# Anglo-Saxon 'Great Hall Complexes'

## Elite Residences and Landscapes of Power in Early England, *c.* AD 550-700

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Matthew H. Austin

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# DECLARATION

I confirm that this is my own work and the use of all materials from other sources has been properly and fully acknowledged.



Matthew H. Austin

# ABSTRACT

This thesis presents the first detailed and systematic examination of Anglo-Saxon 'great hall complexes'. Characterised by their architectural grandeur and spatial formality, these rare and impressive sites represent a distinct class of high-status settlement that were primarily occupied during the later sixth and seventh centuries AD. Though their existence has been known to archaeologists since the mid-twentieth century, a series of recent and high-profile excavations has reignited the debate about these sites and necessitated the provision of a comprehensive study.

Following an introductory account, the thesis begins with an archaeological review. This considers sixteen great hall complexes that are known from across the Anglo-Saxon realm. From this, a definition and broader characterisation of the great hall phenomenon is advanced. A series of four regional case studies represent the analytical core of the thesis. Focused on specific great hall complexes, and underpinned by comprehensive regional gazetteers, these investigations utilise a wide-ranging and multiscalar programme of spatial and chronological analysis in order to model the data. Particular emphasis is placed on the landscape context of sites, as is their interaction with wider hinterlands. The results are contextualised within a broader archaeo-historical framework, with original interpretations offered for each of the great hall complexes under consideration.

It is concluded that great hall complexes likely operated as administrative centres and nodes of governance within broader socio-economic and politico-religious networks. It is also maintained that they fulfilled a range of social and symbolic functions – as emblematic displays of political authority that were emplaced within landscapes of power designed to legitimise and institutionalise emergent political hegemonies. Ultimately, it is argued, great hall complexes are to be understood as archaeological manifestations of the more overtly hierarchical society that was emerging in the sixth century.

# A NOTE ON THE e-APPENDICES

This thesis is underpinned by a series of e-Appendices. These comprise the four regional datasets that represent the analytical core of the thesis (*e-Appendix 1a*), with accompanying spatial data (*e-Appendix 1b*) and bibliographic material (*e-Appendix 1c*), and a series of data matrices produced as part of a chronological seriation (*e-Appendix 2*). While comprehension of the text should not depend on the reader having consulted these resources, they may be of use to other researchers and are hereby presented in the interests of transparency and data sharing. The e-Appendices are included in the attached CD-ROM.

When mentioned in the text, individual sites are identified by their database ID as given in *e-Appendix 1a* (e.g. **CD_005**). This is created from a case study-specific prefix and a site number suffix – in this example, the fifth site in the dataset associated with the Cowdery's Down case study. These in-text references allow the reader to consult the relevant entry in the database for further information about a site. If the reader desires, the spatial data for sites can be copied from the regional dataset and visualised using a Geographic Information System (GIS) or a website such as https://gridreferencefinder.com.

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# 1 INTRODUCTION

This chapter introduces the archaeological sites that form the investigative focus of this thesis. It begins with a definition of terms and a brief historiographical account. This is followed by a consideration of various strands of contextual information, including textual evidence and archaeological parallels. The interpretative frameworks that have previously been employed to understand great hall complexes are then considered. A brief summary and research statement is offered by way of conclusion.

## 1.1 ANGLO-SAXON GREAT HALL COMPLEXES

### 1.1.1 *Terminology*

Anglo-Saxon 'great hall complexes' are a rare but extremely important class of high-status settlement that mostly date from the seventh century and are characterised by very large timber buildings or 'great halls'. At the time of writing less than twenty sites are known, of which only a handful have seen significant excavation. Before reviewing the history of their discovery and interpretation it is important to offer a brief note on terminology. Historians of the period have tended to correlate the archaeological evidence for great halls with that of the *villa regia* or royals vills recorded in near-contemporary documentary evidence (Campbell 1986, 108-16; Yorke 1990, 8-9). The importance of the *healle* in Old English poetry, as epitomised by *Heorot*, the royal great hall of Hrothgar in the epic *Beowulf*, has also elicited comparison with these sites (Cramp 1957, 71-77; Hume 1974, 63-4; Webster 1998, 186). More explicitly archaeological accounts have used a plethora of terms, including 'royal township', 'high status centre', 'palace', 'estate centre', 'open-ground royal vill', 'chiefly farmstead' and 'central place complex' (Hope-Taylor 1977, 313; Millett and James 1983, 249; Williams et al. 1985, 41-2; Welch 1992, 50; Blair 2005, 275; Hamerow 2010b, 59; Scull et al. 2016, 1609). It is argued here that 'great hall complex' is more suitable: a neutral term that assumes neither 'central-place functions' nor 'royal' status, and which functionally describes a settlement that features multiple buildings and at least one very large building or 'great hall'. The earliest usage of the term, at least as identified by the author, was in Rosemary Cramp's (1983, 275) discussion of the evidence from Yeavering. More recent publications have utilised this nomenclature (Hamerow et al. 2007, 187;

Thomas 2013, 139; Brennan and Hamerow 2015, 325; Thomas et al. 2016, 753), and thus the term shall be used hereafter.

### 1.1.2 *Discovery and research history*

The excavation of the first great hall complex was undertaken by Brian Hope-Taylor (1977), whose work at Yeavering in Northumberland is so well known. As with many sites, the initial discovery was made through aerial photography (Knowles and St Joseph 1952, 270-1), after which a series of excavations were undertaken between 1952 and 1962 (Hope-Taylor 1977, xvii-xviii; 1-6). Though aspects of the proposed sequence have since been contested (e.g. Scull 1991), the excavations were an incredible feat for the time in terms of scale, technical proficiency and quality of publication. Additional great hall complexes were also discovered through aerial photography around this time, but with so few having any form of excavation little consensus was reached as to their definition and broader significance (Webster et al. 1964; Rahtz 1970; Hirst and Rahtz 1973; Benson and Miles 1974; 1975; St Joseph 1975; 1976a; 1976b, 65-8; Hampton 1981; 1982; 1983). Less than a decade after the Yeavering excavations were published a second type site was provided by a major programme of excavation at Cowdery's Down in Basingstoke, Hampshire (Millett and James 1983). Featuring a planned layout with elements of axiality, and a great hall of similar proportions, the site was discussed in relation to Yeavering and tentatively interpreted as being of broadly comparable importance (*ibid.*, 249). Although other sites would be investigated through aerial reconnaissance, field survey and small-scale evaluation, Yeavering and Cowdery's Down would remain the only well-excavated great hall complexes for the next three decades.

The first comparative study of great hall complexes came as part of a broader investigation of sixth-eighth-century settlements (James et al. 1984). In this the so-called 'early medieval building tradition' of distinct constructional techniques and spatial arrangements was defined, within which were two distinct groups. Group 2 – which included Cowdery's Down and Yeavering, as well as the cropmark sites of Cowage Farm in Wiltshire, Sprouston in Roxburghshire and Milfield in Northumberland – were distinguished by very large buildings (with surface areas greater than 150 $m^2$) and centralised layouts (*ibid.*, 185-8). This was an important realisation, but no terminology was offered to define the phenomenon and little progress was made beyond preliminary identification and structural description. The following years saw the publication of excavations at Cowage Farm in Wiltshire and Northampton (Williams 1984; 1985; Hinchliffe 1986), though the former was of limited scale and the identification of the latter as a great hall complex has since been questioned (Blair 1996). At other sites, exemplary though necessarily tentative attempts were made to

phase and interpret the cropmark evidence (e.g. Smith 1991). Despite these contributions, scholarly understanding of the wider phenomenon had progressed little beyond the findings of James *et al* (1984).

The evidence from great hall complexes began to be incorporated into wider syntheses during the 1990s, with varying degrees of success. Martin Welch (1992, 43-53) devoted a chapter to what he termed 'estate centres', but it did little more than cautiously introduce the evidence. He resolved that, due to their uncertain chronology and documentary association, it was not possible to offer a unified description and interpretation of the phenomenon, concluding only that their large buildings surely evinced their owner's mastery over resources (*ibid.*, 52). Chris Arnold (1997, 214-17) took a similarly cautious approach, noting that the size of a building does not necessarily correlate with its status, though he did contribute one original idea to the debate: that the emergence of great hall complexes may have been a reaction to Christianity in much the same way as has been argued for the so-called 'princely burials'. Others went even further, such as Barbara Yorke's (1995, 76-9) interpretation of Cowage Farm and Cowdery's Down as royal vills of the early West Saxon kings, or Frands Herschend's (1998, 20) assertion that Anglo-Saxon halls took greater architectural and cultural inspiration from migrant traditions than native influences. Even so, with Yeavering and Cowdery's Down remaining the only two sites having seen significant excavation there was still a definite lack of scholarly consensus at the close of the century.

These issues have been partially addressed in more recent times through a series of comparative studies that have led to a better characterisation of the evidence as a broader archaeological phenomenon. Andrew Reynolds' (2003, 104-10) study of boundaries and settlement morphology compared the plans from a number of sites, identifying a series of formalised layouts – axial or coaxial arrangements of buildings centred on the largest structure – which he termed 'ritual symmetry'. This idea was subsequently explored by John Blair (2005, 199-200), who suggested that the spatial configuration of ecclesiastical sites could have been influenced by earlier great hall complexes. Blair's broader consideration of the evidence, which he terms 'open-ground royal vills', also represents a noteworthy contribution, both for its critical account of the documentary evidence for *villae regiae* before AD 820, but also for its general pessimism regarding our ability to identify a distinct category of royal site before the ninth century (*ibid.*, 275-9). The association between great hall complexes and prehistoric monuments has recently been discussed by Sarah Semple (2013, 207-11), who viewed the phenomenon as part of a broader process of political legitimisation and institutionalisation. Of particular significance to the historiography of great hall complexes was Helena Hamerow's (2010b) brief synthesis of the evidence. Discussed in reference to the *Herrenhöfe* or 'chiefly farmsteads' of north-western Europe, Hamerow identified several

shared criteria including evidence for formalised layouts, enclosures, cultic or ritualised activity, structural repair and association with prehistoric monuments. Many of these themes were also considered in a more recent summary, with the ritual and cultic dimensions receiving the most detailed treatment (Hamerow 2012, 102-9). Though rather provisional, Hamerow's syntheses represent one of the few attempts to characterise great hall complexes as both a distinct class of settlement site and a broader cultural phenomenon. Indeed, these contributions have yet to be surpassed; as shall be seen in the following chapter, Hamerow's criteria are a major influence on the author's own characterisation and definition.

The new millennium also brought a number of fresh excavations, as well as the publication of an old one. The 2003 publication of excavations undertaken in Dover during the early 1980s was of particular significance for its description of a large, multiphase timber structure (Philp 2003, 58-72). The building (S14), measuring at least 22 m in length, was interpreted by the excavator as being the historically attested Church of St Martin (*ibid.*, 125-31). An alternative and arguably more plausible interpretation has since been proposed, instead viewing the structure as a secular great hall (Welch 2007, 202-3; Thomas 2013, 126). The legacy of Philp's ecclesiastical interpretation, however, has seen the site being almost totally ignored in the scholarship of great hall complexes.

In a sense, the 2001-2003 excavations at Sutton Courtenay in Oxfordshire marked the beginning of new era in the excavation and analysis of great hall complexes (Hamerow et al. 2007). The partial excavation of a timber building measuring *c.* 19 m x 9 m confirmed what had previously been proposed on the basis of aerial photographs: that the site represented a great hall complex (Benson and Miles 1974; Hawkes 1986, 88-9; Hamerow et al. 2007, 186-7). Subsequent excavations have revealed additional features including a building (Structure 500) measuring 30.9 m x 10.8 m, making it the largest great hall currently known from Anglo-Saxon England (Brennan and Hamerow 2015). Another probable great hall complex has been identified at Long Wittenham, some 5 km to the east (Hamerow et al. 2013, 62-4). This site has recently seen geophysical survey and limited excavation under the directorship of Adam McBride (see **2.4.6**) and appears to have been part of a broader landscape of power during the seventh century.

Excavations of even greater significance have been undertaken at the historically documented royal vill and later monastery at Lyminge in Kent, where systematic survey and excavation between 2007 and 2015 revealed a rich archaeological sequence spanning the fifth-ninth centuries (Thomas 2010, 2013, 2017). Of greatest interest to the current study is the sequence of three great halls that were rebuilt several times over the course of the seventh century (Thomas 2017, 106-8). An impressive programme of field survey has recently been concluded at another documented royal centre. Described by Bede (*HE* III.22) as a *vicus*

*regius* (royal village or settlement) of the East Anglian kingdom, archaeological survey across an area of 150 ha at Rendlesham has revealed extensive evidence for high-status occupation during the fifth-eighth centuries (Scull et al. 2016). The tentative identification, from aerial photography and magnetometry, of a building measuring *c.* 23 m x 9.5 m, combined with a concentration of very high-status artefacts nearby, indicates the likely location of a great hall complex within the wider settlement area (*ibid.*, 1597-1600). Mention must also be made of the recent finding at Eynsford of a building, measuring *c.* 20 m x 10 m and thought to date from the seventh century, which may represent a hitherto unidentified great hall complex in west Kent (Philp 2014).

In closing, the discoveries made over the last decade or so have been nothing short of outstanding.[1] It is, for example, now possible to discuss the evidence as a phenomenon, one that appears altogether more chronologically discrete and geographically widespread than hitherto realised. Put another way, a sizeable corpus has emerged from a handful of sites that were initially thought to be anomalous. Considered as such, it is hoped that the reader will infer a definite sense of momentum in the discourse. Though initially stimulated by a rapid influx of new, high-quality datasets, collaborations between contemporary research projects have done much to guide the development of a distinct research tradition. This is exemplified by the *Royal Residences Network AD 500-800*, an AHRC-funded network that held three meetings during 2016.[2] Taking these considerations into account, it is the view of the present author that there has never been a more opportune time to undertake a thesis-length study of the Anglo-Saxon great hall phenomenon.

## 1.2 CONTEXTUAL EVIDENCE

### 1.2.1 *Documentary evidence*

Before undertaking an extensive archaeological review, it seems apt to offer a brief consideration of the written evidence relating to high-status residences in Anglo-Saxon England. In this we shall initially concern ourselves with semantic and toponymic issues of relevance. Latin sources such as Bede's *Historia ecclesiastica gentis Anglorum* typically refer to a place of royal residence as a *vicus regius* or *villa regia*, seemingly in an interchangeable manner (Campbell 1986, 108-13). The Old English equivalent of *vicus/ villa* appears to have been *tun* (*ibid.*, 113-15). This is variously translated as 'farm', 'village' or 'estate', with the royal form

[1] It should also be noted that this new wave of discoveries is not confined to England – excavations at Rhynie in Aberdeenshire have recently uncovered a high-status Pictish residence (Noble and Gondek 2011; Noble et al. 2013). At the time of writing Gordon Noble and colleagues at the University of Aberdeen have just been awarded almost £1million by the Leverhulme Trust to investigate sites of royal residence in Scotland and further afield in Ireland and Northern Ireland.

[2] See http://royalresidencenetwork.org for further details. The results of these meetings form a key component of the discussion chapter.

being written – albeit rarely – as *cyninges tun* (Sawyer 1983, 274; Brooks 1989a, 67; Lavelle 2010, 190-2). These places appear to have been separate from the larger, more urban settlements described by Bede as *civitas* and *urbs*, which seem to correlate with the Old English place-name elements *-ceaster* (e.g. Winchester) and *-burh* (e.g. Malmesbury) respectively (Campbell 1986, 99-108). Indeed, places like Winchester and Canterbury surely had a royal seat, but their fortifications, Roman origins and pseudo-urban character seems to have rendered them distinct, at least in linguistic terms, from rural royal vills such as Lyminge. Though we should be cautious of a strict categorisation (Blair 2005, 276-7), the written evidence does appear to broadly support the archaeological identification of great hall complexes as a reasonably discrete form of high-status rural residence.

The hall figures prominently in Anglo-Saxon literature as both a building and a wider concept. Old English distinguishes between the ordinary *hus* and the lordly *healle* (Hamerow 2011, 141-3). The hall is an important and recurrent theme in Old English poetry, most explicitly in *Beowulf* but also in shorter compositions like *The Wanderer* and *The Battle of Maldon* (Hume 1974). These texts are perhaps most useful to our current investigation for the information they convey about the physical characteristics of hall buildings. In this *Beowulf* must be afforded primacy, for it is the great hall *Heorot* – and the social institution it represents – which is central to the narrative (Cramp 1957, 71-7; Earl 1994, 115; Niles 2007, 177). As such, the unnamed poet offers lavish description, informing us that the hall:

- was made of timber (line 308)
- had wide gables and stood at an impressive height (lines 81-2; 926)
- featured gold decoration (lines 308; 715-16; 926-7)
- was in some way structurally reinforced with iron bands (lines 774-5)
- featured a reinforced external door and a separate internal door (lines 721-4)
- contained many mead-benches (lines 775-6)
- was furnished using the skills of many nations (lines 75-6)
- had gold-glittering tapestries on the walls (lines 994-5)
- featured decorative, perhaps mosaic flooring (line 725)
- was approached via a stone path that accentuated its grandeur (line 320)

The poet also implies that, like the excavated great hall complexes discussed below, *Heorot* was part of a wider complex that included various ancillary structures, *buras*, which presumably functioned as private residences and guesthouses (Cramp 1957, 71-2). As will become apparent in the following chapter, the poet's vision of the mead hall can be easily accommodated by the archaeological evidence. The obvious exception to this is the seemingly implausible but thrice mentioned gold decoration, which might be explained as poetic embellishment, else a gold-plated shingle roof is at least possible (Cramp 1957, 73).

Great hall complexes are occasionally mentioned in documentary sources, albeit often only in passing. Bede affords the settlements at Yeavering (*HE* II.14) and Rendlesham (*HE* III.22) more detailed treatment. The former, *Ad gefrin*, is described as a *villa regia* of Edwin that was visited by Paulinus in AD 627, who spent thirty-six days baptising the surrounding populace, and which was abandoned in favour of *Maelmin* (Milfield) at some point before Bede was writing (Hope-Taylor 1977, 1); all we are told of *Rendlæsham* is that it was an East Anglian *vicus regius*, and that it was the site of Swithhelm's baptism in AD 655 x 663 by Cedd (Scull et al. 2016, 1595). Though these references are of immense importance to the historian, they offer much less to the archaeologist seeking to characterise and better understand the functional specifics of great hall complexes.

Charter evidence enables us to approximate the date and location of a handful of royal vills, but seldom allows specific details about these sites to be gleaned. For example, the existence of a royal vill at Thame (Oxfordshire) is known to us from Wulfhere's signing of a charter there in AD 672 x 674 (S 1165), though a single attestation leaves little room for speculation as to its physical characteristics and wider significance. A problematic chronicle entry for AD 571 also indicates the existence of *villae regiae* at Aylesbury, Benson, Eynsham and Limbury, all in Oxfordshire, but offers no further detail (Sawyer 1983, 274-5). In many cases it is not even possible to georeference this information: more than half of the fifty-three historically attested royal vills identified by John Blair (2005, 277-8) as having been 'active' before AD 820 are unlocated, and there is often little to be said even of those that are. Blair views the high proportion of unidentified sites as signifying a broader impermanence, with many sites perhaps being open-air meeting places '*supplemented by temporary or portable accommodation and facilities as needs required*' (*ibid*., 279). This is a plausible view, and indicates that a *villa regia* need not necessarily have been associated with an extensive archaeological complex.[3] As such, it seems sensible to be cautious – while archaeologically identified great hall complexes may occasionally correlate with historically attested royal vills, a one-to-one relationship should not be assumed.

A particularly interesting entry in the *Anglo-Saxon Chronicle* is worthy of mention due to its uncommonly rich description of a royal settlement. It describes a raid by Cyneheard on an unlocated residence of Cynewulf called *Meretun* (*ASC* 755[757]). Cyneheard, *ætheling* (prince) of Wessex and brother to the former king Sigeberht, was in feud with Cynewulf over the throne and, upon learning his whereabouts at *Meretun*, launched an attack on the settlement. The attack was successful, leading to the death of Cynewulf and, after a rebuked offer of allegiance from Cyneheard, the king's entourage as well. A counter attack was

[3] It should be noted that recent scholarship has begun to consider how these 'outdoor assembly places' might be identified on the ground (e.g. Baker and Brookes 2013b, 2015).

launched by Cynewulf's forces the following day which, after another abortive offer, led to the death of Cyneheard and his followers. The entry is of significance to our current investigation for the structural details it reveals about the settlement, which appears to have comprised a hall, separate *buras* and a lockable gate that was presumably accompanied by a fenced enclosure or earthwork (Addyman 1972, 304; Hume 1974, 64; Yorke 1995, 78-9). The entry is also noteworthy for its allusions to the sanctity of the hall, with Cynewulf's followers seemingly so outraged by the brazenness of the attack and the loss of their lord that they twice refused Cyneheard (White 1989, 3-4). This reaction might be viewed in reference to the harsh penalties imposed on those fighting within a royal settlement in the lawcodes of Æthelberht, Ine and Alfred (Rollason 2009, 21-2), but surely also suggests the underlying social importance of the hall.

This latter point, that the hall represented a social institution or 'idea-complex' of wider significance, is worthy of further exploration (Hume 1974, 64). Both James Earl (1994, 100-2) and Leslie Webster (1998, 186) have discussed *Heorot* as a place of sanctuary – a refuge against the harsh dangers of the wider world, as represented by Grendel and his mother, and a ritualised space that helped structure the social life of elites. A similar mind-set can also be glimpsed in Bede's (*HE* II.13) account of Edwin's conversion. After receiving Paulinus' gospel, Edwin calls a meeting of his council to discuss the implications of conversion. A speech at the meeting, attributed to an unnamed advisor, uses the hall as part of an interesting metaphor:

> *This is how the present life of man on earth, King, appears to me in comparison with that time which is unknown to us. You are sitting feasting with your ealdormen and thegns in winter time; the fire is burning on the hearth in the middle of the hall and all inside is warm, while outside the wintry storms of rain and snow are raging; and a sparrow flies swiftly through the hall. It enters in at one door and quickly flies out through the other. For the few moments that it is inside, the storm and wintry tempest cannot touch it, but after the briefest moment of calm, it flits from your sight, out of the wintry storm and into it again. So this life of man appears but for a moment; what follows or indeed what went before, we know not at all. If this new doctrine brings us more certain information, it seems right that we should accept it.*
>
> (Colgrave and Mynors 1969, 182-5)

This passage represents a valuable demonstration of the perceived sanctity of the hall. Indeed, the lack of defences at great hall complexes – at least as they are currently understood archaeologically – could indicate that their protection was assured more through social convention than physical fortifications (Rollason 2009, 20-1).

Our final consideration is concerned with textual depictions of 'hall life'. Arguably the most visible and important aspects of this, at least as can be reconstructed from textual

sources and archaeological excavation, was consumption, particularly in terms of feasting and drinking rituals (Enright 1996). Indeed, references to drinking are found in a number of literary accounts (Pollington 2011, 22-32), including *The Seafarer*, *The Fortunes of Men* and *The Ruin*, and on the evidence of various Anglo-Saxon lawcodes appears to have been governed by a strict code of conduct with participants enjoying special protection during the act (Rollason 2009, 26-35). This revelry would have been accompanied by music, games and the exchange of stories and news, in turn helping strengthen bonds between kin and kith. What is perhaps most interesting is that none of these features of life in the hall are unique to Anglo-Saxon England; indeed, the development of a broad 'hall culture' across much of north-western Europe during the first millennium AD has been widely discussed (Herschend 1998; Hedeager 2002; 2009, 251-60; Carstens 2014), and is briefly appraised below (**1.2.3**).

Given the archaeological focus of this thesis, the preceding review has been necessarily brief. Even so, it has been detailed enough to convey, in a general sense, the contribution of written sources to this particular debate. It has been shown that the archaeological distinctiveness of great hall complexes is, to a certain extent, corroborated by documentary accounts. We have also seen how the centrepiece of these sites – the hall – appears to have held a position of tremendous significance to the communities who used them, or at least to those who were in a position to write about them. We are not merely dealing with a special form of settlement, then, but also with the cultural phenomenon it appears to have been central to. To begin unpacking this task, we shall consider further contextual evidence in the form of archaeological sites from other periods and geographic areas. As shall be seen, however, these offer no direct parallel.

### 1.2.2 *Late Anglo-Saxon 'long halls'*

At the broadest scale, it is possible to identify long-term architectural and morphological trends in the settlement archaeology of Anglo-Saxon England. This 'early medieval building tradition', as it is known, describes a number of constructional techniques and spatial arrangements that are characteristic of the period (e.g. James et al. 1984; Gardiner 2012). While this is a useful general framework, it is possible to identify more chronologically discrete developments within the repertoire of building and settlement forms. Greater spatial formality can be seen from the late sixth century onwards, for example, as can the development of more specialised forms of settlement such as wics, monasteries and 'productive sites' (Hamerow 2010a, 9-10; Ulmschneider 2011, 160-1; 2012, 70-2). It is argued in the following chapter that, in exhibiting a remarkable degree of architectural correspondence and chronological similarity, Anglo-Saxon great hall complexes can be viewed as one such

development (**2.6.2**). Another broadly similar development, exhibiting comparable levels of standardisation and monumentality, are the so-called 'long halls'. The best known examples are Cheddar in Somerset (Rahtz 1979), Sulgrave in Northamptonshire (Davison 1977), Goltho in Lincolnshire (Beresford 1987) and Bicester in Oxfordshire (Harding and Andrews 2002), though various others are known from documentary accounts but remain unexcavated (e.g. Lewis 2009). Primarily dating from the tenth century, the remarkable similarity exhibited by the central building at each site is of particular interest (*Figure 1.1*).

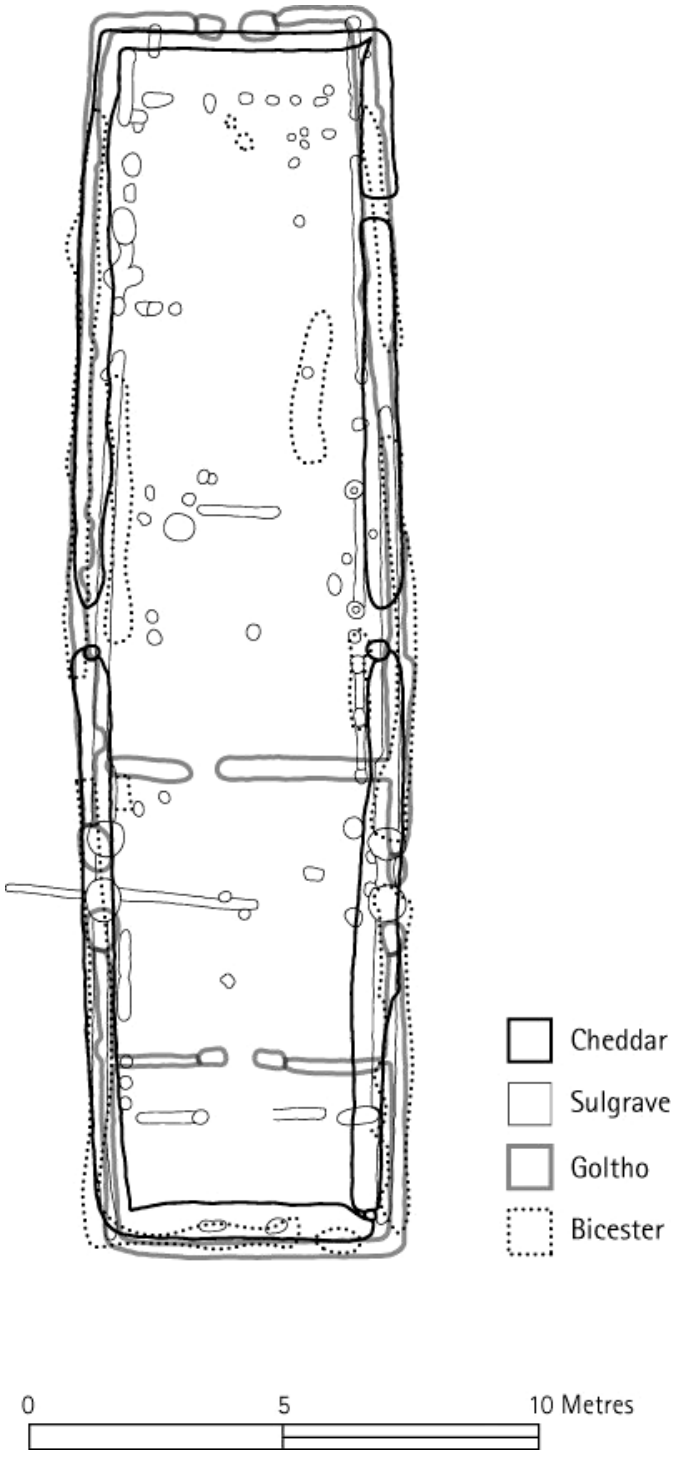



*Figure 1.1:* Superimposed plans of four tenth-century 'long halls' (after Hamerow 2011, 142).

When viewed in reference to earlier great halls, Helena Hamerow (2012, 47) has noted a '*continuing interest in standardized layout and measurement*', though it is important to emphasise the differences between great halls and long halls. The latter are architecturally distinct from the former, being narrower and slightly bowed in form, and featuring neither external raking posts nor 'Yeavering style' annexes. Beyond architectural concerns, there also appears to have been a difference in the fundamental nature of these sites: whereas great hall complexes appear to have been mostly unenclosed and relatively short-lived, long halls were part of more substantial, longer-lived and fortified manorial complexes (Davison 1977, 113-14; Rahtz 1979, 371-9; Beresford 1987, 125-6). While there may be an element of shared ideology, then, great hall complexes are evidently a different form of high-status expression than their subsequent long hall counterparts. Passing mention might also be made of late Anglo-Saxon 'narrow-aisled' halls, which likely represent a different form of lordly residence, though they can be seen to evidence an even greater architectural departure (Hamerow 2012, 48; 116-17). Indeed, great hall complexes appear to have been part of a general shift towards more permanent constructional techniques (Thomas 2012, 47).

### 1.2.3 *Hall sites in northern Europe*

It was noted above that, far from being an Anglo-Saxon phenomenon, hall sites are found in great numbers across much of northern Europe. The first to be identified was excavated at Helgö (Uppland, Sweden) during the 1950s and 1960s, but its true significance was not fully appreciated until much later (e.g. Zachrisson 2004). More substantial programmes of metal-detecting and open-area excavation since the 1980s have revealed a large number of sites, the majority of which are known from Scandinavia (Näsman 2011, 185-6).[4] Spanning a broad period from the third-eleventh centuries, more than eighty sites are now known from around the North and Baltic Seas (Ludowici et al. 2010a, 6). As with Anglo-Saxon England, these sites can be characterised by their monumental hall architecture. The classic description was advanced by Frands Herschend (e.g. 1998, 14-16), who defined the hall as a very large three-aisled structure containing a spacious central room with a hearth and rich artefact signature. A more recent review has expanded this definition to make more use of contextual evidence, such as spatial configuration of the site and its wider landscape setting (Carstens 2014, 14-17). Architecturally speaking, Scandinavian halls differ from their English counterparts, being of aisled construction – occasionally without wall-trenches – with bowed sides and far greater overall dimensions. On the latter point, it is important to stress

[4] Though the Scandinavian sites still dominate the literature, English summaries of excavations from elsewhere in northern Europe are becoming increasingly more common (e.g. see papers in Ludowici et al. 2010b).

the very real differences in scale: whereas the largest Anglo-Saxon great hall currently known measured 30.9 m x 10.8 m (see **2.3.2**), the largest halls at Gamla Uppsala (Uppland, Sweden), Tissø (Zealand, Denmark) and Uppåkra (Scania, Sweden) were all around 50 m in length (Carstens 2014, 20-1). At Lejre (Zealand, Denmark), the largest structure measured 60 m in length (Christensen 2013, 65).

Differences can also be identified in the configuration of the evidence. Whereas the wider settlement context of great hall complexes is poorly understood – with several sites thus appearing somewhat isolated – halls in northern Europe are commonly found as large, multicomponent complexes, often featuring a range of ancillary structures, cult and industrial zones and associated burial archaeology (Fabech 1999a, 455; 2006, 27).[5] A detailed review is clearly beyond the scope of the present study, but certain aspects of the evidence will be briefly considered as a means of introduction. Unlike the relative sterility of great hall complexes, continental hall sites frequently have vast and especially rich artefact assemblages. Evidence for activities such as feasting and drinking is relatively common, for example, as with the assemblage of broken glass and tableware associated with the hall at Kaupang in Vestfold, Norway (Skre 2007, 234-5). The exquisite beaker decorated with gold foil recovered from house 1:2 at Uppåkra attests how this consumption could also relate to overt displays of wealth and status (Larsson 2002, 25-6). Indeed, the transformation of precious metals into prestige objects appears to have been a key activity, with several sites having designated craft areas and evidence for in-situ production (Hjärthner-Holdar et al. 2002; Hedeager 2011, 145-8). For instance, the hall and workshop at Gudme were spatially separate from the domestic area, with the former being associated with vast quantities of ornamental metalwork. This abundant evidence for skilled crafting has been interpreted as a crucial element in the political and ideological legitimisation of those who resided at Gudme (Hedeager 2002, 13).

Although evidence for cultic activity at Anglo-Saxon great hall complexes is becoming increasingly apparent (e.g. Hamerow 2012, 106-9; Thomas 2017, 111-12), it is considerably easier to identify in the Scandinavian material. Both phases of settlement at Lejre featured very large mounds of fire-cracked stones that were tentatively interpreted as *hørg*, the sacrificial altars described in Old Norse sources (Christensen 2007, 122; 2010, 251-2). Also found in association with the largest structure at the site was a silver figurine of an enthroned individual cautiously interpreted as the Norse god Odin (Christensen 2013). At Tissø, some 40 km to the west, large quantities of weaponry and jewellery were found in the nearby lake,

[5] It should be noted that this disparity is more likely a reflection of different levels of excavation than a genuine tendency for isolated residences. Where fieldwork has been undertaken over a wide area, as recently at Rendlesham (Scull et al. 2016), it is possible to identify extensive complexes that more closely accord with the Scandinavian model.

attesting a practice of ritual deposition that spanned the sixth-eleventh centuries (Albris 2014). The evidence for Scandinavian hall sites having been situated in wider landscapes of memory and religiosity is also strong. Proximal to the later phase of settlement at Lejre was a prominent sixth-seventh-century barrow known as *Grydehøj* with an 86 m long stone ship setting immediately to the south-west (Christensen 2010, 240-1). The monumental complex at Gamla Uppsala likewise featured very large burial mounds (Ljungkvist 2008; Ljungkvist and Frölund 2015, 4-6). Gudme is also significant in this respect, not only because the name of the site means 'the home of the gods', but also for the presence of three hills to the south, west and north bearing further sacral place-names (Hedeager 2001, 481; 2011, 158-9). More broadly, the site has been interpreted as a 'paradigmatic model of the universe', a microcosm of the world view and spiritual ideology of its inhabitants (Hedeager 2002).[6]

Though there are a number of broad similarities between Anglo-Saxon great hall complexes and their continental parallels, then, there is enough archaeological dissimilarity for them to be considered separate phenomena. The clearest difference is in the much greater quantity and overall quality of the evidence from northern Europe. This is surely in part due to the greater emphasis placed on state-funded research projects and large open-area excavations in Scandinavian archaeology, but may also reflect genuine differences in the material. For example, the abundance of precious metals, especially in gold and silver, is in stark contrast to the relative sterility of sites like Yeavering and Cowdery's Down. Constructional technique and overall architectural style represent further differences, as does chronology: while the English evidence appears to centre in date on the seventh century (**2.6.1**), the broad 'hall culture' of northern Europe spans almost the entirety of the first millennium. Though we can – and should – draw parallels between the two types of site, their differences must also be borne in mind. These sites may represent different interpretations of a similar idea, perhaps, but are separated by a number of geographical, historical and archaeological factors.

## 1.3 INTERPRETATIVE FRAMEWORKS

### 1.3.1 *Central-place theory*

Although the concept has been seldom applied in English archaeology, the hall sites of northern Europe described above have been frequently discussed as 'central places' (e.g. Näsman 2011). These accounts borrow terminology from – and occasionally engage with –

[6] This approach was applied to Lejre, with some success, as part of the author's undergraduate dissertation (Austin 2011).

the 'central-place theory' of Walter Christaller (1933). His *Die zentralen Orte in Süddeutschland*, later translated into English as 'Central Places in Southern Germany', sought to determine whether there were universal laws governing the size, number and distribution of settlements in a system (Christaller 1966). Although its practical application on then present-day southern Germany has been largely overlooked, Christaller's underlying theoretical model has proven to be enormously influential, with derivatives still in use today (e.g. Hsu et al. 2014; Nakamura 2014; Wang et al. 2014). Christaller assumed a flat, homogeneous region that was easily traversable and uniformly settled. This theoretical plain was populated by rational individuals who strived for maximum profit, minimal losses and efficient transportation routes. Accordingly, the resulting economic system was based on supply, demand and the distance one was willing to travel for goods or services. Places within this system that performed an important economic function – termed by Christaller as a 'central function' – were to be thought of as 'central places'. Centrality was thus viewed as analogous with economic importance and specialism, meaning that a 'central place' could be defined by its functional ability to offer unique goods and services to a wider hinterland (*ibid.*, 18-19; 147). The sum of these interactions was considered a 'central-place system' – essentially a hierarchical socio-economic network – and was visualised in a series of striking and widely reproduced diagrams (*Figure 1.2*).

It may not be immediately obvious why an economic theory designed to explain modern settlement patterns gained traction in archaeological discourse, but a major strength of the

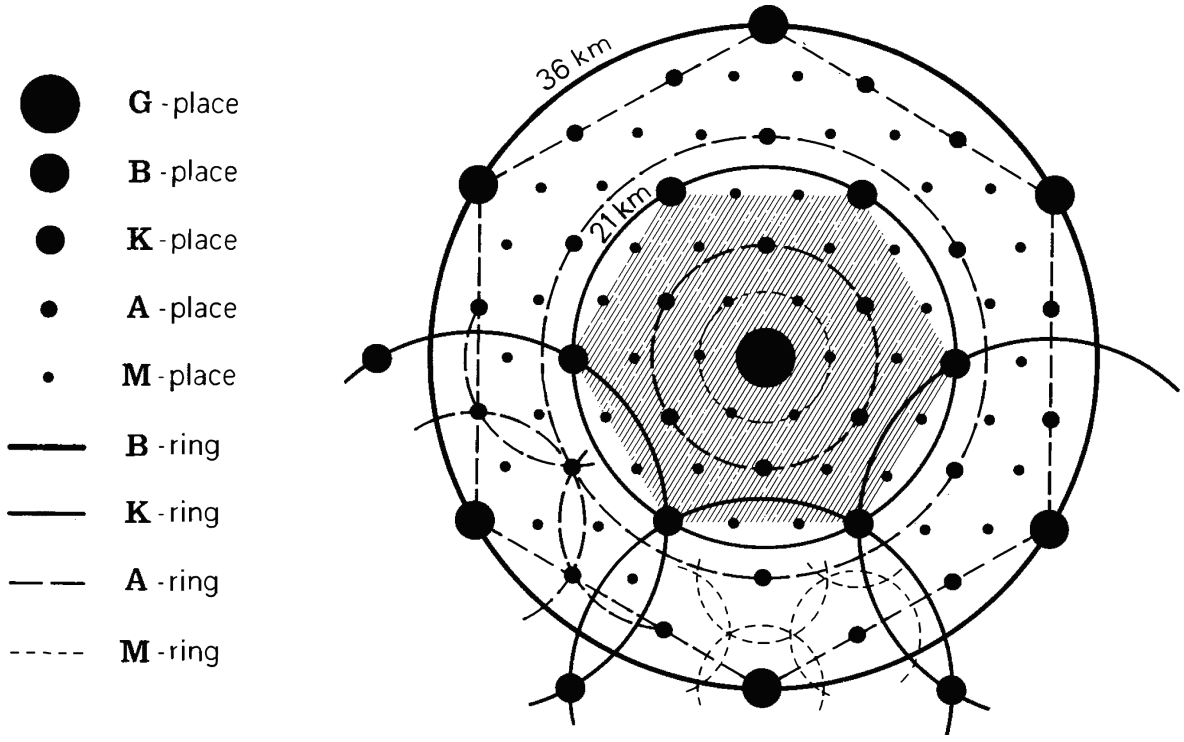



*Figure 1.2:* An example of a central-place system as reproduced by Malcolm Wagstaff. The diagram shows a 'central place' of the highest order (a 'G-place') variously surrounded by places of lesser centrality, as governed by the so-called 'Market Principle' (after Wagstaff 1986, 120).

model is how it can be adapted to suit the time and space under study (Schenk 2010, 13). In corresponding with three foci of processual scholarship – economic interpretations, empirical analysis and a focus on the macro scale – central-place theory enjoyed a period of popularity in archaeological works from the late 1960s to the 1980s. The zenith of 'central-place archaeology' in British archaeology was an edited volume, *Central Places, Archaeology and History*, which featured applications of the theory to various archaeological case studies (Grant 1986a). Though doubts were expressed about its applicability to the past (Millett 1986, 45; Reece 1986, 42), the theory proved too attractive to disregard, with one contributor already considering it '*one of the guiding principles of archaeological research*' (Haselgrove 1986, 6-7). This enthusiasm was short-lived, however, with the approach ultimately falling out of favour during the post-processual paradigm shift.

While in Britain the central-place debate '*faded away at an early stage*', it subsequently found many adherents in Germany and Scandinavia (Høilund Nielsen 2014, 22). From the late 1980s the relatively sudden and widespread discovery of high-status settlement sites presented archaeologists in these regions with problems of classification and interpretation. In order to explain this new phenomenon, 'central place' was proposed as a neutral term that reflected the apparent multifunctional importance of these sites (Näsman 1991). This notion would prove to be popular, with a pair of influential edited volumes helping to establish a distinct research tradition (Hårdh and Larsson 2002; Larsson and Hårdh 2003). Using this framework, sites such as Gudme (Fyn, Denmark) and Uppåkra (Scania, Sweden) were understood as operating at the apex of wider socio-political, economic and religious networks (e.g. Hedeager 2001; Hårdh 2002; 2002; Helgesson 2002). Commendable attempts were also made to compare, categorise and rank the growing corpus of evidence (Fabech 1999a, b; Näsman 2000); one of the more well-known examples is reproduced in *Figure 1.3*. At a broader level, syntheses sought to place the evidence within frameworks of regional development and state formation (e.g. Hedeager 1992; Näsman 1999; Ringtved 1999; Wickham 2001; Herschend 2009).

The enthusiasm with which the concept was initially adopted has waned in recent years, though, with more critical accounts expressing doubts over its theoretical depth and continued usage. For example, scholars have criticised how the term is often used without any theoretical engagement (Drauschke 2010, 26). Indeed, Winfried Schenk (2010, 11-12) has noted how '*the term suffers from a loss of significance*' while Oliver Nakoinz (2010, 251) has disparagingly remarked that '*nearly all settlements seem to be some kind of central place*'. A recent and similarly damning assessment by Karen Høilund Nielsen (2014, 23) has urged us to '*deconstruct the whole idea*' and approach the evidence with new empirical and interpretative methods. While not entirely without merit (Näsman 2011, 191-2; Skre 2011, 199-200), there

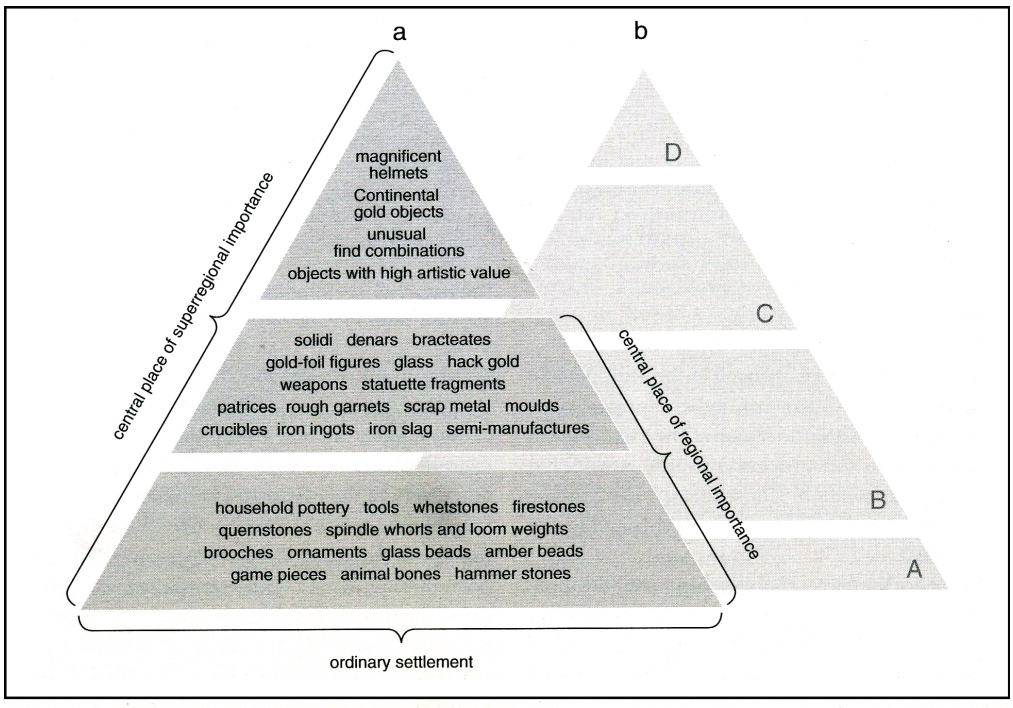



*Fig. 1. This figure draws a parallel between: a. the hierarchical model based on South Scandinavian small finds (Fabech & Ringtved 1995) and b. a model based on Widgren's subdivision of agrarian settlements into four levels (1998).*
*a. We distinguish between three levels: a local, a regional, and a supraregional. The pyramid illustrates the simple observation that there are very few of the localities which supposedly have more than a regional significance, a larger number have a more normal wealth, while in most of the rural settlements only the production of everyday goods can be traced. Places inhabited by unfree or dependants cannot be distinguished in the material.*
*b. The South Scandinavian societies can be structured in four tiers A-D. A. At the base, we find the small households, the members of an unfree and dependent workforce settled in huts and caves. B. In the middle, free owners of middle-sized farmsteads are found. In their household, thralls may have been included. C. The top level consists of the large households with an unfree workforce and unusually many animals. D. Among the farms of the upper tier C, we find that some alone on the basis of their splendid finds and the presence of workshop debris can be supposed to have held a central position within military organisation, cult, craft and trade, etc.*

*Figure 1.3:* A hierarchical model of South Scandinavian settlements inspired by central-place theory, with original caption included for context (after Fabech 1999a, 456).

is a strong case to be made for using different terminology altogether (e.g. Rundkvist 2011, 10). Put simply, the notion of a 'central place' – that being a settlement of central importance within a wider socio-economic system – is a useful one, but it is not appropriate to divorce a concept from its underlying theory. It is therefore argued that we must either engage with Christaller's theory more explicitly in our investigations, or we should disavow the term altogether. Falling within the latter camp, it is the view of the present author that more neutral and less conceptually encumbered terms like 'principal settlement' or 'elite settlement' might be more appropriate.

### 1.3.2 *The Multiple Estate Model*

A more geographically and historically specific interpretive model has been proposed by Glanville Jones (1961, 1971, 1976, 1985), whose concept of the 'multiple estate' represents one of the most influential explanatory frameworks yet produced for the study of early and later medieval settlement. Developed over a number of years, Jones used later medieval legal documents to articulate a system of political and agrarian organisation, centred on the

ability of key settlements such as royal vills to exploit a diverse economic hinterland through networks of dependency, and then back-projected it onto earlier periods. In this he argued that multiple estates were a relatively widespread phenomenon in England and Wales which, despite being '*recorded in detail only after the eleventh century*', likely reflected '*arrangements of great antiquity*' (1985, 361). As such, Jones essentially offered a framework in which to consider the development of manorialism – and feudalism more generally – across the *longue durée*. Though influential, the model has been widely criticised. Nicky Gregson (1985) took issue with almost everything, including the model's definition, methods and empirical application, while Steven Bassett (1989b, 20) rendered it '*unhistorical*'. More recently, Andrew Seaman's (2012) authoritative account clearly lays out a series of major interpretive difficulties faced when using the model – not least its reliance on historical back-projection – and calls for its removal from our interpretive repertoire. A further issue with the model is its rigidity, assuming established and largely homogeneous power structures that many modern scholars would view as more transient and dynamic (e.g. Wickham 2001). Indeed, the changing fortunes of certain estates can be understood through charter evidence, with many being gradually fragmented through successive grants to the church (Rippon 2008, 14-15). While perhaps a plausible working hypothesis, then, the existence of multiple estates on the scale, regularity and permanence Jones envisioned cannot be sustained on current evidence. It is nevertheless important, where documentary and archaeological evidence permit, to consider how great hall complexes exploited a diverse economic hinterland. One way of doing so is to consider the concept of *feorm*, an historically attested practice, and its logistical implications for great hall complexes and early medieval kingdoms more broadly.

### 1.3.3 *Feorm and itinerancy*

*Feorm* can be thought of as a system of non-monetary taxation in which food renders and other provisions – possibly also including entertainment – are offered to the royal household as part of a regional or supra-regional network of collection, redistribution and wider governance (Faith 2014). Perhaps developing from an earlier form of obligatory hospitality, the system appears to have been quite formalised by the middle Anglo-Saxon period (Faith 2009, 31). A particularly explicit example can be drawn from the late seventh-century law-code of Ine of Wessex (Lavelle 2013), which stipulated the following dues to be collected annually:

> *As a food-rent from 10 hides: 10 vats of honey, 300 loaves, 12 'ambers' of Welsh ale, 30 of clear ale, 2 full-grown cows, or 10 wethers, 10 geese, 20 hens, 10 cheeses, an 'amber' full of butter, 5 salmon, 20 pounds of fodder and 100 eels.*
>
> (trans. Whitelock 1979, 406)

The degree to which these extensive demands were met in reality is difficult to speculate, but the example is useful as a demonstration of the potential scale and pervasiveness of the practice. While forms of monetary taxation became increasingly important during the late Anglo-Saxon period (Gautier 2009, 42-4), the system appears to have survived beyond the Norman Conquest as the *firma unius noct* ('farm of one night'): a sum, borne by royal manors, deemed adequate to support the royal retinue for a period of up to twenty-four hours (Stafford 1980). The practice can thus be viewed as an enduring and fundamental aspect of early medieval kingship. Moreover, it is of particular relevance to our current investigation because it is at estate centres, like historically attested *villae regiae* and archaeologically identified great hall complexes, where these renders were likely to have been collected and consumed (Welch 1992, 50-3; Thacker 2005, 477; Reynolds 2009, 75). This realisation enables us to view great hall complexes as important nodes operating within wider socio-economic networks. This not only heightens the importance we should confer on these sites but, as shall be seen in **3.5.3**, opens up a number of interesting avenues for regional-scale investigation. It must be noted, however, that the consumption of render need not necessarily have taken place at an estate centre (Gautier 2009, 38). Indeed, it is entirely possible that a king's schedule also included periodic 'guesting' at the private residences of his subjects, perhaps in a manner not dissimilar to later kings and their monasteries.

*Feorm* networks were potentially rather large: while individual estate centres may have drawn provisions from a wide area, a sizeable political hegemony such as Wessex or Mercia would have required an extensive network of sites to ensure adequate geographic coverage. It is thus commonly argued that early kings were essentially peripatetic, operating out of multiple *villae regiae* in a royal circuit sustained by food-rents (e.g. Hooke 1998, 50). Indeed, itinerancy has been viewed as the '*essential economic basis of kingship*' (Charles-Edwards 1989, 28). There is certainly enough textual evidence to contend that kings and their entourages were want to travel widely within – and occasionally beyond – their territories (e.g. Charles-Edwards 1989, 28-33; Yorke 1990, 8-9; Welch 1992, 45-6; Blair 2005, 153-60; Lavelle 2013, 260-6). What is altogether less certain, though, is the extent to which early medieval kingship was *fundamentally* itinerant, or whether the periodic visitation of important settlements was initiated from a central residence that was occupied on a more permanent basis. Indeed, Martin Welch's (1992, 45) suggestion that estate centres may have been visited '*once or twice a year at most*' is plausible for a territorially dominant king like Penda but should not be assumed for all kings. As shall be seen in **4.4.1**, for example, the reasonably well-defined lathes of east Kent offer an alternative model in which the king may have primarily operated within a royal heartland and perhaps routinely travelled between a handful of semi-permanent estate centres. There is likely some correlation between the size of a territory and the

degree of itinerancy, but it seems unwise to assume that all kings were essentially peripatetic. Regardless, the importance of both concepts – *feorm* and itinerant kingship – to the study of great hall complexes is evident.

## 1.4 SUMMARY

### 1.4.1 *State of knowledge*

The preceding considerations have by no means offered an exhaustive treatment of the archaeological evidence and wider cultural phenomenon under investigation in this thesis. They have helped introduce the topic, though, and as such it is possible to offer a statement of present knowledge. In this we can make a number of general comments about Anglo-Saxon great hall complexes, at least as they are currently understood:

- They represent a group of sites that, due to their architectural distinctiveness and other characteristics, can be considered a distinct class of high-status settlement
- At least some of them appear to have operated as important administrative centres and royal residences known in written accounts as *villae regiae* or *cyninges tunas*
- Textual sources also indicate that the central feature of these sites – the hall – was a social institution and wider cultural phenomenon of tremendous importance
- Though they share some morphological characteristics with later 'long hall' sites, they were architecturally, chronologically and perhaps even functionally distinct
- A stronger comparison can be made with the hall sites of north-western Europe, whose propensity arguably demonstrate a broader North Sea 'hall culture'
- On the basis of their architectural investment and other contextual information, they likely operated at the apex of regional and supra-regional socio-economic networks
- In this they probably acted as 'central places' with 'central-place functions', although there are major conceptual issues associated with the use of this terminology
- A great hall complex could also be thought of as the residential component of a 'multiple estate', but this is a concept of similarly questionable value and practical benefit to the discourse
- A more productive approach, then, might be to consider their likely role as estate centres within regional and perhaps supra-regional *feorm* networks
- Irrespective of functional specifics, the archaeological importance and wider societal significance of Anglo-Saxon great hall complexes is evident

### 1.4.2. *Project design*

Having sufficiently introduced the sites that form the focus of this thesis, it is now apposite to consider the rationale behind the present study. The doctoral project began with a series of broad and exploratory research questions that helped frame the overall research design:

- What are the key spatial, temporal and archaeological characteristics of Anglo-Saxon great hall complexes?
- What sort of interactions did Anglo-Saxon great hall complexes have with their local environment and wider landscape?
- What specific socio-economic and politico-religious functions did Anglo-Saxon great hall complexes fulfil?
- What was the broader significance of Anglo-Saxon great hall complexes within early medieval society?

After some preliminary investigation, it was felt that these research questions could be most effectively addressed by (a) attempting a systematic and national-scale review of the evidence, (b) undertaking a series of focused regional case studies and (c) relating the findings to broader discussions of early medieval power, place and society. As with any project, a series of aims or statements of intent were devised to outline the intended outcomes of the research. As such, the aims of the project were:

- To undertake a detailed review and characterisation of the archaeological evidence for Anglo-Saxon great hall complexes
- To create a coherent, methodologically rigorous and multi-scalar framework for the study of Anglo-Saxon great hall complexes
- To apply this methodology to a series of regional case studies, each focusing on one or more Anglo-Saxon great hall complex
- To contextualise the results from these case studies within a broader spatio-temporal and archaeo-historical framework
- To relate the findings of the individual case studies and the national review of the evidence to contemporary debates around early medieval power, place and society

A series of objectives or interim steps were also defined to ensure the desired outcomes of the project were successfully realised. These comprised:

- A detailed, site-by-site review of the evidence and a broader characterisation of the Anglo-Saxon great hall phenomenon
- The identification of suitable sites for detailed investigation and the demarcation of georeferenced study regions around them
- The creation of an archaeological database for each case study and its integration with a Geographic Information System (GIS)

- Preparatory chronological analyses, including the recalibration of radiocarbon samples, chronological seriation, site phasing and activity modelling
- A local-scale investigation of the evidence using spatial techniques such as viewshed and least-cost path analysis
- An exploratory spatial analysis at the regional scale using techniques like Average Nearest Neighbour Analysis, Ripley's K-Function and Kernel Density Estimation
- The creation of territorial reconstruction models using advanced techniques such as Voronoi Tessellation, Buffer Zone Analysis and Standard Deviational Ellipses
- The contextualisation of the results of each case study within a regionally specific archaeo-historical framework
- A general discussion of the results in relation to national patterns and current debates surrounding early medieval power, place and society
- A general statement on the key characteristics of great hall complexes, with recommendations for further investigation

In terms of structure, this introductory chapter is followed by a systematic review of the evidence for Anglo-Saxon great hall complexes (Chapter 2), a detailed overview of the methodology employed (Chapter 3), a series of four regional case studies (Chapters 4-7), a summary of the results and thematic discussion (Chapter 8) and a concluding account (Chapter 9).

# 2
# REVIEW OF THE ARCHAEOLOGY

This chapter presents the first systematic and detailed review of the archaeological evidence for Anglo-Saxon great hall complexes. It is primarily offered as means to better characterise the phenomenon, but was also undertaken as a precursor to the selection of specific sites and regions for detailed analysis. The review is concluded with a chronological summary and a broader characterisation of the great hall phenomenon.

## 2.1 OVERVIEW

### 2.1.1 *The sites*

From an extensive review of the literature it has been possible to identify a total of sixteen great hall complexes, comprising thirteen certain or probable sites and three that were uncertain. Only three great hall complexes – Yeavering, Cowdery's Down and Lyminge – have seen extensive open-area excavation. Others have seen more limited intervention, ranging in scale from the extensive programme of field survey at Rendlesham to the limited pipeline excavations at Hatton Rock and Long Itchington. Sites like Atcham and Sprouston have seen virtually no investigation, with our knowledge resting solely on aerial photography and other methods of remote sensing. By way of initial introduction, it is appropriate to briefly consider the spatial distribution of the evidence (*Figure 2.1*). The majority of the evidence relates to southern and midland England, with sites known from the east coast as far west as the Welsh Marches. Elsewhere, Yeavering, Milfield and Sprouston represent a notable cluster in the north-east. That there is a gap in the distribution of some 350 km, covering the majority of northern England, is intriguing. John Blair (2013b) has noted how the distribution of great hall complexes and princely burials appears to avoid the core zone of archaeologically visible settlement, which he terms the 'Anglo-Saxon building culture province'. Were these places where 'Englishness' needed more explicit assertion, at cultural and territorial fringes, or is this spatial pattern to be taken as evidence for a degree of British influence on settlement forms? At present it is difficult to say; future discoveries may render this a moot point, however.

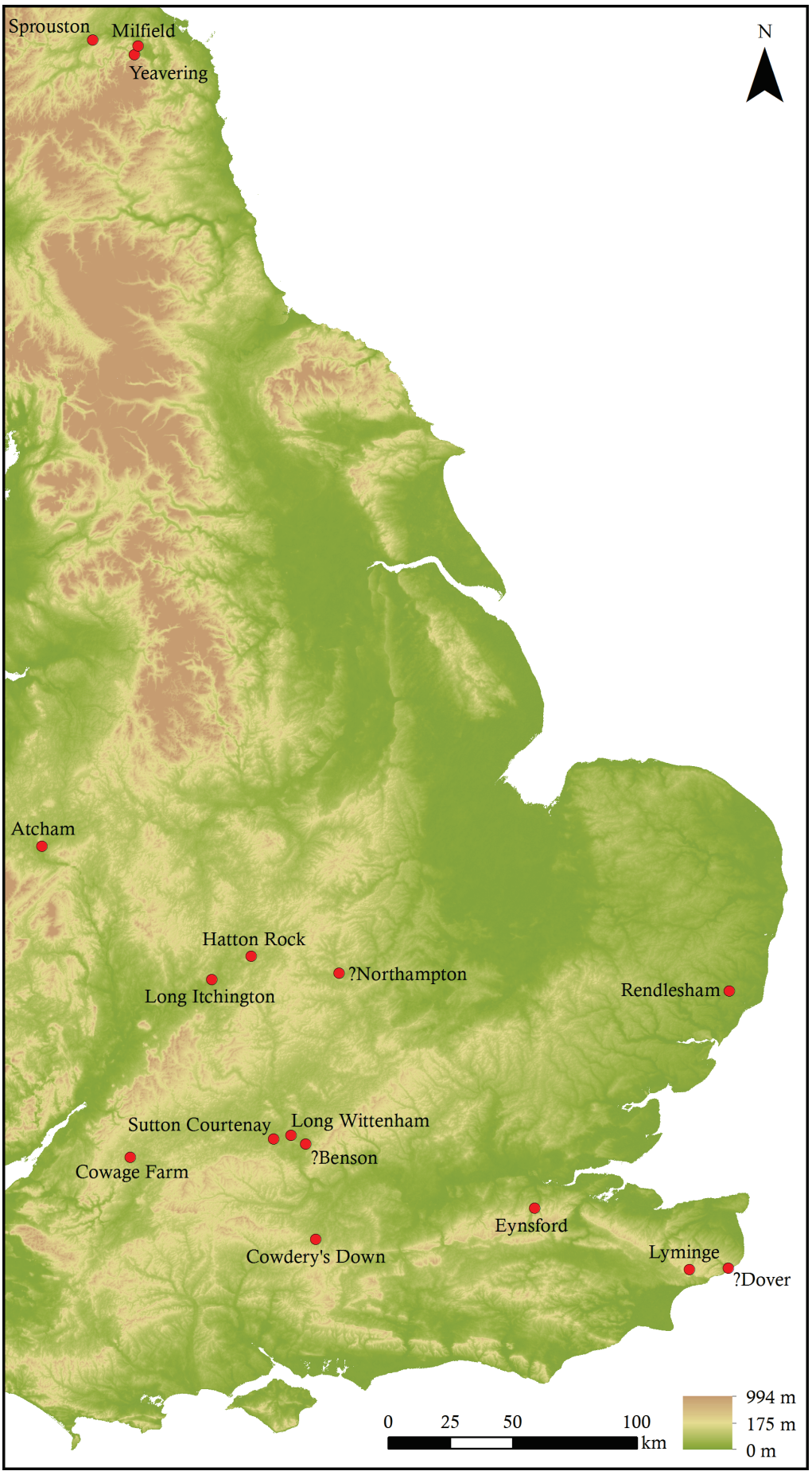



*Figure 2.1:* A distribution map of all known Anglo-Saxon great hall complexes (*contains Ordnance Survey data © Crown copyright and database right 2016*).

In terms of broader political units, sites are known from within the putative extents of Kent, East Anglia, Wessex, Mercia and Northumbria. Given this, the phenomenon should not be understood in terms of Bede's ethnic geography (i.e. as 'Saxon' or 'Anglian'), as it appears to have spanned cultural and political borders. Indeed, the development of these sites could have been underpinned by a shared mental template, inasmuch as one could be transmitted among supra-regional elites during the sixth and seventh centuries (Brennan and Hamerow 2015, 346).[7] It is also worth reflecting on the possible scale of the evidence. Of the sites considered below, roughly one third – Yeavering, Milfield, Rendlesham, Lyminge and the possible site at Benson – are historically attested as seventh-century royal vills.[8] On this basis, it might be assumed that the majority of great hall complexes are undocumented. Peter Sawyer's (1983, 289-99) seminal study identified 195 royal vills from documentary sources pertaining to Anglo-Saxon England. More specifically, fifty-three royal vills are known from written evidence dating before AD 820 (Blair 2005, 277-8). Using the above ratio as a rough guide, somewhere in the region of 150 great hall complexes might therefore be expected. This represents a very tentative thought experiment, but serves to underscore the possible quantity of unrecognised evidence. Though our current sample is relatively limited, it is entirely possible that the great hall phenomenon was of far greater scale and geographic extent than has hitherto been realised.

A small number of sites were excluded from the review, mostly for practical reasons. Of the English evidence, the only intentional omission was the partially excavated hall at Repton in Derbyshire. It was found alongside another structure during excavations in 1987 and 1988 and thought to possibly represent an '*estate centre of the 7th century*' (Biddle and Kjølbye-Biddle 1992, 36). A later summary of the excavations included a schematic plan that appears to show a partially excavated structure measuring c. 28.5 m x 8 m and what is presumably part of another, smaller structure (Biddle and Kjølbye-Biddle 2001, 51). Neither structure is described and no other features are recorded from this phase. Due to the limited state of publication and overall lack of dating evidence, it was felt that little would be gained from the site's inclusion.

A handful of Scottish sites with halls of smaller proportions were also omitted due to their limited archaeological similarity, geographic separation and largely uncertain chronology (see Brophy 2007, 76-81 for a summary of the evidence). The only site known with a hall of comparable dimensions to those discussed below is Doon Hill, near Dunbar in Berwickshire. Unpublished excavations by Brian Hope-Taylor revealed a post-in-trench hall measuring c. 23 m x 10 m that was set within an unusual polygonal enclosure (Wilson and

[7] The idea is discussed further in **8.2.2**.
[8] A charter was issued at Sutton Courtenay in AD 868 (S 338a), but there is no contemporary written evidence for its earlier life as a sixth-seventh-century great hall complex.

Hurst 1966, 175-6; Miket 2013, 151-3). Interestingly, this structure was found to have been built over an earlier Neolithic hall, prompting a great deal of chronological confusion (Brophy 2007, 76-7). More recent excavations at Lockerbie in Dumfriesshire have revealed a post-built structure that was subsequently rebuilt as a post-in-trench hall (Kirby 2011, 43-54). The latter structure measured 14 m x 7 m, with an annexe at its northern end bringing the overall length to 19 m. Although an interesting example of 'Anglian' expansion into south-west Scotland, due to the hall's relatively small size and apparent isolation it cannot be considered a great hall complex of the sort reviewed in this chapter. An even smaller post-in-trench hall was excavated at Castle Park in Dunbar (Berwickshire) but is excluded on similar grounds (Perry 2000, 52-3).

### 2.1.2 *A note on radiocarbon dates*

The review involves a consideration of the dating evidence from each site. As will soon become apparent, the majority of sites have largely uncertain chronologies. Indeed, architectural and morphological comparison is often used in lieu of closely dateable evidence. A number of sites have associated radiocarbon evidence, however, and every attempt has been made to incorporate it within the review. These radiocarbon determinations have been re-calibrated using the most recent radiocarbon age calibration curve, IntCal 13 (Reimer et al. 2013), and OxCal v4.2, a radiocarbon calibration and analysis program created by the University of Oxford (Ramsey 2009; Ramsey and Lee 2013).[9] This was undertaken to improve the chronological precision of calibrated date ranges, and also to standardised the manner in which radiocarbon samples were treated in the review. More detailed methodological consideration is given in **3.3.2**.

## 2.2 THE TYPE SITES

### 2.2.1 *Yeavering*

This section reviews the evidence from the two most influential sites: Yeavering and Cowdery's Down. As noted above, both sites have dominated the literature on the subject given their extensive excavation and early discovery. As such, they are deserving of lengthy consideration. Yeavering (NT 926 304) is located at the northern edge of the Cheviot Hills on a sandy knoll overlooking the River Glen. The site is situated at a height of around 65 m AOD at the foot of a hillfort known as Yeavering Bell, which is typically interpreted as an Iron Age oppidum of the *Votadini* with a possible post-Roman palisade (Hope-Taylor 1977,

[9] https://c14.arch.ox.ac.uk/oxcal/OxCal. See https://c14.arch.ox.ac.uk/calibration.html for an introduction to radiocarbon calibration.

6; Oswald and Pearson 2005; Miket 2013, 151-6). The complex was thus positioned within a dramatic landscape, further augmenting its rich archaeology. The site was first discovered through aerial photography and was subsequently excavated between 1952-62 (Knowles and St Joseph 1952, 270-1; Hope-Taylor 1977, 1-5). Hope-Taylor (1977, 151-68) devised an intricate chronology (*Figure 2.2*), beginning in the late fifth or sixth century and extending, through four iterations of the *villa regia*, into the late seventh (see Welch 1992, 46-7 for a useful summary). The site comprises four main elements: a sizeable complex of timber buildings; a monumental timber palisade; a wooden 'theatre'; and a wider funerary landscape (O'Brien 2011, 209-10). As shall be seen below, there is a decidedly ritual element to much of the archaeology (Hamerow 2012, 106-9).

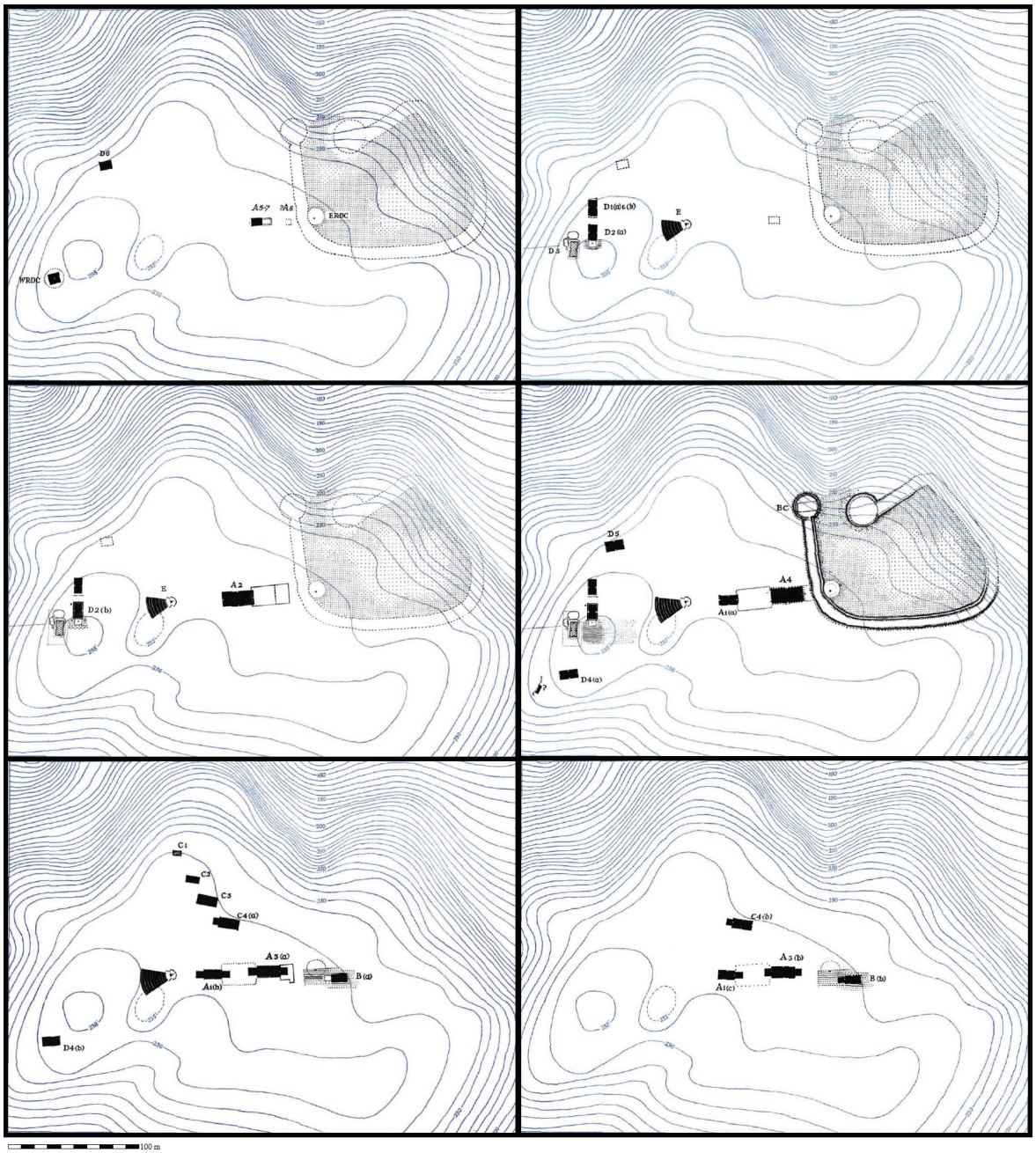



*Figure 2.2:* Phase plans of Yeavering. From top-left to bottom-right: phases I, II, IIIAB, IIIC, IV and V. Note: these are north-up plans (adapted from Hope-Taylor 1977, Figs.74-79).

Timber buildings were found in three parts of the site – Areas A (central), C (north) and D (west). Area A was the most significant, featuring a succession of great halls (Buildings A2, A3a, A3b and A4) and smaller structures (A1a, A1b and A1c) set within a fenced courtyard area (Hope-Taylor 1977, 46-69). The great halls ranged in size and architectural style, with A2 and A4 being the widest and A3(a) and A3(b) having an overall greater length due to the presence of annexes (27.5 m and 27 m respectively).[10] The largest great hall (A4) measured 25.3 m x 11.8 m, giving it an approximate surface area of 298.5 $m^2$. It featured a single internal partition at the eastern end and had four entrances at the midpoint of each wall. Immediately in front of, and carefully aligned with, the eastern entrance was an unsexed adult inhumation (Grave AX) interred with a sheep or goat skull and a wooden staff with copper-alloy fittings (*ibid*., 67-9). The staff was interpreted as being either ceremonial or for surveying purposes (*ibid*, 200-3), though subsequent scholars have drawn textual and archaeological parallels with *völva* burials from Scandinavia (Hamerow 2012, 106-7; Sofield 2015, 367). Though not as wide, if annexes are taken into consideration then Structures A3(a) and A3(b) were actually longer than A4, with a length of in excess of 30 m (*ibid*., 55-8). Areas C and D contained a number of smaller or 'lesser' halls in various linear alignments (Hope-Taylor 1977, 88-118; 168).

Two unusual features warranted special names. The first was a large double-palisaded enclosure, the so-called 'Great Enclosure', which was located at the eastern end of the complex (Area B). It underwent several iterations and was eventually replaced with a probable church (Building B). Hope-Taylor (1977, 209) was convinced that it dated '*within or very soon after the Roman Iron Age*', but O'Brien (2005) has demonstrated how there is little evidence to support this date; the structure seems more likely to be contemporary with the Anglo-Saxon phases. The second feature, known as the 'wooden theatre', was a wedge-shaped series of concentric foundation trenches situated between Areas A and D (Hope-Taylor 1977, 119-22). Four aspects of this incredible feature deserve particular mention: firstly, that the concentric trenches got progressively deeper, from *c.* 0.9 m in Trench 1 to *c.* 1.5 m in Trench 9; secondly, that four stone-packed pits with a broadly diagonal inclination were found set *c.* 5.5 m away from the outermost foundation (Trench 9); thirdly, that a series of trapezoidal-shaped stakeholes and postholes were found in front of the innermost foundation (Trench 1); and fourthly, that a semi-circular series of postholes and a very large post setting (Post E) some 1.2 m deep were found behind the trapezoidal-shaped feature. Taken together, these features were interpreted as representing a tiered seating structure with a 'totemic' pole and wooden screen positioned behind a central dais or 'high-seat' (*Figure 2.3*).

[10] Hope-Taylor (1977, 129-49) discussed the structures in relation to the so-called 'Yeavering unit', which equates to 28.1 cm. Once converted, the measurements of the great halls are as follows: A2, 24.7 m x 11.2 m; A4, 25.3 m x 11.8 m; A3(a), 27.5 m x 10.1 m; and A3(b), 27.0 m x 10.1 m.

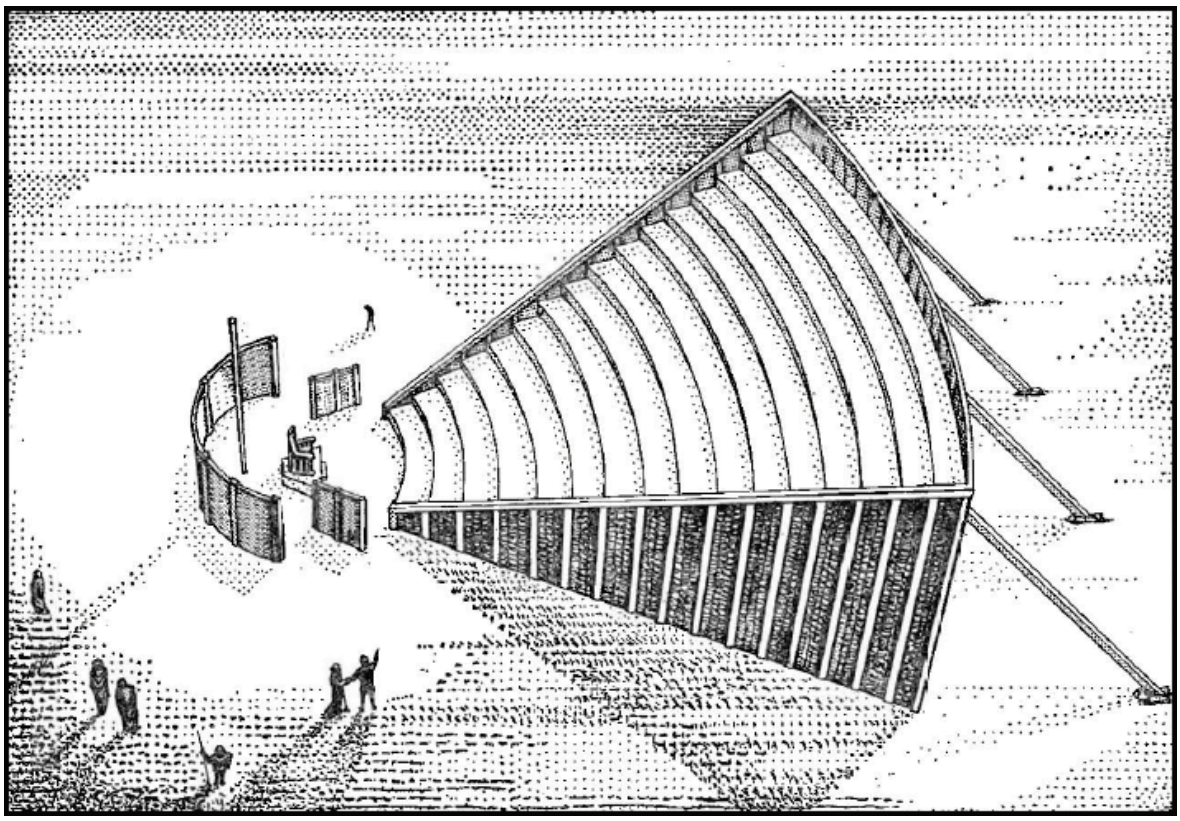


*Figure 2.3:* A reconstruction of Building E – 'the wooden theatre' (after Hope-Taylor 1977, 121).

The fourth aspect of the site was its burial evidence, found predominately at the eastern and western extremes of the complex. The western cemetery (Area D) was seemingly the earliest. Secondary inhumations placed in the Western Ring Ditch became foci for subsequent burial in the area (Hope-Taylor 1977, 108-16). Other burials were located around the southern end of Building D2, which had a large pit containing ox skulls in its wall-trench and which Hope-Taylor (1977, 97-102; 244-5) interpreted as a sixth-century pagan temple. The eastern burials (Area B) consisted of a large post-pit containing a single inhumation (Grave BX1) set within the Eastern Ring Ditch, and a linear series of what were termed 'string-graves': burials placed end-on-end in a presumably continuous burial trench (*ibid.*, 70-3). The large and dense cemetery associated with Building B, a possible church, represented the latest burials on the site after the dismantling of the Great Enclosure (*ibid.*, 73-8). Virtually all of the burials encountered were unfurnished, making dating problematic.

On the basis of stratigraphic evidence, historical inference and an assumed architectural evolution, Hope-Taylor (1977, 151-68; 276-82) saw the site emerge as a British settlement in the later fifth or early sixth century and operate as an Anglian *villa regia* between the later sixth and seventh centuries. Chris Scull (1991) has questioned the notion of a British antecedent, instead arguing on the basis of wider settlement evidence from the Milfield Basin that Phases I and II can be thought of as a single, sixth-century phase of Anglo-Saxon cultural origin. Taking an alternative view, John Blair (2005, 56) has speculated whether the site may have begun as a cult centre that was used '*by both British and English Bernicians*'.

Others have also critiqued the proposed sequence, particularly in terms of Hope-Taylor's reliance on dubious historical events and his insistence on an early date for the 'wooden theatre' (Welch 1992, 46-7). Overall, however, the general chronology of the site can be viewed as mostly credible. Thus, it seems that the site began in the later fifth or sixth century as a small settlement, perhaps of some politico-religious significance, and was subsequently redeveloped as a great hall complex, with the four iterations of the *villa regia* (Phases IIIAB, IIIC, IV and V) perhaps corresponding with the reigns of successive Bernician and Northumbrian kings: Æthelfrith, AD 592-616; Edwin, AD 616-632; Oswald, AD 633-641; and Oswiu, AD 641-670 (Hope-Taylor 1977, 309-13; Welch 1992, 43-5).

### 2.2.2 *Cowdery's Down*

Cowdery's Down (SU 6570 5320) is located on the eastern outskirts of Basingstoke, situated at a height of 85 m AOD on a chalk ridge overlooking the River Loddon (Millett and James 1983). Now a housing estate, the site was first identified in 1977 and fully excavated between 1978 and 1981. The excavations uncovered intermittent occupation spanning the Bronze Age to the Civil War (*ibid.*, 154-9). Earlier phases included a series of Bronze Age ring-ditches (Period 1), an Iron Age enclosure (Period 3A) and both early and late Roman occupation (Periods 3B and 3C). The latter included an enclosure, multiple field boundaries, several pits and a double inhumation, none of which appears to have dated later than the mid-fourth century (*ibid.*, 179-82). The altogether more substantial early medieval evidence consisted of three distinct phases of settlement spanning the sixth-seventh centuries (*Figure 2.4*).

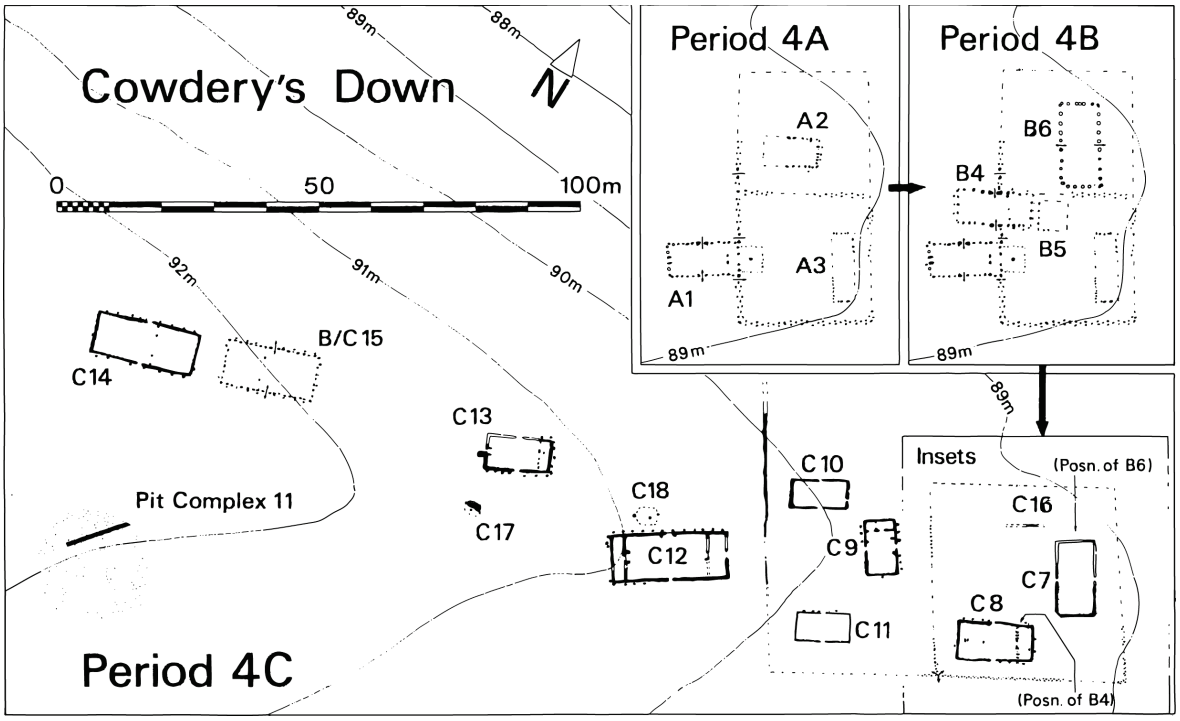



*Figure 2.4:* Phase plans of Cowdery's Down, Hampshire (after Millett and James 1983, 194).

A total of eighteen structures were identified across the three phases (Period 4A, 4B and 4C). The first phase of the settlement (4A) consisted of three post-built structures (A1, A2 and A3) and two fenced enclosures measuring *c.* 25 m x 25 m (Millett and James 1983, 193-4; 201-5). Whereas Structures A2 (*c.* 9.8 m x 5.6 m) and A3 (*c.* 13.0 m x 4.6 m) were located inside the enclosures, Structure A1, which consisted of a main hall (13.8 m x 6.4 m) and eastern annexe (4.4 m x 4.4 m), appears to have been constructed as part of the southernmost one. During this time the site may have housed around twenty people in what probably represented the farmsteads of one or two extended families (Millett and James 1983, 248-9). Although relatively small, the degree of spatial formality and presence of fenced enclosures could indicate that the settlement was of greater than average status. Period 4B saw the construction of three new structures (B4, B5 and B6) and the apparent continuation of Structures A1 and A3 (*ibid.*, 194-5; 205-8). Like Structure A1, Structure B4 (13.8 m x 6.2 m) was integrated within the southernmost enclosure, and may have had an eastern annexe in the form of Structure B5 (*c.* 5.4 m x 5.4 m). Structure B6 (*c.* 16.0 m x 7.3 m) appears to have been built to replace Structure A2. Structure B/C15 (17.4 m x 8.2 m) was tentatively assigned to this phase on the basis of constructional technique, though this cannot be proven statigraphically.

The settlement underwent considerable expansion and spatial reconfiguration during Period 4C (Millett and James 1983, 195-7; 209-27). This new layout consisted of six buildings (C7, C8, C9, C10, C11 and C16) set within a pair of larger enclosures, and a range of three halls (C12, C13, C14) and two SFBs (C17 and C18) further along the ridge to the west. These structures were architecturally distinct from their Period 4A and 4B forebears; two were SFBs (Structures C17 and C18) and the rest of plank-in-trench construction, some of which also utilised external raking timbers. Of greatest interest is the largest structure (C12), which measured 22.1 m in length and 8.8m in width (narrowing to 8.5 m at the ends). It had two internal partitions (each with a doorway in the centre), a pair of opposing doorways along the long-walls and a single entrance on the north-eastern short-wall. This structure was part of a group of structures (C9: 10.1 m x 5.4 m, C10: 11.4 m x 5.2 m and C11: 9.9 m x 5.2 m) arranged in a perpendicular manner to create a central courtyard. Coupled with the monumental interior of the great hall, this courtyard could have facilitated formal – and perhaps ritual – displays similar to those that presumably took place within the theatre at Yeavering (Hope-Taylor 1977, 119-22). Structures C7 (14.4 m x 7.3 m), C8 (14.0 m x 7.1 m) and possibly C16 (uncertain size) may also have been arranged in a similar manner. Based on the quantity and overall size of the buildings, the excavators thought the permanent population of the site '*unlikely to have been less than 60 persons*' (Millett and James 1983, 249). The general absence of domestic refuse at the site might be taken as evidence against

a large permanent population, however.

Although few dateable artefacts were recovered, the excavators were able to utilise methods of scientific dating (Millett and James 1983, 197-200). A single thermoluminescence assay of burnt daub taken from the wall-trench of Structure 12 returned a somewhat unhelpful date range of AD 573-867 for the destruction of the building. Radiocarbon dating was also employed, with nine samples taken from charcoal associated with Structures A2, C9 and C12.[11] The results were problematic, covering '*a wide range, much of which is too early since it conflicts with the stratigraphic evidence*' (*ibid.*, 197). Being from carbonised oak, it is possible the ranges returned relate to specific tree-ring ages and not the date of felling; based on a series of statistical corrections and best estimations the excavators instead argued for a date range of AD 513-647 for Period 4A and AD 552-666 for Period 4C (*ibid.*, 197-200). Although the radiocarbon age of the samples was not included in the original publication, they were later calibrated using Stuiver and Pearson (1986) and published in an English Heritage report (Jordan et al. 1994, 40-1). Recalibration of these samples does not significantly modify the date ranges as originally published (*Table 2.1*). That the date ranges are rather broad is to be expected given the error range of the samples. Despite this, the 1σ ranges for Structure A2 return a plausible pooled average of *cal AD 479-606* (68.2% probability). This broadly accords with Millett and James' (1983, 199) revisions. The dates for Structure C12 are similarly credible, though a date in the latter part of the range seems more likely. Considered together, the chronological data indicate that the sequence began in the early sixth century and extended until the late seventh, with the great hall phase most likely being a seventh-century phenomenon. As with Yeavering, the monumental complex appears to have emerged from an earlier phase of settlement that was comparatively modest though by no means insignificant, especially given its relatively early evidence for enclosure and spatial formality.

| Radiocarbon sample information | | | Published date ranges | | IntCal 13 date ranges | |
|---|---|---|---|---|---|---|
| RC sample | RC age | Source | 68.2% | 95.4% | 68.2% | 95.4% |
| HAR-3720 | 1480±60BP | Structure A2 | 540 – 640 | 430 – 660 | 537 – 647 | 428 – 655 |
| HAR-3721 | 1560±70BP | Structure A2 | 415 – 590 | 340 – 660 | 420 – 565 | 350 – 640 |
| HAR-3764 | 1620±70BP | Structure C9 | 350 – 535 | 250 – 600 | 356 – 539 | 254 – 588 |
| HAR-3767 | 1630±80BP | Structure C9 | 270 – 535 | 230 – 600 | 344 – 536 | 240 – 597 |
| HAR-3768 | 1700±90BP | Structure C9 | 235 – 425 | 120 – 550 | 225 – 505 | 127 – 548 |
| HAR-4447 | 1490±90BP | Structure C12 | 440 – 650 | 390 – 680 | 433 – 646 | 355 – 686 |
| HAR-4449 | 1490±80BP | Structure C12 | 450 – 645 | 400 – 670 | 434 – 645 | 402 – 666 |

*Table 2.1:* Radiocarbon samples from Cowdery's Down (data from Jordan et al. 1994, 40-1) and their recalibration using IntCal 13 (Reimer et al. 2013) and OxCal v4.2 (Ramsey 2009; Ramsey and Lee 2013), reported at 1σ (68.2%) and 2σ (95.4%). Calibrated date ranges are years AD/CE.

[11] One sample each from Structures A2 and C12 were rejected by the laboratory.

## 2.3 RECENT EXCAVATIONS

### 2.3.1 *Lyminge*

This section is primarily concerned with the results from three major research projects that have investigated great hall complexes in southern England,[12] but also considers Brian Philp's (2014) recent work at Eynsford. Having uncovered occupation across multiple sites spanning the fifth-ninth centuries, the 2007-2015 excavations at Lyminge represent the most extensive investigation of a great hall complex and wider associated settlement since Cowdery's Down (*Figure 2.5*).[13] An historically attested royal vill and monastery, Lyminge is located at the head of the River Nailbourne and set within the main axis of the Elham Valley, one of the major routeways across the North Downs of Kent. The focus of early Anglo-Saxon settlement was on the plateau of a chalk spur known as Tayne Field (TR 1620 4100), a plan of which is given in *Figure 2.6*. This activity was demonstrably influenced by antecedent features, including a substantial Bronze Age barrow and a natural hollow or 'doline' (Thomas 2017, 103). The first phase of occupation, centring in date on the sixth century, comprised three SFBs, a series of deep pits and a post-built structure with at least two phases. The former are perhaps of greatest significance for their especially rich fills (Maslin 2015), but also for their associated zooarchaeological assemblages which featured unusually high proportions of pig bone (Thomas 2013, 132-7). The latter is significant, not only for the recovery a sixth-century annular brooch and dress-pin from its foundations, but also for its position partially overlying a Bronze Age barrow ditch. The earliest phase of activity also included the 'doline', a natural formation measuring c. 18 m x 12 m that appears to have been used initially as a clay pit and then interchangeably as a midden and industrial area thereafter (Thomas 2017, 97-106). The associated finds, which include vast quantities of glass and an impressive array of iron and bronze artefacts, demonstrate considerable material wealth and industrial ability.

Two broadly contemporary cemeteries at either end of the village offer an important funerary context for the first phase of occupation, and may have functioned as '*symbolic entry points*' to the settlement proper (Thomas 2013, 118). The southernmost, Lyminge I, was excavated during the construction of the Elham Valley railway in 1885 and remains largely unpublished. Although the number of burials is unknown, some of the finds were communicated at a meeting of the Society of Antiquaries of London (Jenkins 1885). These included brooches of the radiate and cruciform types, swords and other weaponry. Overall,

[12] These comprise: *The Origins of Wessex* (University of Oxford, http://www.arch.ox.ac.uk/wessex.html); the *Lyminge Archaeological Project* (University of Reading, http://www.lymingearchaeology.org/); and the *Rendlesham Project* (Suffolk County Council, https://heritage.suffolk.gov.uk/rendlesham-project).
[13] Although the following review is reasonably thorough, attention is drawn to a series of interim publications for further details (Thomas 2010, 2013, 2017)

a date in the sixth century is usually attributed to the burials (e.g. Evison 1987, 162-4). Lyminge II is better understood, having been extensively excavated in the 1950s and subject to further evaluation more recently (Warhurst 1955; Parfitt 2002). A total of 107 graves have been identified from the combined interventions, with the excavated burials having been interred with a variety of high-status brooches, buckles, weaponry, glass, and pottery vessels dating to *c.* AD 425/450-550 (Richardson 2005b, 48-9). Of particular significance was a grave containing a gold bracteate, a wider phenomenon taken by Charlotte Behr (2000) to have had an important contribution to the establishment and legitimisation of royal power in sixth-century Kent. The burial of a horse is also noteworthy inasmuch as it likely evinces the practise of horse sacrifice, an important early Anglo-Saxon cultic activity (Fern 2007; Thomas 2013, 118-19). Post-excavation analysis of the Tayne Field material may reduce the chronological gap between the earliest burials from Lyminge II and the earliest artefacts from the doline, else an earlier and undiscovered phase of settlement within the village is possible.

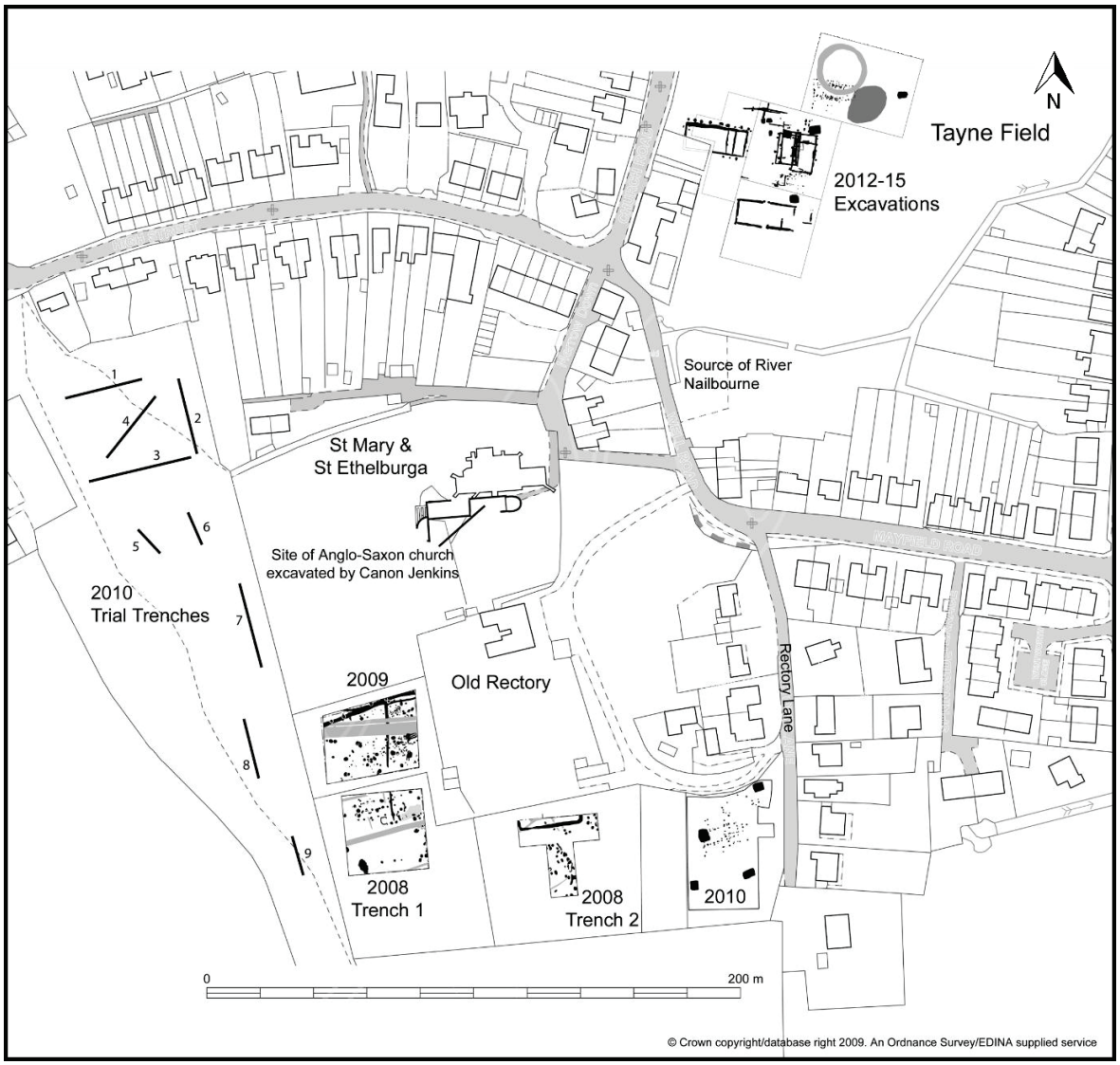



*Figure 2.5:* A plan of the features at Lyminge (after Thomas 2017, 99).

