
J – male	0.6	1	1.9	12.5
L – female	<0.1	0	0	0
L – male	<0.1	0	0	0



Table A230: Age and sex of eaves-drip burials, all phases

Project ID	Age band	Sex (if appropriate)	Zone	Prop. of individuals of same age (%)	Prop. of 'eaves-drip' burials (%)
IN3924	A/B/C	N/A	N	20.0	1.1
IN3268	B/C	N/A	SE	11.3	18.5
IN3464	B/C		SE		
IN3497	B/C		SE		
IN3498	B/C		SE		
IN3501	B/C		SE		
IN3577	B/C		SE		
IN3655	B/C		SE		
IN3667	B/C		SE		
IN3668	B/C		SE		
IN3753	B/C		N		
IN3794	B/C		NE		
IN3877	B/C		NW		
IN3891	B/C		N		
IN3994	B/C		N		
IN4060	B/C		N		
IN4099	B/C		N		
IN4328	B/C	NW			
IN3500	D/E	N/A	SE	5.7	10.9
IN3771	D/E		S		
IN3830	D/E		NW		
IN3853	D/E		NW		
IN3892	D/E		NW		
IN3935	D/E		N		
IN3955	D/E		SW		
IN4173	D/E		N		
IN4359	D/E		NW		
IN4362	D/E		NW		
IN3320	F/G	N/A	SE	5.3	5.4
IN3346	F/G		NE		
IN3525	F/G		SE		
IN3651	F/G		SE		
IN3666	F/G		SE		
IN3745	F/G/H	N/A	NE	18.7	3.3
IN3979	F/G/H	Female	N		
IN3980	F/G/H	N/A	N		
IN3321	F/G/H/I	N/A	SE	6.5	5.4
IN3716	F/G/H/I	N/A	NE		
IN3720	F/G/H/I	N/A	SE		
IN3732	F/G/H/I	N/A	NE		
IN3781	F/G/H/I	N/A	NE		
IN3750	F/G/H/I/J	N/A	NE	11.1	1.1
IN3547	H	Female	S	6.5	6.5
IN3611	H	N/A	S		
IN3646	H	N/A	SE		
IN3795	H	Male	NE		
IN4156	H	N/A	N		
IN4289	H	Female	NW		
IN3517	H/I	Male	SE	6.1	9.8
IN3542	H/I	N/A	SE		
IN3614	H/I	N/A	SE		

IN3672	H/I	N/A	NE				
IN3682	H/I	N/A	NE				
IN3719	H/I	N/A	SE				
IN3743	H/I	Female	SE				
IN3839	H/I	N/A	N				
IN4356	H/I	N/A	NW				
IN3322	I	Female	SE			5.5	14.1
IN3446	I	Male	S				
IN3662	I	Male	NE				
IN3710	I	N/A	SE				
IN3731	I	Male	NE				
IN3760	I	N/A	S				
IN3772	I	N/A	S				
IN3782	I	Female	S				
IN3804	I	N/A	NE				
IN3869	I	Male	N				
IN4148	I	N/A	N				
IN4311	I	Female	SW				
IN4357	I	N/A	NW				
IN3281	I/J	N/A	SE	7.5	13.0		
IN3310	I/J	N/A	SE				
IN3649	I/J	N/A	NE				
IN3728	I/J	N/A	SE				
IN3749	I/J	Male	SE				
IN3761	I/J	N/A	S				
IN3762	I/J	Female	SE				
IN3776	I/J	N/A	S				
IN3791	I/J	Female	NE				
IN3796	I/J	N/A	NE				
IN4095	I/J	Female	N				
IN4233	I/J	N/A	N				
IN3282	K	N/A	SE	10.0	8.7		
IN3714	K		NE				
IN3715	K		NE				
IN3767	K		S				
IN3829	K		NW				
IN3930	K		N				
IN3938	K		SW				
IN4167	K	N					
IN3220	L	N/A	SE	4.4	2.2		
IN3770	L	N/A	S				

Table A231: locations of graves with burial furniture (number) by type; all zones, all phases

Burial practice	Number								Total
	NW	N	NE	SE	S	SW	Church	Outside cemetery	
Boards	21	10	13	15	0	0	0	0	59
Coffins	1	0	0	0	0	0	4	1	6
Ear muffs	5	4	3	8	4	0	2	0	26
Linings	9	7	3	6	7	1	10	0	43
Objects (report)	6	3	7	5	0	0	6	0	27
Objects (context sheets)	30	17	25	36	2	0	17	0	127
Shaped graves	0	0	0	1	0	0	1	0	2
Stones	1	1	2	5	4	0	0	0	13
Total number of graves with burial furniture	55	31	39	57	9	1	28	1	-

Table A232: locations of graves with burial furniture (proportion) by type; all zones, all phases

Burial practice	Percentage								Total
	NW	N	NE	SE	S	SW	Church	Outside cemetery	
Boards	35.6	16.9	22.1	25.4	0	0	0	0	100
Coffins	16.7	0	0	0	0	0	66.7	16.7	100
Ear muffs	19.2	15.4	11.5	30.8	15.4	0	7.7	0	100
Linings	20.9	16.3	7.0	14.0	16.3	2.3	23.2	0	100
Objects (report)	22.2	11.1	25.9	18.6	0	0	22.2	0	100
Objects (context sheets)	23.6	13.4	19.7	28.3	1.6	0	13.4	0	100
Shaped graves	0	0	0	50.0	0	0	50.0	0	100
Stones	7.7	7.7	15.4	38.6	30.8	0	0	0	100
Total percentage of graves with burial furniture	13.5	16.7	18.7	13.0	52.9	25.0	50.0	100	-

*(Blank)*