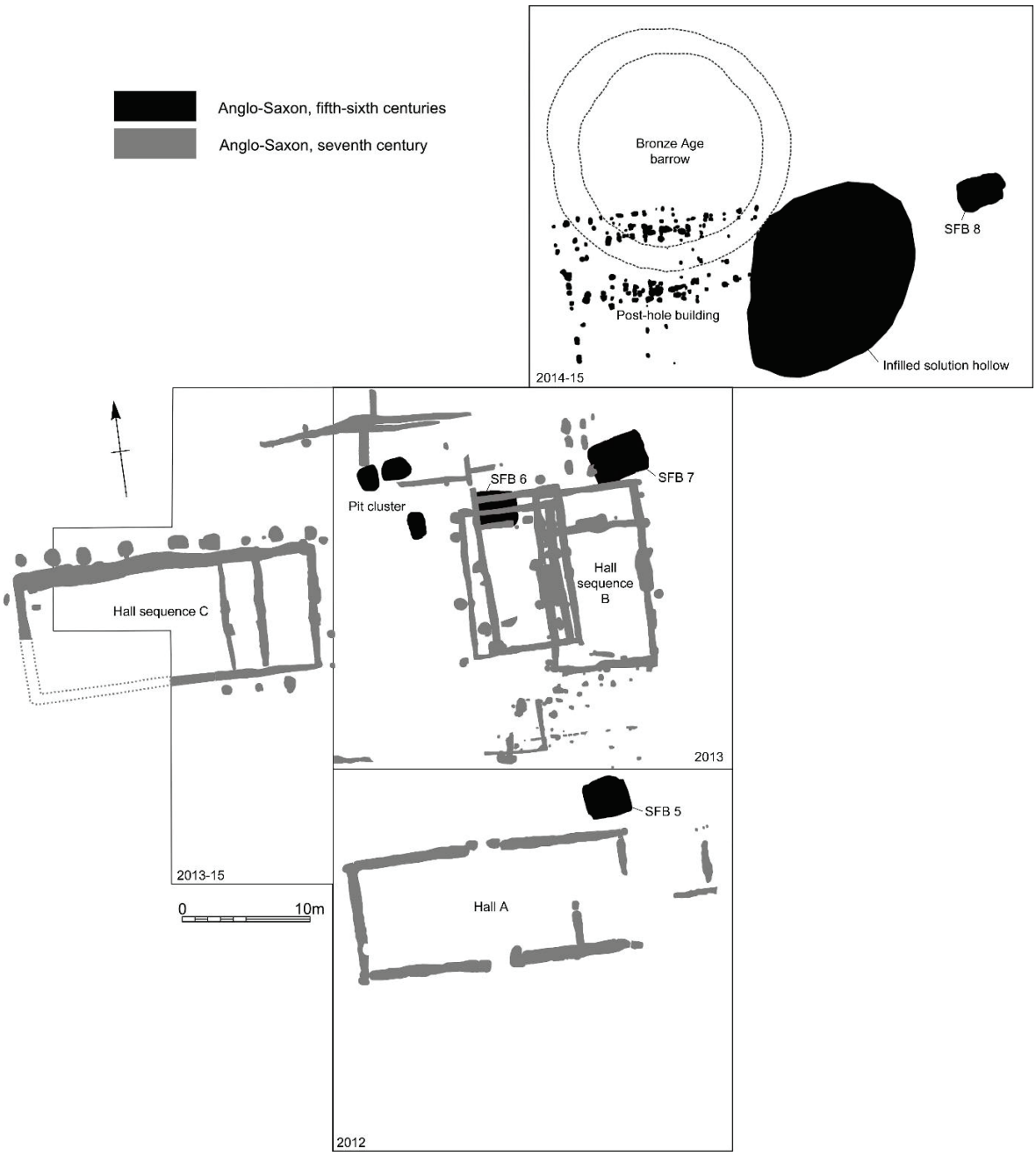



*Figure 2.6:* The great hall complex and antecedent phase at Lyminge (after Thomas 2017, 101).

The settlement on Tayne Field underwent considerable spatial reconfiguration in the seventh century. What followed was a stratigraphically complex sequence of three coaxially aligned buildings and a handful of partially excavated but largely uncertain ancillary structures (*Figure 2.6*). Hall A, the first to be excavated, measured 21.0 m x 8.2 m and featured double-planked wall construction. Hall sequence B consisted of a smaller hall that was rebuilt and successively enlarged twice, from 11.0 m x 6.0 m in its first phase to 13.6 m x 7.4 m in its third. Each iteration of the building was constructed in a similar way, using single-planked wall construction with external raking posts. At c. 24 m x c. 9 m, Hall sequence C featured the largest hall. It too was rebuilt twice, each with a different form of construction. The first and second iterations utilised construction techniques similar to Hall A and Hall

sequence B respectively; the third phase appears to have been only a partial rebuild, seemingly replacing the northern long-wall using a series of post-pits.

The lack of closely dateable finds and an apparent degree of residuality in many of the radiocarbon determinations pose problems for the chronology and sequence of the great hall phase (Thomas 2017, 100; 109-10). On the basis of stratigraphic evidence and the more plausible radiocarbon estimations it is currently thought that the sequence began with the smaller hall (Hall sequence B, phase 1) probably in the very late sixth or early seventh century. This structure was then rebuilt (Hall sequence B, phase 2) as part of a grander complex incorporating a large hall to the west (Hall A) and an even larger structure to the south (Hall sequence C, phases 1 and 2). The third phases of Halls B and C were likely the last to be built, probably in the final third of the seventh century. Two aspects of the hall evidence can be briefly mentioned by way of characterisation. The finding of substantial pieces of *opus signinum* indicates that some of the halls, or at least certain phases of them, were decorated with Roman-style flooring, presumably as a deliberate imitation of contemporary church architecture (Thomas 2017, 107; 111). Evidence was also found for the sorts of activities that would have taken place within these impressive structures, with finds of vessel glass and an exquisite bone gaming piece according well with depictions of the mead hall in heroic poetry (**1.2.1**).

Evidence for settlement across a wider area was also revealed in a 2010 evaluation located some 250 m south of the complex (*Figure 2.5*). This revealed a post-built hall measuring 12.8 m x 4.6 m and four SFBs that are conspicuous for the richness of their fills (Thomas 2013, 123-5; Maslin 2015, 203-4). Most evocative was the finding of a plough coulter dating from the first half of the seventh century – the earliest known from England – at the base of SFB 1 (Thomas et al. 2016, 745-7). The unusual dimensions of the hall – with a length approximately three times its width – are also noteworthy and elicit comparison with similar structures from Church Whitfield, some 15 km to the east (Welch 2007, 204-5; Thomas 2013, 120). Taking the evidence as a whole, it appears that this part of the site was in use from the late fifth or early sixth century through to the middle of the seventh. This occupational continuity therefore serves as a useful counterbalance for the otherwise dramatic shift in the spatial and architectural configuration of activity on Tayne Field.

At some point during the latter decades of the seventh century a monastery was founded at the site (Kelly 2006). The settlement associated with this foundation had a very different spatial articulation than its predecessor, being situated at higher elevation on the slopes of a promontory some 200-300 m to the south-west (Thomas 2013, 128). With the modern church and churchyard obscuring most of what would have presumably been the monastic core, excavations between 2008 and 2010 focused on its outer precinct to the west and south

(*Figure 2.5*). Taken together, the evidence comprised a number of post-built structures and more than 100 pits containing late seventh- to ninth-century domestic and industrial refuse. A series of boundary ditches also provided useful evidence for spatial zoning, with an apparent domestic zone closer to the church and industrial zones further to the south and west (Thomas 2013, 129). Industrial activities appear to have included iron working and the processing of agricultural surplus: the former is evidenced by large quantities of slag and other production material found west of the church while that latter is attested by a large building (measuring 19 m x 6.5 m) with a metalled yard tentatively interpreted as a granary and processing area (Thomas 2010, 412; 2013, 131).

Large quantities of well-dated artefact types and a suite of almost forty radiocarbon dates have facilitated the production of a high-resolution, long-term chronology for the site. The earliest activity is attested at Lyminge II, where burial may have begun in the second or third quarter of the fifth century. Archaeologically defined occupation at Tayne Field dates from the late fifth century onwards, with the great hall phase likely dating to *c.* AD 600/625-675/700. The somewhat uncertain date of the monastic establishment notwithstanding (see Kelly 2006), monastic occupation dates to *c.* AD 675-850/875. There is thus an incredibly rich and seemingly unbroken sequence of high-status occupation at Lyminge that spans the fifth-ninth centuries, thereby offering an unprecedented opportunity to study a great hall complex and both its antecedent and postcedent phases.

### 2.3.2 *Sutton Courtenay*

Sutton Courtenay (SU 486 936) has long been a focus of investigation, but has only recently been confirmed as a great hall complex. Excavations in the 1920s and 1930s uncovered at least thirty-three SFBs – the first such structures to be found in England – dating to the early Anglo-Saxon period (Leeds 1923, 1927, 1947). Subsequent aerial photography revealed a palimpsest of features in the vicinity of Leeds' excavations (Benson and Miles 1974; Hawkes 1986, 88-9). These were found on a gravel terrace at a height of around 55 m AOD. The features comprise a complex of five timber buildings, arranged in a coaxial manner and broadly aligned with the compass points, several SFB-like features and a series of presumably prehistoric ring-ditches (Crewe 2010, 309-36). These features are in turn set within the southernmost part of the Drayton Cursus, a Neolithic monument that extends in a broadly north-south manner for more than 1.5 km, and located some 500 m west of Dropshort Roman villa (*Figure 2.7*). More broadly, the Thames is found just over 1 km to the north-east, with Abindon some 3 km to the north. Though now commonly referred to as Sutton Courtenay, the site is actually located on the parish boundary between Sutton Courtenay and Drayton, and prior to the 1974 reforms was part of Berkshire (Hamerow et al. 2007, 113).

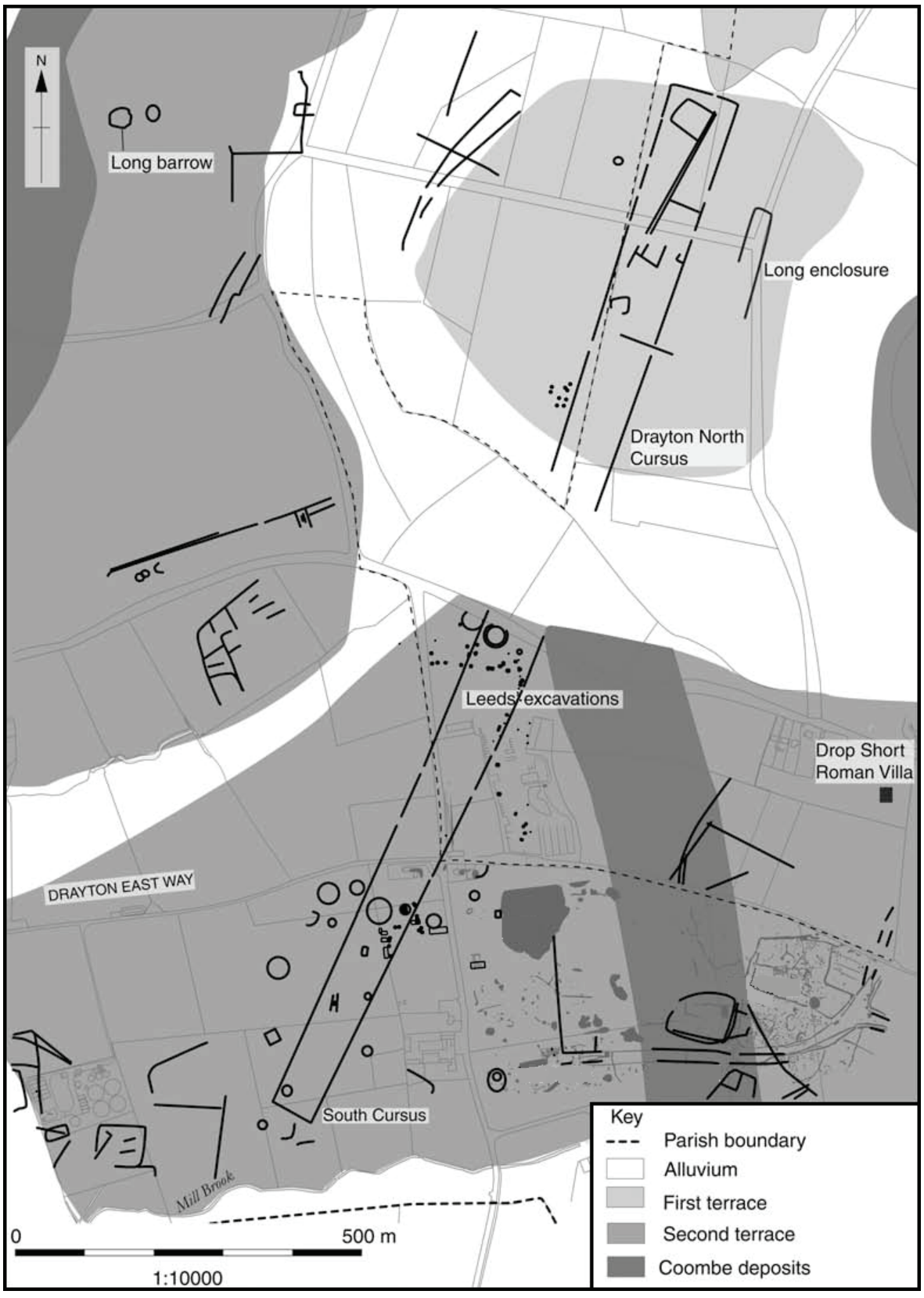



*Figure 2.7:* A plan of the features at Sutton Courtenay (adapted from Hamerow et al. 2007, 112).

Metal-detecting in the 1990s between these two sites revealed objects likely to have come from late sixth- or early seventh-century burials, as well as series of early eighth-century sceattas that possibly indicate a later market (Hamerow 1999, 32-8; Hamerow et al. 2007, 170-83). More systematic fieldwalking, geophysical survey and small-scale excavation have

been undertaken since 2001. A building measuring *c.* 19 m x 9 m was partially excavated in 2002 and found to have utilised double-row plank-in-trench construction (Hamerow et al. 2007, 160-7). Excavation as part of a *Time Team* special in 2009 targeted a number of additional structures (Brennan and Hamerow 2015). Trench 3 revealed an SFB (Feature 330) measuring 3.9 m x 2.6 m x 0.38 m that was cut by the wall trench of a rectangular building, Structure 329, which measures *c.* 11.5 m x 7 m (*ibid.*, 331-3; 338-9). A radiocarbon sample taken from articulated bone near the base of the SFB indicates that it was backfilled by the mid-sixth century (*Table 2.2*). Interestingly, suckling pig represented more than 60% of the associated zooarchaeological assemblage (*ibid.*, 340-1).

Trenches 1 and 4 targeted the western and eastern ends of the largest hall, Structure 500, which partially overlay a substantial prehistoric ring-ditch (*Figure 2.8*). The building measured 30.9 m x 10.8 m and utilised both post-in-trench and external raking timber construction forms (*ibid.*, 333-9). A row of postholes running northwards from the north-western corner of the structure likely represent a fenced enclosure (*ibid.*, 339). At its eastern entrance

| Radiocarbon sample information | | | IntCal 13 date ranges | |
|---|---|---|---|---|
| Sample ID | RC age | Source | 68.2% | 95.4% |
| OxA-30138 | 1565±23BP | SFB fill (Feature 330) | 430 – 538 | 423 – 547 |
| OxA-30139 | 1550±23BP | Post-pit fill (Feature 403) | 431 – 549 | 427 – 563 |
| OxA-30140 | 1567±24BP | Post-pit fill (Feature 403) | 430 – 537 | 422 – 548 |

*Table 2.2:* Radiocarbon samples from Sutton Courtenay (data from Brennan and Hamerow 2015, 344).

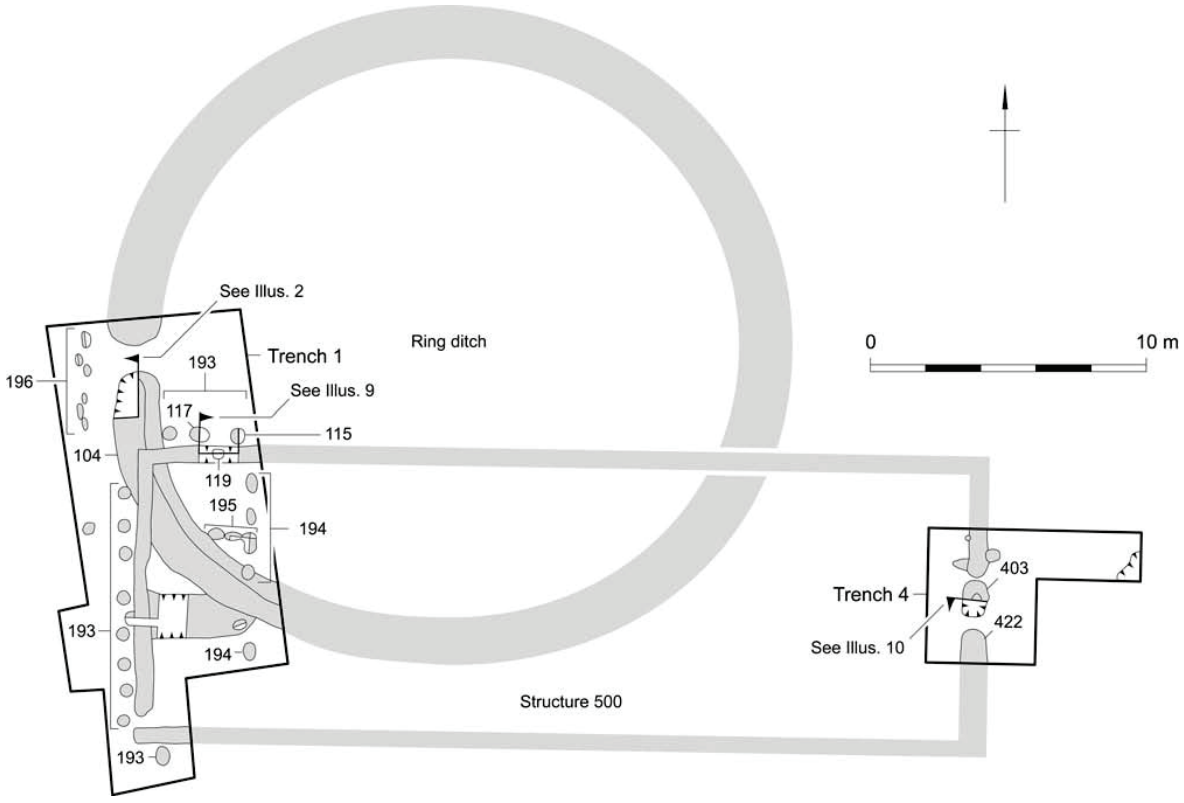



*Figure 2.8:* A plan of the Sutton Courtenay great hall (after Brennan and Hamerow 2015, 334).

was a very deep post-pit with traces of a substantial post-pipe. This was interpreted by the excavators as an act of closure. Radiocarbon determinations from animal bone at the base of this feature returned a fifth- to mid-sixth-century date range (*Table 2.2*), which was taken to suggest that the bone was '*almost certainly residual*' (*ibid.*, 345).[14] There is thus no direct dating evidence for the great hall complex, but on the basis of the site's architectural and morphological similarities with Yeavering, Cowdery's Down and Lyminge – and using contextual evidence recovered from previous interventions – the excavators have proposed a late sixth- to seventh-century date (Hamerow et al. 2007, 183-90; Hamerow et al. 2013, 62; Brennan and Hamerow 2015, 343-6). Though contingent on further investigation, this appears a plausible argument. Long-term royal activity is attested in the locality by the aforementioned charter evidence (S 338a), but has not been located archaeologically.

### 2.3.3 *Rendlesham*

A wide-ranging programme of field survey has recently been concluded at Rendlesham in Suffolk, confirming beyond reasonable doubt the location of Bede's (*HE* III.22) *vicus regius*. Between 2008 and 2014, small-scale evaluation, systematic metal-detecting, geophysical survey and aerial reconnaissance across an area of approximately 50 ha revealed a rich palimpsest of early-middle Anglo-Saxon archaeology (Scull et al. 2016, 1597-1602). The finds were made between 10 m and 20 m AOD across slightly undulating topography immediately south-east of the River Deben. Of greatest interest to our current study was the finding of a crop-mark indicating the presence of a large timber hall (TM 32370 53146), measuring 23 m x 9.5 m and found in proximity to a concentration of high-status artefacts (*ibid.*, 1597-8). Additionally, a range of boundary ditches, SFBs, pits and ploughed-out inhumation and cremation burials were also recorded. The associated material culture assemblage included a sizeable Late Roman component and more than 1,000 objects of early-middle Anglo-Saxon date. The latter attest a community of '*an extent and material wealth currently difficult to parallel in the contemporary settlement record in England*' (*ibid.*, 1601). Particularly conspicuous is the evidence for seemingly direct trade with the Mediterranean, well attesting the wealth and power of the Rendlesham inhabitants. Bringing the various strands of evidence together, the excavators produced a spatial model of the settlement (*Figure 2.9*), noting that it likely operated as an extensive and long-lived complex that comprised '*a permanent centre for agrarian or economic administration, a periodic residence for a peripatetic elite, and a periodic meeting place for military and jurisdictional assemblies*' (*ibid.*, 1605). The site can thus be viewed as a paramount settlement of East Anglia which, at its apex in the seventh century, presumably

[14] It should be noted that artefact residuality was also a feature of the hall sequence at Lyminge (Thomas 2017. 109).

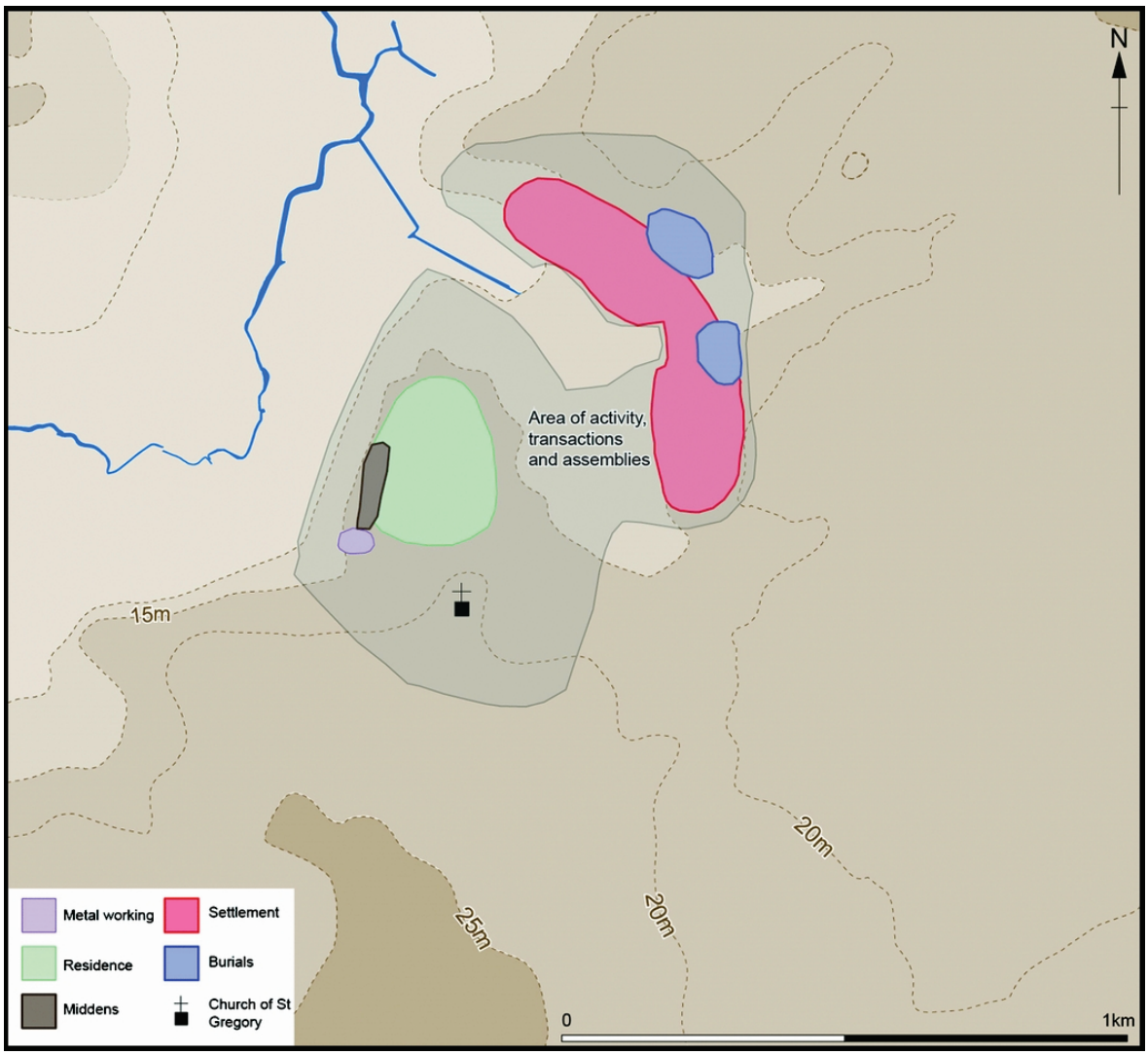



*Figure 2.9:* A spatial model of early-middle Anglo-Saxon activity at Rendlesham (after Scull et al. 2016, 1606).

included a great hall complex. More broadly the site can be viewed in reference to the princely burial ground at Sutton Hoo, some 6 km downriver, with further economic specialism possibly being offered by Ipswich, 18 km to the south-west (Scull 2002; Carver 2005).

### 2.3.4 *Eynsford*

The final site to consider in this section is Eynsford (TQ 5388 6565), thus far the only known great hall complex from west Kent (Philp 2014). The excavations were prompted by previous discoveries – in 1971, 1986 and 1990 – of Roman settlement in the village; thus, the finding of a high-status early medieval site came as a surprise (*ibid*, 118). Situated at an elevation of about 40 m AOD, the site is located in an area of meadow on the north bank of the River Darent. Two campaigns of excavation – during 1991-1995 and 2009-2012 – have revealed two areas of occupation in the southern and central parts of the field. The southern area comprised an SFB measuring 3.27 m x 2.60 m x 0.20 m, a group of thirteen

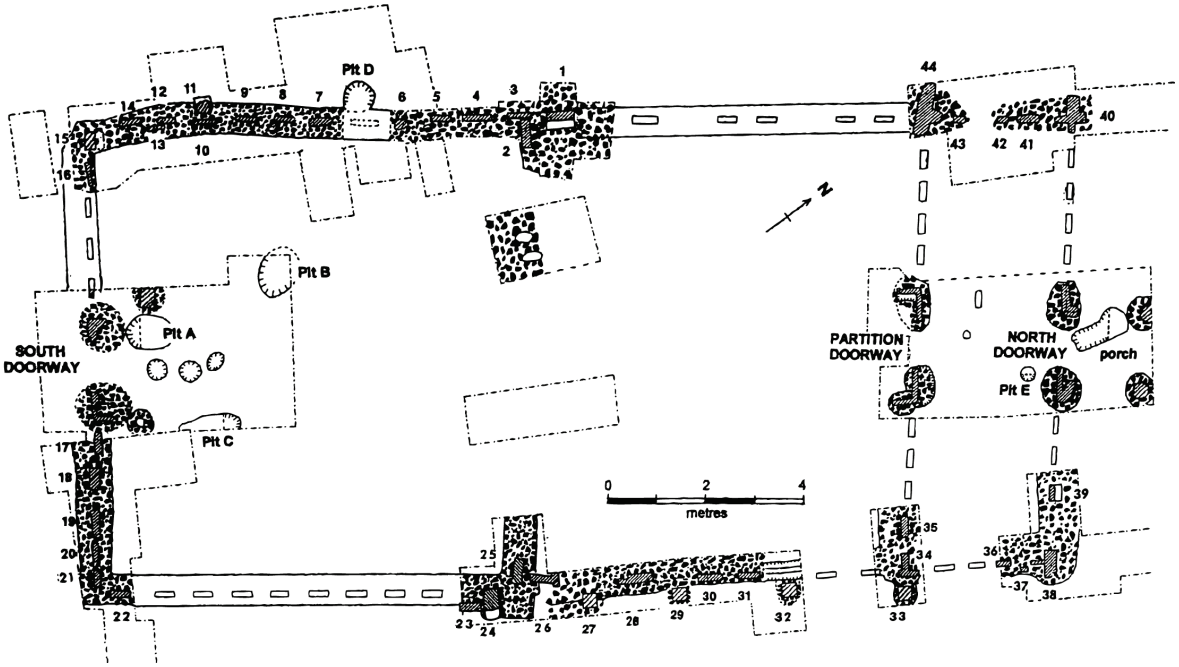



*Figure 2.10:* A plan of the Eynsford great hall (after Philp 2014, 123).

postholes and an assemblage that included significant quantities of pottery dating from the sixth-seventh centuries (*ibid.*, 118-20; 126-8). The central area, some 50 m to the north, featured a great hall structure (*Figure 2.10*). Despite the limited scale of excavation, a number of structural features could be determined (*ibid.*, 120-9). It measured *c.* 20 m x 10 m and was constructed using at least sixty planks set within a foundation trench some 0.6 m deep. An internal partition was found in the north end, which was aligned with a pair of opposing entrances in the north and south long-walls. Minor entrances were also found in the east and west short-walls. Additionally, alignments of postholes were interpreted as possible raking timbers, while a group of postholes extending from the north entrance could represent a porch feature. Of the greatest interest was the finding, in various parts of the foundation trench, of substantial quantities of plaster, indicating that the structure was plastered, perhaps in a manner not dissimilar to early Kentish churches (*ibid.*, 134). Though the central area featured few dateable artefacts, on the evidence of comparative sites the excavator thought the structure likely to date from some point during the sixth-eighth centuries (*ibid.*, 133). The author would not dispute this range, though an eighth-century date seems somewhat improbable when viewed in relation to other sites (**2.6.1**). Indeed, a seventh-century date seems highly likely given the structure's architectural similarity to the great halls at Lyminge. Further excavation, should it happen, will hopefully uncover additional structures and more credible dating evidence.

## 2.4 CROP-MARK SITES

### 2.4.1 *Cowage Farm*

This section considers great hall complexes that were originally identified from aerial photography and have since seen limited or no excavation. As shall become apparent, a great many sites fall within this category, making them prime targets for future campaigns of investigation. One of the better understood crop-mark sites is known at Cowage Farm (ST 9081 8616), situated some 2.5 km south-west of Malmesbury in Wiltshire. First discovered by aerial reconnaissance in 1975 (Hampton 1981), a large number of transcriptions and interpretive plans have since been published (Hampton 1983, 122; Hinchliffe 1986, Fig.1; Janik et al. 2011, 64; Blair 2013a, 27-8). From these it is possible to identify more than twenty structures arranged within a series of boundary ditches or fenced enclosures, the vast majority of which are situated north of Foxley Road, with two rectangular buildings and two presumably prehistoric ring ditches being found south of it (*Figure 2.11*). At least two phases appear to be represented, perhaps most strikingly realised in John Blair's (2013a, 27-8) recent analysis of building alignments (*Figure 2.12*). Topographically speaking, the complex is located at a height of around 75 m AOD on a small limestone plateau overlooking the Sherston Branch of the River Avon.

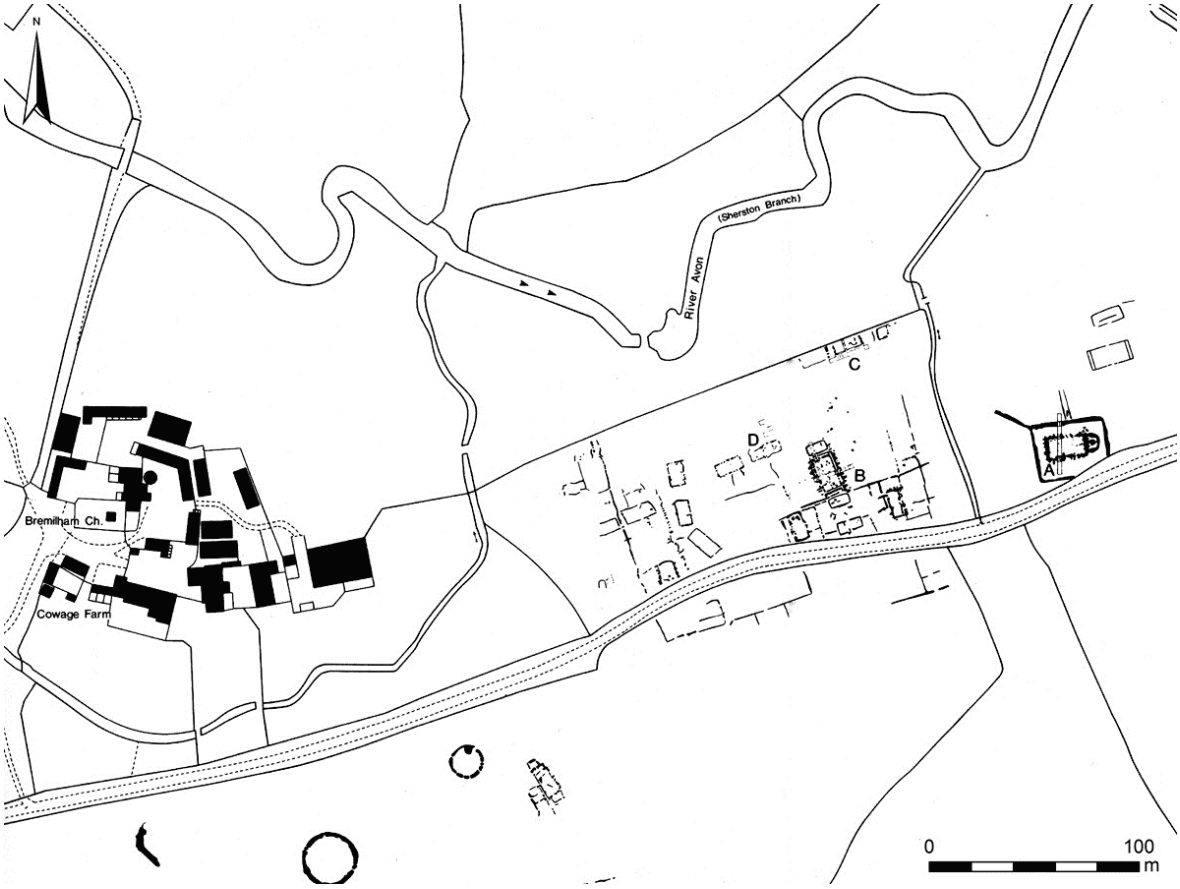



*Figure 2.11:* A plan of the features at Cowage Farm (after Wright 2015, 41).

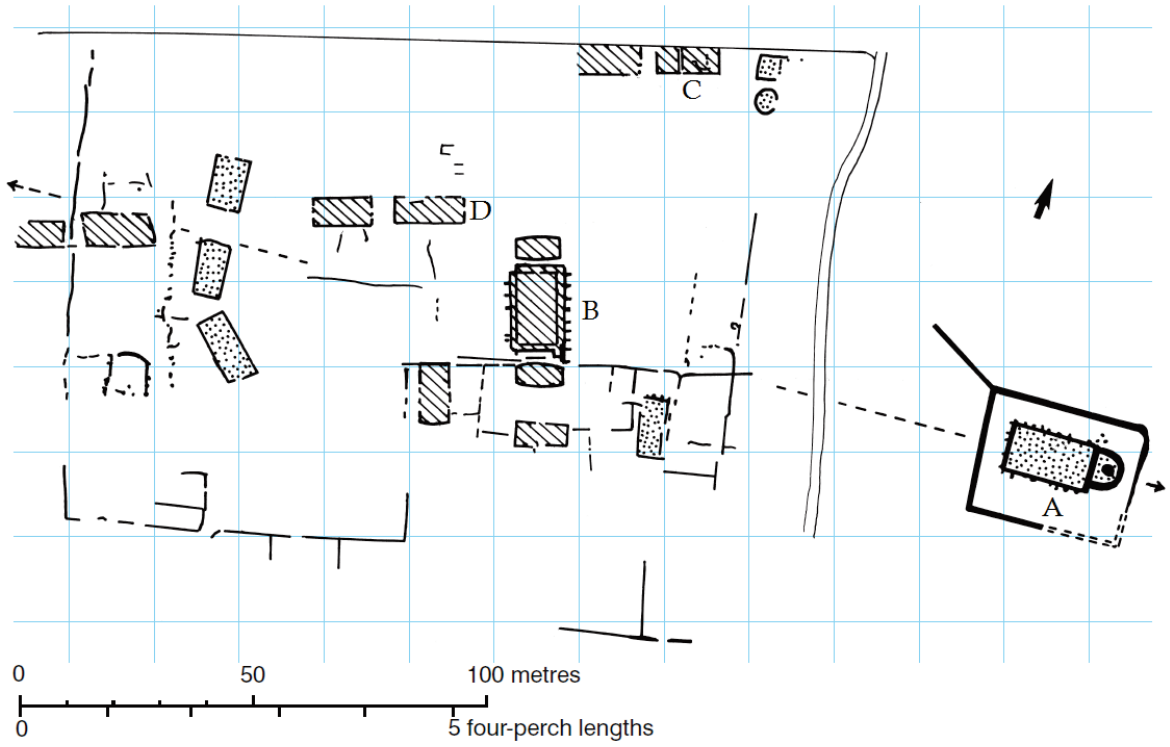



*Figure 2.12:* The main complex of buildings at Cowage Farm against a grid of four-perch squares (18.28 m x 18.28 m). Hatched structures conform to the grid; stippled structures do not. Two main orientations are observable, implying (at least) two phases of settlement. Note: the positions of the four structures excavated by Hinchliffe have be marked by the author (after Blair 2013a, 27).

A brief evaluation led by John Hinchliffe (1986) targeted four structures (labelled A-D in *Figure 2.12*).[15] Structure A was found to be oriented east-west and measure *c.* 24 m x 9 m (*ibid.*, 241-3). Two aspects of this building are noteworthy: that it was situated within its own enclosure and set apart from the rest of the complex; and that it featured an apsidal or semi-circular end. Based primarily on the latter characteristic, both Hampton (1981, 316-18) and Hinchliffe (1986, 251-3) viewed the structure as a probable church. Two trenches across Structure B revealed a large timber hall with at least two phases (Hinchliffe 1986, 243-7). The first consisted of a central hall measuring *c.* 20 m x 10 m and two ancillary buildings or annexes, each measuring *c.* 5 m x 10 m. This structure was subsequently replaced by a smaller hall that was offset slightly to the south-west and measured *c.* 17 m x 10 m. Although both phases were of plank-in-trench construction and featured large external post pits, the earlier phase had deeper wall-trenches and employed external raking timbers. Structure C was found to also feature plank-in-trench construction, though at *c.* 14 m x 7 m was a considerably more modest structure (*ibid.*, 247-9). Structure D, the least understood, was encountered by chance during the investigation of features thought to represent pits.

[15] For unknown reasons, Hampton (1981) and Hinchliffe (1986) used different labelling systems. Hampton labelled the great hall as Structure A, the larger of the two halls to the south-west as Structure B and the possible church as Structure C. Hinchliffe labelled the possible church as Structure A, the great hall as Structure B and two smaller buildings to the north and west Structures C and D respectively. Hinchliffe's system is hereby assumed to have superseded Hampton's.

Few finds were recovered. The most interesting – and closely dateable – was a copper-alloy oval belt buckle decorated with incised lines (Hinchliffe 1986, 247-9). It was found within the southern wall-trench of Structure C and thought to date from the seventh century. A radiocarbon sample was also recovered from Structure C; it was calibrated using Stuiver and Pearson (1986) and reported as returning a date range of *cal AD 555-660* (*ibid.*, 249). Two additional samples were taken but remained unpublished until relatively recently (Bayliss et al. 2012, 127). Though one of the samples relates to the Iron Age or Roman period, the other returned an eighth- or ninth-century date. Frustratingly, the provenance of the sample was not identified, and it could therefore relate to any of the four structures encountered. The recalibration of these samples has a relatively minor impact (*Table 2.3*).

That Structures B, C and D are coaxially aligned suggests a degree of contemporaneity (*Figure 2.12*). As such, we might cautiously date the first phase of the complex using the belt buckle and radiocarbon determination from Structure C. The lack of contextual information about the other sample makes it difficult to use, though it is interesting to note the different alignment of Structure A. On this albeit tentative basis we might attribute the second radiocarbon determination to Structure A. Further justification for this approach might be sought from the scarcity of churches in the region before the late seventh century (Sims-Williams 1990, 92-7; Blair 2005, 31). Given these considerations it is possible to articulate a provisional sequence whereby a great hall complex of the later sixth and seventh centuries had an ecclesiastical afterlife in the eighth and ninth centuries. On the basis of the radiocarbon determinations, these phases might be more precisely written as *c.* AD 550-675 and *c.* AD 675/700-875/900. This would make the site chronologically consistent with the sequence of secular and monastic occupation at Lyminge (**2.3.1**). If the later radiocarbon determination is seen as residual, an alternative interpretation might view the possible church as part of the great hall complex, as appears to have been the case with Phases IV and V at Yeavering (**2.2.1**). A final if seemingly unlikely interpretation would be to view the site as the mid-seventh century monastery supposedly founded by Mailduib (Hinchliffe 1986, 253). Without further investigation, it is not possible to argue any of these possibilities with certainty.

| Radiocarbon sample information | | | Published date ranges | | IntCal 13 date ranges | |
|---|---|---|---|---|---|---|
| Sample ID | RC age | Source | 68.2% | 95.4% | 68.2% | 95.4% |
| HAR-6216 | 1430±80BP | Structure C | 560 – 670 | 430 – 770 | 542 – 670 | 426 – 765 |
| HAR-8082 | 1220±70BP | Unknown | 680 – 900 | 650 – 990 | 695 – 885 | 666 – 968 |

*Table 2.3:* Radiocarbon samples from Cowage Farm (data from Bayliss et al., 2012, 127) and their recalibration using IntCal 13 (Reimer et al. 2013) and OxCal v4.2 (Ramsey 2009; Ramsey and Lee 2013), reported at 1σ (68.2%) and 2σ (95.4%).

## 2.4.2 *Hatton Rock*

Two largely unexplored great hall complexes are also known from Warwickshire. The better understood of the two is Hatton Rock (SP 2370 5770), located some 4.5 km north-east of Stratford-upon-Avon. The site is found at a height of around 50 m AOD on a spur of clay and gravel situated less than 500 m from a known ford of the Warwickshire Avon (Rahtz 1970, 139). Initially identified through aerial photography (Webster et al. 1964, 17-18), the complex of crop-mark structures has since been investigated through geophysical survey (Rahtz 1970) and a very brief excavation (Hirst and Rahtz 1973). Philip Rahtz (1970, 141) produced a comprehensive plan of the features, which is reproduced in *Figure 2.13*.

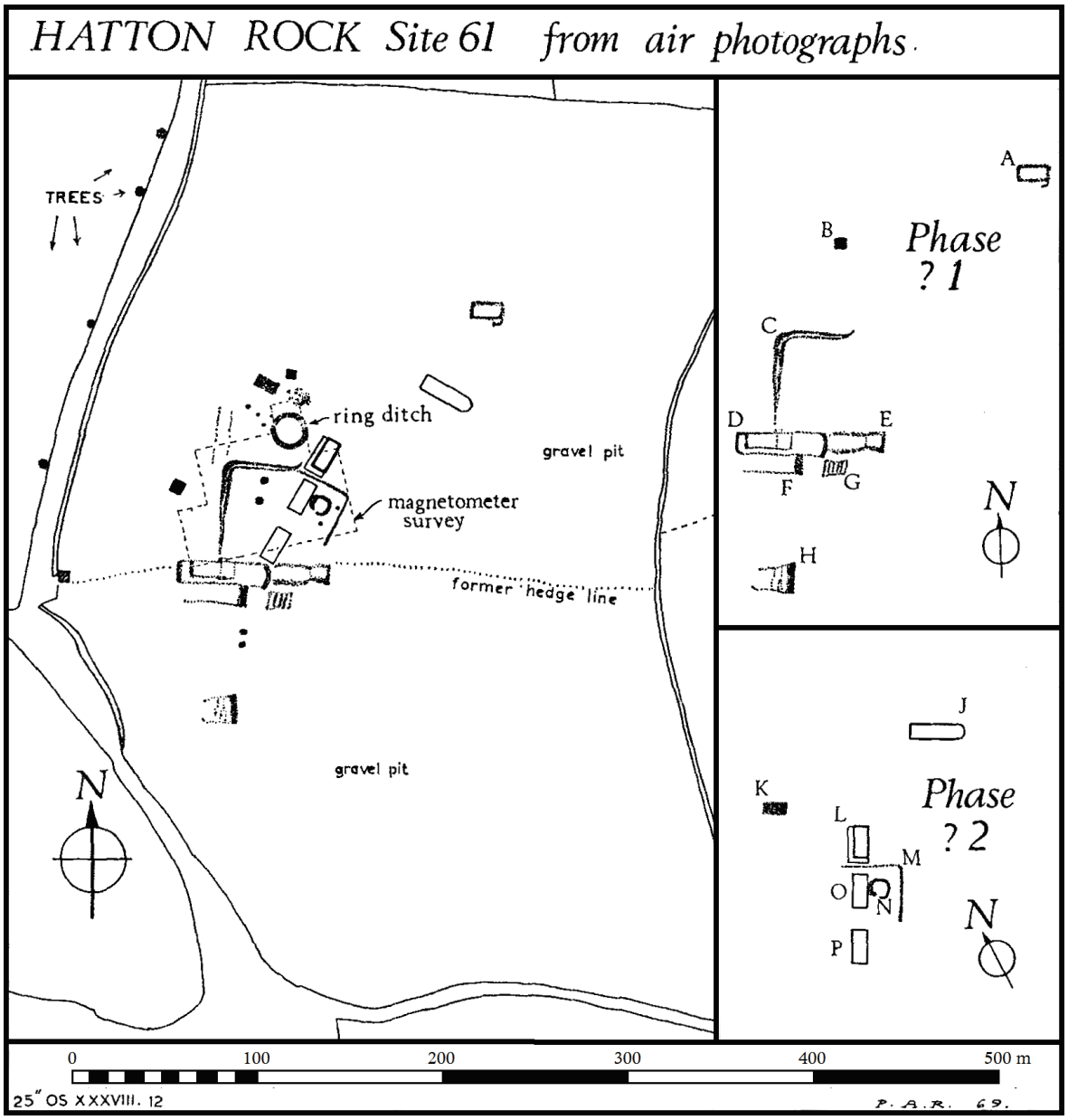



*Figure 2.13:* A plan of the features at Hatton Rock (adapted from Rahtz 1970, 141). A note in the Warwickshire HER by Bryn Gethin indicates that Structures D, E, F and G could be quarried areas. Archive reference: SWA 22722, undated. A scan of this document was kindly provided by Ben Wallace (Warwickshire Historic Environment Record Manager) on 18th November 2016.

Rahtz's plan identified two phases on the basis of building alignment, each featuring an L-shaped ditch or enclosure and a series of coaxially aligned buildings. Of particular interest was his Phase ?2, which included an array of three large structures (L, *c.* 22 m x 12 m; O, *c.* 20 m x 9 m; and P, *c.* 20 m x 9 m) and a coaxially aligned structure (J, *c.* 30 m x 8 m) that featured an apsidal or semi-circular end; as with Cowage Farm, the latter feature was interpreted as a possible church (Rahtz 1970, 142). The cutting of a water-pipe trench across the site in 1973 encountered a probable SFB and recovered a small assemblage of pottery, daub and animal bone in addition to a perforated bone tool and fragments of possible slag (Hirst and Rahtz 1973). A single radiocarbon sample was taken from excavated charcoal and reported as returning a date of AD 787-966 (*ibid.*, 177). From this the excavators concluded that '*in the absence of any other firm dating evidence it seems reasonable to put forward an eighth–ninth-century date as a tentative hypothesis*' (*ibid.*, 169). Recalibration of this sample widens this range considerably, however, almost beyond the point of use (*Figure 2.14*).

Given this, it would be wise to exercise caution. Put simply, we should not base our chronological understanding of the site on a lone radiocarbon sample that was recovered from an uncertain feature – which may not have been part of the main complex – and processed well before modern standards. A recent resource assessment has taken a similar stance, viewing the evidence as '*more likely to have been a rubbish pit given its late date*' (Alexander et al. 2008, 59). If we discount the radiocarbon determination, we are left with only a small quantity of largely undiagnostic Anglo-Saxon pottery and the morphology of

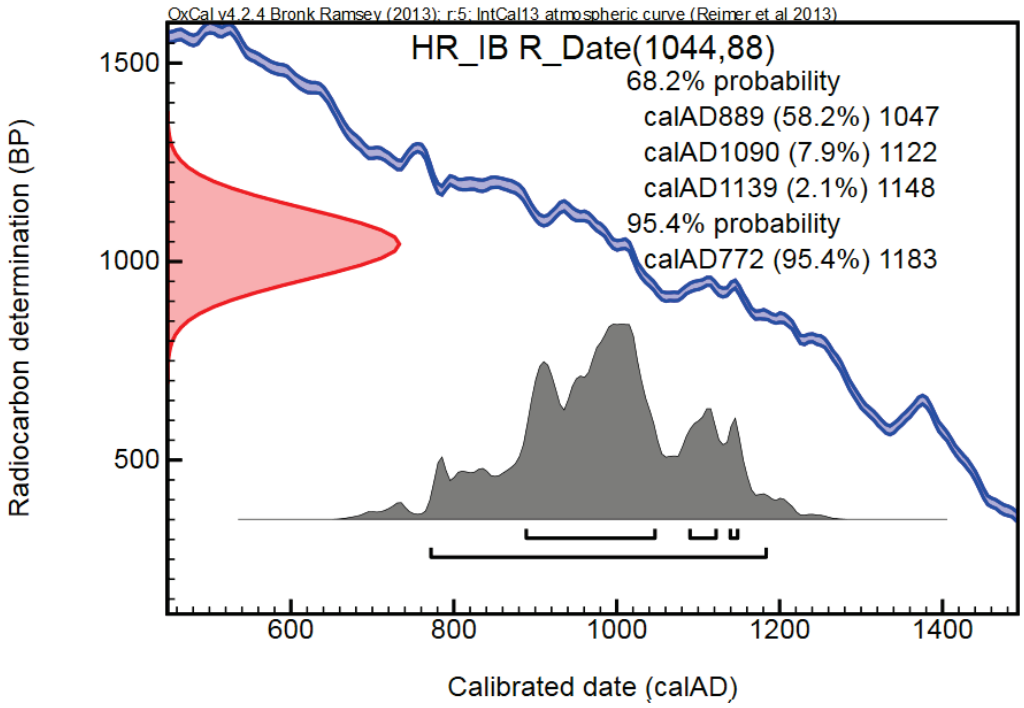



*Figure 2.14:* The radiocarbon sample from Hatton Rock (data from Hirst and Rahtz 1973, 177) and its recalibration using IntCal 13 (Reimer et al. 2013) and OxCal v4.2 (Ramsey 2009; Ramsey and Lee 2013), reported at 1σ (68.2%) and 2σ (95.4%). The sample was taken from charcoal associated with Feature 1, Layer a.

the settlement itself to propose a date range. A comparative approach might therefore expect the settlement to emerge in the later sixth or seventh century, with occupation potentially extending into the eighth or ninth centuries. This allows the site to be viewed as a high-status settlement that may have subsequently developed into an ecclesiastical residence. This hypothesis is also consistent with Rahtz's (1970, 139) reading of the local documentary evidence as indicating a substantial royal estate that increasingly falls under ecclesiastical proprietorship during the eighth century.

### 2.4.3 *Long Itchington*

A further great hall complex has been identified at Long Itchington (SP 3970 6710), though it has seen limited exploration and has a confusing publication history. The site was first recognised in 1963 as a series of crop-mark features, found at approximately 50 m AOD and located in close proximity to both a known Roman occupation site and River Itchen (Wilson 1982, 80). To the author's knowledge, only a single of these aerial photographs have ever been published (*Figure 2.15*). The evidence appears to comprise a large single- or double-annexed hall set perpendicular to a range of at least three buildings aligned end-on-end, though there is no obvious evidence for phasing or enclosure. Based on its proximity to the known Roman site, which was investigated in 1925 (unpublished), 1959 (Hemsley 1959) and 1978 (Wilson 1978), the site was initially – and erroneously – interpreted as a Roman villa of the winged-corridor type (Wilson 1982).

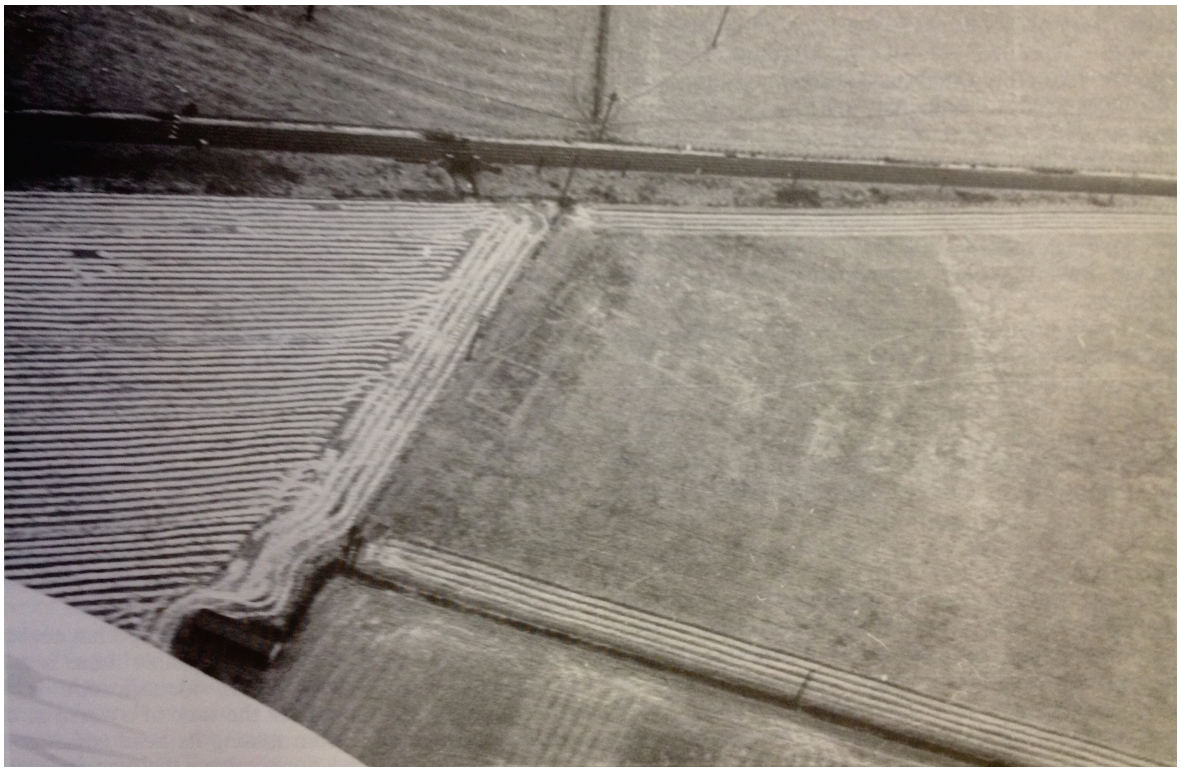


*Figure 2.15:* An aerial photograph of the features at Long Itchington (after Wilson 1982, 81).

A note in the Warwickshire HER by Richard Hingley refutes this notion, describing Wilson's plan as '*totally anomalous*' and instead arguing, on the basis of alignment, architectural style and the lack of surface finds, that '*the site is far more reminiscent of a series of Anglo-Saxon timber halls*'.[16] A programme of field-walking, metal-detecting and geophysical survey in 1997 recovered no early medieval finds but did manage to confirm the location of at least two of the crop-mark features (Jones and Wise 1997). Frustratingly, no details were given nor a plan provided. A more noteworthy discovery was made as part of the 1999 Churchover to Newbold Pacey gas pipeline. Here a pit containing four sherds of early Anglo-Saxon pottery was found some 200 m south-east of the crop-mark site (Palmer 2006, 114; 137; 222). This feature was presumably associated with the complex, though might relate to an earlier phase.

Long Itchington represents one of our least understood great hall complexes. It has never been properly described, and the only published plan is erroneous (and therefore not reproduced here). The only dateable evidence is a small quantity of nearby pottery from which association – though perhaps not direct – might be assumed. Aside from this, the most significant evidence is the great hall itself, which resembles double-annexed buildings at Yeavering (Hope-Taylor 1977, 164-8), Sprouston (St Joseph 1982, 194-7) and Atcham (Rahtz 1975, 58). Considered with the size and arrangement of the other buildings, a high-status residence is suggested. Without direct investigation it is impossible to be certain, but on comparative grounds a date centring on the seventh century seems appropriate.

### 2.4.4 *Milfield*

As noted in the previous chapter (**1.2.1**), a *villa regia* has long been known to exist at Milfield (NT 941 339). Noting the abandonment of *Ad Gefrin* (Yeavering) at some point after the reign of Edwin (AD 616-633), Bede (*HE* II.14) informs us that another *villa regia* was built at a place called *Maelmin* (Milfield). The corroboration of this account with archaeological reality came in 1948 when aerial photographs revealed a complex of substantial timber buildings and a series of rectilinear enclosures (Knowles and St Joseph 1952, 270-1). The complex was found at a height of approximately 30 m AOD, on the southern bank of the River Till. More broadly, the site is located some 500 m east of the present village and 4 km northeast of Yeavering. Further reconnaissance was undertaken in the decades that followed (McCord and Jobey 1971, 127; pl. XVI), leading to several transcriptions of the features being published (Hope-Taylor 1977, fig. 7; Riley et al. 1985, fig. 11; Gates and O'Brien 1988, fig. 1; Scull and Harding 1990, fig. 2). As shown in *Figure 2.16*, the features comprise:

[16] Archive reference: SWA 1705/1, dated 25/09/1984. A scan of this document was kindly provided by Ben Wallace (Warwickshire Historic Environment Record Manager) on 18th November 2016.

a pair of timber buildings set within a sub-rectangular enclosure; a spread of pits and probable SFBs; an enclosed 'fort'; and a very large double-palisaded enclosure (Gates and O'Brien 1988, 3). Of greatest interest to our current review is the double-annexed hall, which appears to consist of a central building measuring *c.* 18 m x 9 m with two annexes each measuring *c.* 7 m x 5 m. This structure can be most closely paralleled with Yeavering A3(a) (Hope-Taylor 1977, 57-8). Immediately to the east was a small building measuring *c.* 14 m x 7 m. Both structures are oriented east-west, aligned end-on-end, and are set within a sub-rectangular enclosure measuring approximately 50 m x 40 m.

Excavations in the 1970s revealed a series of largely unfurnished inhumation burials cut into a pair of prehistoric henge monuments situated 400 m to the south-west and 1.2 km to the north-west respectively (Scull and Harding 1990). The associated artefactual evidence, limited though it was, indicated a late sixth- or early seventh-century date for the small group of northerly burials, while the larger southern cemetery was decidedly later, seemingly in use during the mid-late seventh and possibly early eighth centuries (*ibid.*, 9-11; 22-3). On the basis of their spatial proximity and assumed contemporaneity, the excavators thought an association between the southern cemetery and the *villa regia* to be highly likely. Considered together, then, the available evidence indicates Milfield as a great hall complex dating primarily to the seventh century, with occupation perhaps extending a quarter-century either side. Greater precision is allowed if AD 633, the end of Edwin's reign, is used as a *terminus post quem* for the *villa regia*, though an earlier (i.e. pre-*villa*) phase should not be ruled out.

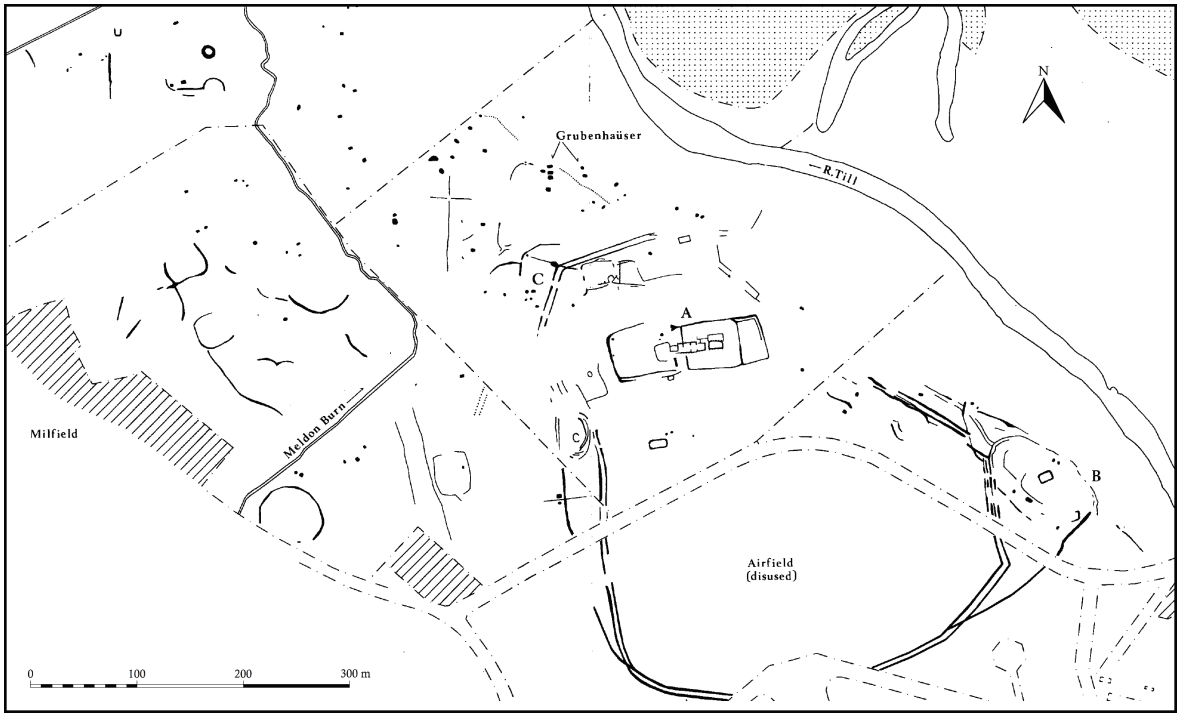



*Figure 2.16:* A plan of the features at Milfield (adapted from Gates and O'Brien 1988, fig. 1).

### 2.4.5 *Sprouston*

Sprouston (NT 758 362) in Roxburghshire represents our northernmost great hall complex. Situated some 18.5 km west of Milfield and 17.5 km west-northwest of Yeavering, the complex is found at a height of around 25 m AOD on a gravel terrace less than 250 m from the River Tweed. The site was first discovered in 1964 and has since been subject to a substantial programme of aerial reconnaissance. Many of these aerial photographs have been published alongside several transcriptions (Reynolds 1980, fig. 7; St Joseph 1982, figs. 1-2; pl. I-II, IV; Smith 1984, figs. 5-6; 1991, illus. 2-4). The most comprehensive plan of the features was produced by Ian Smith (1991, illus. 3-4), who conducted various field surveys and consulted more than twenty aerial photographs. Given the geographic spread and apparent chronological depth of the crop-marks, Smith divided the features into three tentative phases, albeit acknowledging the potential pitfalls of doing so (*ibid.*, 266-83). His Phase I consisted of a series of presumably prehistoric earthworks, while Phase II was thought to include a linear field system and palisaded 'fort' of probable Romano-British date. Phase III, the early medieval phase, comprised a cemetery, a double-ditched oval enclosure and a complex of timber buildings (*Figure 2.17*). Each will be briefly considered in turn.

The cemetery appears extensive, consisting of multiple rows of graves aligned in a broadly east-west fashion, and a single post-built structure tentatively interpreted as a church or mortuary chapel (Smith 1991, 280-2). To the north is a vast enclosure, perhaps encircling an area of 7200 $m^2$, which shares some similarities, particularly in terms of scale, with the so-called 'Great Enclosure' at Yeavering (St Joseph 1982, 194; 197; Smith 1991, 272-4). The settlement proper appears substantial, featuring ten SFBs, three post-built structures and at least ten buildings denoted by continuous wall-trenches (Smith 1991, 274-80). The two largest buildings are of particular note (St Joseph 1982, 194; Smith 1991, 276-8; 280). The largest, Hall A, was a post-built construction measuring *c.* 28 m x 9 m. The other, Hall F, comprises a central hall measuring c. 14 m x 7 m and two narrower annexes, bringing the total length to *c.* 23 m. Though the former is more difficult to parallel, the latter shares similarities with the Yeavering A1(b), A3(a) and A3(b) structures (Hope-Taylor 1977, 49-50; 55-8).

The resemblance between Sprouston and Yeavering was noted by both St Joseph (1982, 197-8) and Smith (1991, 283), so much so that the latter thought them to be contemporaneous. They did not agree, however, on the importance and wider function of the complex. St Joseph (1982, 198) attached significance to Bede's lack of reference to Sprouston, and therefore saw it as '*a settlement of a more modest kind*'. Taking a very different position, Smith (1991, 287) thought the evidence '*unacceptably grand simply for a villa regia*' and instead suggested that the site may have held even greater importance, '*being at least an urbs regis*'. This view

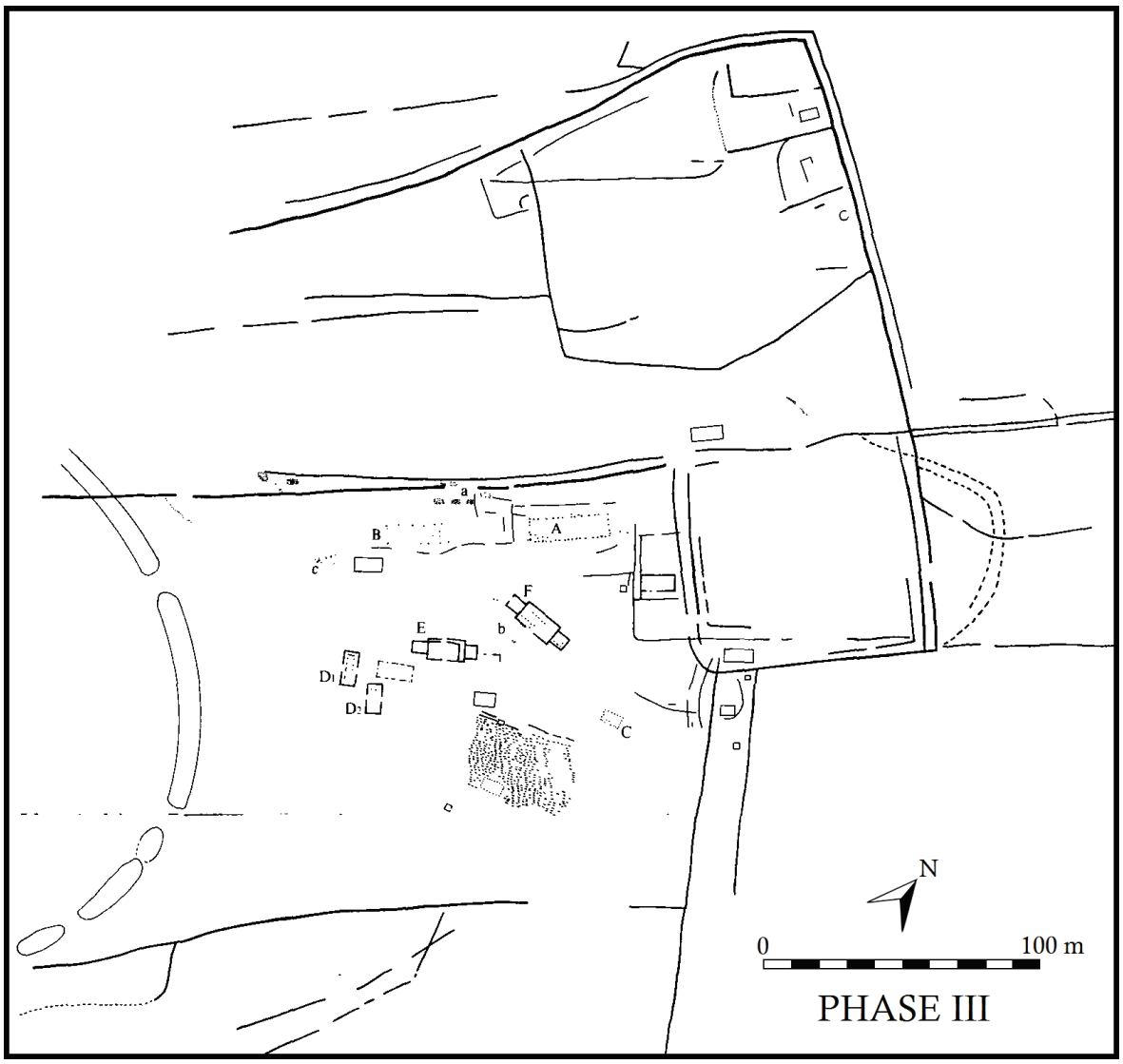



*Figure 2.17:* A plan of the early medieval features at Sprouston (adapted from Smith 1991, illus. 4).

seems unfounded, and it would perhaps be sensible to adopt a more moderate and historically neutral position – viewing the site as a high-status settlement that, at least on architectural and morphological grounds, compares favourably with other great hall complexes of the late sixth-seventh centuries.

### 2.4.6 *Long Wittenham*

A further crop-mark site is known just south of the village of Long Wittenham (SU 5559 9500) in Oxfordshire, some 7 km east of the great hall complex at Sutton Courtenay. Periodic excavations took place in the village during the mid-nineteenth century (Clutterbuck 1848; Akerman 1861, 1863, 1864). These interventions encountered two cemeteries – Long Wittenham I and II – and recovered 199 inhumations and forty-six cremations. The associated artefacts indicate that burial took place from the mid-late fifth century until the early seventh (Hamerow 1999, 28-9). Long Wittenham I, by far the larger of the two and also of much higher status, is noteworthy for its proximity to a number of crop-mark features,

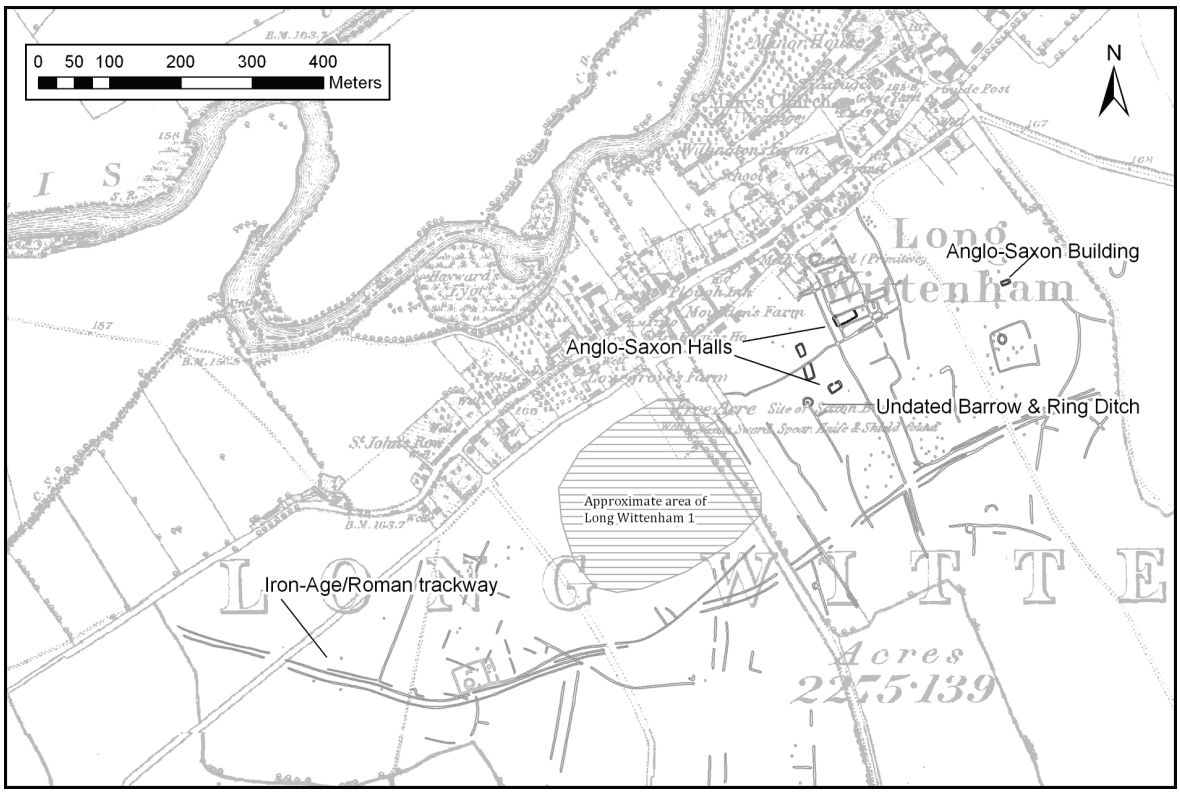



*Figure 2.18:* A plan of the features at Long Wittenham (after Hamerow et al. 2013, 64).

suggestive of a great hall complex, that were discovered by aerial photography in 1975 (Hawkes 1986, 89). The features are located immediately south of the modern village, on a gravel terrace approximately 45 m AOD. A new transcription of the features has recently been produced as part of the University of Oxford's *Origins of Wessex* project (Hamerow et al. 2013, 62-4), combining recent remote sensing data with hitherto unrecognised contextual information obtained from the Leeds Archive (*Figure 2.18*). From this it is possible to identify at least five structures arranged in a 'U-shaped' fashion, the largest of which appears to measure *c.* 30 m in length, and a series of probable SFBs (*ibid.*, 63). A programme of geophysical survey and limited excavation has recently been initiated, though the results are as yet inconclusive.[17] There is thus no direct dating evidence for the complex, but a broad contemporaneity with Sutton Courtenay is expected (e.g. Brennan and Hamerow 2015, 347-8). However, it should be emphasised that this dating rests on architectural and morphological comparison alone.

### 2.4.7 *Atcham*

The final crop-mark site to be considered here is the complex recognised at Atcham (SJ 5521 1145) in Shropshire. Initially identified through aerial photography in 1975 (St Joseph 1975), a recent geophysical survey has broadly confirmed the location of the features and

[17] Adam McBride, *pers. comm.*, 10th November 2016.

revealed further elements of a presumed Iron Age or Romano-British field system (Roseveare 2011). The site is located at a height of around 60 m AOD on a gravel ridge overlooking the River Tern, some 3 km north of Wroxeter and 5 km east of Shrewsbury. The evidence comprises at least two substantial structures aligned along the axis of the ridge, a complicated series of enclosures and areas of medieval ridge and furrow (*Figure 2.19*). The south-western building consists of a central structure measuring *c.* 14 m x 8 m and two narrow annexes or ancillary structures which bring the total length to *c.* 21 m. The building appears to feature a large pit or disturbance – possibly even an SFB – cut through its south-ern corner. The north-eastern building appears to have almost identical dimensions (*c.* 21 m x 8 m) but without the ancillary buildings or annexes; there is no evidence for one at the north-eastern end and the south-western end appears more like an internal partition. A third building measuring *c.* 7 m x 7m appears to cut through the north-eastern end of this building. St Joseph (1975, 294) interpreted this as an extension, bringing the total length of the build-ing to *c.* 24 m, but it could just as easily represent a standalone structure from an earlier or later phase. This view is arguably strengthened by the apparently off-axis angle of the struc-ture (*Figure 2.19*).

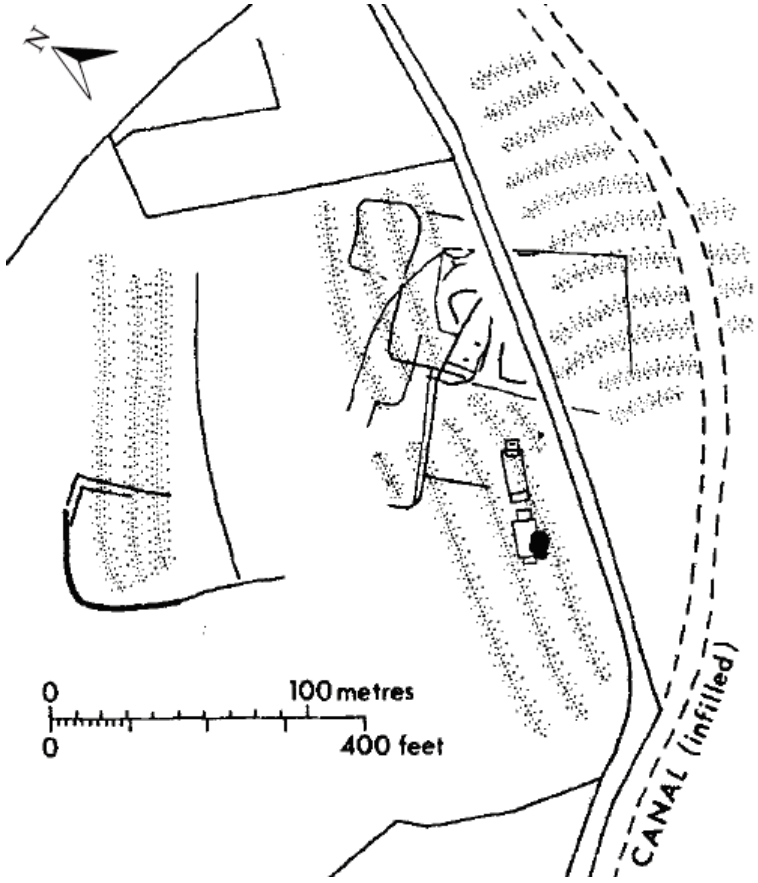



*Figure 2.19:* A plan of the features at Atcham. The disturbance of the south-western building is indicated by the dark spot, with stippled areas denoting medieval ridge and furrow (adapted from St Joseph 1975, 294).

The site has seen limited discussion, presumably due to its marginal position and our relatively poor archaeological knowledge of the region. Philip Rahtz (1975, 1976a) has suggested that the halls could represent a *villa regia* of the mid-seventh century, perhaps established by Northumbria as part of a broader mission in the region. Using the evidence for post-Roman activity at Wroxeter as a *terminus post quem*, others have instead argued for a slightly earlier date (Marshall and Marshall 1993, 398).[18] Without excavation it is impossible to be certain, but the size and end-on-end alignment of the structures permits comparison with Yeavering, particularly Phases IV and V, as well as Hatton Rock and possibly Long Itchington. Consequently, a date centring on the seventh century seems probable. Unfortunately there is little else that can be said about this site; St Joseph's (1975, 295) plea that excavation '*should not be long delayed*' has thus far remained unanswered.

## 2.5 UNCERTAIN SITES

### 2.5.1 *Dover*

This section reviews a small number of sites that, for various reasons, can be considered 'uncertain' great hall complexes. A possible great hall site was discovered as part of a series of rescue excavations in the centre of Dover (TR 3188 4141) between 1970 and 1990. The excavations uncovered significant evidence for early medieval settlement within the walls of the Late Roman shorefort, *Dubris*, and were published to a reasonably good standard relative to most pre-PPG 16 rescue archaeology (Philp 2003). Even so, a number of features were only partially excavated or were omitted altogether from the final report due to financial constraints (*ibid*., 1). Sixth- and seventh-century occupation was found in the form of five SFBs, two post-built structures, two wall-trench structures and a substantial midden spread. The latter, covering an area of *c*. 14.5 m x 5m, included much domestic and craftwork debris. Found within this feature was an exceptional gold-and-garnet finger-ring likely dating from the mid-sixth century (Philp 1973; 2003, 26-8). The discoveries were made at a height of around 15 m AOD on a terrace overlooking both the River Dour and the English Channel beyond it.

Of the greatest significance was S14, a five-phase building found partially underneath the post-Conquest church of St Martin-le-Grand (*Figure 2.20*). Period I was a single-roomed structure featuring a clay floor and built using plank-in-trench construction. In the eastern portion of the room was a mortar base, measuring *c*. 0.85 m x 0.75 m and tentatively interpreted as an altar (Philp 2003, 59). At some point, likely during the seventh century, this

[18] Given that the Wroxeter chronology and sequence has since been heavily criticised (Lane 2014), a relational chronology between Atcham and Wroxeter seems ill-advised.

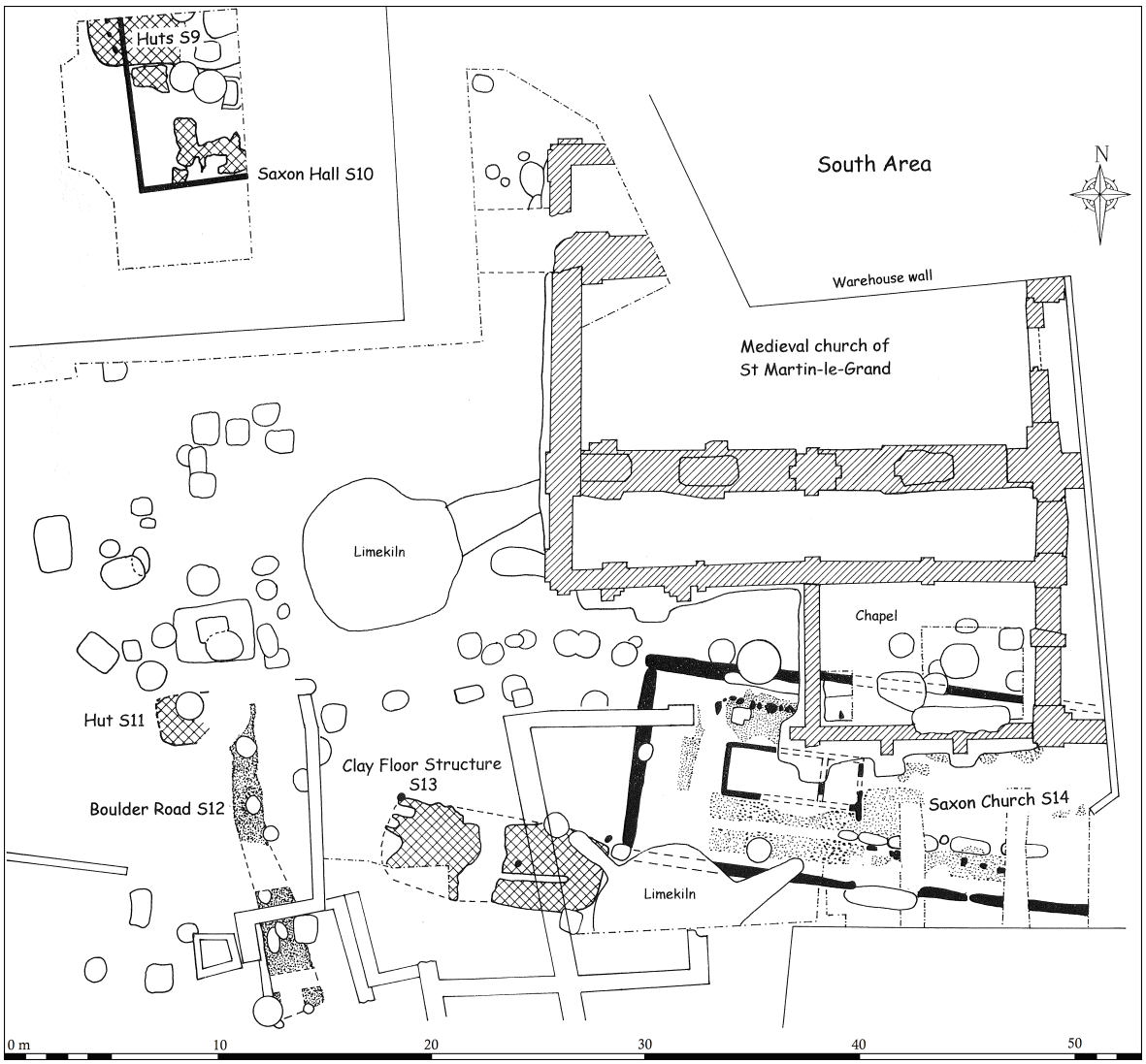



*Figure 2.20:* A plan of the main features at Dover (adapted from Philp 2003, 128).

structure was either replaced or vastly enlarged to measure 9.7 m in width and at least 22 m in length (to the limit of excavation). The excavator thought the Period I structure to have been incorporated within its second phase (*ibid.*, 59-64), but without a direct stratigraphic relationship a total replacement might be more likely. Period III, probably dating to the eighth century, saw the western end of the structure rebuilt and an *opus signinum* floor inserted; Periods IV and V saw further developments in the ninth century and beyond.

The structure was interpreted by the excavators as being the historically-attested church of St Martin (Philp 2003, 125-31), a monastic establishment for twenty-two secular canons under Eadbald (*r.* AD 616-640) that was later re-founded by Wihtred at the end of the seventh century (Rigold 1977, 73). Philp (2014, 134) has subsequently restated this case, emphasising the difference in orientation between the 'church' at Dover and the 'great hall' at Eynsford (**2.3.4**). While historically plausible, this interpretation has not been universally accepted. Indeed, Martin Welch (2007, 203) thought that '*a far more convincing case can be made instead for S14 representing two successive great timber halls*'. In support of this he argued,

albeit somewhat vaguely, that a late seventh-century church '*ought to be constructed in stone*' and also emphasised the lack of porticos typical of contemporary Kentish church architecture. It is also perhaps significant that, unlike the Northampton excavations (see below), no small finds of ecclesiastical character were recovered. On the contrary, the finds from S14 were mostly domestic, including various pottery forms, a piece of brooch plate, a composite bone comb, a bell-beaker and a bead (Philp 2003, 118-21). Further evidence for a secular interpretation might also be inferred from the post-built structure (S13) immediately west of it. This building was on the same alignment as S14 and contained much middle Anglo-Saxon midden material, including a bone needle and pin, large quantities of Roman and Anglo-Saxon pottery and *c.* 800 sherds of animal bone (Philp 2003, 57). High-status burials at Priory Hill and High Meadows, both less than 1 km away, further suggest an elite context (Payne 1889; Evison 1967; Rigold and Webster 1970). While the evidence is far from conclusive, then, there is perhaps more to suggest S14 as a great hall than a church, at least in its earlier phases. This re-evaluation is further justified by the recent discoveries at Lyminge, which represent a broad architectural and chronological parallel less than 16 km to the west (Thomas 2013, 126).

### 2.5.2 *Northampton*

Another uncertain site was discovered in the western part of Northampton (SP 7502 6038) during large-scale excavations in the 1970s and early 1980s (Williams 1979, 1984; Williams et al. 1985). The excavations revealed an extensive sequence of activity that ran from the late fifth or early sixth century through to the Viking period. Of the pre-Viking archaeology, which mainly comprised SFBs and probable post-built structures, the most impressive feature was a sequence of monumental hall buildings (*Figure 2.21* and *Figure 2.22*). The latter were found on a small hill – with an elevation of around 60 m AOD – 300 m north of the River Nene and immediately east of the now disused Church of St Peter. The first phase of the hall building utilised post-in-trench construction, with posts set at regular intervals of *c.* 0.6 m into trenches cut into the bedrock at a depth of *c.* 1 m (Williams 1984, 119). It consisted of a main hall and two narrower annexes, with a total length of *c.* 29.7 m and a width of *c.* 8.6 m at the centre and *c.* 6.5 m at the annexes (Williams et al. 1985, 14). Other structural features included pairs of opposing doorways in the centre of the long-walls and internal partition walls. The timber structure was subsequently rebuilt in stone and greatly expanded to 37.6 m x 11.4 m (Williams et al. 1985, 17-20). This was further extended by the addition of two extra rooms or annexes, making the structure L-shaped and bringing the total length to 43.4 m. It is likely that this phase was contemporary with five mortar mixers found in the immediate vicinity (Williams 1984, 122).

West Northampton c. AD400 to 820

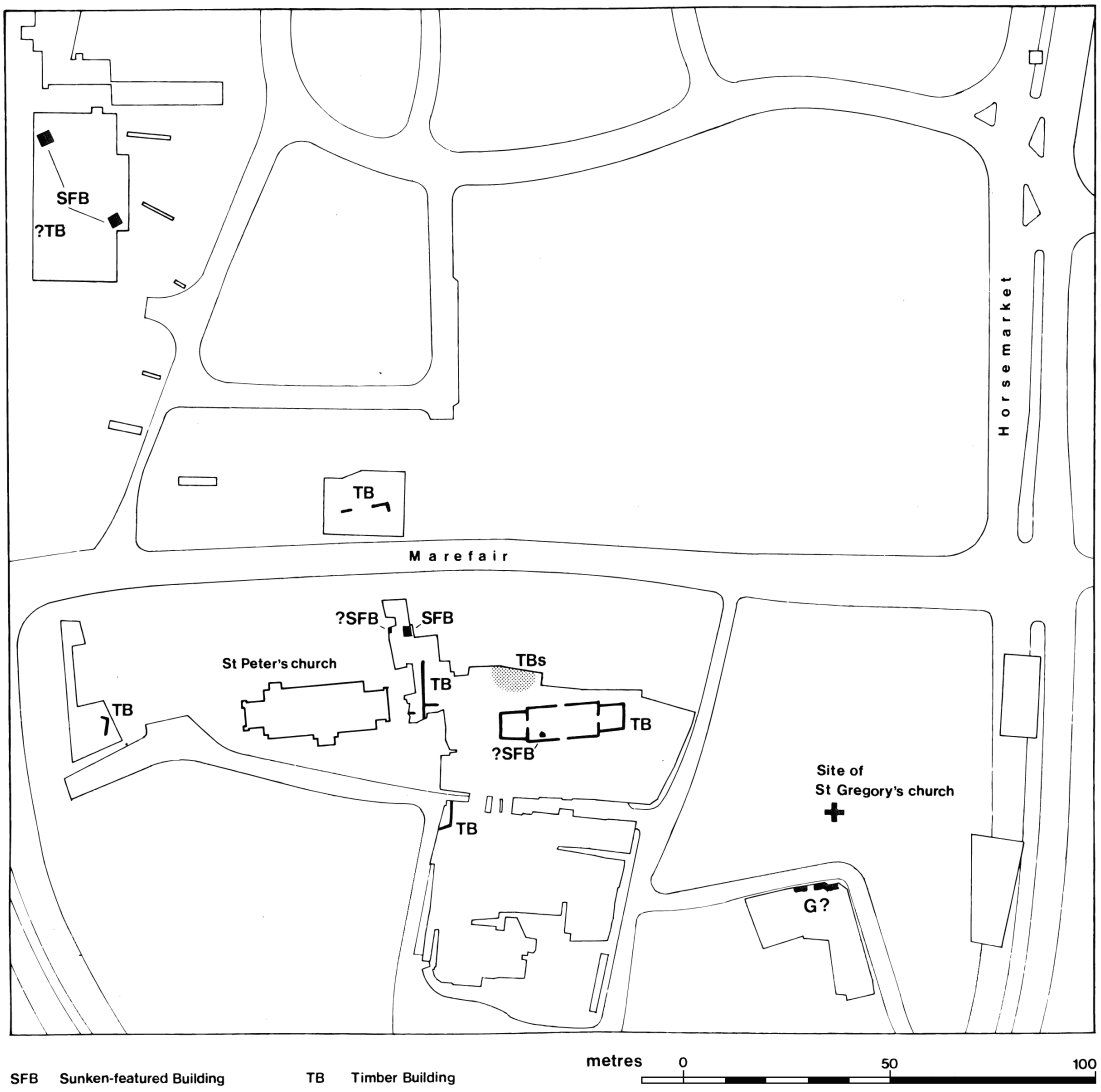



*Figure 2.21:* A plan of the features at Northampton (after Williams et al. 1985, 40).

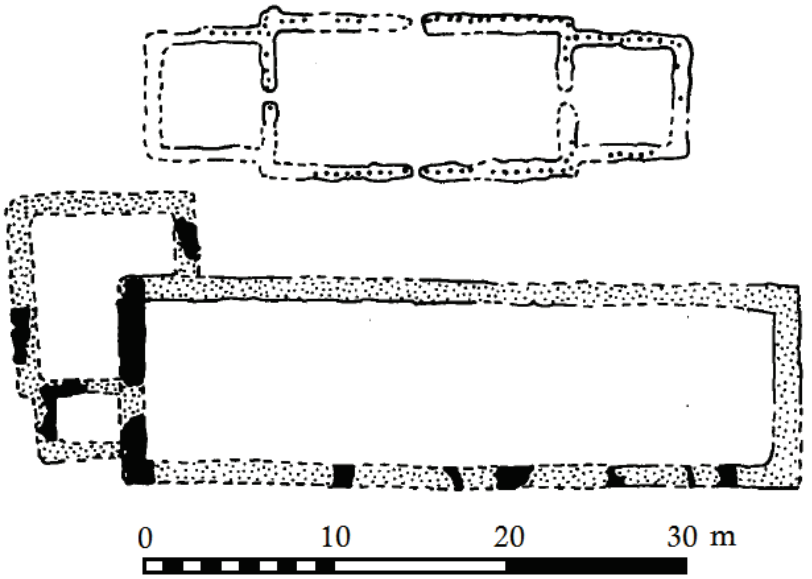



*Figure 2.22:* Plans of the very large timber (top) and masonry (bottom) structures at Northampton (adapted from Blair 1996, 102).

An assemblage of early-middle Anglo-Saxon pottery and animal bone fragments was recovered from the timber hall, but did not allow close dating (Williams et al. 1985, 15). Even so, the structure's architectural similarities to Yeavering, Cowage Farm and Atcham prompted the excavator to argue for a seventh-century date in a preliminary publication (Williams 1984, 118-20). Scientific confirmation was attempted via radiocarbon means, with seven samples being calibrated according to Stuiver (1982), but the results were somewhat inconclusive. Recalibration of these samples demonstrates the level of uncertainty (*Table 2.4*).

The excavators used the radiocarbon determinations to suggest that the structure was in use during the latter half of the eighth century, with the subsequent stone hall being a ninth-century construction (Williams et al. 1985, 26; 65-6). This is a plausible argument, provided one accepts the excavators' assumptions that the structure was occupied somewhere '*in the order of 50 years*' (*ibid.*, 66) and that the dates likely relate '*to the destruction or abandonment of the hall*' (*ibid.*, 26). Caution is urged, however; these wide determinations are far from convincing and it is perhaps unwise to draw too much from a series of radiocarbon samples that were collected and processed before modern standards. It may also be significant that the ceramic evidence would not be incompatible with an earlier date, with the excavators noting that '*the pottery from the timber and stone halls is likely to be of middle Saxon date, although it in no way differs from early Saxon material*' (*ibid.*, 62). Although on present evidence more likely of eighth-century date, given these various uncertainties – not least the issues faced by the excavators in differentiating, both chronologically and stratigraphically, between the two phases (*ibid.*, 8-9; 66) – an earlier date for the timber hall cannot be ruled out. The presence of sixth- and seventh-century SFBs at the Chalk Lane site some 150 m to the north-west could further support an alternative date.

Based on their architectural grandeur – specifically the similarity of the timber structure with other great hall sites and the masonry structure with Carolingian palaces – the site was

| Radiocarbon sample information | | | IntCal 13 date ranges | |
|---|---|---|---|---|
| RC sample | RC age | Source | 68.2% | 95.4% |
| HAR-5551 | 1100±80BP | Animal bone from wall trench | 779 – 1021 | 695 – 1149 |
| HAR-5552 | 1070±80BP | Animal bone from posthole | 780 – 1038 | 771 – 1155 |
| HAR-5553 | 1220±70BP | Animal bone from posthole | 695 – 885 | 666 – 968 |
| HAR-5554 | 1680±120BP | Animal bone from posthole | 235 – 535 | 85 – 602 |
| HAR-5555 | 1010±70BP | Animal bone from wall trench | 970 – 1152 | 886 – 1205 |
| HAR-5556 | 1300±80BP | Charcoal from ?floor layer | 648 – 856 | 598 – 942 |
| HAR-5558 | 1310±70BP | Animal bone from posthole | 651 – 771 | 610 – 884 |

*Table 2.4:* Radiocarbon samples from the Northampton timber hall (data from Williams et al. 1985, 64-6) and their recalibration using IntCal 13 (Reimer et al. 2013) and OxCal v4.2 (Ramsey 2009; Ramsey and Lee 2013), reported at 1σ (68.2%) and 2σ (95.4%). Calibrated date ranges are years AD/CE. Note: the dates were originally calibrated using Stuiver (1982) but were discussed collectively; individual calibrations were not published.

interpreted as royal residences of Mercia or East Anglia (Williams et al. 1985, 28-35; 41-2). Some years later, Martin Welch (1992, 50) instead contended that the structures could just as easily have had an ecclesiastical rather than royal function. John Blair (1996) took this idea further, drawing upon a range of evidence – including the finding of a probable Irish shrine mount and writing stylus in the vicinity of the halls – to argue that the buildings represent domestic accommodation for an ecclesiastical community. In this he drew parallels with the domestic range at Jarrow and emphasised the spatial position of the structures in relation to two possibly contemporary churches (*ibid.*, 103-8). While there are many merits to Blair's thesis, it is an altogether more convincing interpretation for the masonry structure than the timber one. Indeed, it is difficult to view the timber structure as anything other than a great hall, especially given its monumental size and obvious architectural similarity with double-annexed halls such as Yeavering A3. Granted, it is difficult to reconcile its apparent eighth-century date with the wider chronology of great hall complexes, though criticism can justifiably be levelled at the radiocarbon sequence.[19] The lack of 'ritual symmetry' also poses a problem but, like Eynsford, this could be due to the extent of excavation rather than an archaeological reality. On the other hand, the monastic appropriation of a former royal residence is a known feature of the great hall complex at Lyminge (Thomas 2013, 139). Perhaps one way of reconciling Williams' and Blair's interpretations, then, is to view the timber structure as a secular great hall and the masonry structure as domestic accommodation for a monastic successor community. Given that the area has since been developed, this particular debate may never be resolved.

### 2.5.3 *Benson*

The final site to consider is Benson (SU 6159 9155) in Oxfordshire. Excavated in 1999 ahead of commercial development, three SFBs with associated enclosures and pits were encountered as well as features of Neolithic, Bronze Age and Iron Age date (Pine and Ford 2003). One of these enclosures, Feature 1006, has recently been subject to a substantial reinterpretation (McBride Forthcoming). Based on a review of the site archive – and noting the size, shape and possible evidence for external raking timbers – McBride has instead suggested that the feature represents a great hall (*Figure 2.23*). Several sections cut through this feature, though not obviously demonstrating a wall-trench, are not particularly indicative of an enclosure either. The feature is thus difficult to interpret, but that it represents a great hall is at least plausible. Chronological support for this reinterpretation is tentatively offered by a late sixth- or seventh-century radiocarbon determination that was recovered from the fill of

[19] That the structure was originally published as being of seventh-century date may be pertinent in this respect (Williams 1984).

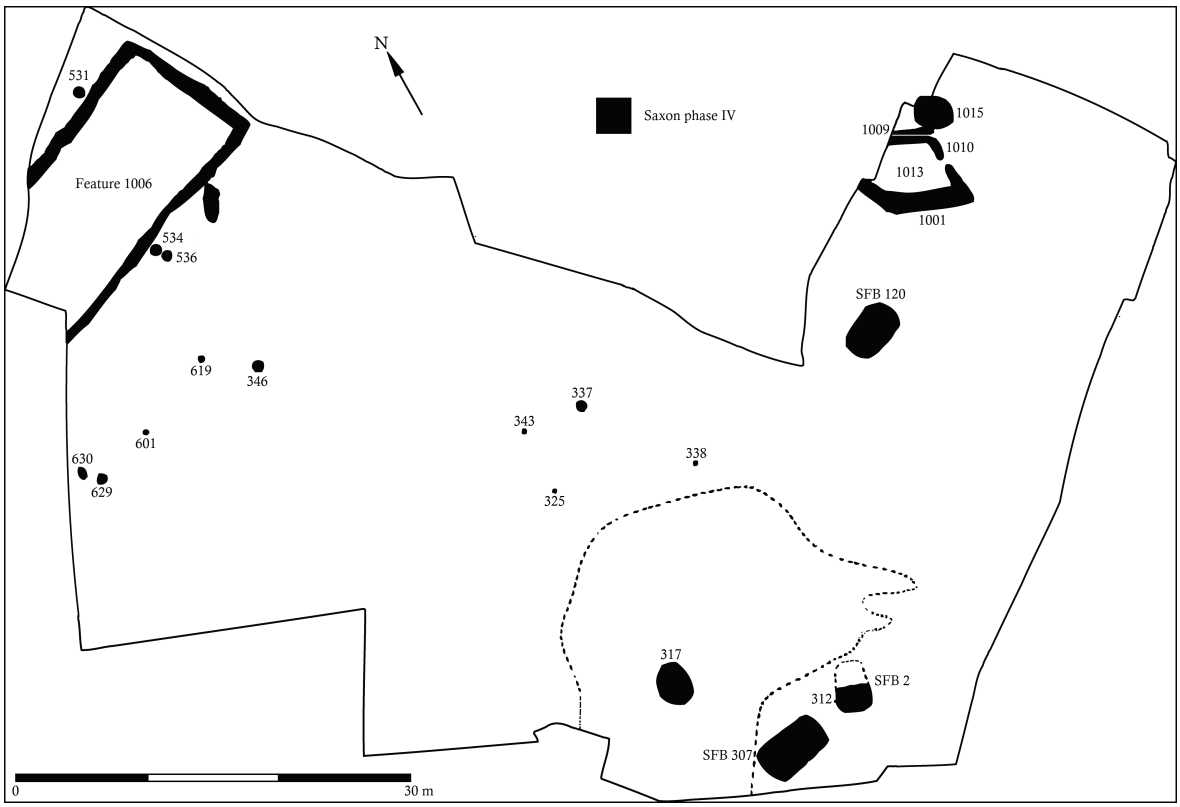



*Figure 2.23:* A plan of the Anglo-Saxon features at Benson (adapted from Pine and Ford 2003, 142).

a nearby SFB (Pine and Ford 2003, 171-2).[20] More broadly, there is textual evidence to suggest Benson as a royal vill, occupied variously by West Saxon and Mercian kings, from at least the eighth century (Sawyer 1983, 279). It is also one of the four *tunas* supposedly captured by Cuthwulf in AD 571 (*ASC* 571), though the veracity of this account has been called into question (Blair 2005, 269). Benson was thus likely part of a group of high-status sites in the Dorchester-on-Thames area, including Sutton Courtenay and Long Wittenham, that formed the ancestral heartland of the emergent kingdom of the Gewisse. Even if Feature 1006 does not represent a great hall, we might nevertheless expect to find one elsewhere in the village.

## 2.6 SUMMARY

### 2.6.1 *Chronology*

Before offering a broader characterisation of the evidence it is appropriate to briefly comment on the chronology of great hall complexes, at least as it is currently understood. As can be seen in *Table 2.5*, the level of chronological confidence that can be attributed to many sites is rather low.

[20] Sample ID: KIA-9529. Radiocarbon age: 1440±30BP. Calibration using IntCal 13 (Reimer *et al.*, 2013) and OxCal v4.2 (Ramsey, 2009; Ramsey and Lee, 2013): *cal AD 600-645* (68.2% probability) and *cal AD 566-655* (95.4% probability).

| Site | Great hall phase | Confidence | Principle basis for dating |
|---|---|---|---|
| Lyminge | 7th | High | Direct radiocarbon dating |
| Yeavering | 6th-7th | Medium | Stratigraphy |
| Cowdery's Down | 6th-7th | Medium | Direct radiocarbon dating* |
| Sutton Courtenay | 6th-7th | Medium | Architectural comparison |
| Rendlesham | 6th-8th | Medium | Metal-detector survey |
| Eynsford | 7th | Medium | Architectural comparison |
| Cowage Farm | 6th-7th | Medium | Indirect radiocarbon dating* |
| Hatton Rock | 6th-7th | Low | Settlement morphology |
| Long Itchington | 6th-7th | Low | Settlement morphology |
| Milfield | 6th-7th | Low | Settlement morphology |
| Sprouston | 6th-7th | Low | Settlement morphology |
| Long Wittenham | 6th-7th | Low | Settlement morphology |
| Atcham | 6th-7th | Low | Settlement morphology |
| (?)Dover | 6th-7th | Medium | Stratigraphy |
| (?)Northampton | 8th | Medium | Direct radiocarbon dating* |
| (?)Benson | 6th-7th | Medium | Indirect radiocarbon dating |

*Table 2.5:* A chronological overview of the great hall complexes considered in this chapter. Dates given relate to the great hall phase of each site, inasmuch as it can be discerned, and do not consider antecedent or postcedent phases. The 'principle basis for dating' column represents the author's assessment of the most crucial strand of dating evidence for each site. It should be acknowledged, however, that site chronologies seldom rely on a single dating source. Note: an * denotes the level of uncertainty associated with older radiocarbon samples.

For example, the chronology of both Yeavering and Cowdery's Down – the two most widely referenced great hall complexes – is far from secure. Lyminge represents a welcome departure in this respect, being supported by a suite of high-precision radiocarbon determinations and other high-resolution contextual data. Even so, the general lack of dateable material evidence associated with the Lyminge great halls – and the apparent residuality of those artefacts that were recovered – demonstrates the wider problem of artefact sterility encountered at many of these sites (Millett and James 1983, 249-50; Brennan and Hamerow 2015, 343; Thomas 2017, 109-10). This may, however, become less of an issue over time as the precision and cost-effectiveness of radiocarbon dating continues to improve. More substantial programmes of investigation should also serve to increase the overall chronological confidence associated with these sites. Despite these issues, it is significant that the available chronological data do genuinely appear to converge on the seventh century. Although the methods of arriving at individual chronologies vary, once collated there is a remarkable degree of consistency. It can therefore be concluded, albeit perhaps with some reservation, that great hall complexes appear to have been a predominantly seventh-century phenomenon. That this period of architectural monumentality was relatively short-lived poses several interesting questions that are considered in **8.2.2** and **8.2.4**.

### 2.6.2 *Characterisation*

Taken together, the sites described above exhibit a notable degree of archaeological similarity. Somewhat paradoxically, however, the earlier historiographical account (**1.1.2**) identified a distinct lack of explicit scholarly consensus on what separates a great hall complex from an 'ordinary' settlement. Andrew Reynolds' (2003, 104-10) and Helena Hamerow's (2010b; 2012, 102-9) preliminary accounts aside, there have been few attempts in recent years to consider the evidence in an explicit and systematic manner. Having presented the first comprehensive survey of the evidence, then, it is now apt to advance a definition and broader characterisation. Of course, the most obvious – and indeed simplest – definition would be to consider any site featuring great hall architecture a great hall complex. On account of their scale and constructional technique, these buildings are easily distinguished from SFBs, post-built structures and smaller wall-trench buildings, and can therefore be thought of as unique among early-middle Anglo-Saxon buildings archaeology. Although by no means prescriptive, we can consider buildings in excess of 20 m in length as falling into this category.[21] It is now possible to go beyond architecture, though, and consider other aspects of the evidence. Although some of these were identified in earlier accounts (Reynolds 2003, 104-10; Hamerow 2010b; 2012, 102-9), the above review has helped isolate further characteristics. These include, but are not necessarily limited to:

- The presence of multiple buildings, many of which are larger than average
- Evidence for distinct phases of occupation involving structural repair and reuse
- A date centring on the seventh century, at least for the great hall phase
- Structural capacity for large periodic gatherings and smaller, permanent occupancy
- Planned layouts featuring axial or coaxial alignments centred on a great hall
- The use of earthworks and fenced enclosures to control the use of space
- Evidence for high-status activities, often with an element of ritual or cult
- Distinct zooarchaeological signature evidencing high-status consumption practices
- Association with prehistoric monuments and Romano-British occupation sites
- Proximity to high-status, broadly contemporary burial archaeology refine
- A reasonably conspicuous landscape setting, often overlooking a river
- Evidence for later significance or ecclesiastical appropriation[22]

[21] It is important to note that this somewhat arbitrary length was determined by a general comparison of great hall architecture and should therefore be taken as a provisional criterion. A quantitative study of building dimensions across early-middle Anglo-Saxon settlement archaeology should allow this to be proven empirically, though this fell outside the scope of the present study.

[22] Due to the archaeological nature of the review, this characteristic was little discussed. The individual case studies feature detailed consideration of relevant charter evidence, however.

It must be noted, of course, that not every site need exhibit all of the above features to be considered a great hall complex. This is especially the case for sites that have yet to see detailed investigation. It is important, however, to set out the broad criteria through which we can compare, contrast and characterise the evidence. Indeed, that the quality and size of the evidence base is sufficient enough to enable reasonably explicit characterisation is a significant achievement for the study of great hall complexes. The identification of an archaeological phenomenon must, after all, precede attempts to analyse and understand it.

Given the introductory purpose of this chapter, it would not be appropriate to consider each of these characteristics in detail. Indeed, their very identification may be viewed by some as a noteworthy contribution in of itself. The criteria outlined above do feature variously in the case studies in Chapters 4-7, however, and are considered in more detail during the discussion in Chapter 8. For now, with the evidence base fully introduced, it is appropriate to consider how the programme of research was designed.

# 3
# METHODOLOGY

This chapter considers the research design of the four regional case studies that form the empirical basis of the thesis. It begins by outlining the rationale behind site selection and study region definition. The data collection and collation strategies are then described, after which the various techniques that form the analytical core of the thesis are considered under three broad headings: preparatory chronological analysis, exploratory spatial analysis and advanced spatial modelling.[23]

## 3.1 SITES AND STUDY REGIONS

### 3.1.1 *Site selection*

The selection of great hall complexes for detailed regional investigation was influenced by a number of practical and conceptual considerations. The author's direct line of engagement with the *Lyminge Archaeological Project* (University of Reading) made it the obvious first choice. The selection of Cowdery's Down as the second case study rested primarily on it being the only well-excavated great hall complex that can be considered 'finished'; the excavators were content that all significant features had been excavated, and the area has since been developed so there can be no attempt at further investigation (Millett and James 1983, 196-7). Certain sites were excluded on the basis that they are currently the focus of ongoing research projects with a regional dimension.[24] This left only a handful of remaining sites, the choice of which was based on the state of excavation and a broader desire for wide geographic and political coverage. Cowage Farm was selected as the third site on the basis of its reasonable level of investigation and uncertain political affiliation. Both Hatton Rock and Long Itchington were selected for the final case study on account of their proximity, meaning they could realistically be included in the same study region. Spatial information relating to the great hall complexes selected for detailed investigation is given in *Table 3.1*.

[23] It is worth noting that this reflect the order in which the analyses were undertaken; the results are reported in a more intuitive and spatially focused manner in the individual case studies (Chapters 4-7).
[24] *The Rendlesham Project* (Suffolk County Council Archaeological Service) is now in the post-excavation phase, with the results due to be published over the next few years. Yeavering is currently subject to reinvestigation in the *Yeavering: A Palace in its Landscape* project (Durham University). At present, the University of Oxford are undertaking excavations at Sutton Courtenay and Long Wittenham as part of a doctoral thesis by Adam McBride and the wider *Origins of Wessex* project.

| Site | County (historic) | NGR | X | Y |
|---|---|---|---|---|
| Cowdery's Down | Hampshire | SU 6570 5320 | 465700 | 153200 |
| Cowage Farm | Wiltshire | ST 9081 8616 | 390810 | 186160 |
| Lyminge | Kent | TR 1620 4100 | 616200 | 141000 |
| Hatton Rock | Warwickshire | SP 2370 5770 | 423700 | 257700 |
| Long Itchington | Warwickshire | SP 3970 6710 | 439700 | 267100 |

*Table 3.1:* The location of the great hall complexes considered in the case studies.

Considered together, the sites cover a broad area spanning territories associated with the three major kingdoms of southern England – Kent, Wessex and Mercia – in addition to more marginal and less understood locales. This is significant for two reasons. Firstly, it facilitates an exploration of regionality. Secondly, it allows for an investigation of the relationship between great hall complexes and kingdoms; the contemporaneity of their emergence cannot be pure coincidence and, as is discussed in **8.2.4**, it is likely that these sites represent an early form of royal palace.

### 3.1.2 *Study region definition*

Using the OSGB36 National Grid (Ordnance Survey 2015a, 22-7), a series of study regions were demarcated around the great hall complexes. For the Cowdery's Down and Cowage Farm study regions this involved using the site NGR as the geographic centre and calculating a survey box around it. The process was the same for the Warwickshire study region except that the midpoint between Hatton Rock and Long Itchington was used as the geographic centre. A 40 km x 40 km study zone was then calculated around these points, each covering a land surface area of 1600 $km^2$. Due to the coastal nature of the Lyminge case study a different approach was taken. This used a 45 km x 60 km study zone which, although covering a total area of 2700 $km^2$, actually equates to a comparable land surface area of 1565.72 $km^2$. The geographic extents of the study regions are visualised in *Figure 3.1*.

The choice of study region size was a compromise between a conceptual desire to consider as large a territory as possible with the practicalities of data collection within a fixed-term project. As such, 40 km x 40 km was taken to be both large enough to facilitate the aims of the thesis (i.e. both local- and regional-scale spatio-temporal analysis) and realistic from a data collection perspective; anything larger (e.g. 50 km x 50 km) would likely have returned too much data to be meaningfully used in a study of this length. This scale also enables insights into the everyday logistics of a region to be gleaned: 20 km (the approximate diameter of the study regions) represents a realistic one-way day journey across undulating rural terrain, or a comfortable return journey on horseback (Harris 1993; Tobler 1993).

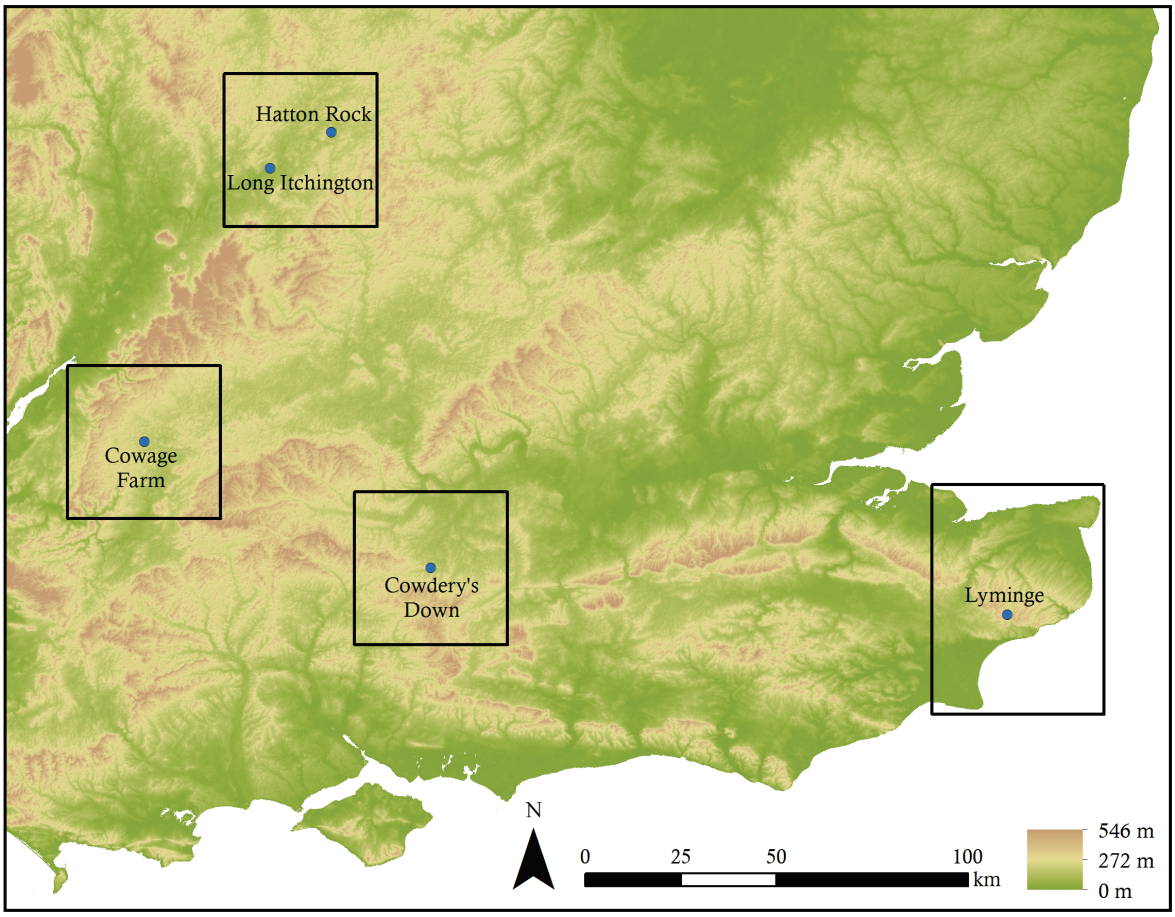



*Figure 3.1:* The four study regions (*contains Ordnance Survey data © Crown copyright and database right 2017*).

## 3.2 DATA COLLECTION AND COLLATION

### 3.2.1 *Rationale*

It is common in archaeological discourse to focus on sites that have been well excavated and published to a high standard. While this approach can be justified depending on the particular research question being addressed – data quality can be crucial to certain forms of investigation, for example – few would disagree that a systematic and comprehensive approach is desirable. This is of particular importance in a discipline like archaeology where we are only ever looking at a sample (archaeology that has been discovered) of the population (the sum of discovered and undiscovered archaeology). In order to obtain a more comprehensive understanding of the past, it is best practice to draw upon the totality of available evidence wherever possible. Detailed regional studies such as those undertaken in this thesis benefit particularly from this approach, where even the presence of poorly dated or uncertain finds can attest activity at a general level. Given these considerations, the decision was taken to compile archaeological gazetteers for each study that were as exhaustive as realistically possible. This 'maximum' approach towards data collection was used in previous gazetteer-based research by the author (Austin 2013, 37-55; 2014, 61-4).

### 3.2.2 *Methodology*

For each study region, a database of all archaeological material likely to date within the period AD 400-800 was compiled. The primary objective of doing so was the acquisition of datasets that could be efficiently managed, quantified and imported into a GIS for analysis and visualisation. The gazetteers were compiled using published and unpublished material obtained from a variety of sources, with particular use being made of electronic resources. Crucially, having study regions defined within the OSGB36 National Grid enabled the author to utilise the advanced search functions of several online databases and greatly improve the efficiency of the data collection process. The 'coordinate bounding box' function of the PAS online database is a good example of this, which allows the researcher to tailor data collection to the specific coordinates of their study area. The various data sources consulted were as follows:

- National gazetteers (e.g. Meaney 1964; Geake 1997; O'Brien 1999);
- Regional gazetteers (e.g. Dickinson 1976a, b; Russel 2002; Draper 2004; Richardson 2005a; 2005b; Clark 2007; Hinton 2007; Dodd 2014);
- Region-specific resources such as local archaeological society journals and county-based Heritage Environment Records (HERs);
- Period-specific resources such as *Medieval Archaeology*'s annual survey of sites;[25]
- Online databases such as the *Portable Antiquities Scheme* (PAS),[26] the *Early Medieval Corpus of Coin Finds* (EMC),[27] *Heritage Gateway*,[28] *PastScape*,[29] *Archsearch*,[30] and the *Archaeological Investigations Project* (AIP);[31]
- Online bibliographic repositories such as the *Grey Literature Library*,[32] *British and Irish Archaeological Bibliography*,[33] and the *International Medieval Bibliography*[34]

Once collected, data were recorded in a standardised way and input into a central database using Microsoft Access (*e-Appendix 1a*). This database was structured into four separate tables, allowing the regional datasets to be considered independently or collectively. The data fields are outlined in *Table 3.2* and the system of site type classification is defined in *Table 3.3*. Although carried out in as thorough and accurate a manner as possible, the author takes full responsibility for any omissions or inaccuracies.

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[25] Volumes 1-50 (1956-2006) are freely available via the ADS: http://dx.doi.org/10.5284/1000320.
[26] http://finds.org.uk.
[27] http://www.fitzmuseum.cam.ac.uk/dept/coins/emc/.
[28] http://www.heritagegateway.org.uk/gateway/.
[29] http://pastscape.org.uk/.
[30] http://archaeologydataservice.ac.uk/archsearch/.
[31] http://csweb.bournemouth.ac.uk/aip/aipintro.htm.
[32] http://archaeologydataservice.ac.uk/archives/view/greylit/.
[33] http://www.biab.ac.uk.
[34] http://cpps.brepolis.net/bmb/search.cfm.

| Field name | Description |
|---|---|
| ID | The unique ID of the site, created using a region-specific prefix and site number suffix (e.g. the fifth site in the Cowdery's Down dataset is known as '**CD_005**'). |
| Site_name | The name of the site based on its published name or nearest parish. |
| Parish | The historic parish in which the site is located, georeferenced using GIS data from Southall and Burton (2004). |
| Hist_county | The historic county in which the site is located, georeferenced using GIS data from the Historic Counties Trust (2015). |
| NGR | The OSGB36 National Grid Reference of the site location, taken from by published sources or personally georeferenced based on unpublished information. |
| X | The OSGB36 National Grid easting of the site location. |
| Y | The OSGB36 National Grid northing of the site location. |
| Type_major | The major site type classification, as outlined in *Table 3.3*. Site types with a '?' prefix indicate a level of uncertainty (e.g. where artefacts indicative of burial have been found but there is no indication of skeletal remains). |
| Type_minor | The secondary classification of the site e.g. the type of artefact found, the size of a burial site or the nature of an occupation site. |
| Chron_cert | Sites were classified as either 'certain', 'probable' or 'uncertain' based on their chronological relevance. A site was considered 'certain' if its date range fell wholly within the chronological limits of the study (e.g. after AD 399 and before AD 799). 'Probable' sites were defined as such when their date range extended partially beyond these limits (e.g. a stray find dated to AD 700-850). A site was considered 'uncertain' when it had a ≤50% chance of being chronologically relevant (e.g. a stray find dated to AD 700-900). |
| Date_start | The earliest calendrical date for the site, based on published material where possible and typically rounded to the nearest quarter century. AD 450 was used as the earliest start date unless there was convincing evidence to the contrary. |
| Date_end | The latest calendrical date for the site, based on published material where possible and typically rounded to the nearest quarter century. |
| Date_range | The calendrical date range of the site. For chronologically uncertain sites 'EM' indicates a date somewhere in the early medieval period and '?EM' indicates the potential for an even wider date range. |
| References | The references relevant to the site and its discovery. |
| Description | A brief account of the site, including what was found, the circumstances of discovery and any additional information of relevance to the study. |
| Discov_year | The year(s) of discovery. |
| Discov_method | The method(s) of discovery e.g. fieldwalking, geophysical survey or excavation. |
| Museum | The museum(s) where the archive and finds are kept. |
| Min_crem | The minimum number of cremation burials, if applicable. |
| Max_crem | The maximum number of cremation burials, if applicable. |
| Min_inhu | The minimum number of inhumation burials, if applicable. |
| Max_inhu | The maximum number of inhumation burials, if applicable. |
| Num_sfb | The number of sunken-featured buildings (SFBs), if applicable. |
| Num_efb | The number of earth-fast buildings (EFBs), if applicable. |
| Website_1 | A website of relevance to the site, if applicable. |
| Website_2 | A second website of relevance to the site, if applicable. |
| PS | The relevant *PastScape* website for the site. |
| HG | The relevant *Heritage Gateway* website for the site. |

*Table 3.2:* The information (fields) recorded for each site (record) in the database.

| Site type | Description |
|---|---|
| Settlement site | A site with evidence for at least one domestic building (e.g. a sunken-featured or earth-fast building). |
| Inferred occupation | A site with evidence of low-level occupation (e.g. pits or hearths) but no definite evidence for buildings. |
| Ecclesiastical site | A site with structural or documentary evidence for an ecclesiastical establishment. |
| Burial site | A site with evidence of human burial, whether inhumation, cremation or both. |
| Artefact find spot (non-PAS) | An artefact or small group of artefacts found without obvious association to any other site. |
| Artefact find spot (PAS) | As above, but for artefacts reported through the PAS, which has a standardised recording system. |
| Hoard | A substantial collection of finds, typically but not exclusively coinage, found in association. |

*Table 3.3:* The major site type classifications used in this thesis. For certain analyses, the 'settlement site' and 'inferred occupation' categories were combined to create a larger sample termed 'occupation sites'.

Some of the more advanced features of Microsoft Access were used to organise and interrogate the regional datasets. Filters were used to isolate sites of special interest and aid the analytical process. Forms were also used to present the data in a more intuitive and visually appealing way, allowing users who are unfamiliar with Microsoft Access to be able to consult the data. Although a print gazetteer is not included, it should be possible to use the Report function to organise the database into a printable format should the reader so desire.

### 3.2.3 *GIS integration*

The database was integrated with a Geographic Information System (GIS) using ArcGIS 10.2. The integration of the database into a GIS was undertaken for two principal reasons: firstly, to facilitate a wide-ranging programme of spatial analysis designed to characterise and model the datasets; and secondly, to produce high-quality visual resources to aid interpretation. Mapping data were obtained from: Ordnance Survey;[35] the Environment Agency;[36] Natural England;[37] and the UK Data Service.[38] From these, a GIS was created for each study region that included the following layers:

- 5 m and 50 m resolution Digital Elevation Models (Ordnance Survey 2015b; 2015c)
- Pre-1974 county boundaries (Historic Counties Trust 2015)
- Pre-1850 parish boundaries (Southall and Burton 2004)
- The 1988 *Agricultural Land Classification of England and Wales* (Natural England 2002)
- Rivers and lakes (Ordnance Survey 2016a; 2016b)

[35] http://digimap.edina.ac.uk/ and https://www.ordnancesurvey.co.uk/opendatadownload/.
[36] http://www.geostore.com/environmentagency/WebStore.
[37] http://publications.naturalengland.org.uk/.
[38] https://discover.ukdataservice.ac.uk/.

Shapefiles of Roman roads were also created for each study region using point data obtained from Keith Briggs, which were checked against conventional sources (e.g. Margary 1973).[39]

## 3.3 PREPARATORY CHRONOLOGICAL ANALYSIS

### 3.3.1 *Overview*

The scheme of chronological analysis had three principle aims: firstly, to revise and refine individual site chronologies; secondly, to phase the sites in relation to the life course of great hall complexes; and thirdly, to identify regional trends and articulate a broad sequence. The first aim was realised during the data collection process, where minor alterations to published sequences were occasionally made based on the latest research, and was specifically addressed through a programme of radiocarbon sample recalibration (**3.3.2**). The second and third aims were achieved using a bespoke form of chronological seriation (**3.3.3**), the results of which were used to construct a phasing system for each region (**3.3.4**) and to visualise archaeological activity within the region over time (**3.3.5**). The analytical techniques are introduced and their methodologies outlined below; the results are presented in the appropriate sections of the case study chapters.

### 3.3.2 *Recalibration of radiocarbon samples*

Where applicable, the data collection process recorded information about any radiocarbon samples associated with a site. These samples were then recalibrated according to the method briefly summarised in **2.1.2**. This used the most recent radiocarbon age calibration curve, IntCal 13 (Reimer et al. 2013), and OxCal v4.2, a radiocarbon calibration and analysis program created by the University of Oxford (Ramsey 2009; Ramsey and Lee 2013).[40] An example of this relatively simple process is given in *Figure 3.2*. The recalibration was undertaken for three reasons: firstly, to standardise the way in which radiocarbon samples were dealt with in the thesis; secondly, to improve the chronological precision of samples calibrated using an older radiocarbon age calibration curve; and thirdly, to refine the dating of associated sites. In total, data relating to ninety-seven radiocarbon samples from nineteen sites were recovered. Of these, thirty-seven relate to the recent excavations at Lyminge which, being part of an ongoing programme of analysis, have already been calibrated using IntCal 13. This left a total of sixty samples from eighteen sites eligible for recalibration. The results are reported in the appropriate section of the case study chapters.

[39] Keith Briggs, *pers. comm.*, 30th March 2015. See http://keithbriggs.info/Roman_road_maps.html for methodological and technical details.
[40] https://c14.arch.ox.ac.uk/oxcal/OxCal.

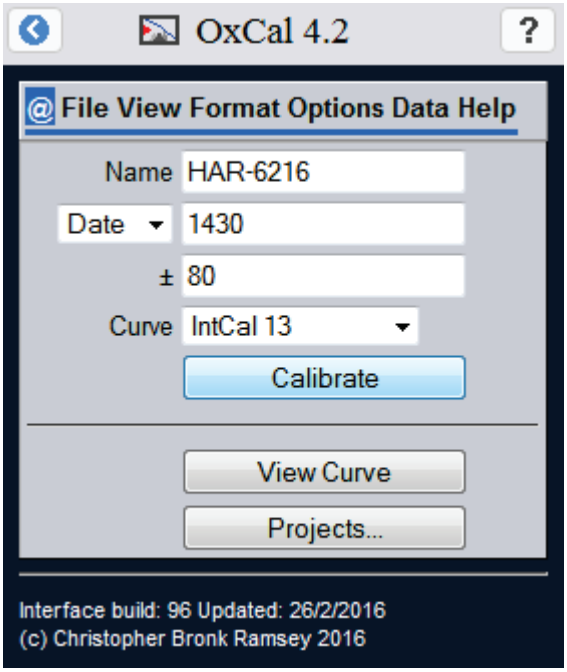



*Figure 3.2:* The process of (re)calibrating radiocarbon samples using the OxCal 4.2 program.

A number of comments can be made on the process of recalibration specifically and the usage of radiocarbon dates more generally, perhaps to serve as guidance for future work. Firstly, it is important not to overstate the significance of radiocarbon samples from the 1970s and 1980s, partly because they were processed before modern scientific standards but also because recalibration often renders their date ranges too broad to be of particular use. Secondly, even when the quality of the sample is not an issue, radiocarbon dates must be used with caution and, where possible, integrated with contextual (e.g. stratigraphic, artefactual and environmental) evidence, Thirdly, although calibrated samples are commonly communicated at 1σ (68.2%) and 2σ (95.4%) confidence levels, there is merit in scrutinising individual calibration plots as non-normal distributions can occasionally aid interpretation. Fourthly, it would be a useful exercise to repeat the recalibration each time a new radiocarbon age calibration curve is published; a new version is expected imminently. Finally, it must be stressed that multiple samples should be taken to aid corroboration and better account for anomalous results; the radiocarbon programme undertaken as part of the Lyminge excavations should be seen as an exemplar in this respect (**2.3.1**).

### 3.3.3 *Chronological seriation*

Writ broadly, seriation is a technique in which archaeological evidence is placed in chronological order to study changes over time. The two most common forms of seriation in archaeology are correspondence analysis (CA) and principal component analysis (PCA), both of which are multivariate statistical techniques used to explore the relationship between numeric variables. In the early medieval archaeology, these attempts are typically

reserved for the analysis of artefact series or grave assemblages (e.g. Jensen and Høilund Nielsen 1997; Ravn 2003, 99-129; Hills and Lucy 2013, 168-211; Hines and Bayliss 2013, 60-73) but have recently been used in studies of ancient DNA (Schiffels et al. 2016). These analyses typically produce scatterplots that visualise the relationship between two datasets for the purposes of identifying and quantifying chronological trends.

The seriation undertaken in this thesis is nowhere near as complicated. Rather, it is seriation in the elementary sense of the word: ordering archaeological sites by their respective date ranges. In order to undertake the seriation, the study period had to be quantified into discrete time segments. Given the scholarly tendency to consider the period in terms of quarter or half centuries, and because the majority of evidence cannot be dated with greater precision than this, the decision was taken to divide the 400-year study period into sixteen time segments of twenty-five years (e.g. 400-424, 425-449 etc.). Sites were recorded in the database using calendrical date ranges. In most cases, there were taken directly from published or unpublished sources. In some instances, these ranges were adjusted based on the results of the radiocarbon recalibration and other chronological considerations. These calendrical date ranges were then used to quantify, on a site-by-site basis, the likelihood of there being archaeological 'activity' during each of the sixteen time segments. In practice this meant tabulating a site's date range into 'active' (1) and 'inactive' (0) time segments. For example, a site dating to AD 500-550 would have a '1' in the '500-524' and '525-549' time segments and a '0' in all others. The data were then ordered in the first instance by ascending start date and in the second instance by descending end date. This resulted in a large data matrix (seriation table) being produced for each region, with individual site activity forming a linear sequence. Being too large to realistically print, the results are included electronically (*e-Appendix 2*). These seriation tables were used to construct a bespoke phasing system for each region (**3.3.4**) and visualise its archaeological activity over time (**3.3.5**).

### 3.3.4 *Site phasing*

It is common in early Anglo-Saxon funerary archaeology to group the evidence into broad chronological phases (Geake 1997; Richardson 2005a; Harrington and Brookes 2008; Hines and Bayliss 2013). Settlement evidence is rarely afforded this treatment, however, and attempts to phase large-scale composite datasets like those used in this thesis are very rare indeed (see Harrington and Welch 2014, 15-19 for a recent example). Given how much of the evidence from early medieval Britain cannot be closely dated, and the degree of regional variation, it is understandable that general chronologies are seldom attempted. The focus of the present research is a single phenomenon, though. This allows – and justifies – the articulation of a bespoke phasing system for each case study based on the chronology of the great

hall complex being investigated. In practice this involved specifying 'before', 'during' and 'after' phases relative to a site's 'great hall phase'. For example, the latest evidence suggests that the great hall phase at Lyminge seems likely to date to AD 600/625-675/700 (Thomas 2017, 109-10). Within the constraints of the overall study period (AD 400-800), this allowed a broad, three-phase chronology to be articulated for the region in which phase 1 (before the great hall phase) dated to AD 400-600, phase 2 (during the great hall phase) dated to AD 600-700 and phase 3 (after the great hall phase) dated to AD 700-800. The seriation tables were of immense use in this endeavour because they allowed the author to filter the evidence in an efficient way. For the example above, this involved recording which sites had a '1' in any of the '600-624', '625-649', '650-674' and '675-699' columns in the relevant seriation table (*e-Appendix 2a*) and then importing them into the GIS as phase 2 sites.

No phasing system is perfect, however. Areas of overlap are unavoidable, especially with sites that have long date ranges. Thus, certain sites were ascribed to multiple phases. A more conceptual limitation is that phasing attempts to quantify continuous data (i.e. site temporality) into discrete data (i.e. broad phases), and although the demarcation of phases can be archaeologically derived, the process will always remain somewhat arbitrary. Despite this, the phasing system for each case study facilitated quantitative comparison, thereby allowing the analysis and discussion to focus on modelling the contemporary interactions of a great hall complex and gauging its emergence and decline from a longer-term perspective. For a relatively discrete archaeological phenomenon, the benefits of this approach are obvious.

### 3.3.5 *Activity modelling*

Chronological phasing is, in essence, a generalisation of individual site chronologies and a simplification of the temporal pattern of a region. It is extremely useful from a comparative perspective, but we should also strive for visualisations of temporality that emphasise the continuous nature of the archaeological activity. An attempt was made to do this using the results of the chronological seriation. This involved quantifying the number of 'active' sites during each time segment and then plotting these data as a line graph to visualise archaeological activity over time. To the author's knowledge this is a novel approach to modelling archaeological activity; indeed, the closest visual parallel found was a comparison of palaeoecological records from Holocene-period sites in Italy, albeit using a different seriation technique and very different datasets (Branch and Marini 2014, 47).

An obvious issue with this approach is the number of sites with wide date ranges. For example, a stray artefact dating to AD 450-600 would be considered 'active' across six time segments because it could have been in use at any point during this time, but it is unlikely

that it was actually in use for 150 years. Another concern is how the level of activity could be easily skewed by phenomena that are especially visible in the archaeological record but which may have had little impact on actual levels of activity, such as the widespread introduction of coinage. Some of these issues were partly addressed by creating 'activity models' that excluded artefact find spot sites with a date range ≥100 years, and by looking at site types separately.

Though the method is useful, it should not be assumed that a simplistic visualisation of archaeological activity necessarily correlates with the actual level of human activity in a region. Indeed, the 'activity models' tell us very little about population sizes.[41] Another limitation is how the process effectively normalises sites; a substantial cemetery and a stray artefact find are of equal weighting in the calculation. This could potentially be remedied by creating some form of importance grading scale, but there is as yet no agreed framework for doing so. Despite these issues, the 'activity models' represent an effective means of gauging how archaeological activity changed within the study regions over time. This comparative approach also facilitated the identification of broader trends in the archaeology of pre-Viking England (see **8.1.3**).

## 3.4 EXPLORATORY SPATIAL ANALYSIS

### 3.4.1 *Overview*

The regional datasets were initially analysed using a number of exploratory spatial techniques. The principal aim of doing so was to use empirical methods to characterise the spatial pattern of the datasets as a precursor to more advanced data modelling and reconstruction attempts (**3.5**). A variety of analytical techniques were used, including: the Average Nearest Neighbour statistic (**3.4.3**); Ripley's K-Function (**3.4.4**); Kernel Density Estimation (**3.4.5**); and Grouping Analysis (**3.4.6**). A more general exploration of the relationship between site distribution and environmental factors was also undertaken (**3.4.2**). The methods used are outlined below; the results are presented in the relevant section of the case study chapters.

### 3.4.2 *Environmental considerations*

The extent to which environmental factors influenced patterns of past activity and settlement is a topic of considerable debate, with some scholars viewing it as the most important factor (e.g. Williamson 2013). While it is tempting to dismiss 'environmentally determinist'

[41] This is something that can be more appropriately inferred from agent-based modelling of burial data. These methodologies have recently been tested by Andreas Düring, who at the time of writing is in the final stages of submitting a DPhil at the University of Oxford.

accounts as failing to account for individual and collective agency, it would be unwise to disregard evidence for environmental preferences when it can be quantitatively demonstrated (Hamerow 1992; Williamson 2010). Two approaches were taken to investigate the influence environmental factors could have had on patterns of activity and the placement of sites within the study regions. To gauge the importance riverine proximity could have had, the first method involved calculating the distance from each site to its nearest watercourse using the 'Generate Near Table' function in ArcGIS.[42] To consider how soil quality and agricultural potential may have influenced site distribution, the second method involved plotting the distribution of sites against the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002).

Naturally, there are issues associated with this form of analysis. Without extensive, localised and high-resolution environmental work it is very difficult to know the extent to which modern assessments of soil quality are indicative of ancient agricultural potential. With the exact courses of ancient rivers in most cases being unknown, one faces similar problems inferring meaningful empirical trends from the distance between archaeological sites and modern rivers. In accordance with these limitations, the presentation and discussion of the results of these analyses will be necessarily provisional and coarse-grained.

### 3.4.3 *Average Nearest Neighbour analysis*

The first formal technique of spatial characterisation used the Average Nearest Neighbour statistic. This statistic works by calculating the mean distance between each data point to its nearest neighbour and then comparing the results to the mean distance in a set of random data points (Pinder et al. 1979, 129-30; Wheatley and Gillings 2002, 117). Based on the ratio of observed and expected mean distances, a critical value (z-score) is calculated and a significance level (p-value) generated to describe its statistical significance. This results in an assessment of the statistical likelihood that the spatial distribution of the dataset is either clustered, random or dispersed. The Average Nearest Neighbour analysis was performed using the 'Spatial Statistics' extension in ArcGIS (*Figure 3.3*).[43] Iterations were calculated with and without artefact find spots to gauge whether the more abundant artefactual material skewed the results in any way.

As a technique of statistical description with no visual output, Average Nearest Neighbour analysis is typically undertaken as part of a broader characterisation of spatial datasets (Wheatley and Gillings 2002, 130). One of the earliest applications to an archaeological

[42] ArcMap>Analysis>Proximity>Generate Near Table. All parameters as default.
[43] ArcMap>Spatial Statistics Tools>Analyzing Patterns>Average Nearest Neighbor. Distance Method: EUCLIDEAN. All other parameters as default.

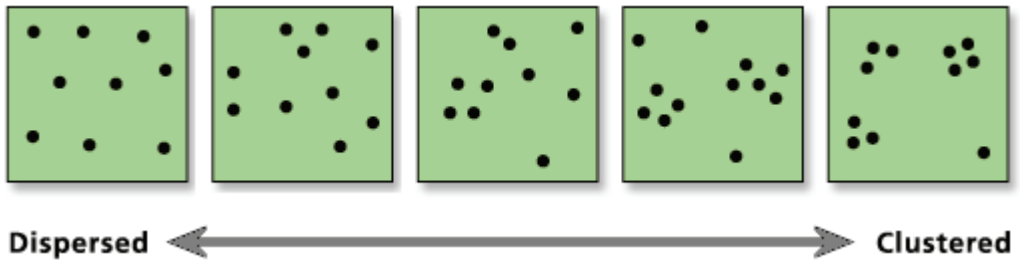



*Figure 3.3:* An illustration showing how the 'Average Nearest Neighbour' ArcGIS function works. If a distribution is not found to have statistically significant spatial clustering or dispersion it can be thought of as random. Image ©ESRI (http://desktop.arcgis.com/en/arcmap/10.3/tools/spatial-statistics-toolbox/average-nearest-neighbor.htm).

case study was the identification of a dispersed spatial pattern of urban settlements in Late Roman Britain (Hodder and Hassall 1971). More recently the technique has been used to explore settlement patterns in Early Neolithic Greece (Perles 2001, 134-8). In Southern Israel, Richard Fletcher's (2008) multiscalar analysis of Chalcolithic archaeology was able to demonstrate that activity focused on a number of core zones, but that the spatial clustering of evidence at the local scale was far less pronounced than in the Early Bronze Age.

It is important to note how the scale of the investigation can have a significant impact on the results of the test (Banning 2002, 80; Fletcher 2008, 2048-9). For example, when considered at the local scale a collection of evenly spaced sites would return a dispersed spatial pattern. This local-scale dispersion can translate into clustering at the regional level if there was a factor of distance between groups of evenly spaced sites, however. Put another way, the spatial pattern of archaeology *within* clusters can be very different to the spatial pattern *between* clusters. As a consequence, the use of inherently multiscalar analyses like Ripley's K-Function (**3.4.4**) to complement the results of the Average Nearest Neighbour statistic is a sensible strategy (Bevan and Conolly 2006).

### 3.4.4 *Ripley's K-Function*

The second formal technique of spatial characterisation utilised Ripley's K-Function, a form of multiscalar spatial analysis that describes the spatial pattern of a dataset over a range of distances (Ripley 1977). It determines the spatial pattern by calculating the mean number of neighbouring features at multiple distance intervals ('ObservedK') and comparing the values with those from a specified number of random computations ('ExpectedK'). The random computations also produce a statistical confidence envelope. The extent to which the observed values deviate from the results of the random computations indicates spatial clustering or dispersion; if the observed values also deviate from the statistical confidence envelope then the spatial clustering or dispersion can be thought of as statistically significant.

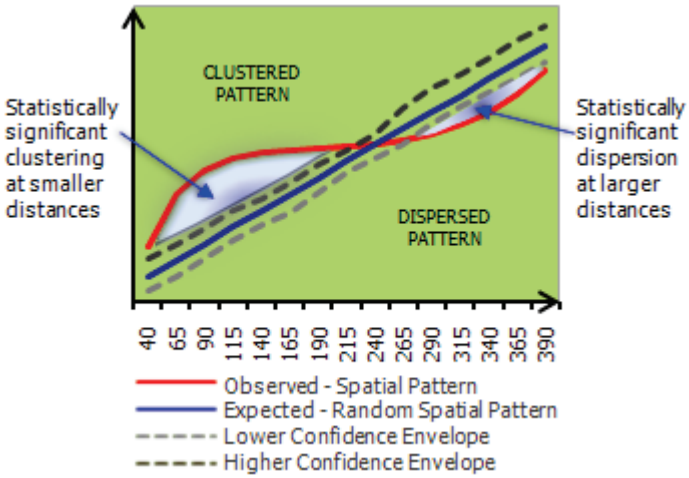



*Figure 3.4:* An illustration showing how the 'Multi-Distance Spatial Cluster Analysis (Ripley's K Function)' ArcGIS function works. Image ©ESRI (http://desktop.arcgis.com/en/arcmap/10.3/tools/spatial-statistics-toolbox/multi-distance-spatial-cluster-analysis.htm).

The analysis was undertaken in ArcGIS, where it is known as 'Multi-Distance Spatial Cluster Analysis', using the 'Spatial Statistics' extension (*Figure 3.4*).[44] Arguably the most important analytical parameter is the number and size of the distance intervals. Given the size of the study regions eighty intervals of 250 m were used, giving a maximum computational distance of 20 km from each data point. The maximum number of random computations (n=999) was used to generate a 95% statistical confidence envelope. The 'Simulate Outer Boundary Values' option was also enabled as doing so produces more accurate results where data points (i.e. archaeological sites not considered in this thesis) are known to exist outside of the study area (Sayer and Wienhold 2013, 78).

The technique has typically been applied at the regional scale, such as attempts to explore patterns of land usage and occupation (Bevan and Conolly 2006; Pillot et al. 2013; Wright et al. 2014). It is possible to use the analysis at the intra-site scale, however, as has recently been demonstrated in the identification of grave groupings thought to represent extended families at several early Anglo-Saxon cemeteries (Sayer and Wienhold 2013).

### 3.4.5 *Kernel Density Estimation*

The third formal technique of spatial characterisation used Kernel Density Estimation to visualise the distribution and density of the regional datasets. The technique employs a probability density function to create an estimation of data density based on data point proximity (Wheatley and Gillings 2002, 186-7; Conolly and Lake 2006, 175). Put simply, in an archaeological context the technique highlights areas of high or low site density – 'hot spots'

[44] ArcMap>Spatial Statistics Tools>Analyzing Patterns>Multi-Distance Spatial Cluster Analysis (Ripleys K Function). Number of Distance Bands: 80. Compute Confidence Envelope: 999_PERMUATIONS. Beginning Distance: 0. Distance Increment: 250. All other parameters as default.

and 'cold spots' – using a series of gradated ovoid shapes. The Kernel Density Estimation was undertaken using the 'Spatial Analyst' extension in ArcGIS (*Figure 3.5*).[45] The results are presented in the relevant sections of the case studies using one of two 'stretch' visualisation techniques: standard deviation (n=1.5), which is a standard method of increasing visual contrast in an image; and histogram equalisation, which is used to reduce the effect extreme densities (i.e. interventions in urban areas) have on the overall image.[46] The former was used as the default visualisation, with the latter being used when much larger datasets were considered, such as the AIP and Roman-period data introduced below.

Kernel Density Estimation has been used extensively in archaeological research as a way of exploring the distribution of archaeological evidence at a range of scales, particularly with regards to the identification and visualisation of clusters (Baxter et al. 1997; Wheatley and Gillings 2002, 186-7; Aldeias et al. 2012, 2420-1; Pillot et al. 2013, 203-4). As with spatial analysis in general there have been few attempts to apply the technique to early medieval case studies. Notable exceptions include the identification of national-scale patterns using early medieval PAS data (Naylor and Richards 2006), the identification of burial clusters within early Anglo-Saxon cemeteries (Sayer and Wienhold 2013) and, further afield, the identification of economic hinterlands around fortified settlements in Bohemia (Mařík 2011).

A major issue one faces in applying the technique to archaeological case studies is the representativeness of the datasets used. Indeed, whether the distribution of archaeological evidence is more a reflection of reality or retrieval bias represents a major topic of debate in archaeology. As such, areas that have seen a high level of archaeological intervention, like urban zones or metal-detector 'hot spots', may appear overrepresented in a Kernel Density Estimation plot. Similarly, 'cold spots' are not necessarily inactive; there could be a number of sites awaiting discovery. Despite this, it is unwise to be overly cynical: we are dealing

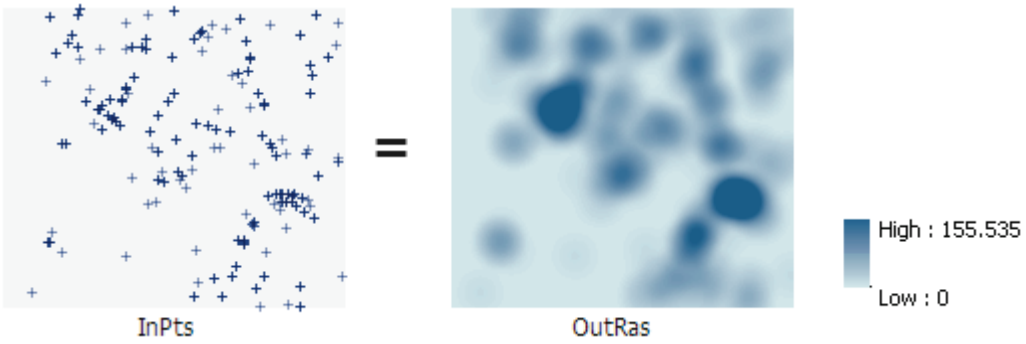



*Figure 3.5:* An illustration showing how the 'Kernel Density' ArcGIS function works. Image ©ESRI (http://desktop.arcgis.com/en/arcmap/10.3/tools/spatial-analyst-toolbox/kernel-density.htm).

[45] ArcMap>Spatial Analyst>Density>Kernel Density. All parameters as default.
[46] See http://desktop.arcgis.com/en/arcmap/10.3/manage-data/raster-and-images/improving-the-display-of-raster-data.htm for an overview of ArcGIS's raster visualisation options.

with a very large body of evidence compiled from several centuries' worth of intervention and recovery, which in recent decades has been systematic and intensive. There are clearly many more sites to be found but, as John Blair (2013b, 12) has noted, it is becoming '*progressively less likely that the gaps will ever be substantially filled*'. Even if these gaps do eventually get filled, we must work with the data as is currently available; doubts over the representativeness of a sample should not rule out exploratory analysis altogether.

Another issue associated with the technique as applied to archaeology is that the calculation treats all data points as being of equal importance. This means that more numerous site types, such as stray finds, may skew the results. This situation could potentially be avoided by 'weighting' the calculation, but this is similarly problematic. Were the thesis only concerned with burial sites one could use a number of metrics (e.g. the number of burials or a calculation of per capita wealth) as the 'population field' to calculate weighted Kernel Density Estimates. This is altogether more difficult when looking at multiple types of site, however. Were this to be done for the thesis it would rely on arbitrarily ascribing a value to sites based on their classification and perceived importance as an indicator of occupation (e.g. artefact find spot=1, burial site=5, settlement site=10). This would introduce an unnecessary and subjective element into the analysis, and the decision was therefore taken to use unweighted (i.e. default) Kernel Density Estimates. In any case, the larger number of 'casual losses' may actually be more revealing of patterns of occupation and activity than the smaller number of excavated sites, especially given both the systematic nature of modern metal-detecting and the scale of the study regions under investigation.

### 3.4.6 *Grouping Analysis*

The final technique of exploratory spatial analysis attempted to place data points into spatially unique groupings for the purposes of territorial modelling (see **3.5.4**, **3.5.5** and **3.5.6**). This was achieved using Grouping Analysis, a technique that attempts to identify a predetermined number of groups within a dataset by maximising intra-group spatial similarity and inter-group spatial dissimilarity. If successful, the analysis assigns each data point to a parent group. It is therefore extremely useful as a means of investigating spatial clustering in large datasets. The Grouping Analysis was performed using the 'Spatial Statistics' extension in ArcGIS (*Figure 3.6*).[47] A K-Means algorithm was used to apportion the data, meaning that the groups identified should comprise spatially proximal data points (Kintigh 1990, 185; Conolly and Lake 2006, 168-73). For each dataset, several iterations were run with

[47] ArcMap>Spatial Statistics>Mapping Clusters>Grouping Analysis. Analysis Fields: 'x' and 'y'. Spatial Constraints: NO_SPATIAL_CONSTRAINT (K-Means algorithm). All other parameters as default.

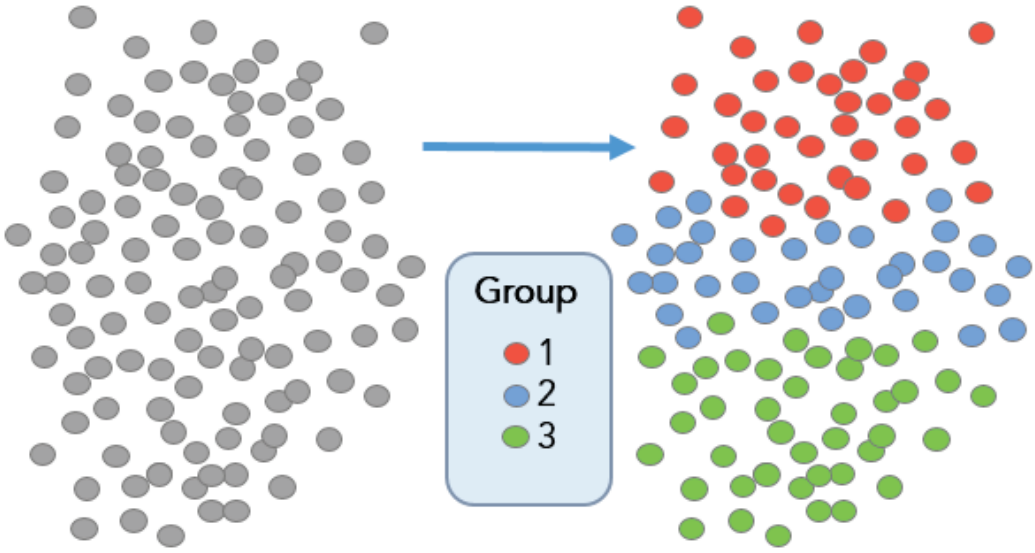



*Figure 3.6:* An illustration showing how the 'Grouping Analysis' ArcGIS function works. Image ©ESRI (http://pro.arcgis.com/en/pro-app/tool-reference/spatial-statistics/grouping-analysis.htm).

different numbers of groups – typically four to six, based on the results of the Kernel Density Estimation – to find the solution that best fit the data. A by-product of the analysis is the calculation of the mean centre (an average x and y coordinates of all data points) for each identified group, which was also used in the territorial modelling discussed below.

Archaeological applications of this technique, at least in the specific form available in ArcGIS, are rare. The author could only identify one published example, which used Grouping Analysis to generate a settlement classification system for Early Byzantine Crete based on spatial proximity, catchment area and elevation (Armstrong et al. 2016). The paucity of published work is presumably due to the relative newness of the technique, but it likely also reflects the difficulties faced by researchers trying to identify formal clustering in archaeological data. Indeed, there is currently no agreed method or standard for doing so (Conolly and Lake 2006, 168-73). A major problem is that almost all cluster analyses require the researcher specifying the number of groups to identify within the analysis. This is an issue that can only really be mitigated by using the results of other analyses, in this case Kernel Density Estimation, and by performing multiple iterations of the analysis to find a cluster solution that best fits the data (Kintigh 1990, 189). As such, the analysis should be viewed as a way of exploring the underlying structure of the data and as a means of offering possible cluster solutions.

## 3.5 ADVANCED SPATIAL MODELLING

### 3.5.1 *Overview*

The exploratory spatial analysis was followed by more advanced attempts at data modelling and historical reconstruction. In contrast to the summarising and exploratory nature of the

preceding analyses, the programme of advanced spatial modelling was undertaken to achieve three specific aims: firstly, to use viewshed analysis to investigate visibility in the immediate landscape around great hall complexes (**3.5.2**); secondly, to explore movement and connectivity in the landscape by modelling least-cost paths (**3.5.3**); and thirdly, to generate hypothetical spatial models of territoriality. The latter aim was realised by employing three methods of spatial allocation: Voronoi Tessellation (**3.5.4**); buffer zones (**3.5.5**); and standard deviational ellipses (**3.5.6**). The methodology used for each technique is outlined below, with the results being presented in the appropriate sections of the case study chapters.

### 3.5.2 *Viewshed analysis*

Viewshed analysis offers a way of exploring the relationship between an archaeological site and the visible landscape around it. The technique involves specifying an observation point and calculating, based on observer angle and topographic height, which cells are visible from it in a raster dataset such as a Digital Terrain Model (Wheatley and Gillings 2002, 204-6; Chapman 2006, 83-5). An overview of the technique is given in *Figure 3.7*. The analysis was undertaken for each of the great hall complexes considered in the four case studies (*Table 3.1*), using the 'Spatial Analyst' extension in ArcGIS and the default algorithm (binary viewshed).[48] Iterations using 5 m and 50 m resolution Digital Terrain Models were computed but the results were virtually identical.

The technique is able to answer a number of important archaeological questions, such as which points in the landscape were likely to be visible from a site, and whether or not sites were intervisible. Given this, it has in recent years become a popular method in broader analyses of archaeological landscapes (Fisher et al. 1997; Wheatley and Gillings 2002, 212-14; Bitrià 2008; Boomgarden 2009; Wright et al. 2014). This popularity has also extended to early medieval studies. Viewshed analysis of high-status sites in Oxfordshire – the great

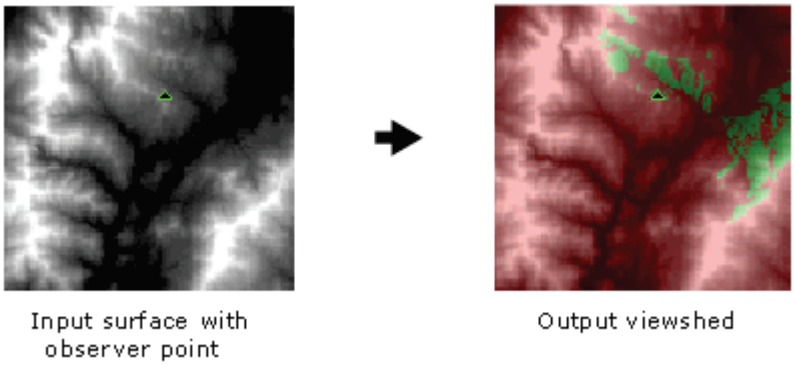



*Figure 3.7:* An illustration showing how the 'Viewshed' ArcGIS function works. Image ©ESRI (http://desktop.arcgis.com/en/arcmap/10.3/tools/spatial-analyst-toolbox/using-viewshed-and-observer-points-for-visibility.htm).

[48] ArcMap>Spatial Analyst>Surface>Viewshed.

hall complexes at Sutton Courtenay and Long Wittenham and the church at Dorchester – has revealed that they each had relatively distinct fields of view, with few overlaps, but that each had a visual relationship with Roman routeways more so than watercourses (Hamerow et al. 2013, 65-8). The technique was also used by Chris Ferguson (2011, 87-9; 215-35) in his doctoral thesis investigating the landscape and seascape of Bernicia.

There are multiple issues associated with this form of analysis, not least that it does not take vegetation or tree cover into account (Wheatley and Gillings 2002, 209-10; 214-16; Chapman 2006, 83-5; 101-3). This is a clear limitation of the technique, but it does not invalidate its results. Without detailed environmental and contextual research, it is extremely difficult to know what sort of land cover there was in a locality at any given time in the past. This endeavour was clearly beyond the scope of the project. Likewise, it should not be assumed that modern land cover is in any way representative of ancient land cover, so even if the analysis did account for this it would still be misleading. Although a significant limitation, then, by not taking land cover into account viewshed analysis gives us the most objective, maximum view of ancient landscapes currently possible. Another limitation is that the standard or binary algorithm does not take into account how distance affects visibility. This has been addressed to some extent by the development of Higuchi or 'fuzzy' viewsheds, but this technique relies on arbitrarily defining visibility bands (Fisher 1994; Wheatley and Gillings 2000; Ogburn 2006).[49] Finally, it should be noted that weather conditions would have been a major factor influencing visibility, and it should not be assumed that an area deemed visible in a viewshed analysis would have been visible all the time. Regardless of these issues, and with the realisation that the results cannot be taken as definite, this analysis is still useful in gauging a general picture of what *could* have been visible in an archaeological landscape.

### 3.5.3 *Least-cost path modelling*

One of the most technically challenging elements of the spatial modelling explored how the landscape could have been used, particularly in terms of identifying potential routeways between contemporaneous occupation sites. In order to avoid considering travel as an abstract concept, aspects of network theory were introduced to focus the analysis on a plausible real-world scenario. As was noted in **1.3.3**, most interpretations of great hall complexes view them as regional power centres involved in the collection of royal food renders or *feorm* (e.g. Yorke 1990, 8-9; Reynolds 2009, 75-6). If this is accepted as a major function of these

[49] Higuchi viewshed analysis is not currently supported in ArcGIS. Learning how to undertake this form of analysis on a different GIS program represented a significant time investment that, on balance, was felt to have limited practical value to the thesis.

sites, the corresponding network around them can be visualised as a series of nodes (associated settlements) which all have a direct connection to a central node (the great hall complex). In considering the region around a great hall complex, then, we might expect contemporary and spatially proximal settlements to have been incorporated within a broader *feorm* network. Simple diagrams visualising such a network are given in *Figure 3.8*.

Although useful as an illustration of the concept, the real-world is not negotiated in Euclidean space (i.e. as the crow flies), and these visualisations therefore tell us little of how the physical landscape may have been traversed to fulfil *feorm* obligations. In order to attempt a more realistic reconstruction, least-cost paths were calculated between sites. A least-cost path, as its name suggests, is the result of a theoretical calculation of movement that attempts to find the most efficient route between two points in a 'cost surface' typically derived from environmental factors such as topographic slope. The underlying assumption in this analysis is that humans are inherently efficient and therefore strive to take the easiest or 'least-cost' route when travelling (Herzog 2013). This assumption is problematic, however; researchers must be open to patterns of travel being influenced by other environmental and non-environmental (e.g. socio-cultural) factors (Reynolds and Langlands 2011; Cameron 2013). The situation is further complicated by the realisation that people likely used a number of different routes, possibly without any one being the 'main' path. Despite this, it seems sensible to assume that, perhaps in addition to other factors, cost and time would have been major considerations in journey planning. Least-cost paths can therefore be thought of as possible routes taken at times when efficiency was the most important factor, and in this they can be thought to have had at least some legitimacy in archaeological reconstructions.

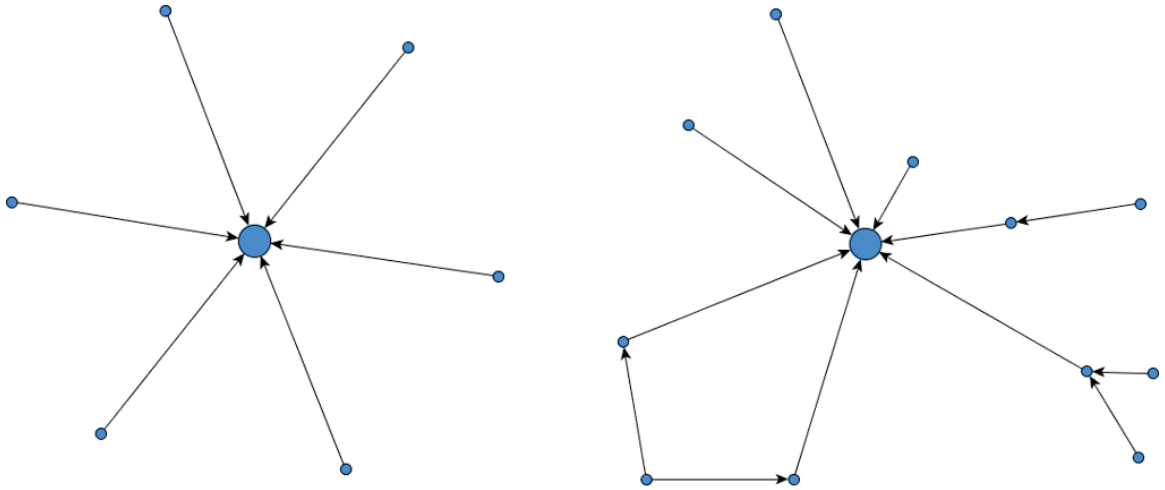


*Figure 3.8:* Two visualisations of possible *feorm* networks around a great hall complex. The visualisation on the left can be thought of as pure or perfect, with dependent settlements spaced evenly. The visualisation on the right is more realistic; dependent settlements are situated more randomly, with some acting as 'gateway nodes' for settlements further away from the great hall complex.

Least-cost paths and cost modelling more generally have been used extensively in recent archaeological research, from investigations of long-term obsidian procurement patterns in New Mexico (Taliaferro et al. 2010) to comparisons of least-cost paths with known Roman roads in the north-west Iberian Peninsula (Güimil-Fariña and Parcero-Oubiña 2015). As with most geospatial techniques, least-cost paths have yet to be utilised extensively in early medieval archaeology. Stuart Brookes (2007b) has explored the relationship between least-cost paths and known routeways in early Anglo-Saxon Kent, noting significant overlaps and a more general correlation with the distribution of funerary archaeology. This correlation between least-cost paths and routeways has also been demonstrated for the Avebury region, albeit in this instance relating to the later Anglo-Saxon period (Baker and Brookes 2013a, 255-9).

The process of least-cost path calculation was undertaken initially using the default (isotropic) method, which is part of the 'Distance' toolset in ArcGIS.[50] This process involved a number of steps. The first was the generation of 'Slope' files from the raster surfaces being used (in this case OS-supplied 5 m and 50 m Digital Terrain Models), which quantifies the gradient (rate of maximum change in elevation) for each cell in the raster, providing a surface for calculating movement costs (Chapman 2006, 82-3).[51] Using the resulting slope raster, the next step in the process involved specifying a point in the landscape (i.e. a site of interest) in which to calculate the 'Cost Distance' from.[52] The resulting 'Cost Distance' and 'Output Cost Back-Link' rasters could then be used to generate least-cost paths to a number of specified points in the landscape (i.e. contemporary sites) with the 'Cost Path' function.[53] Due to the scale of the study regions and the resolution of the Digital Terrain Models, this process could take upwards of eight hours to compute and the resulting least-cost paths were only generated from the location initially specified when calculating the 'Cost Distance' raster. If least-cost paths are desired from the perspective of a different site, the process had to be rerun. This was an obvious issue given the number of sites, regions and chronological phases consulted in this thesis. In order to automate the process an Iterative Model was constructed using ArcGIS's 'Model Builder' (*Figure 3.9*). This allowed least-cost paths to be calculated for each phase from each site to all others.

There are two main types of least-cost path calculation (Wheatley and Gillings 2002, 151-4; Herzog 2014). Isotropic methods – such as the default ArcGIS method outlined above – do not take the direction of travel into account when computing a path; walking uphill is avoided as much as walking downhill. Anisotropic methods, which are altogether

[50] ArcMap>Spatial Analyst>Distance.
[51] ArcMap>Spatial Analyst>Surface>Slope. All parameters as default.
[52] ArcMap>Spatial Analyst>Distance>Cost Distance. All parameters as default.
[53] ArcMap>Spatial Analyst>Distance>Cost Path. All parameters as default.

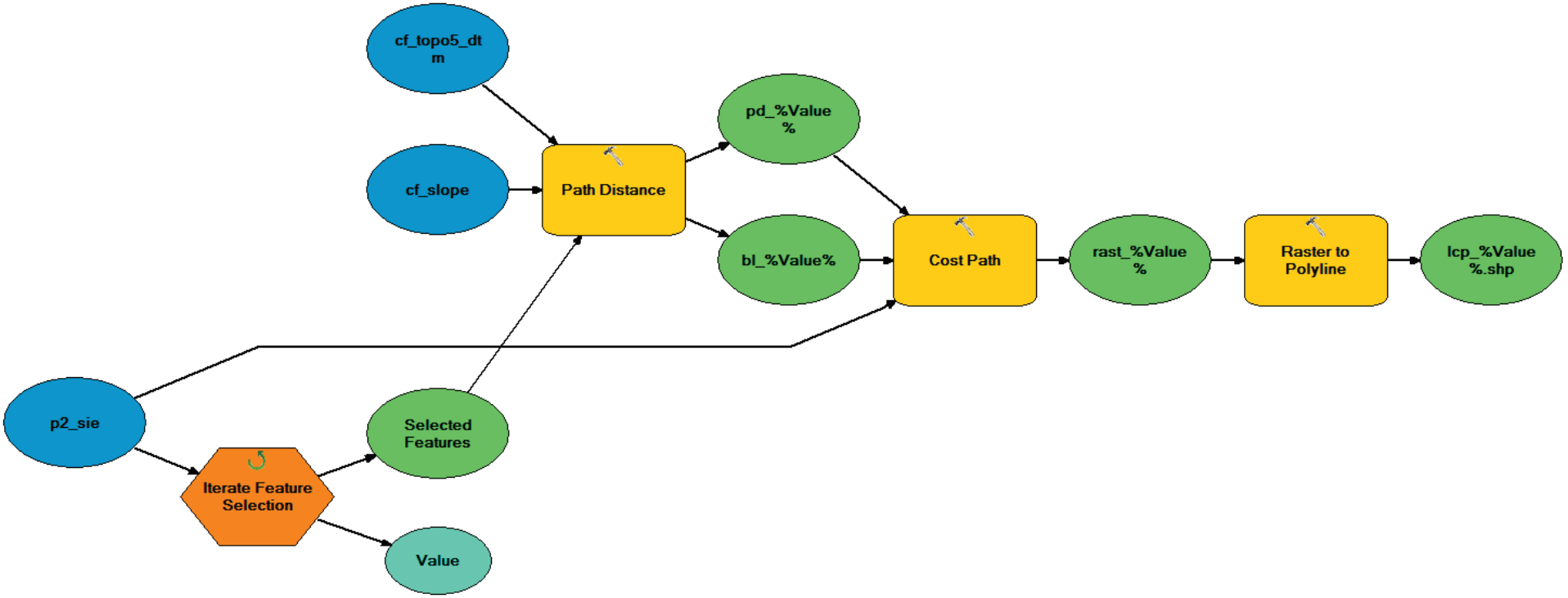



*Figure 3.9:* The Iterative Model used to automate the calculation of least-cost paths, illustrated here with an example from the Cowage Farm case study. The model begins with an iterator selecting a random site from a shapefile containing phase 2 occupation sites ('p2_sie'). Once selected, the process outlined above is followed until least-cost paths are created from that site to all others ('lcp_%Value%.shp'). The iterator then selects a new site at random, repeats the process, and continues until least-cost paths have been calculated between all sites.

more computationally difficult to successfully execute, are direction-dependent. Consequently, walking downhill is regarded as easier than walking uphill, arguably creating more realistic paths. The most well-known form of anisotropic method is Tobler's Hiking Function (Tobler 1993), but alternatives have been proposed (Pandolf et al. 1977; Llobera and Sluckin 2007; Herzog 2013). Although not officially supported in ArcGIS, it is possible to calculate least-cost paths according to Tobler's Hiking Function by manually adding a vertical factor table to the 'Path Distance' calculation.[54] An example of least-cost paths generated using the default (isotropic) and Hiking Function (anisotropic) methods is presented in *Figure 3.10*. This closely demonstrates what has been noted elsewhere – that the results of isotropic and anisotropic least-cost paths seldom differ in any meaningful way, especially at larger scales (Herzog 2014). Taking the similarity of the results on one hand and the greater computational difficulty of anisotropic methods on the other, the decision was taken to only use both methods (isotropic and anisotropic) in *feorm* network reconstructions; for ease, more general explorations of movement in the landscape used only the isotropic method. In any case, all four of the study regions are topographically diverse enough that efficient routes are likely to be quite intuitive, regardless of the direction of travel.

As with any method of spatial analysis, there several issues associated with the calculation and interpretation of least-cost paths (Chapman 2006, 107-11). Rivers represent a particular issue; because they are usually only traversable at specific locations (i.e. fords or bridges) they introduce a number of conceptual and operational complications (Güimil-Fariña and Parcero-Oubiña 2015, 34). It is possible to manually assign rivers 'costly' values to discourage paths that cross them, but this can lead to unrealistically long routes which in reality may have been avoided by crossing the river at its shallowest point. This situation is further complicated by the fact that the location of modern waterways does not necessarily correlate with ancient ones, and it is only through detailed, local-scale environmental work that their original courses can be reconstructed. Taken together, it may be more objective and practical to base our understanding of the landscape based on topography alone. Indeed, least-cost paths generated from a high-resolution Digital Terrain Map would typically only cross rivers at their shallowest points. As such, it was deemed practical (and more useful comparatively) to ignore rivers altogether in the calculations.

Further limitations relate to the Digital Terrain Map used in the analysis (Herzog 2014). Although the raster datasets used in this thesis are of high resolution and quality, it must be emphasised that these are modern land surfaces; it is extremely difficult to predict the degree to which the landscape has changed overtime without extensive environmental fieldwork.

[54] This was undertaken using Kaitlin Yanchar's tutorial, available at: http://kaitlinyanchar.com/arcgis-tutorial-toblers-hiking-function/. The tutorial is an expanded version of Appendix E of her Master's thesis (Yanchar 2013, 287-9), which was in turn based on earlier work by Nicholas Tripcevich.

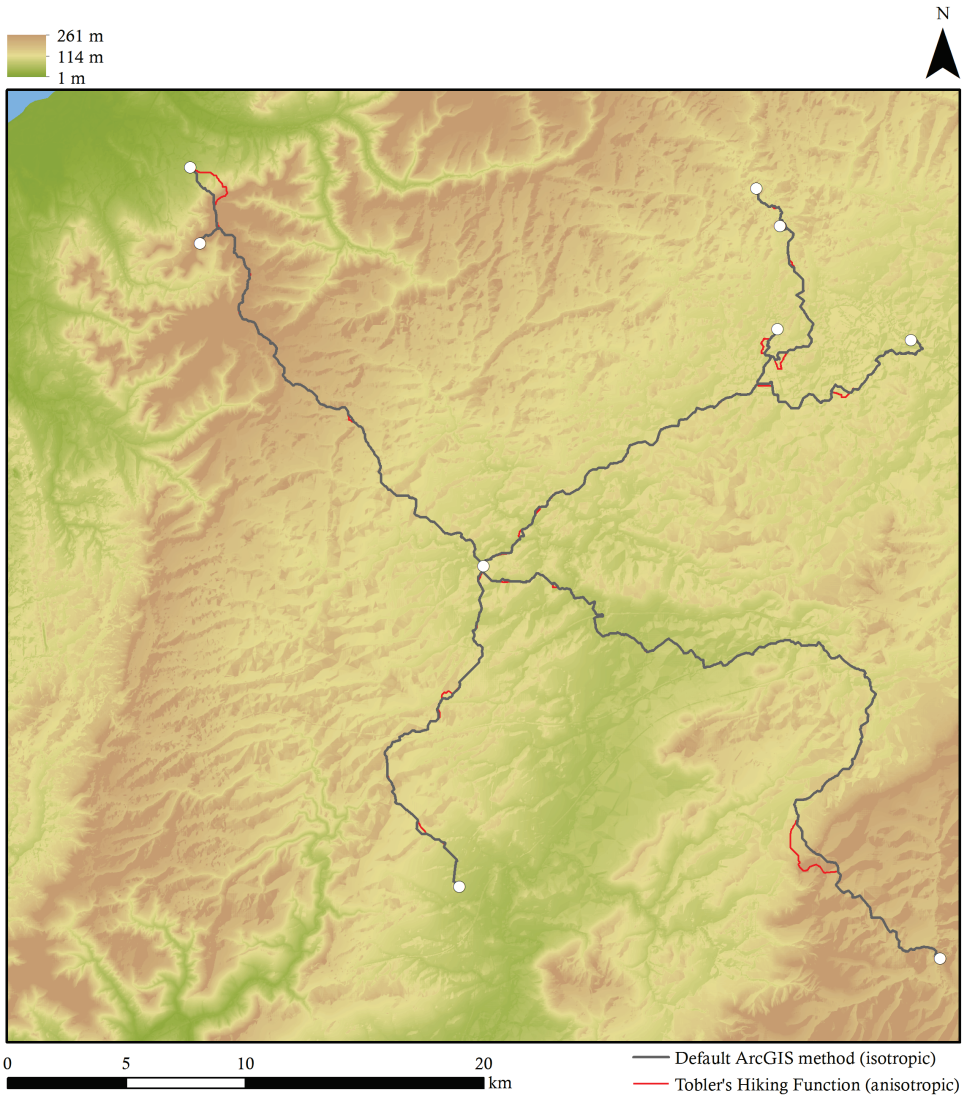



*Figure 3.10:* A comparison of different least-cost path calculations in the Cowage Farm study region. The least-cost paths are calculated from Cowage Farm in the centre of the region to broadly contemporary occupation sites using the two different methodologies described above (*contains Ordnance Survey data © Crown copyright and database right 2017*).

It should also be emphasised that the least-cost paths calculated in this thesis are based on minimising changes in topographic slope and do not take additional criteria into account. For example, no attempt was made to account for seasonal variance. Although including these factors in the calculation is desirable, it is only possible through complex additional calculations and is not currently routine (Howey 2007).

A final consideration is the proximity of sites. In order to prevent the least-cost path algorithm from computing overlapping paths, the decision was taken to treat sites located in close proximity (i.e. <1 km) to each other as a single entity. The most significant example of this was at Canterbury, where fifteen separate occupation sites were recorded in the database. In this instance, the Temple Precinct site (**LY_583**) was chosen to represent the locality due to its long chronology and central position within Canterbury.

### 3.5.4 *Voronoi Tessellation*

As noted above (**3.5.1**), attempts to produce hypothetical spatial models of territoriality for the study regions were undertaken using three different forms of spatial allocation. The first used a process known as Voronoi Tessellation. It works by calculating polygons around point data, the extent of which are determined by drawing equidistant lines so that any location within a polygon is closer to its associated data point than to any other data point (Wheatley and Gillings 2002, 149-51; Conolly and Lake 2006, 211-12). The resulting diagrams go by a number of discipline-specific names, the most common being Thiessen Polygons or Voronoi Diagrams. The analysis was undertaken in ArcGIS (*Figure 3.11*), with the cluster centres derived from Grouping Analysis being used as the target features.[55]

Being visually distinctive and computationally simple to create, Voronoi diagrams were used extensively in processualist accounts to explore patterns of settlement and demarcate areas of influence around key archaeological sites (Cunliffe 1971; Grant 1986b; Haselgrove 1986). Likely because of this association, more recent contributions have used the technique less as a method of empirical description and more as a means of *suggesting* the areal extents of territories for the purposes of discussion (Ruggles and Church 1996; Wheatley and Gillings 2002, 150-1; Yanchar 2013, 59-60; Fernández-Götz 2014, 180-1). Voronoi Tessellation has seen only minimal usage in early medieval archaeology. In an exploratory analysis, Chris Arnold (1997, 222-7) calculated Voronoi Polygons around elite graves to reconstruct the shifting territorial boundaries of sixth- and seventh-century polities. More recently, Voronoi Polygons have been calculated around *-ge* place-names in east Kent and tested against the density of early Anglo-Saxon burials as a way of visualising regional administrative units (Brookes and Reynolds 2011, 90-2).

A major limitation of the technique is that it is an entirely geometric form of spatial allocation. This means that factors like topography are not taken into account – an obvious

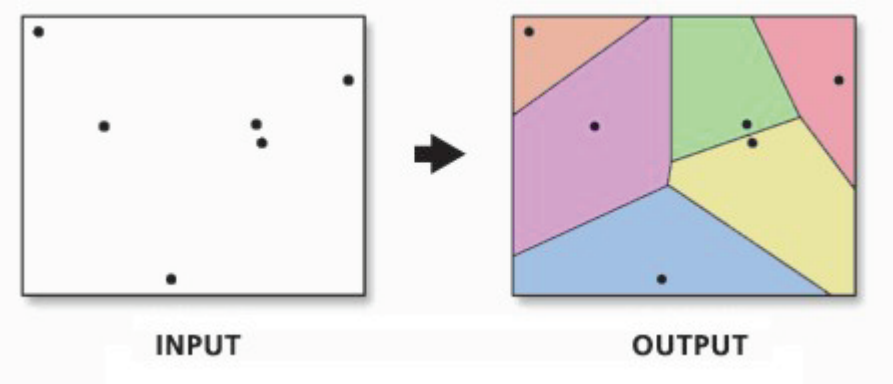



*Figure 3.11:* An overview of the 'Create Thiessen Polygons' ArcGIS function. Image ©ESRI (http://desktop.arcgis.com/en/arcmap/10.3/tools/analysis-toolbox/create-thiessen-polygons.htm).

[55] ArcMap>Analysis>Proximity>Create Thiessen Polygons. All parameters as default.

problem for all but the flattest of the study regions (Wheatley and Gillings 2002, 151). The technique is arguably unsuited to the task of reconstructing the areal extents of past territories for two additional reasons: firstly, in returning polygons that do not overlap it is unable to account for contested frontiers; and secondly, because it assumes absolute spatial allocation when in reality there are likely to have been peripheral areas without direct control. While the results should not therefore be thought of as demarcating past boundaries in any absolute sense, then, these limitations do not preclude the usage of Voronoi Tessellation as a means of generating possible reconstructions, primarily for the purposes of comparison and speculation.

### 3.5.5 *Buffer zones*

The second approach to territorial modelling calculated spatial zones using the ArcGIS 'Buffer' function (Figure 3.12).[56] This relatively simple technique calculates isotropic (identical in all direction) spatial zones of a predetermined distance around features (Wheatley and Gillings 2002, 148-9). The simplicity of the calculation allows for various applications of relevance to archaeologists: creating a series of zonal distances along the length of linear features such as rivers or roads is one example. In the current research, the function was used to calculate spatial zones around the group centres identified from the Grouping Analysis (**3.4.6**). Although the size of the buffer zones could have been arbitrarily set, the decision was taken to infer their size based on the results of the Ripley's K-Function analysis (**3.4.4**). Specifically, the distance at which the data stopped being statistically significantly

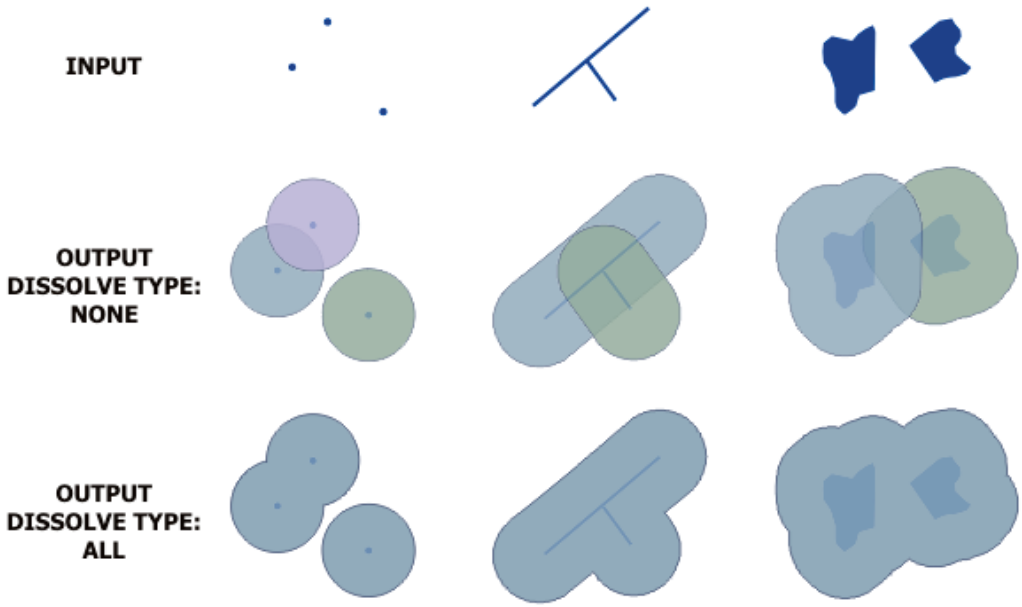



*Figure 3.12:* An illustration showing how the 'Buffer' ArcGIS function works. Image ©ESRI (http://desktop.arcgis.com/en/arcmap/10.3/tools/analysis-toolbox/buffer.htm).

[56] ArcMap>Analysis>Proximity>Buffer. All parameters as default.

clustered was used. This is, to the author's knowledge, a novel way of considering territorial core zones, but there is no logical reason why evidence from a multiscalar analysis that describes the spatial pattern of a dataset over a range of distances should not be used in this manner. As a geometric form of spatial allocation, the territorial models created from the Buffer Analysis have similar limitations to the Voronoi Tessellation; namely, they do not take geographic or other factors into consideration. Despite this, the Buffer Analysis can be thought of as a more appropriate way of investigating past territoriality because (a) it is informed by statistical methods, (b) is capable of modelling territorial overlaps and (c) does not assume that all areas were directly controlled. It is therefore argued that should the majority of data points fall within the calculated buffer zones, and if the zones themselves make topographic sense, the resulting models can be viewed as a valid reconstruction.

### 3.5.6 *Standard deviational ellipses*

The final approach to territorial modelling made use of the ArcGIS function known as 'Directional Distribution (Standard Deviational Ellipse)'. This function works in two ways. Firstly, the mean centre (an average of the x and y coordinates of all data points) is calculated. Then, the standard deviation of the x and y coordinates from each data point from the mean centre is used to define the size and shape of the ellipse (*Figure 3.13*). The size of the resulting ellipse is based on the number of standard deviations computed, with 1 and 2 standard deviations returning ellipses covering approximately 68% and 99% of the features respectively.[57] The analysis was run for each group of sites identified in the Grouping Analysis (**3.4.6**), with iterations using 1 and 2 standard deviational ellipses to simulate the core and periphery of each territory.[58]

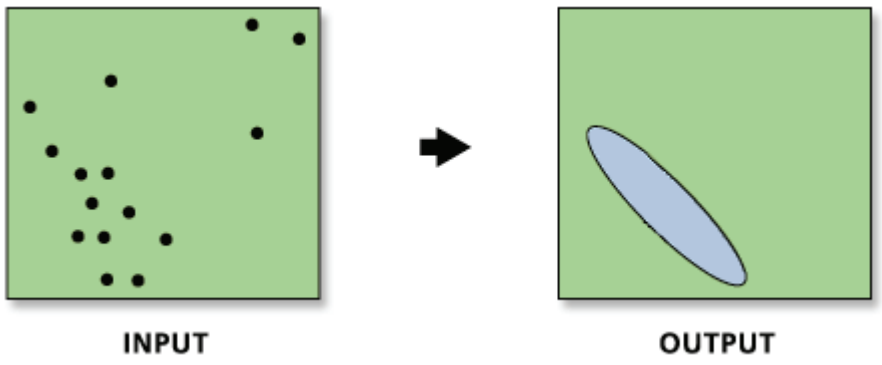



*Figure 3.13:* An illustration showing how the 'Directional Distribution (Standard Deviational Ellipse)' ArcGIS function works. Image ©ESRI (http://desktop.arcgis.com/en/arcmap/10.3/tools/spatial-statistics-toolbox/directional-distribution.htm).

[57] See http://desktop.arcgis.com/en/arcmap/10.3/tools/spatial-statistics-toolbox/h-how-directional-distribution-standard-deviationa.htm for further information on the calculation.
[58] ArcMap>Spatial Statistics>Measuring Geographic Distributions>Directional Distribution (Standard Deviational Ellipse). Ellipse Size: '1_Standard_Deviation' (first iteration) and '2_Standard_Deviation' (second iteration). All other parameters as default.

The technique was initially proposed by Lefever (1926) and is routinely used in modern GIS analyses (e.g. Wang et al. 2015). It has seen limited usage in archaeological research, however. Standard deviational ellipses have been employed in the identification of use-wear patterns on stone anvils (de la Torre et al. 2013) and, more recently, in the demarcation of burial clusters at a Neolithic cemetery in north-western France (Le Roy et al. 2016). The author is not aware of any previous study using the technique to explore and model broader patterns of settlement and activity. In considering the spatial shape of the distribution, the resulting ellipses should theoretically be the best fit for the data relative to the two other methods of spatial allocation used in this thesis. This also makes the technique more suitable for considering real world examples where the distribution of activity may have been directional, such as a group of sites whose spatial position relates to the alignment of a river or band of high ground.

# 4
# LYMINGE

This chapter presents a case study focused on the historically documented royal vill and later monastery at Lyminge in Kent. It begins with a consideration of the study region and a brief description of its early medieval archaeology. The second section consists of a local-scale investigation, situating Lyminge within its immediate environmental and archaeological context. This is followed by an examination of the region's archaeology, with a range of analytical techniques being used to characterise and model the dataset. A discussion then attempts to contextualise the results within a broader archaeo-historical framework.

## 4.1 INTRODUCTION

### 4.1.1 *The study region*

Unlike the other case studies in this thesis, a rectangular study region was used due to the unusual shape of the Kentish coastline. Broadly centred on Lyminge (TR 1620 4100), this comprised a 45km x 60 km area encompassing almost the entirety of east Kent. Although covering a much larger overall area (2700 km$^2$) than the other case studies, the actual amount of land surface (1565.72 km$^2$) is broadly comparable. The physical landscape of the region is diverse, ranging from fertile plains to chalk downland and from wooded clayland to coastal wetland. This diversity is on the most part due to the erosion of the Wealden anticline – a dome of uplifted Cretaceous sands, clays, greensands and gaults – which divides Kent into the North Downs and the Weald (Williams 2007, 3). Overall, the region comprises a number of broad geological and topographical zones (*Figure 4.1*).[59] The south-western portion of the study region features Romney Marsh, a coastal wetland created by an accumulation of alluvium, and the edge of the Weald, composed primarily of Wealden Clay (WC). North of this is a narrow band of gault and greensand (GLT/LGS/GUGS). The North Downs dominate much of the region, being a ridge of mainly white chalk (WHCK) that naturally divides east Kent along a northwest-southeast axis. The Isle of Thanet is a similar formation, with the rest of the north coast being formed of London Clays

[59] Geological information was taken from the British Geological Survey's *Geology of Britain viewer*, accessible at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html. Geological codes relate to the *Lexicon of Named Rock Units* accessible at: http://www.bgs.ac.uk/lexicon/.

(LC). These zones have some correlation with those described by Alan Everitt (1986, 43-5), who divided the Kentish landscape into six 'contrasting countrysides' or '*pays*': the most fertile and earliest settled Foothills and Holmesdale, and the less fertile Marshland, Downland, Chartland and Weald. Although their usefulness as accurate environmental categories has since been questioned (Harrington and Welch 2014, 50-1), Everitt's *pays* have had an enduring legacy in discussions of early medieval settlement patterns in Kent (e.g. Brookes 2007a, 2010).

As shown in *Figure 4.1*, the most significant rivers in the study region are the Little Stour and Great Stour. The two major tributaries of the Great Stour are the Upper Great Stour and the East Stour, which confluence at Ashford. The Little Stour flows north-eastwards from Lyminge – where it is known as the Nailbourne – to Plucks Corner, where both the Little Stour and Great Stour confluence and flow eastwards to Pegwell Bay on the east coast. The region also features a number of secondary rivers, including the Wantsum in the

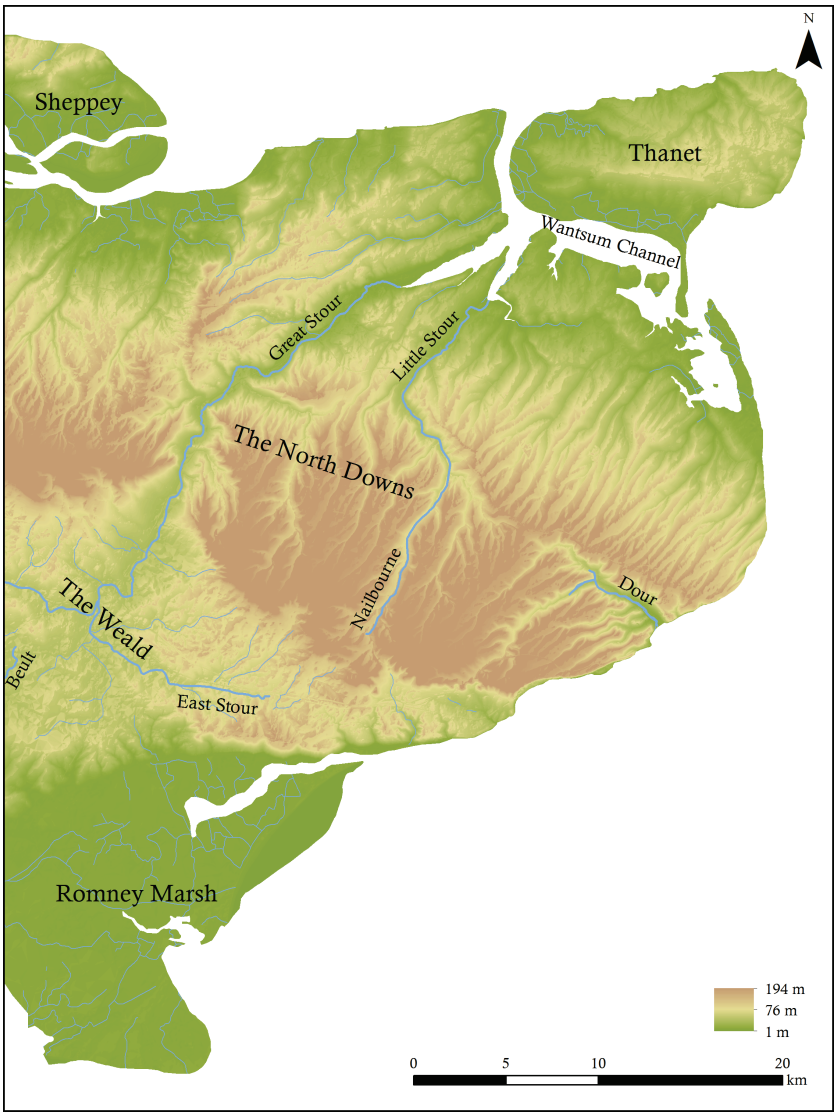



*Figure 4.1:* Major rivers and topographic zones in the study region (*contains Ordnance Survey data © Crown copyright and database right 2017*).

north, the Dour in the south and both the Oare and Faversham Creeks, which join the Swale in the north-west of the region. Overall the region is of very good agricultural potential, featuring some of the most fertile soils in southern England (Harrington and Welch 2014, 48). In terms of administration the study region comprises the eastern part of the historic county of Kent (99.60%) as well as a very small part of Sussex (0.40%). Modern population centres are found at Canterbury, Margate in the north-east, Folkestone and Dover in the south and Ashford in the west. Maidstone is located just beyond the limits of the study region to the west, with London and Brighton being situated further to the north-west and south-west respectively.

Being the only region in this thesis to feature significant sections of coastline, the Lyminge case study presented a number of problems from a mapping and GIS perspective. For example, it has been estimated that coastal erosion may account for upwards of 4.8 km of lost land in certain parts of Kent (Brookes 2007a, 44). The period in question also predates the silting up of the Wantsum Channel so Thanet would still have been a separate island, as noted by Bede (*HE* I.25). Romney Marsh, the largest area of wetland on the south coast, was also partially reclaimed during this period due to alluvial accumulation (Long et al. 2002). The combination of these factors is a physical environment that would have been significantly different during the early medieval period than it is today. To account for this, a modern Digital Terrain Model was clipped to the reconstructed Anglo-Saxon coastline GIS shapefile created as part of Stuart Brookes' (2007a) doctoral thesis.[60]

### 4.1.2 *Antecedent archaeology*

It is instructive to begin with a brief archaeological review of the region, not only as a form of introduction but also to enable a longer-term perspective to be taken in the analysis and discussion that follows. Beginning chronologically, the most significant early prehistoric monuments from the region are the Stour Valley earthen long barrows, which are some of the largest Neolithic monuments known in Britain (Champion 2007, 76-81). Early activity is further illustrated by the relatively recent finding of a number of causewayed enclosures (Oswald et al. 2001), one of which – Chalk Hill near Ramsgate – may have been overlain by a cursus (Shand 2001). Activity in the later Neolithic and Bronze Age is perhaps best demonstrated by the spread and relative density of round barrows, the number of which is thought likely to exceed 800 across the county (Champion 2007, 87). The influence of these monuments on early medieval patterns of settlement is well demonstrated at Lyminge, the antecedent character of which was considered in **2.3.1** and is revisited in **4.2.1**. This can be

[60] Stuart Brookes, *pers. comm.*, 29th February 2016. His reconstruction was created using a number of historical and environmental sources, including the *Historical Atlas of Kent* (2004).

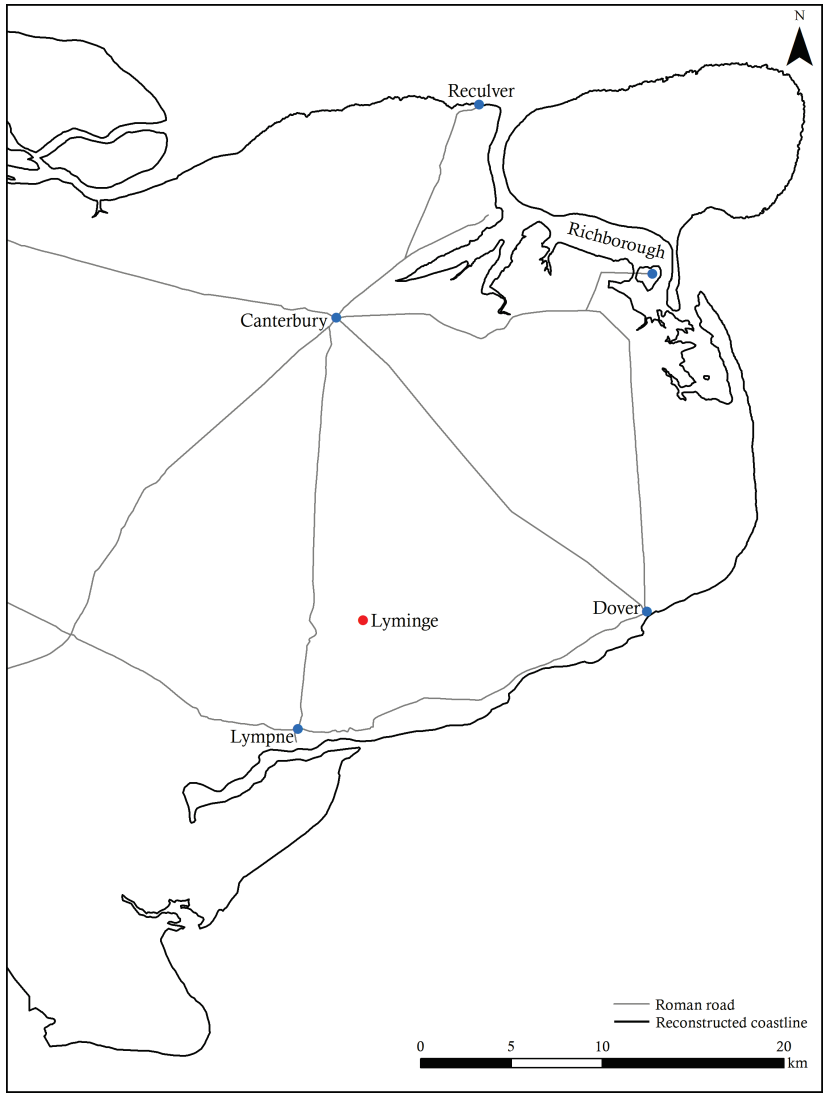



*Figure 4.2:* Lyminge and the study region in relation to major Roman sites and the associated road network.

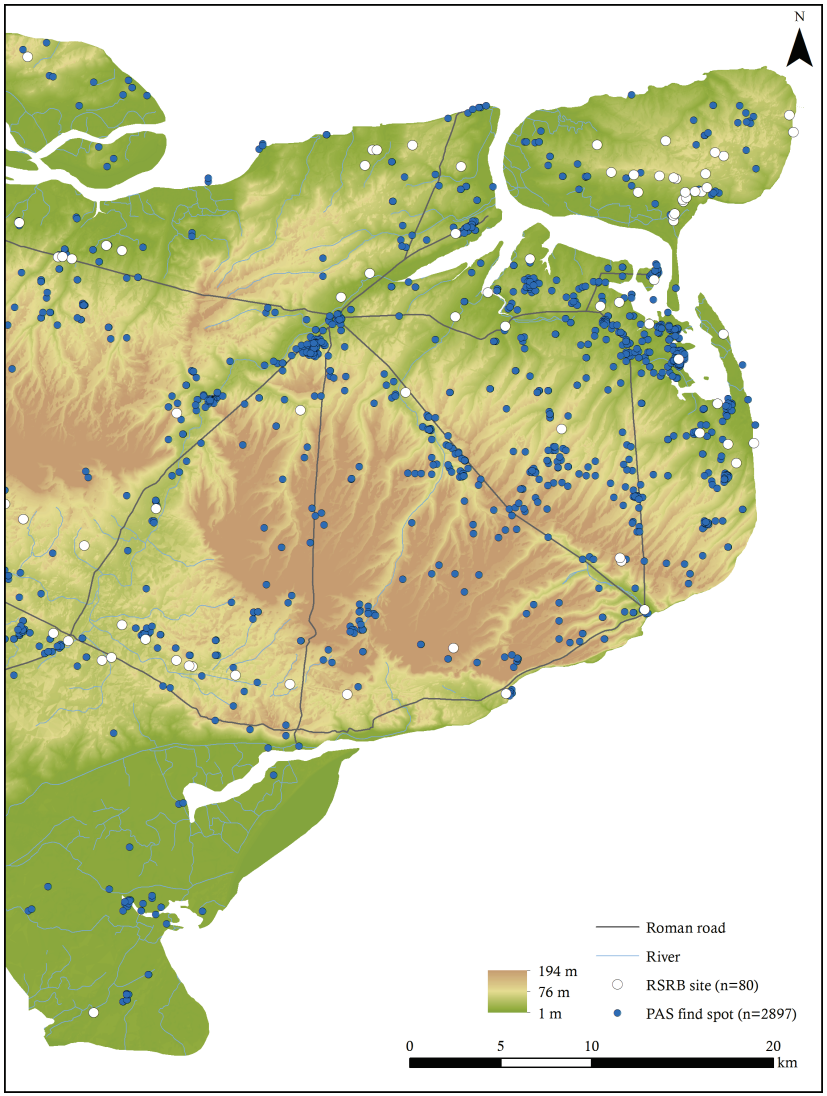



*Figure 4.3:* The study region during the Roman period (*contains Ordnance Survey data © Crown copyright and database right 2017*).

further illustrated by sites such as Saltwood (**LY_507**), where a series of three spatially separate but chronologically overlapping early Anglo-Saxon cemeteries were found, each focused on an Early Bronze Age barrow (Booth et al. 2011). Somewhat paradoxically, the evidence of these monuments being destroyed by Iron Age occupation could indicate a much less respectful attitude during the first millennium BC (see Champion 2007, 88 for examples). Regardless of later reverence or disregard, the social complexity and material wealth of the communities that built these monuments is well evidenced by the finding of spectacular objects, like the exquisite gold cup discovered via metal detecting at Ringlemere (Needham et al. 2006).

The later prehistory of the region places it within the lands of a pre-Roman tribal grouping or loose federation known as the *Cantiaci*, whose name (and presumably some aspects of its culture and administrative structures) was preserved at *Durovernum Cantiacorum*, the later *civitas* capital at Canterbury (Williams 2003, 221-2; 235-6; Millett 2007, 139-41). At its height, the territory commanded great material wealth, most famously evidenced by the high-status graves from Aylesford (Evans 1890), and was the first in Britain to produce its own coinage (Holman 2000, 2005). Being the landing site of both Caesar's (in 55 BC and 54 BC) and Claudius' (in AD 43) invasions, the process of romanisation in east Kent was relatively swift. The network that developed, visualised in *Figure 4.2*, consisted of four ports – Reculver (*Regulbium*), Richborough (*Rutupiae*), Dover (*Dubris*) and Lympne (*Lemanis*) – connected to Canterbury, which was in turn connected as far as Wroxeter (*Viroconium Cornoviorum*) via Watling Street (Margary 1973, 35-44). Canterbury itself was a major socio-cultural and economic hub by the end of the first century, and certainly one of the most important towns in Roman Britain (Wacher 1995, 189-207; Millett 2007, 148-50; 156-8). This importance is borne out by the results of some of the largest urban excavations undertaken in the twentieth century (e.g. Frere et al. 1982; 1983; 1987; Blockley et al. 1995).

Although there is no readily available database of prehistoric sites, at least to the author's knowledge, Roman-period activity can be mapped using a combination of the PAS online database and the recently completed *Rural Settlement of Roman Britain* project (Allen et al. 2015). Using these resources, data relating to 2897 PAS finds and eighty settlements were obtained.[61] The distribution of these data is given in *Figure 4.3*. From this it is interesting to note a somewhat uneven distribution of sites, with activity typically favouring lowland plains and valleys, though the number of sites in more marginal (e.g. Romney Marsh) and upland (e.g. the North Downs) areas is not insignificant. Unsurprisingly, the greatest

[61] The PAS online database, available at: https://finds.org.uk/, was accessed on 13th June 2016 and data downloaded using the 'search via map' function. The *Rural Settlement of Roman Britain* project, available at: https://doi.org/10.5284/1030449, was accessed on 15th July 2016 and data downloaded using the 'query' function.

density of evidence is found at Canterbury, with a further concentration near Richborough and the east coast. Significant activity is also found in close proximity to the road network, especially around Canterbury and the road leading to Dover. The study region was evidently a place of significant activity during the Roman period, then, with a settlement pattern that appears to have been focused on a handful of important localities.

### 4.1.3 *The regional dataset*

Following the methodology described in **3.2.2**, the data collection process managed to record 675 sites from the study region. In terms of chronological certainty, 519 (76.89%) were thought 'certain' to relate to the study period (AD 400-800) while forty-nine (7.26%) were categorised as 'probable' and 107 (15.85%) 'uncertain'.[62] The latter category was further subdivided into sites of completely unknown date (twenty-four), sites that are broadly dateable to the early medieval period (forty-four) and sites that could be calendrically dated but which have a ≤50% chance of being chronologically relevant (thirty-nine). A breakdown of the dataset is given in *Table 4.1* and a distribution map of the sites is given in *Figure 4.4*.

Although lacking chronological precision – four centuries' worth of archaeology are visualised in one map – a number of introductory and necessarily general remarks can be made from *Figure 4.4*. It can be observed how the distribution of sites is broadly similar to that described above for the Roman-period evidence (*Figure 4.3*). Indeed, it is possible to identify a clear preference for lowland areas, with particular concentrations of sites in the coastal zone and along river valleys. It also seems apparent that post-Roman activity made extensive use of pre-existing infrastructure, with a considerable number of sites being found on or very near to a Roman road. In the context of the present study it is interesting to note a dense cluster of sites (primarily PAS finds) in the vicinity of Lyminge (**4.2.2**). Places such as Canterbury and Eastry appear to have been similar foci for activity.

Despite similarities in the overall distribution of Roman-period and fifth-eighth-century evidence, it is important to emphasise the striking difference in scale (*Figure 4.5*). Put simply, there is over four times more first-fourth-century sites in the region than fifth-eighth. This disparity is further accentuated by the methods used to compile the two datasets: the former, being the empirical basis of this chapter, was the product of several months' worth of exhaustive data collection and involved significant archival research; the latter was compiled in a day from two readily available online resources. With even the most conservative of approaches, emphasising retrieval biases and issues of archaeological visibility, it is difficult to make a convincing case for post-Roman continuity at any comparable scale. Indeed, we are clearly dealing with a reduced population operating at a very different societal scale.

[62] See *Table 3.2* for a description of the chronological certainty assessment.

| | C/P/U sites | | C/P sites | | C sites | |
|---|---|---|---|---|---|---|
| Site type | No. of sites | % | No. of sites | % | No. of sites | % |
| Artefact find spot | 492 | 72.89% | 402 | 70.77% | 382 | 73.60% |
| Burial site | 114 | 16.89% | 98 | 17.25% | 86 | 16.57% |
| Settlement site | 31 | 4.59% | 31 | 5.46% | 27 | 5.20% |
| Inferred occupation | 26 | 3.85% | 25 | 4.40% | 16 | 3.08% |
| Ecclesiastical site | 10 | 1.48% | 10 | 1.76% | 6 | 1.16% |
| Hoard | 2 | 0.30% | 2 | 0.35% | 2 | 0.39% |
| Total | 675 | 100.00% | 568 | 100.00% | 519 | 100.00% |

*Table 4.1:* An overview of the regional dataset. The abbreviations used – 'C' for certain, 'P' for probable and 'U' for uncertain – relate to the level of chronological certainty assigned to sites in the dataset, as outlined in *Table 3.2*. Note: some of the analyses reported in this chapter combine the 'settlement site' and 'inferred occupation' site types into a single category termed 'occupation sites'.

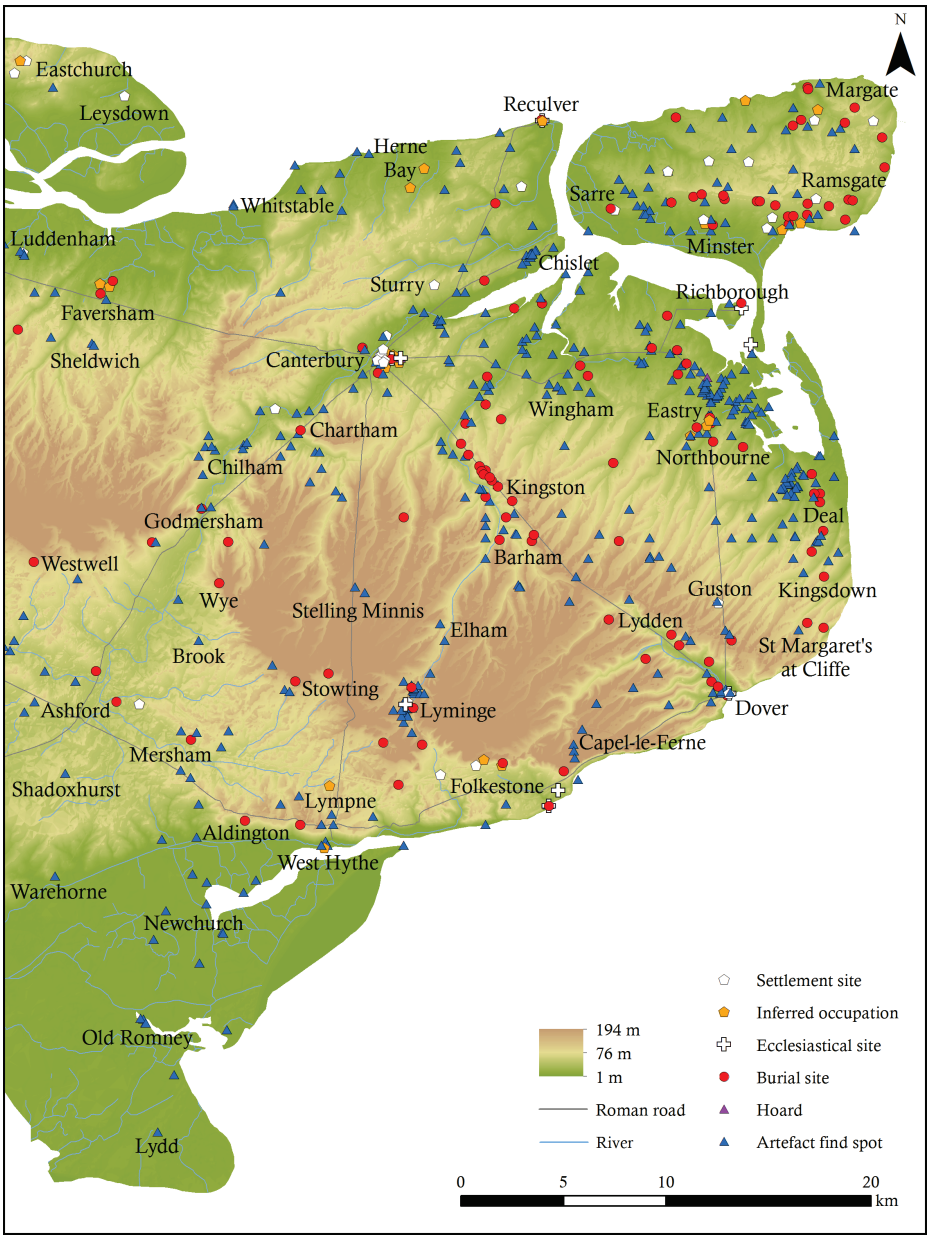



*Figure 4.4:* A distribution map of the regional dataset with prominent localities labelled (*contains Ordnance Survey data © Crown copyright and database right 2017).*

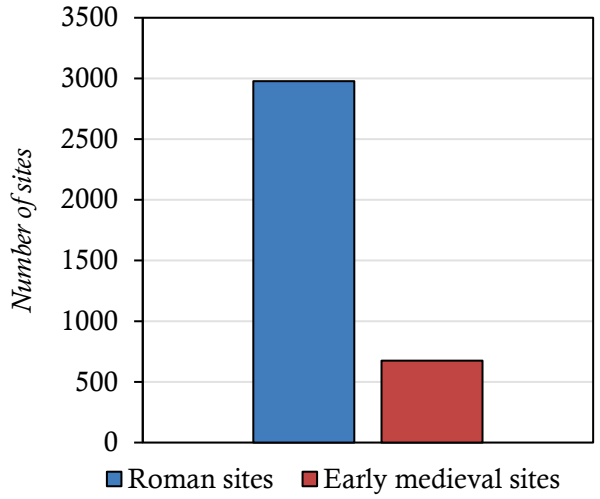



*Figure 4.5:* A bar chart comparing the numbers of sites in the Roman-period (n=2977) and fifth-eighth-century (n=675) datasets.

| Phase | Description | Date range | No. of sites |
|---|---|---|---|
| 1 | Before the great-hall phase | AD 400-600 | 351 |
| 2 | During the great-hall phase | AD 600-700 | 298 |
| 3 | After the great-hall phase | AD 700-800 | 180 |

*Table 4.2:* The phasing scheme used for the regional dataset, based on the sequence at Lyminge (**2.3.1**). The number of sites within each phase was determined using the results of the chronological seriation.

### 4.1.4 *Chronology*

A scheme of chronological analysis was undertaken to prepare the regional dataset for further investigation. The first step in this process was to chronologically seriate the dataset. This was undertaken in accordance with the method described in **3.3.3**, using all chronologically certain and probable sites as well as the thirty-nine uncertain sites that could be calendrically dated.[63] The output, a very large data matrix of 607 sites arranged in chronological order, can be found in *e-Appendix 2a*. This was used to construct a bespoke phasing system which centred on the sequence at Lyminge (outlined in **2.3.1**). By manipulating the seriation table, it was possible to isolate sites that were 'active' before, during and after the great hall phase at Lyminge (*Table 4.2*).[64] As with any phasing scheme there were areas of overlap. It was possible, for example, for a site to be assigned to multiple phases; the settlement at Biggins Wood (**LY_049**) was considered 'active' during both Phases 2 and 3 on the basis of associated pottery dating from the seventh-eighth centuries (Bennett 1989). Despite this, the phasing scheme enabled quantitative comparison between different time periods, thereby allowing the analysis to focus on the contemporary interactions of Lyminge while

[63] There is an important distinction to be made here between a site where no specific calendrical date can be proposed (e.g. 'early medieval') and a site that can, but whose date range partially extends beyond the chronological limits of the study (AD 400-800).
[64] As noted in **3.3.4**, this was achieved by applying binary filters to isolate 'active' (1) or 'inactive' (0) sites for each time segment in the seriation table.

also considering its emergence and decline from a longer-term perspective. In short, it made it easier to analyse the dataset in a more chronologically meaningful way.

The data collection process also recorded data from fourteen radiocarbon samples from three different sites. These have been recalibrated according to the methodology described in **3.3.2** and are presented in *Table 4.3*. Being from relatively recent excavations, the overall quality of the samples is good, with error ranges of ±20-45. Although the recalibrated date ranges are not significantly different to those as previously published, they do allow for slight revisions to individual site chronologies. These are considered later in the chapter as and when they become relevant.

## 4.2 LYMINGE IN CONTEXT

### 4.2.1 *The site and its setting*

Having previously described the extensive archaeological sequence at Lyminge in some detail (**2.3.1**), we will begin our investigation with an introduction to the locality and a consideration of the evidence from a predominately landscape perspective. This will involve elements of formal analysis, but will primarily be achieved through a conventional comparative discussion of the evidence. Located at the head of the Nailbourne and set within the main axis of the Elham Valley, Lyminge is positioned between the historic parishes of Elham to the north, Postling to the south-west and Newington to the south-east. It is first attested as *Liminge* in AD 689, where a charter of Oswine transfers ownership of iron-bearing land from the royal vill to St Augustine's, Canterbury (S 12). Eighth- and ninth-century charters are altogether more numerous (see below, **4.2.2**).

In terms of antecedent archaeology, the Kent HER records twenty-six prehistoric sites from the parish, although the vast majority of these are stray finds or uncertain features.[65] The most substantial features are known from the Westwood area some 3 km north-west of the village. Here, a 1994 evaluation identified Neolithic flint scatters, pottery and possible charcoal pits as well as a quantity of Early Roman pottery nearby (Pollard and Stevens 1996). At least six Bronze Age barrows are also known from the area. The most substantial prehistoric feature identified in the village proper is the Bronze Age barrow encountered during the University of Reading excavations (Thomas 2017, 100-1). Roman evidence is similarly scarce, with just eight sites recorded in the Kent HER. Of these, the most noteworthy is the unpublished second- or third-century inhumation discovered in 1961 at the western edge of the village.[66] Some form of occupation might be inferred from the twenty-

[65] The Kent HER was accessed on 15th November 2016 via the *Exploring Kent's Past* online portal, available at https://webapps.kent.gov.uk/ExploringKentsPast/.
[66] HER No. TR 14 SE 23.

| Site information | | Radiocarbon sample information | | | Published date ranges | | IntCal 13 date ranges | |
|---|---|---|---|---|---|---|---|---|
| ID | Site | RC sample | RC age | Description | 68.2% | 95.4% | 68.2% | 95.4% |
| LY_230 | Foster Road | NZA-28893 | 1427±25BP | Stake from probable well (Feature 3504) | N/R | 580 – 660 | 612 – 647 | 586 – 657 |
| LY_230 | Foster Road | NZA-28894 | 1444±25BP | Stake from probable well (Feature 3503) | N/R | 570 – 650 | 601 – 642 | 572 – 651 |
| LY_306 | Kingsborough Manor | NZA-22278 | 1498±35BP | Charcoal from SFB fill (Feature 6084) | 535 – 620 | 430 – 650 | 540 – 610 | 431 – 643 |
| LY_507 | Saltwood | NZA-21511 | 1701±30BP | Gaming counter from Grave 1048 | N/R | 250 – 420 | 263 – 390 | 253 – 406 |
| LY_507 | Saltwood | NZA-19639 | 1446±35BP | Bone sample from Grave 6635 | N/R | 540 – 660 | 592 – 646 | 555 – 655 |
| LY_507 | Saltwood | NZA-20448 | 1455±35BP | Bone sample from Grave 1391 | N/R | 540 – 660 | 584 – 641 | 550 – 652 |
| LY_507 | Saltwood | NZA-19719 | 1415±35BP | Bone sample from Grave 6421 | N/R | 560 – 680 | 609 – 654 | 575 – 665 |
| LY_507 | Saltwood | NZA-19638 | 1352±35BP | Bone sample from Grave 1216 | N/R | 620 – 780 | 645 – 686 | 622 – 766 |
| LY_507 | Saltwood | NZA-19887 | 1336±35BP | Bone sample from Grave 1244 | N/R | 640 – 780 | 651 – 761 | 643 – 768 |
| LY_507 | Saltwood | NZA-19640 | 1560±35BP | Bone sample from Grave 6231 | N/R | 420 – 600 | 429 – 542 | 415 – 575 |
| LY_507 | Saltwood | NZA-20445 | 1474±40BP | Bone sample from Grave 3885 | N/R | 430 – 660 | 560 – 630 | 435 – 653 |
| LY_507 | Saltwood | NZA-19885 | 1435±40BP | Bone sample from Grave 4614 | N/R | 540 – 670 | 596 – 651 | 556 – 661 |
| LY_507 | Saltwood | NZA-20447 | 1596±45BP | Bone sample from Grave 1577 | N/R | 340 – 600 | 413 – 535 | 355 – 568 |
| LY_507 | Saltwood | NZA-20446 | 1395±35BP | Bone sample from Grave 1491 | N/R | 560 – 700 | 621 – 662 | 588 – 678 |

*Table 4.3:* Radiocarbon samples of relevance from the study region (data from Allen et al. 2006, 17-19; Powell and Birbeck 2006, 13-17; Stevens 2009, 148-9) and their recalibration using IntCal 13 (Reimer et al. 2013) and OxCal v4.2 (Ramsey 2009; Ramsey and Lee 2013), reported at 1σ (68.2%) and 2σ (95.4%). Calibrated date ranges are years AD/CE. 'N/R' being an abbreviation for 'not recorded', which is used where samples have not been previously calibrated or where calibrated date ranges were only reported at 1σ. Note: the radiocarbon sequence at Lyminge was discussed previously (**2.3.1**).

seven Roman PAS finds known from the village, but it is difficult to gauge the extent and significance of settlement from this evidence. Overall, the available evidence suggests a reasonably low level of activity in the parish before the early medieval period. This assessment is in contrast to previous accounts (e.g. Everitt 1986, 20), which have typically described the locality as an important Roman centre on the basis of the Roman basilica purported to have been found by Canon Jenkins (1874, 1876, 1887). Given the likelihood that the structures encountered by Jenkins were of early medieval date, there is little reason to argue Lyminge as either a significant Roman settlement or a particularly robust example of Romano-British continuity (Thomas 2013, 115; 2017, 103). As such, it is not therefore possible to provide an immediate archaeological context for the Anglo-Saxon settlement.

The focus of early Anglo-Saxon settlement within Lyminge was on the plateau of Tayne Field. The spatial dimension of this establishment can be understood at a number of scales. At the most immediate, the internal configuration of the settlement was clearly influenced by antecedent features. The first phase of settlement included a post-built structure that was partially located over the ring-ditch of a Bronze Age barrow, while the 'doline' appears to have been used variously as a clay pit, industrial area and midden (Thomas 2017, 100-3).[67] The location of the site was likely also influenced by practical and strategic factors. Being located at the head of the Nailbourne would have given the inhabitants of Lyminge ready access to a useful and abundant freshwater source. Indeed, the 2014 excavation of a sequence of palaeochannels and waterlogged deposits revealed evidence for economic activities such as foraging and woodworking at the riverside (Maslin 2017). Although unlikely to have been navigable, the river would still have linked Lyminge to settlements further downriver, potentially as far as the Wantsum Channel. More broadly, Lyminge's position within a downland valley would have offered an abundance of fertile agricultural soils and high-quality lands for grazing.

Three aspects of the site's setting require further emphasis. Firstly, it is interesting to note the reasonably conspicuous topographic position of the pre-monastic settlement, being located as it was on the plateau of prominent chalk spur. Secondly, the proximity of two cemeteries, Lyminge I (**LY_366**) and II (**LY_367**), is significant, and it is possible that they served to frame the settlement in relation to its main access points (Thomas 2013, 118). Thirdly, and more broadly, it is important to highlight the site's position within the main axis of the Elham Valley, one of the major routeways across the North Downs. Bearing these three considerations in mind, viewshed analysis was used to explore the site's spatial position further. As explained in **3.5.2**, the technique involves specifying an observation point and calculating, based on observer angle and topographic height, which cells are likely

[67] The broader implications of this antecedent association are discussed in **8.2.2** and **8.2.3**.

to have been visible from it in a raster dataset (in this case an OS-supplied Digital Elevation Model). This was undertaken using the Tayne Field settlement (TR 1620 4100) as the observation point (*Figure 4.6*). The results indicate that Lyminge would have enjoyed commanding views of the immediate landscape, as is demonstrated by the number of sites that fall within the visible area. These include the aforementioned cemeteries, several early-middle Anglo-Saxon PAS finds (e.g. **LY_341**) and the modern church, under which the seventh-century church is presumably located (**LY_542**).[68] To the south, the burial site discovered in 1760 at Milky Down (**LY_396**) may also have been visible (Gomme 1886a, 133; Meaney 1964, 130; Richardson 2005b, 58). Moreover, we might include the find spot of two unpublished silver sceattas at Elham (**LY_437**) within this visible area. Beyond specific instances of intervisibility, the results demonstrate how the settlement would have had good general visibility along the length of the Elham Valley. The site's apparent ability to see – and be seen by – those entering the valley from both sides is a significant finding. As one of the few natural passages across the North Downs, the importance of the valley for long-distance trade and communication should not be underestimated; indeed, the ability to visually control this major route must therefore have been of great socio-economic significance. Taking these considerations into account, Lyminge can be seen to have exploited its immediate landscape for practical – and perhaps ideological – reasons.

### 4.2.2 *Local archaeological context*

Having set Lyminge in its immediate context, it is now appropriate to review the evidence from contemporary and near-contemporary sites in the wider locality. This will allow us to contextualise the evidence from Lyminge within a local framework and articulate a provisional sequence. Aside from the Lyminge I and II cemeteries, which were reviewed in **2.3.1**, the most immediately relevant body of evidence comes from the large number of stray artefacts. At the time of writing, more than thirty early medieval PAS finds are known from the village (*Figure 4.6*). These include high-status artefacts that span the length of the excavated sequence, from fifth-sixth-century brooches (e.g. **LY_353**) to early eighth-century coins (e.g. **LY_354**). Their distribution across the village does not allude to particular foci, but the sixth-century sword pommel (**LY_358**) and reasonably large number of early brooches (e.g. **LY_350**) found in the vicinity of the Lyminge II cemetery presumably indicate unexcavated

[68] Sporadic excavations during the 1850s and 1860s in the graveyard of the modern church by the then Rector uncovered a masonry structure in the style of the 'Kentish group' of early foundations (Jenkins 1874, 1876, 1887; Taylor 1969). Much less certainty can be afforded the structure found immediately to the south-west, but it seems altogether more likely to have been some form of ancillary building than the Roman basilica proposed by Jenkins (Kelly 2006, 99-100; Thomas 2013, 115).

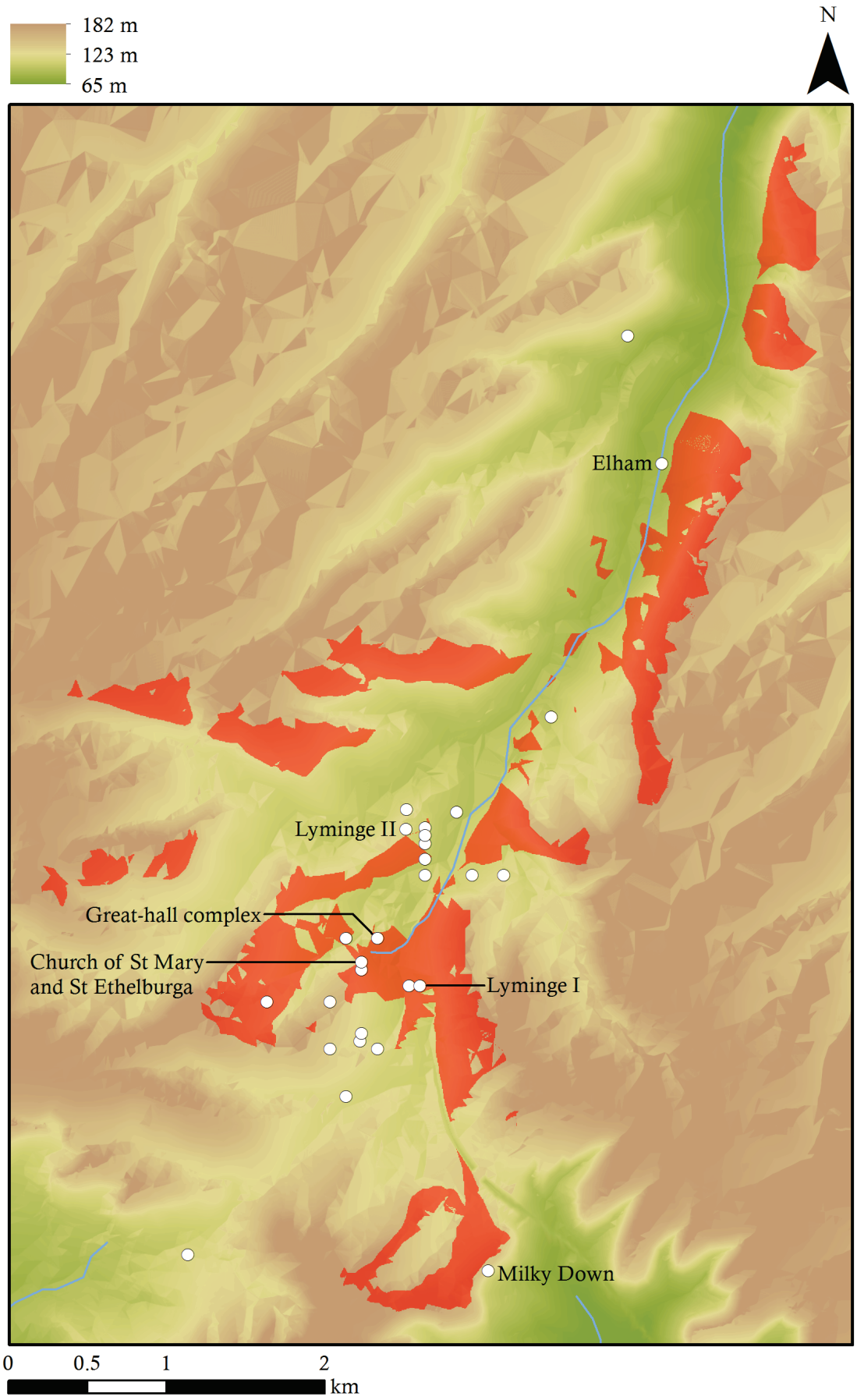



*Figure 4.6:* The results of the viewshed analysis. Areas likely to have been visible from Lyminge are shaded red, with contemporary and near-contemporary sites being represented by white dots. Sites mentioned in the text are labelled (*contains Ordnance Survey data © Crown copyright and database right 2017).*

burials. Although large parts of the village have now been excavated, it seems likely that other areas of settlement remain to be discovered – as recent research at Rendlesham has shown (Scull et al. 2016), we should expect activity at great hall complexes to be found across a wide area and not just limited to the immediate vicinity of the complex itself.

Beyond the village, we can consider the nearby funerary evidence from two eighteenth-century excavations to offer some broader context. At Milky Down (**LY_396**), three burials with coloured beads were uncovered in 1760 (Gomme 1886a, 133). Although few records remain, an early Anglo-Saxon date has been proposed on the basis of the beads (Meaney 1964, 130; Richardson 2005b, 58). A pair of keystone-garnet disc brooches included in Faussett's (1856, 228) *Inventorium Sepulchrale* are also known from Postling (**LY_475**), having been recovered in *c.* 1776. No skeletal material is mentioned but the finds presumably indicate a high-status female burial from the mid-sixth century (Meaney 1964, 132; Richardson 2005b, 61-2). This albeit scarce evidence might be taken to indicate the existence of broadly contemporary communities some 4 km to the south-east and south-west respectively. A similar case might be made for Elham, some 5 km to the north, if the aforementioned early eighth-century sceattas are taken to indicate low-level activity (**LY_437**).

Further afield, the most striking archaeology in reasonable proximity comes from the Barham-Kingston-Bishopsbourne area some 10 km to the north-east. More than twenty-five stray artefacts are known, including a number of early brooches (e.g. **LY_311**), sceattas (e.g. **LY_612**) and a wheel-thrown biconical bowl (**LY_064**) dating from the first half of the seventh century (Evison 1979, 78). Most impressive is the burial evidence from this locality, taking in large and reasonably high-status barrow cemeteries like Bourne Park (**LY_060** and **LY_061**) and Breach Downs (**LY_065**), as well as Kingston Downs (**LY_318**), where 348 graves dating to *c.* AD 575-725 have been excavated since the eighteenth century (Douglas 1793; Conyngham 1844; Wright 1853; Faussett 1856, 35-100; Meaney 1964, 110-11; 125-6; Richardson 2005b, 7; 10-11; 45). A further example of high-status burial archaeology is provided by the recent excavations at Saltwood, some 4 km south of Lyminge (Booth et al. 2011). Excavated as part of the High Speed I rail link, three cemeteries were found spatially associated with a linear arrangement of three Early Bronze Age barrows. A total of 217 inhumations were recovered spanning the late fifth to late seventh centuries (see *Table 4.3* for the radiocarbon evidence).[69] Overall, the quantity and quality of the associated grave goods attest a high-status community operating across a period of some 200 years.

The preceding discussion has attempted to consider the evidence from Lyminge within

[69] If the gaming counter sample (NZA-21511) is excluded, the recalibrations allow for pooled means of *cal AD 472-623* (95.4% probability), *cal AD 469-630* (95.4% probability) and *cal AD 576-685* (95.4% probability) to be calculated for the eastern, western and central cemeteries respectively.

a local framework. Doing so has emphasised the conspicuous prominence of Lyminge, both in of itself and in relation to its environs. It has also laid the foundation upon which a provisional sequence can be articulated. Given the limited extent of our knowledge of Roman activity in the village there is little to be said of the immediate post-Roman period, but Anglo-Saxon activity of a very early date is attested from the earliest burials at Lyminge II (**LY_367**). Towards the end of the fifth century, if not before, Tayne Field was chosen as the focus for settlement; a selection that was likely influenced by antecedent features and a broader desire to visually control certain aspects of the surrounding landscape. That the settlement was a place of great importance even during this initial phase is convincingly demonstrated by the evidence for conspicuous consumption, specialist craftwork, high-status burial and monument reuse (Thomas 2017, 111-12). While comparable settlement evidence is not found elsewhere, high-status burials at places like Saltwood may indicate the emergence of other high-status lineages in relative proximity. Whether these were in direct competition is difficult to gauge, but Lyminge appears to have been preeminent, at least on the basis of excavated settlement evidence. A colossal investment in monumental architecture and dramatic spatial reconfiguration saw Lyminge emerge in the seventh century as one of the most prominent centres for elite activity in the region. Crucially, charter evidence allows us to observe that it was in possession of iron-bearing land prior to AD 689 (S 12). This would have been a critical economic resource that facilitated the production and control of high-status metalwork, allowing Lyminge's elites to consolidate their position (Hinton 1998; Wright 2010). Although the specific communities under Lyminge's authority are difficult to pinpoint archaeologically, it seems likely to have included those at Postling, Newington and Elham at the very least. It is highly probable that this sphere of influence was much wider, however.[70]

The locality underwent another major shift towards the end of the seventh century, with the apparent abandonment of the royal complex and the establishment of a monastery and associated community on the slopes of a nearby promontory. Whether the royal vill benefited from ecclesiastical provisions prior to the establishment of the monastery is not currently known, nor is the degree of overlap between the two settlements (Thomas 2017, 113). The monastic establishment has traditionally been dated to AD 633 on the basis of post-Conquest hagiography (e.g. Taylor 1969, 257-8), but recent research has suggested that it may have emerged in the early seventh century as a royal mortuary chapel (Kelly 2006, 104). Irrespective of any contemporaneity, the monastery at Lyminge subsequently appears to have appropriated much of the former settlement's power and status, and also benefitted

[70] As will be argued below, in **4.4.1**, this area of control may have comprised the entirety of a territorial unit that came to be known as the *Limenwaralæð*.




*Figure 4.7:* Least-cost paths generated between Lyminge (blue dot) and phase 2 occupation sites (white dots) using the default ArcGIS (isotropic) and Tobler's Hiking Function (anisotropic) methods (*contains Ordnance Survey data © Crown copyright and database right 2017*).




*Figure 4.8:* The economic hinterland of a Kentish royal monastery: isotropic least-cost paths generated between Lyminge and the estates granted to it during the late seventh-ninth centuries (*contains Ordnance Survey data © Crown copyright and database right 2017).*

from the favourable disposition of a succession of Kentish – and later Mercian – kings. Indeed, what was presumably a sizeable royal estate in the late seventh century was augmented in a series of charters issued by Wihtred (S 19, S 21 and S 22), Æthelberht II (S 23 and S 24), Ecgberht (S 270), Offa (S 123 and S 125) Coenwulf (S 160) and Cuthred (S 39). Of particular significance is the insight this rich body of evidence offers about the diverse economy of Lyminge from the late seventh or early eighth century through to the middle of the ninth (Thomas 2013, 114-15). That the monastery enjoyed access to coastal resources is demonstrated zooarchaeologically by the finding of marine species like cod and whiting and historically by Lyminge's charter-attested proprietorship over a fishery on the River Limen (S 24) as well as coastal landholdings at Sandtun (S 23) and elsewhere in Romney Marsh (Brooks 1988; Gardiner 2001, 166; Thomas 2013, 134; 137-8). An abundance of terrestrial provisions is similarly indicated by the granting of enough pasture for 300 sheep and 150 cattle by Wihtred (S 21) and Æthelberht II (S 24) respectively. A later charter of Offa also grants Lyminge an area of swine pasture amongst other appurtenances (S 125). This useful data source is explored more thoroughly below (**4.2.3**).

The monastery was ultimately abandoned at some point in the ninth or tenth century and its archives were transferred to Christ Church, Canterbury. The effects of this are not known, but the settlement appears to have been in rude health at the time of the Domesday Survey. A large and prosperous community is signified by its 170 households, three mills, fishery and extensive holdings of ploughland, meadow and woodland; that it retained some of its local significance is also implied by nearby Postling, Newington and Elham being recorded as having twenty-three, twenty-four and fifty-seven households respectively.[71]

### 4.2.3 *Modelling the wider hinterland*

From the above considerations it has been possible to chart Lyminge's development as a socio-economic and politico-religious centre across the *longue durée*. These efforts have mostly been confined to the local scale, but the evidence from the wider study region can also be utilised to explore Lyminge's centrality over a much wider area. In this we might visualise Lyminge at the centre of a regional *feorm* network and assume, in accordance with the rationale outlined in **3.5.3**, that proximal and contemporary settlements were obligated to it. To explore this empirically, a technique known as least-cost path modelling was used. This technique generates the most efficient route between two points in a 3D landscape based on its topography. It can therefore be used to identify possible routeways between

[71] Information taken from the *Open Domesday* website, available at: http://opendomesday.org/ (accessed 15th November 2016). The resource was created by Anna Powell-Smith as part of the AHRC-funded *Hull Domesday Project*. See http://www.domesdaybook.net/ for more information.

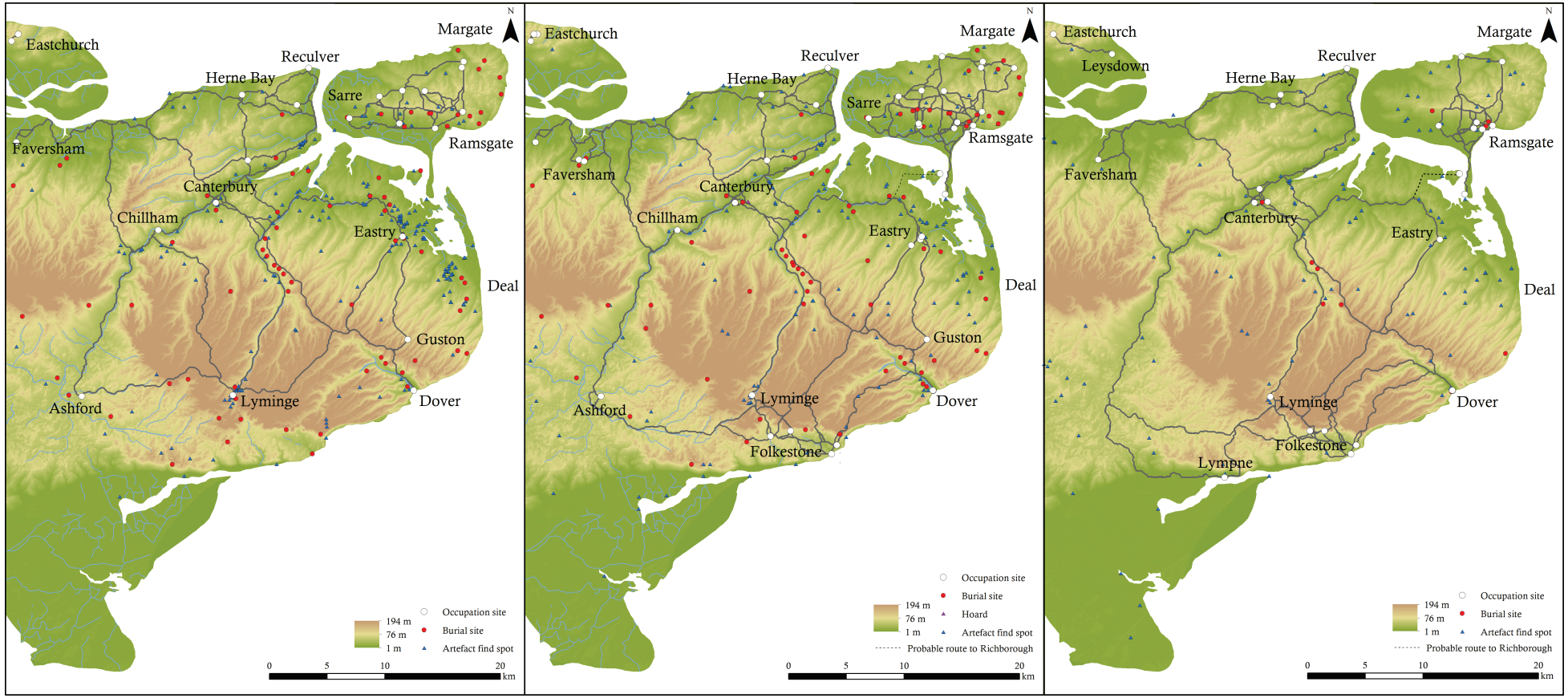



*Figure 4.9:* Least-cost paths generated between contemporary occupation sites for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively (*contains Ordnance Survey data © Crown copyright and database right 2017*).

archaeological sites, and explore long-distance movement through the landscape more generally. Following the methodology presented in **3.5.3**, least-cost paths were generated between the great hall complex at Lyminge and contemporary (phase 2) occupation sites using both the default (isotropic) and Tobler's Hiking Function (anisotropic) methods. The results are presented in *Figure 4.7*.

Being calculated to minimise changes in topographic slope, the results represent the most theoretically efficient routes between Lyminge and the other settlements in the region. This approach can be justified to an extent on the grounds that efficiency would have been an important factor in the planning of a supra-local journey, especially if goods (such as *feorm* for the regional centre) were being moved. Broadly speaking, the routeways identified offer practical solutions to the region's topography, with most following the course of river valleys or taking 'switchback' routes through steeper gradients. Although the correlation between the least-cost paths and the Roman road network is not particularly strong, a comparison between *Figure 4.3* and *Figure 4.7* demonstrates some general similarities. While there are some conceptual issues with the analysis – it seems unlikely that Eastry would have had a *feorm* obligation to Lyminge, for example, given its ostensibly comparable status (**4.4.1**) – the results are useful as an approximation of the extent of a great hall complex's wider hinterland.

A more real-world application of the least-cost path analysis was attempted using the charter evidence associated with the monastery at Lyminge (discussed in **4.2.2**). As a body of evidence, the charters demonstrate how Lyminge was able to exploit a diverse range of terrestrial and coastal resources to supply the monastic community (Thomas 2013, 137). To visualise this provisioning network, isotropic least-cost paths were generated between the monastery and the estates granted to it inasmuch as their locations can be identified (e.g. see reconstructions in Brooks 1988). The results, shown in *Figure 4.8*, attest a community with far-reaching contacts; having access to pseudo-urban tenements at Canterbury, coastal holdings in Romney Marsh and abundant pasturage in-between. In particular, the results serve to visualise the routeways that may have been used to maintain contact with what appears to have been a dispersed and varied network of dependencies. That this was possible must surely demonstrate the effectiveness of Lyminge's communication strategies, and the extent of its integration with the Kentish kingdom more generally. At a broader scale, the results offer a useful reminder that documentary sources can often reveal aspects of the past that are invisible to the archaeological record. In offering definitive proof of economic obligations, charter grants allow us to reconstruct networks based not on speculation but proven association.

Patterns of movement within the study region were also explored at a more general level. This was achieved by calculating isotropic least-cost paths between contemporaneous occupation sites for each of the three phases of the regional dataset (*Figure 4.9*). In general terms, the results underline the importance of several natural communication corridors, particularly those that facilitate movement through the North Downs. This is illustrated by the stability of certain routes throughout the period, even as the number of identifiable settlements decreases over time (something that is commented in **4.3.1**). Crucially, the results demonstrate what was proposed above – that Lyminge was strategically placed to control access across the North Downs. A landscape that is geographically predisposed to form reasonably distinct localities connected by a handful of arterial routeways is therefore indicated from the wider results. That computer-generated routeways correspond with *actual* route-ways is indicated by their correlation with burial sites, especially in areas close to the Little Stour. Encouragingly, previous applications of the technique to east Kent has identified a similar correlation (Brookes 2007b).

## 4.3 THE REGIONAL PERSPECTIVE

### 4.3.1 *Regional sequence*

Due to the size of the region and the quantity of archaeological evidence, it was possible to undertake an extensive programme of data characterisation and analysis. This enabled the evidence from Lyminge and its local environs to be situated within a regional context. Considering first the regional sequence, we can use the results of the chronological seriation (mentioned briefly in **4.1.4**) to explore how the level of archaeologically attested activity in the region changed over time. Using the seriation table (*e-Appendix 2a*), the numbers of 'active' sites for each twenty-five-year time segment were totalled and then visualised as a line graph (*Figure 4.10*).

Although it should not be assumed that these visualisations necessarily correlate with historical reality (see **3.3.5**), the resulting 'activity models' allow us to glimpse the regional sequence and consider how the activity at Lyminge fits within this schema. Broadly speaking, a general pattern of activity can be discerned in which the number of 'active' sites increases substantially from the mid-fifth century, plateaus in the sixth century, decreases for most of the seventh, rises sharply in the late seventh century and then gradually declines throughout the eighth. The identification of this overall pattern is validated to an extent by the fact that there is limited difference between the model that uses the total dataset and that which excluded artefact find spots with a date range in excess of 100 years.

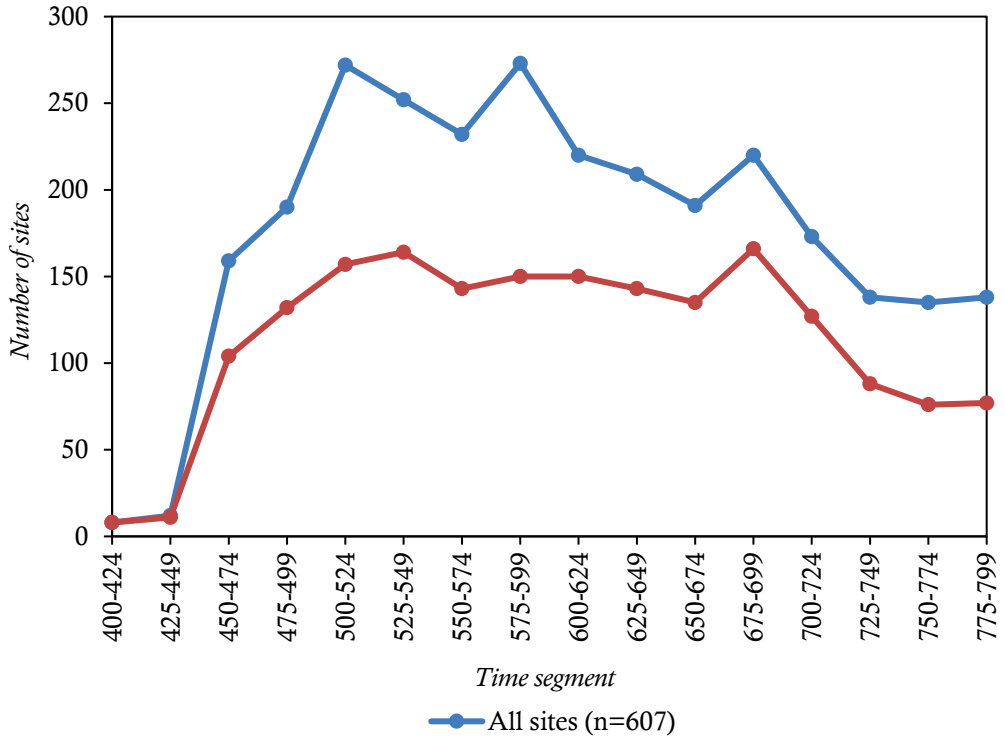



*Figure 4.10:* activity modelling for the regional dataset, based on the results of the chronological seriation.

This sequence of archaeological activity raises a number of interesting points. The highly variable level of activity during the fifth century can be understood in two ways. That there is such a marked increase in activity from the mid-fifth century onwards is likely a reflection of the methodology employed, with AD 450 being used as the earliest start date for sites unless there was convincing evidence to believe otherwise.[72] Although this may result in an over exaggeration of the level of mid-fifth-century activity, it arguably offers a more realistic assessment of early fifth-century activity. Indeed, that there is such limited activity before AD 450 demonstrates how few sites date from the immediate post-Roman period. Notable exceptions include early cemeteries like Ringlemere Farm (**LY_494**) and Lyminge II (**LY_367**), both of which may date from the second quarter of the fifth century onwards (Warhurst 1955; Meaney 1964, 127; Richardson 2005b, 48-9; 85; Parfitt and Needham 2007; Marzinzik 2011). Even so, the scarcity of very early sites accords with the national pattern inasmuch that there does appear to have been genuine hiatus in observable activity in the decades following the Roman withdrawal (Cleary 2011, 13-14; 23; Gerrard 2013, 2-11). The activity modelling can therefore be used to argue against models of post-Roman continuity (e.g. Dark 2000, 105-49), at least in explicit archaeological terms. Moreover, this evidence adds further weight to comments made above (**4.1.3**) regarding the very real difference in scale between the Roman-period and fifth-eighth-century datasets.

[72] This is something of a departure from the disciplinary convention of using AD 410. For example, a site described in the literature as 'fifth-seventh century' would typically be written calendrically as 'AD 410-700'. Given the rarity of sites with genuine early fifth-century activity, this is somewhat misleading.

Interestingly, the level of activity across the fifth-sixth centuries accords with models of settlement as proposed by Alan Everitt (1986) and Stuart Brookes (2007a). Writ broadly, these models argued for sustained population growth and increased resource competition having stimulated a gradual expansion of settlement throughout the early Anglo-Saxon period. That the number of 'active' sites should decrease throughout much of the seventh century is curious, though. This drop might be understood by the general reduction during this time in the deposition of closely dateable artefacts for all but the very wealthiest of burials and, by proxy, the sorts of artefacts found as stray finds (e.g. Harrington and Welch 2014, 15-19; 28-9). Alternatively, it could indicate a genuine shift in the regional pattern of occupation. We can more confidently explain the increase in activity during the late seventh century, though, as this corresponds with the widespread introduction of silver coinage across much of Anglo-Saxon England (Williams 2013, 41-3). Indeed, 116 of the 158 stray coin finds in the dataset postdate AD 675.

The activity modelling was also undertaken for specific site types, as shown in *Figure 4.11*. These will now be briefly considered in turn. The sequence for burial sites adheres reasonably well to the standard model of furnished burial, with an increase in the number of burial sites during the fifth and sixth centuries followed by a gradual decline until the end of furnished burial in the late seventh century (Dickinson 2011, 228-32; Hines and Bayliss 2013, 459-62). A striking and perhaps significant deviation from this model is the marked

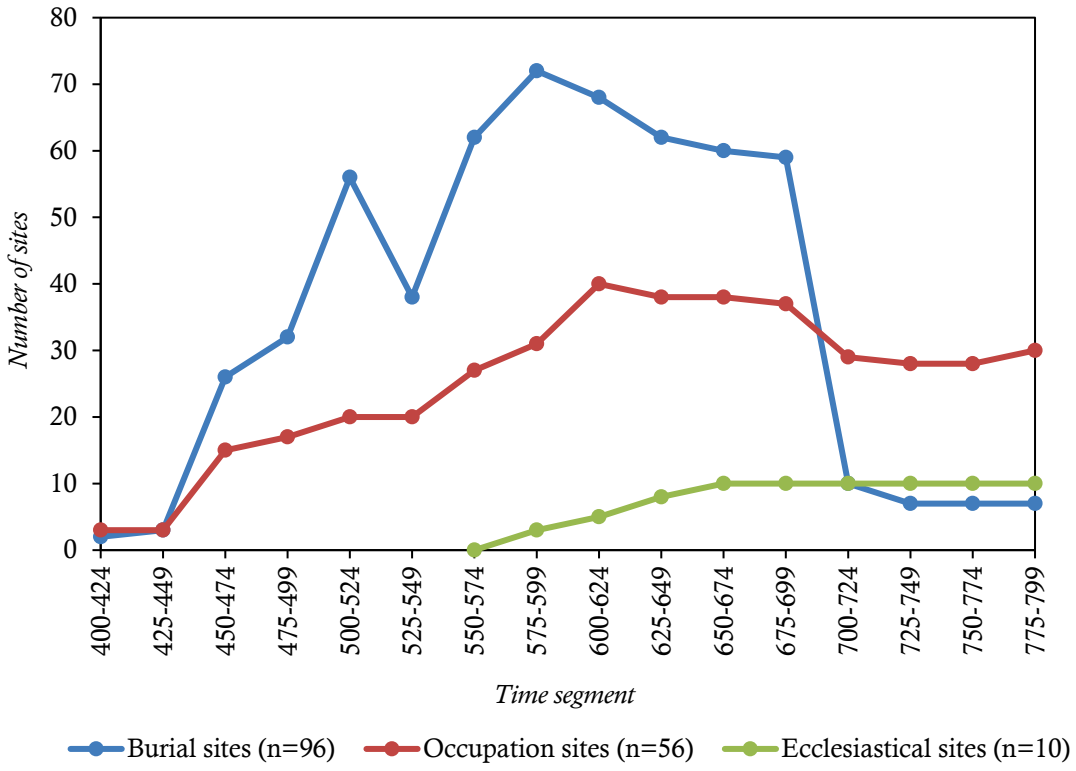



*Figure 4.11:* Specific activity modelling for burial, occupation and ecclesiastical sites in the regional dataset, based on the results of the chronological seriation.

decrease in 'active' burial sites during the second quarter of the sixth century. It is tempting to interpret this result in light of the increasingly reliable evidence for major environmental events having taken place in AD 536 and AD 540 (Büntgen et al. 2016; Toohey et al. 2016; Xoplaki et al. 2016), although the extent to which we can argue this as significant factor is limited by the seemingly swift recovery of burial activity in the third and fourth quarters of the century. That there is such a drop in 'active' burial sites coming into the eighth century is unsurprising, but one suspects more systematic programmes of radiocarbon dating will yield far greater evidence for post-700 burials. The sequence for occupation sites is less volatile, demonstrating a gradual increase throughout most of the period before plateauing during the eighth century. As above, this can be seen to accord with the aforementioned models of Everitt (1986) and Brookes (2007a). There is little to be said of the activity modelling for ecclesiastical sites except to note the early establishment date – as confirmed by documentary sources like the *Historia Ecclesiastica* – and the consistency of activity thereafter.

### 4.3.2 *Archaeological characterisation*

Having gained some insight into the regional chronology and sequence, it is useful to offer a brief characterisation of the region's archaeology. This will by no means be an extensive review – others have reviewed the archaeology of Kent in far more exhaustive ways (e.g. Richardson 2005a, b; Brookes 2007a; Welch 2007) – but it will consider some of the more important sites and will set the scene for the analyses that follow more broadly. As such, the reader may wish to refer to the distribution map above (*Figure 4.4*) for guidance.

Beginning chronologically, one is immediately drawn to the scarcity of evidence for direct continuity in the immediate post-Roman period. Indeed, just two of the fifty-six settlement and inferred occupation sites recorded from the region could have activity before AD 450. The most significant evidence comes from seventeen separate interventions in the St George's Street-Burgate Street area of Canterbury (**LY_543**), where an almost unbroken occupation sequence is attested (Frere and Stow 1983; Blockley 1987). Also found at Canterbury, in an area known as Adelaide Place (**LY_008**), was an early fifth-century grave containing two adults (male and female), two juveniles (both female) and a dog interred with various Late Roman bangles, keys and glass beads (Bennett 1981). As was noted above, early burial activity can be found at cemeteries like Lyminge II (**LY_367**) and Ringlemere Farm (**LY_494**). Recent excavations at the latter have uncovered some of the earliest burial evidence known from east Kent, including the largest group of cremations (Parfitt and Needham 2007). Although post-excavation analysis is ongoing, there are early indications that the finds represent an international community interred during the period AD

425-525 (Marzinzik 2011). Final mention might be made of the lone inhumation, interred with a sword, shield boss, long spearhead and pewter bowl, that was found in 1928 at Richborough Castle (**LY_493**). The find was interpreted as a very early raider of Continental descent, with a number of proximal finds perhaps indicating further burials (Bushe-Fox 1949, 80; Hawkes 1961, 17-18). Overall, the evidence for early fifth-century activity in the study region is of a scattered and small-scale nature.

The archaeological record from the mid-fifth century onwards is dominated by rich burial archaeology. Most of the extensive and long-recognised cemeteries were in use during this period, many of which feature distinctive jewellery and wheel-thrown pottery indicative of Frankish and other long-distance contacts (Evison 1979; Welch 2002). Some of the more well-known examples include: Bifrons (**LY_047**); Buckland, Dover (**LY_071**); Eastry (**LY_076**, **LY_212**, **LY_213** and **LY_599**); Faversham (**LY_305**); Finglesham (**LY_223**); Gilton (**LY_234**); Kingston (**LY_318**); Mill Hill, Deal (**LY_399**); Monkton (**LY_477**); Ozingell (**LY_463**); Sarre (**LY_517**); and Westbere (**LY_618**). Although they shall not be reviewed here (see Welch 2007, 209-35 for a recent summary), these sites well demonstrate the outstanding character of east Kentish funerary archaeology.[73] Collectively, these exceptional cemeteries are usually taken as of evidence of a broad process in which several high-status families appear to have developed across much of east Kent during the sixth-seventh centuries (e.g. Sayer 2009, 167-9). As has been discussed extensively above, Lyminge was clearly one such locality.

A growing body of settlement evidence also contributes to our understanding of the region, with sites in Dover (**LY_386**), Ramsgate (**LY_381**) and Church Whitfield (**LY_139**) each having more than five buildings (Philp 2003; Hutcheson and Andrews 2009; Parfitt 2014).[74] In featuring a possible great hall, the evidence from Dover is particularly significant (**2.5.1**); indeed, it currently offers the only architectural parallel for Lyminge thus far known from east Kent (Thomas 2013, 126). Other settlement excavations in the region are significant for their reasonably precise chronologies. The small-scale occupation evidence encountered at Kingsborough Manor (**LY_306**) represents a good case in point (Stevens 2009; Schuster 2010). Recalibration of the radiocarbon sample associated with one of the SFBs identifies a non-normal distribution (*Figure 4.12*) of *cal AD 530-643* (81.2% probability). This can be used in conjunction with the ceramic evidence to propose a high-probability date

[73] Two online resources are of particular use in the study of Kentish funerary material. These comprise *Novum Inventorium Sepulchrale: Kentish Anglo-Saxon Graves and Grave Goods in the Sonia Hawkes Archive* (http://inventorium.arch.ox.ac.uk), hosted by the University of Oxford, and the *Anglo-Saxon Kent Electronic Database* (https://doi.org/10.5284/1000069), hosted by the Archaeological Data Service.

[74] One should also note that, in addition to the St George's Street-Burgate Street area sites discussed above, numerous excavations have revealed evidence for significant occupation in and around Canterbury during the fifth-eighth centuries (e.g. **LY_042**, **LY_388**, **LY_543**, **LY_559**, **LY_583** and **LY_621**).

range of AD 525-650 for the site. An additional example is offered by Foster Road in Ashford (**LY_230**), where excavations in 2006 revealed a pair of waterholes (Powell and Birbeck 2006). Recalibration of radiocarbon samples taken from each of these features indicates a date in the first half of the seventh century to be the most likely (*Table 4.3*), and allows us to provisionally date the associated SFB by inference.

The archaeological record of the later seventh and eighth centuries is rather different to what came before it. Arguably the most striking change is the cessation of furnished burial towards the end of the seventh century, as was visualised above (*Figure 4.11*). Although difficult to sustain without radiocarbon dating, it seems likely that eighth-century burials are to be found in unfurnished cemeteries like Broome Park in Barham (**LY_070**) and Albany Place (**LY_011**) in Dover (Bradshaw 1969; Philp 2003, 131-2; Richardson 2005b, 8; 28). Another major shift in the archaeological record is the building of churches. Kent is well known for its rich ecclesiastical tradition, with architectural forms established in Canterbury as early as the AD 590s having subsequently taken hold elsewhere in the county (Welch 2007, 235-42). The Church of St Mary at Reculver (**LY_138**) is significant in this respect, being one of only a handful of early establishments to be excavated (Peers 1928). Distinct shifts in the material culture of the region are also observable, with the introduction of new artefact types like ansate brooches (e.g. **LY_257**), strap-ends (e.g. **LY_526**) and hooked-tags (**LY_624**). More than 100 early sceattas and pennies are also known from the region.

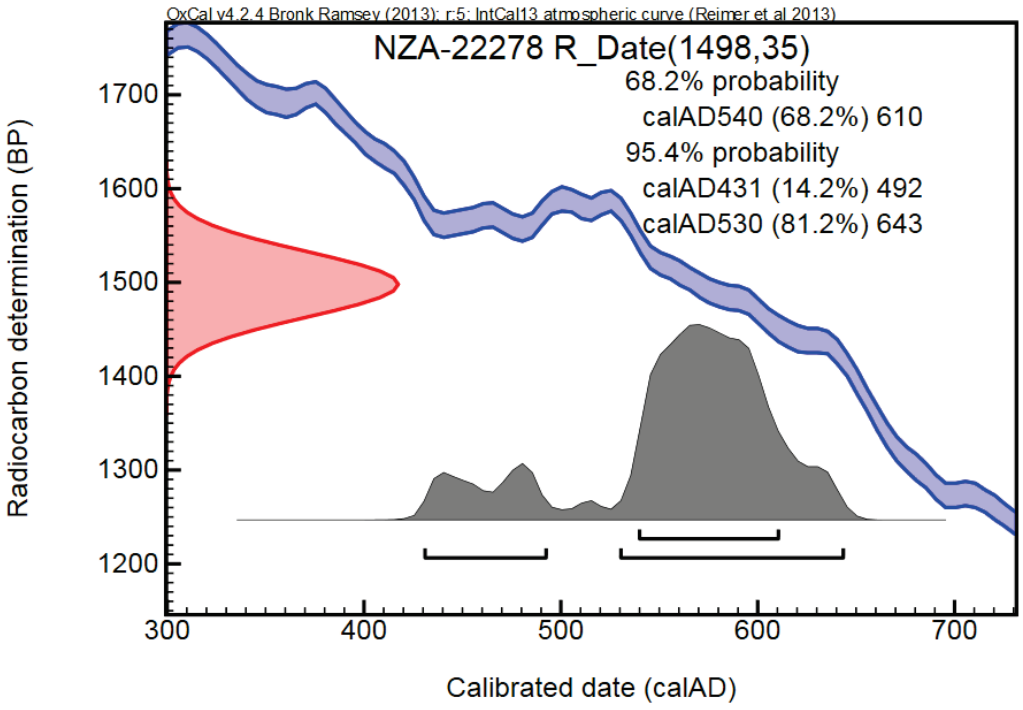



*Figure 4.12:* Recalibrated radiocarbon dates from charcoal associated with an SFB (Feature 6084) at Kingsborough Manor, Eastchurch, Kent (data from Stevens 2009, 148-9).

### 4.3.3 *Exploratory spatial analysis*

Having reviewed the key chronological and archaeological characteristics of the dataset, we can now undertake more formal methods of investigation. Several techniques were employed in an attempt to characterise the distribution of sites and identify any underlying spatial patterning. This programme of analysis was largely exploratory in nature; a necessary precursor to further investigation, producing the empirical foundation upon which formal techniques of spatial modelling could be attempted.

The analysis began with a consideration of how site placement may have been influenced by environmental characteristics. This was initially explored using the 'Generate Near Table' function in ArcGIS to calculate the distance from each site to its nearest river. The results are shown in *Figure 4.13*. A total of 409 sites (60.59%) were situated within 1 km from a river while a further 146 (21.63%) were within 2 km. This demonstrates a clear tendency for sites to be located in proximity to a river, perhaps rarely more than a thirty-minute walk away. The results also indicate that a minority of sites were located at distances further away, however. To explore this further the analysis was rerun with artefact find spot sites omitted, the logic being that these sites are more likely to be found further from a freshwater source than a place of burial or occupation. As shown in *Figure 4.14*, this does not appear to have been the case, prompting one to question whether this result is a genuine reflection of past practice. Explanation for these outliers might be sought from the albeit limited evidence for wells in Anglo-Saxon settlements, as with the two probable examples from Foster **(LY_230)** Road in Ashford, Kent (Powell and Birbeck 2006). Conversely, it is possible that the resolution of the river GIS dataset used is lacking; in reality these sites may have been situated close to springs and minor rivers that are not mapped at the regional scale. Both explanations have merits, and it is perhaps unwise to speculate. Nevertheless, the key finding is that early medieval activity mostly took place in relative proximity to a water source.

The underlying agricultural quality of the soil may also have been an important factor in the distribution of early medieval activity. This was explored by comparing the distribution of sites against the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002). The results are presented in *Figure 4.15*, with an overview of the land surface representation of soil classes given in *Table 4.4*. Although there are significant unassessed areas (the 'urban' and 'non agricultural' classes), the overall trend appears to be that sites are primarily found in soils of Grade 3 and above. This tendency is illustrated most strikingly by the density of sites found in Grade 1 (excellent) soils, particularly in the north-eastern portion of the study region. Conversely, there is limited activity in poorer-quality soils (Grades 4 and 5). That there is a relationship between site placement and underlying soil quality might be seen as evidence to support the aforementioned models of

Kentish settlement, which view settlement as having expanded outwards from established communities located in the most fertile areas (e.g. Brookes 2007a, 176-80).

Although tentative, the combined results from these two approaches indicate a general preference for land of good agricultural potential that was situated in relative proximity to at least one river. This is by no means a strict rule; we must be open to other factors such as ideology being as – if not more – important in the placement of sites. Nonetheless, it seems sensible to conclude that both factors played an important role in the spatial configuration of settlement and wider activity in the region.

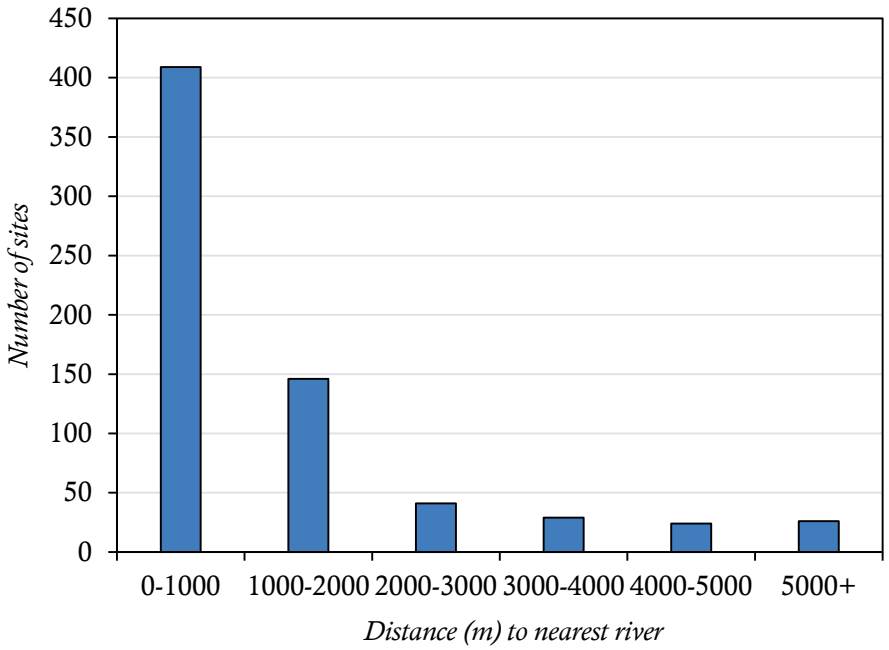



*Figure 4.13:* A histogram showing the distance between sites and their nearest watercourse, calculated using the regional dataset in its entirety (n=675).

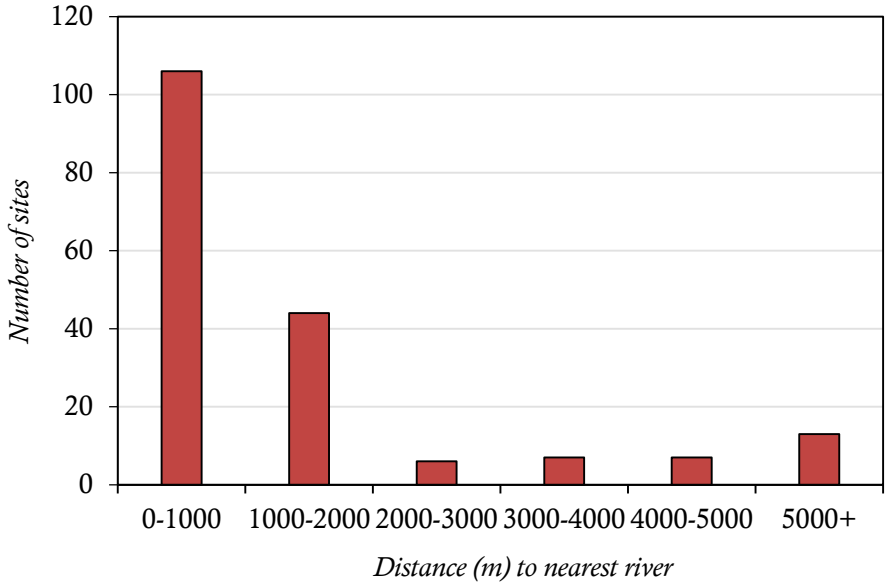



*Figure 4.14:* A histogram showing the distance between sites and their nearest watercourse, calculated with artefact find spot sites excluded (n=183).

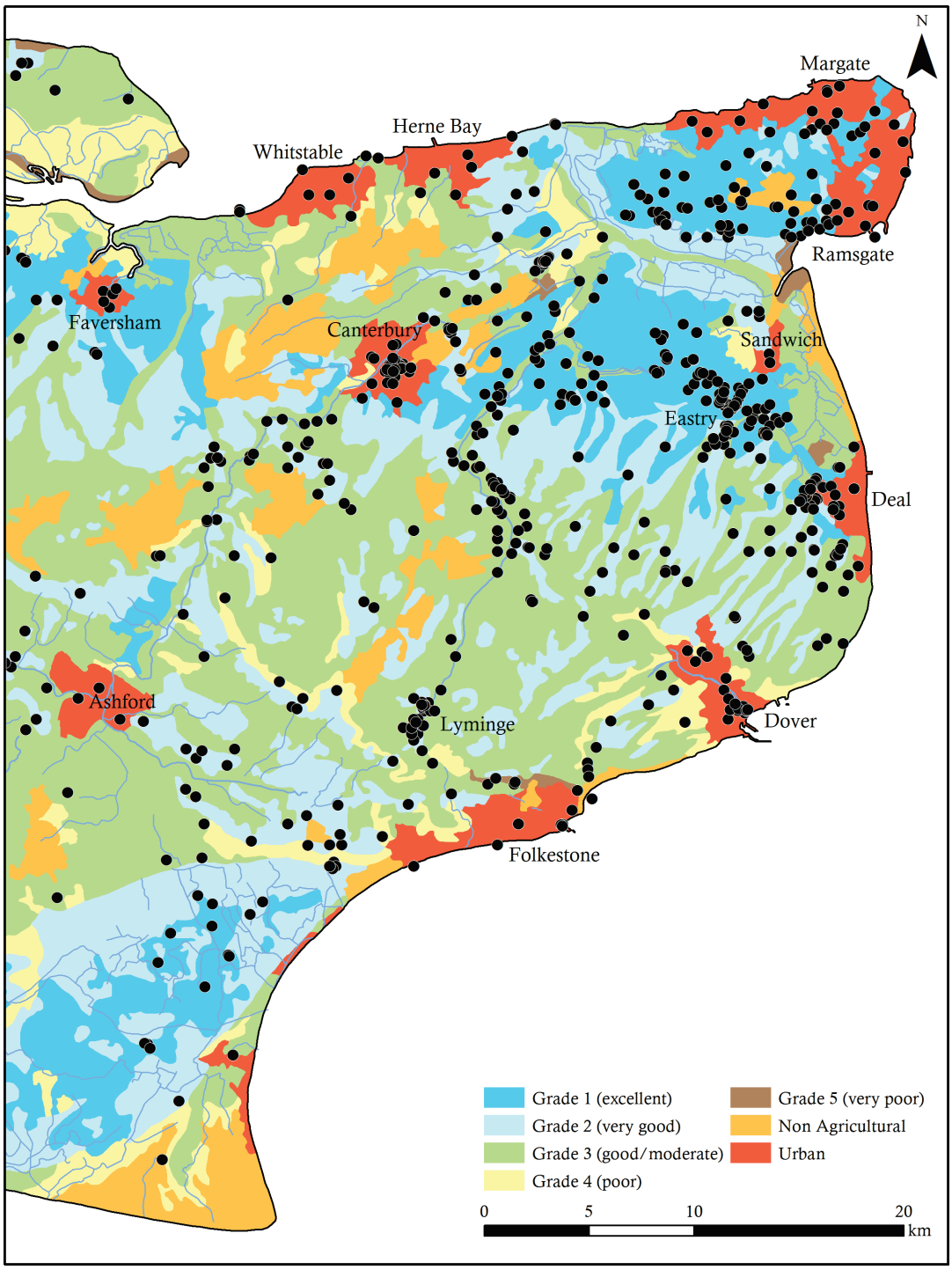



*Figure 4.15:* The distribution of the regional dataset in relation to the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002).

| | Land surface coverage |
|---|---|
| Grade 1 (excellent) | 15.40% |
| Grade 2 (very good) | 24.76% |
| Grade 3 (good to moderate) | 36.69% |
| Grade 4 (poor) | 7.13% |
| Grade 5 (very poor) | 0.63% |
| Non Agricultural | 7.98% |
| Urban | 7.40% |

*Table 4.4:* The overall quality of land within the study region as recorded in the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002).

The underlying spatial structure of the dataset was analysed in a more explicit way through formal statistical analysis. This involved two forms of spatial statistic: the Average Nearest Neighbour statistic and Ripley's K-Function. The results from both will now be considered in turn. The Average Nearest Neighbour statistic, described in **3.4.3**, assesses the statistical likelihood that a set of data points exhibit a clustered, random or dispersed spatial pattern. The implications of this are obvious – from this approach it will be possible to gauge the spatial distribution of archaeological material in the study region and, by inference, the underlying settlement pattern. The analysis was undertaken for each phase of the regional dataset to gauge whether the spatial structure of the data changed in any meaningful way over time. Two iterations of the analysis were run for each phase – one with and one without artefact find spot sites – to determine whether the more abundant artefactual material skewed the results in any way. The results from both analyses are presented in *Table 4.5*, with *Figure 4.16* offering a visual summary to aid interpretation.

When artefact find spot sites were included, the results indicate consistent spatial patterning in the dataset over time. The z-scores of -15.734416 for phase 1, -13.082336 for phase 2 and -11.835192 for phase 3 indicate significant spatial clustering, with a less than 1% likelihood that this clustered pattern could be the result of random chance. When artefact find spot sites were excluded, the results demonstrate similarly consistent spatial patterning in the dataset over time. The z-scores of -6.204630, -7.813275 and -8.176976 for phases 1, 2 and 3 respectively indicate significant spatial clustering, although to a slightly lesser extent than when artefact find spot sites are included. Given these scores, there is also a less than 1% likelihood that these clustered patterns could be the result of random chance. Overall, the combined results reveal consistent and statistically significant spatial clustering in the dataset across all three phases, whether artefact find spot sites are included or not.

Ripley's K-Function, or 'Multi-Distance Spatial Cluster Analysis' as it is known as in ArcGIS, determines whether a spatial dataset exhibits statistically significant clustering or dispersion over a range of distances. Following the methodology detailed in **3.4.4**, the analysis was computed for the three phases of the regional dataset. As above, separate iterations were computed with and without artefact find spot sites. The results are displayed as a series of graphs that indicate the level of clustering, randomness or dispersion at various distances. When artefact find spot sites were included in the calculation, the results demonstrate consistent and statistically significant spatial clustering across all three phases of the dataset (*Figure 4.17*). In this they can be seen as consistent with the results of the Average Nearest Neighbour analysis described above.

| | Measure | Phase 1 (n=351) | Phase 2 (n=298) | Phase 3 (n=180) |
|---|---|---|---|---|
| All sites | Observed Mean Distance (m) | 615.8705 | 780.4088 | 928.0300 |
| | Expected Mean Distance (m) | 1097.8118 | 1292.3624 | 1722.1262 |
| | Nearest Neighbour Ratio | 0.560998 | 0.603862 | 0.538886 |
| | z-score | -15.734416 | -13.082336 | -11.835192 |
| | p-value | 0.000000 | 0.000000 | 0.000000 |
| | Interpretation | Clustered | Clustered | Clustered |

| | Measure | Phase 1 (n=116) | Phase 2 (n=131) | Phase 3 (n=53) |
|---|---|---|---|---|
| Excluding artefact find spots | Observed Mean Distance (m) | 1283.9947 | 1111.9465 | 1098.2040 |
| | Expected Mean Distance (m) | 1837.2476 | 1728.8648 | 2659.8365 |
| | Nearest Neighbour Ratio | 0.698869 | 0.643166 | 0.412884 |
| | z-score | -6.204630 | -7.813275 | -8.176976 |
| | p-value | 0.000000 | 0.000000 | 0.000000 |
| | Interpretation | Clustered | Clustered | Clustered |

*Table 4.5:* The results of the Average Nearest Neighbour Analysis. The p-value and z-score numbers are explained in *Figure 4.16* below.

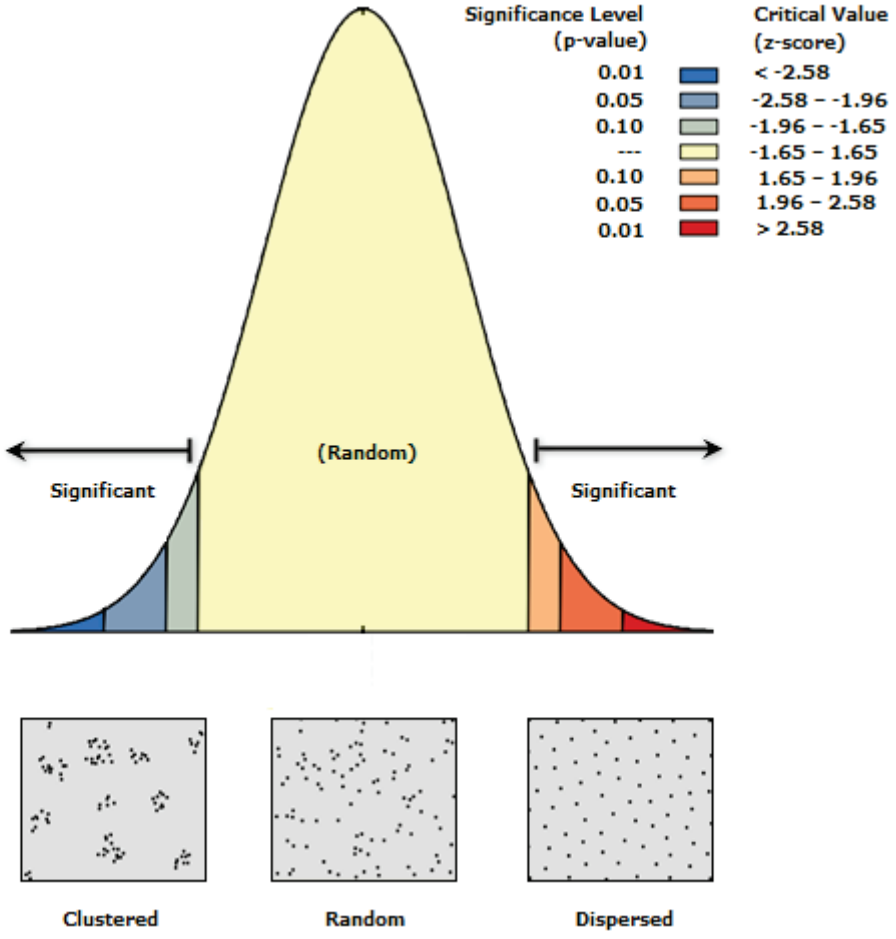



*Figure 4.16:* A visual summary of the Average Nearest Neighbour statistic. The p-value and z-score numbers in the top-right of the image are absolute benchmarks to compare the numbers in *Table 4.5* against.

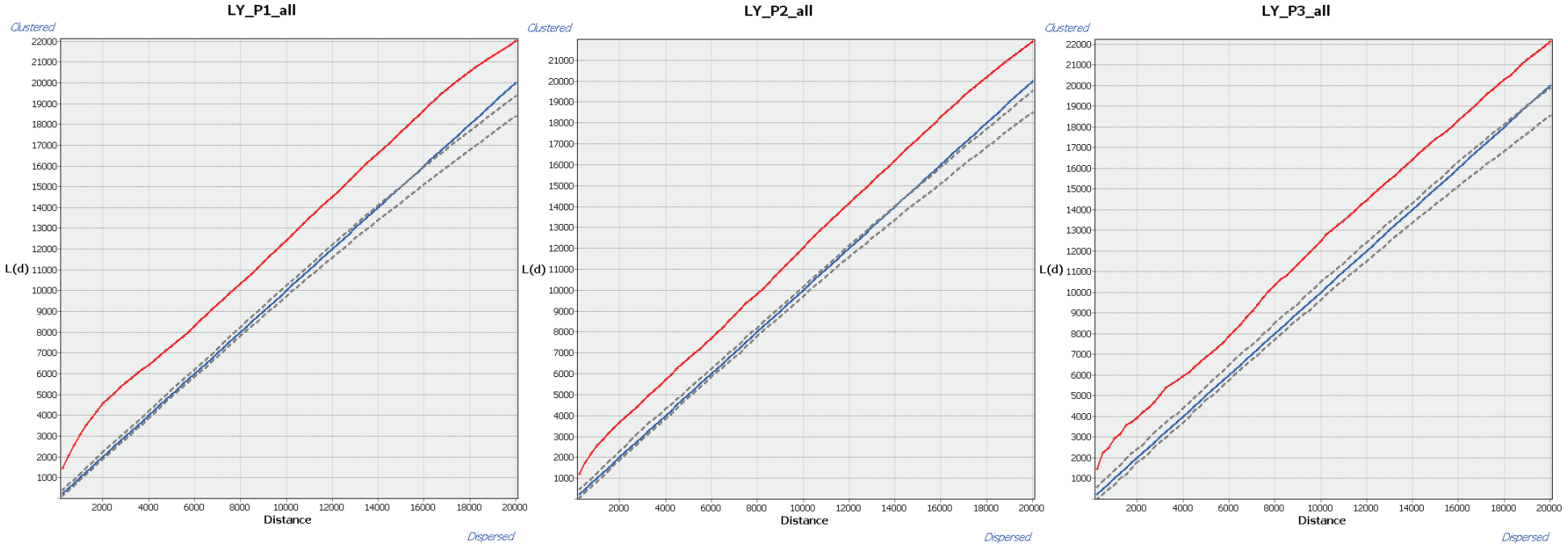



*Figure 4.17:* Ripley's K Function analysis for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively. The blue line indicates a random distribution (expected observations), the dashed lines show the 'confidence envelope' created from 999 random permutations and the red line plots the actual observations. Where the red line extends above or below the confidence envelope indicates statistically significant spatial clustering or dispersion respectively.

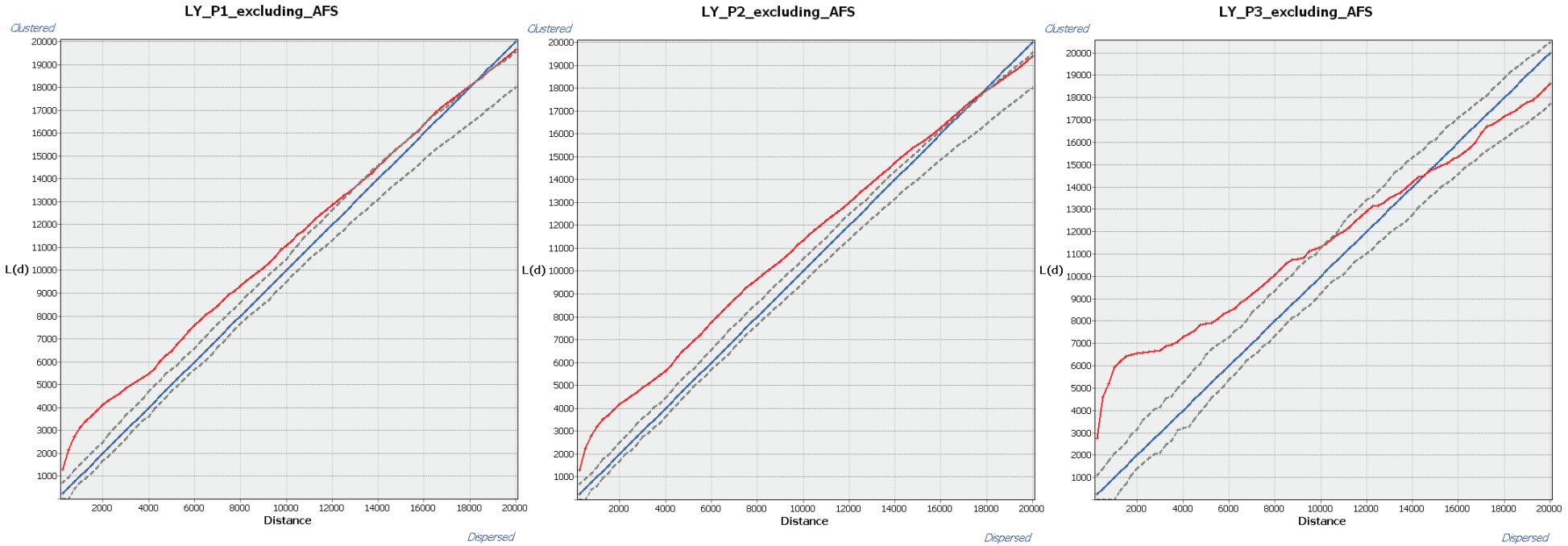



*Figure 4.18:* Ripley's K Function analysis for the three phases of the Lyminge study region with artefact find spot sites excluded. The blue line indicates a random distribution, the dashed lines show the 'confidence envelope' created from 999 random permutations and the red line plots the actual observations. Where the red line extends above or below the confidence envelope indicates statistically significant spatial clustering or dispersion respectively.

With artefact find spots excluded, the results were more variable (*Figure 4.18*). The results for phase 1 sites demonstrate significant clustering (exceeding the 95% confidence envelope) at distances ≤13000 m, moderate clustering (within the 95% confidence envelope) at distances ≤18250 m and moderate dispersion (within the 95% confidence envelope) at distances >18250 m. The results for phase 2 sites show significant clustering (exceeding the 95% confidence envelope) at distances ≤17500 m which swiftly transitions into moderate dispersion (within the 95% confidence envelope) at distances >17500 m. The results for phase 3 sites identify significant clustering (exceeding the 95% confidence envelope) at distances ≤10250 m, moderate clustering (within the 95% confidence envelope) at distances ≤14500 m and moderate dispersion (within the 95% confidence envelope) at distances >14500 m. Considered together, the results are reasonably consistent. The spatial pattern identified is mostly clustered, with evidence for dispersion at distances beyond about 18 km for phases 1 and 2 and 14.5 km for phase 3. The most striking differences are observable when one compares the phase 3 results with those from phases 1 and 2 – while the profiles of the latter are broadly similar, the former exhibits more significant clustering at smaller distances and a much swifter and definite transition into dispersion. In summary, the results indicate that the archaeological data form reasonably distinct clusters, but their size varied somewhat over time.

Overall, the results from the spatial statistics allow for some general comments to be made about the spatial patterning of archaeology in the study region. The most obvious realisation is that the dataset exhibits consistent and highly statistically significant spatial clustering throughout the study period. This is borne out specifically by the results of the Average Nearest Neighbour analysis, which indicate a less than 1% chance that this pattern could be the result of random chance, and also by the Ripley's K-Function, in which there is ample evidence for clustering at a significance that well exceeds the 95% confidence envelope. This spatial pattern is nuanced by the Ripley's K-Function results when artefact find spot sites were excluded, from which it is possible to identify chronological trends. During phases 1 and 2 sites exhibit clustering up to distances of about 18 km; during phase 3 the extent of clustering at smaller distances is much stronger but it transitions into dispersion much more rapidly. Despite these distinctions, there is a clearly observable general pattern: archaeological sites in the study region form reasonably distinct and sizeable clusters, but that these clusters were themselves spatially separate. This realisation might be thought to indicate the existence of 'core zones' of activity, perhaps corresponding more broadly with territorial units. Although the spatial extent of these entities may have varied across time and space, the overall pattern of settlement appears to have been a clustered one. As shall be seen in the discussion below (**4.4.1**), this interpretation accords

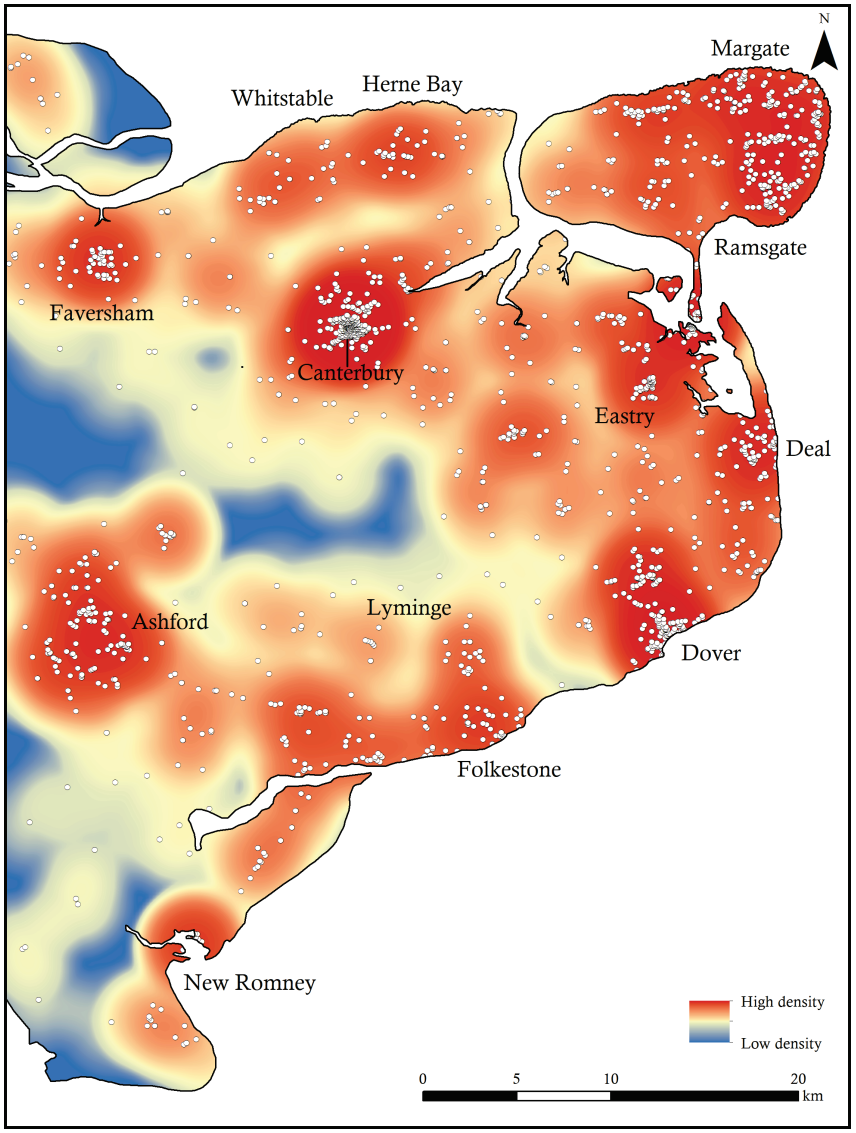



*Figure 4.19:* A Kernel Density Estimate using the AIP dataset (n=2038). The results are visualised using the 'Histogram Equalize' option (see **3.4.5**).

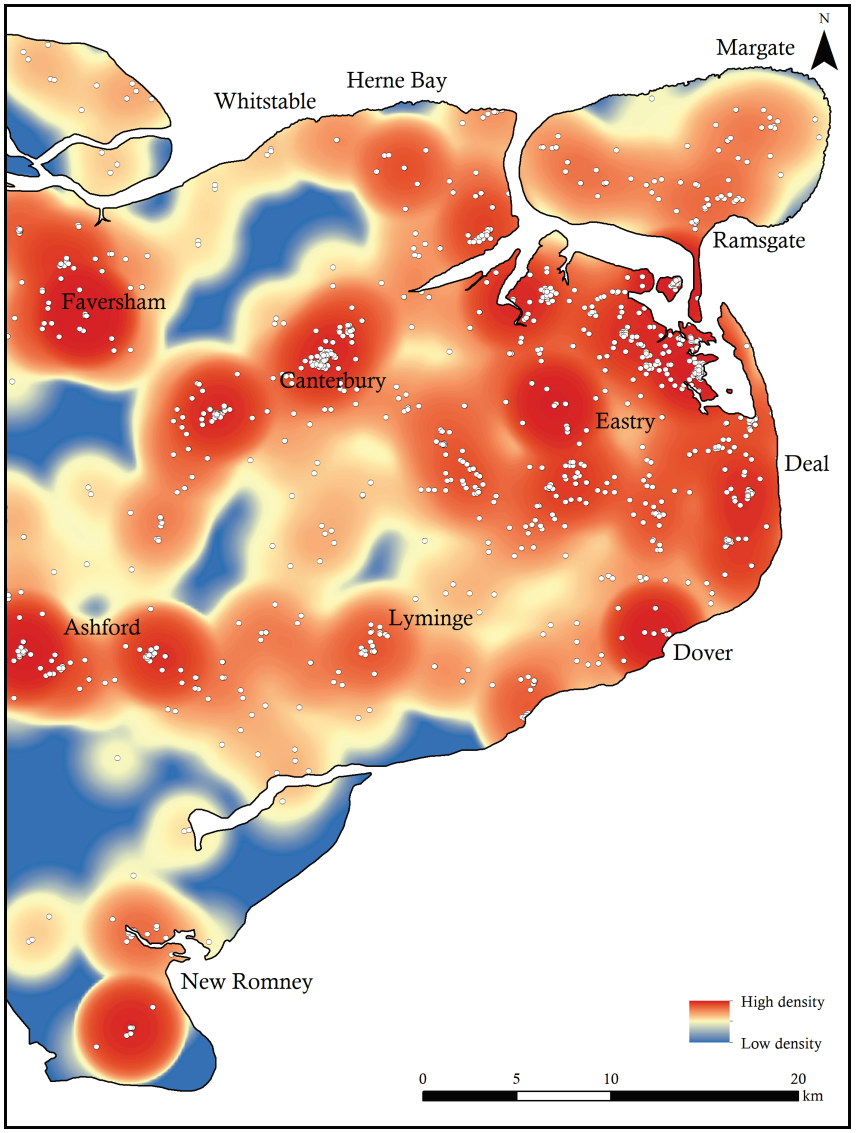



*Figure 4.20:* A Kernel Density Estimate using the Roman dataset (n=2977). The results are visualised using the 'Histogram Equalize' option (see **3.4.**

reasonably well with our understanding of administrative structures within east Kent.

The final aspect of the exploratory spatial analysis employed a technique known as Kernel Density Estimation to help visualise some of the underlying trends identified above. As outlined in **3.4.5**, the analysis uses a probability density function on point data to create a continuous approximation of data density. Before investigating the present dataset, it was decided that some reference points ought to be obtained for the region's archaeology more broadly. This was achieved by running the Kernel Density Estimation on two different datasets. The first was a dataset of 2038 sites obtained from the *Archaeological Investigations Project* (AIP), an online database of all archaeological interventions carried out in England between 1990 and 2010.[75] The second was the dataset of 2977 Roman sites discussed previously, obtained from the PAS online database and the RSRB project. The results are visualised in *Figure 4.19* and *Figure 4.20* respectively. The results can be thought of as broadly similar, evidencing an overall pattern of dense archaeological activity. Interestingly, although perhaps expectedly, the low-density areas ('cold spots') broadly correspond with less-desirable lands such as Romney Marsh and parts of the North Downs. Although it is possible to detect high-density areas, as at Canterbury, the overall spread of activity makes it difficult to discern especially discrete clusters. While there are minor differences between the two datasets, then, this 'sprawl' of activity can be used as a baseline in which to compare the early medieval evidence against.

With these comparatives in tow, the analysis was undertaken for each phase of the regional dataset. The results are shown in *Figure 4.21*. Although there are changes over time, the results indicate a largely consistent pattern of archaeological activity which centres on a handful of important localities. Compared with the 'sprawl' of activity noted above, it is far easier to detect spatial patterning in the fifth-eighth-century evidence. Dense clusters of sites during phase 1 are observable in the vicinity of Canterbury, Lyminge and southern Thanet, with more continuous high-density areas east of Canterbury and along much of the east coast. Interestingly, this distribution compares favourably with the most fertile areas as recorded in the aforementioned *Agricultural Land Classification* (*Figure 4.15*). The density of sites during phase 2 appears greater, with more intense activity at Dover, Folkestone and Thanet, but the overall pattern stays much the same. Patterns of activity appear to change during phase 3, with ostensibly new clusters further to the west at Lympne and Ashford. Writ broadly, the results indicate that fifth-eighth-century archaeology was spatially configured in such a way as to form distinct foci. Perhaps unsurprisingly, this spatial zoning seems

[75] The AIP online database (https://csweb.bournemouth.ac.uk/aip/) was accessed on 4th September 2016 and data downloaded using the 'Export Query to Excel' function.

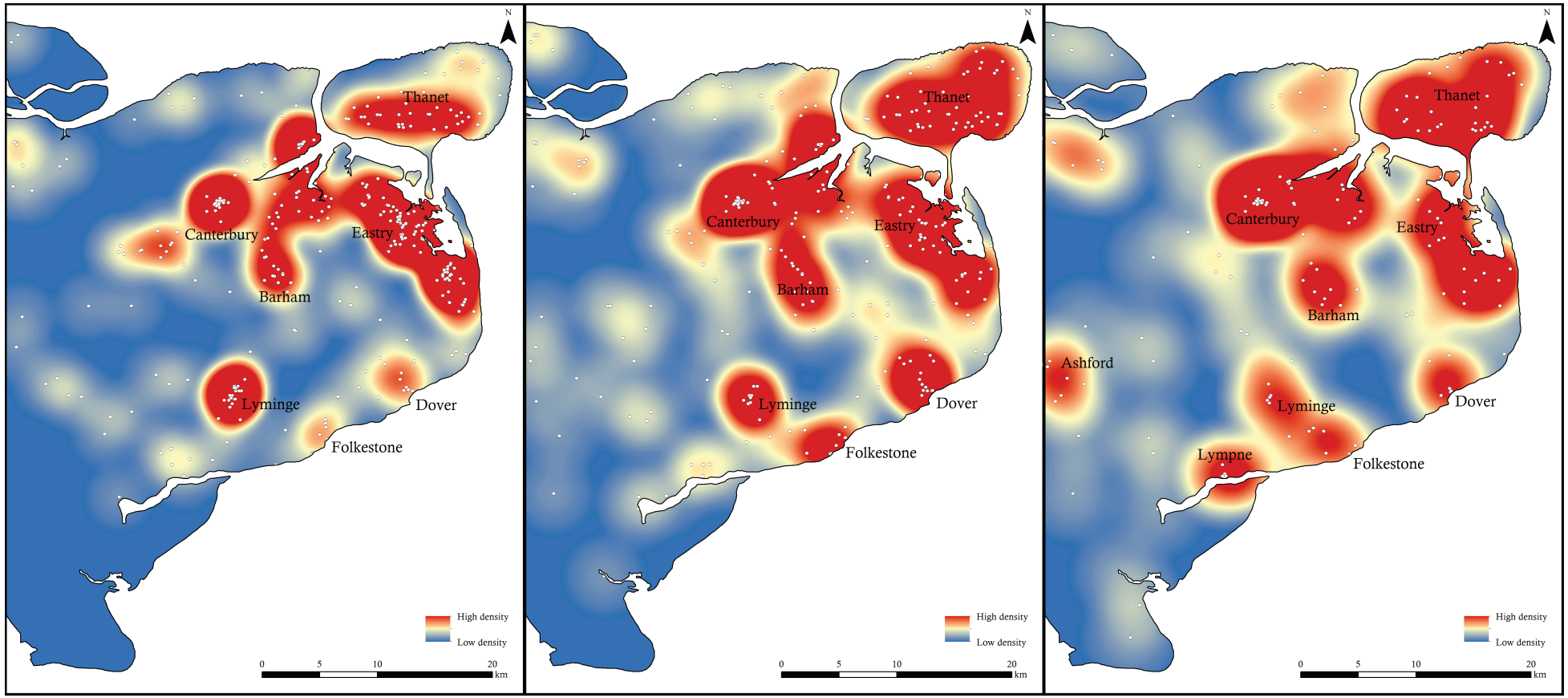



*Figure 4.21:* Kernel Density Estimation calculated using the three phases of the Lyminge regional dataset, dating to AD 400-600 (left), 600-700 (centre) and 700-800 (right) respectively. The results are visualised at 1.5 standard deviations (see **3.4.5**).

to have been influenced to some extent by the physical environment: the North Downs seemingly divided the landscape into groups situated north, east and south of it, while the island nature of Thanet looks to have rendered it somewhat independent.

Overall, the programme of exploratory spatial analysis has revealed a number of insights. Put simply, fifth-eighth-century archaeology in the region exhibits a decidedly clustered spatial pattern, with a handful of localities standing out as long-term centres of activity. This distribution appears to have been partially influenced by geographic factors, with high-quality lands seemingly preferred and more marginal areas initially avoided. Although it would be unwise to infer too much from a disparate range of exploratory analyses, the gradual expansion of settlement indicated by the results does largely conform to the 'patch-resource model' of Stuart Brookes (2007a, 176-80). The model, which might be understood a socio-economic elaboration of Everitt's (1986) sequence of *pays* colonisation, views Kentish settlement as having gradually expanded from a core of established communities in the most fertile areas to more marginal lands. As shall be argued below (**4.4.1**), Brookes' model represents a useful explanatory framework in which to situate the evidence.

### 4.3.4 *Territorial modelling*

The above findings have significant implications for our understanding of the region, and can be used as the basis for considerations of territoriality and social organisation. Before doing so, however, one must convert the evidence of spatial clustering into more explicit archaeological groupings. This was achieved using a technique of cluster analysis known in ArcGIS as 'Grouping Analysis'. As described in **3.4.6**, the technique tries to identify a predetermined number of groups within a dataset by maximising intra-group spatial similarity and inter-group spatial dissimilarity. Within these groups the technique also calculates the cluster mid-point. To be successful, the technique requires the researcher to specify the number of groups in which to find a 'cluster solution'. Informed by the results of the Kernel Density Estimation (*Figure 4.18*), the analysis was undertaken for each phase of the regional dataset with iterations computed for four, five and six spatial groups. Of these, the results with five groups were the most spatially coherent and geographically realistic. The results are not presented here but are visualised as part of the wider programme of territorial modelling that follows.

With plausible clusters of sites identified, a number of data modelling techniques could then be used to generate territorial reconstructions. The results from three attempts will now be presented and briefly discussed. The first model utilised Voronoi Tessellation (**3.5.4**). The technique works by calculating a series of polygons around data points by drawing equidistant lines between them (in Euclidean space) so that any location within a

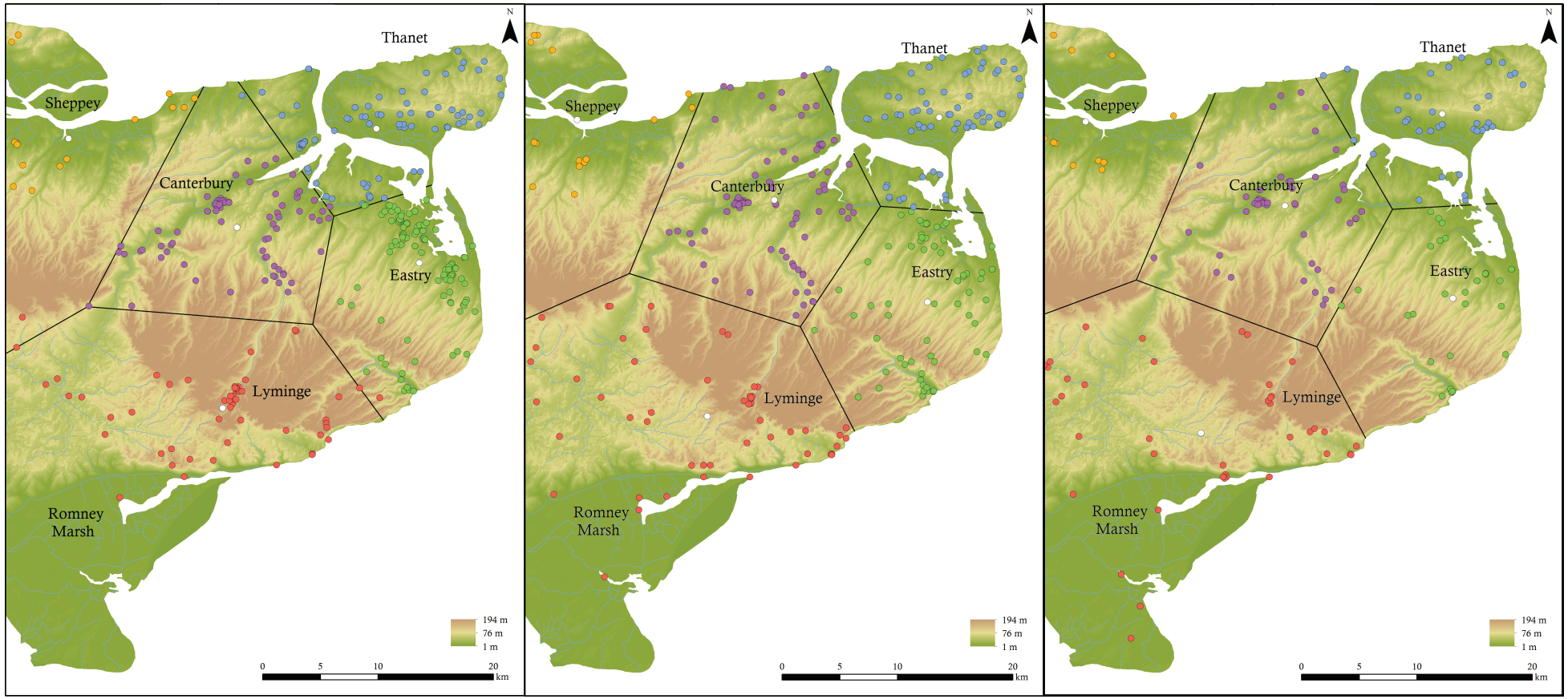



*Figure 4.22:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 410-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively. The model was created using Voronoi Tessellation of the group centres identified in the Grouping Analysis (white dots). Sites are represented by coloured dots, with the colour representing group membership as defined by the Grouping Analysis (*contains Ordnance Survey data © Crown copyright and database right 2017*).

polygon is closer to its associated data point than to any other data point. As a method of spatial allocation, the technique offers a simple and visually effective means of reconstructing territorial units region based on the principle of equidistance. The Voronoi Tessellation was undertaken using the group centres identified in the Grouping Analysis – the logic being that if the results of the Grouping Analysis are accepted as valid, it follows that the group centres identified can be thought of as the hypothetical centres of corresponding territorial zones. The results, shown in *Figure 4.22*, broadly conform to the physical geography of the landscape. In clock-wise order, the model describes: a coastal zone centred on Thanet; a similarly coastal territory encompassing important localities like Eastry, Deal and Dover; a lowland southern zone; a territory that includes Sheppey and part of the north coast; and a central zone focused on Canterbury. The results can also be seen to have an almost perfect correlation with the Grouping Analysis, with few sites being located beyond their associated polygon. In summary, the Voronoi Tessellation analysis can be seen to have returned a plausible territorial reconstruction.

The second attempt at territorial reconstruction used the 'Buffer' function in ArcGIS to calculate isotropic (identical in all direction) spatial zones around the group centres identified from the Grouping Analysis (**3.5.5**). The size of the spatial zones was inferred from the results of the Ripley's K-Function (*Figure 4.18*), specifically the point at which the data ceased to exhibit statistically significant spatial clustering. As such, buffer zones were calculated at a radius of 13 km (phase 1), 17.5 km (phase 2) and 10.25 km (phase 3) respectively. It was hypothesised that should the majority of sites fall within the resulting territorial zones, and if said zones were geographically plausible, the model could be considered a valid method of territorial reconstruction. As can be seen in *Figure 4.23*, the results were mixed. Although the vast majority of sites are located within the resulting spatial zones, the overall size of said zones – and the degree of overlap – is not especially helpful. The results for phase 3 are the most plausible, with somewhat discrete territories. Phases 1 and 2, however, utterly fail to demarcate realistic territorial zones. Given this, the model cannot be thought of as a plausible reconstruction, and is effectively presented here as a negative result. In this the results serve to highlight some of the issues associated with this type of data modelling.

The third and final model was generated using a technique of geospatial analysis that is relatively unknown in archaeological research. Known in ArcGIS as 'Directional Distribution (Standard Deviational Ellipse)', the function calculates the standard deviation of the x and y coordinates from each data point in a group to the mean centre. The result is a 'standard deviational ellipse' that reflects the actual shape of the data (**3.5.6**). The analysis was run for each group of sites identified in the Grouping Analysis, with iterations using 1 and

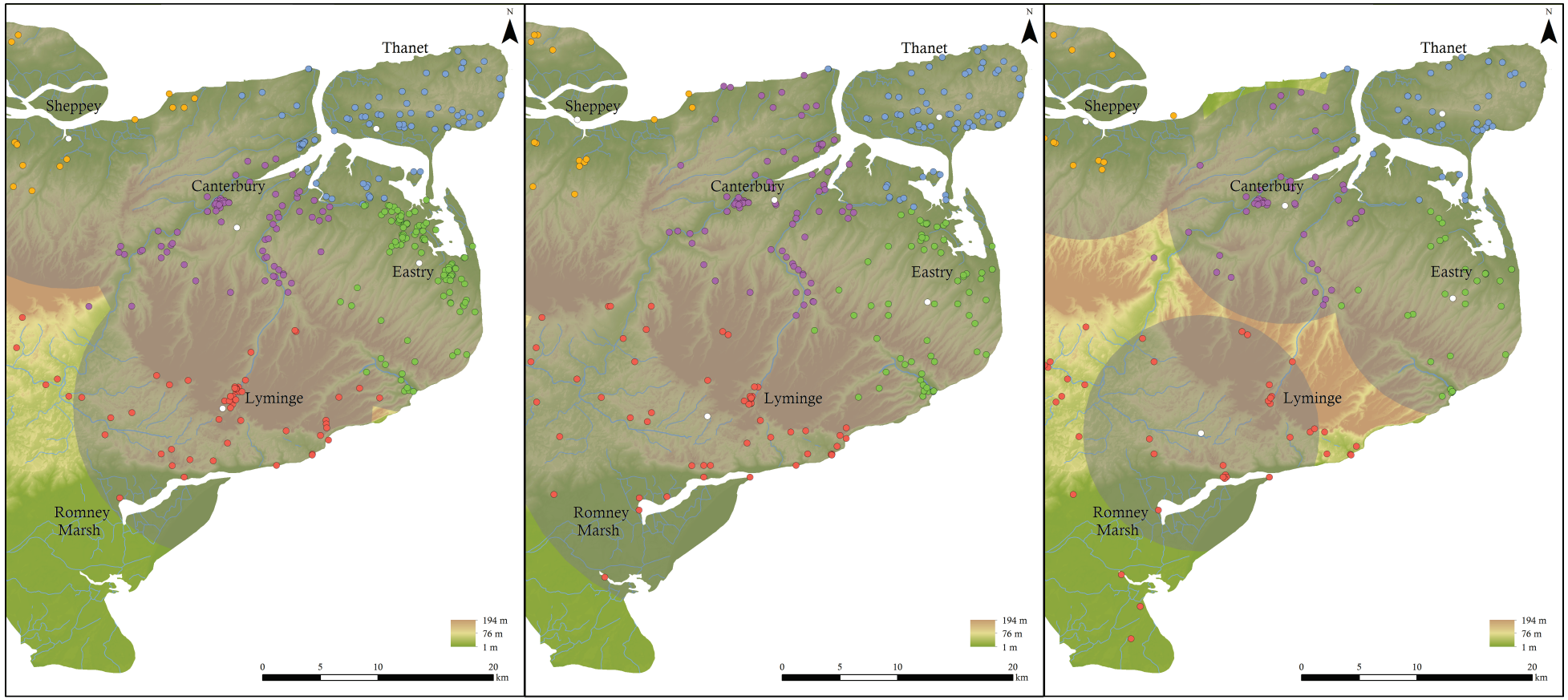



*Figure 4.23:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 410-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively. The model was created by calculating buffer zones around the group centres identified in the Grouping Analysis (white dots). The extent of buffer zones was informed by the results of the Ripley's K Function analysis. Sites are represented by coloured dots, with the colour representing group membership as defined by the Grouping Analysis (*contains Ordnance Survey data © Crown copyright and database right 2017*).

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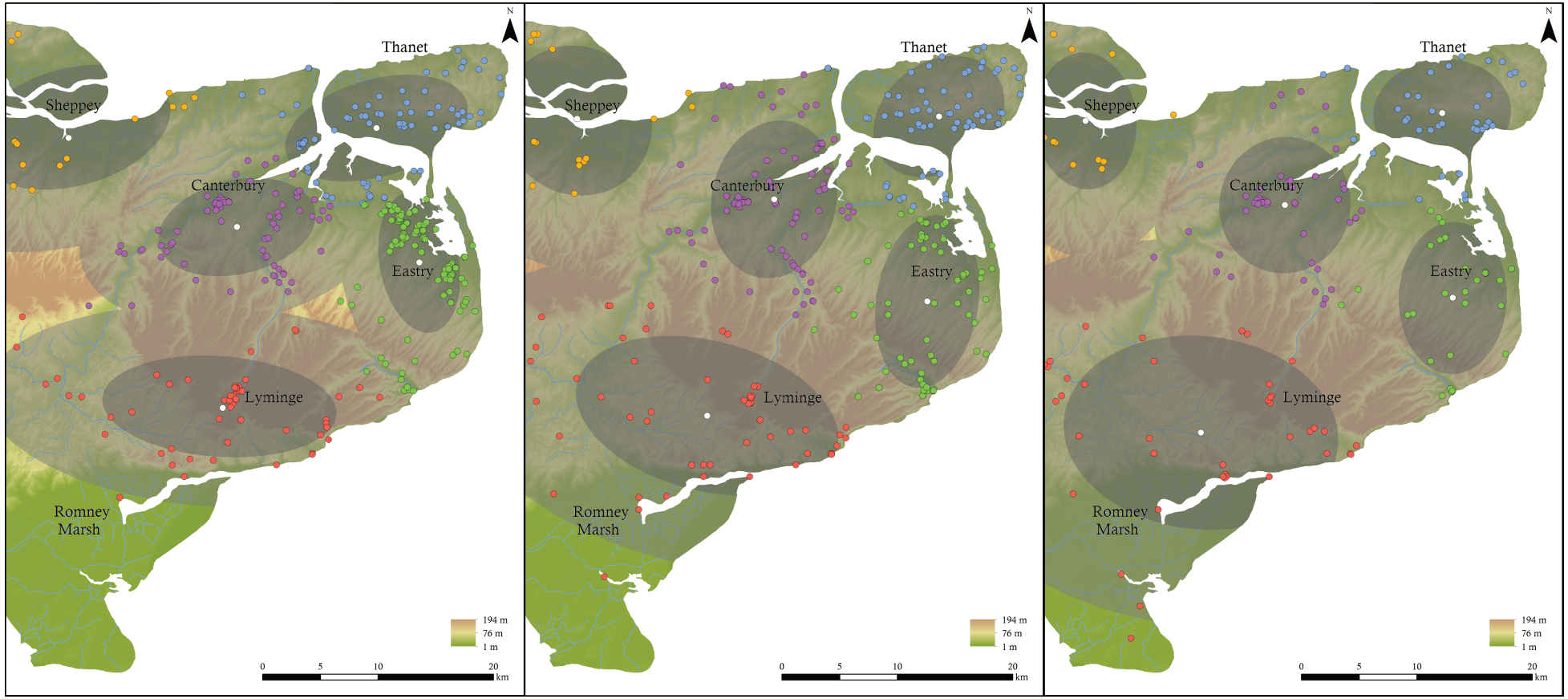



*Figure 4.24:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 410-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively. The model was created by calculating 1 and 2 standard deviational ellipses (the dark grey and light grey areas respectively) for each group of data points identified in the Grouping Analysis (coloured dots). The group centres also identified in the Grouping Analysis are represented by white dots (*contains Ordnance Survey data © Crown copyright and database right 2017*).

2 standard deviational ellipses to simulate the core and periphery of each hypothesised territory. From the results it is possible to identify a series of territorial 'cores', each encompassing the majority of sites, and much larger areas of territorial intersection (*Figure 4.24*). Also interesting is how the shape and extent of these territorial cores changes over time, as is well demonstrated by the gradual expansion of the southern territory (red dots). As such, the model successfully identifies areas of both territorial centrality and liminality, in doing so arriving at a plausible territorial interpretation of the region.

As with any method of spatial analysis, but perhaps more so in this instance, there are a range of limitations and caveats associated with the production of archaeologically derived models of territoriality.[76] In particular, it is important to adopt a critical and cautious approach when interpreting the results. It is also worth emphasising that these reconstructions do not necessarily correlate with historical reality – they are derived solely from the spatio-temporal characteristics of the available archaeological evidence. Even so, there is much to be gained from this exercise; through the use of empirical methods it has been possible to tentatively identify territorial units and approximate of their spatial extents. It is interesting to note how these territories appear to have been influenced by the diverse geography of the region, with the coast, river valleys and topographic features such as the North Downs forming natural boundaries between early power centres. Crucially, and as will be discussed in the next section, these archaeologically derived territories broadly correlate with those as can be inferred from other sources.

## 4.4 DISCUSSION

### 4.4.1 *Lyminge in a Kentish context*

This wide-ranging programme of analysis warrants contextualisation within a broader archaeo-historical framework. Unlike the other case studies in this thesis, which feature study regions of largely uncertain political affiliation, Lyminge is located in what most commentators would consider the ancestral core of the Kentish kingdom (e.g. Yorke 1990, 26-7). As a charter-attested *villa regia* (S 12), there can also be little ambiguity as to the site's royal association. This awareness offers us a clear context in which to approach the evidence – as a *villa regia* operating within a royal heartland – and necessitates a brief consideration of the origins and administration of the kingdom.[77]

The historical evidence for the Kentish kingdom is strong, featuring some of the earliest charters, lawcodes and genealogies known from Anglo-Saxon England (Brooks 1989a, 55;

[76] These were outlined in **3.5.4**, **3.5.5** and **3.5.6** respectively.
[77] What follows is a largely archaeological account. For detailed considerations of early Kentish history see Brooks (1989b), Yorke (1990, 25-44) and Kirby (2000, 23-37).

Yorke 1990, 25). Despite this, the early history of the kingdom, at least before the reign of Æthelberht I, is difficult to reconstruct. The traditional account, as given in various sources (*HE* I.15; *ASC* 449; *HB* 31), is that Kent was settled by 'Jutes', hailing from the Jutland Peninsula of northern Europe, on the invitation of the British king Vortigern (Brooks 1989a, 58-64). The migrants' subsequent betrayal, led by the warlords Hengist and Horsa, resulted in a string of battles through which territorial control in Kent was established (e.g. *ASC* 455; 457; 465; 473). This foundation is almost certainly of mythical origin (Dumville 1977, 176-7; Sims-Williams 1983, 21-6), but that the territory had a significant 'Jutish' component – at least culturally if not ethnically – is also implied by place-name evidence. The inhabitants referred to themselves as the *Cantware*, a Germanic adaptation of the Romano-British territorial place-name *Cantiaci* (Brooks 1989a, 57-8; Millett 2007, 137-41; Welch 2007, 189-90). This has obvious implications for notions of continuity, granted, but it is interesting that the *-wara* element is also found in in southern Hampshire (*Meonwara*) and the Isle of Wight (*Wihtwara*), both of which are also described as being 'Jutish' by Bede (Yorke 1989; 1995, 36-43).

Somewhat paradoxically, there is altogether more evidence for Frankish rather than south Scandinavian influences in the early archaeological record of Kent (Welch 2002), prompting scholars to either downplay the significance of this 'Jutish' connection or to argue that the 'Jutes' themselves had significant Frankish or Frisian influences (Sørensen 1999; Welch 2007, 212-20). Indeed, some have argued that Kent was at times subject to Frankish overlordship (Wood 1992; 1994, 176-80). It is certainly true that there are very real differences in the material culture and funerary archaeology of east and west Kent. Burial in west Kent tends to exhibit cultural affinities with the 'Saxon' realm, as evidenced by significant quantities of artefacts from northern Germany and a preponderance for female burials in the classic 'Saxon' style – being interred with pairs of disc or saucer brooches connected by strings of beads (Welch 2007, 230-5). Conversely, the cemeteries of east Kent demonstrate more overt Frankish and south Scandinavian influences; something that has come to be known in the literature as the 'Kentish style' (*ibid.*, 210-30). These differences in the burial record are, to a certain extent, supported by later ecclesiastical divisions and the diarchic tendencies of the Kentish royal house as recorded in sources from the late sixth century onwards (Yorke 1983; 1990, 27).

Though our knowledge of its earliest kings is scarce, the kingdom appears to have developed from an initial pattern of settlement focused on east Kent to encompass the full extent of the historic county – and perhaps also parts of Surrey – by the end of the sixth century (Welch 2007, 189; Harrington and Welch 2014, 95-103). One of the first serious

attempts to consider the development of Kentish settlement was Alan Everitt's (1986) *Continuity and Colonization*. The foundation of his study was that Kent comprised several distinct topographic regions or *pays* (*ibid.*, 43-5). These included the fertile, low-lying and predominantly agrarian Foothills and Holmesdale, and the more marginal and mainly pastoral Downland, Chartland, Marshland and Weald. Through a meticulous review of archaeological, documentary, toponymic, cartographic and environmental evidence, Everitt concluded that each *pays* had a distinct developmental history. As such, he was able to articulate a relative chronology that emphasised colonisation over continuity, arguing for a gradual and predominately westward expansion from an ancestral core – the 'Original Lands' of the Foothills and Holmesdale – that was crystallised through bonds of secular and ecclesiastical authority (*ibid.*, 89-92; 119-21; 264-7; 341-9).

Stuart Brookes' (2007a) important study maintained the landscape focus of Everitt – facilitated by the then relatively new technology of GIS – but also took a more fundamentally economic approach to the issue of settlement development and state formation in Anglo-Saxon Kent. In this he adopted an agent-based approach, emphasising exchange as a major factor and viewing the '*rationalised decision-making*' of individuals as the most likely explanation of social change (*ibid.*, 16-34; 125-43; 182-5). His 'patch-resource model', mentioned above (**4.3.3**), regarded population growth and resource competition as the principal stimuli in a process of settlement expansion and infilling from the most fertile areas to more marginal lands (*ibid.*, 176-80). It was furthered that, in being economically poorer, these 'secondary settlements' were partly dependent on the more prosperous 'primary settlements'; a dynamic that stimulated the development of large resource territories underpinned by complex socio-economic systems. In more recent work, Brookes (2010) has incorporated theories of behavioural ecology into his model to emphasise how strategic land-use decisions and subsequent population dispersal into less-desirable lands led to the formation of large territorial units with well-defined economic and administrative roles.

Considered together, the works of Everitt and Brookes describe a plausible scenario of settlement expansion and territorial formation that broadly accords with the results of the exploratory spatial analysis (**4.3.3**) and territorial modelling (**4.3.4**) presented above. While the evolution of Kentish settlement can be considered reasonably well understood, then, the specific mechanics of royal establishment are altogether more difficult to discern.[78] It was noted above how a significant Frankish influence can be identified, but the nature of this political relationship remains largely uncertain (Yorke 1990, 43-4; Wood 1992). More internally focused accounts have argued that the control of certain types of artefact, such as

[78] More generally, and as will be shown in **8.2.4**, the origins and development of the early Anglo-Saxon kingdoms is a nebulous and controversial field of enquiry.

bracteates, was crucial to the spiritual and ideological legitimisation of the emerging kingdom (Behr 2000). Irrespective of its origin, that the Kentish kingdom was in full operation by the reign of Æthelberht I can be stated with confidence (Brooks 1989a, 65-7; Yorke 1990, 28-9; Kirby 2000, 24-30). Given that Æthelberht I was one of seven rulers described by Bede (*HE* II.5) as having wielded *imperium* over the southern kingdoms (Wormald 1983; Fanning 1991), we can assume that the kingdom was very powerful indeed around the turn of the seventh century.

Despite this historical reality, identifying 'royal archaeology' on the ground is difficult. Princely burials are likely candidates, but are few and far between. One such example was excavated in 1848 at Coombe (**LY_664**), near the suggestive place-name of Woodnesborough (Davidson and Webster 1967). Dating from the final quarter of the sixth century, the grave consisted of cremated human remains placed within a copper-alloy bowl, accompanied by an assemblage of high-status artefacts including a very fine ring-sword with a niello-inlaid cast silver hilt. We might also consider Grave 205, excavated in 1771 at Kingston Downs (**LY_318**), as a similar embodiment of royal power (Faussett 1856, 77-9). Placed under a very large barrow was a coffin burial dating from the first quarter of the seventh century. The associated grave goods included the 'Kingston brooch', one of the finest pieces of jewellery known from Anglo-Saxon England, as well as a gold scutiform pendant, a pair of safety-pin brooches, two copper-alloy bowls, a glass palm-cup, an iron chatelaine and a wheel-thrown pot with roulette decoration.[79] Further afield, it has been posited on the basis of associated grave goods that the early seventh-century barrow burial at Taplow in Buckinghamshire may have been that of a *subregulus* of the Kentish royal house, perhaps operating as an agent of Æthelberht I (Webster 2011, 271). Mention should also be made of a very rich female burial (grave 45) at Chessell Down on the Isle of Wight. Interred with an array of high-status and overtly 'Kentish' artefacts, the burial has been tentatively interpreted as that of a princess (Arnold 1982, 26-8; 50-72; 106-7; Yorke 1990, 27; Ulmschneider 1999, 25-6). Whether royal or not, these four examples can be seen to evidence a broader trend towards more overt displays of wealth and power in the funerary archaeology of the late sixth and early seventh centuries (Scull 2011, 852-3).

A more promising line of enquiry regards the administration and territorial organisation of the kingdom, of which our understanding is reasonably developed. The division of early medieval Kent into administrative units known as lathes is known from place-name evidence, the Domesday Survey and a late tenth-century document identified as the Rochester

[79] The contents of the grave were taken from the University of Oxford's *Novum Inventorium Sepulchrale: Kentish Anglo-Saxon Graves and Grave Goods in the Sonia Hawkes Archive* online dataset, available at: http://inventorium.arch.ox.ac.uk. The specific entry for Grave 205 (http://inventorium.arch.ox.ac.uk/grave.php?site_ID=Kin&grave_ID=Kin205) was accessed on 28th November 2016.

bridgework list (Brooks 1989a, 69-74). Lathes, which can be understood as being larger than a hundred but smaller than a shire, appear to have been synonymous with the *regiones* or 'small shires' found elsewhere in Anglo-Saxon England (Yorke 1995, 39-43; Blair 2005, 154; Molyneaux 2015, 99-100). Of relevance to the study region are the four lathes of east Kent known to us from Domesday Book: *Wiwaralæð*, *Burhwaralæð*, *Limenwaralæð* and *Estrea* (*Figure 4.25*).[80] These are thought to be early formations – perhaps from the sixth century and almost certainly by the eighth – whose genesis may have been in the amalgamation of small-scale tribal areas or broader folk groupings that were largely defined by the physical landscape (Welch 2007, 242-5; Brookes 2011, 158-63; Lloyd 2013, 99-100).

Of particular interest is the relationship between lathes, place-name-derived administrative centres and historically attested royal vills. Denoted by the Old English element *-ge*, administrative centres can be identified at Lyminge and in early forms of the Eastry and Sturry place-names (Brooks 1989a, 69; Brookes 2011, 158-9). Interestingly, these *-ge* sites have previously been shown to have a central position within lathe boundaries as recorded in AD 1086 (*Figure 4.26*). Some form of intersection between *-ge* toponyms and royal power centres is suggested by Lyminge's description as a *villa regia* (S 12). Wye is also described like this, albeit somewhat later in AD 762 (S 25), and it is worth noting that a royal centre

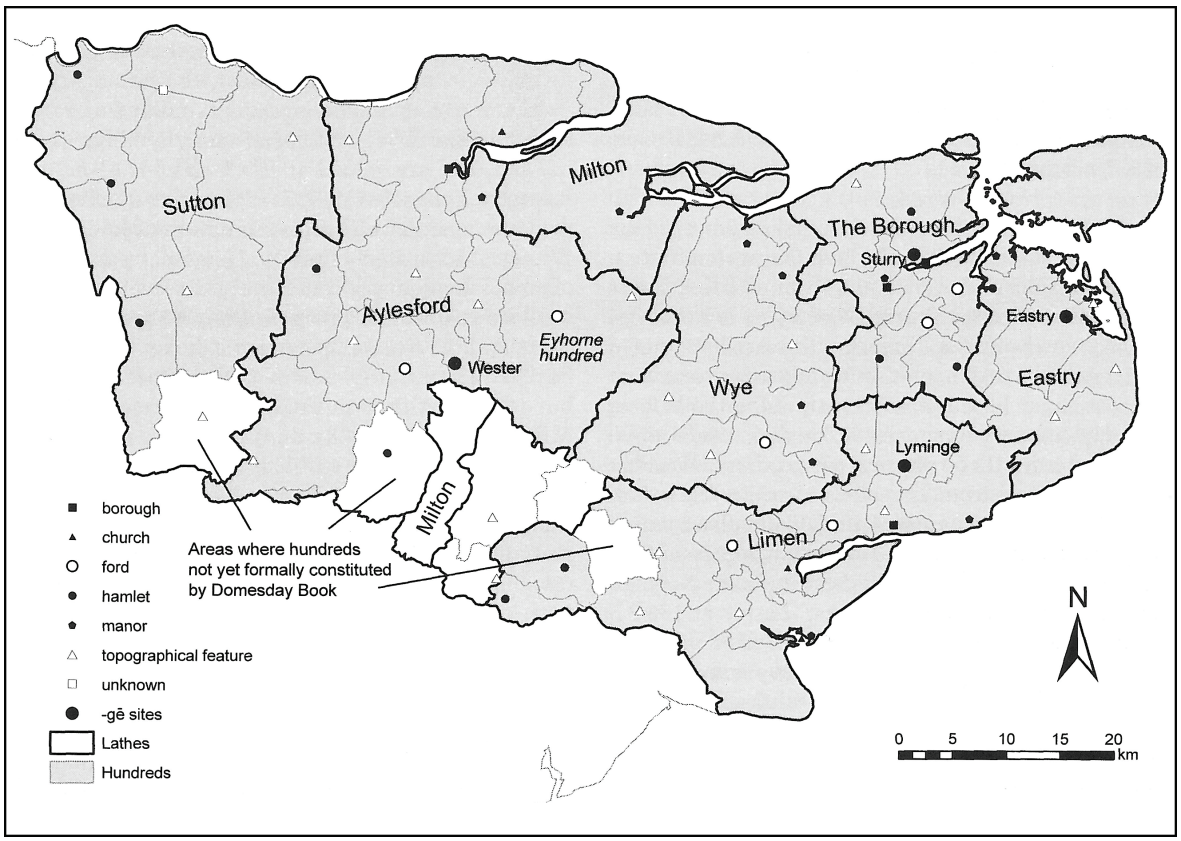



*Figure 4.25:* The administration of Kent at the time of Domesday Book (after Brookes 2011, 157).

[80] The *-wara* element is generally translated as 'dwellers of' (e.g. Yorke 1995, 40), so that *Limenwaralæð* can be understood as 'lathe of the dwellers of the Limen' or 'lathe of the Limen dwellers'.

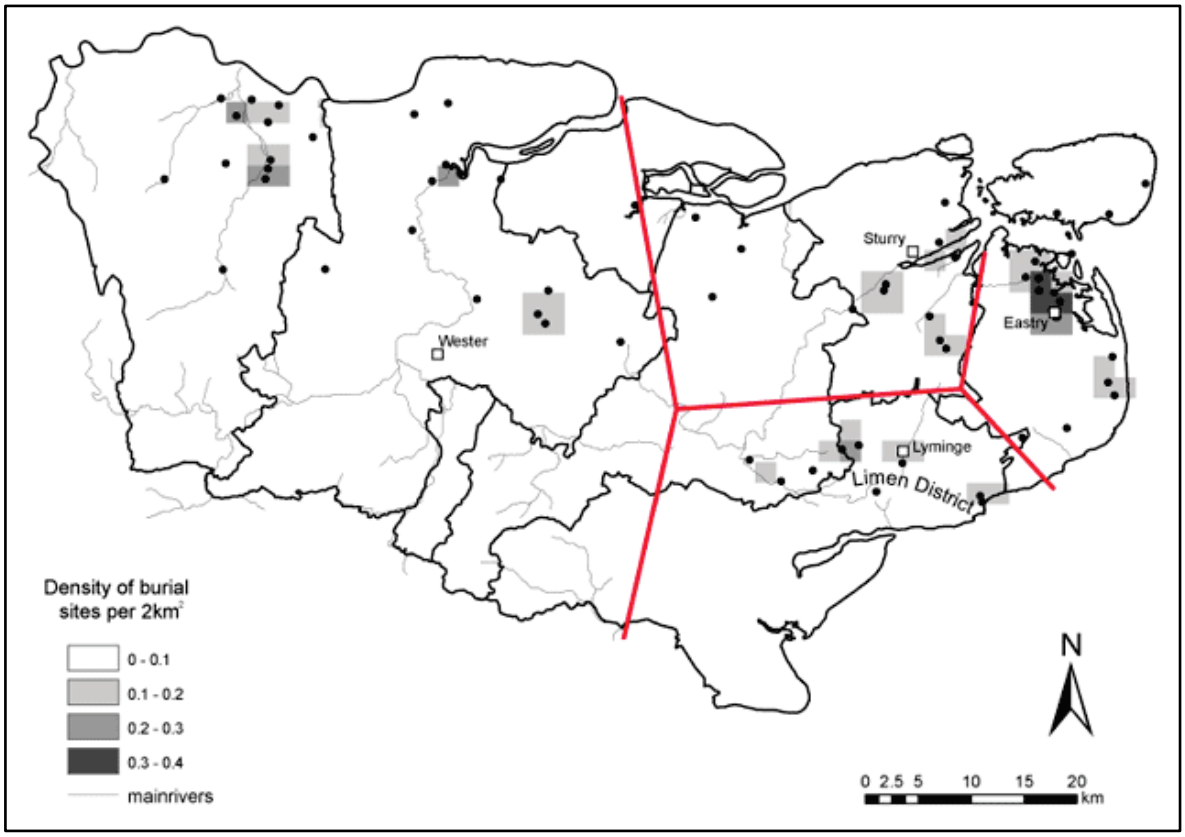



*Figure 4.26:* The results of a Voronoi Tessellation analysis using the three *-ge* sites (Eastry, Sturry and Lyminge) superimposed over the lathes of Kent as recorded in AD 1086 and a density plot of early Anglo-Saxon burial sites (after Brookes and Reynolds 2011, 92).

at Eastry can be inferred from hagiographic sources and a concentration of high-status cemeteries (Rollason 1982, 10; Yorke 1990, 34-5; Dickinson et al. 2011, 1-3). It is possible that the *-ge* at Sturry, as recorded in a forged charter of Æthelberht I (S 4), may have been replaced with a royal vill at Canterbury (Welch 2007, 244; Brookes 2011, 159). Margaret Sparks and Tim Tatton-Brown (1987, 200-1) have postulated that this vill is to be found east of the city wall, perhaps incorporating the church of St Martin frequented by Bertha and Liudard (*HE* I.26). Although not in association with a *-ge* site, the evidence from Dover could represent a coastal vill under the jurisdiction of the *Estrea*, else it might signify an important ecclesiastical or proto-urban establishment (**2.5.1**). Likewise, the recent discovery of a great hall at Eynsford in west Kent may indicate a royal centre of the *Sudtone*, the westernmost lathe of Kent (**2.3.4**). Drawing these disparate strands of evidence together, it is possible to view the seventh-century kingdom as having been composed of discrete territorial units that were each administered by a district centre. Whether a district centre always operated as a *villa regia* is difficult to gauge, but this certainly seems to have been the case at Lyminge.

The above considerations provide a broader context in which to interpret the evidence from Lyminge: as a district centre and royal vill of a territorial unit that came to be known as the *Limenwara*. One peculiarity remains, however: why did Lyminge, an inland site, come

to be named after the River Limen, a tidal inlet near West Hythe and Lympne some 6 km to the south? This is a difficult question to answer, but this geographic separation indicates that Lyminge's role as a district centre post-dated the formation of the *Limenwara* territory, which presumably expanded inland from an initially coastal focus. Given the early indications of politico-religious centrality at Lyminge (Thomas 2017, 111-12), this territorial formalisation may have occurred at some point before the early-mid sixth century. This view does not preclude Lympne having also been an important centre (e.g. Everitt 1986, 90; 342; Blair 2005, 186), but the weight of archaeological, historical and toponymic evidence certainly points to Lyminge being the principal centre by the seventh century (Brookes 2011, 159; Thomas 2013, 116). Beyond its immediate territorial association, that the great hall phase at Lyminge can be confidently dated to the seventh century places it firmly within the realm of documented kings. Interestingly, this phase can be subdivided into three hall sequences that each must have lasted for approximately thirty years (Thomas 2017, 106-10). From this it is tempting to posit that the sequence may relate to the construction of royal palaces by successive kings. It is impossible to state which – if any – of course, but this chronology broadly corresponds with the period from Æthelberht I to Ecgberht (*d*. AD 673) or Hlothhere (*d*. AD 685).

Expressions of royal power appear to have shifted in the late seventh and eighth centuries, presumably as part of broader societal changes (**8.2.2**). The growing power of the church appears to have been a significant factor in this transition. This is well evidenced by the monastic appropriation of the royal vill at Lyminge, of course, but is also demonstrated by the sheer quantity of ecclesiastical land grants made during the late seventh and early eighth centuries (Blair 2005, 84-91). Indeed, whereas earlier kings appear to have demonstrated their power through the building of great hall complexes, later monarchs seem to have done so through ecclesiastical investment. This was certainly the case at Lyminge, where successive royal grants stand testament to the wealth and importance of the monastery (**4.2.2**). Like its precursor in the late seventh century, the monastery at Lyminge was eventually abandoned at some point in the ninth or tenth century. Though it remained a sizeable and relatively wealthy settlement, it was never to regain its previous politico-religious significance.

# 5
# COWDERY'S DOWN

This chapter presents the results of a case study of Cowdery's Down in Hampshire. The first section is introductory, describing the study region and outlining the archaeological data collected from it. A series of local- and regional-scale analyses form the investigative basis of the chapter, and are reported in the second and third sections respectively. The concluding section discusses the results within a broader archaeo-historical framework.

## 5.1 INTRODUCTION

### 5.1.1 *The study region*

As noted in **3.1.1**, Cowdery's Down was selected as the second case study due to its impressive state of excavation and the overall quality of evidence. Centred on the site (SU 6570 5320), a 40 km x 40 km survey area was calculated for the purposes of data collection. The physical landscape is undulating but relatively low-lying, comprising of a number of broad environmental zones (*Figure 5.1*).[81] The most obvious landscape feature is the Hampshire Downs, a band of chalk downland (WHCK) covering much of the south and west of the region. Heading north into the Thames Valley is a fertile plain principally composed of clays (THAM/LMBE). The south-east of the study region consists of a spur of gault and greensand (LGS/GUGS) representing the edge of the Weald. The most significant rivers are the Kennet in the north, which flows eastwards from near Silbury Hill in Wiltshire and joins the Thames at Reading, and the Wey in the south east, which flows north-eastwards from two sources (Alton in Hampshire and Blackdown in West Sussex) before joining the Thames at Weybridge in Surrey. Other rivers of note include the Pang in the north west, the Dever in the south west and the Loddon, Blackwater, Whitewater and Hart in the north east. As shown in *Figure 5.2*, the study region comprises parts of the historic counties of Hampshire (71.85%), Berkshire (25.60%) and Surrey (2.55%).[82]

[81] Geological information was obtained from the British Geological Survey's *Geology of Britain viewer*, accessible at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html. Geological codes relate to the *Lexicon of Named Rock Units* accessible at: http://www.bgs.ac.uk/lexicon/.
[82] The local government district of West Berkshire was created in 1998 and has its own HER.

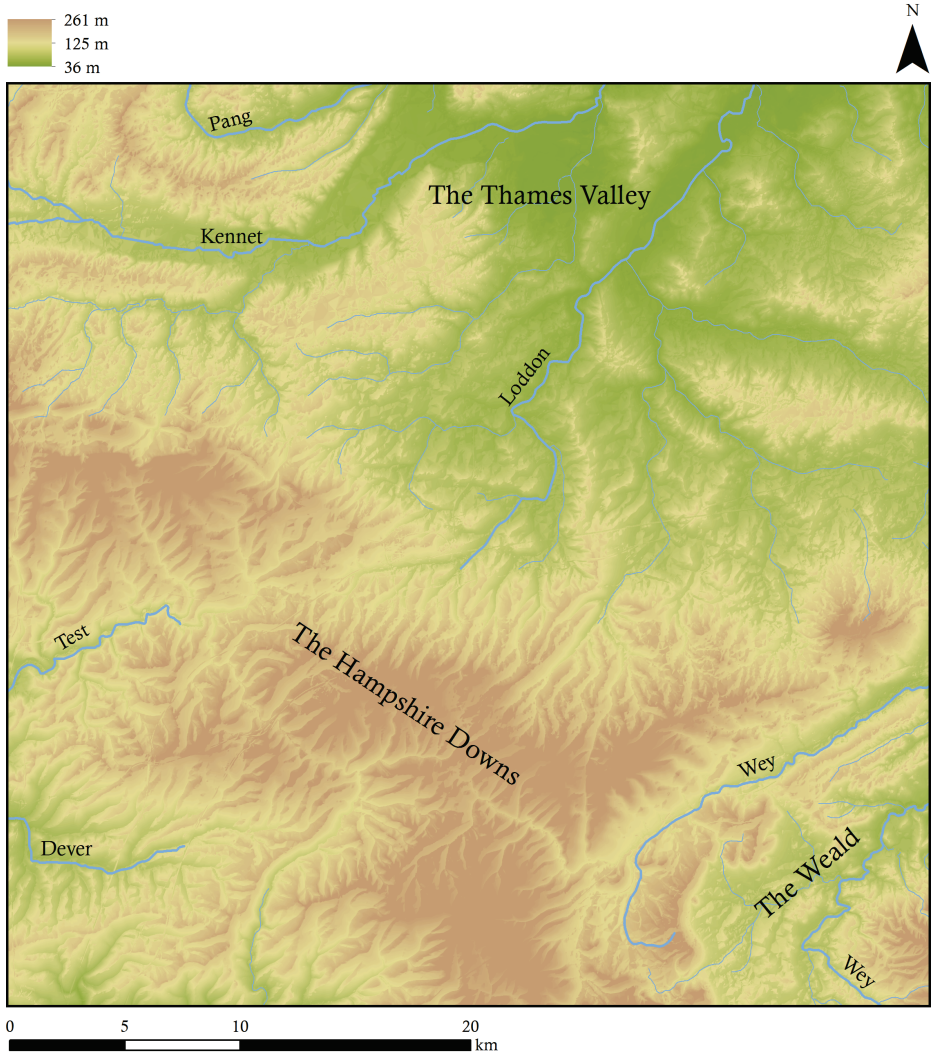



*Figure 5.1:* Major rivers and topographic zones in the study region (*contains Ordnance Survey data © Crown copyright and database right 2017*).

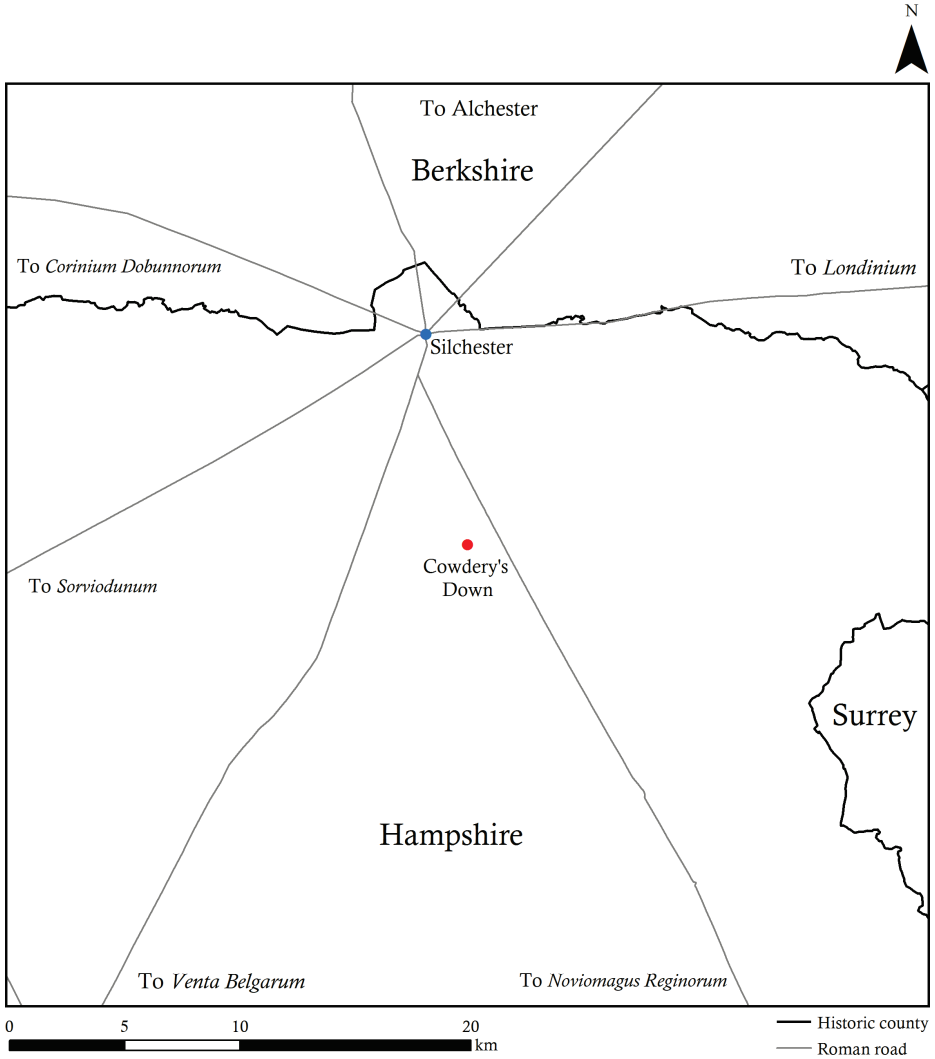



*Figure 5.2:* The study region in relation to historic county boundaries and the Roman road network.

### 5.1.2 *Antecedent archaeology*

Although the fifth-eighth centuries represent the present focus, it is useful to situate the study region within a longer-term perspective through a brief consideration of its prehistoric and Roman-period archaeology. In this the publication of the Solent-Thames Research Framework is a welcome and timely contribution (Hey and Hind 2014). The early prehistoric archaeology of the region is limited, especially when compared with the monumental landscapes from the neighbouring counties of Wiltshire and Dorset, but a number of excavated sites allow a tentative pattern of activity to be discerned during the Bronze Age (Bradley 2014, 87). Sites like the barrow at Buckskin and the sizeable cremation cemetery at Daneshill offer a glimpse into the funerary landscape (Millett and Schadla-Hall 1992; Allen et al. 1995), while the transition to a more permanent pattern of occupation is attested by a number of sites along the River Kennet (Butterworth and Lobb 1992a; Moore and Jennings 1992). More broadly, finds like the perforated axe hammer from Kingsclere and the fragments of gold 'ring money' from North Warnborough offer some insight into the Bronze Age economy (Gardiner 2002, 7-8). Occupation of a different character is attested in the Iron Age by the hillfort evidence, with sites like Winklebury having enjoyed significant excavation (Smith 1977; Lambrick 2014, 131-3). Moreover, some form of territorial organisation – or at the very least a consolidated sphere of influence – is suggested by the concentration of Eppilus and Verica coin issues at the major settlement and likely *oppidum* at Silchester (Fulford 1996, 31-2; Allen 2002, 13; Sharples 2010, 160-2).

Silchester (*Calleva Atrebatum*), being a *civitas* capital by the late first century, represents the obvious focus of Roman activity (Wacher 1995, 271-91). Indeed, the region represents almost the entirety of the *civitas* of the Atrebates inasmuch as it can be defined (Fulford 2014, 155). Primarily because it did not become a medieval town, and is almost completely unsettled in modern times, the site has enjoyed excavation on a scale unparalleled elsewhere in Britain (Fox and St John Hope 1894; Fox et al. 1895; St John Hope and Stephenson 1910; Boon 1957, 1974; Fulford 1989).[83] That Silchester functioned as a central node in a wider socio-economic system is clearly demonstrated by the wealth of its archaeology, but is also evidenced by its strategic position within the Roman road network – being situated at the junction between no less than seven roads (Margary 1973, 84-90; 96-8; 130-2). These included connections to Cirencester (*Corinium Dobunnorum*), London (*Londinium*), Winchester (*Venta Belgarum*) and Chichester (*Noviomagus Reginorum*).

Beyond the obvious importance of Silchester, we can explore the spread of activity in the region using the PAS online database and the *Rural Settlement of Roman Britain* project

[83] The site has been systematically excavated by the University of Reading since 1997. Further details can be found at http://www.reading.ac.uk/silchester/.

(Allen et al. 2015). Using these resources, data relating to seventy-five settlements and 4200 PAS finds were obtained.[84] The distribution of these sites, visualised in *Figure 5.3*, demonstrates a landscape of significant settlement. Although the highest ground atop the Hampshire Downs appears to have been avoided, there is otherwise no obvious pattern of activity; indeed, the more upland southern half of the region appears to have had a similar level of activity to the low-lying northern half. Particularly high levels of activity are found at certain localities, such as at the villages of West and East Stratton in the south-west of the region and near Thatcham in the north-west. There are also several sites along the length of, and in close proximity to, the road network. When viewed collectively, the Roman-period evidence from the study region attests a densely settled, heavily Romanised and (presumably) well-populated landscape.

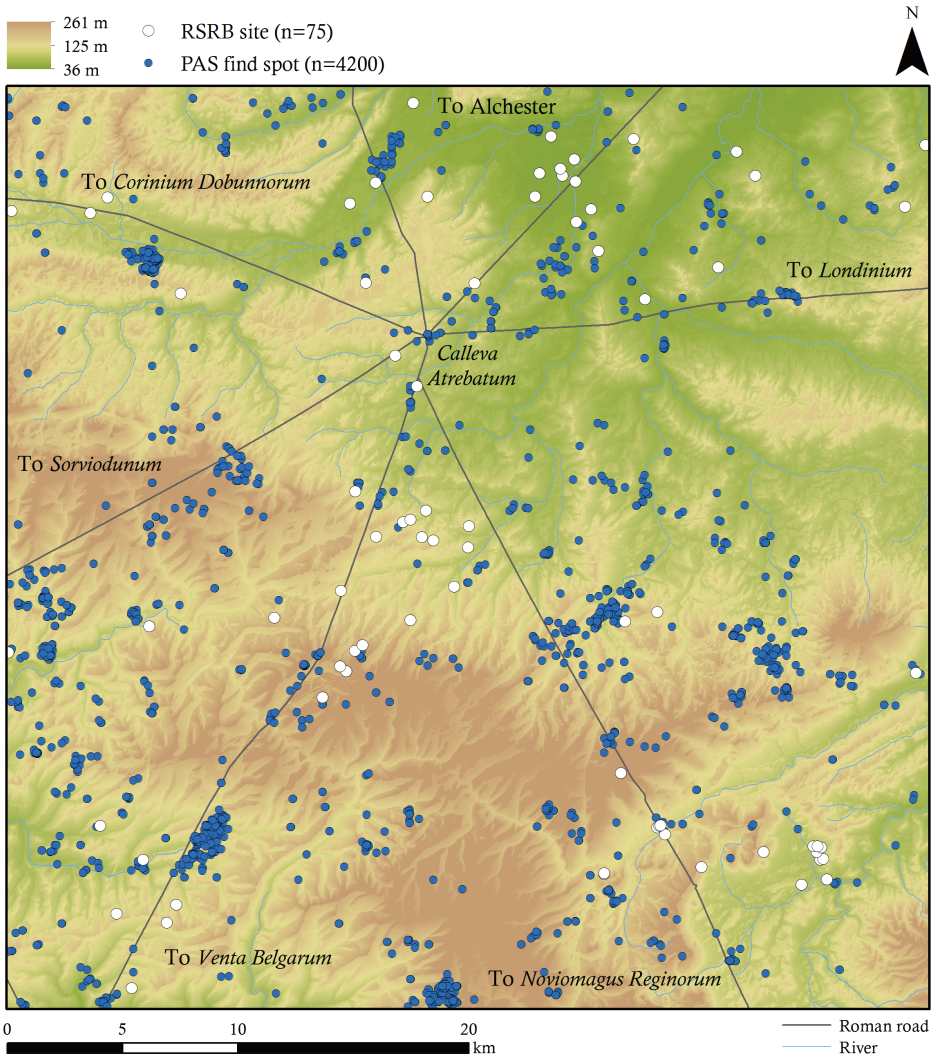



*Figure 5.3:* The study region during the Roman period, as evidenced from the PAS online database and the Rural Settlement in Roman Britain project (*contains Ordnance Survey data © Crown copyright and database right 2017).*

[84] The PAS online database, available at: https://finds.org.uk/, was accessed on 13th June 2016 and data downloaded using the 'search via map' function. The *Rural Settlement of Roman Britain* project, available at: https://doi.org/10.5284/1030449, was accessed on 15th July 2016 and data downloaded using the 'query' function.

### 5.1.3 *The regional dataset*

The data collection process, outlined in **3.2.2**, resulted in the identification of 192 sites with archaeological activity likely to date to the research period (AD 400-800). Of these, 141 (73.44%) sites are certain to date from the fifth-eighth centuries while twelve (6.25%) and thirty-eight (20.31%) were classed as 'probable' and 'uncertain' respectively. Of the 'uncertain' sites, eight are of completely unknown date, four are only broadly datable to the early medieval period and twenty-six can be calendrically dated but have a ≤50% chance of relating to the study period. An overview of the dataset is given in *Table 5.1*.

As can be seen in *Figure 5.4*, the distribution of sites follows the same general pattern as the Roman-period dataset discussed above (*Figure 5.3*). More specifically, it can be observed how activity clusters in some of the same localities (e.g. in proximity to the River Dever) and is similarly absent from others (e.g. a large area in the eastern portion of the study region). In general, activity appears to favour lowland areas in the vicinity of a river, although the number of sites at higher elevations, such as those on the lower courses of the Hampshire Downs, is not insignificant. Taken together, the evidence indicates a landscape of moderate settlement in the early medieval period, at a scale broadly comparable with the Cowage Farm and Long Itchington/Hatton Rock case studies (**8.1.3**). As with the previous case study, the difference in size between the Roman and early medieval datasets is vast (*Figure 5.5*). The arguments do not need restating (see **4.1.3**) but this is important to bear in mind; once again, we are dealing with a landscape that was occupied in a very different manner after *c.* AD 410 than before it.

### 5.1.4 *Chronology*

The final introductory consideration relates to chronology. In order to facilitate quantification and analysis, the regional dataset was chronologically seriated and subsequently phased. Following the method detailed in **3.3.3**, the seriation was undertaken using all chronologically certain and probable sites, as well as the twenty-six uncertain sites that could be calendrically dated but whose date ranges partially fell outside the chronological limits of the study (see above). This resulted in a large data matrix of chronological information from 180 sites ordered by date range (*e-Appendix 2b*). The results are used below to visualise archaeological activity over time and construct a regional chronology (**5.3.1**), but are used here as a means to phase the dataset. Informed by the proposed date of the great hall phase at Cowdery's Down (**2.2.2**), a phasing scheme was produced according to the method outlined in **3.3.4**. This resulted in a breakdown of sites likely to have been 'active' before, during and after the great hall phase (*Table 5.2*).

| Site type | C/P/U sites | | C/P sites | | C sites | |
|---|---|---|---|---|---|---|
| | No. of sites | % | No. of sites | % | No. of sites | % |
| Artefact find spot | 160 | 83.33% | 126 | 81.82% | 116 | 81.69% |
| Burial site | 13 | 6.77% | 10 | 6.49% | 9 | 6.34% |
| Settlement site | 10 | 5.21% | 10 | 6.49% | 10 | 7.04% |
| Inferred occupation | 8 | 4.17% | 7 | 4.55% | 6 | 4.23% |
| Ecclesiastical site | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Hoard | 1 | 0.52% | 1 | 0.65% | 1 | 0.70% |
| Total | 192 | 100.00% | 154 | 100.00% | 142 | 100.00% |

*Table 5.1:* An overview of the Cowdery's Down regional dataset. The abbreviations used – 'C' for certain, 'P' for probable and 'U' for uncertain – relate to the level of chronological certainty assigned to sites in the dataset, as outlined in *Table 3.2*. Note: some of the analyses reported in this chapter combine the 'settlement site' and 'inferred occupation' site types into a single category termed 'occupation sites'.

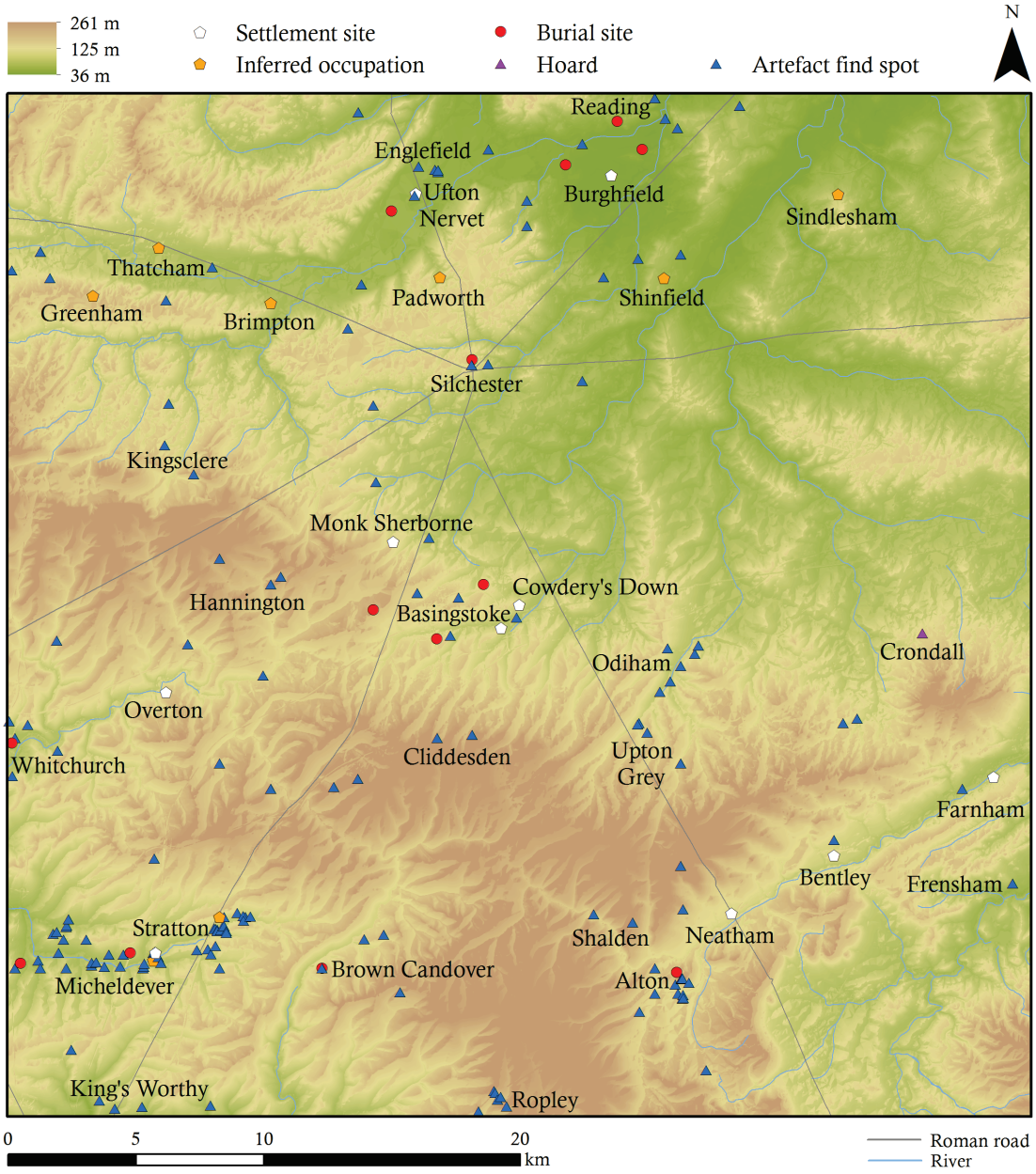



*Figure 5.4:* A distribution map of the regional dataset with prominent localities labelled (*contains Ordnance Survey data © Crown copyright and database right 2017*).

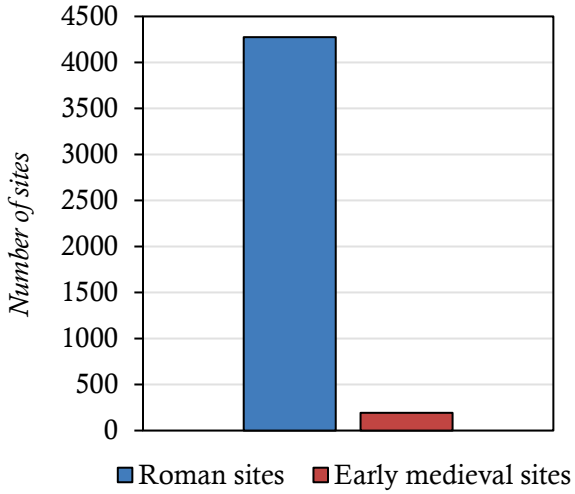



*Figure 5.5:* A bar chart comparing the numbers of Roman-period (n=4275) and fifth-eighth-century (n=192) sites in the region.

| Phase | Description | Date range | No. of sites |
|---|---|---|---|
| 1 | Before the great hall phase | AD 400-600 | 78 |
| 2 | During the great hall phase | AD 600-675 | 44 |
| 3 | After the great hall phase | AD 675-800 | 100 |

*Table 5.2:* The phasing scheme used for the regional dataset, based on the sequence at Cowdery's Down (**2.2.1**). The number of sites within each phase was determined using the results of the chronological seriation.

Data relating to twenty-one radiocarbon samples (from seven sites) were also recovered during the data collection process. Overall the quality of the samples was variable, with some samples having error ranges as wide as ±120 BP and others as narrow as ±22 BP. These have been recalibrated using the methodology outlined in **3.3.2** and are presented in *Table 5.3*. Individual samples are considered in the ensuing discussion as and when they become relevant.

## 5.2 COWDERY'S DOWN IN CONTEXT

### 5.2.1 *The site and its setting*

With the archaeology of Cowdery's Down having already been reviewed in some detail (**2.2.2**), it is now appropriate to situate the evidence in an environmental, archaeological and historical context. Cowdery's Down is sited within the Basingstoke locality, a low-lying and reasonably fertile area located directly north of the Hampshire Downs and at the source of the River Loddon, from which one could sail north-eastwards to the Kennet and on to the Thames. In modern times the locality consists of Basingstoke – the town proper – and the small village of Old Basing on its eastern outskirts, although the geographic separation between the two has been reduced by urban expansion. Being a product of this urban expansion, the Cowdery's Down site is actually closer to the high street of Old Basing ('The

| Site information | | Radiocarbon sample information | | | Published date ranges | | IntCal 13 date ranges | |
|---|---|---|---|---|---|---|---|---|
| ID | Site | RC sample | RC age | Description | 68.2% | 95.4% | 68.2% | 95.4% |
| CD_019 | Anslow's Cottages | HAR-9182 | 1370±60BP | Timber associated with unknown structure | 630 – 675 | 565 – 770 | 605 – 761 | 565 – 770 |
| CD_019 | Anslow's Cottages | HAR-9183 | 1390±60BP | Timber associated with unknown structure | 610 – 670 | 550 – 760 | 595 – 681 | 545 – 768 |
| CD_019 | Anslow's Cottages | HAR-9184 | 1300±60BP | Timber associated with unknown structure | 660 – 775 | 640 – 880 | 660 – 769 | 641 – 880 |
| CD_034 | Burghfield Quarry | BM-2096 | 1500±60BP | Coffin timber associated with human burial | N/R | N/R | 435 – 635 | 426 – 647 |
| CD_034 | Burghfield Quarry | BM-2096R | 1720±120BP | Coffin timber associated with human burial | N/R | N/R | 138 – 424 | 54 – 579 |
| CD_034 | Burghfield Quarry | BM-2096A | 1750±50BP | Coffin timber associated with human burial | N/R | N/R | 234 – 379 | 138 – 394 |
| CD_034 | Burghfield Quarry | BM-2096AR | 1840±100BP | Coffin timber associated with human burial | N/R | N/R | 67 – 324 | -45 – 403 |
| CD_034 | Burghfield Quarry | BM-2096N | 1800±50BP | Coffin timber associated with human burial | N/R | N/R | 135 – 317 | 85 – 345 |
| CD_081 | London Road | KIA-28637 | 1533±22BP | Animal bone associated with an SFB | N/R | 436 – 599 | 434 – 568 | 428 – 593 |
| CD_132 | Riverdene | Unknown | 1310±70BP | Animal bone associated with SFB 9 | 650 – 780 | 610 – 890 | 651 – 771 | 610 – 884 |
| CD_140 | Sadler's End | KIA-44187 | 1260±23BP | Charcoal associated with a pit | N/R | 679 – 825 | 691 – 770 | 671 – 853 |
| CD_147 | Silchester (burial) | OXA-8733 | 1600±40BP | Human cranial fragment near North Gate | 420 – 540 | 340 – 570 | 409 – 535 | 383 – 557 |
| CD_156 | Stratton | HAR-2027 | 1790±80BP | Charcoal associated with Roman road | N/R | N/R | 133 – 332 | 62 – 408 |
| CD_156 | Stratton | HAR-1703 | 1550±80BP | Charcoal associated with Roman road | N/R | N/R | 421 – 582 | 345 – 648 |
| CD_156 | Stratton | HAR-2769 | 1220±90BP | Animal bone associated with Roman road | N/R | N/R | 689 – 889 | 656 – 986 |

*Table 5.3:* Radiocarbon samples of relevance from the Cowdery's Down study region (data from Fasham 1981, 167; 171; 186; Burleigh et al. 1984, 63; Bowman et al. 1990, 62-3; Butterworth and Lobb 1992b, 85; Jordan et al. 1994, 40-1; Fulford 2000, 356; Taylor 2012, 197; Lewis et al. 2013) and their recalibration using IntCal 13 (Reimer et al. 2013) and OxCal v4.2 (Ramsey 2009; Ramsey and Lee 2013), reported at 1σ (68.2%) and 2σ (95.4%). Calibrated date ranges are years AD/CE. 'N/R' is an abbreviation for 'not recorded', which is used where samples have not been previously calibrated or where calibrated date ranges were only reported at 1σ. Note: the Cowdery's Down radiocarbon samples were previously presented in *Table 2.1*.

Street') than it is to the centre of Basingstoke, and is situated less than 1 km from its parish church (dedicated to St Mary). By comparison, the Riverdene settlement discussed below has a more central (i.e. westward) location, being approximately 1.25 km from Basingstoke train station.

The relationship between Basing and Basingstoke during the early medieval period is difficult to discern. Basing is first attested in the *Anglo-Saxon Chronicle* entry for AD 871, as the site of a battle between Alfred and Danish invaders, and is also mentioned briefly in Asser's *Life of King Alfred*, written in AD 893 (Hughes 1984, 76). A draft will of Eadred (*r.* AD 923-955) includes a bequest of land at *Basingum* but makes no mention of Basingstoke (S 1515). The earliest reference to Basingstoke is a charter of Æthelred, dating to AD 990, which grants Æthelweard a meadow at *Embasinga stocæ* (S 874). Domesday Book also makes a distinction: *Basinges* is recorded as having sixty-eight households and three mills while *Basingstoches* is described as a royal manor with fifty-seven households, a market, a mill and a church held by Mont St Michel Abbey.[85] Viewed collectively, the documentary evidence suggests that Basing was a recognised locality but that the place-names of its constituent settlements were sometimes used interchangeably.

Despite considerable evidence for Iron Age and Roman activity (Hall-Torrance and Weaver 2003, 63), including a number of Late Roman sites such as Manor Farm (Teague 2005) and Park Prewitt Hospital (Coles et al. 2011), there is as yet no evidence for fifth-century activity in the Basingstoke area. Antecedent activity at Cowdery's Down itself included Bronze Age ring-ditches (Periods 1-2), an Iron Age enclosure (Period 3A) and a Roman enclosure with various field boundaries (Periods 3B-3C). None of the artefacts associated with Period 3C need date later than the mid-fourth century, though, and it appears that the early medieval settlement (Period 4) was a new establishment after at least a 100-year gap in activity (Millett and James 1983, 182; 192). Without an immediate archaeological context for the settlement, then, we might better understand its establishment through a consideration of its wider landscape setting. Although antecedent activity clearly influenced its spatial configuration – with the Period 4A structures being situated less than 30 m from the Bronze Age ring-ditches and Roman enclosure – the choice of location may have been informed by other considerations. Indeed, it is possible to discern an element of environmental strategy in the placement of the site. For example, the site's proximity to the Loddon would have indirectly connected it to Thames – arguably the most important waterway in southern England. This position would also have provided the site with good access to both an abundant freshwater resource and the good-quality chalks and clays of the

[85] This information was taken from the *Open Domesday* website, available at: http://opendomesday.org/ (accessed 15th November 2016). The resource was created by Anna Powell-Smith as part of the AHRC-funded *Hull Domesday Project*. See http://www.domesdaybook.net/ for further details.

wider valley. More broadly, the Hampshire Downs immediately to the south would have offered ample upland for transhumance. In boasting impressive views of the surrounding region, this area of downland might also have functioned as an important place of open-air assembly and ceremonial activity (Baker and Brookes 2013b, 149-50; 2015, 14-16).

It is also interesting to note the site's location on a prominent ridge. The extent to which this would have afforded the site good visibility over the surround area was tested using viewshed analysis. As with the previous case study, the technique used Cowdery's Down (SU 6570 5320) as the observation point and calculated, based on observer angle and topographic height, which areas are likely to have been visible from it. This offered a means in which to characterise the visual landscape and gauge which areas and sites were likely to have been visible from Cowdery's Down. The results, visualised in *Figure 5.6*, demonstrate an impressive level of local and long-distance visibility.

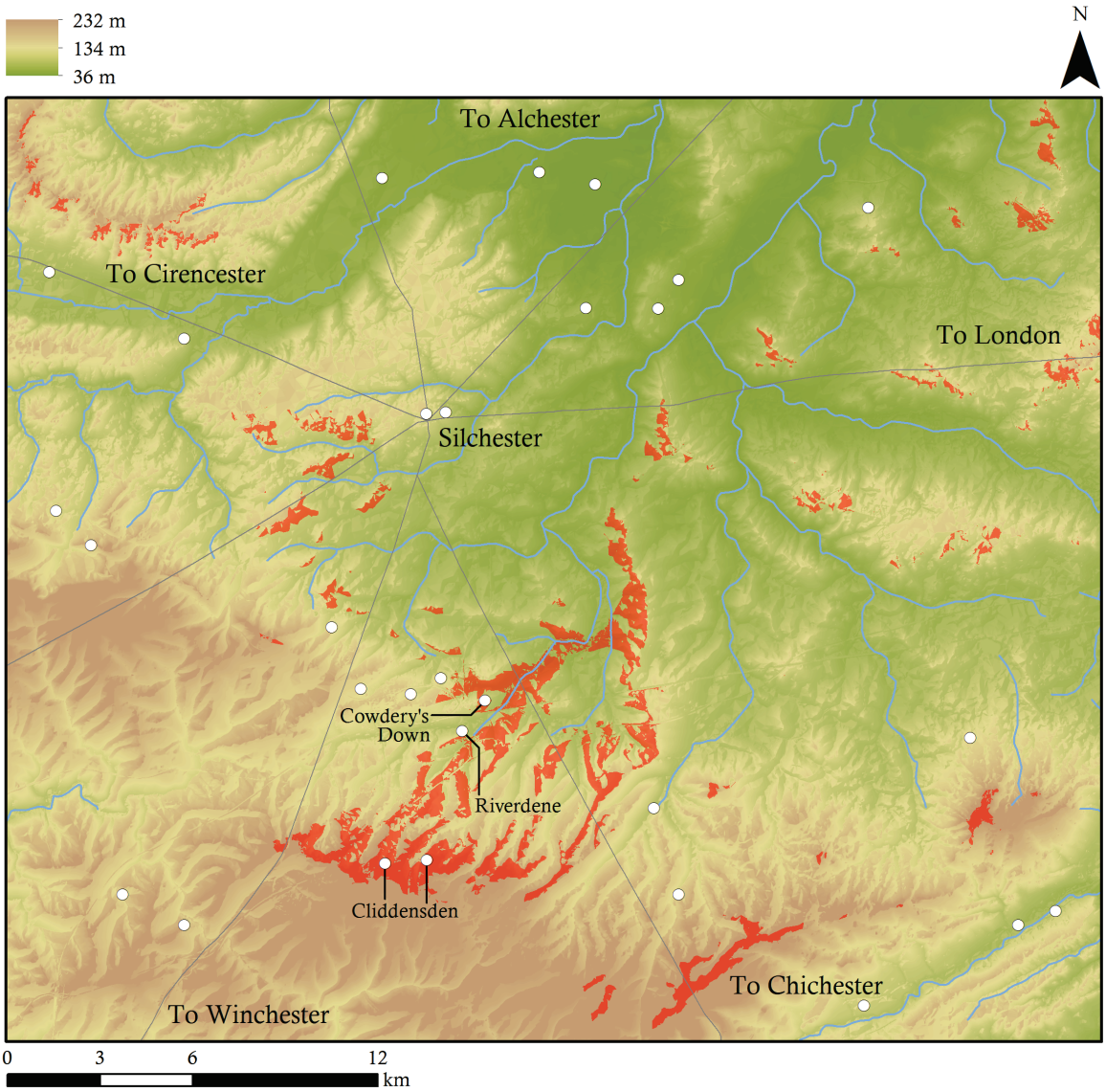



*Figure 5.6:* The results of the viewshed analysis. Areas likely to have been visible from Cowdery's Down are shaded red, with contemporary and near-contemporary sites being represented by white dots. Sites mentioned in the text are labelled (*contains Ordnance Survey data © Crown copyright and database right 2017).*

Visual coverage at the local scale is mainly confined to the south and east, with an arc of visibility that takes in a number of downland ridges and features a commanding view of the Loddon valley. The long-distance vista incorporates some of the more topographically prominent aspects to the north and east. Interestingly, a number of sites fall within this visible area. These include Riverdene (**CD_132**), the most substantial settlement in the region, and two PAS finds – a fifth- or sixth-century cruciform brooch (**CD_040**) and a possible finger-ring (**CD_041**) – recovered from Cliddesden. That the viewshed also features significant stretches of the Roman road from Chichester, as well as a small part of the road from Winchester, indicates some form of visual control over the major transport routes in the locality.

Considering how there is a significant distance between Cowdery's Down and some of the visible areas, and given the limitations associated with this form of analysis (summarised in **3.5.2**), we must be careful not to be too optimistic in our interpretation of the results. Even so, the results help characterise the importance of Cowdery's Down and emphasise its strategic position within the local landscape. That the site was likely to have had some form of visual control over navigable watercourses and Roman roads compares favourably with the identification of a spatial relationship between great hall complexes and transport networks previously identified in Oxfordshire (Hamerow et al. 2013, 65-8). Being on the crest of a prominent ridge, the site may also have enjoyed some form of visual interaction with other communities along the valley. In summary, the above considerations indicate that Cowdery's Down was situated in a location of environmental, logistical and perhaps social significance.

### 5.2.2 *Local archaeological context*

A comparative discussion of contemporary and near-contemporary archaeology from the locality will allow us to better appreciate the significance of the evidence from Cowdery's Down and contextualise it within a local archaeological framework. The most immediately relevant site is found just over 1 km to the south-west, at Riverdene (**CD_132**), where evaluation in 1993 and excavation ahead of housing development in 1995 encountered a substantial settlement (Moore 1993; Hall-Torrance and Weaver 2003). The settlement comprised thirteen SFBs, ten post-built structures and numerous pits, although many of the features were only considered probable due to the poor preservation of the site (Hall-Torrance and Weaver 2003, 74-6; 81-3). The evidence was thought to represent a single period of occupation, dateable by a large pottery assemblage and a single radiocarbon sample taken from animal bone associated with SFB 9 (*ibid.*, 89; 99). Recalibration of this sample returns dates of *cal AD 651-771* (68.2% probability) and *cal AD 610-884* (95.4% probability), broadly

confirming the published ranges (*Table 5.3*). The settlement therefore seems likely to have been occupied at some point in the seventh or eighth centuries, making it difficult to gauge its relationship with Cowdery's Down. If they were contemporaneous then a subordinate relationship might be assumed, with the former perhaps supplying that latter as a dependent estate or 'home farm'. Conversely, if Riverdene was occupied during the eighth century then it may have functioned as something of a successor to the great hall complex. On the basis of the radiocarbon determination, the latter appears marginally more probable.

The only other excavated settlement in the locality is Manor Farm (**CD_083**), situated in the parish of Monk Sherborn. Excavations in 1996 revealed a late third- and fourth-century villa and some highly significant evidence for seventh-century activity (Teague 2001, 2005). The early medieval evidence comprised three features: a partially excavated post-built structure (Building 3), which measured *c.* 8.7 m x 4.9 m and contained extensive deposits of heavily burnt flints, charcoal and slag; a rectilinear enclosure ditch on a similar alignment (F115/212); and a Frankish wire-inlaid belt buckle and square belt fitting found deposited in the top layer of a Roman pit (Teague 2005, 119-21). The latter finds, conspicuous for their intricacy and rarity, date from the first half of the seventh century and were interpreted either as objects awaiting repair or as a founder's hoard (*ibid.*, 121-4). Considered in relation to Cowdery's Down, the site was interpreted as a probable smithy of broadly contemporary date (*ibid.*, 130-1).

Burial evidence in the general vicinity of Cowdery's Down can further furnish our understanding of the area. Of greatest interest is the high-status weapon burial discovered in 1889 at West Ham (**CD_171**), some 3.5 km to the south-west (Smith 1909, 79-81). The burial, presumably male, was interred with two spearheads, a seax, an iron vessel, a set of bone gaming pieces and a bronze hanging bowl. The latter is likely of sixth- or seventh-century date (Kendrick 1932, 167; Geake 1997, 156) but could be as late as the ninth (Shetelig 1954, 80-1). Although only broadly dateable to the early Anglo-Saxon period, we might also consider the unpublished burials from Popley 1 Estate (**CD_129**) some 1.6 km north-west of Cowdery's Down. Finally, a case could also be made to include in this review the inhumation cemetery found at some point before 1831 in the nearby parish of Rooksdown (**CD_133**). Though no longer extant, the skeletons were reported as being '*ancient Britons'* (Gomme 1886b, 177).

Various stray finds contribute further evidence for activity in the locality. Some form of occupation is likely indicated by the finding of early-middle Anglo-Saxon pottery at Park Prewett Hospital (**CD_127**), approximately 500 m east of the Roman road to Winchester in north-west Basingstoke (Coles et al. 2011). Millett and James (1983, 152; 249) note early medieval pottery at Basing House, immediately south-west of Cowdery's Down, though the

author was unable to verify this claim. We might also consider the unpublished early Anglo-Saxon spearhead from the Oakridge area (**CD_118**), found in 1953, as well as the Type 30 sceat dating from the early eighth century listed in the EMC database as being from Basingstoke (**CD_020**). Found less than 1 km south of Cowdery's Down, final mention should be made of the early medieval (but not closely dateable) pin listed in the PAS database (**CD_021**).

This review serves two main functions: firstly, it underscores the position of Cowdery's Down as the principal settlement in the area; and secondly, it facilitates the articulation of a provisional local sequence. In this we begin with a landscape that, despite having moderate Late Roman settlement, has no detectable activity in the immediate post-Roman period. At some point in the early sixth century a settlement was established at Cowdery's Down, atop a prominent ridge overlooking the river valley and in the vicinity of a Roman enclosure. Over the course of the sixth and seventh centuries the site transitioned from a comparatively small though not insignificant settlement into a large and very obviously high-status complex. At its apex, the great hall complex likely held authority over much of the surrounding landscape. This would certainly have included the communities of the Basingstoke locality. Of particular interest in this respect is the evidence of a high-status burial at West Ham (**CD_171**), which could conceivably represent an important dynastic burial, and also the probable smithy at Manor Farm (**CD_132**). The latter seems to confirm the important relationship between places of power and the control of metalwork, as has been argued for other regions (Hedeager 2002, 7-10; Hjärthner-Holdar et al. 2002; 2011, 139-44; Scull et al. 2016).

Activity at Cowdery's Down appears to have ceased towards the end of the seventh century, after which the local sequence is less certain. The uncertain relationship between Cowdery's Down and Riverdene (**CD_132**) has already been mentioned, but one crucial detail is worth further consideration. Despite a very limited animal bone assemblage at Cowdery's Down, zooarchaeological analysis of other great hall complexes has indicated a preference in domestic mammals for pig (e.g. Thomas 2013, 132-7; Brennan and Hamerow 2015, 340-1). It is therefore of great interest that pig bones represented 44% of the zooarchaeological assemblage at Riverdene (Hall-Torrance and Weaver 2003, 92-4). Although it remains to be confirmed, it is tempting to view the site as something of a successor community, living in more modest surroundings but maintaining high-status consumption practices. A continuity of high-status activity in the locality beyond the eighth century can be inferred from various sources, including documentary evidence for an important link with London (Hughes 1984, 76; Hinton 1986; Eagles 2015, 131). Crucially, the description of Basingstoke in Domesday Book as having always been a royal manor further underscores

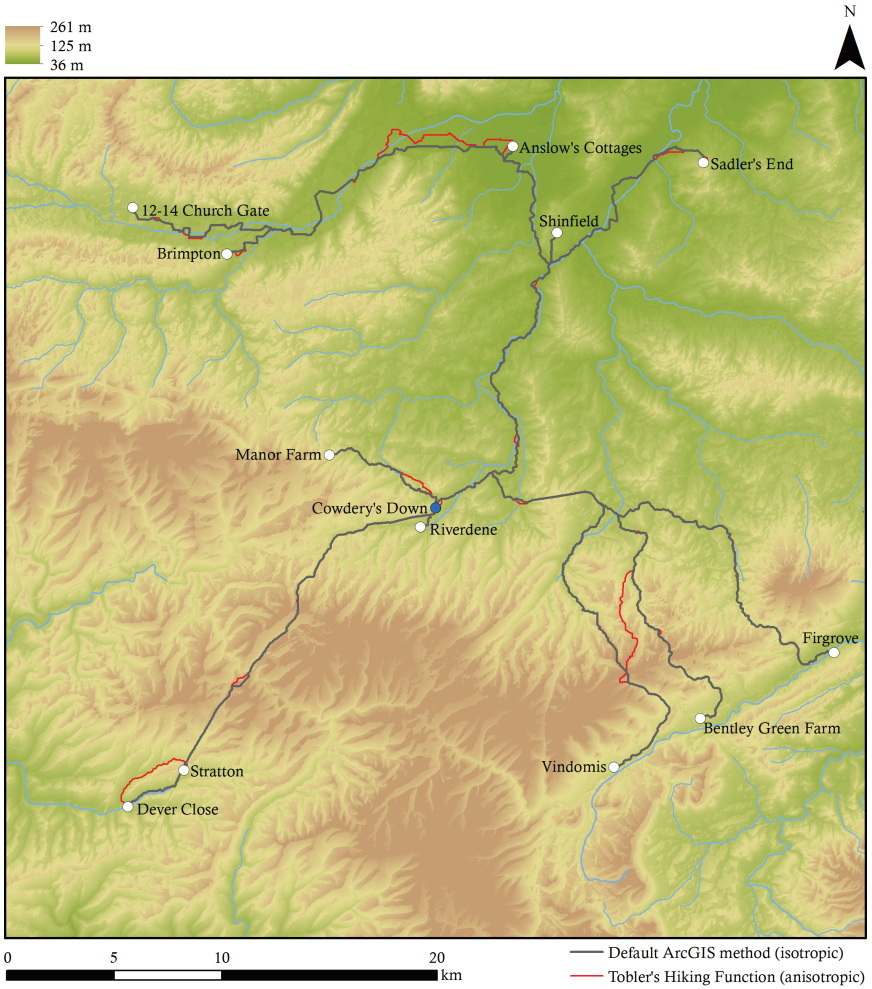



*Figure 5.7:* Least-cost paths generated between Cowdery's Down (blue dot) and phase 2 occupation sites (white dots) using the default ArcGIS (isotropic) and Tobler's Hiking Function (anisotropic) methods (*contains Ordnance Survey data © Crown copyright and database right 2017*).

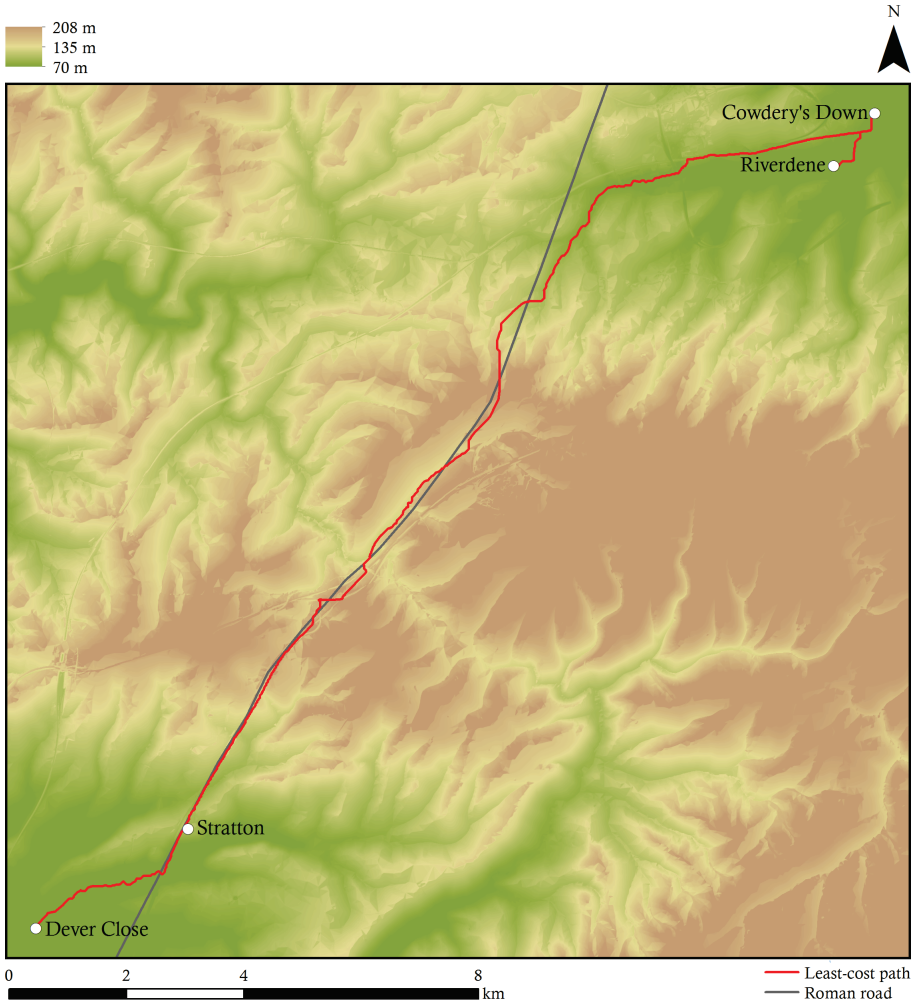



*Figure 5.8:* A comparison of the Roman road network and the isotropic least-cost paths generated between the broadly contemporary occupation sites at Cowdery's Down, Riverdene, Stratton and Dever Close (*contains Ordnance Survey data © Crown copyright and database right 2017*).

its significance as an ancestral power centre (Fleming 1998, 150). It is therefore possible to chart the development of an important centre over time and place it within its immediate context. How, then, might this evidence be considered at a larger scale?

### 5.2.3 *Modelling the wider hinterland*

Having considered Cowdery's Down from a predominantly local perspective, it is a logical progression in scale to now explore some of its more long-distance interactions. One means of doing so is to investigate how the great hall complex may have interacted with other (possibly dependent) settlements. In this we might consider travel and connectivity between contemporary sites, something that was investigated using least-cost path modelling. Least-cost path modelling is a geospatial technique that determines the most efficient route between two points in a landscape based on physical characteristics like topographic slope. This analysis was principally concerned with modelling a hypothetical *feorm* network around Cowdery's Down, and it should therefore be noted that this approach assumed Cowdery's Down as the centre of a socio-economic network spanning the entirety of the study region. This represents an interesting line of enquiry, but it is acknowledged that in reality *feorm* systems may have varied considerably in scale. The analysis was undertaken following the methodology detailed in **3.5.3**, with least-cost paths generated between Cowdery's Down and contemporary (phase 2) occupation sites using both the default (isotropic) and Tobler's Hiking Function (anisotropic) methods. The results are visualised in *Figure 5.7*.

Although there are a number of issues associated with least-cost path modelling, as summarised in **3.5.3**, the method can be viewed as a useful approximation of how people travelled in the past. In practical terms the results represent the most theoretically efficient paths between Cowdery's Down and other contemporary or broadly contemporary occupation sites. The routeways can therefore be validated to a certain extent by the fact that efficient routes with minimal variation in topographic slope would, at least in theory, have been favoured for long-distance journeys. It is therefore not unrealistic to posit that *feorm*-related journeys could conceivably have followed similar paths to those as identified in the analysis, should such a system have been in place. At a general level the least-cost paths should be seen as efficient and sensible, sticking to river valleys wherever possible and negotiating hilly areas using a zig-zag route. Perhaps the greatest vindication of the results is the striking correlation, shown in *Figure 5.8*, between the Roman road from Silchester to Winchester and the isotropic least-cost path from Cowdery's Down to the Stratton and Dever Close sites (Margary 1973, 89-90).

The least-cost path modelling was also undertaken on a much larger scale, between each

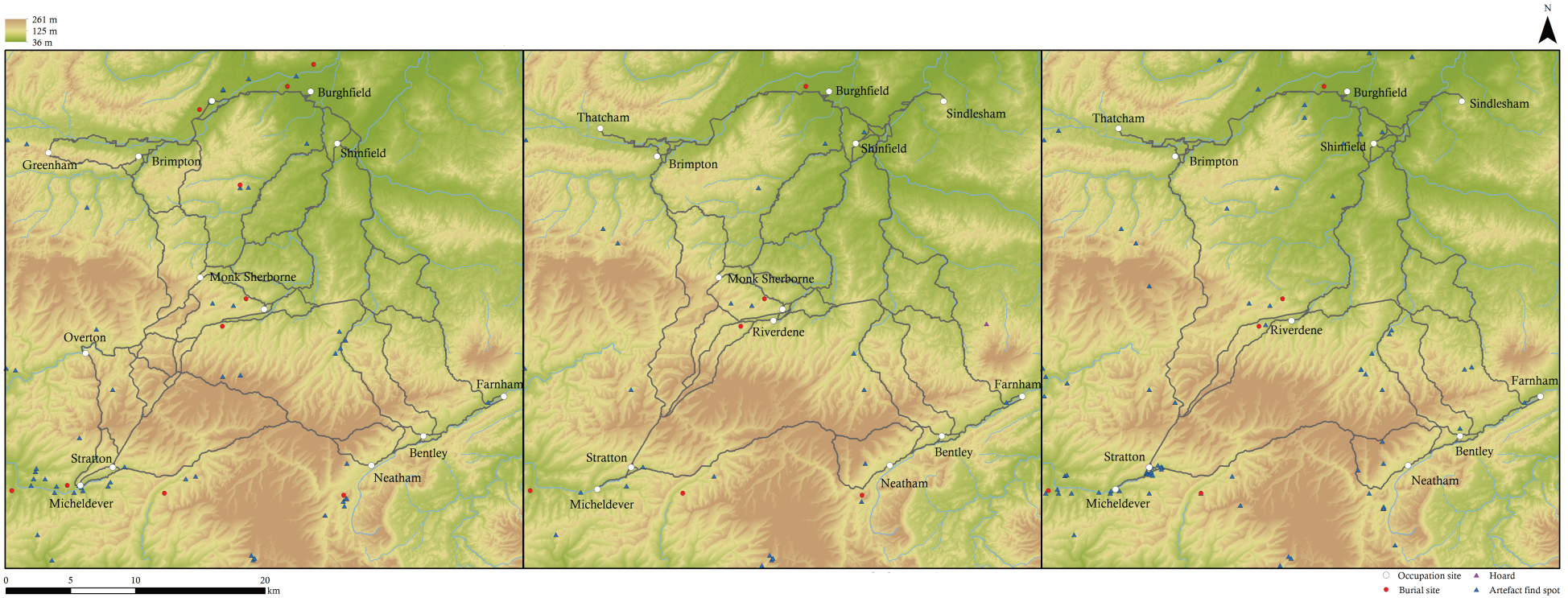



*Figure 5.9:* Least-cost paths generated between contemporary occupation sites for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-675 (centre) and AD 675-800 (right) respectively (*contains Ordnance Survey data © Crown copyright and database right 2017*).

occupation site to all others across the three phases of the regional dataset. This analysis was primarily interested in exploring how the landscape was used across a much longer timeframe. The results, visualised in *Figure 5.9*, effectively represent a hypothetical reconstruction of the regional settlement network over time. Taken together, the modelled paths indicate a complex and reasonably well-integrated system, with the most difficult area to traverse – the Hampshire Downs – being served by a number of strategic routes. In this the extent to which Cowdery's Down and the wider Basingstoke locality appear to operate as a node of considerable centrality is surely significant. Indeed, this 'central territory' is in a strategic position, appearing to function as a gateway between communities situated north, south-east and south-west of the Downs. It is also interesting that certain routes seem to have been chronologically consistent, especially in the south-eastern part of the study region. Although to a much lesser extent than with the preceding case study, that some of the routes run in close proximity to burial sites – and some artefact find spot sites – can be seen as a partial validation of their plausibility. Overall, the results represent a useful and credible reconstruction of landscape connectivity during the study period. More broadly, the least-cost path modelling can be seen as a useful means of exploring the wider hinterland of a great hall complex.

## 5.3 THE REGIONAL PERSPECTIVE

### 5.3.1 *Regional sequence*

In addition to being used to construct a bespoke phasing system, the results of the chronological seriation described above (**5.1.4**) were also used to consider the regional sequence of archaeological activity. This activity modelling was undertaken using the seriation table (*e-Appendix 2b*) to determine the number of 'active' sites for each twenty-five-year time segment. These were then visualised as a line graph (*Figure 5.10*). Although one must acknowledge the many limitations associated with this approach (outlined in **3.3.5**), the results elicit a number of general comments about the sequence of archaeological activity in the region. Broadly speaking, the number of sites increases substantially throughout the fifth century, plateaus throughout much of the sixth, declines significantly in the first quarter of the seventh, rises substantially in the late seventh century and then declines until the end of the study period. That a similar sequence is observed when poorly dated artefact find spot sites are excluded offers a degree of validation.

The pattern of activity thus revealed prompts several points of discussion. As noted in the Lyminge case study (**4.3.1**), the variable pattern of activity during the fifth century is likely a reflection of both the methodology used and the genuine rarity of early fifth-century

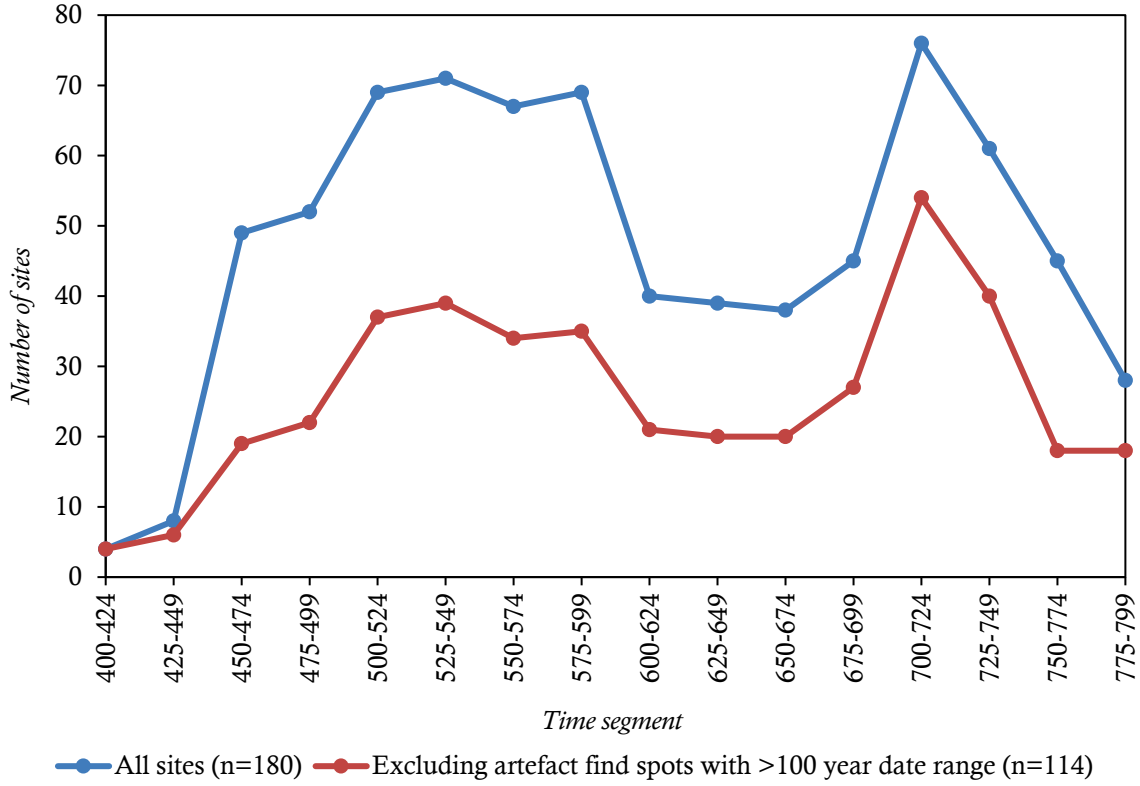



*Figure 5.10:* General activity modelling for the regional dataset, based on the results of the chronological seriation.

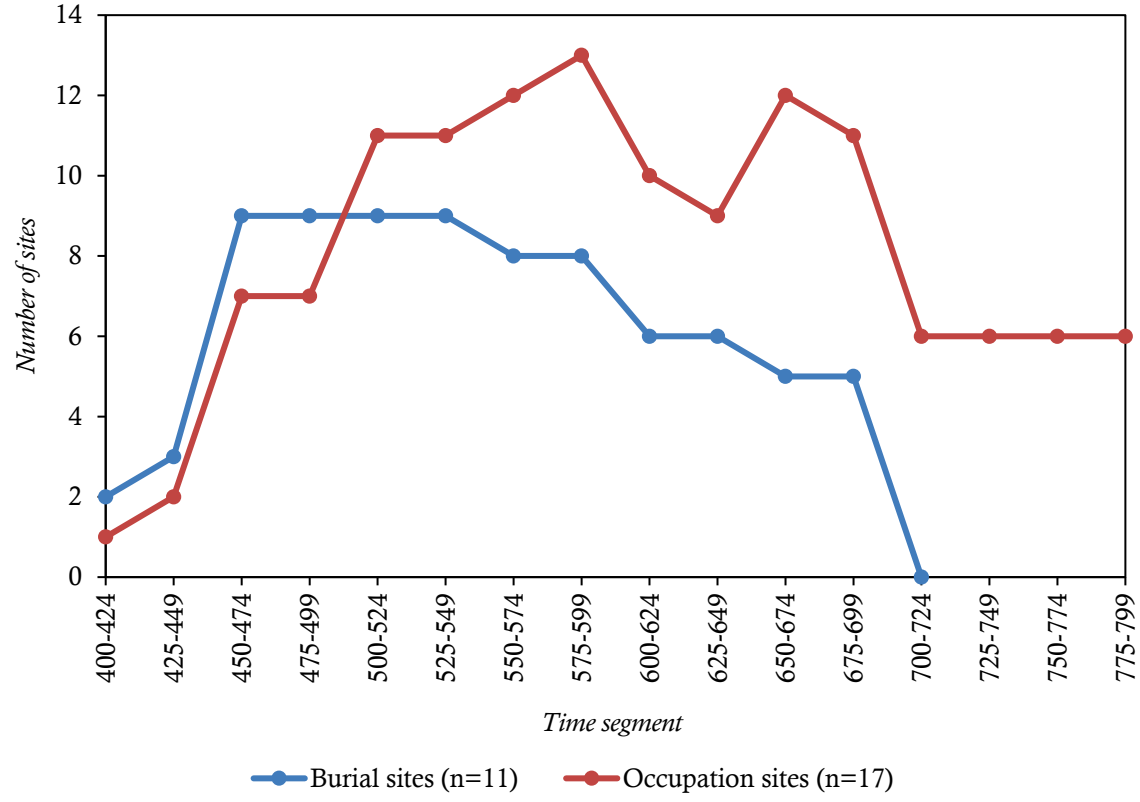



*Figure 5.11:* Specific activity modelling for burial and occupation sites in the regional dataset, based on the results of the chronological seriation.

activity in Anglo-Saxon England. Indeed, material evidence in the region that predates AD 450 is extremely limited. The substantial cemetery at Alton (**CD_008**) is an important irregularity in this respect, with the earliest burials perhaps dating from the second quarter of the fifth century (Evison 1988, 41-5). The significant decrease in the number of 'active' sites during the seventh century is particularly striking, especially given that this corresponds with the main period of activity at Cowdery's Down. It is difficult to explain this trend, though it was noted previously how there is a general decline in closely dateable artefacts during this period (Harrington and Welch 2014, 15-19; 28-9). As with the Lyminge case study, the substantial increase in 'active' sites during the late seventh and early eighth centuries can be attributed to the introduction of coinage in the region.[86]

The results of the activity modelling for specific site types are given in *Figure 5.11*. The burial sequence demonstrates significant activity between AD 450-550, after which the number of 'active' burial sites steadily decreases throughout the seventh century. There is currently no site in the region with burials post-dating AD 700, but this likely represents a lack of radiocarbon dating rather than an outright absence of eighth-century burials. The sequence of occupation activity is altogether more variable: the number of 'active' sites increases in a sustained way throughout the fifth-sixth centuries, fluctuates significantly during the seventh century, declines sharply in the early eighth century and then plateaus until the end of the study period. Again, it is curious that the great hall phase at Cowdery's Down corresponds with a period of fewer settlement sites. From a longer-term perspective, however, the results indicate significant occupation activity within the region from the mid-fifth to late seventh centuries, after which it lessens to a significant degree. More broadly, the combined results of the activity modelling demonstrate a gradual though somewhat volatile growth in the number of sites with early Anglo-Saxon activity and a more abrupt decline towards the end of the period. Whether these broad differences correspond to genuine changes in human activity or merely reflect variations in archaeological visibility is difficult to discern, though.

### 5.3.2 *Archaeological characterisation*

The above considerations can be complemented by a broader characterisation of the region's archaeology. Despite being a highly Romanised area, there is a general dearth of fifth-century evidence from Hampshire and Berkshire (Stoodley 2011, 49; Dodd 2014, 187-90). It is therefore unsurprising that the study region features only a handful of these sites. The earliest evidence from the region is found at Silchester. This takes the form of a rare ogham stone (**CD_148**), found during the Society of Antiquaries of London excavations at

[86] Stray coin finds, all of which post-date AD 675, represent 29.17% of sites in the dataset.

Insula IX during the late nineteenth century (Fox and St John Hope 1894; Fox et al. 1895). Although doubts have been raised over its date and authenticity (Fulford and Sellwood 1980; Boon 1981), a consensus has emerged in recent years that the stone represents a '*4th- or 5th-century epitaph of one Tebicatus, son of an unknown tribe, an Irishman deep in Britain*' (Fulford et al. 2000, 15). Excavations at the North Gate (**CD_147**) in 1991 have also revealed evidence for early post-Roman burial (Fulford 2000); as shown in *Table 5.3*, recalibration of a sample taken from cranial fragments returns a date of *cal AD 409-535* (68.2% probability). Finds of organic-tempered pottery have also been made at Silchester (**CD_145** and **CD_146**), further evidencing some form of small-scale occupation beyond AD 410 (Fulford 1989, 57-8; Fulford et al. 2013, 9-10). Further afield, earthworks at Bury's Bank (**CD_035**) and Grim's Bank (**CD_068**) have previously been interpreted as early post-Roman constructions (O'Neil 1943; O'Neil and Peake 1943). The evidence is far from conclusive, however, and alternative dates could easily be accommodated (e.g. Astill 1980).

Some of the issues associated with identifying fifth-century archaeology in the region, and more generally, can be illustrated using a specific example. A coffin burial was discovered at Burghfield Quarry (**CD_034**) in 1982 and, on the basis of two uncalibrated radiocarbon determinations, was reported as being of fifth-century date (Lobb 1982, 104; Burleigh et al. 1984, 63). In fact, these two samples (BM-2096 and BM-2096A) are quite different, and it is now known that samples processed in the British Museum radiocarbon laboratory during 1980-1984 were in error (Bowman et al. 1990, 62-3). Corrections have since been applied (BM-2096R and BM-2096AR) and a further sample taken (BM-2096N). Although the corrected samples are of little use, having high error ranges and wide calibrated date ranges, the more recent sample indicates that the burial was actually of Roman date (*Table 5.3*). A post-Roman date, while possible, therefore seems unlikely. At the other end of the spectrum are the radiocarbon samples recovered from a cutting across the Roman road at Stratton (**CD_156**). Calibrated here for the first time, the samples well demonstrate the difficulties one faces in pinpointing specific periods of activity (*Table 5.3*). What was assumed by the excavator to represent a reasonably distinct period of sixth- or seventh-century activity (Fasham 1981, 186), could in fact span the majority of the first millennium. Without closely dateable artefacts or high-precision radiocarbon determinations, then, the problems of dating much of the available evidence are considerable.

It was noted above that, at least from the sixth century onwards, it is possible to identify an important locality centring on the River Loddon (**5.2.2**). Rivers also appear to have been foci for early settlement elsewhere. Burial likely began in the second quarter of the fifth century at Alton (**CD_008**), where the north branch of the River Wey rises (Evison 1988, 41-5). Early burials are also found along the Kennet, with lone cremations at Southcote

Lane (**CD_152**) in Reading and at Field Barn Farm (**CD_060**) near Beenham (Colyer 1924; Newman and Lovell 1992). Early burial activity is also well evidenced along the River Dever in the south-west of the region. Although much of the substantial cemetery excavated at Weston Farm (**CD_172**) remains unpublished, having been variously excavated since 1847, it appears to have been long-lived, with burial beginning in the mid-fifth century and continuing through to the end of the seventh (Gunner 1849; Milner 1924, 6-8; Stoodley 2011).

Various strands of occupation evidence also allow us to gauge areas of early importance. The earliest settlement evidence comes in the form of an SFB excavated at London Road in Overton (**CD_081**). Recalibration of the radiocarbon sample associated with animal bone from this feature returns a date of *cal AD 434-568* (68.2% probability) and *cal AD 428-593* (95.4% probability), thereby supporting the date range of AD 450-550 proposed by the excavator on the basis of associated domestic debris (Taylor 2012, 187-8; 197). Evidence for settlement has been discovered near Ufton Nervet (**CD_023**), where an SFB was found with a substantial assemblage of fifth-sixth-century pottery (Manning 1974). Excavation and targeted metal-detector surveys at Northbrook (**CD_121**), near Micheldever, have also revealed late fifth- and sixth-century occupation over a large area (Johnston 1998). Scatters of stray finds help further elucidate the early post-Roman period. These include a spearhead of Swanton's (1973) Group E1 from Burghfield (**CD_033**) as well as a number of early button brooches from Alton (**CD_009** and **CD_014**), Chawton (**CD_037**), Micheldever (**CD_084**) and Overton (**CD_126**). The finding of fifth- and sixth-century pottery at Theale (**CD_164**) can also be considered further evidence for low-level settlement (Myres 1938). Although material from the early-mid fifth century is somewhat limited, then, there is ample evidence to suggest a number of reasonably distinct communities in operation by the sixth century.

Aside from Cowdery's Down and Riverdene, both of which were discussed previously (**5.2.2**), seventh- and eighth-century activity in the region is relatively uncommon. It is possible to infer occupation from the various pits and ditches at sites like Church Gate (**CD_002**) in Thatcham and Dever Close (**CD_047**) in Micheldever, but neither have any excavated structures (Lowe 2003; Jenkins and Pine 2005; Russel 2005; Wallis 2005; Milbank and Pine 2006). More broadly, aspects of the regional economy can be gleaned from the finding of possible fish traps at Anslow's Cottages (**CD_019**) in Burghfield and a charcoal clamp at Sadler's end (**CD_140**) in Sindlesham (Butterworth and Lobb 1992a; Lewis et al. 2013). Crucially, both sites are associated with reasonably unambiguous radiocarbon dates (*Table 5.3*). There is currently nothing to be said of the eighth-century burial record, but a more routine approach to radiocarbon dating will likely resolve this in the

coming decades. More concrete archaeological trends are observable in the types of material culture encountered, with greater numbers of pins (e.g. **CD_168**), the introduction of artefacts like strap-ends (e.g. **CD_038**) and the widespread circulation of silver coinage (e.g. **CD_124**). The absence of early ecclesiastical establishments is perhaps more conspicuous, especially when compared with the other study regions in this thesis. It seems likely that early churches did feature in the region, at least by the end of the study period, but they are yet to be located. Reading may have had a minster by the ninth or tenth century (Astill 1984, 67), though there is as yet no indication of earlier ecclesiastical activity in the town. Unfortunately, we can only speculate as to the whereabouts of the early church elsewhere in the region.

### 5.3.3 *Exploratory spatial analysis*

Having considered the chronology and key archaeological characteristics of the region, it is now appropriate to undertake a wide-ranging programme of exploratory spatial analysis. As with the Lyminge case study, a variety of techniques were employed to explore and model the regional dataset. Two methodologies were used to investigate the extent to which environmental factors could have influenced patterns of activity within the study region (**3.4.2**). The first used the 'Generate Near Table' function in ArcGIS to consider the distance between sites and rivers. As shown in *Figure 5.12*, the results demonstrate that 116 sites (60.42%) were situated within 1 km from a river. At distances of 2 km, this rose to 152 sites (79.17%). While the vast majority of sites were located in proximity to a freshwater source, then, more than a fifth were not. Further analysis was undertaken with artefact find spots

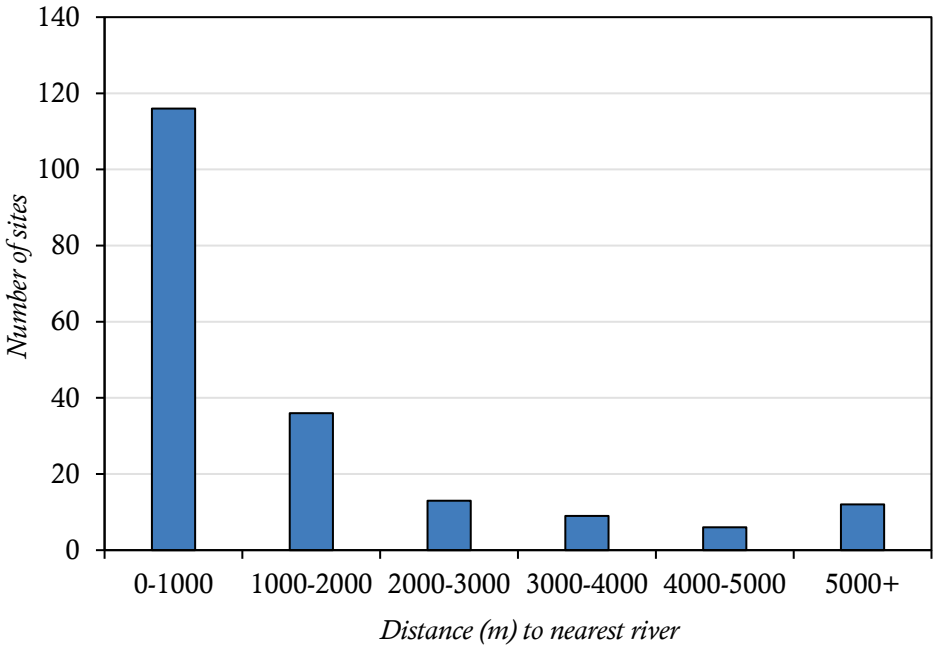



*Figure 5.12:* A histogram showing the distance between sites and their nearest watercourse, calculated using the regional dataset in its entirety (n=192).

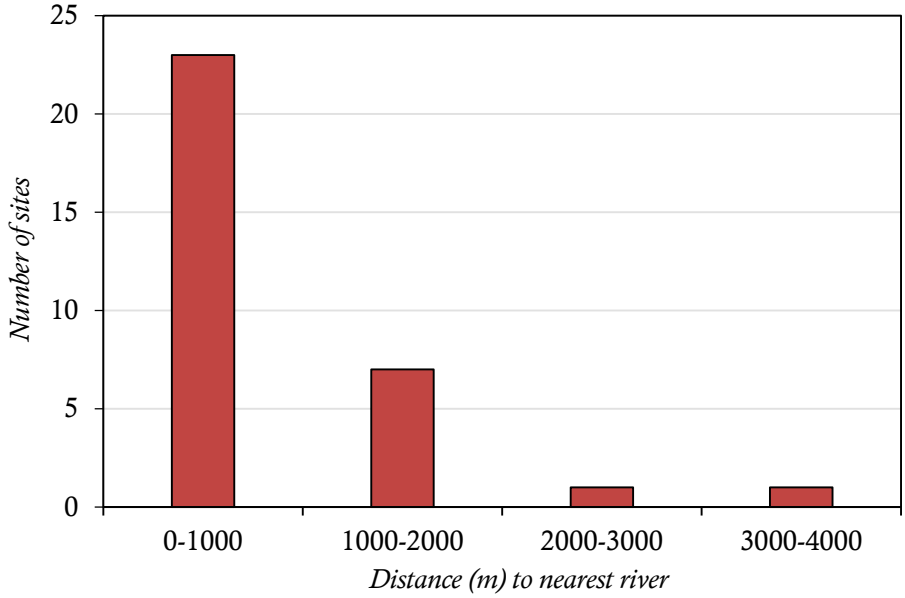



*Figure 5.13:* A histogram showing the distance between sites and their nearest watercourse, calculated with artefact find spot sites excluded (n=32).

excluded to gauge whether these sites were skewing the overall trend (*Figure 5.13*). Unlike the previous case study (**4.3.3**), the results indicate that this was the case, with only a single site being located at a distance of 2-3 km and another at 3-4 km. While one must be wary of plotting the distribution of past activity against the courses of (mostly) modern rivers (**3.4.2**), it seems that there is a general trend for sites having been located reasonably close to freshwater sources.

The second approach used the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002) to explore how soil quality may have influenced the placement of sites. The results are shown in *Figure 5.14*, with an overview of agricultural quality in the region being given in *Table 5.4*. It must be noted that the region is not of exceptional fertility, having reasonably small areas of 'very good' (Grade 2) or 'excellent' (Grade 1) soils. There is some indication that these lands were favoured over those with poorer-quality soils (Grades 4 and 5), though the high density of sites near the River Dever in the south-west of the region indicate that this was not always the case. More broadly, it should be noted that the correlation between site distribution and soil quality is nowhere near as strong as with the preceding case study (**4.3.3**). The relatively large amount of un-assessed areas (the 'urban' and 'non agricultural' classes) may account for this to a certain extent. Considering both methods together, the results indicate a general tendency for the distribution of archaeological evidence to favour decent soils in relative proximity to a river. This should not necessarily be seen as a strong correlation, though; it seems unlikely that the spatial configuration of activity was dictated by environmental factors alone. As was shown above (**5.2.1**), visibility and access to infrastructure may have been just as important. Even so, that environmental factors influenced the distribution of sites is undeniable.

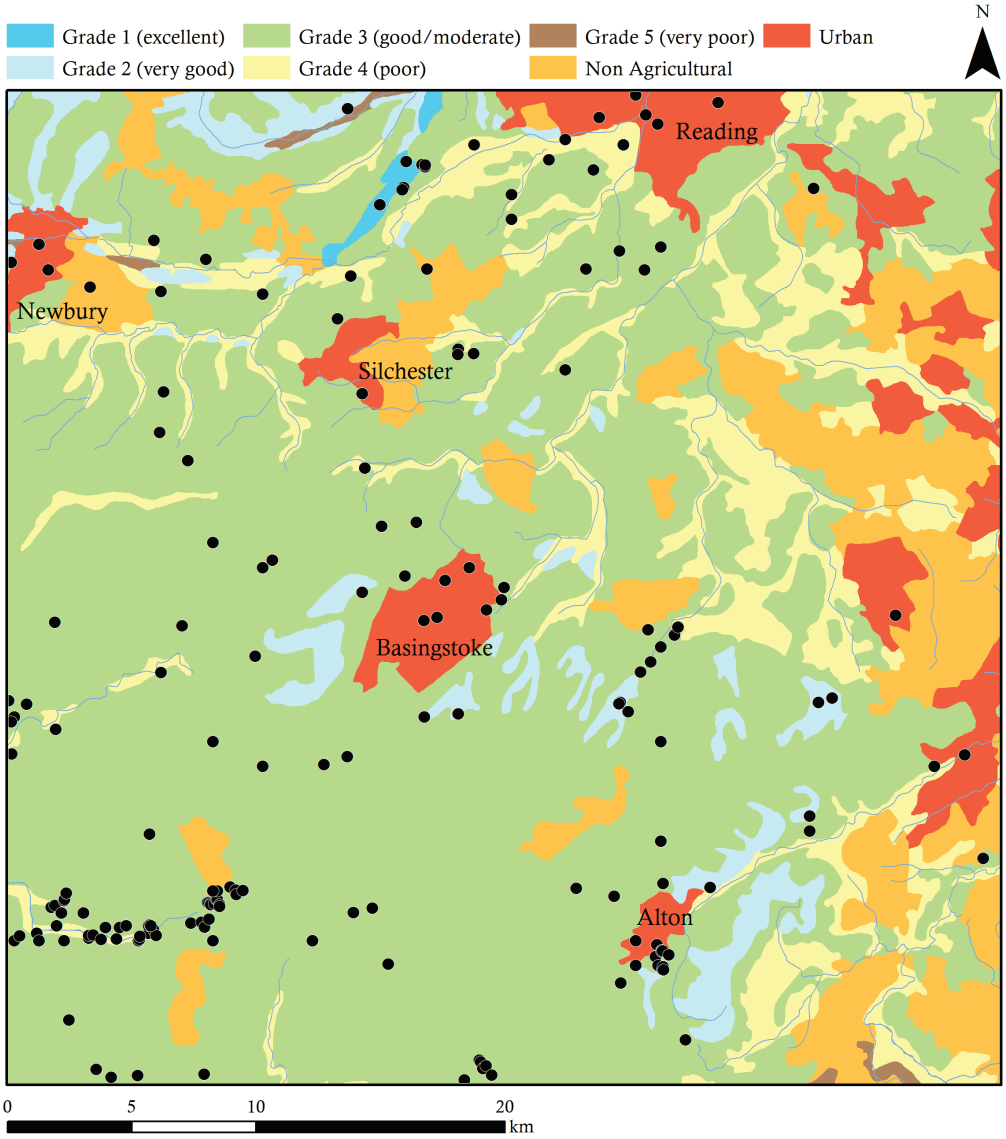



*Figure 5.14:* The distribution of the regional dataset in relation to the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002).

| | Land surface coverage |
|---|---|
| Grade 1 (excellent) | 0.30% |
| Grade 2 (very good) | 4.55% |
| Grade 3 (good to moderate) | 64.99% |
| Grade 4 (poor) | 11.00% |
| Grade 5 (very poor) | 0.30% |
| Non Agricultural | 11.85% |
| Urban | 7.01% |

*Table 5.4:* The overall quality of land within the study region as recorded in the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002).

More formal analysis of the regional dataset used two different spatial statistics: the Average Nearest Neighbour statistic and Ripley's K-Function. Described in **3.4.3**, the Average Nearest Neighbour statistic gauges whether a set of data points exhibit a clustered, random or dispersed spatial pattern. The analysis was run for each phase of the regional dataset, with separate iterations including and excluding artefact find spot sites (*Table 5.5* and *Figure 5.15*).

| | Measure | Phase 1 (n=78) | Phase 2 (n=44) | Phase 3 (n=100) |
|---|---|---|---|---|
| All sites | Observed Mean Distance (m) | 1149.7669 | 2286.1059 | 1027.4604 |
| | Expected Mean Distance (m) | 2099.0474 | 2770.7244 | 1934.2601 |
| | Nearest Neighbour Ratio | 0.547757 | 0.825093 | 0.531190 |
| | z-score | -7.641005 | -2.244625 | -9.013388 |
| | p-value | 0.000000 | 0.024792 | 0.000000 |
| | Interpretation | Clustered | Clustered | Clustered |

| | Measure | Phase 1 (n=23) | Phase 2 (n=20) | Phase 3 (n=16) |
|---|---|---|---|---|
| Excluding artefact find spots | Observed Mean Distance (m) | 3591.7879 | 3757.6120 | 3986.0081 |
| | Expected Mean Distance (m) | 3669.9888 | 3864.8253 | 4245.8198 |
| | Nearest Neighbour Ratio | 0.978692 | 0.972259 | 0.938808 |
| | z-score | -0.195498 | 0.237337 | -0.468261 |
| | p-value | 0.845003 | 0.812396 | 0.639598 |
| | Interpretation | Random | Random | Random |

*Table 5.5:* The results of the Average Nearest Neighbour Analysis. The p-value and z-score numbers are explained in *Figure 5.15* below.

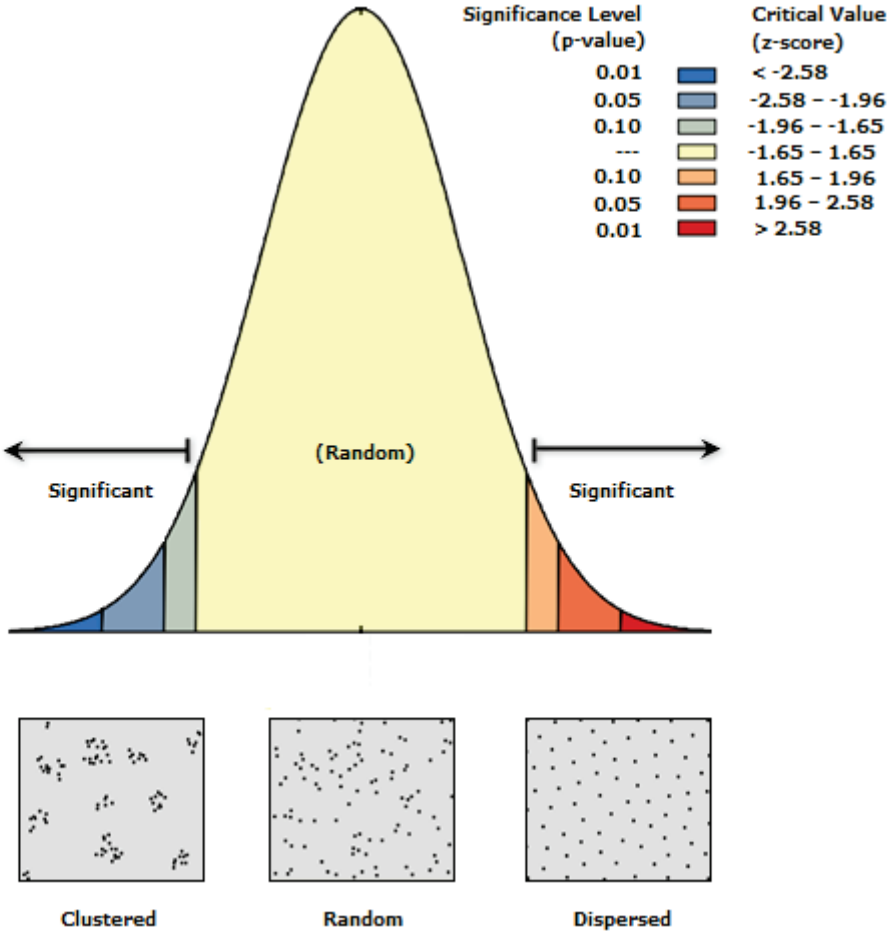



*Figure 5.15:* A visual summary of the Average Nearest Neighbour statistic. The p-value and z-score numbers in the top-right of the image are absolute benchmarks to compare the numbers in *Table 5.5* against.

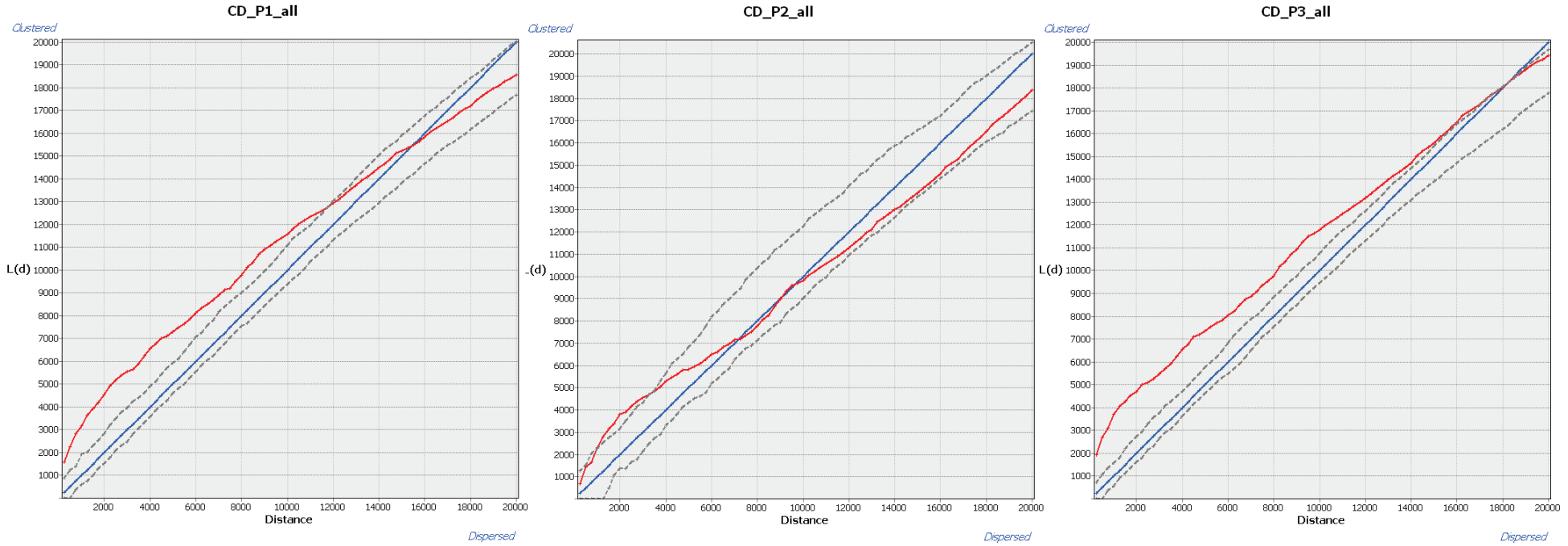



*Figure 5.16:* Ripley's K Function analysis for each phase of the regional dataset, dating to AD 400-600 (left), 600-675 (centre) and 675-800 (right) respectively. The blue line indicates a random distribution, the dashed lines show the 'confidence envelope' created from 999 random permutations and the red line plots the actual observations. Where the red line extends above or below the confidence envelope indicates statistically significant spatial clustering or dispersion respectively.

When artefact find spot sites were included, the results indicate consistent spatial patterning in the dataset over time. The z-scores of -7.641005 for phase 1, -2.244625 for phase 2 and -9.013388 for phase 3 indicate significant spatial clustering, with a less than 1% likelihood for phases 1 and 3 and a less than 5% likelihood for phase 2 that this clustered pattern could be the result of random chance. When artefact find spot sites were excluded, the results demonstrate a similarly consistent but different spatial pattern in the dataset over time. The z-scores of -0.195498 for phase 1, 0.237337 for phase 2 and -0.468261 for phase 3 indicate that the spatial pattern does not appear significantly different than random.

The combined results indicate that the overall dataset exhibits a significantly clustered spatial pattern, but when artefact find spot sites are removed this spatial pattern appears random (i.e. there is no discernible pattern). This discrepancy might be interpreted in one of two ways. If one assumes that stray artefact finds are indicative of nearby occupation – much of which is presumably unexcavated – then the difference in results indicate that the overall settlement pattern of the region was clustered (i.e. settlements grouped together). Conversely, if the evidence of stray artefacts is taken to reflect patterns of movement and activity in the wider landscape, then the results could be read as indicating activity clustered around settlements that were themselves located in a random manner. Given this uncertainty, it is not possible to offer a definitive interpretation of the results. It is perhaps worth noting that the previous case study returned less ambiguous results (**4.3.3**), though the dataset used was much larger.

Ripley's K-Function analysis was used to describe the spatial pattern of the dataset across a range of distances. It was undertaken for each phase of the regional dataset according to the process described in **3.4.4**.[87] The resulting graphs are shown in *Figure 5.16* and are described in turn. The results for phase 1 sites identify significant clustering (exceeding the 95% confidence envelope) at distances ≤11500 m, moderate clustering (within the 95% confidence envelope) at distances ≤15500 m and moderate dispersion (within the 95% confidence envelope) at distances >15500 m. The results for phase 2 sites show significant clustering (exceeding the 95% confidence envelope) at distances ≤3250 m, moderate clustering (within the 95% confidence envelope) at distances ≤7250 m and moderate dispersion (within the 95% confidence envelope) at distances >7250 m. The results for phase 3 sites show significant clustering (exceeding the 95% confidence envelope) at distances ≤18000 m which swiftly transitions into moderate dispersion (within the 95% confidence envelope) at

[87] It should be noted that additional computations excluding artefact find spot sites – as was done in the Lyminge case study (**4.3.3**) – could not be undertaken because Ripley's K-Function requires at least thirty data points for accurate analysis. This was not have been possible for all phases and was therefore not attempted.

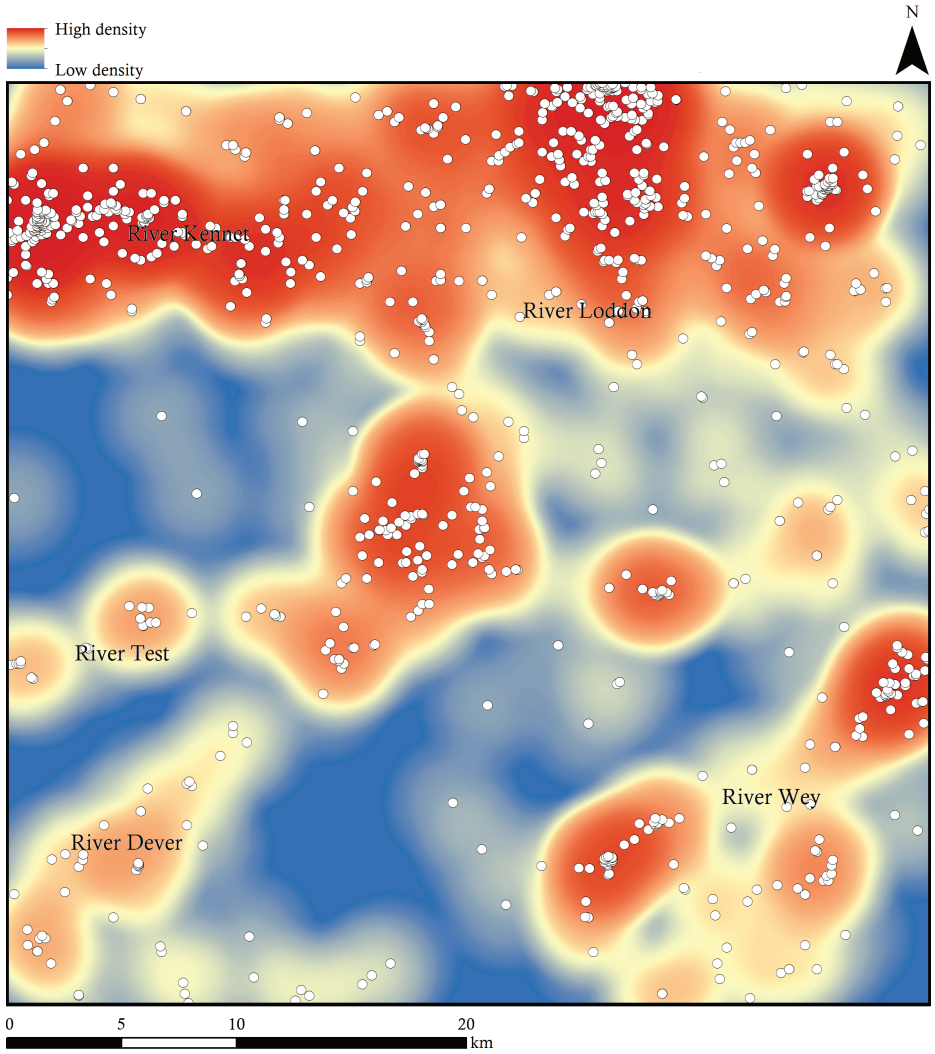



*Figure 5.17:* A Kennel Density Estimate using the AIP dataset (n=1448) and visualised using the 'Histogram Equalize' option (see **3.4.5**).

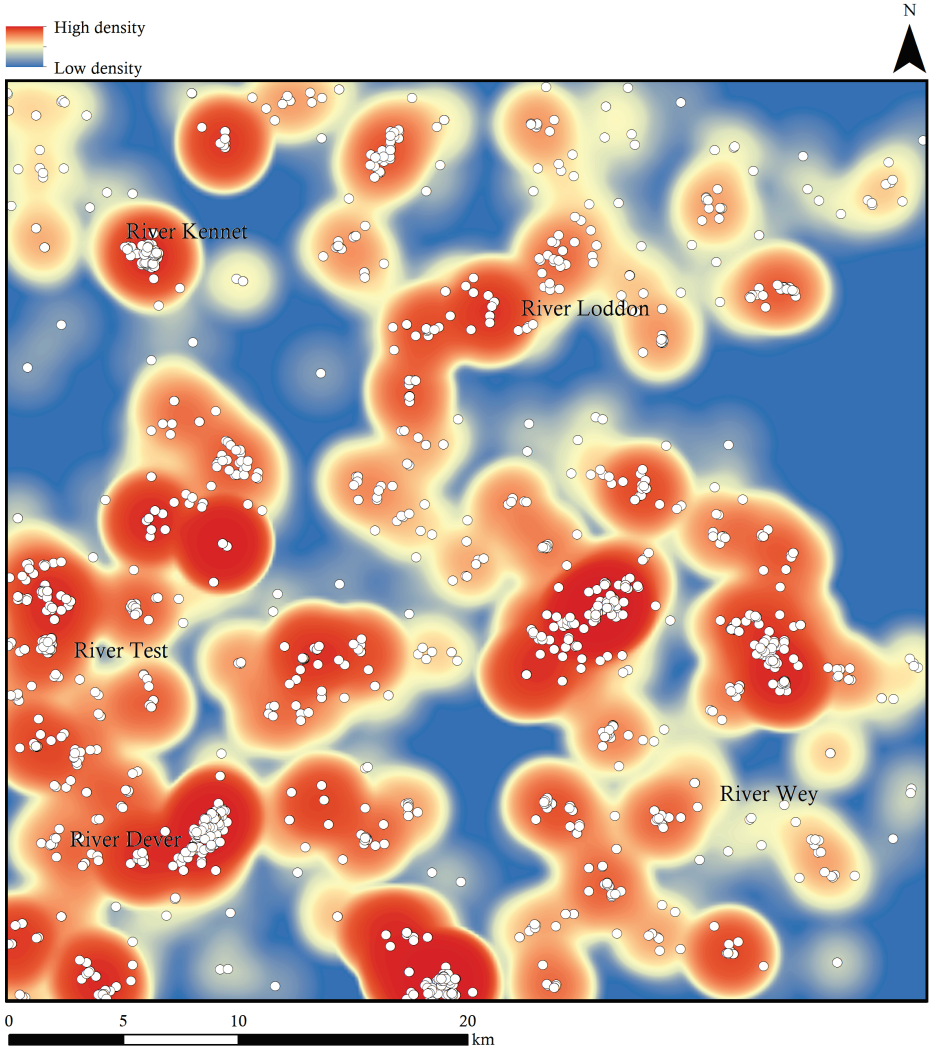



*Figure 5.18:* A Kennel Density Estimate using the Roman dataset (n=4275) and visualised using the 'Histogram Equalize' option (see **3.4.5**).

distances >18000 m. Taken together, the results do not reveal a consistent spatial pattern in the dataset. Not only does the point at which spatial clustering cease being statistically significant vary considerably – at 11.5 km for phase 1, at 3.25 km for phase 2 and at 18 km for phase 3 – but the speed at which the spatial pattern transitions from clustering to dispersion is also mutable. The results therefore indicate that the region was variously composed of several relatively indistinct and differently sized clusters of sites.

The combined results of the spatial statistics allow us to make some general if necessarily tentative inferences about the spatial patterning of archaeological sites in the region. Regardless of how one interprets the results when artefact find spot sites are excluded, it is clear from Average Nearest Neighbour analysis that the data tend towards significant clustering. This spatial pattern is broadly confirmed by the results of the Ripley's K-Function, although the distance at which the clustering of sites ceases to be statistically significant varies considerably across the three phases of the dataset. While the results from phases 1 and 3 have broadly similar profiles, there is clearly something different in the spatial patterning of phase 2 sites. In this phase clustering occurs at smaller distances, and has a relatively swift transition from a significantly clustered to moderately dispersed spatial pattern. Regardless of this variance, the evidence of statistically significant clustering across the study period might be thought to indicate broader territorial groupings or activity centres.[88] While these 'core zones' would presumably have varied in size, their very existence might be taken to imply some form of socio-economic cooperation at a scale beyond the immediately local. That the evidence for spatial clustering transitions into dispersion at larger distances also implies an order of distance between these 'core zones', although the extent to which this pattern of settlement reflected socio-cultural design or was environmentally determined by resource competition is impossible to say. Writ broadly, then, the analysis indicates a regional settlement pattern more of distinct localities than a continuous 'sprawl'. Even so, the results are perhaps too uncertain to offer definite conclusions.

Kernel Density Estimation was used as the final technique in the exploratory spatial analysis. In an archaeological context, this technique can be used to approximate the density of archaeological sites, thereby identifying 'hot spots' and 'cold spots' (**3.4.5**). Prior to analysis of the fifth-eighth-century dataset, it was felt useful to obtain results illustrative of the regional archaeological signature more broadly. This involved computing the Kernel Density Estimation using two separate datasets: a dataset of 1448 sites obtained from the *Archaeological Investigations Project* (AIP),[89] as was done in the previous case study; and the

[88] This idea was explored in the previous case study, albeit on the basis of more convincing statistical evidence.
[89] The AIP online database (https://csweb.bournemouth.ac.uk/aip/) was accessed on 4th September 2016 and data downloaded using the 'Export Query to Excel' function.

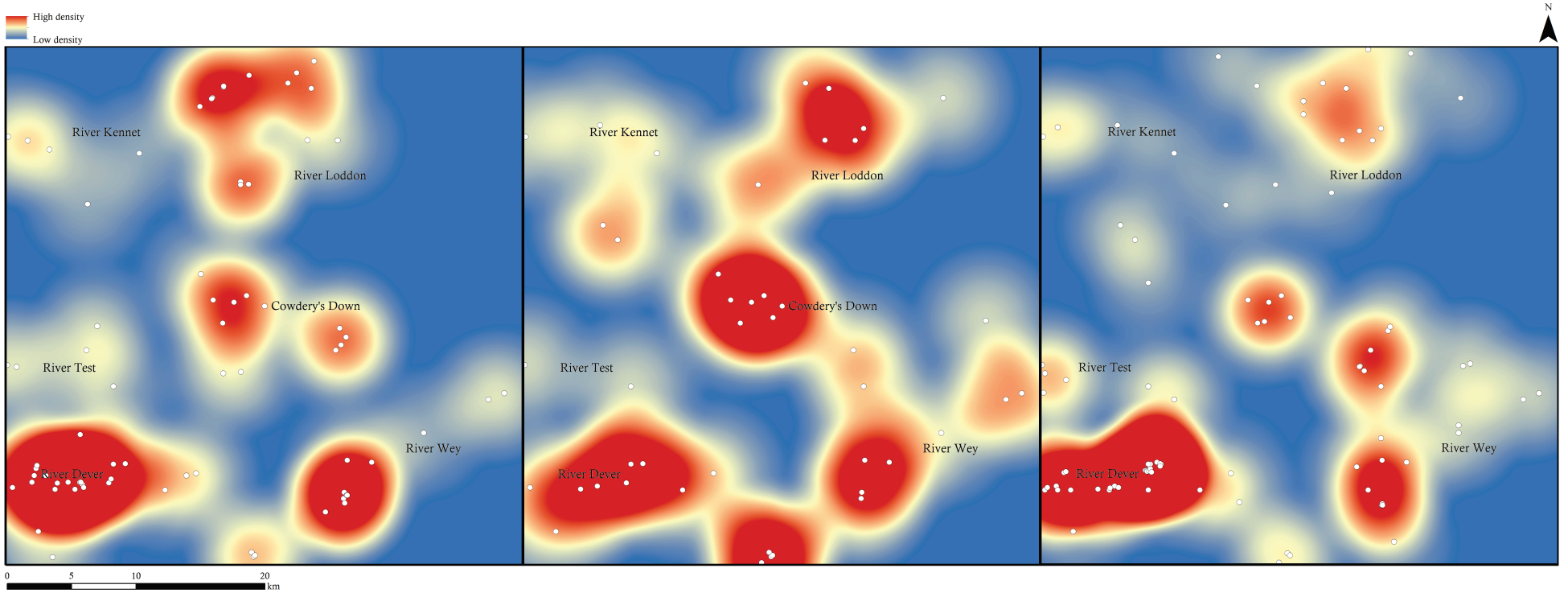



*Figure 5.19:* Kernel Density Estimates for each phase of the regional dataset, dating to AD 400-600 (left), 600-675 (centre) and 675-800 (right) respectively. The results are visualised at 1.5 standard deviations (see **3.4.5**).

dataset of 4275 Roman sites discussed above (**5.1.2**). The results are shown in *Figure 5.17* and *Figure 5.18* respectively.

A comparison of the results reveals some specific differences but also some general similarities. The AIP data appear to be dominated by interventions in the northern part of the region, with particular concentrations along the length of the Kennet and in southern Reading. Other areas of high density are found in the centre, south-east and south-west of the region, with relatively large areas in-between that have seen limited intervention. The Roman evidence, by contrast, has an altogether different spatial structure. Most noticeably, the evidence suggests greater density in the southern portion of the region rather than in the north. It also seems that the 'hot spots' tend to be smaller, but are more numerous and of greater density. Indeed, the Roman landscape appears to have been one of more continuous settlement. Despite these differences, if one were to combine the two sets of results the outcome would be a landscape of almost total settlement (i.e. with very few 'cold spots'). As such, the results can be used as baseline 'heat map' of archaeological activity, any significant deviation from which would likely reflect a genuine difference in the distribution and density of activity. The results therefore represent useful comparatives for the early medieval evidence discussed below.

The analysis was subsequently undertaken for each phase of the regional dataset. Shown in *Figure 5.19*, the results indicate a spatial pattern composed of multiple 'hot spots' – whose intensity and spatial location appears to change over time – that are set between rather large areas of low archaeological density. During phase 1 there are four or five main areas of activity: at Alton in the south-east; along the River Dever in the south-west; in the vicinity of Basingstoke and Odiham (both centre); and a looser grouping in the north covering Silchester, Burghfield and Ufton Nervet. The results from phase 2 sites indicate some differences in the spread of material, with activity becoming more concentrated in the centre and more dispersed in the north. By phase 3 the clusters are less visually distinct and there appears to be more regularity in the spacing of sites. The south-west cluster is the obvious exception here which, if anything, sees an increase in site density. Two aspects of the results are of particular interest. Firstly, it may be significant to note a degree of environmental determinism inasmuch that the Hampshire Downs seem to have served as a natural barrier for groups of sites in the south of the study region. Perhaps most interestingly, the results are significantly different to those of the AIP and Roman datasets. This difference manifests itself most obviously by the different scales of evidence but also in terms of geographic spread and overall density (e.g. the extent of 'cold spots'). Rather than the more continuous settlement pattern indicated by the results using the AIP and Roman datasets, early medieval activity in the region appears to have focused on a number of key localities.

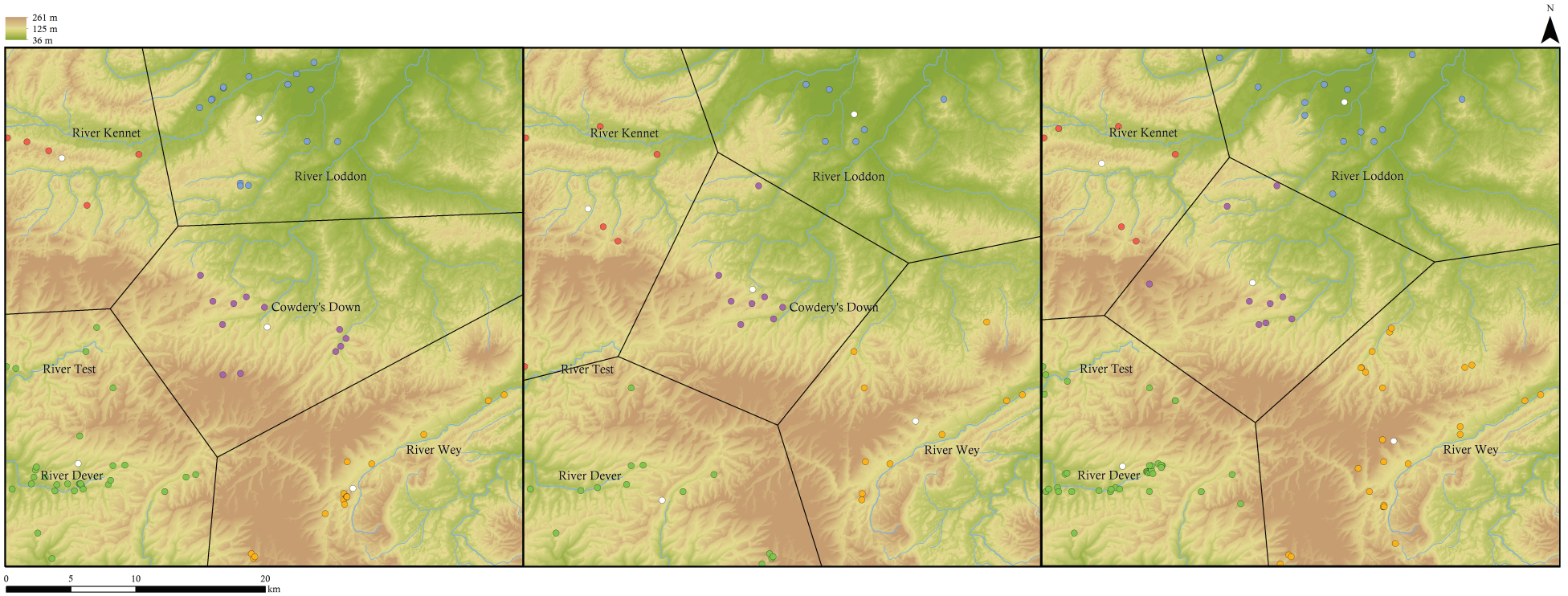



*Figure 5.20:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-675 (centre) and AD 675-800 (right) respectively. The model was created using Voronoi Tessellation of the group centres identified in the Grouping Analysis (white dots). Sites are represented by coloured dots, with the colour representing group membership as defined by the Grouping Analysis (*contains Ordnance Survey data © Crown copyright and database right 2017*).

Two trends have emerged from the programme of exploratory spatial analysis. The first is an awareness that sites are generally found in areas of high-quality agricultural soils with good access to freshwater sources. The second, and perhaps more interesting realisation, is that the evidence tends towards a clustered spatial pattern. The latter allows us to identify five or so reasonably distinct 'hot spots' or 'core zones' separated by areas with less archaeological activity. Although the size, shape and spatial position of these areas changes over time, there does appear to be an element of continuity – and perhaps importance – throughout the period.

### 5.3.4 *Territorial modelling*

Based on the results presented above, it is clear that the dataset tends towards spatial clustering. An ArcGIS technique known as Grouping Analysis was used to characterise these clusters in a more explicit way. The technique attempts to identify a predetermined number of groups within a dataset by maximising intra-group spatial similarity and inter-group spatial dissimilarity (**3.4.6**). Informed by the results of the exploratory spatial analysis, the number of groups was set to five.[90] The analysis successfully managed to identify plausible groupings (and corresponding group centres), which were used as the empirical foundation for a series of territorial reconstructions.

The first reconstruction utilised a method of spatial allocation known as Voronoi Tessellation. As detailed in **3.5.4**, the technique uses point data to create a series of polygons based on Euclidean equidistance. The analysis used the results of the Grouping Analysis to calculate the areal extents of hypothesised territories (*Figure 5.20*). The territorial units identified conform reasonably well to the region's topography, with the Hampshire Downs seemingly acting as a natural boundary between communities living north, south-west and south-east of it. Despite this, there are a number of inconsistences present in the results. For example, the westernmost orange sites during phases 1 and 3 appear more sensibly represented as green sites during phase 2. Even so, the model can be thought to offer a plausible territorial reconstruction that fits the data reasonable well and makes broad topographic sense.

The second model used the ArcGIS 'Buffer' function to generate spatial zones based on the results of the Ripley's K-Function analysis (**3.5.5**). Given the significant variation observed in the latter, buffer zones were calculated at a radius of 11.5 km for phase 1, 3.25 km for phase 2 and 18 km for phase 3. As with the Lyminge case study (**4.3.4**), the results were largely inconsistent (*Figure 5.21*). Whereas the results for phase 1 seem plausible, with the

[90] As with the Lyminge case study (**4.3.4**), separate iterations of the analysis were also performed using four and six groups respectively. These were found to be less convincing, however.

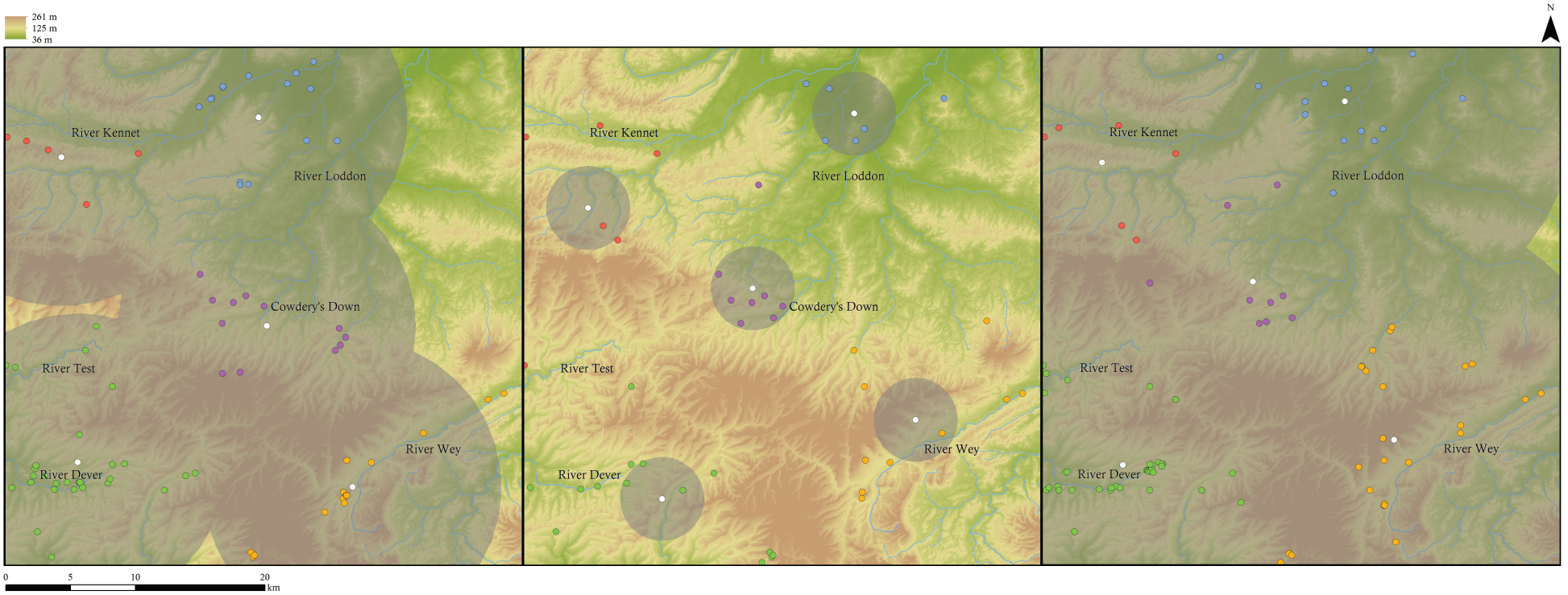



*Figure 5.21:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-675 (centre) and AD 675-800 (right) respectively. The model was created by calculating buffer zones around the group centres identified in the Grouping Analysis (white dots). The extent of buffer zones was informed by the results of the Ripley's K Function analysis. Sites are represented by coloured dots, with the colour representing group membership as defined by the Grouping Analysis (*contains Ordnance Survey data © Crown copyright and database right 2017*).

majority of sites being located within a series of large but not unrealistic territorial zones, the results from phases 2 and 3 are problematic. That there is such a striking disparity between these two phases is difficult to explain, but it would be absurd to argue that either represent a useful contribution. The results are therefore presented as a negative result and do not warrant further comment.

The third model used the 'Directional Distribution (Standard Deviational Ellipse)' function in ArcGIS to calculate a series of standard deviational ellipses that reflect the spatial distribution of sites. Described in **3.5.6**, the technique computes the standard deviation of the x and y coordinates from each data point in a group to the mean centre, in the process creating a spatial representation of the shape of the data. As with the previous case study, 1 and 2 standard deviational ellipses were calculated for each group of data points identified from the Grouping Analysis (*Figure 5.22*). Unlike the previous two attempts, this model allows us to gauge both the core and periphery of hypothesised territorial units, with the latter often having some form of overlap with other territories. The model therefore successfully incorporates local variation into a composite territorial interpretation of the region. It also identifies an interesting shift in the spatial patterning of the evidence over time: from mostly separate territories in phase 1 to a system with less distinct and more overlapping territorial zones in phase 3. Considered as such, it appears the most plausible reconstruction.

The conceptual and methodological issues associated with territorial reconstruction are legion.[91] Even so, the results demonstrate that it is possible, based on the spatial and temporal configuration of archaeological sites, to reconstruct a number of reasonably distinct territories in the study region. These include three territories found to the north, south-west and south-east of the Hampshire Downs, centring on the Loddon, Dever and Wey rivers respectively, and two broader groupings along the River Kennet to the north. Of particular interest to our current focus, the models emphasise Cowdery's Down (and the Basingstoke locality more generally) as being located at an important topographic intersection, acting as something of a natural gateway between the fertile plains of the north and communities situated either side of the Downs. It is also possible to detect something of a chronological shift in the models, from geographically separate territories in the earliest phase to a more consolidated pattern of settlement towards the end of the period. This shift might tentatively be interpreted along the lines of settlement expansion and a tendency towards greater political unity over time, though this is perhaps too speculative to sustain on the current evidence.

[91] These were variously discussed in **3.5.4**, **3.5.5**, **3.5.6** and **4.3.4** and do not need restating.

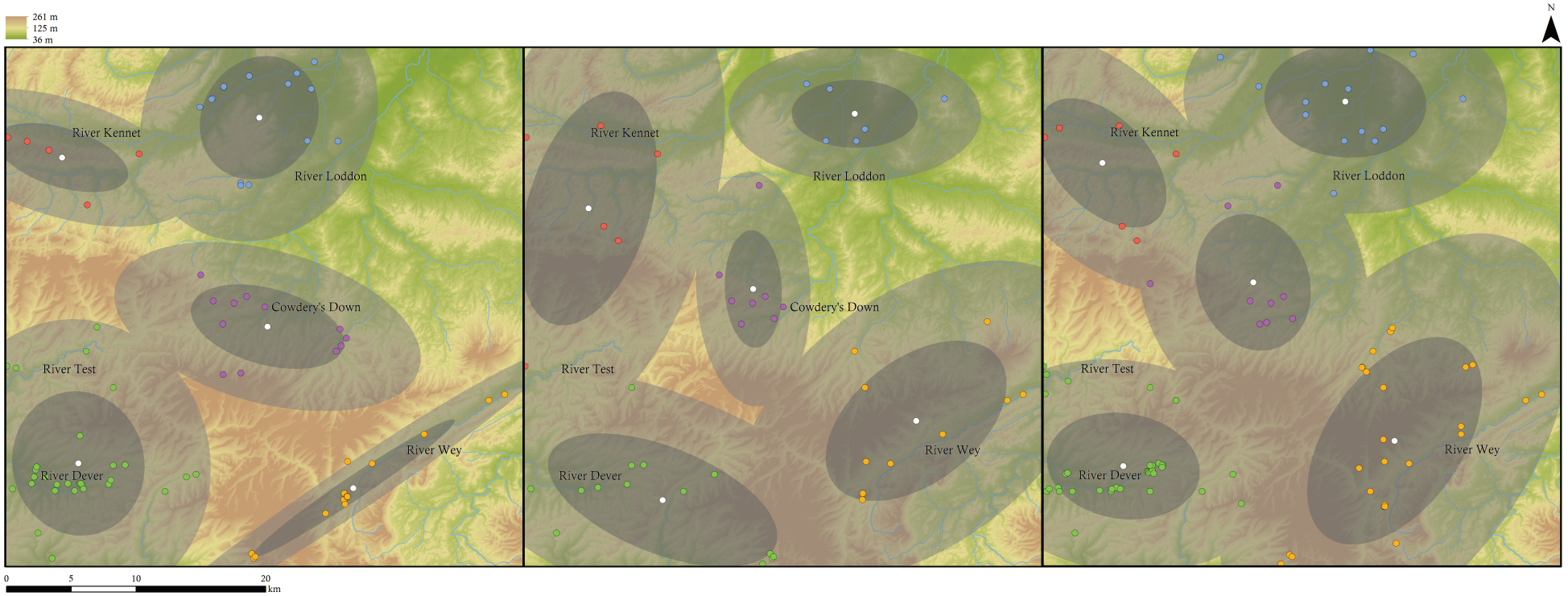



*Figure 5.22:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-675 (centre) and AD 675-800 (right) respectively. The model was created by calculating 1 and 2 standard deviational ellipses (the dark grey and light grey areas respectively) for each group of data points identified in the Grouping Analysis (coloured dots). The group centres also identified in the Grouping Analysis are represented by white dots (*contains Ordnance Survey data © Crown copyright and database right 2017*).

## 5.4 DISCUSSION

### 5.4.1 *The political geography of the region*

In order to advance a new interpretation of the evidence, the results from this wide-ranging investigation will now be contextualised within a broader archaeo-historical framework. The political affiliation of the study region is largely uncertain for much of the period under study, but it seems likely to have been under West Saxon control from the mid-seventh century onwards. Bede (*HE* III.7) informs us that a see was established at Winchester during the reign of Cenwalh (r. AD 642-673).[92] Although this could be read as a response to Mercian expansion in the vicinity of the then see at Dorchester-on-Thames (Yorke 1995, 172; Kirby 2000, 48-9), it is also useful in the triangulation of political geography more broadly. Assuming that the kingdom originated in the Upper Thames Valley (e.g. Hamerow et al. 2013), this move implies that West Saxon influence extended as far south as central Hampshire by the middle decades of the seventh century. Territorial control would no doubt have been strengthened during the reign of Cædwalla, who at the time of his abdication in AD 688 controlled a vast territory that included overlordship as east as Kent and perhaps as far west as the edge of Cornwall (Hoskins 1960, 17-18; Yorke 1995, 59-60; Kirby 2000, 98-104). Thus there is little doubt that West Saxon control would have been well established by the late seventh century, but the region's affiliation and degree of political independence in the preceding period is difficult to gauge (Yorke 1995, 39). Indeed, the documentary evidence is slight, with no recorded battles and few early charters from the region. This situation greatly limits our ability to situate Cowdery's Down within a broader geopolitical framework, a task that is further confounded by the uncertain extent of Romano-British continuity in southern and western England more generally (Cunliffe 1993, 275-82; Dark 2000, 130-4).

Despite our limited historical knowledge of the region before the mid-seventh century, it is possible to glean some tentative insight into its territorial organisation. In this we must return to the *regiones* mentioned briefly in the previous chapter (**4.4.1**). *Regiones* can be conceptualised as discrete administrative units operating beneath the level of a kingdom (Bassett 1989a, 18-19; Yorke 1995, 39-43; Harrington and Welch 2014, 5). Rosamond Faith (2008, 9) has viewed them as being '*recognised from the bottom up*' – relatively stable and essentially local entities that were organised around resource territories. Occasionally mentioned in charters (e.g. S 100) and other documents (e.g. *HE* II.14), they have been identified on the ground through toponymic research. In particular, they have been linked to placenames that feature an *–inga* suffix, which denotes an association of a people with a particular

[92] West Saxon regnal dates are taken from David Dumville (1985).

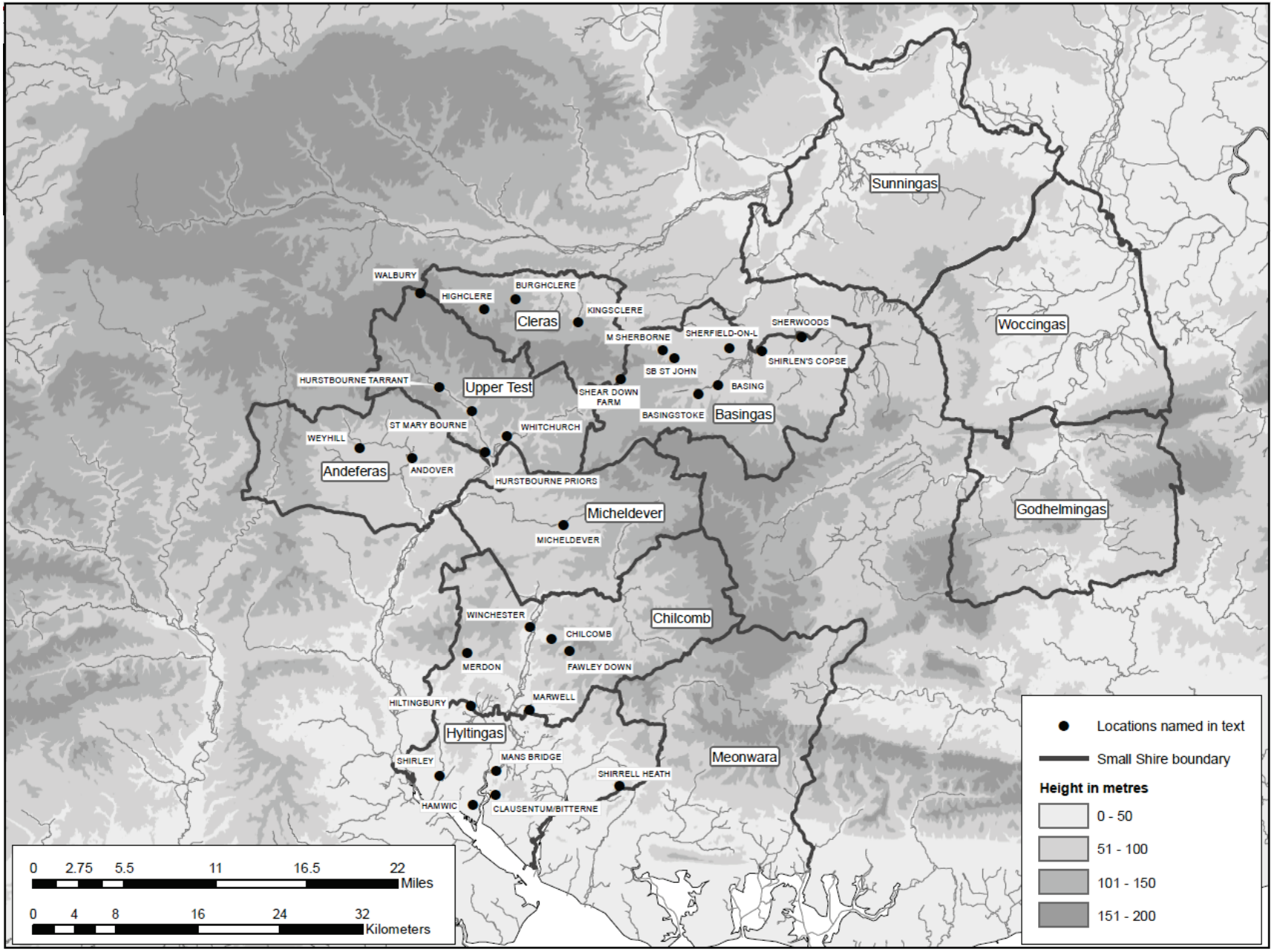



*Figure 5.23:* The *regiones* or 'small shires' of Hampshire, Berkshire and Surrey (after Eagles 2015, 141).

individual (Dodgson 1966; Gelling 1997, 177-8). Place-names with these elements were originally interpreted as evidencing the earliest Anglo-Saxon settlements, but extensive research has shown this correlation to be limited (Cox 1976; Copley 1986). These units are now viewed as slightly later creations, perhaps developing around important extended families as part a broader process of territorial formalisation (Gelling 1997, 253-5; 2011, 994-7). The gradual amalgamation of certain *regiones*, perhaps due to interfamilial competition, may have been an important factor in the development of kingdoms (Bassett 1989a, 17-24; Scull 1993; Blair 1994, 49). Others may have remained largely independent of these broader groupings, or were perhaps created at a later date (Woolf 2000, 91-2).

Given these considerations it is interesting that a number of *regiones* have been identified within or just beyond the study region. It is also fortuitous that the *regiones* or 'small shires' of Hampshire have recently seen extensive investigation by Bruce Eagles (2015), who used various strands of evidence – including place-names, the distribution of early churches, the configuration of later administrative structures and the identification of natural 'resource areas' – to reconstruct their approximate extents (*Figure 5.23*). Four of his hypothesised units are of direct relevance to the study region: the *Basingas* in the centre; the *Cleras* to the north-west; the *regio* of Micheldever to the south-west; and a possible *regio* centring on the Upper Test Valley to the west (*ibid.*, 127-35). Although by no means certain, a *regio* and possible forebear to the Neatham hundred can also be proposed to the south-east, perhaps centring on Alton and defined by the River Wey (*ibid.*, 136). To these we can add the *regiones* of the *Rēadingas* and *Sunningas* to the north and north-east, whose names are preserved in modern-day Reading and Sonning (Yorke 1995, 40). John Blair's (1991) identification of the *regiones* of the *Woccingas* and the *Godhelmingas* to the east, which may have collectively formed the *SūÞre-gē* (southern region), also allows us to consider administrative structures to the east of the region. Further to the south are two place-names indicative of 'Jutish' territories: the *Wihtwara* of Wight and the *Meonwara* of the Meon Valley in southern Hampshire (Yorke 1989). In triangulating the work of several scholars, then, it is possible to deduce a reasonably comprehensive model for the region which comprises a series of similarly sized and perhaps mostly self-sufficient territories. It is therefore of great interest that there is a degree of correlation between these hypothesised administrative units and the territorial zones identified above. Although not especially fine-grained in chronological terms, this model is useful in the identification of *longue durée* processes of territorial development.

How these territories emerged, and at what point they became formalised, is poorly understood. The process may have begun in the fifth century, with a degree of Romano-British continuity in some areas and groups of settlers seeking out high-quality lands with good

access to rivers in others. Over time, these communities may have gradually expanded, undergoing a presumably rather organic process of development and eventual delineation. Given that there is no documentary evidence for external political control of the region before the mid-late seventh century, this process could have been largely internal. In this the sequence at Cowdery's Down – from a sixth-century farmstead to a seventh-century elite complex – might be viewed as a microcosm for broader developments within the territory. Although the exact function of the site remains uncertain, its role as an early power centre seems relatively secure. As such, it likely developed as the principle settlement of an emergent territorial unit. More broadly, that the *Basingas* may have enjoyed supra-local importance and long-distance contacts is tentatively suggested by the Frankish material from Manor Farm (**CD_083**). This view is strengthened by the finding of several PAS finds of Frankish character in the nearby parish of Greywell. These include an unusual radiate-headed brooch (**CD_066**) and a rare scabbard chape of Menghin's (1983) Type 3 (**CD_067**). If not evidence for direct Continental trade, these finds could instead represent interactions with 'Jutish' communities further to the south, whose material culture is more Kentish – and therefore Frankish-oriented (Arnold 1982; Myres 1986, 113-6; Yorke 1989; Richardson 2011). Although perhaps on the eastern edge of the territory, the hoard of 101 gold coins deposited at Crondall (**CD_045**) might further attest to the broader importance of the *Basingas* by the mid-seventh century (Gannon 2003, 11; Williams 2008, 20; Archibald et al. 2013, 497-8).

Given the limited survival of written sources, it is difficult to gauge how these territorial entities may have interacted. Surrey appears to have been operating as a substantial sub-kingdom under the auspices of Mercia by the late seventh century. A charter of Frithuwold, composed in *c.* AD 672-674 and confirmed by Wulfhere at his royal vill at Thame (Oxfordshire), demonstrates his ability to make significant grants to the church. Frithuwold may himself have been of Mercian descent, and it has been posited that he could have played an important role in the southern expansion of Mercian territory (Wormald 1983, 112; Blair 1989, 105-7). In this it has been suggested that he ruled over a large territory, one that '*extended down the Thames Valley between Mercia proper and the Middle Saxons and which thus included the Reading and Sonning regiones*' (Blair 1991, 7). Although the foundation for Blair's thesis is by no means secure – being based as it is on a later hagiography of St Osgyth – it has profound implications for our understanding of the study region. Indeed, this reading of the evidence raises the possibility that the territory of the *Basingas* may have been situated on the border of Mercian territory, at least for part of the seventh century. This notion adds an interesting if perhaps slightly unexpected dimension to our interpretation of the region:

that it may have operated as something of a frontier zone. The identification of broad differences in the archaeological record of northern and southern Hampshire becomes altogether more interesting given this new perspective. Comparative approaches have identified a 'Saxon' zone in northern Hampshire and a 'Jutish' or 'non-Saxon' zone in southern Hampshire and the Isle of Wight, which could have been partially demarcated by the Dever and Itchen rivers (Arnold 1982; Johnston 1998, 106-7; Richardson 2011, 79-80; Stoodley 2011, 49). The campaign to conquer these southern 'Jutes' appears to have been initiated under Cenwalh, but was not fully realised until the reign of Cædwalla in the AD 680s (Yorke 1989, 92-6). Taking both strands of evidence together, it is entirely possible that the communities of southern Berkshire and central and northern Hampshire may have contested their borders with rival powerbases to the south, east and possibly north for much of the seventh century, and perhaps also before. Viewed in such a manner, it becomes tempting to consider the great hall complex at Cowdery's Down as something of a statement of power on a territorial fringe. As will be shown in the chapters that follow, a similar interpretation can also be advanced for the great hall complexes at Cowage Farm, Hatton Rock and Long Itchington.

### 5.4.2 *Towards a new interpretation of Cowdery's Down*

The above considerations offer a broader context in which to understand the evidence from Cowdery's Down. Before doing so, however, it is important to consider how the site has been viewed by others. The excavators exercised considerable caution in their interpretation of the site, conceding that the evidence represented a high-status settlement but hesitating to consider it royal (Millett and James 1983, 247-50). In a subsequent publication they even raised the possibility that its inhabitants were of Romano-British descent, imitating the 'Germanic' architectural fashions of the emergent political elite (James et al. 1984, 206). Subsequent scholars have tended to be similarly reticent, refraining from offering an explicit statement on the site's political context and broader significance (Sawyer 1983, 274; Hinton 1986, 162). In this the uncertain political affiliation of the site has often been stressed (e.g. Brennan and Hamerow 2015, 22), as has the '*varied geographical setting*' of West Saxon history more generally (Kirby 2000, 44).

There have been, at least to the author's knowledge, only two serious attempts to offer an explicit interpretation of the evidence. Barbara Yorke (1995, 76-9) has viewed the site as a likely *villa regia* of the West Saxon kingdom, arguing that it was probably occupied by a royal official on a permanent basis and periodically visited the king and his entourage. This interpretation is convincing from the mid-seventh century onwards, when West Saxon control in the region seems assured, but is less persuasive for the period prior to this. It is

certainly possible that the site was established by a Gewissan king, perhaps under the long and expansionist reigns of Ceawlin or Cynegils, but this assessment is highly speculative, lacking any documentary evidence whatsoever. An alternative interpretation has been proposed by Martin Welch (1992, 50-3). He thought attributing the site to a particular historical figure or kingdom to be rather unhelpful, and instead looked to charter evidence for inspiration. Drawing on the occasional evidence for time-limited grants – those that granted an individual access to an estate for one or more lifetimes (e.g. S 212) – Welch posited whether the architectural grandeur of the great hall phase might be reconciled with its short-lived nature by viewing it as an estate granted for a single lifetime. We might therefore understand the final phase of the site as representing the residence of an important nobleman, presumably in service to a regional hegemony. While an interesting suggestion, this cannot be proven without textual support. Moreover, to which kingdom might such a nobleman have belonged?

An alternative and arguably less speculative approach would be to view Cowdery's Down as the principal settlement of a largely independent territory. This view benefits from making few assumptions about the political geography of the region before *c.* AD 650. Indeed, while the expansion and monumentalisation of the site during Period 4C could have been initiated by external forces – i.e. an 'ordinary' settlement was 'upgraded' to an elite residence under the auspices of a newly victorious West Saxon king – a different reading of the evidence could view it as an internal development. In this we might interpret the site's development as a relatively high-status residence that grew in importance over time and expanded in a commensurate manner. A similar assessment has been previously advanced: noting how the total surface area of the buildings more than doubled with each consecutive phase of settlement, Barry Cunliffe (1993, 294) thought the sequence as redolent of '*the increasing status of a lineage*'. Whether the site was home to a 'king' of the *Basingas* is impossible to say, of course, but this interpretation is not incompatible with periodic overlordship from Wessex, Mercia or even Surrey.

It is also difficult to gauge with any certainty whether the site operated as a *villa regia*, but it is interesting that a charter of Cædwalla, dating to AD 688 and granting lands in Surrey for the foundation of a minster, was signed at a place called *Besingahearh* (S 235). The place-name, which denotes the *hearh* (sanctuary or shrine) of the *Besingas*, is somewhat mysterious, being taken by both David Hinton (1986, 162) and Margaret Gelling (1997, 161) as representing an unknown location which, in the context of the charter, would most plausibly be found in Surrey. Bruce Eagles (2015, 131) has raised the possibility of a royal connection with Basing, however, and in a recent conference paper John Blair has argued that the spelling was probably a mistake and that the charter may well have been issued at

Cowdery's Down.[93] Since scribal errors are to be expected in early documents, and given that charters were occasionally issued far from the lands they granted (e.g. S 70), the author is inclined towards the latter argument. Given the scale and architectural grandeur of the complex, it is easy to envision it accommodating very large gatherings of people, perhaps like that of a royal entourage witnessing a charter signing. It is therefore argued that the site should be viewed as a strong candidate for a *villa regia*.

Similar paramount settlements might be expected in neighbouring *regiones*. It seems unlikely that a figure as powerful as Frithuwold would not have had his own royal vill – especially if his territory was as expansive as John Blair (1989, 1991) proposes – though the whereabouts of this settlement is difficult to speculate. More specifically, Æthelred is known to have signed a charter at Micheldever in AD 862 (S 335). Considered with the density of archaeological activity identified above, an early power centre here is entirely possible. A royal vill is also mentioned at Reading in Asser's *Life of King Alfred*, written in AD 893, but there is insufficient evidence to argue for significant activity or particular importance during the preceding centuries (Astill 1984, 70-3). The high-status burial evidence and place-name at Alton (*Aewielltun*) indicate it as another locality of note (Evison 1988, 44), while an administrative centre of the *Cleras* can be inferred from the suggestive place-name of Kingsclere (Sawyer 1983, 278; Briggs 2009, 17; Eagles 2015, 131-2). The ecclesiastical and royal significance of Winchester from the mid-seventh century onwards might also belie an earlier significance. Although well beyond the study region, this discussion should consider the important evidence from Chalton (Addyman et al. 1972, 1973). Its impressive size and 'ritual symmetry' have been previously noted (Reynolds 2003, 104-10; Hamerow 2010b, 60-1), though none of the buildings match the scale and architectural grandeur of Cowdery's Down. The absence of a great hall disqualifies it as a great hall complex, but that it may have fulfilled a similar role as Riverdene in the territory of the *Meonwara* is at least possible. Final mention is reserved for the eighth- and ninth-century trading site known as *Hamwic* (Morton 1992; Andrews 1997), which Nick Stoodley (2002) has argued likely developed from a seventh-century royal estate and associated cemetery. Taken together, and although the architectural grandeur and obvious importance of Cowdery's Down should not be underemphasised, future excavations in the region may render it less of an exception. Indeed, the building of great hall complexes during the later sixth and seventh centuries may come to be seen as part of a broader pattern of territorial development and elite expression (**8.2.4**).

Taking all of these considerations into account, and in conclusion, it seems sensible to tentatively interpret Cowdery's Down as the foremost residence of the *Basingas*, a minor

[93] 'The intersecting rich worlds of 7th-century England', given at *Early Medieval Monasticism in the North Sea Zone* (Canterbury, 24th April 2015).

territorial unit that was ultimately integrated within the West Saxon kingdom but which may have had periods of relative independence – albeit while contending with other external powers – before the mid-late seventh century.

# 6
# COWAGE FARM

This chapter presents the results of a case study focused on Cowage Farm in Wiltshire. The first section introduces the study region and its archaeology. This is followed by a consideration of Cowage Farm from a mostly local perspective. Large-scale regional analyses are then undertaken to provide further context. A discussion of the results then situates the main results of the study within a broader archaeo-historical framework.

## 6.1 INTRODUCTION

### 6.1.1 *The study region*

The study region consists of a 40 km x 40 km area centred on Cowage Farm (ST 9081 8616). This equates to a total area of 1600 km$^2$, which includes a land surface area of 1598.61 km$^2$ on account of the Bristol Channel. An overview of the region's topography is given in *Figure 6.1*. Broadly speaking, the study region consists of four geological and topographic zones.[94] The landscape is dominated by two areas of upland: the Cotswolds in the north-west, composed of Jurassic limestone (GOG), and the Marlborough Downs (being the western edge of the North Wessex Downs) in the south-east, composed of Cretaceous chalk (CG). Between the two is a fertile valley known as the Avon Vale, which is largely composed of the Kellaways (KLB) and Oxford Clay (OXC) Formations, and a narrow belt of the Corallian Group (CR), Gault Formation (GLT) and Lower Greensand Group (LGS). North and west of the Cotswolds is a coastal zone, being part of the Severn Valley, which is primarily composed of the Lias Group (LI). Major rivers present in the study region include: the Thames, which flows eastwards from its source at Thames Head in Gloucestershire to the Thames Estuary; the Kennet, which flows southwards from near Silbury Hill in Wiltshire and then eastwards to join the Thames at Reading; and the Bristol Avon, which flows in a clockwise direction from its source near Acton Turville in Gloucestershire to Avonmouth and the Severn Estuary. Rivers of secondary importance include the Frome (Stroud) to the north, the Frome (Bristol) to the west and the Churn to the north east.

[94] Geological information was taken from the British Geological Survey's *Geology of Britain viewer*, accessible at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html. Geological codes relate to the *Lexicon of Named Rock Units* accessible at: http://www.bgs.ac.uk/lexicon/.

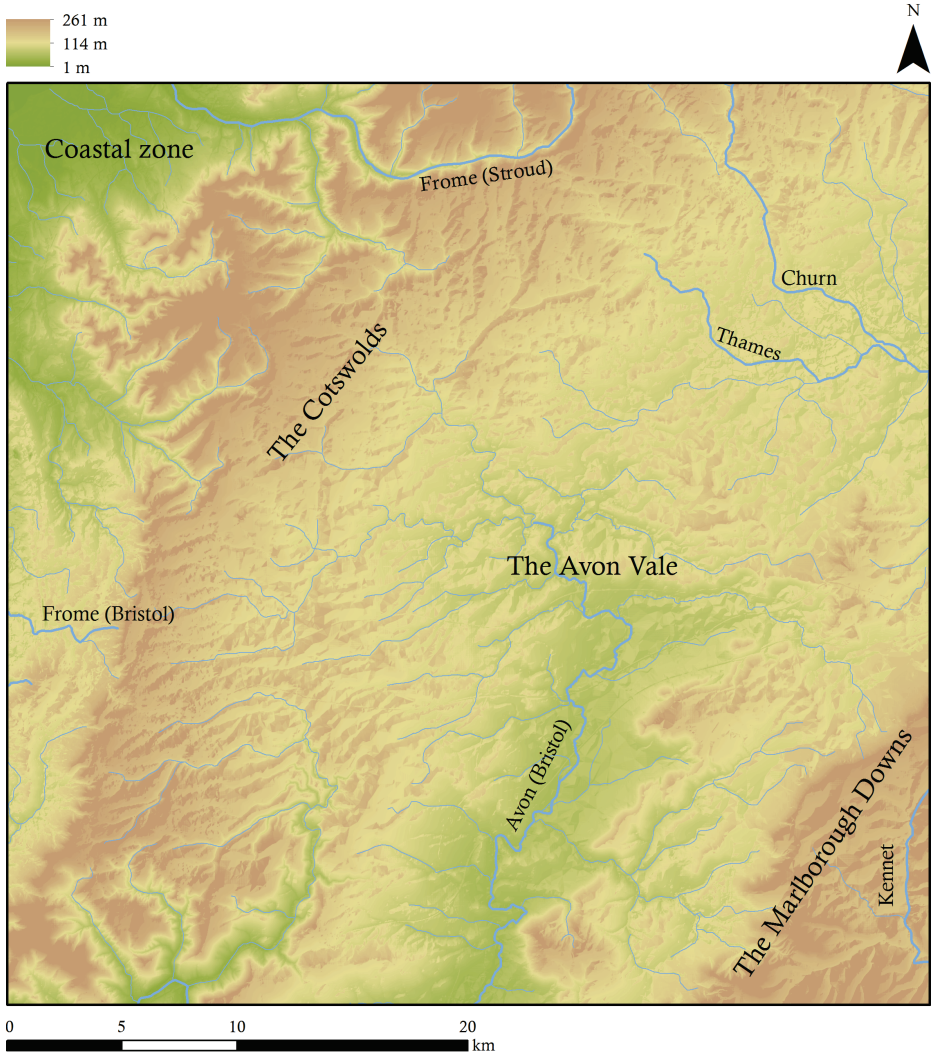



*Figure 6.1:* Major rivers and topographic zones in the study region (*contains Ordnance Survey data © Crown copyright and database right 2017*).

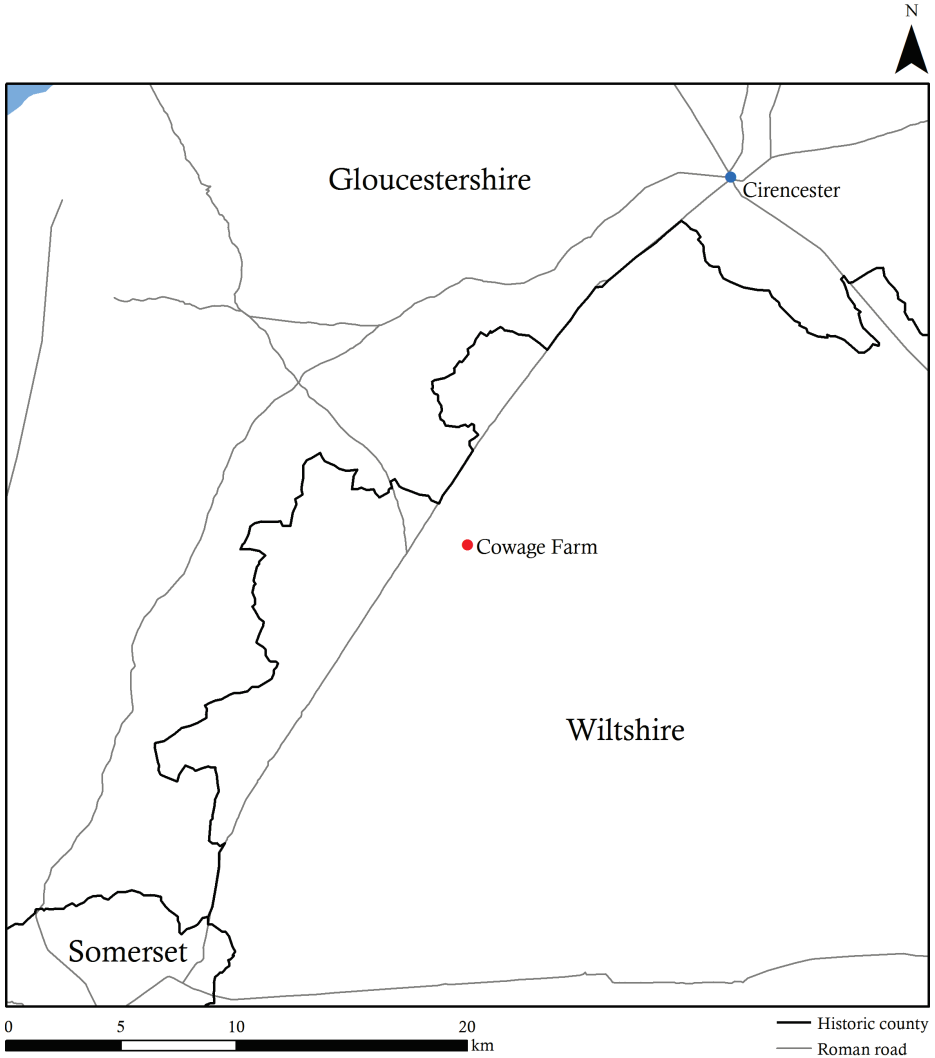



*Figure 6.2:* The study region in relation to historic county boundaries and the Roman road network, which clearly influenced their formation.

As shown in *Figure 6.2*, the study region comprises parts of the historic counties of Wiltshire (53.14%), Gloucestershire (44.46%) and Somerset (2.40%).[95] Modern population centres are found at Malmesbury in the centre of the study region as well as at Cirencester to the north-east, Stroud to the north-west and Chippenham to the south. Swindon, Bath and Bristol are located just beyond the limits of the study region to the east, south and south-west respectively.

### 6.1.2 *Antecedent archaeology*

By way of introduction, the study region will now be considered from a long-term perspective. By far the most significant evidence of early prehistoric activity is known from Avebury, an area of chalk downland famous for its rich Neolithic monuments (Pollard and Reynolds 2002). These striking monuments include Silbury Hill, the tallest man-made mound known from prehistoric Europe, as well as Avebury Henge, Windmill Hill and the West Kennet Long Barrow (Gillings et al. 2010; Leary and Field 2010). Although of tremendous importance in its own right, of particular interest to our present study is how this monumental landscape appears to have served as an evocative backdrop for later settlement. Indeed, the Roman road between Speen and Bath runs immediately south of Silbury Hill (Margary 1973, 135-7), and a substantial ladder settlement has been identified either side of it to the east (Powell et al. 1996; Crosby and Hembrey 2013). The locality also appears to have been a focus for early medieval burial, with a distinct group of mostly lone interments being known from the various prehistoric monuments (Semple 2003). Early earthworks also appear to have influenced later activity patterns elsewhere in the region. Excavations on a prominent part of the Cotswolds in Uley (**CF_112**) revealed a long sequence of activity including Neolithic and Iron Age enclosures, a substantial Roman-period temple complex and a small post-Roman settlement likely in use from the mid-late fifth century (Woodward and Leach 1993). As was noted in **2.4.1**, the early medieval settlement at Cowage Farm was also located in relative proximity to prehistoric activity, in this instance being a pair of presumably Bronze Age ring-ditches.

Much of the region would, during the Iron Age, have been under the influence of the *Dobunni*, a tribal grouping mentioned in a number of Roman accounts (Van Arsdell 1994; Cunliffe 2003; Darvill 2003; Moore 2006). Although little is known of this entity, a degree of cultural and administrative continuity into the Roman period might be assumed given the name used for the civitas capital: *Corinium Dobunnorum* (Cirencester). By the second century Cirencester was the second largest town in *Britannia* – in all probability the capital

[95] The unitary authorities of South Gloucestershire and Bath and North East Somerset were created in 1996 after the abolition of Avon, which was itself created in 1974. Both have their own HER.

of *Britannia Prima* – and would therefore have operated as the administrative centre of a large and heavily Romanised region (Reece 1986; Wacher 1995, 302-23; Reynolds 2006, 133). This importance is underscored by Cirencester's position within the Roman road network, being situated at the intersection of several important routeways. These included: Ermin Street, which ran from Gloucester (*Glevum*) to Silchester (*Calleva Atrebatum*); the Fosse Way, which connected Exeter (*Isca Dumnoniorum*) to Lincoln (*Lindum Colonia*); and Akeman Street, which linked the Fosse Way to Watling Street (Margary 1973, 134-5; 141-3; 155-62).

At a broader level, the distribution and density of Roman activity in the study region can be examined using two readily accessible online datasets. As with the previous case studies, both the PAS online database and the *Rural Settlement of Roman Britain* (RSRB) project were consulted to aid this endeavour. In total, data relating to 2946 PAS finds and seventy-seven settlements were obtained.[96] As shown in *Figure 6.3*, the distribution of sites evidences a densely settled and (presumably) well-populated landscape. Activity clearly preferences the fertile and lowland areas – with a particular concentration identifiable in the Avon Vale – but there are also significant numbers of sites in the more marginal and upland regions. Indeed, while clusters of PAS finds identify certain localities as being more 'active' than others, the overall distribution is reasonably well dispersed throughout the study region. Overall, the study region can be thought of as a place of significance both prior to – and during – the Roman period.

### 6.1.3 *The regional dataset*

An exhaustive programme of data collection (**3.2.2**) resulted in the identification of 121 sites likely to date from the study period. It is worth noting that this represents the smallest dataset of the four case studies in this thesis (**8.1.3**), though this is unsurprising given the general dearth of early Anglo-Saxon archaeology in the West Country (e.g. see distribution maps in Hines 1990). An overview of the dataset can be found in *Table 6.1*. Following a chronological assessment (see *Table 3.2*), seventy-one sites (58.68%) were considered 'certain' to date from the fifth-eighth centuries while twenty (16.53%) were classed as 'probable' and thirty (24.79%) 'uncertain'. Of the thirty 'uncertain' sites, sixteen were thought to have a ≤50% chance of being chronologically relevant, eight were broadly dateable to the early medieval period and six were of completely unknown date.

[96] The PAS online database, available at: https://finds.org.uk/, was accessed on 13th June 2016 and data downloaded using the 'search via map' function. The *Rural Settlement of Roman Britain* project, available at: https://doi.org/10.5284/1030449, was accessed on 15th July 2016 and data downloaded using the 'query' function.

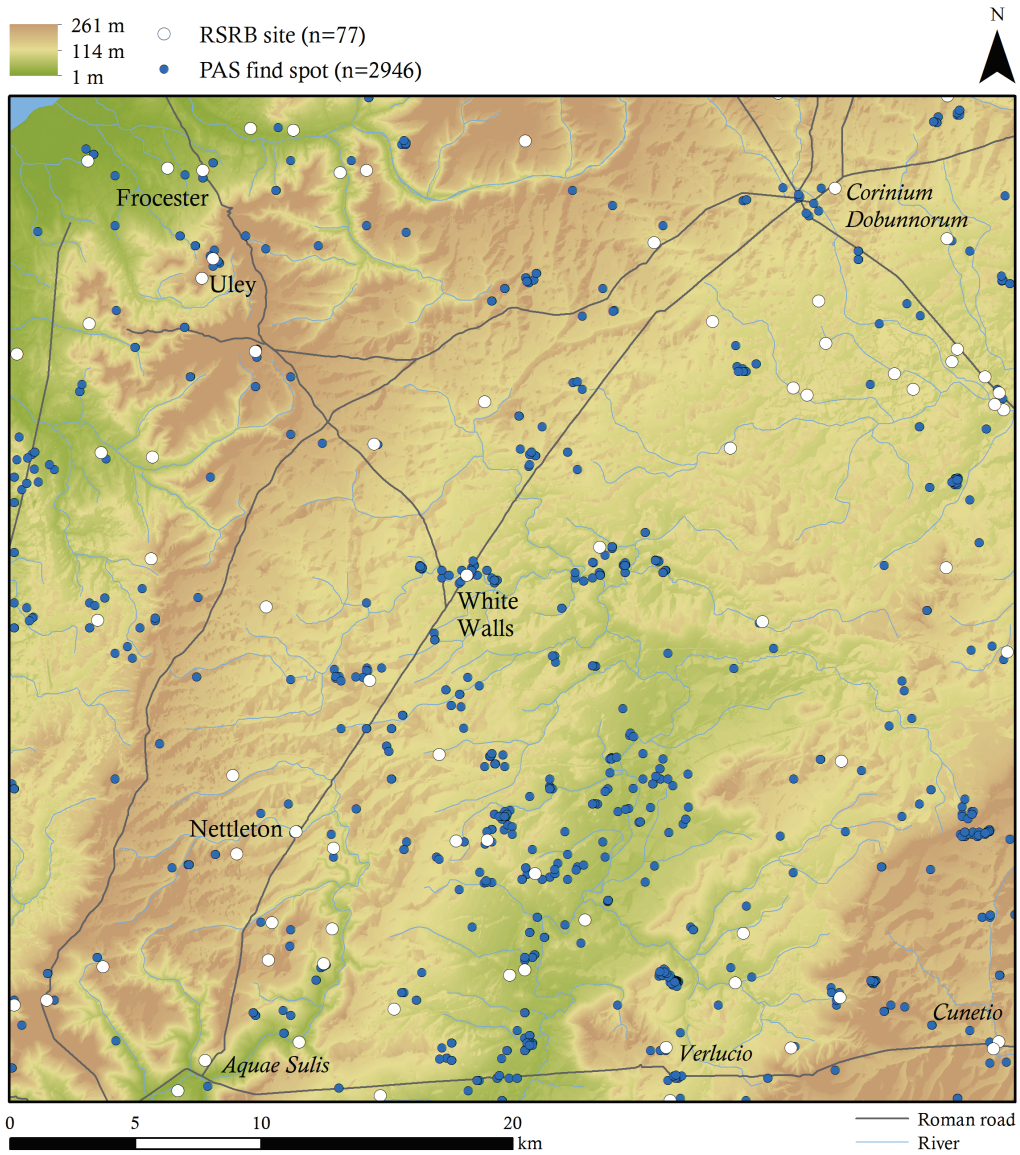



*Figure 6.3:* The study region during the Roman period, as evidenced from the PAS online database and the *Rural Settlement in Roman Britain* project (*contains Ordnance Survey data © Crown copyright and database right 2017*).

| | C/P/U sites | | C/P sites | | C sites | |
|---|---|---|---|---|---|---|
| Site type | No. of sites | % | No. of sites | % | No. of sites | % |
| Artefact find spot | 82 | 67.77% | 56 | 62.92% | 44 | 61.97% |
| Burial site | 20 | 16.53% | 18 | 20.22% | 16 | 22.54% |
| Settlement site | 8 | 6.61% | 7 | 7.87% | 6 | 8.45% |
| Inferred occupation | 6 | 4.96% | 5 | 5.62% | 4 | 5.63% |
| Ecclesiastical site | 4 | 3.31% | 3 | 3.37% | 1 | 1.41% |
| Hoard | 1 | 0.83% | 0 | 0.00% | 0 | 0.00% |
| Total | 121 | 100.00% | 89 | 100.00% | 71 | 100.00% |

*Table 6.1:* An overview of the regional dataset. The abbreviations used – 'C' for certain, 'P' for probable and 'U' for uncertain – relate to the level of chronological certainty assigned to sites in the dataset, as outlined in *Table 3.2*. Note: some of the analyses reported in this chapter combine the 'settlement site' and 'inferred occupation' site types into a single category termed 'occupation sites'.

A distribution map of the dataset is given in *Figure 6.4*. Writ broadly, the spatial patterning of fifth-eighth-century sites clearly favours the more fertile and lowland areas. In particular, concentrations of sites are found along the course of the Thames, Churn, Avon and Kennet rivers. The pattern of settlement in the upland zones is less uniform; archaeological activity in the Avebury area is high, but the Cotswolds appear to have been sparsely populated. Given the importance of animal husbandry to subsistence economies, the latter phenomenon might be a reflection of the relative archaeological invisibility of transhumance activities (Banham and Faith 2014, 11-13; 293-4). Also striking is the relatively extensive evidence for early Christian communities within the study region. Establishments at Tetbury (**CF_108**) and Malmesbury (**CF_085**) as well as possibly at Somerford Keynes (**CF_001**) and Hawkesbury (**CF_060**) likely date from the late seventh century and clearly represent a major monastic tradition in the Cotswolds-Avon area. A monastery is also known to have existed at Bath, just beyond the southern extent of the study region, from the late seventh century (Sims-Williams 1975). Although the distribution of sites is broadly similar to that noted above for the Roman period (*Figure 6.3*), it is important to reiterate the very real difference in scale. As is shown in *Figure 6.5*, there are almost twenty-five times more known sites during the first-fourth centuries than in the fifth-eighth.

### 6.1.4 *Chronology*

As with the other case studies, the chronology of the regional case study was explored using a variety of techniques. This began by performing a chronological seriation on the dataset as a means to both construct a bespoke phasing system (see below) and consider the regional sequence (**6.3.1**). The seriation was undertaken in accordance with the method outlined in **3.3.3** using 107 sites from the regional dataset.[97] The resulting data matrix (*e-Appendix 2c*) was then used to phase the dataset. This followed the process described in **3.3.4** to create a three-phase chronology for the region relative to the sequence identified at Cowage Farm (**2.4.1**). The resulting scheme, presented in *Table 6.2*, effectively divides the dataset into sites that were likely to be 'active' before, during and after the proposed great hall phase at Cowage Farm. As noted in **3.3.2**, the data collection process endeavoured to record any radiocarbon samples of relevance to the study period. In total, data relating to six radiocarbon samples (from four different sites) were obtained in this case study. These samples were recalibrated using the most recent radiocarbon age calibration curve and are presented in *Table 6.3*, with the Cowage Farm samples omitted due to their earlier consideration (**2.4.1**).

[97] These comprised all chronologically 'certain' and 'probable' sites (n=91) and the sixteen 'uncertain' sites that could be calendrically dated but whose date ranges partially fell outside the chronological limits of the study.

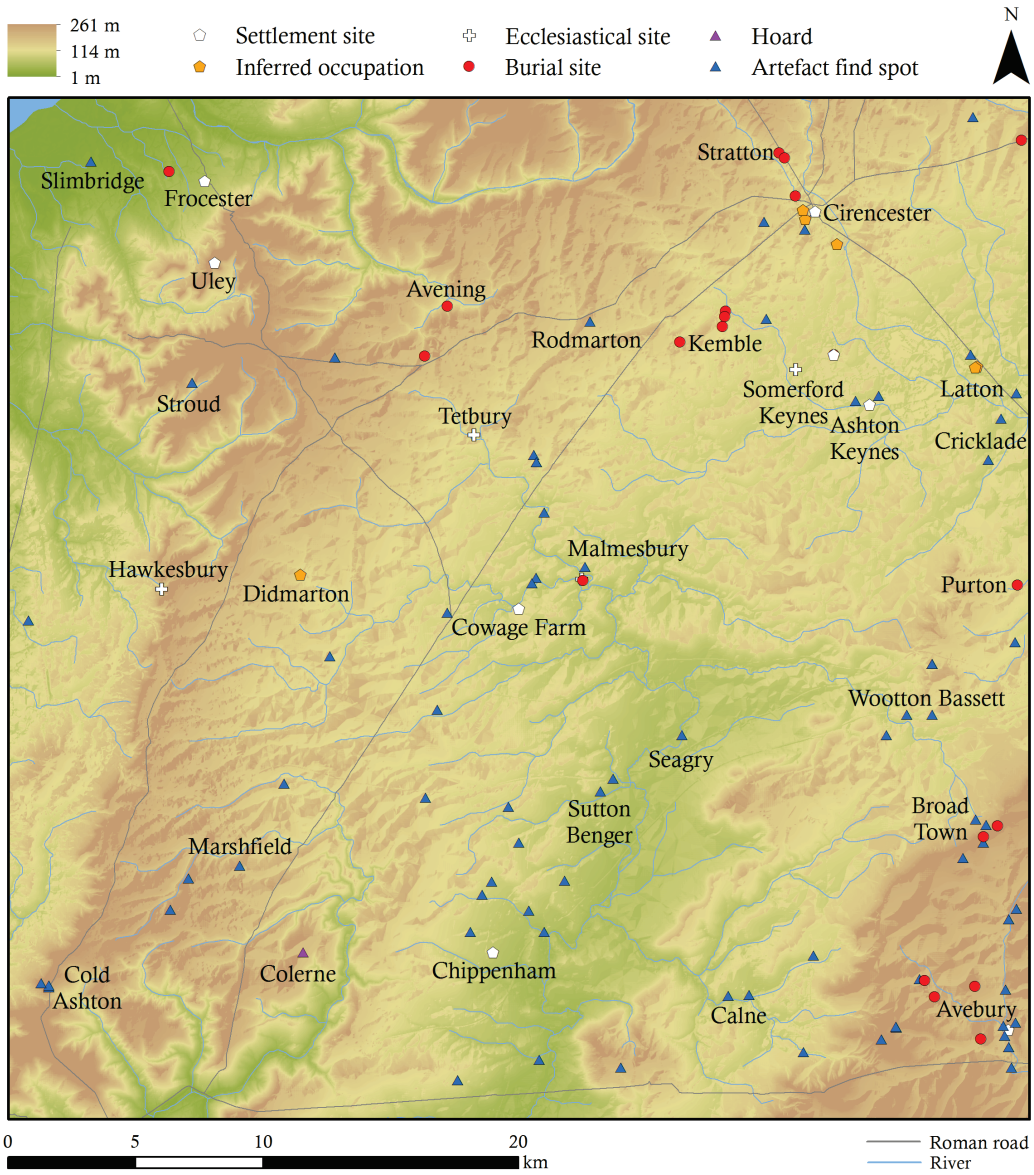



*Figure 6.4:* A distribution map of the regional dataset with prominent localities labelled (*contains Ordnance Survey data © Crown copyright and database right 2017).*

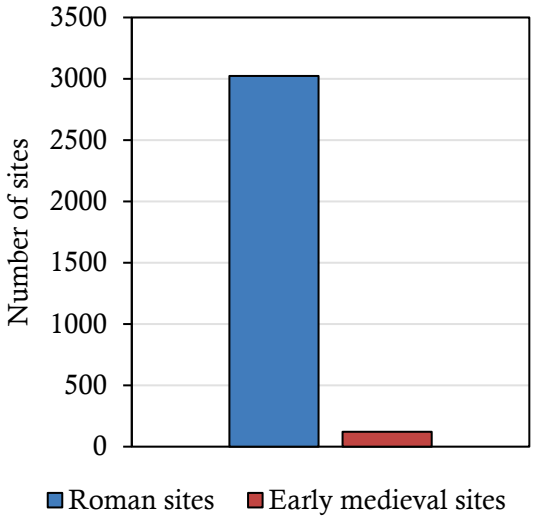



*Figure 6.5:* A bar chart comparing the numbers of Roman-period (n=3023) and fifth-eighth-century (n=121) sites in the region.

| Phase | Description | Date range | No. of sites |
|---|---|---|---|
| 1 | Before the great-hall phase | AD 400-550 | 49 |
| 2 | ?During the great-hall phase | AD 550-675 | 53 |
| 3 | ?After the great-hall phase | AD 675-800 | 65 |

*Table 6.2:* The phasing scheme used for the regional dataset, based on the provisional sequence proposed for Cowage Farm (**2.4.1**). The number of sites within each phase was determined using the results of the chronological seriation, with sites considered to be chronologically uncertain omitted (see *Table 3.2*).

| Site information | | Radiocarbon sample information | | | Published date ranges | | IntCal 13 date ranges | |
|---|---|---|---|---|---|---|---|---|
| ID | Site | RC sample | RC age | Description | 68.2% | 95.4% | 68.2% | 95.4% |
| CF_015 | Broad Town | OxA 11173 | 1430±45BP | Human bone samples from lone burial | 595 – 665 | 540 – 680 | 592 – 654 | 547 – 666 |
| CF_041 | Cotswold Community | OxA-17648 | 1361±24BP | Human bone sample from Grave 2477 | 649 – 669 | 635 – 690 | 650 – 669 | 634 – 689 |
| CF_041 | Cotswold Community | SUERC-18830 | 1415±30BP | Human bone sample from Grave 10764 | 610 – 655 | 580 – 665 | 614 – 653 | 585 – 663 |
| CF_052 | Frocester Court | CAR 1475 | 1490±60BP | Animal bone from Building E | 534 – 632 | N/R | 474 – 643 | 428 – 651 |

*Table 6.3:* Radiocarbon samples of relevance from study region (data from Price 2000, 185; Clarke 2004, 90; Powell et al. 2010b, 271-2) and their recalibration using IntCal 13 (Reimer et al. 2013) and OxCal v4.2 (Ramsey 2009; Ramsey and Lee 2013), reported at 1σ (68.2%) and 2σ (95.4%). Calibrated date ranges are years AD/CE. 'N/R' is an abbreviation for 'not recorded', which is used where samples have not been previously calibrated or where calibrated date ranges were only reported at 1σ. Note: the Cowage Farm radiocarbon samples were previously presented in *Table 2.3*.

## 6.2 COWAGE FARM IN CONTEXT

### 6.2.1 *The site and its setting*

Following the structure of the previous case studies, it is appropriate to begin our investigation at the local scale and work outwards. In this we will initially consider the evidence from Cowage Farm (summarised in **2.4.1**) within its immediate context. The site is located in the historic parish of Bremilham, less than 3 km south-west of Malmesbury. The parish is first attested as *Bremelham* in a charter of AD 1065 (S 1038). On the evidence of estate bounds (S 1577) it has been suggested that the area may have originally been known as *Pleieswrthe* ('Pleg's enclosure'), though this remains speculative (Barker 1986, 255-6; Kelly 2005, 251-61). The earliest reference to the specific area of Cowage Farm is as *Cowyk* in the thirteenth century (Barker 1986, 255). Bremilham was merged with the neighbouring parish of Foxley in 1893, with this combined entity becoming part of Norton in 1934.[98] As a consequence of this confusing administrative history, the site is often erroneously ascribed to the now-defunct parish of Foxley (e.g. Arnold 1997, 170).

Given its small size and historically low population, it is unsurprising that the archaeology of Bremilham is exceptionally sparse. Neither the Wiltshire HER nor the PAS online database list any Roman archaeology, and the handful of presumably prehistoric earthworks known from the locality are unexcavated and poorly dated.[99] It is therefore impossible to provide an immediate archaeological context for the early medieval settlement. Even so, it was previously argued from the artefactual and radiocarbon evidence that a great hall complex was likely established in the area during the latter half of the sixth century (**2.4.1**). Given the evidence for fifth-sixth-century activity at sites like Lyminge, Yeavering and Sutton Courtenay (Hope-Taylor 1977, 154-8; Hamerow et al. 2007, 183-6; Thomas 2017, 111-12), an as yet undiscovered phase of earlier occupation at Cowage Farm remains a distinct possibility.

Irrespective of what came before it, the spatial dimension of the establishment can be understood at a number of scales. At the most immediate, the settlement's close proximity to a pair of probable Bronze Age ring-ditches surely indicates some form of spatial relationship (Hinchliffe 1986, 240-1; Crewe 2010, 24; Semple 2013, 96). Logistical and strategic concerns are also likely to have been important factors in the location of the settlement. Of particular significance is the presence of a routeway immediately south of the main complex (see *Figure 2.11*). Though the course of the modern road has been diverted across part of the site, it is thought to have originally formed the southern boundary of the settlement

[98] Information obtained from *Wiltshire Community History*, an online resource hosted by Wiltshire Council. Available at https://history.wiltshire.gov.uk/community/getcom2.php?id=173. Accessed 2nd May 2017.
[99] E.g. HER Nos. ST 98 NW 69, ST 98 NW 110, ST 98 NW 111 and ST 98 NW 639.

(Reynolds 2003, 106). A further spatial influence must undoubtedly have been a desire for riverine access, with the Sherston Branch of the Bristol Avon being found less than 100 m north of the great hall complex. This would have been a major navigation route, connecting the Cotswolds to a series of important settlements downriver such as Malmesbury, Chippenham and Bath.

Considering the wider landscape, it is significant to note the site's location atop a reasonably prominent limestone plateau (Hinchliffe 1986, 240). This topographic position – similar in a sense to that of Lyminge and Cowdery's Down considered previously – lends itself to a consideration of visibility. This was achieved using viewshed analysis, a technique described in **3.5.2**. With Cowage Farm (ST 9081 8616) as the observation point, a viewshed was calculated to gauge which areas were likely to have been visible from the great hall complex (*Figure 6.6*). The results can be understood as an immediate visible zone and a more long-distance vista. The former indicates reasonably impressive local coverage up to a distance of around 2-3 km from the site. Included within this is a significant section of the river and, interestingly, short stretches of two Roman roads: the Fosse Way and the road between Easton grey and Arlingham (Margary 1973, 141-5). This realisation further attests the logistical significance of the site. In terms of archaeology, the find spot of two sherds of probable sixth-century pottery at Hyam Park Farm (**CF_064** and **CF_065**) can be included in this visible area (Draper 2004, 255). A late sixth- or early seventh-century Merovingian gold *tremissis* found in the vicinity of Norton (**CF_089**) sometime before 1791 might also be included (Robinson 1980). Interestedly, Malmesbury Abbey is not within the visible zone,

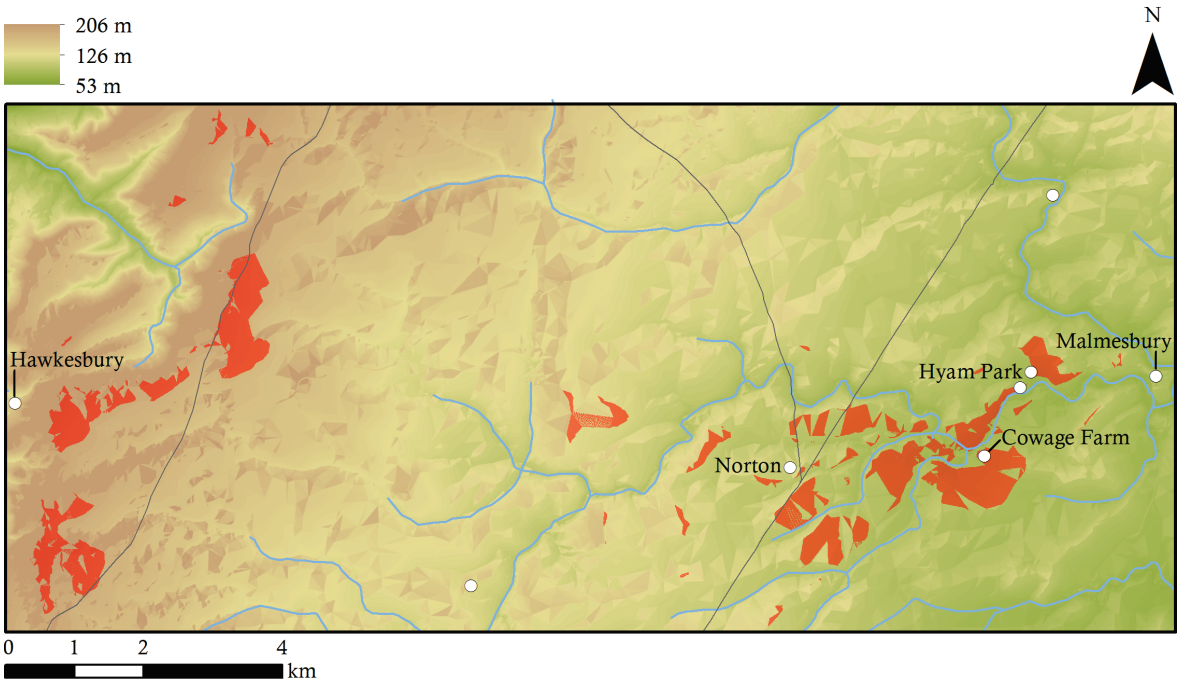



*Figure 6.6:* The results of the viewshed analysis. Areas likely to have been visible from Cowage Farm are shaded red, with contemporary and near-contemporary sites being represented by white dots. Sites mentioned in the text are labelled (*contains Ordnance Survey data © Crown copyright and database right 2017).*

although it is at least possible it could have been if the early architecture was especially tall. Arguably of greater interest to our understanding of Cowage Farm's broader significance is the long-distance viewshed, which demonstrates commanding views of the dramatic landscape to the west. Although one should exercise a degree of caution when considering long-distance visibility (**3.5.2**), it is significant that the main ridgeline of the Cotswolds, and the Roman road running along it (Margary 1973, 143-4), are considered visible in the analysis.

Based on the above considerations it is possible to better appreciate the spatial context of Cowage Farm. In being located on a prominent feature in the local topography, the settlement would have enjoyed good visibility of the immediate and surrounding landscape. Further logistical significance is implied by the close proximity of the site to a major river and a terrestrial routeway. Moreover, that infrastructural elements were likely to have been visible from the site adds further support to the identification of an important spatial relationship between great hall complexes and transportation networks identified elsewhere (Hamerow et al. 2013, 65-8). Assuming that Cowage Farm operated as a centre of administration, the ability to observe the flow of people and goods along major riverine and terrestrial routeways would have been welcome indeed. Just like in previous case studies, then, a consideration of Cowage Farm's landscape setting has allowed us to assess its strategic importance.

### 6.2.2 *Local archaeological context*

Looking beyond Cowage Farm, it is useful to briefly consider the archaeology of its immediate environs. Malmesbury Abbey (**CF_085**), situated 2.75 km to the north-east, easily represents the most significant ecclesiastical establishment in the region. Its foundation may date as early as the mid-seventh century if the twelfth-century *Eulogium Historiarum* is to be believed, but a date in the later seventh century appears more likely on the basis of charter evidence (Wright 2015, 39). Indeed, a charter of AD 675 (S 1245) records that Aldhelm was granted land for the founding of a monastery by Leuthere, bishop of Winchester. This establishment appears to have been reasonably swift, with subsequent charters of the AD 680s (S 71 and S 1169) referring to Aldhelm as abbot of Malmesbury (Brodie 1988; Kelly 2005, 1-10). Although no archaeological remains of the abbey have yet been encountered, two inhumations were found in 1972 under a rubble spread in the cellar of the nearby tea rooms (**CF_086**). The burials are undated, but an association with the abbey seems likely given their proximity (Anon 1973, 138-9). Various finds of organic-tempered pottery are known from Malmesbury, adding further support for an early-middle Anglo-Saxon presence (Wright 2015, 39-40). A monastery is also thought to have been in existence around this time at Tetbury (**CF_108**), some 7 km north of Cowage Farm. A charter of AD 680 (S 71)

describes the granting of '*15 hides near the monastery of Tetta to Abbot Aldhelm*' by Æthelred of Mercia.[100] Not only can this reference can be used to infer the existence of a contemporary monastery, it also demonstrates an early consolidation of Malmesbury's influence and agricultural base.

Though there are no excavated settlements in the immediate vicinity of Cowage Farm, various stray finds contribute some understanding of occupational activity. Ceramic evidence from Hyam Park Farm (**CF_064** and **CF_065**) and Golden Hill (**CF_055**), 1.25 km and 3.75 km to the north respectively, might be taken to indicate broadly contemporary occupation in relative proximity to the great hall complex (Draper 2004, 255). Recent finds reported to the PAS from Long Newton, including three pins and a strap-end (**CF_078**, **CF_079**, **CF_080** and **CF_081**), also suggest eighth-ninth-century activity a little further to the north. Artefacts of higher status are known from areas such as Norton (**CF_089**), where the abovementioned Merovingian gold *tremissis* was found (Robinson 1980). Although not closely dated, the unpublished early medieval sword pommel from Surrendal Farm (**CF_105**) in Hullavington offers tentative evidence for a wider landscape of elite power and martial display. Further finds of significance were dredged up in 1979 near Seagry (**CF_095**), including an iron seax, a Viking-period stirrup and a seventh- or eighth-century copper-alloy hanging-bowl mount with scroll decoration and traces of enamel (Seaby and Woodfield 1980, 118-19). Being a Mercian issue, the Series O silver sceat from Luckington (**CF_028**), likely minted AD 720-735, could be of broader geopolitical significance.

A critical reading of this evidence emphasises the position of Cowage Farm as the principal settlement in an area of some ecclesiastical – and presumably secular – importance. Combining these various strands of evidence, we can begin to understand the establishment of the great hall complex in a local archaeological context. Whether due to issues of archaeological visibility or a genuine lack of activity, there is little to be said of the locality during the immediate post-Roman period. As was argued in **2.4.1**, though, it seems likely that a great hall complex was established at some point during the latter half of the sixth century. We know very little of this settlement, but a few details are discernible. It was built on an area of fairly level high ground, with good visibility over its immediate surroundings and beyond. It was also vast, featuring a substantial great hall and numerous other large buildings. Although no documentary sources attest its function, the settlement can be considered of unmistakeably high status. It may therefore have been linked to an emergent rulership.[101] At present there is little that can be said of its hinterland, though suggestions of high status

[100] The translation used is that given in *The Electronic Sawyer* entry for S 71 (http://www.esawyer.org.uk/charter/71.html). Accessed 8th May 2017. The politically contested nature of Malmesbury Abbey is commented on in **6.4.1**.
[101] Comments on Cowage Farm's administrative function and political affiliation are offered in **6.4.2**.

activity might be inferred from nearby artefact finds (see above).

On the evidence of building alignments and radiocarbon determinations it seems likely that the settlement had at least two phases. Given the presence of a probable church, it was argued in **2.4.1** that this sequence may denote a great hall complex with an ecclesiastical afterlife, as has been observed elsewhere (Blair 2005, 186-7; Thomas 2013, 139-40). This interpretation is arguably strengthened by the high level of ecclesiastical interest in the area. Indeed, it is entirely possible that many of the functions originally fulfilled by the great hall complex could have been transferred to Malmesbury as its importance increased. This approach might see the later life of the settlement as an extension of – or community in service to – the abbey (Blair 2005, 213-14; Wright 2015, 39-42). Whatever the case may be, there is no evidence to suggest occupational continuity at Cowage Farm beyond the eighth or ninth century. What became of the area during the late Anglo-Saxon period is therefore largely unknown, though it may be significant that a tenth-century charter (S 454) mentions a *uil-lunculuam* ('small vill') at nearby Norton (Kelly 2005, 291-3). This implies a continuity in royal interest, perhaps suggesting that the locality came to be seen as an ancestral landscape of long-term politico-religious significance.

### 6.2.3 *Modelling the wider hinterland*

This appreciation of the local context prompts a consideration of Cowage Farm's broader significance. If it is accepted that the site had important administrative functions, at least during its great hall phase, then we might conceptualise it as an estate centre involved in a supra-local *feorm* network.[102] Following the example set by previous case studies (**4.2.3** and **5.2.3**), least-cost path modelling was used to explore how Cowage Farm may have interacted with such a system. This involved the calculation of least-cost paths between Cowage Farm and occupation sites thought likely to be contemporary with it (phase 2 sites as defined in *Table 6.2*).[103] In accordance with the method described in **3.5.3**, both isotropic (non-directional) and anisotropic (directional) least-cost paths were computed. As can be seen in *Figure 6.7*, the analysis identified a series of credible routeways across the landscape. In terms of topographic plausibility, the least-cost paths can be seen to sensibly favour low-lying areas and river valleys, only negotiating steep terrain when necessary. Beyond this, the viability of certain least-cost paths can be demonstrated by a consideration of the Roman road network (*Figure 6.8*). Indeed, a striking relationship is observable when the least-cost

[102] The relationship between great hall complexes and the practice of *feorm* was considered on a conceptual level in **1.3.3** and from a practical perspective in **3.5.3**.
[103] As mentioned in **3.5.3**, sites situated in very close proximity were amalgamated to prevent the calculation of overlapping paths. This was done for the two Latton sites (**CF_076** and **CF_102**) and the Cirencester urban area (**CF_035**, **CF_037** and **CF_109**).

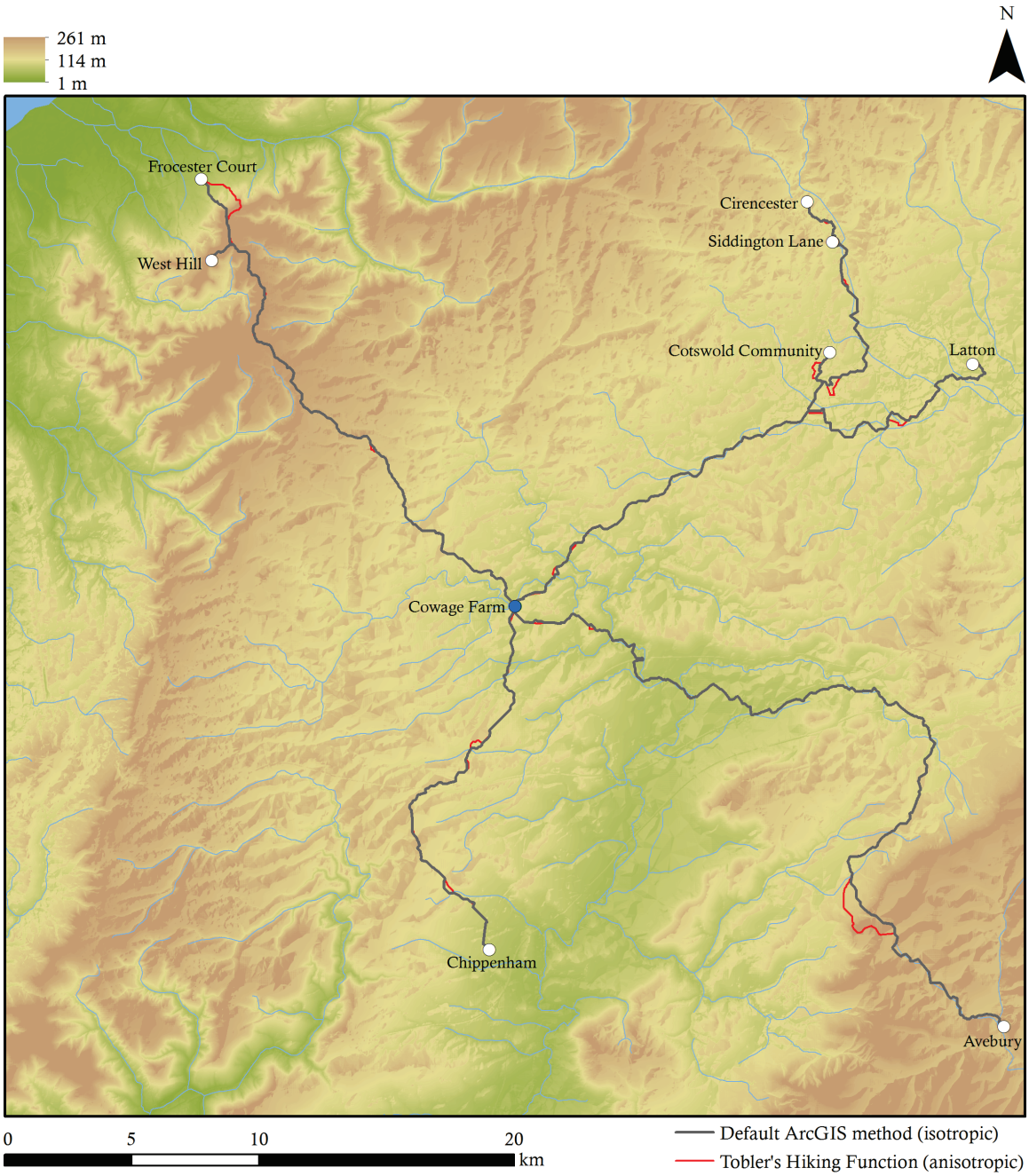



*Figure 6.7:* Least-cost paths generated between Cowage Farm (blue dot) and phase 2 occupation sites (white dots) using the default ArcGIS (isotropic) and Tobler's Hiking Function (anisotropic) methods (*contains Ordnance Survey data © Crown copyright and database right 2017*).

path from Cowage Farm to West Hill (**CF_112**) and Frocester Court (**CF_052**) is compared with the route of Margary 543, the Roman road between Easton Grey and Arlingham that branches north-westwards from the Fosse Way (Margary 1973, 144-5).

Beyond modelling the hinterland of Cowage Farm, the least-cost path modelling was also used to explore patterns of movement in the region more generally. This involved calculating isotropic least-cost paths between each occupation site to all others across the three phases of the dataset (*Figure 6.9*). In offering a visualisation of the regional settlement network across time, the results are useful on a number of levels. Of particular interest is how many of the least-cost paths identified run through the centre of the region – what will later

be termed the 'central zone' (**6.3.4**). This is significant because it emphasises how sites like Cowage Farm and Malmesbury Abbey were situated in a natural communication corridor, being geographically central to communities at places like Cirencester, Avebury and the lower Cotswolds. Sites in the 'central zone' may thus have operated as major nodes in a wider settlement network, adding further support to arguments made above about Cowage Farm's strategic positioning (**6.2.1**). Perhaps the most striking aspect of the least-cost path modelling is that, without any such parameter being imposed, many of the paths run in close proximity to burial sites. This has been identified in other case studies (e.g. **4.2.3**) and appears to have been part of a broader trend in north-west Europe; indeed, 'barrow lines' have been used to glimpse the communication infrastructure of Iron Age Scandinavia for some time now (Johansen et al. 2004; Klassen 2014, 56-76).

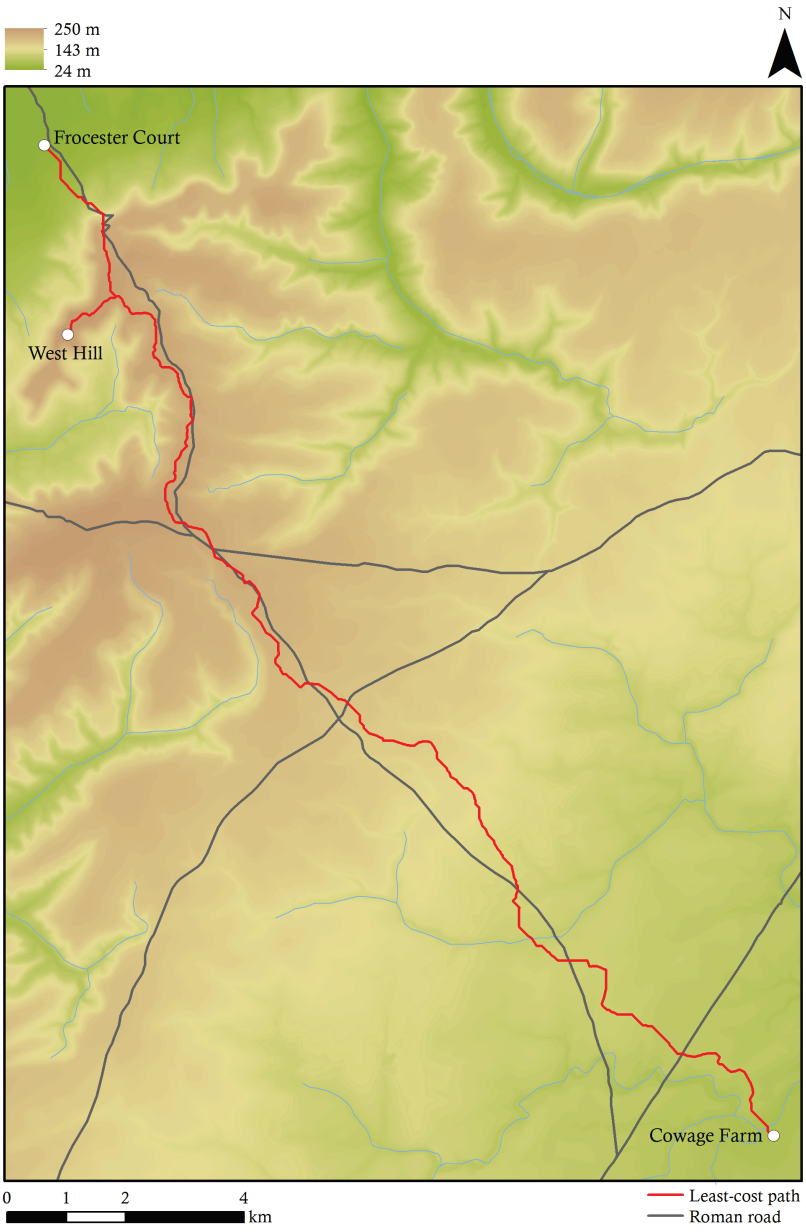



*Figure 6.8:* A comparison of the Roman road network and the isotropic least-cost paths generated between the broadly contemporary settlements at Cowage Farm, West Hill and Frocester Court (*contains Ordnance Survey data © Crown copyright and database right 2017*).

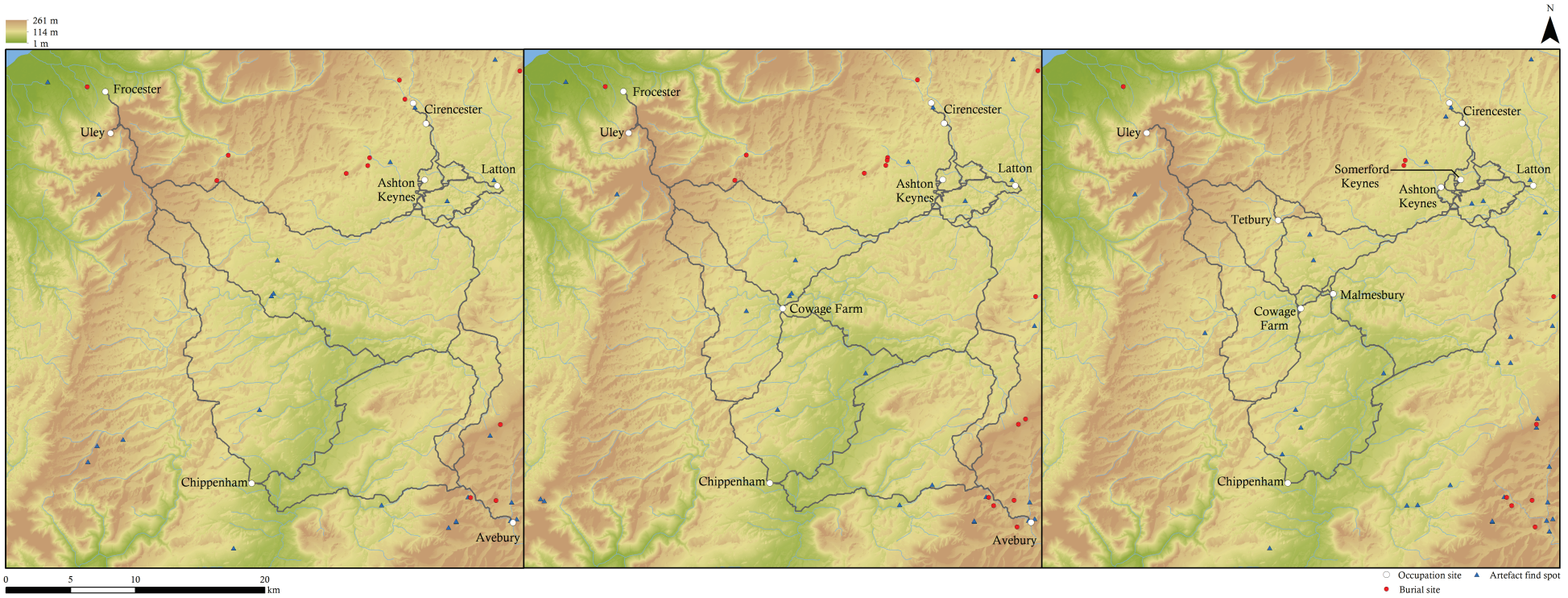



*Figure 6.9:* Least-cost paths generated between contemporary occupation sites for each phase of the regional dataset, dating to AD 400-550 (left), AD 550-675 (centre) and AD 675-800 (right) respectively (*contains Ordnance Survey data © Crown copyright and database right 2017*).

## 6.3 THE REGIONAL PERSPECTIVE

### 6.3.1 *Regional sequence*

As noted above (**6.1.4**), one of the main reasons for undertaking the chronological seriation was to model levels of archaeological activity over time. This involved using the seriation dataset (*e-Appendix 2c*) to create graphical visualisations or 'activity models' based on the number of 'active' sites for each twenty-five-year time segment in the study period (**3.3.5**). Although not without limitation, this approach has thus far proven to be a useful – and methodologically original – means of gauging regional chronologies (see **4.3.1** and **5.3.1**). This case study is no exception, with the results (*Figure 6.10*) demonstrating a general pattern of activity in which the number of 'active' sites increases substantially from the mid-fifth century, plateaus in the sixth century, decreases slightly for most of the seventh, rises sharply in the late seventh century and gradually declines throughout the eighth. As with the previous case studies, the overall sequence of archaeological activity is broadly similar whether artefact find spots with a date range greater than 100 years are excluded or not. This sequence of archaeological activity merits a brief and preliminary discussion. The substantial increase in activity from the mid-fifth century has been explained elsewhere (see **4.3.1** and **5.3.1**), but that the number of 'active' sites remains largely consistent thereafter is interesting. While there is some fluctuation, particularly towards the end of the period, the overall sequence appears far less volatile than that of the previous two case studies (compare *Figure 6.10* with *Figure 4.10* and *Figure 5.10*). It would be unwise to infer a degree of demographic stability from this trend, but it is certainly worthy of further exploration.

A rather different picture emerges when the site types are considered individually (*Figure 6.11*). The most striking result is that of the burial site sequence, which sees a gradual increase in the number of sites throughout the fifth and sixth centuries before declining very sharply in the late seventh century. The only site that could have eighth-century burials is the churchyard of St Peter's in Frocester (**CF_099**), though the available dating evidence is very limited (Vince 1984, 240). The activity modelling for occupation sites suggests an altogether more consistent sequence, though there is a notable decline in the number of 'active' sites during the seventh and early eighth centuries. The relatively high number of early monasteries in the region was mentioned above (**6.1.3**), but it is interesting to note how they were all likely established around the same time. Setting aside these specific trends, arguably the most interesting observation is the overall consistency in numbers of 'active' sites across a 400-year period. This is significant because it emphasises that although the number of identified burial and settlement sites decreases towards the end of the period, we can still use stray finds and other forms of site to identify significant occupation activity.

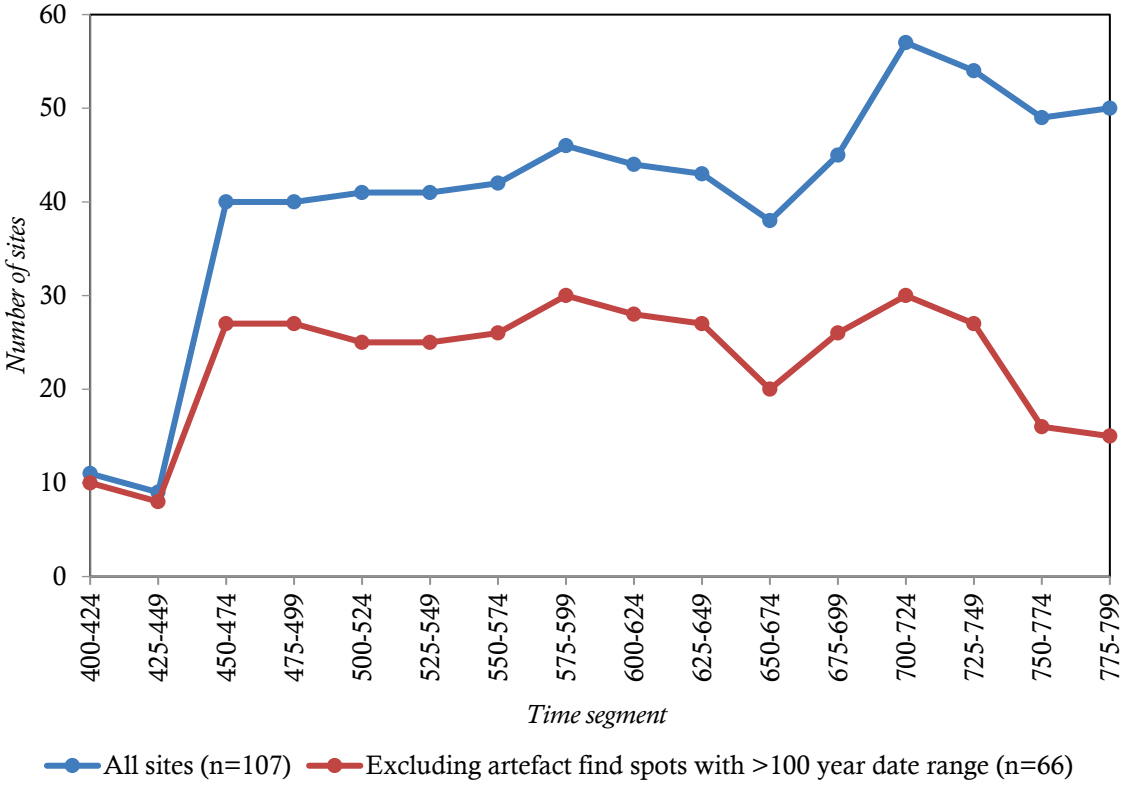



*Figure 6.10:* General activity modelling for the regional dataset, based on the results of the chronological seriation.

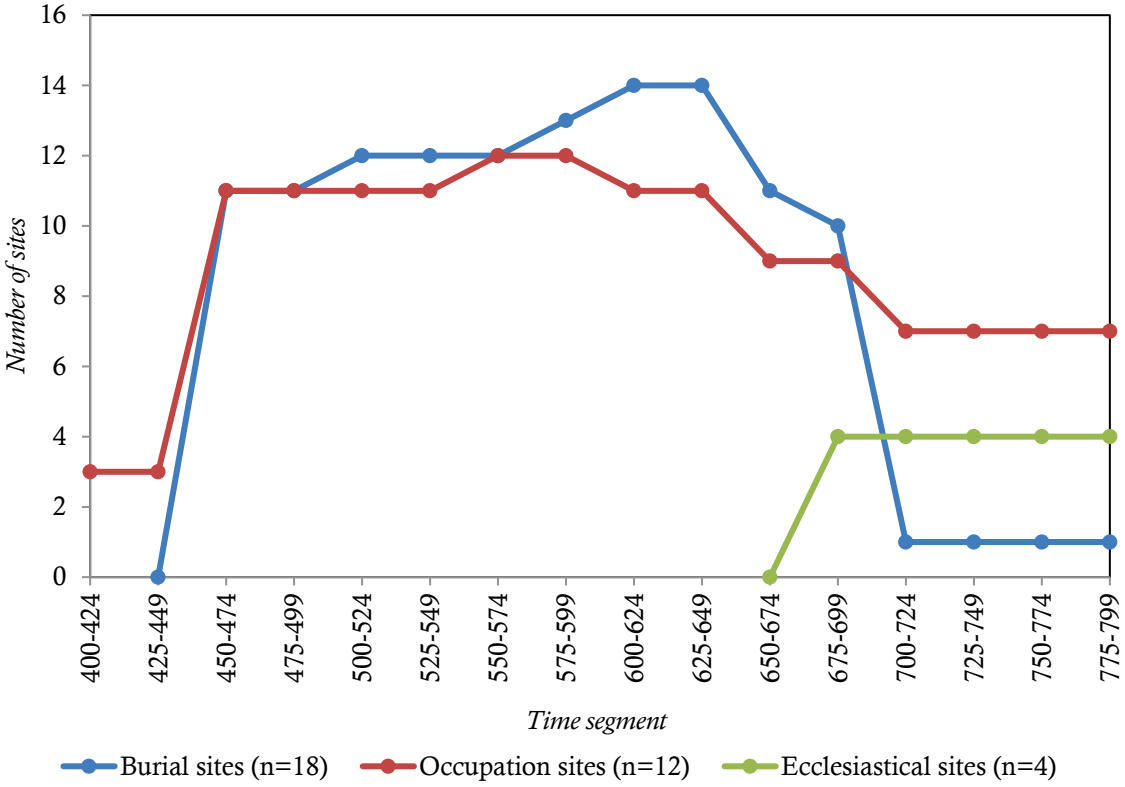



*Figure 6.11:* Specific activity modelling for burial, occupation and ecclesiastical sites in the regional dataset, based on the results of the chronological seriation.

### 6.3.2 *Archaeological characterisation*

Having considered the sequence of activity, it is instructive to offer a brief review of the key archaeological sites in the region. This task is made difficult by the limited size of the regional dataset (**6.1.3**), but is worth undertaking nevertheless. Opening with the immediate post-Roman period, there are but a few sites to draw upon. Indeed, finds like the fifth-century penannular brooch (**CF_090**) from Oldbury Hill near Calne are few and far between (Grinsell 1957, 54). A scatter of seemingly early pottery is known from multiple sites in the parish of Marshfield (**CF_021**, **CF_058** and **CF_066**), though whether this implies sub-Roman continuity or particularly early Anglo-Saxon activity is difficult to discern (Blockley 1985, 310; 373; Russett 1985; La Trobe-Bateman 1995, 8). More convincing evidence for continuity has been identified at Cirencester (**CF_036**), where a number of timber structures appear to have been occupied until *c.* AD 425 (see Faulkner 1998, 385-88 for a gazetteer). Extensive excavations at Cirencester amphitheatre (**CF_037**), situated just beyond the town wall, have also revealed important evidence of early activity. Initially constructed in the second century, the amphitheatre appears to have been augmented with a new palisade and narrower entrance during the fifth century, perhaps as a defensive measure (Wacher 1976, 16-17). A substantial post-built structure of probable fifth-sixth-century date was also identified (Holbrook 1998, 170-1; 174-5). More broadly, the twenty-three artefacts known from Cirencester and its environs (**CF_035**) suggest a low-level of activity throughout the study period (Brown 1976, 19-30).

Parts of the Cotswolds also feature evidence of early occupation. At West Hill (**CF_112**) near Uley, excavations in the 1970s revealed a long sequence of activity spanning the Neolithic to Anglo-Saxon periods (Woodward and Leach 1993). Of particular relevance to our present interest is Phase 7a, provisionally dated to the mid-late fifth century, in which a timber building (Structure XI) and a substantial earthen perimeter bank were built on the site of an earlier Romano-British temple complex. Sixth-seventh-century activity (phases 7bi, 7bii and 7c) saw the construction of a probable stone-built church (Structure VIII), among other features. Though aspects of this sequence have since been questioned (e.g. King 1994), the evidence suggests that a religious community was operating in the area from an early date. Settlement activity of a similarly early date has been identified at nearby Frocester Court (**CF_052**). Here, protracted excavations since 1961 at the site of an important Roman villa have revealed evidence for a low-level post-Roman occupation (Price 2000, 11; 111-18; Reynolds 2006, 134-7). This included the reuse of Rooms 6 and 7 in Building A and the construction of three new timber buildings: Building E, Structure 20 and Structure 21. A radiocarbon sample recovered from an ox skull found in a floor layer associated with Building E offers a useful source of dating evidence. Although the sample was reported as

*cal AD 534-632* (68.2% probability) in the original report (Price 2000, 185), recalibration widens this range considerably and makes a fifth-century date possible (*Table 6.3*). While the evidence is far from comprehensive, it seems likely that the early post-Roman landscape consisted of various 'continuist' groups attempting to organise themselves around Roman structures and systems – perhaps with some success – and a series of dispersed 'early folk territories' that were presumably established through acculturation between natives and migrants.

Evidence for a more overtly 'Anglo-Saxon' presence is identifiable from the sixth century. Though most were excavated by antiquarians, a handful of important cemeteries help to illustrate this. Kemble stands out as an area of concentrated burial, with no less than four burial sites (**CF_067**, **CF_068**, **CF_069** and **CF_070**) being known from the parish.[104] Kemble I (**CF_067**) is the largest, featuring twenty-six inhumations interred with saucer and disc brooches, spearheads, shield bosses and other artefacts typical of a sixth-century 'Saxon' cemetery (Akerman 1857; Meaney 1964, 92). The region also features a number of burials that made use of prehistoric monuments, particularly in the Avebury area (Semple 2003). These are known from the parishes of Cherhill (**CF_120**), Clyffe Pypard (**CF_014**) and Avening (**CF_022**). The latter site stands out in featuring a series of furnished burials in stone-lined graves laid out in a ring around a Bronze Age barrow (Wright 1849; Meaney 1964, 90).

Seventh-century burials are similarly well represented in the region. The largest has been identified at Purton (**CF_091**), where various excavations in the early twentieth century recovered twelve or thirteen burials with knives, seaxes and other objects (Cunnington and Goddard 1912; 1934, 252; Meaney 1964, 272). Two inhumations found with a knife, workbox and three beads are also known from Yatesbury Field (**CF_121**), near Cherhill (Smith 1879, 331-3; Meaney 1964, 279). More recent excavations at Broad Town (**CF_015**) and Ashton Keynes (**CF_041**) are noteworthy for their use of radiocarbon dating. At Broad Town, an inhumation was discovered in 2000 on a chalk escarpment near the hundredal boundary between Kingsbridge and Selkley (Clarke 2004). As shown in *Table 6.3*, recalibration of the radiocarbon sample taken from the skeleton returns a date range of *cal AD 592-654* (68.2% probability) and *cal AD 547-666* (95.4% probability). In Ashton Keynes, two inhumation burials were encountered at a gravel terrace site north of Cotswold Community School (Powell et al. 2010b, 271-2). High-precision radiocarbon dating makes a date in the first half of the seventh century highly likely (*Table 6.3*).

The later settlement record of the region is somewhat limited and poorly dated. SFBs

[104] Though considered part of Gloucestershire after the 1974 reorganisation, it may be significant that Kemble is located on the Wiltshire side of the historic border.

are known from Ashton Keynes (**CF_054**), Avebury (**CF_005**) and Chippenham (**CF_029**), though none can be closely dated (Anon 1991, 143; Last 2002). Pits, quantities of pottery and other features indicative of occupation have also been identified at Latton (**CF_076** and **CF_102**) and Siddington (**CF_096**), but again chronologies are unhelpfully broad (Bateman 1997; Mudd et al. 1999, 141; Hughes and Firth 2010). Aside from Cowage Farm, the most substantial settlement in the region is that identified as part of the Cotswold Community (**CF_042**) excavations mentioned above (2010a, b). Here, a total of nine post-built structures were encountered alongside various pits, posthole alignments and waterholes. Dateable artefacts were limited, though, and it was only possible to propose a generic date range of AD 450-850 based on the ceramic evidence (Powell et al. 2010b, 49-51). More broadly, the later seventh and eighth centuries see the introduction of new forms of material culture into the region, best illustrated by the number of pins (e.g. **CF_078**), strap-ends (e.g. **CF_113**) and early sceattas (e.g. **CF_003**). The middle Anglo-Saxon monastic tradition in the Cotswolds-Avon area was mentioned previously (**6.1.3**).

### 6.3.3 *Exploratory spatial analysis*

The above attempts to characterise the dataset, necessarily broad-brush though they were, can be followed up with a more formal programme of exploratory spatial analysis (**3.4.1**). This began with an investigation of the influence environmental factors may have played on the spatial patterning of archaeological sites. Two methods were employed to do so. The first involved calculating the distance between sites and their nearest river using an ArcGIS function known as 'Generate Near Table' (**3.4.2**). As shown in *Figure 6.12*, the results demonstrate a clear tendency for sites to have been located in reasonably close proximity to a river. Indeed, 98.35% of sites are found less than 2 km away from a river, with the vast majority of these (80.17%) being situated at distances less than 1 km. Interestingly, this trend appears stronger than in previous case studies (see **4.3.3** and **5.3.3**). In considering all sites – not just burial and occupation sites – the analysis further indicates that activity at a more general level appears to have taken place in proximity to freshwater sources.

The extent to which soil quality may have influenced site location was also explored. This was achieved by comparing the distribution of sites with the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002). This approach is visualised in *Figure 6.13* and *Table 6.4*. The results indicate that soil quality did indeed influence the placement of sites, although avoiding poor-quality soils may have been more important than seeking out those of the highest quality. This is arguably borne out by the number of river valleys with poor-quality soils that do not appear to have any archaeological

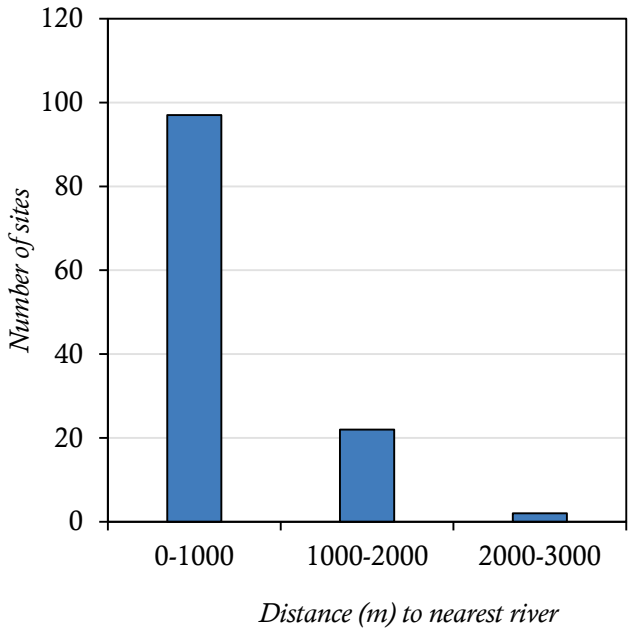



*Figure 6.12:* A histogram showing the distance between sites and their nearest watercourse, calculated using the regional dataset in its entirety (n=121).

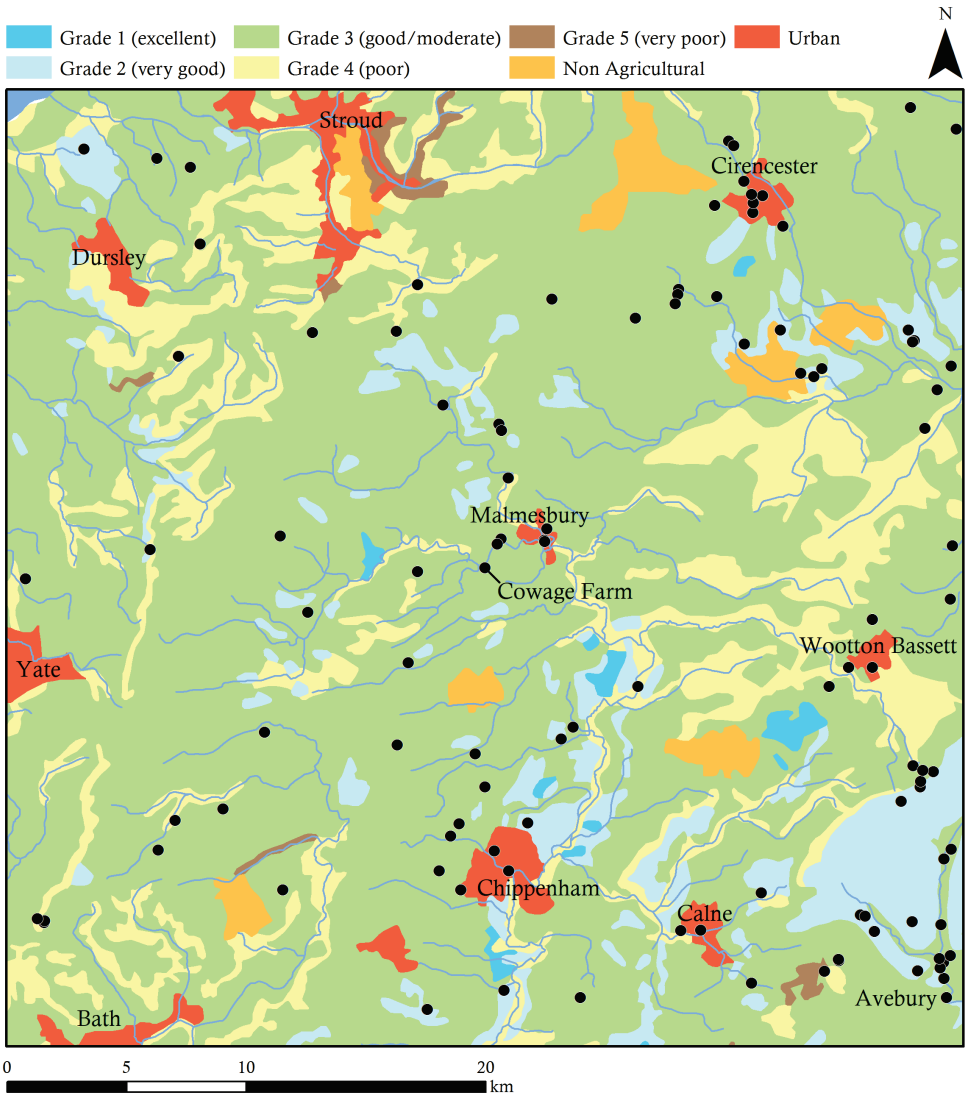



*Figure 6.13:* The distribution of the regional dataset in relation to the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002).

| | Land surface coverage |
|---|---|
| Grade 1 (excellent) | 0.58% |
| Grade 2 (very good) | 7.98% |
| Grade 3 (good to moderate) | 70.40% |
| Grade 4 (poor) | 14.92% |
| Grade 5 (very poor) | 0.57% |
| Non Agricultural | 2.37% |
| Urban | 3.17% |

*Table 6.4:* The overall quality of land within the study region as recorded in the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002).

representation, particular in the east and north-west of the study region. Overall, the results from both of these approaches indicate that site placement was influenced by environmental factors such as soil quality and river proximity. These should not be seen as the only factors affecting the spatial distribution of sites in the region, of course, but they do appear to have at least been part of the decision-making process.

Moving beyond environmental factors, a pair of statistical techniques were used to identify and characterise any underlying spatial patterning in the dataset. The first technique to be used was the Average Nearest Neighbour statistic. Described in **3.4.3**, the technique assesses the likelihood that a set of data points exhibit a clustered, random or dispersed spatial pattern. The analysis was undertaken twice – including and excluding artefact find spot sites – for each phase of the regional dataset. These six sets of results are presented in *Table 6.5* and visually summarised in *Figure 6.14*. When artefact find spots were included, the very small p-values and z-scores indicate significant spatial clustering in the data. Given these results, there is a less than 1% likelihood that this clustered pattern could be the result of random chance. When artefact find spots were excluded, the similarly very small p-values and z-scores indicate significant spatial clustering in the data. Given these results, there is a less than 1% likelihood for phases 1 and 2 and 5% likelihood for Phase 3 that this clustered pattern could be the result of random chance. Considered together, the results unequivocally demonstrate that the dataset exhibits statistically significant spatial clustering throughout the study period; that this is to a slightly lesser extent during phase 3 does not detract from this overall result.

The second spatial statistic used is known in ArcGIS as 'Multi-Distance Spatial Cluster Analysis'. Better known as Ripley's K-Function, the technique calculates whether data points exhibit a clustered, random or dispersed spatial pattern across multiple distance intervals (**3.4.4**). Undertaken for each phase of the dataset, the results demonstrate a remarkable degree of similarity (*Figure 6.15*). Taken together, statistically significant clustering (exceeding the 95% confidence envelope) is indicated at distances ≤7000 m, moderate clustering (within the 95% confidence envelope) at distances ≤8500 m and moderate dispersion

| | Measure | Phase 1 (n=49) | Phase 2 (n=53) | Phase 3 (n=65) |
|---|---|---|---|---|
| All sites | Observed Mean Distance (m) | 1487.427693 | 1391.550201 | 1271.783380 |
| | Expected Mean Distance (m) | 2610.075971 | 2547.092817 | 2119.338732 |
| | Nearest Neighbour Ratio | 0.569879 | 0.546329 | 0.600085 |
| | z-score | -5.759960 | -6.318442 | -6.168155 |
| | p-value | 0.000000 | 0.000000 | 0.000000 |
| | Interpretation | Clustered | Clustered | Clustered |

| | Measure | Phase 1 (n=25) | Phase 2 (n=29) | Phase 3 (n=22) |
|---|---|---|---|---|
| Excluding artefact find spots | Observed Mean Distance (m) | 2250.8799 | 2230.4162 | 2729.1726 |
| | Expected Mean Distance (m) | 3409.5590 | 3180.4603 | 3548.3841 |
| | Nearest Neighbour Ratio | 0.660167 | 0.701287 | 0.769131 |
| | z-score | -3.250617 | -3.077398 | -2.071608 |
| | p-value | 0.001152 | 0.002088 | 0.038302 |
| | Interpretation | Clustered | Clustered | Clustered |

*Table 6.5:* The results of the Average Nearest Neighbour Analysis. The p-value and z-score numbers are explained in *Figure 6.14* below.

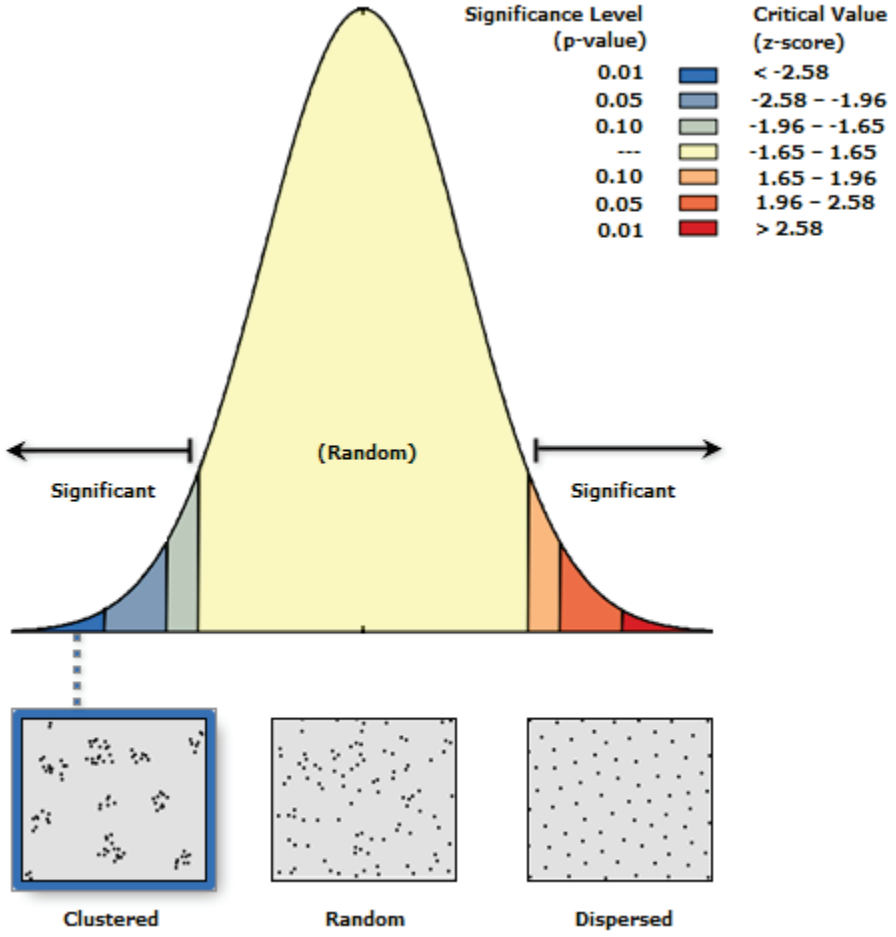



*Figure 6.14:* A visual summary of the Average Nearest Neighbour statistic. The p-value and z-score numbers in the top-right of the image are absolute benchmarks to compare the numbers in *Table 6.5* against.

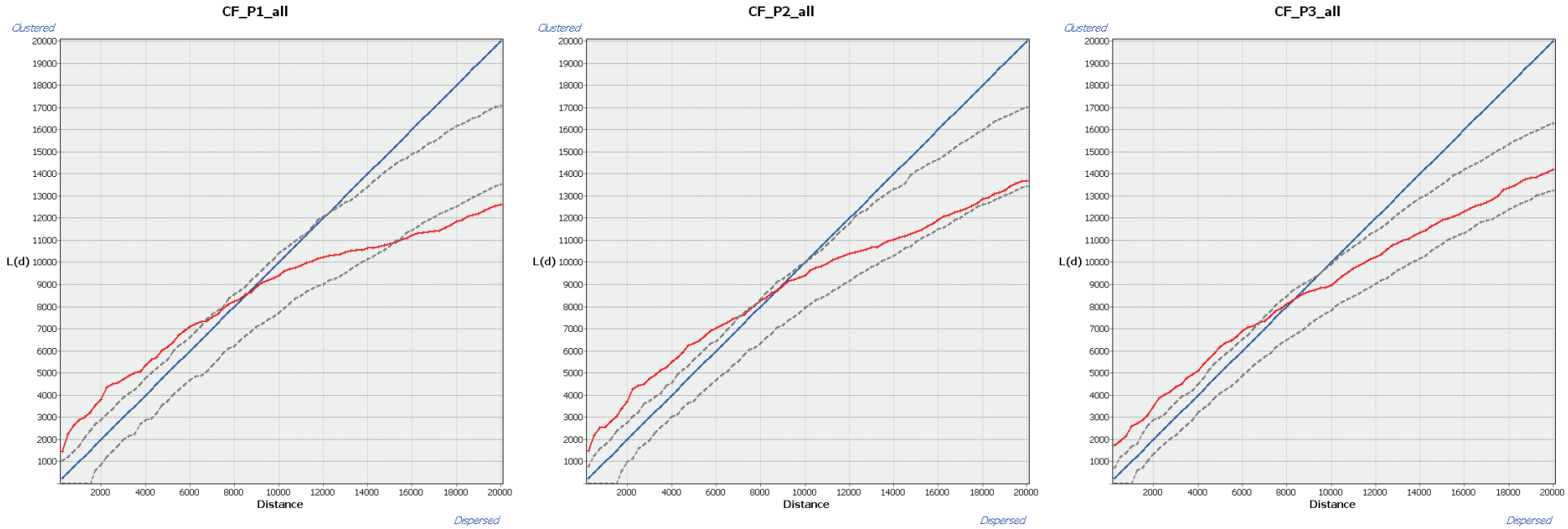



*Figure 6.15:* Ripley's K Function analysis for each phase of the regional dataset, dating to AD 400-550 (left), AD 550-675 (centre) and AD 675-800 (right) respectively. The blue line indicates a random distribution, the dashed lines show the 'confidence envelope' created from 999 random permutations and the red line plots the actual observations. Where the red line extends above or below the confidence envelope indicates statistically significant spatial clustering or dispersion respectively.

(within the 95% confidence envelope) at distances ≥8500 m. In one instance (phase 1), statistically significant dispersion (exceeding the 95% confidence envelope) is also demonstrated at distances ≥15000 m. Although there are subtle differences between the three phases, it is worth mentioning that these represent those most consistent set of Ripley's K-Function results of the thesis (**8.1.3**). Overall, the results suggest that sites exhibit spatial clustering up to a distance of about 7-8 km, after which they tend towards a dispersed spatial pattern.

Although one must be careful extrapolating past patterns of human occupation from the spread of recovered archaeological material, it is possible to elicit some preliminary conclusions on the basis of these analyses. The most striking realisation is that the dataset exhibits a clearly identifiable spatial pattern. In combining the results of both analyses it is possible to describe this as being clustered at the statistically significant level. Writ broadly, archaeological sites appear to have formed discrete and similarly sized clusters that were themselves spatially separate (i.e. dispersed across the landscape). This realisation has two implications. Firstly, that sites are clustered at the local scale suggests a degree of social cooperation and communal access to resources, else proximal individuals would be in constant cooperation. Secondly, that this clustering transitions to a dispersed spatial pattern at distances beyond *c.* 7 km indicates reasonably fixed geographic entities, perhaps determined by resource competition or socio-political design. Put simply, the results of the spatial statistics suggest a settlement pattern composed of largely distinct localities or 'core zones' of archaeological activity.

This evidence for distinct spatial patterning was explored further using a technique of data visualisation known as Kernel Density Estimation. Described in **3.4.5**, the technique generates a density surface from point data. It therefore offers a means of visualising the density of archaeologically attested activity based on the distribution of sites. As with the previous case studies, the analysis was initially undertaken to establish reference points in which to compare the early medieval evidence against. This used a dataset derived from the *Archaeological Investigations Project* (AIP) and the Roman-period dataset described above (**6.1.2**).[105] Visualised in *Figure 6.16* and *Figure 6.17*, the results represent general and period-specific 'heat maps' of archaeological activity in the region. While there are obvious differences between the two visualisations, both can be seen to indicate a reasonably continuous spread of activity. Indeed, there are few areas without any archaeological representation and while there are definite foci – e.g. Stroud and Cirencester in *Figure 6.16* and the Avon Vale in *Figure 6.17* – it is difficult to identify distinct and spatially separate clusters.

[105] The AIP online database (https://csweb.bournemouth.ac.uk/aip/) was accessed on 4th September 2016 and data downloaded using the 'Export Query to Excel' function.

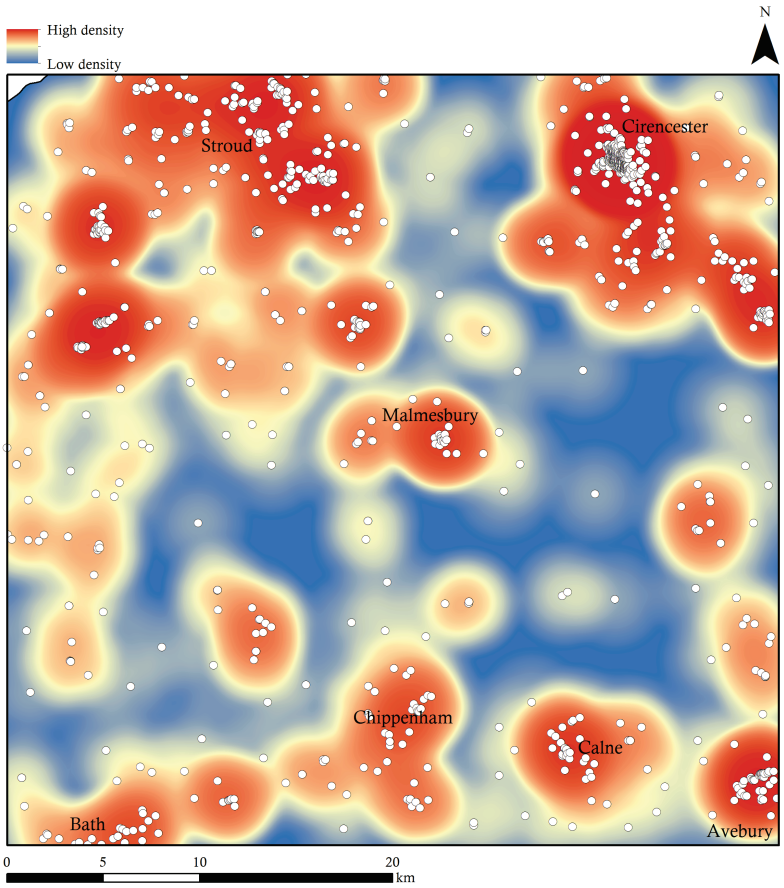



*Figure 6.16:* A Kernel Density Estimate using the AIP dataset (n=1359) and visualised using the ‘‘Histogram Equalize’ option (see **3.4.5**).

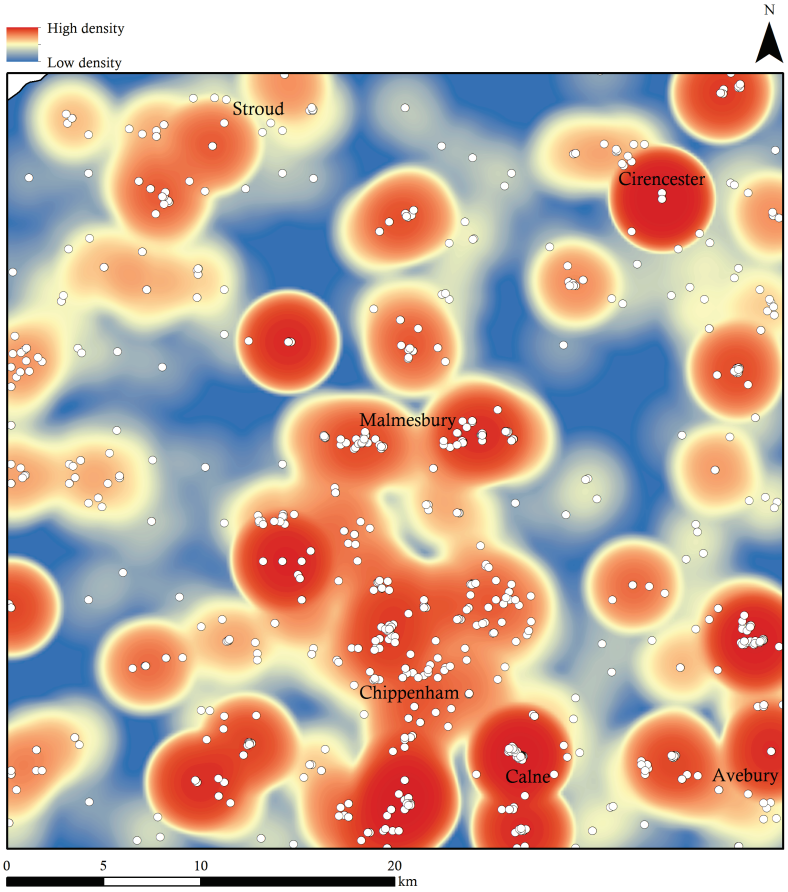



*Figure 6.17:* A Kernel Density Estimate using the Roman dataset (n=3023) and visualised using the ‘Histogram Equalize’ option (see **3.4.5**).

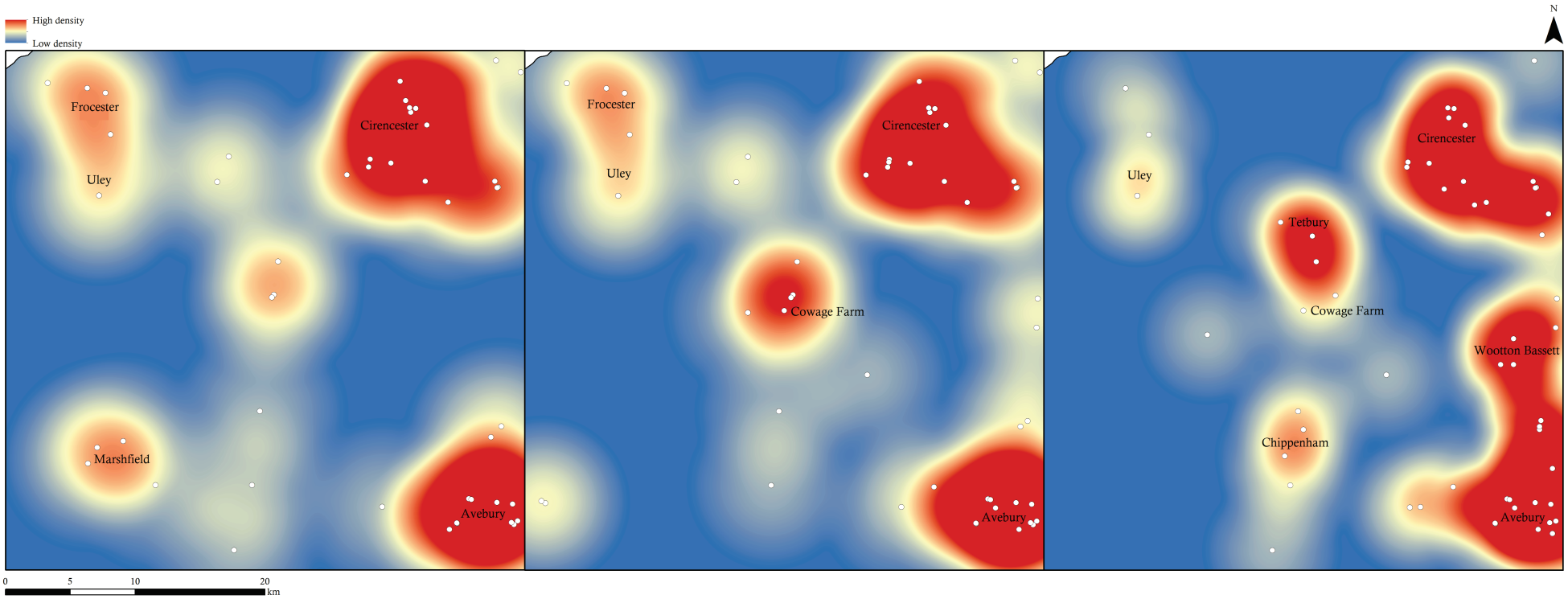



*Figure 6.18:* Kernel Density Estimates for each phase of the regional dataset, dating to AD 400-550 (left), AD 550-675 (centre) and AD 675-800 (right) respectively. The results are visualised at 1.5 standard deviations (see **3.4.5**).

By comparison, a much clearer pattern of density is observable in the fifth-eighth-century dataset (*Figure 6.18*). The results indicate a reasonably consistent spatial pattern of five or so 'core zones', whose spatial position shifts slightly over time, and reasonably large areas with limited archaeological activity ('cold spots'). During phase 1, activity appears to cluster in the four corners of the study region – broadly centring on Marshfield (south-west), Uley (north-west) Cirencester (north-east) and Avebury (south-east) – with a looser north-south spread of material in the centre. The situation is broadly similar in phase 2, though density lessens in the south-west and increases in the centre. The final phase sees a number of changes in the pattern of density, with less activity in the west, more in the east and a central cluster that appears to diverge along north-south lines. Despite these spatio-temporal changes, the overall identification of spatially distinct and chronologically enduring archaeological foci is an important outcome.

In summary, the programme of exploratory spatial analysis has identified several insights into the spatial characteristics of the regional dataset. It has been shown, for instance, how river proximity and soil quality appear to have influenced the placement of sites. At a more fundamental level, it has also been observed how the dataset tends towards statistically significant spatial clustering. Sites can therefore be seen to have formed clusters that were not only spatially distinct but also ostensibly enduring. To conclude, the results from this section suggest an overall pattern of occupation in which a handful of important localities, including Cowage Farm and the Malmesbury area, operated as long-term archaeological foci.

### 6.3.4 *Territorial modelling*

The insights gained from the above analyses can be used to inform a series of data modelling exercises aimed at reconstructing the spatial extents of notional territorial units. To prepare the dataset for this, the 'Grouping Analysis' function in ArcGIS was used. Described in **3.4.6**, the technique attempts to identify a predetermined number of groups in a dataset based on spatial proximity. It also calculates the geographic centre of each group. Given the fairly unambiguous results of the Kernel Density Estimation (**6.3.3**), the number of groups to identify was set to five. As with previous case studies, the resultant spatial groupings were then used as the analytical basis for three different approaches to territorial reconstruction.
Voronoi Tessellation was used to construct the first spatial model. This well-known method of spatial allocation defines a series of polygons around point data based on the principal of equidistance, so that any location within a polygon is closer to its parent data point than any other (**3.5.4**). The technique therefore offers a computationally simple and visually effective means in which to demarcate the extents of possible territorial units. Using the group

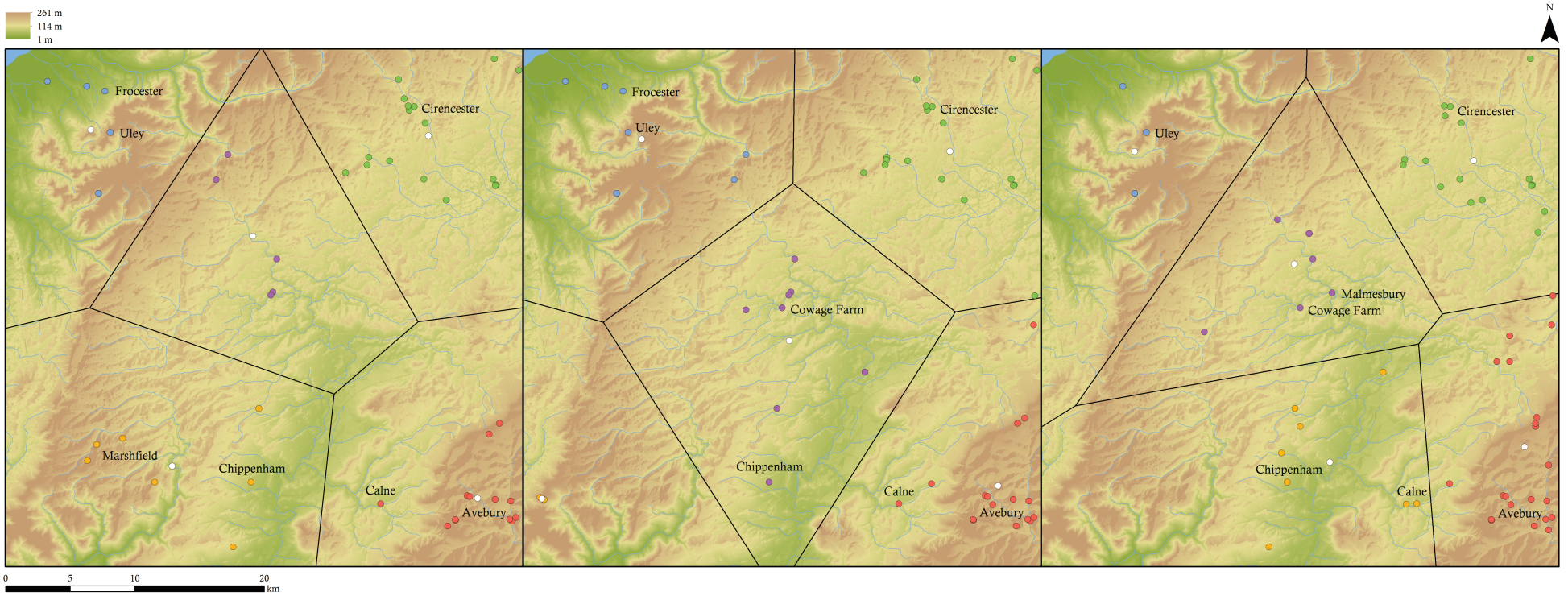



*Figure 6.19:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 400-550 (left), AD 550-675 (centre) and AD 675-800 (right) respectively. The model was created using Voronoi Tessellation of the group centres identified in the Grouping Analysis (white dots). Sites are represented by coloured dots, with the colour representing group membership as defined by the Grouping Analysis (*contains Ordnance Survey data © Crown copyright and database right 2017*).

centres identified in the Grouping Analysis (see above), the Voronoi Tessellation was computed for each phase of the regional dataset (*Figure 6.19*). The results can be seen to define zones of territorial influence that appear both topographically plausible and a good fit for the distribution of sites more generally. Though there is some variation across the study period, particularly in the Avon Vale and lower Cotswolds, it is interesting to note how the proposed territories appear chronologically consistent, regularly spaced and of broadly uniform size.

A second spatial model was produced using the 'Buffer' function in ArcGIS. This calculated a series of isotropic spatial zones around the group centres identified in the Grouping Analysis (**3.5.5**). The size of the buffer zones was inferred from the results of the Ripley's K-Function statistic, which indicate that sites cease to exhibit statistically significant spatial clustering at distances beyond *c.* 7 km (**6.3.3**). Buffer zones with a radius of 7 km were therefore calculated around the group centres for each phase of the regional dataset, and are presented in *Figure 6.20*. Unlike previous attempts (**4.3.4** and **5.3.4**), the results show a remarkably close correlation between the buffer zones and the distribution of sites. Phase 1 is the best demonstration of this, having only five sites located outside of a buffer zone. Though sites are a little more dispersed during phases 2 and 3, the closeness of fit remains significant. The results are not only encouraging from a methodological standpoint, then, but are of potential significance to our understanding of territoriality and social organisation in the study region.

Standard deviational ellipses were used to undertake the third territorial reconstruction. Known in ArcGIS as 'Directional Distribution (Standard Deviational Ellipse)', the function creates an ellipse based on the standard deviation of the x and y coordinates of each data point in a group to the mean centre (**3.5.6**). Put another way, the technique produces a geometric shape that is representative of the spatial characteristics of a group of data points. The analysis was run for each group of data points identified in the Grouping Analysis. Separate iterations of the analysis were also computed using 1 and 2 standard deviations, to visualise the territorial core and periphery of each unit respectively. The results, shown in *Figure 6.21* for the three phases of the study period, present an interesting and nuanced territorial reconstruction that successfully manages to incorporate the notion of core-periphery into a composite model for the region. In this we can identify zones of concentrated influence in the Cirencester, Avebury and Stroud localities and at certain points of the Avon Vale. Of particular interest is the evidence for broader spatio-temporal trends, with the overall pattern of settlement appearing to transition from an earlier landscape of spatially separate units to one of greater integration and territorial overlap by the end of the period.

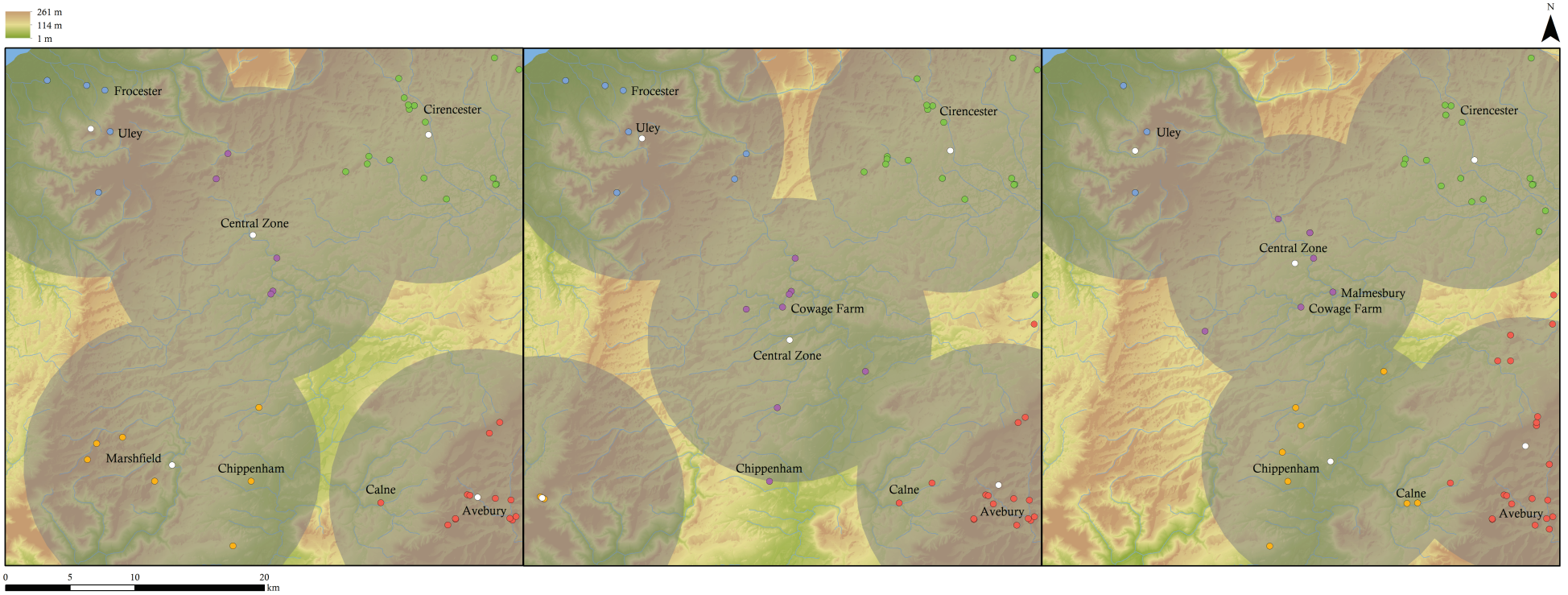



*Figure 6.20:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 400-550 (left), AD 550-675 (centre) and AD 675-800 (right) respectively. The model was created by calculating buffer zones around the group centres identified in the Grouping Analysis (white dots). The extent of buffer zones was informed by the results of the Ripley's K Function analysis. Sites are represented by coloured dots, with the colour representing group membership as defined by the Grouping Analysis (*contains Ordnance Survey data © Crown copyright and database right 2017*

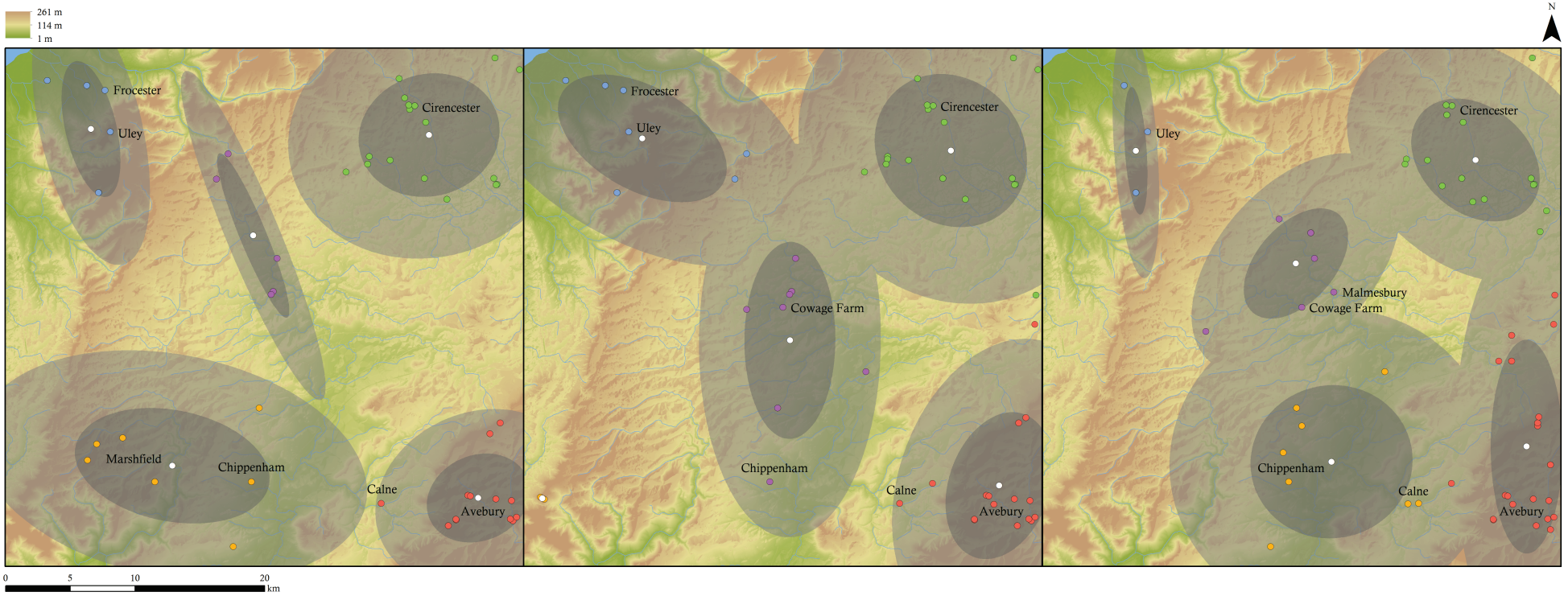



*Figure 6.21:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 400-550 (left), AD 550-675 (centre) and AD 675-800 (right) respectively. The model was created by calculating 1 and 2 standard deviational ellipses (the dark grey and light grey areas respectively) for each group of data points identified in the Grouping Analysis (coloured dots). The group centres also identified in the Grouping Analysis are represented by white dots (*contains Ordnance Survey data © Crown copyright and database right 2017*).

In a more general discussion of the three models we must of course remember that various caveats apply with this sort of exploratory modelling. Put simply, the models are *hypothetical* territorial reconstructions, based on the spatial and chronological characteristics of the available archaeological data and generated independent from any administrative or historical context.[106] Though this means they must be treated with great caution, it does not preclude their usefulness altogether. Indeed, the results are quite effective at demonstrating how Cowage Farm – and the central zone loosely focused on Malmesbury more generally – occupies the natural centre of a topographically diverse region. Given its architectural grandeur, it might seem rather intuitive to suggest that Cowage Farm may, however briefly, have been the administrative centre of a territorial entity focused on the Avon Valley. What this sort of analysis provides, however, is a degree of empirical support for this notion.

## 6.4 DISCUSSION

### 6.4.1 *The political geography of the region*

It is essential to place this extensive and multifaceted investigation into some sort of broader context, and in this we must expand our focus to consider matters of historical and political significance. A major issue one faces when interpreting the evidence from Cowage Farm is the ambiguity of its political association – as well as that of the region more broadly. Indeed, the site appears to be situated in a landscape that was variously contested by Hwiccian, British, Mercian and Gewissan (later West Saxon) influences (*Figure 6.22*). That this rare and important form of high-status settlement was located at a territorial fringe – not a provincial core – is intriguing and warrants a consideration of the political history of the West Country.

The earliest historical evidence from the region is that of the *Anglo-Saxon Chronicle* entry for AD 577, where it is recorded that Cuthwine and Ceawlin of the Gewisse slew three British kings at the Battle of Dyrham and took control of Gloucester, Cirencester and Bath. Though traditional accounts drew a direct link between this battle and the founding of the kingdom of the Hwicce (see Wilson 1968, 21 and references), more recent scholarship has questioned the historical accuracy of the entry and cautioned against inferring too much from it (e.g. Sims-Williams 1990, 23-4). While it might be tempting to see this as the beginning of permanent Anglo-Saxon control in the region, a passage in Bede (*HE* II.2) gives us pause for thought. We are told that in *c.* AD 600 Augustine met a delegation of British clergy from '*the nearest kingdom of the Britons*' at a place known as Augustine's Oak, located

[106] Whether the territorial units variously modelled in this section accord with historical reality will be considered in the discussion that follows (**6.4.1**).

in Bede's time on the border between the Hwicce and the West Saxons (Colgrave and Mynors 1969, 134-5).[107] On the basis of this account, Steven Bassett (2000, 112) has argued that the upper West Country and lower West Midlands were '*still subject to British rule at the start of the seventh century*'. Whether or not this was the case, that there was some form of British continuity in areas of the study region seems likely. Post-Roman activity at sites such as Frocester (**CF_052**) and Uley (**CF_112**) might be seen to support this (see above, **6.2.2**). Elsewhere, a degree of Gewissan influence might be expected.

The politically contested nature of the region is well demonstrated by the *Anglo-Saxon Chronicle* entry for AD 628. Here, we are told that Cynegils and Cwichelm of the Gewisse fought against Penda of Mercia at the Battle of Cirencester and then came to an agreement. This passage is typically interpreted as signifying victory for the Mercians, with the terms

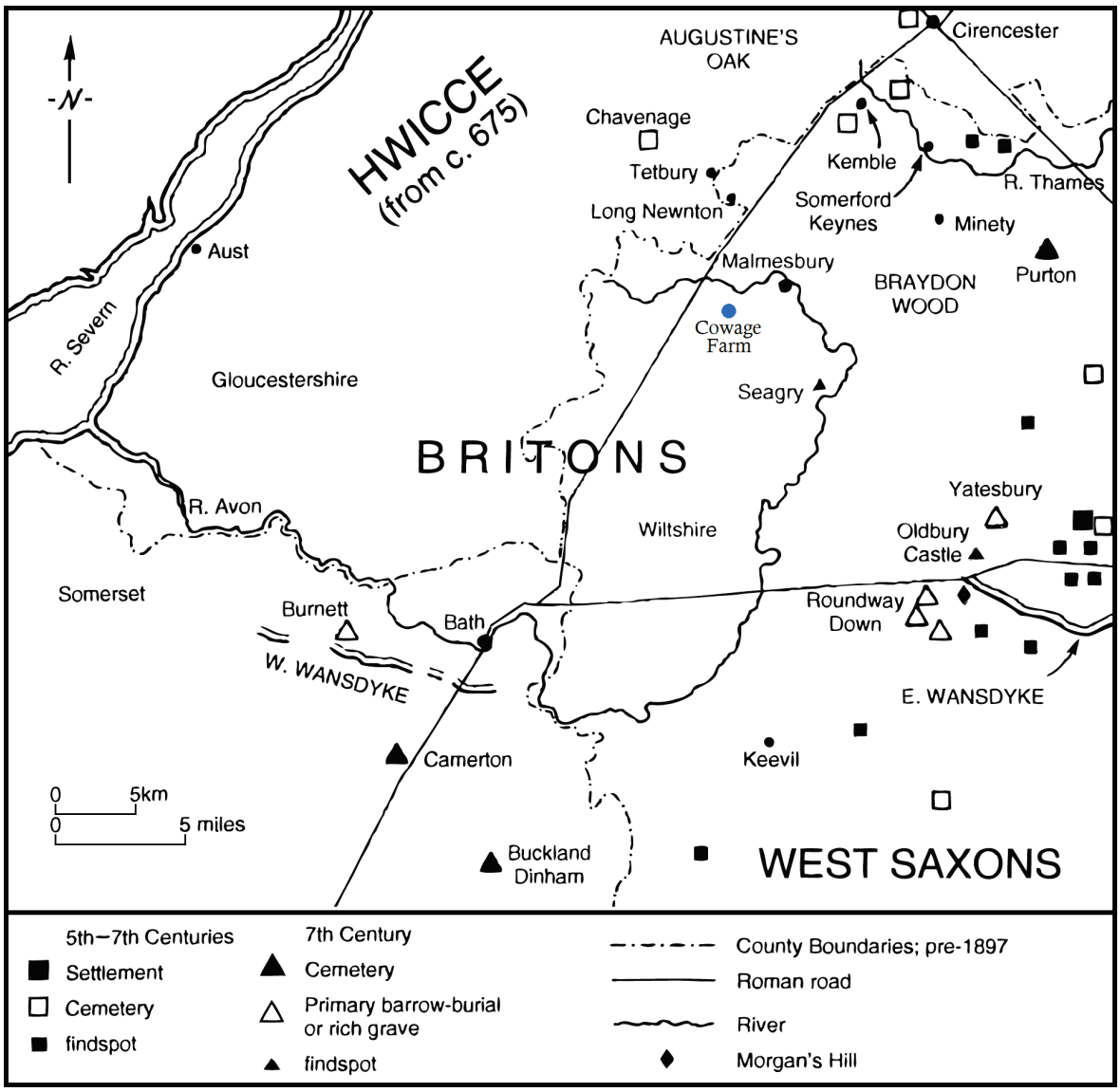



*Figure 6.22:* The archaeological and political context of the region (adapted from Eagles 2003, 177).

[107] Kemble has recently been suggested as the location of this meeting (Eagles 2003). If true, this would place Cowage Farm around 14 km south-east of this border.

perhaps including dynastic intermarriage and overlordship of the Hwiccian territory (Sims-Williams 1990, 27; Yorke 1995, 57). Though it is conceivable that the Hwiccian kingdom was a direct establishment of Penda (Stenton 1971, 45; Yorke 1990, 109), it seems more likely that the kingdom was already in existence by this point, perhaps a product of long-term territorial amalgamation (Bassett 1989a, 6; 2000, 116; Kirby 2000, 8).[108] Irrespective of its origins and earlier degree of independence, that the kingdom was subject to Mercian overlordship later in the seventh century is convincingly demonstrated by a series charters (S 51, S 52 and S 53) that were issued by Hwiccian kings but confirmed by Mercian overlords (Blair 2005, 89). That several Mercian charters (S 71, S 73, S 1167 and S 1168) were subscribed by Bosel, a bishop of the Hwicce mentioned by Bede (*HE* IV.23), further supports this argument (Hooke 1985, 12-15; Edwards 1988, 90-2; 211-18).

Usefully, the territorial extent of the Hwicce can be reconstructed with some precision on the basis of charter grants, place-name evidence and the diocesan boundary of Worcester as recorded in *c.* AD 1291 (Wilson 1968, 20; Hill 1981, 81; Hooke 1985, 7; Bassett 1989a, 9). These attempts typically centre activity on the lower courses of the Warwickshire Avon and its confluence with the Severn, encompassing the historic counties of Gloucestershire and Worcestershire almost in their entirety as well as part of western Warwickshire. Considered in this context, it is interesting to note Cowage Farm's location just beyond the putative extent of the kingdom (*Figure 6.23*). Far from being territorially central, then, the great hall complex appears to have been located at the interface *between* territories. What, then, does this a spatial position tell us about the site and its function? Are we to consider it an outpost at the edge of Gewissan or West Saxon territory? Or should we to understand it as a statement of Hwiccian or Mercian territorial ambition? And what relationship might it have had with any British survival further to the south and west? These questions are impossible to answer with any certainty, but some suggestions can be offered.

### 6.4.2 *Cowage Farm: a new interpretation*

It is clear from the historical evidence described above that the study region was politically contested throughout much of the sixth and seventh centuries. More specifically, the historical record appears to centre on the exploits of two powerful warlords – Ceawlin of the Gewisse and Penda of Mercia – who were active roughly a generation apart. Reconstructing the reign of Ceawlin, the second of Bede's (*HE* II.5) kings to wield *imperium* over the southern kingdoms, is particularly challenging. While the *Anglo-Saxon Chronicle* records his reign

[108] The kingdom of the Hwicce was the subject of much investigation in the latter part of the twentieth century (Smith 1965; Wilson 1968; Finberg 1972, 167-80; Metcalf 1976; Hooke 1985; Bassett 1989a, 6-17; Sims-Williams 1990).

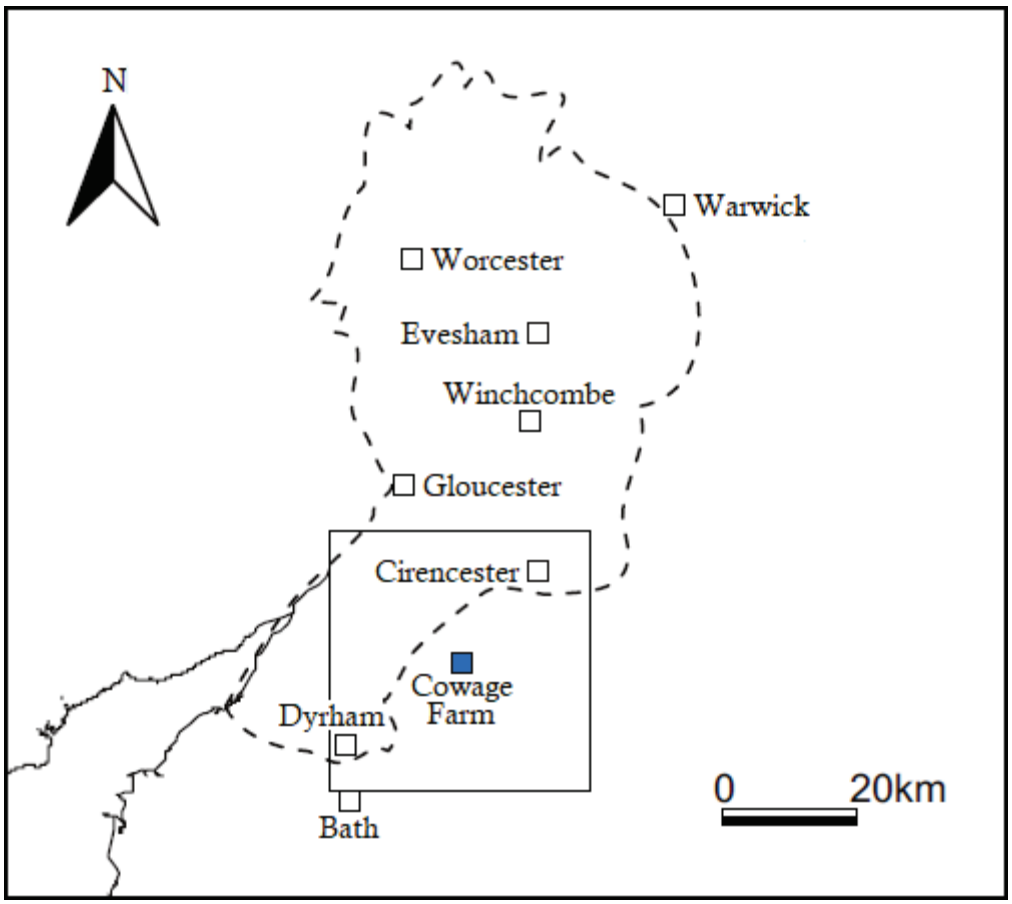



*Figure 6.23:* Cowage Farm and the study region in relation to the Diocese of Worcester as recorded in *c.* AD 1291. Notable localities are marked for reference (adapted from Gerrard 2013, 214).

as AD 560-592, separate versions of the *West Saxon Genealogical Regnal List* ascribe him a regnal length of either seven or seventeen years (Yorke 1990, 132-5; 1995, 34-5). Based on an extensive reconstruction of early West Saxon history, David Dumville (1985, 1986) has argued for a reign of AD 581-588. Similar confusion abounds over the interpretation of Penda's reign, with the *Anglo-Saxon Chronicle*, *Historia Ecclesiastica* and *Historia Brittonum* crediting him a regnal length of thirty, twenty-two and ten years respectively (Brooks 1989b, 165). This discrepancy has led to a variety of regnal dates being proposed.[109] Although extremely tentative, it is worth noting how the chronology of Cowage Farm – at least as it is presently argued – could accommodate the reign of either king. Given this, we might entertain two possible contexts for the construction of the great hall complex: as a late sixth-century establishment to consolidate recent Gewissan advances into the West Country, or as a bulwark against West Saxon expansionism initiated by Mercian agents during the second quarter of the seventh century.[110] If a Hwiccian (i.e. partly or wholly independent) origin was instead the case, it is not possible to link the establishment to any historical figure.

[109] Brooks (1989b, 166-7) suggested a long reign of 626-655 while Kirby (2000, 67-8) argued for 633-655 or 634-656. Blair (2005, 30) has more recently settled for *c.* 630-655.
[110] A loose parallel might be drawn here with a group of distinctive burials in the wider Avebury region which have been interpreted as territorial statements in a contested political frontier (Semple 2003).

It seems, then, that our understanding of Cowage Farm is to a certain extent contingent on the relationship between the Hwicce, a reasonably bounded polity, and the ever-shifting territorial extents of its more powerful neighbours to the north-east (Mercia) and south-east (Wessex). Regardless of the political affiliation of its founders, the great hall complex evidently occupied a position of considerable importance in the landscape, being located in such a manner as to have visual command over important terrestrial and riverine routeways (**6.2.1**). That it operated at the highest echelon of contemporary society might also be inferred from its architectural grandeur, remarkable degree of planning and extensive overall scale (Reynolds 2003, 106). Whether it functioned as a *villa regia* cannot be confirmed without documentary attestation, though Barbara Yorke (1995, 76-9) is probably correct in viewing it as such; the settlement would certainly have been large enough to store *feorm* payments and periodically accommodate a royal entourage. The extent of the settlement's influence is difficult to discern, but the results of the territorial modelling might be taken to suggest a relatively discrete zone of control in the Avon Vale (**6.3.4**).

While viewing the site as an early royal complex and secular estate centre remains a plausible reading of the evidence, in the interests of balance it is important to consider alternative interpretations. An intriguing argument has been advanced by John Blair (2005, 214), who has eschewed a secular interpretation in favour of viewing the site as '*a semi-monastic cell with strongly agrarian functions*'. In support of his claim he draws upon an episode recorded in the two *vitae* of St Cuthbert in which Cuthbert visits Abbess Ælfflæd at a settlement known as *Osingadun*, an apparent estate centre with its own church that belonged to Whitby Abbey (*ibid.*, 212-13). The argument follows that, with its apsidal-ended building (Structure A) and general proximity to Malmesbury, Cowage Farm might be understood as an *Osingadun*-style dependency. A similar argument has recently been proposed by Duncan Wright (2015, 39-42), who has interpreted the site as a 'home farm' of Malmesbury Abbey. This assessment was based on comparison with excavated settlements at Fordham and Ely, both in Cambridgeshire, though it was acknowledged that the '*scale and architectural sophistication*' of the site '*has more in common with excavated aristocratic residences*' (*ibid.*, 40). While the interpretations of Blair and Wright are plausible, they need not preclude Cowage Farm having also had a royal phase. Put simply, the arguments presented in this section should not be seen as mutually exclusive: the long chronology and evidence for distinct phasing at Cowage Farm could easily accommodate both an earlier royal phase and a subsequent period of ecclesiastical ownership.[111] Given that the settlement could realistically predate the establishment of Malmesbury Abbey by a full century (**2.4.1**), this is perhaps the most sensible conclusion.

[111] The ecclesiastical appropriation of pre-existing politico-religious centres is explored further in **8.2.1**.

No other great hall complexes are known from the region, but it may be significant that Chippenham is described as a *villa regia* in Asser's *Life of King Alfred*, written in AD 893 (Sawyer 1983, 275). Various middle Anglo-Saxon PAS finds are known from the vicinity, including a possible early Islamic coin (**CF_026**), so an earlier royal settlement is at least possible. Cirencester might also have functioned as a politico-religious centre, though the evidence is insufficient at present (Gerrard 1994, 90). Beyond this, there is little else to go on. That royal powers continued to show interest in the region throughout the seventh and eighth centuries is strongly suggested by the documentary evidence. In particular, charters relating to Malmesbury Abbey reveal a fundamental tension between Wessex and Mercia (Yorke 1990, 136). Established through West Saxon sponsorship (S 1245), Abbot Aldhelm appears to have subsequently accepted land from Æthelred of Mercia (S 71 and S 73), Berhtwald of the Hwicce (S 1169) and Baldred of Wessex (S 1170). At a broader level, the *Anglo-Saxon Chronicle* entry for AD 802 indicates that the Hwiccian-West Saxon border remained fiercely contested into the ninth century (*ASC* 800 [802]). We are told that Æthelmund, ealdorman of the Hwicce, joined battle with Weohstan of the 'Wiltshire men' at Kempsford, some 25 km north-east of Malmesbury on the historic border between Gloucestershire and Wiltshire.

To conclude, the long-term archaeo-historical perspective adopted in this section has emphasised Cowage Farm as a strategic establishment in a contested political frontier. On the balance of evidence, it seems likely that the great hall complex was constructed during the later sixth or seventh century, taking advantage of a prominent landscape position with good access to natural resources and transport infrastructure. In addition to its assumed role as a *villa regia*, the site appears to have functioned as a symbol of political power in an important territorial intersection. In this it was argued that the site may have had royal origins, perhaps linked to historically attested advances into the West Country by Gewissan and Mercian kings. Given the likely presence of a church, and the ostensibly long chronology of the site more generally, it was further maintained that Cowage Farm could have enjoyed an ecclesiastical afterlife, presumably in service to the great minster at Malmesbury. A tenth-century charter reference to royal land at nearby Norton might indicate continued royal interest, and it is perhaps here where we might look for the late Anglo-Saxon equivalent of Cowage Farm.

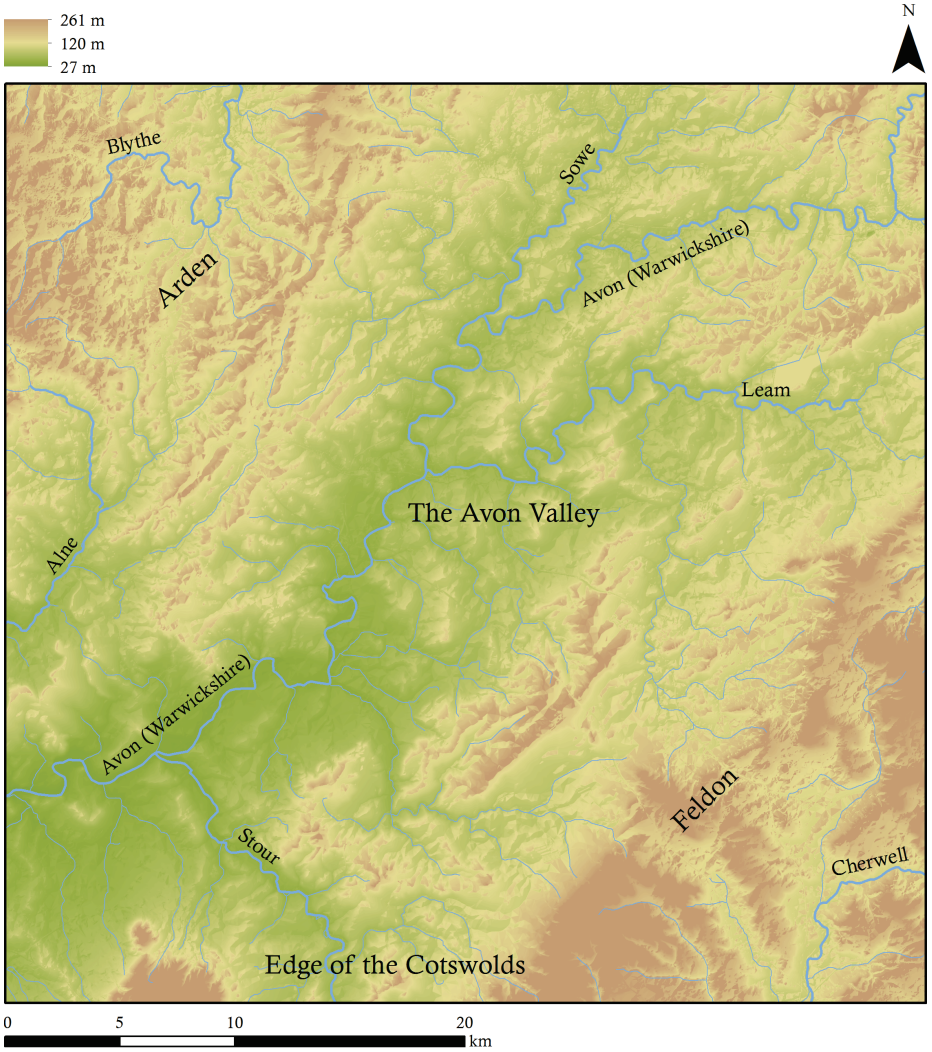



*Figure 7.1:* Major rivers and topographic zones in the study region (*contains Ordnance Survey data © Crown copyright and database right 2017*).

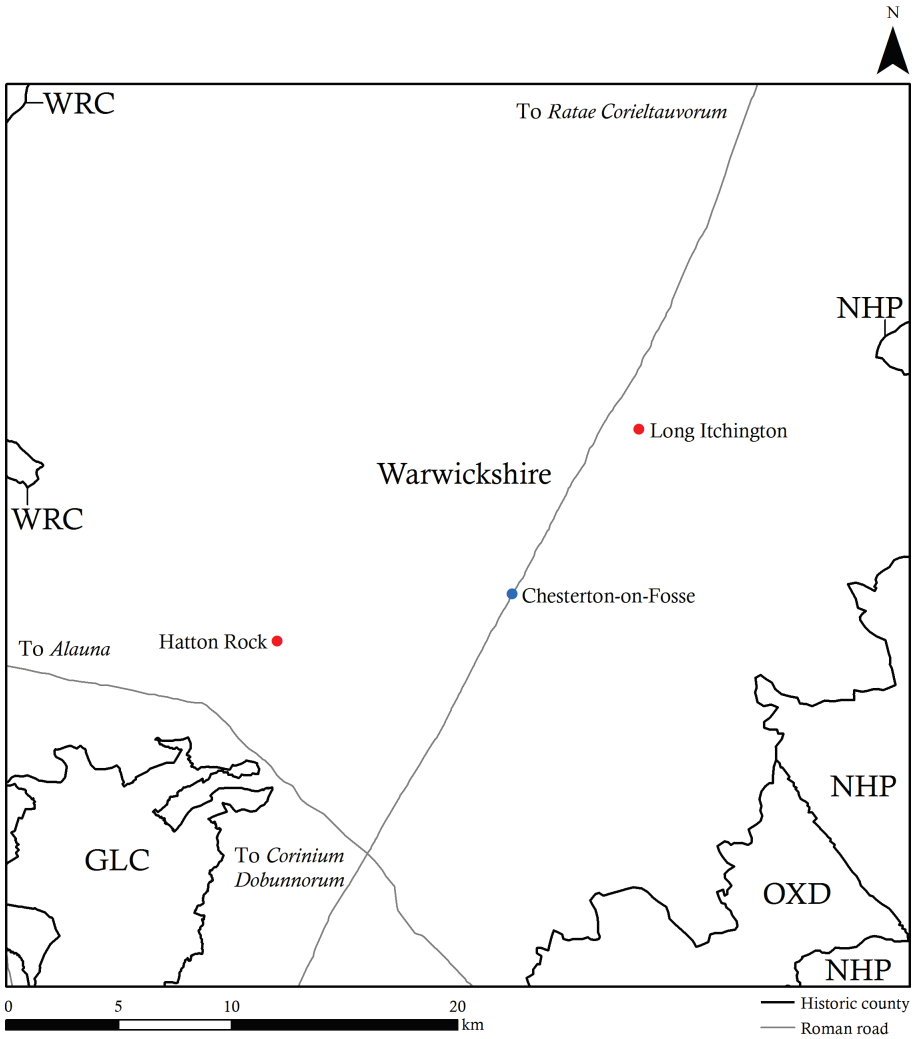



*Figure 7.2:* The study region in relation to historic county boundaries and the Roman road network. Abbreviations: NHP=Northamptonshire, OXD=Oxfordshire, GLC=Gloucestershire and WRC=Worcestershire.

# 7
# HATTON ROCK AND LONG ITCHINGTON

This chapter presents a case study of the two great hall complexes known from Warwickshire. It begins with an overview of the study region and its archaeology. The analytical core of the chapter is an extensive and multiscalar investigation, which is presented in the second and third sections. The fourth and final section then situates the evidence within a broader archaeological and historical context.

## 7.1 INTRODUCTION

### 7.1.1 *The study region*

It was noted in **3.1.1** that Hatton Rock and Long Itchington were selected as the final sites to investigate due to their spatial proximity, which allowed both to be considered in the same case study.[112] Using the midpoint between Hatton Rock (SP 2370 5770) and Long Itchington (SP 39680 67135), a 40 km x 40 km (1600 km$^2$) study region was calculated to focus the investigation. In common with much of the West Midlands, the region is topographically diverse and agriculturally rich – featuring an abundance of high-quality arable land and pasturage naturally suited to mixed farming methods (Bassett 2000, 109). In terms of geology, the region can be divided into two halves: the south-eastern half is composed of Lias Group (LI) bedrock geology while the north-western half features the Mercian Mudstone Group (MMG) and outcrops of the Warwickshire Group (WAWK).[113] With regard to topography the region comprises three main zones (*Figure 7.1*). The fertile Avon Valley roughly divides the region into two halves, with two bands of higher ground – the Arden and the Feldon – being situated either side (Hingley 1996, 2-4). In this the Warwickshire

[112] The Warwickshire great hall complexes have recently been examined as part of a broader analysis of the Avon Valley during the early Anglo-Saxon period (Tompkins 2017). Being a recent submission, this thesis was not available to the author until very late in the writing process. While an attempt has been made to incorporate the main conclusions, the reader is urged to consult Tompkins' work for an altogether more extensive study of this region.

[113] Geological information was taken from the British Geological Survey's *Geology of Britain viewer*, accessible at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html. Geological codes relate to the *Lexicon of Named Rock Units* accessible at: http://www.bgs.ac.uk/lexicon/.

Avon obviously represents the most significant river, flowing as it does from Naseby in Northamptonshire to a confluence with the Severn at Tewkesbury in Gloucestershire. Other rivers of note include tributaries of the Avon, such as the Sowe, Leam and Stour. With regard to administration (*Figure 7.2*), the study region features a large part of the historic county of Warwickshire (86.47%) as well as smaller parts of Gloucestershire (4.95%), Oxfordshire (4.17%), Northamptonshire (3.90%) and Worcestershire (0.51%). Modern activity centres present in the region include Warwick and Leamington Spa, which occupy the centre of the region, as well as Stratford-upon-Avon to the south-west, Solihull to the north-west, Coventry to the north and Rugby to the north-east. Birmingham is located just beyond the north-west limit of the region.

### 7.1.2 *Antecedent archaeology*

Prior to an assessment of its fifth-eighth-century archaeology, it is instructive to consider the archaeology of the study region from a long-term perspective. Although the region is not especially well known for its rich archaeology, the publication of the West Midlands research framework (Watt 2011) and the more detailed papers that informed it (e.g. Palmer 2002) are welcome syntheses. Of that which is known, there is a veritable dearth of early prehistoric archaeology, with no definite causewayed enclosures and only a few long barrows, cursuses and henges (Hingley 1996, 7-9; Barber 2008, 81-3). The ritual complex at Barford stands out as a key site in this respect, comprising a cursus, henge, several ring-ditches and a (possibly) contemporary building (Oswald 1969; Loveday 1989). Even so, it is difficult to generalise from a handful of examples. Activity from the Late Bronze Age onwards is more abundant however, and it is from this time that a number of enclosed settlements emerge in the region. Wasperton appears to have been an important locality during this period, featuring several enclosed sites and some useful evidence for major land boundaries (Hughes and Crawford 1995). Evidence of Iron Age activity is primarily derived from the region's many hillforts. One of the better known is Meon Hill, from which a very large hoard of currency bars was recovered (Price and Watson 1982). Few sites have seen serious excavation, though, and our knowledge is therefore rather poor (Palmer 2002, 10). It is also difficult to discern the tribal affiliation of the study region during the later Iron Age – at least on numismatic if not cultural grounds – as most territorial reconstructions would place it on the fringes of the *Corieltauvi* and the *Dobunni*, coin-minting tribes to the north-east and south-west respectively (Van Arsdell 1994; Booth 2002, 4; Palmer 2002, 6; Hurst 2011, 114). At a broader level, the prehistoric archaeology of Warwickshire – which makes up the majority of the study region – is rather limited when compared with the neighbouring counties of Oxfordshire, Gloucestershire and Wiltshire (Hingley 1996, 21).

Of the four case studies in this thesis, Hatton Rock and Long Itchington are unique in not being located near a Roman *civitas* capital. Indeed, the most substantial settlement in the region during the Roman period was the defended small-town of Chesterton-on-Fosse, which was excavated in the 1920s and 1960s but remains mostly unpublished (Burnham and Wacher 1990, 249-52). A settlement of logistical importance (if nothing else) was likely also situated at Ettington, at the crossroads between four roads: the Fosse Way, which runs south-westwards to Cirencester (*Corinium Dobunnorum*) and north-eastwards to High Cross (*Venonis*) and Leicester (*Ratae Corieltauvorum*); Margary 56b, which runs north-westwards onto Alcester (*Alauna*) and Droitwich (*Salinae*); and Margary 56a, which runs south-eastwards to connect with Watling Street (Margary 1973, 150-4; 283-4). Alcester, probably the largest Roman settlement in Warwickshire, is located just beyond the study region to the west (Booth 2002, 5).

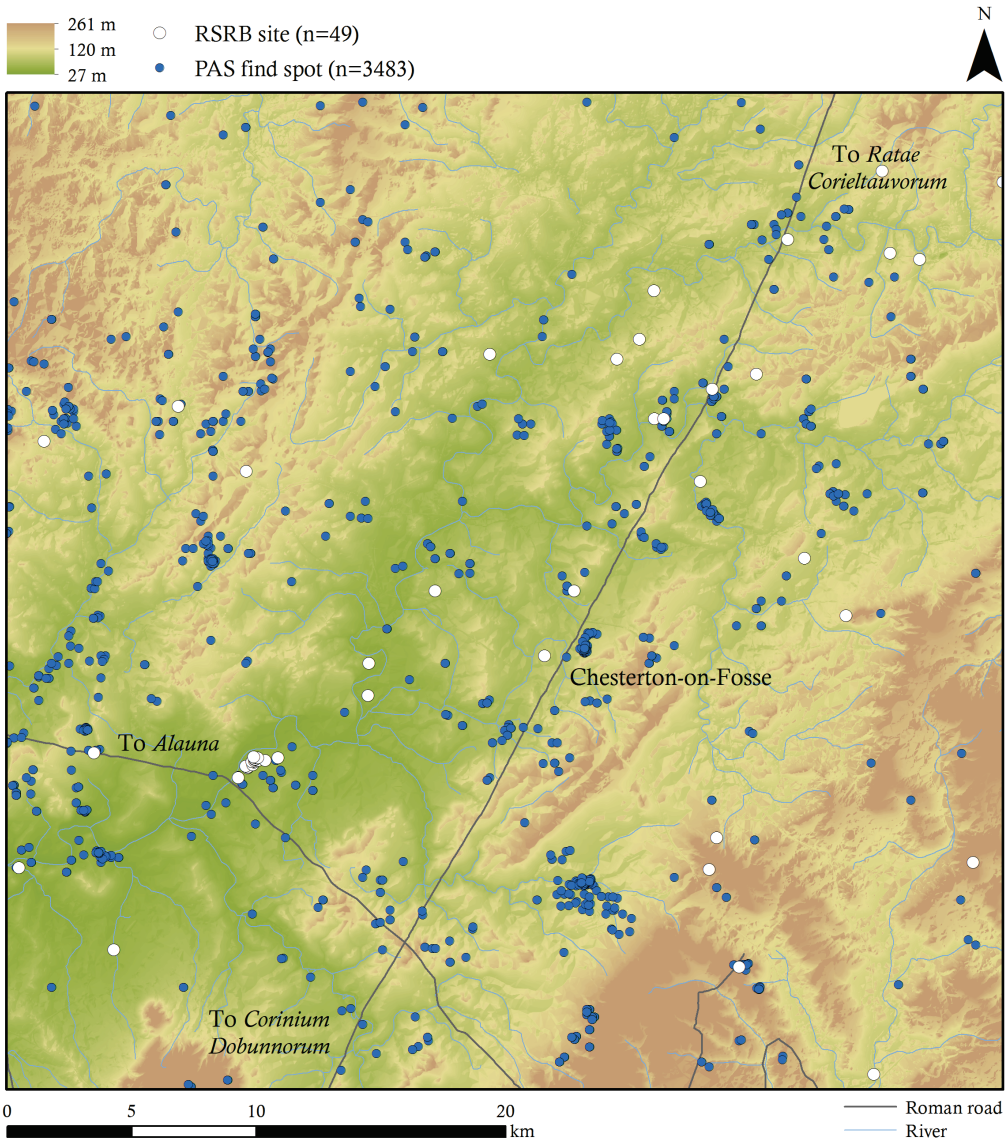



*Figure 7.3:* The study region during the Roman period, as evidenced from the PAS online database and the *Rural Settlement in Roman Britain* project (*contains Ordnance Survey data © Crown copyright and database right 2017*).

Roman-period activity in the region can be examined spatially using a pair of useful online resources.[114] From these, spatial data for 3483 PAS finds and forty-nine Romano-British settlements were obtained. These data, visualised in *Figure 7.3*, evidence an active and widely settled landscape. Given the geographic prevalence of the Avon Valley within the region, it is perhaps unsurprising that the distribution of sites appears to favour low-lying areas over the more marginal lands to the north-west and south-east. Significant activity can also be identified along the lengths of the aforementioned roads, especially the Fosse Way. Particular clusters of PAS finds can be identified at places where they might be expected, as at Chesterton-on-Fosse and Stratford-upon-Avon, but also in areas that do not have extensive settlements in modern times. The concentration of finds between Kineton and Ratley (in the southern part of the region) is a good example of this latter phenomenon. Elsewhere activity tends to focus on rivers such as the Alne and Avon. As the only study region considered in this thesis to lack a *civitas* capital, it is difficult to assess its relative importance during the Roman period. Its position of equidistance between Cirencester and Leicester might indicate its worth more as a logistical corridor than a political and cultural centre in its own right, however.

### 7.1.3 *The regional dataset*

An exhaustive survey of the available evidence revealed 131 sites of potential relevance to the study. A chronological assessment of this dataset classified ninety sites (68.70%) as 'certain' to date from the study period, eleven (8.40%) as 'probable' and thirty (22.90%) 'uncertain'.[115] A breakdown of the dataset by site type and chronological certainty is given in *Table 7.1*. In terms of distribution, fifth-eighth-century activity is found almost exclusively in the low-lying and predominately riverine areas of the region (*Figure 7.4*). Though similar to the Roman period in this respect (*Figure 7.3*), the trend appears more exaggerated in the early medieval period. Indeed, there is far less activity in the Arden and Feldon areas by comparison. In general, the pattern of activity seems quite dispersed and relatively consistent, with the only notable concentration of sites being at Stratford-upon-Avon. This is significant insofar that the 'hot spots' of Roman activity identified above (**7.1.2**) do not appear to have continued as such into the post-Roman period.

[114] The PAS online database, available at: https://finds.org.uk/, was accessed on 13th June 2016 and data downloaded using the 'search via map' function. The *Rural Settlement of Roman Britain* project, available at: https://doi.org/10.5284/1030449, was accessed on 15th July 2016 and data downloaded using the 'query' function.

[115] The thirty 'uncertain' sites were further subdivided into those of potential relevance to the study period (eleven), those that can only be broadly dated to the early medieval period (thirteen) and those that are of completely unknown date (six).

| Site type | C/P/U sites | | C/P sites | | C sites | |
|---|---|---|---|---|---|---|
| | No. of sites | % | No. of sites | % | No. of sites | % |
| Artefact find spot | 95 | 72.52% | 66 | 65.35% | 58 | 64.44% |
| Burial site | 24 | 18.32% | 23 | 22.77% | 23 | 25.56% |
| Settlement site | 5 | 3.82% | 5 | 4.95% | 3 | 3.33% |
| Inferred occupation | 6 | 4.58% | 6 | 5.94% | 5 | 5.56% |
| Ecclesiastical site | 1 | 0.76% | 1 | 0.99% | 1 | 1.11% |
| Hoard | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 131 | 100.00% | 101 | 100.00% | 90 | 100.00% |

*Table 7.1:* An overview of the regional dataset. The abbreviations used – 'C' for certain, 'P' for probable and 'U' for uncertain – relate to the level of chronological certainty assigned to sites in the dataset, as outlined in *Table 3.2*. Note: some of the analyses reported in this chapter combine the 'settlement site' and 'inferred occupation' site types into a single category termed 'occupation sites'.

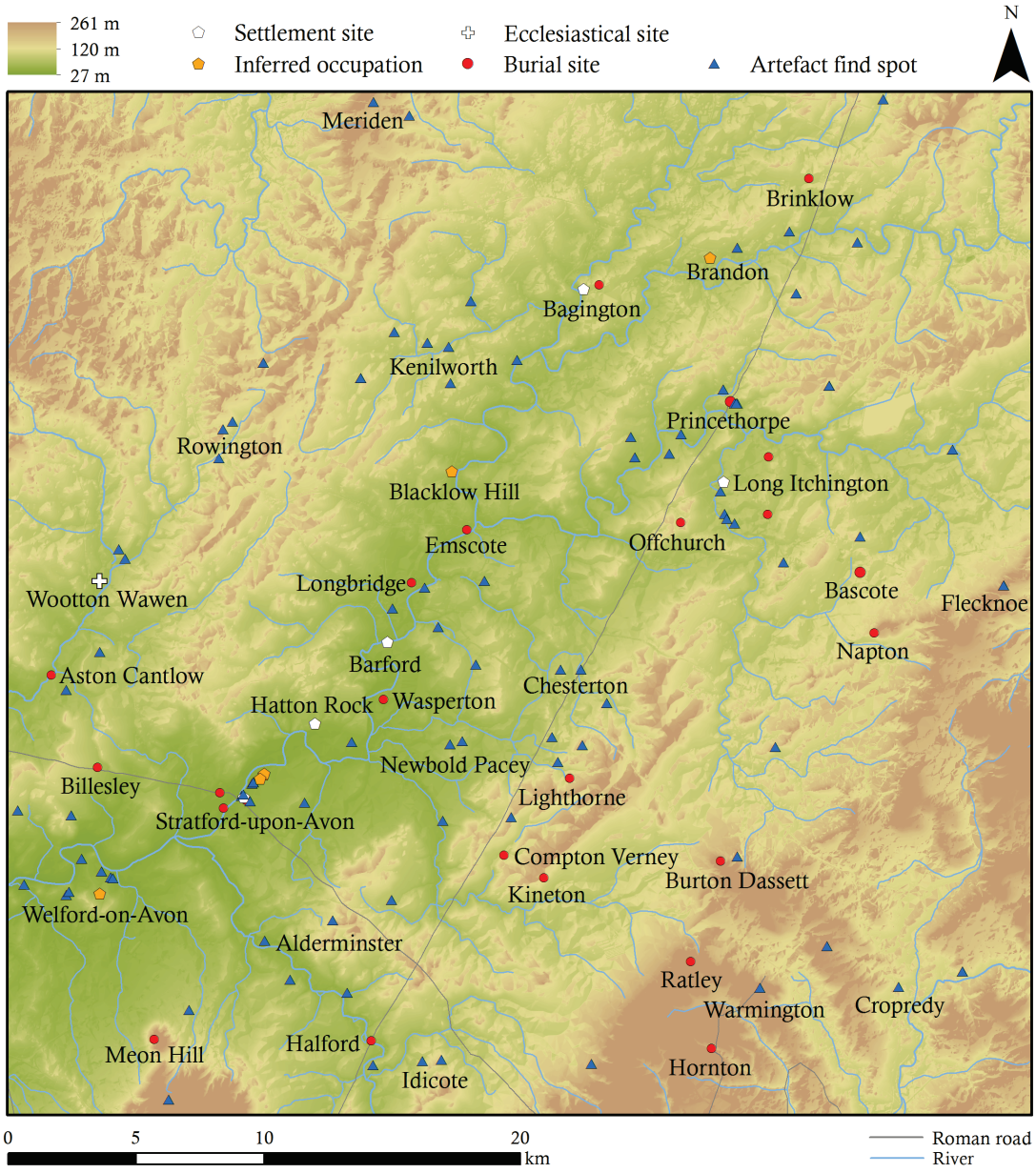



*Figure 7.4:* A distribution map of the regional dataset with prominent localities labelled (*contains Ordnance Survey data © Crown copyright and database right 2017).*

This discontinuity can be illustrated by a comparison of the first-fourth-century and fifth-eighth-century datasets (*Figure 7.5*). As it stands, then, Steven Bassett's (2000, 110-11) claim that the West Midlands were '*well populated throughout the migration period*' is not currently supported by the available archaeological evidence.

### 7.1.4 *Chronology*

We can conclude this introductory account with some chronological considerations. As with previous case studies, a bespoke form of seriation was used to explore and quantify temporality in the regional dataset. Following the process described in **3.3.3**, the seriation was run using 112 sites, comprising all chronologically 'certain' and 'probable' sites, as well as the eleven 'uncertain' sites thought most likely to be relevant (see above). The resulting data matrix is included on the included CD-ROM (*e-Appendix 2d*). Though useful as an exploratory technique in its own right, the seriation was principally undertaken to phase the dataset ahead of further analysis. In this the provisional chronology proposed for both Hatton Rock (**2.4.2**) and Long Itchington (**2.4.6**) was used to isolate chronologically similar sites (*Table 7.2*). While not especially robust given the uncertain date of the Warwickshire great hall complexes, this phasing scheme can be seen to facilitate temporal comparison and thereby allows for a more chronologically meaningful interrogation of the dataset.

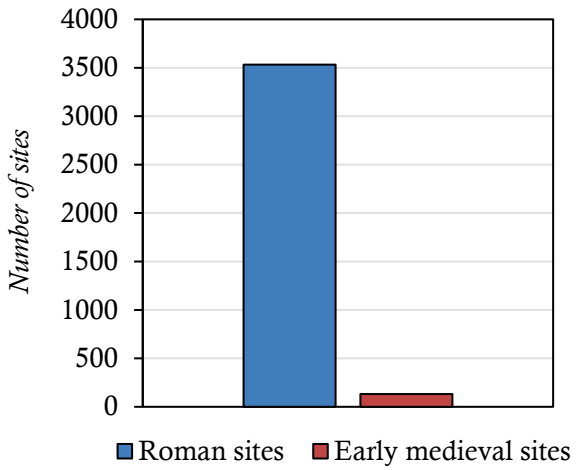



*Figure 7.5:* A bar chart comparing the numbers of Roman-period (n=3532) and fifth-eighth-century (n=131) sites in the region.

| Phase | Description | Date range | No. of sites |
|---|---|---|---|
| 1 | Before the great hall phase | AD 400-600 | 63 |
| 2 | ?During the great hall phase | AD 600-700 | 42 |
| 3 | ?After the great hall phase | AD 700-800 | 35 |

*Table 7.2:* The phasing scheme used for the regional dataset, based on the provisional sequences proposed for Hatton Rock (**2.4.2**) and Long Itchington (**2.4.3**). The number of sites within each phase was determined using the results of the chronological seriation, with sites considered to be chronologically uncertain omitted.

Eighteen radiocarbon samples of relevance to the region and period were recorded during the data collection process. Fourteen of the samples came from the extensive excavations at Wasperton (**WW_116**) while two samples were each collected from burial sites at Centenary Gardens (**WW_032**) in Stratford-upon-Avon and Ridge House (**WW_103**) near Ratley (Hamilton et al. 2007, 5; Ives 2010, 69-72; Palmer 2011, 22-3). These samples were recalibrated according to the most recent radiocarbon age calibration curve after the method described in **3.3.2**. The results are presented in *Table 7.3*; individual samples are discussed when relevant in the text that follows.

## 7.2 THE SITES AND THEIR SETTING

### 7.2.1 *Hatton Rock in a local context*

The investigation shall begin with a consideration of Hatton Rock (**2.4.2**) in its immediate environmental, archaeological and historical context. The site is located in the western part of Hampton Lucy, an historic parish whose boundary is principally defined by the Avon. The locality is first attested as *Homtune* in a pair of charters from AD 781 (S 120 and S 1257) and is recorded as *Hantone* in the Domesday Survey, where it was assessed at thirty-six households with meadow, woodland and a mill.[116] The locality was recognised as Bishop's Hampton during the medieval period, but it has been known as Hampton Lucy since early modern times (Sims-Williams 1990, 163). Although a multitude of prehistoric and Roman sites have been identified in the parish through aerial photography (e.g. Webster et al. 1964, 17-18), very few have seen excavation of any form. As a consequence, the evidence base is fragmentary and of largely indeterminate date. Of the handful of interventions undertaken in the parish, it is worth noting the discovery of a ring-ditch of Neolithic or Bronze Age date during the 1970 pipeline excavations at Hatton Rock (Hirst and Rahtz 1973). Excavations some 400 m north-west of the parish church have likewise revealed Iron Age features and pottery (Hughes 1995). Sherds of Romano-British pottery are also known from elsewhere in the parish (Webster et al. 1964, 18). Given the general dearth of material, it is difficult to assess the significance of the locality before the establishment of the great hall complex.

Despite this, the spatial position and landscape context of the site offer some insight into the mindset of its inhabitants. As has been noted by both Vicky Crewe (2008, 2) and Sarah Semple (2013, 207), the spatial configuration of Hatton Rock appears to have respected the location of a large and presumably prehistoric ring-ditch. Building N, a '*rectangular enclosure or building*', might also represent an additional prehistoric feature (Rahtz 1970, 142). This

[116] Data from Domesday Book were taken from the *Open Domesday* website available: http://opendomesday.org/. The resource was created by Anna Powell-Smith as part of the AHRC-funded *Hull Domesday Project* (see http://www.domesdaybook.net/ for more information).

| Site information | | Radiocarbon sample information | | | Published date ranges | | IntCal 13 date ranges | |
|---|---|---|---|---|---|---|---|---|
| ID | Site | RC sample | RC age | Description | 68.2% | 95.4% | 68.2% | 95.4% |
| WW_032 | Centenary Gardens | SUERC-28369 | 1265±40BP | Bone sample from Skeleton 4/016 | 680 – 780 | 660 – 870 | 684 – 771 | 665 – 869 |
| WW_032 | Centenary Gardens | SUERC-28370 | 1325±40BP | Bone sample from Skeleton 4/036 | 650 – 770 | 640 – 780 | 665 – 764 | 645 – 770 |
| WW_103 | Ridge House | SUERC-32578 | 1280±35BP | Bone sample from Skeleton 1 | 675 – 770 | 650 – 820 | 680 – 767 | 657 – 860 |
| WW_103 | Ridge House | SUERC-34063 | 1345±30BP | Bone sample from Skeleton 3 | 645 – 685 | 640 – 770 | 650 – 684 | 641 – 765 |
| WW_116 | Wasperton | OxA-14459 | 1806±31BP | Bone sample from Inhumation 26 | N/R | 120 – 330 | 139 – 245 | 128 – 325 |
| WW_116 | Wasperton | GrA-32672 | 1704±30BP | Bone sample from Inhumation 46 | N/R | 230 – 390 | 262 – 389 | 252 – 403 |
| WW_116 | Wasperton | SUERC-11973 | 1700±35BP | Bone sample from Inhumation 27 | N/R | 240 – 430 | 260 – 395 | 251 – 410 |
| WW_116 | Wasperton | GrA-32671 | 1670±30BP | Bone sample from Inhumation 34 | N/R | 250 – 430 | 345 – 408 | 258 – 428 |
| WW_116 | Wasperton | GrA-32674 | 1580±25BP | Bone sample from Inhumation 169 | N/R | 410 – 550 | 426 – 535 | 418 – 542 |
| WW_116 | Wasperton | SUERC-11974 | 1460±35BP | Bone sample from Inhumation 174 | N/R | 540 – 660 | 577 – 638 | 545 – 650 |
| WW_116 | Wasperton | OxA-15964 | 1735±55BP | Bone sample from Inhumation 20 | N/R | 130 – 430 | 244 – 381 | 139 – 411 |
| WW_116 | Wasperton | OxA-15985 | 1687±28BP | Bone sample from Inhumation 26 | N/R | 250 – 430 | 336 – 397 | 257 – 416 |
| WW_116 | Wasperton | OxA-15962 | 1609±32BP | Bone sample from Inhumation 3 | N/R | 380 – 550 | 401 – 533 | 389 – 540 |
| WW_116 | Wasperton | GrA-32136 | 1595±35BP | Bone sample from Inhumation 6 | N/R | 390 – 550 | 416 – 535 | 394 – 545 |
| WW_116 | Wasperton | GrA-32135 | 1570±35BP | Bone sample from Inhumation 1a | N/R | 410 – 580 | 429 – 537 | 410 – 564 |
| WW_116 | Wasperton | OxA-15963 | 1565±29BP | Bone sample from Inhumation 10 | N/R | 410 – 570 | 429 – 539 | 420 – 558 |
| WW_116 | Wasperton | OxA-15965 | 1566±30BP | Bone sample from Inhumation 22 | N/R | 410 – 570 | 429 – 538 | 418 – 559 |
| WW_116 | Wasperton | GrA-32242 | 1550±30BP | Bone sample from Inhumation 14 | N/R | 420 – 590 | 430 – 550 | 423 – 574 |

*Table 7.3:* Radiocarbon samples of relevance from the study region (data from Hamilton et al. 2007, 5; Ives 2010, 52; 69-72; Palmer 2011, 22-3) and their recalibration using IntCal 13 (Reimer et al. 2013) and OxCal v4.2 (Ramsey 2009; Ramsey and Lee 2013), reported at 1σ (68.2%) and 2σ (95.4%). Calibrated date ranges are years AD/CE. 'N/R' is an abbreviation for 'not recorded', which is used where samples have not been previously calibrated or where calibrated date ranges were only reported at 1σ. Note: the Hatton Rock radiocarbon sample was previously presented in *Figure 2.14*.

a spatial relationship with the past, common in great hall complexes and early medieval settlement archaeology more generally, is generally understood as signifying a socio-cultural process of appropriation and reconstitution (e.g. Bradley 1987; Crewe 2012; Semple 2013). Moving beyond ideological concerns, it is also possible to infer practical design elements from the settlement's position within the landscape. Proximity to the Warwickshire Avon was an obvious consideration, but that the site was close to a fording point indicates that links with terrestrial transportation networks were also deemed important. Soil fertility seems likely to have been another factor in site placement, and in this it is worth noting that Hatton Rock is located on very good quality soil (Grade 2) according to the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002).[117] More broadly, that the site would have had access to a diverse range of resources seems likely; the Forest of Arden would have offered an abundance of timber resources and grounds for hunting, for example (Tompkins 2017, 261).

That the settlement was located on a small hill accords with the broader trend identified for great hall complexes in **2.6.2**. Although not the most striking topographic feature in the immediate landscape – that accolade goes to an '*unusually dramatic*' cliff of clay and gravel from which Hatton Rock gets its name (Rahtz 1970, 139) – this position of relative prominence invites a brief visibility study. Using Hatton Rock (SP 2370 5770) as the observation point, a viewshed analysis was undertaken using the method outlined in **3.5.2** (*Figure 7.6*). The results suggest that the inhabitants of Hatton Rock would have enjoyed particularly good views of the surrounding landscape. Long-distance visibility appears to have included the edge of the Cotswolds to the south and a prominent ridgeline of the Feldon area. More local visibility is demonstrated by an oval-shaped visual zone that may have included localities as west as Welford-on-Avon and as east as Lighthorne. It is perhaps of significance to discussions of visual authority and landscape governance that the viewshed results include large segments of the Warwickshire Avon and its tributaries, as well as significant stretches of the Roman Fosse Way and the road to Alcester that branches north-westwards from it (Margary 1973, 150-4; 283-4). A considerable number of archaeological sites also feature within this visible zone, including burial sites at Alveston Manor (**WW_006**) and Centenary Gardens (**WW_032**), various occupation sites in the Stratford-upon-Avon area (e.g. **WW_102**) and the location of high-status artefact finds at Compton Verney (**WW_044**) and Newbold Pacey (**WW_093**).

That so many sites appear to have been visible to Hatton Rock warrants a consideration of contemporary and near-contemporary archaeology from the surrounding area. Arguably the most significant evidence comes from Wasperton (**WW_116**), situated some 3 km east

[117] See **7.3.3** for a consideration of how soil quality may have affected site placement on a broader scale.

of Hatton Rock. Here, an extensive mixed-rite cemetery featuring 215 inhumations and twenty-six cremations was fully excavated between 1980 and 1985 (Carver et al. 2009). The site is of particular significance for its chronology and sequence – on the basis of an impressive scheme of chronological analysis, making use of both relational (stratigraphic and artefactual) and absolute (radiocarbon) methods, it was possible to identify an almost continuous burial sequence from the fourth to the seventh centuries (*ibid.*, 122-5).[118] Within this sequence it was possible to identify broad shifts in artefact usage, with periods of 'Anglian' and 'Saxon' cultural affiliation. Further afield, evidence of small-scale occupation has recently been uncovered during the construction of a bypass at Barford (**WW_016**). Activity was dated to *c.* AD 450-650 on the basis of a lone SFB from Area D and pottery from the fill of a ditch in Area A, with environmental sampling also revealing evidence for the consumption and possible processing of wheat, barley and oats (Palmer 2010a, 58).

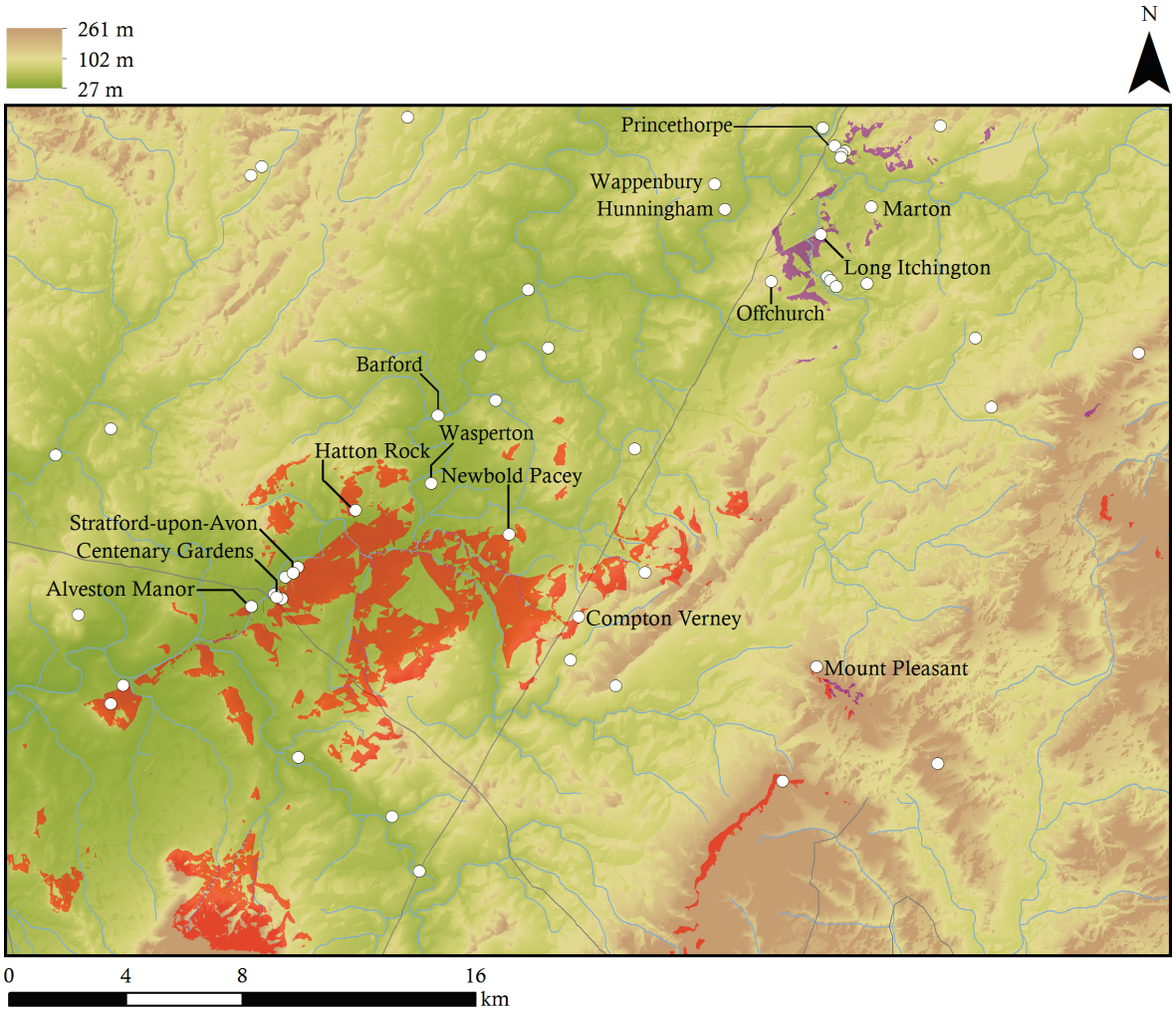



*Figure 7.6:* The results of the viewshed analysis. Areas likely to have been visible from Hatton Rock and Long Itchington are shaded red and purple respectively, with contemporary and near-contemporary sites being represented by white dots. Sites mentioned in the text are labelled (*contains Ordnance Survey data © Crown copyright and database right 2017).*

[118] See *Table 7.3* for the radiocarbon samples and their recalibration using IntCal 13.

The archaeology of Stratford-upon-Avon, located some 4 km downriver from Hatton Rock, is altogether more substantial. The most significant evidence comes from the grounds of the Alveston Manor Hotel (**WW_006**). A total of seventy-seven inhumations and thirty-eight cremations were recovered from excavations in 1934 (Meaney 1964, 262-3), 1970 (Wilson and Moorhouse 1971, 134), 1971 (Webster and Cherry 1972, 164) and 2002 (Caffell and Holst 2007). The cemetery is significant for its longevity, being in use from the late fifth to early seventh centuries, but also for its wealth: the richest grave was of an elderly woman interred with four brooches (one square-headed, two saucer and one penannular), a string of forty beads, an iron girdle-buckle and a finger-ring. Evidence for occupation at the site is also indicated by a small post-built structure and series of palisade trenches (**WW_007**). Intermittent excavations at properties on Tiddington Road (**WW_001**, **WW_002**, **WW_003** and **WW_004**) have also revealed evidence of a large enclosure ditch with associated early Anglo-Saxon pottery (Anon 1988, 1992; Palmer 2005, 2009, 2010b). Similar features have been discovered at Rayford Camp Caravan Park (**WW_102**), less than 250 m south-west of Tiddington Road. (Palmer 2010c).

This review accentuates the significance of the evidence from Hatton Rock, but also provides enough context to propose a tentative archaeological sequence for the locality. The earliest material from the locality comes from Wasperton, which appears to have had an unbroken burial sequence spanning the fourth-seventh centuries. Although not especially large or of particular material wealth, the site represents an important and extremely rare instance of post-Roman continuity. Beyond this, early communities appear to have been in existence at Barford and Stratford-upon-Avon from the latter half of the fifth century, if not before. Although of uncertain chronology and sequence, that Hatton Rock emerged as an important settlement at some point in the later sixth or seventh century seems likely. Whether this was a new establishment or a monumental reorganisation of a pre-existing (but not currently identified) settlement is difficult to say, but the latter is possible on comparative grounds (e.g. Hope-Taylor 1977, 154-8; Millett and James 1983, 201-8; Hamerow et al. 2007, 183-6; Thomas 2017, 111-12). On the basis of its scale and apparent architectural grandeur it seems likely that the site operated at the apex of a local and regional hierarchy, perhaps functioning as a *villa regia* of Mercia or the Hwicce (**7.4.2**).

This large, presumably royal estate appears to have been gradually transferred into ecclesiastical ownership over the course of the eighth and ninth centuries (Rahtz 1970, 139). A charter of AD 781 (S 1257) records an exchange of land between Hathored, bishop of the Hwicce, and Offa of Mercia. As a result of the transfer, the bishopric of Worcester took possession of seventeen hides (*cassati*) at Hampton Lucy. Though Hatton Rock is not explicitly mentioned, the charter certainly implies ecclesiastical appropriation of the site

(Hooke 2011, 157). If not under this charter then perhaps in another of the same year (S 120), where a grant of twelve hides at Hampton Lucy is made to the church. This change in ownership was presumably accompanied by a significant spatial and functional reorganisation of the site. Given that the parish church and modern-day village are situated 1 km to the east, it is possible that the settlement was abandoned after a relatively brief period of monastic occupation. Though tentative, evidence for a continuity of royal function in the area might be drawn from a pair of Mercian charters (S 192 and S 209) issued at Wellesbourne, some 5 km to the south-east (Sims-Williams 1990, 163-4).

### 7.2.2 *Long Itchington in a local context*

There is unfortunately much less that can be said of Long Itchington (**2.4.3**). The site is located in the northern part of the historic parish of the same name, near the boundary between Hunningham and Marton.[119] It is first attested as *Yceantune* in a charter of AD 1001 (S 898) – the only Anglo-Saxon charter reference to the parish – and is subsequently recorded as *Icentone* in the Domesday Survey.[120] The 'Long' element appears to have been a later addition (Hooke 1999, 110-15), perhaps in a manner similar to the 'Lucy' element in Hampton Lucy. The parish is also similar to Hampton Lucy inasmuch that a large number of sites are known from aerial photography but few have been excavated. Somewhat serendipitously, though, interventions at two nearby sites offer an immediate archaeological context for the establishment of the great hall complex. The first is a Roman settlement located 300 m to the south-west. Small-scale excavations in 1925 and 1959 revealed '*very few remains of buildings*' but enough ceramic material to allow the excavator to conclude that '*it appears to have been principally a fourth century farmstead*' (Hemsley 1959, 4). Subsequent field surveys in 1978 and 1997 recovered ten coins – one from the first or second century and nine from the later third to fourth – as well as large quantities of pottery and tile (Wilson 1978, 1982; Jones and Wise 1997). Of greater temporal relevance was the discovery, as part of the 1999 Churchover to Newbold Pacey gas pipeline (**WW_081**), of a pit containing four sherds of fifth-seventh-century pottery just 200 m south-east of the great hall complex (Palmer 2006, 114; 137; 222). Whether this feature was contemporary with the complex or represents an antecedent phase of occupation cannot be established, but it does confirm an early Anglo-Saxon presence in the immediate vicinity of the settlement.

[119] It is worth noting that, to the author's knowledge, Long Itchington is the only great hall complex known to be situated near a parish boundary. The phenomenon of burials being located like this is well known (e.g. Hamerow et al. 2015), but the territorial and administrative significance of a settlement having been positioned as such is difficult to gauge.

[120] Data from Domesday Book were taken from the *Open Domesday* website available at: http://opendomesday.org/. The resource was created by Anna Powell-Smith as part of the AHRC-funded *Hull Domesday Project* (see http://www.domesdaybook.net/ for more information).

With regard to the complex proper, the absence of dating evidence renders a chronological assessment rather difficult.[121] Regardless of the date at which the complex did emerge, it is possible to infer aspects of its form and function through a consideration of its position within the landscape. Similar to Hatton Rock, the settlement was situated in close proximity to a river (the Itchen, 250 m to the west) and in general proximity to a Roman road (the Fosse Way, 1.5 km to the west). Also comparable was its environmental context, being in an area of Grade 2 (very good) quality soil (see *Figure 7.15* below). Although the site was not located on especially prominent topography (**2.4.3**), it is nonetheless interesting to consider visibility. As above, this was achieved using viewshed analysis – this time with Long Itchington (SP 3970 6710) as the observation point. The results, shown in *Figure 7.6*, demonstrate good visual coverage around Long Itchington up to a distance of about 3-4 km, with a viewshed that includes the Dunsmore plateau in the north as well as a significant segment of the Itchen and a small stretch of the Fosse Way. Of particular significance is the realisation that the high-status barrow burial at Marton (**WW_088**) is likely to have been visible from the great hall complex (see below).

As with Hatton Rock, it is useful to undertake a brief archaeological review of the immediate area. Evidence from within the parish of Long Itchington itself is rather scarce. The pit and small assemblage of pottery recovered immediately south-east of the complex has already been mentioned (**WW_081**), but it is worth noting the discovery of a lone cremation burial some 2 km further to the south-east (**WW_082**). Excavated in 1864, the remains were found contained in an 'Anglian'-style cinerary urn, itself placed within a probable barrow (Meaney 1964, 217). Activity further upriver (southwards) is attested by a number of stray finds. In chronological order, these include: a girdle-hanger of mid fifth- or sixth-century date (**WW_078**); a sixth-century small-long brooch (**WW_080**); and an eighth- or ninth-century pin (**WW_079**). Most of the evidence beyond the parish of Long Itchington relates to a series of burial sites excavated in the mid-late nineteenth century. The largest was discovered on the parish boundary between Long Itchington and Offchurch (**WW_095**), near a road leading directly to Long Itchington that is thought to be of some antiquity (Tompkins 2017, 260-1). Inhumations were discovered with finds including brooches of cruciform, square-headed, swastika and saucer form, a silver buckle and tag, amber and clay beads, Late Roman coins and a knife, shield boss and spearhead – the latter said to be driven through one of the skeletons (Burgess 1876; Meaney 1964, 262). The number of burials is unknown, but Smith (1915, 467) notes that there were as many as sixty Late Roman coins.

A significant concentration of evidence is also known at Princethorpe, some 3 km north

[121] On the basis of architectural and morphological comparison, particularly with Yeavering, a date centring on the seventh century was suggested in **2.4.3**

of Long Itchington. Interventions in the late nineteenth century recovered various artefacts from the crest of a hill immediately south of the village (**WW_096**). Presumably representing ploughed-out burials of sixth-century date, the finds included urns, two brooches (of cruciform and square-headed form), some tools (a hammer, chisel and punching tool) and a possible sword chape (Bloxam 1875; Meaney 1964, 262). Recent metal-detector finds from elsewhere on the hill could indicate additional burials (e.g. **WW_098**, **WW_099** and **WW_100**). Of particular significance is the high-status barrow burial at Marton (**WW_088**), which is likely to have been visible to great hall complex (*Figure 7.6*). Excavated in 1849, the barrow revealed several urned cremations (Bloxam 1851, 230-1). Warwick Museum has three undecorated urns from this excavation as well as an iron sword, part of a shield boss, three annular brooches, a saucer brooch, a large pin and, possibly, two spearheads (Meaney 1964, 261). Final mention can be made of the sixth-century cruciform brooch fragment from Hunningham (**WW_062**) and the pair of early eighth-century sceattas from Wappenbury (**WW_113**), both of which might be taken to signify low-level activity west of the great hall complex.

This review of the evidence emphasises Long Itchington as a paramount settlement and allows for a provisional local sequence to be outlined. Although the Long Itchington complex is of a largely uncertain date, some form of occupational continuity is indicated by the substantial Late Roman occupation and small-scale early Anglo-Saxon activity found within the immediate vicinity. This is further suggested by Rosemary Hemsley's (1959, 4) comment that '*post-Roman material was also found*' in her brief report on the 1959 excavations at the Roman settlement. Whether there was an antecedent phase or not, based on the distinct architecture and spatial organisation of the settlement it seems likely to have emerged as a great hall complex in the later sixth or – perhaps more likely – seventh century. Other communities also appear to have been operating within the area at this time, but the lack of comparable settlement evidence suggests that Long Itchington had a position of prominence within the local settlement hierarchy. With no clear evidence for phasing or later activity, the afterlife of the settlement is indeterminate. That the locality retained some significance is perhaps attested by the aforementioned charter of AD 1001 (S 898), but is perhaps better demonstrated by Domesday Book. Assessed at ninety-nine households, Long Itchington compares favourably with nearby Hunningham (seventeen), Ufton (thirty-one) and Southam (thirty-five).[122]

[122] Data from Domesday Book were taken from the *Open Domesday* website available at: http://open-domesday.org/. The resource was created by Anna Powell-Smith as part of the AHRC-funded *Hull Domesday Project* (see http://www.domesdaybook.net/ for more information).

### 7.2.3 *Negotiating the landscape*

While a consideration of the Warwickshire great hall complexes from an essentially local perspective has yielded useful insights, it can be followed with a spatial investigation that is broader in scale. In this we can examine some of the more long-distance interactions of the complexes and explore how people may have negotiated the landscape more broadly. In keeping with previous case studies, this involved the calculation of least-cost paths. Detailed in **3.5.3**, least-cost path modelling calculates the least accumulated travel cost (i.e. most topographically efficient route) between two points in a landscape. Working on the assumption that they may have operated as *villae regiae*, the analysis was primarily concerned with exploring possible *feorm* networks around Hatton Rock and Long Itchington. As such, least-cost paths were generated between the great hall complexes and contemporary (phase 2) occupation sites. The results presented in *Figure 7.7* are from the perspective of Hatton Rock while those given in *Figure 7.8* relate to Long Itchington.

The least-cost paths generated from the analysis can be understood as the most theoretically efficient routes between the Warwickshire great hall complexes and contemporary settlements. More broadly, the results illustrate the extent to which settlement activity in the region was primarily confined to the Avon Valley. It is therefore unsurprising that, with only limited topographic variation within this central zone, the least-cost paths are broadly intuitive and correlate strongly with river valleys. Whether the least-cost paths represent the routes used in *feorm* connections – and whether there even was a formalised settlement network in the region – remain largely uncertain, however. Other issues further limit the value of the results. The fairly limited settlement record might not offer a true reflection of historical reality, for example. Indeed, while it is possible to envision a *feorm* network involving Hatton Rock, Stratford-upon-Avon and Welford-on-Avon, a similar interpretation cannot be offered for Long Itchington given the dearth of settlements in the area around it. The uncertain relationship between Hatton Rock and Long Itchington also presents a significant interpretative issue: were they independent estate centres or part of the same regional system?[123] Given these issues, it is wise not to infer too much from the results. That the least-cost paths correlate more closely with the river system than the Roman road network is in contrast to previous case studies, however, and may indicate a rather different pattern of occupation.

Moving beyond this site-specific approach, a further analysis was undertaken where least-cost paths were modelled from each occupation site to all others. When computed for the three phases of the regional dataset, it is possible to explore how patterns of movement and settlement in the region changed over time. The results might therefore be seen as a

[123] This issue is addressed in **7.4.2**.

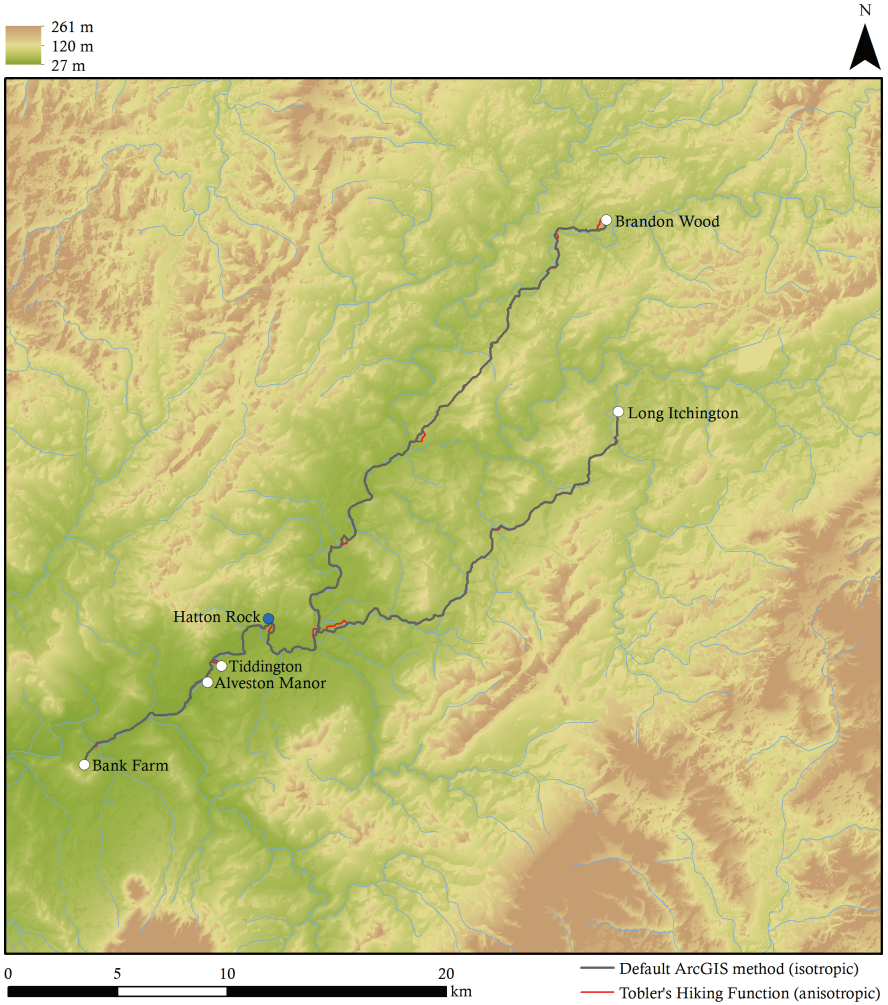



*Figure 7.7:* Least-cost paths generated between Hatton Rock (blue dot) and phase 2 occupation sites (blue dots) using the default ArcGIS (isotropic) and Tobler's Hiking Function (anisotropic) methods (*contains Ordnance Survey data © Crown copyright and database right 2017*).

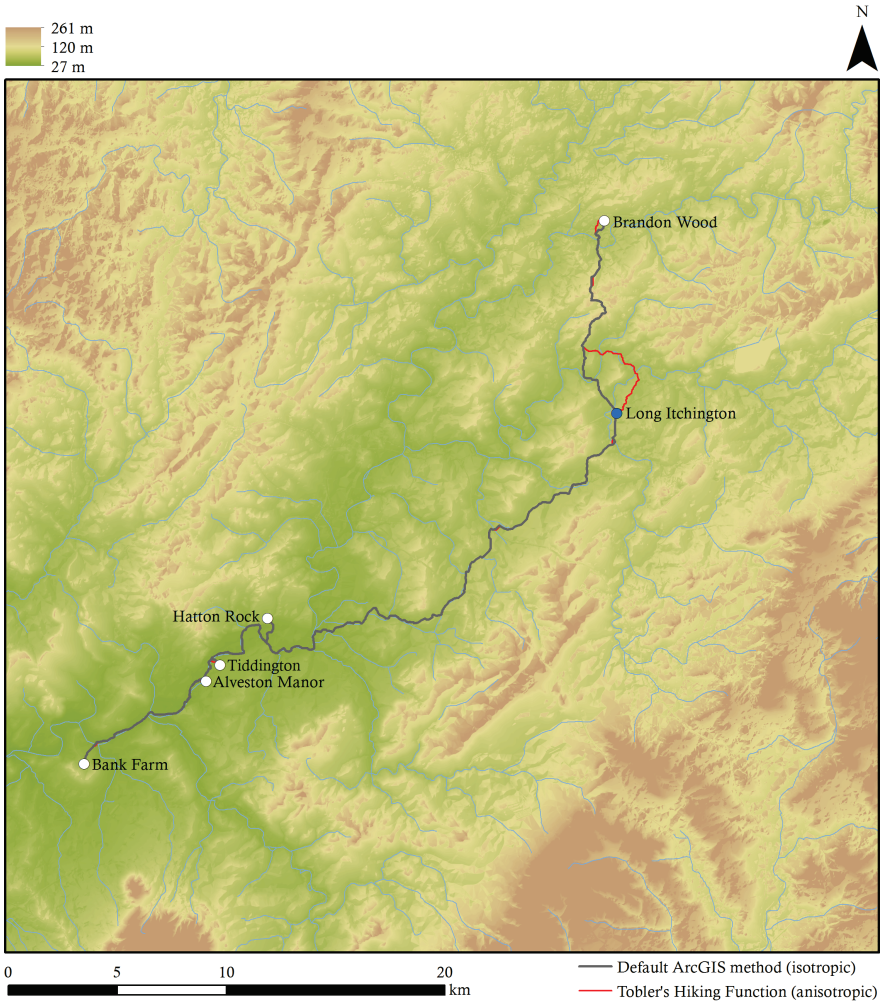



*Figure 7.8:* Least-cost paths generated between Long Itchington (blue dot) and phase 2 occupation sites (blue dots) using the default ArcGIS (isotropic) and Tobler's Hiking Function (anisotropic) methods (*contains Ordnance Survey data © Crown copyright and database right 2017*).

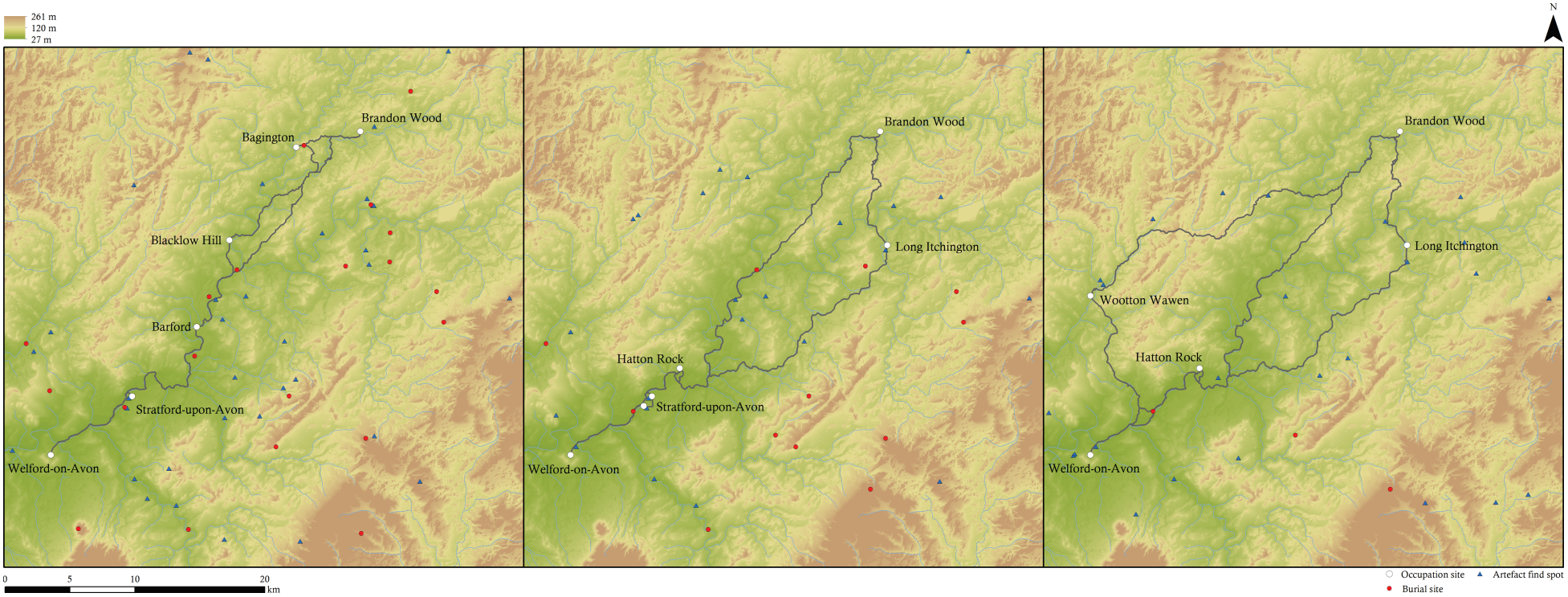



*Figure 7.9:* Least-cost paths generated between contemporary occupation sites for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively (*contains Ordnance Survey data © Crown copyright and database right 2017*).

network visualisation, undertaken as a prelude to the programme of regional-scale analysis that follows (*Figure 7.9*). Two important points of discussion emerge from this analysis. It can first of all be noted how the importance of riverine transport is emphasised in the results. Indeed, the influence of the Warwickshire Avon and its tributaries on the spatial configuration of archaeology in the region appears considerable. Viewed in this way, the significance of Hatton Rock and Long Itchington's position within an important riverine communication corridor should be emphasised. As identified in other case studies (e.g. **6.2.3**), it is also interesting to note how several of the least-cost paths run in close proximity to burial sites and artefact find spots. In these instances it is possible to infer occupation without excavated settlements, thereby suggesting a more extensive network of settlements. This is best evidenced in phase 1, where a pattern of dispersed occupation centres running the length of the Avon is revealed. The implication of this, explored below, is that the regional settlement pattern was somewhat linear and configured in reference to the Avon more so than other natural features.

## 7.3 THE REGIONAL PERSPECTIVE

### 7.3.1 *Regional sequence*

While the chronological seriation described above (**7.1.4**) was principally undertaken to help phase the regional dataset (*Table 7.2*), a secondary aim was to consider the level of archaeological activity in the region over time. As noted in **3.3.5**, this was achieved by calculating the number of 'active' sites for each twenty-five-year time segment in the seriation data matrix (*e-Appendix 2d*) and then visualising the results as a line graph (*Figure 7.10*). Overall, the results suggest that the level of archaeological activity increases dramatically from the mid-fifth to sixth centuries, decreases significantly in the early seventh century and continues to decline until the end of the study period. Although the extremes are smoothed somewhat when indeterminate stray finds are excluded, the overall pattern remains broadly similar. This suggests that these sites do not significantly skew the underlying trend.

The results raise some interesting points of discussion. As established previously (see **4.3.1** and **5.3.1**), the sharp rise in 'active' sites from AD 450 is likely due to (a) the way the data were recorded and (b) the genuine rarity of early fifth-century archaeology. That the level of activity continues to increase throughout the fifth and sixth centuries might be taken to indicate a sustained level of migration and population growth over time, though. Quite why there is such a drop in seventh- and eighth-century activity relative to that of the fifth and sixth centuries is difficult to gauge. The general dearth of middle Anglo-Saxon archaeology in Warwickshire has been noted previously (Palmer 2011, 23), though this may be more a reflection of archaeological visibility than a genuine shift in settlement. Even so, the

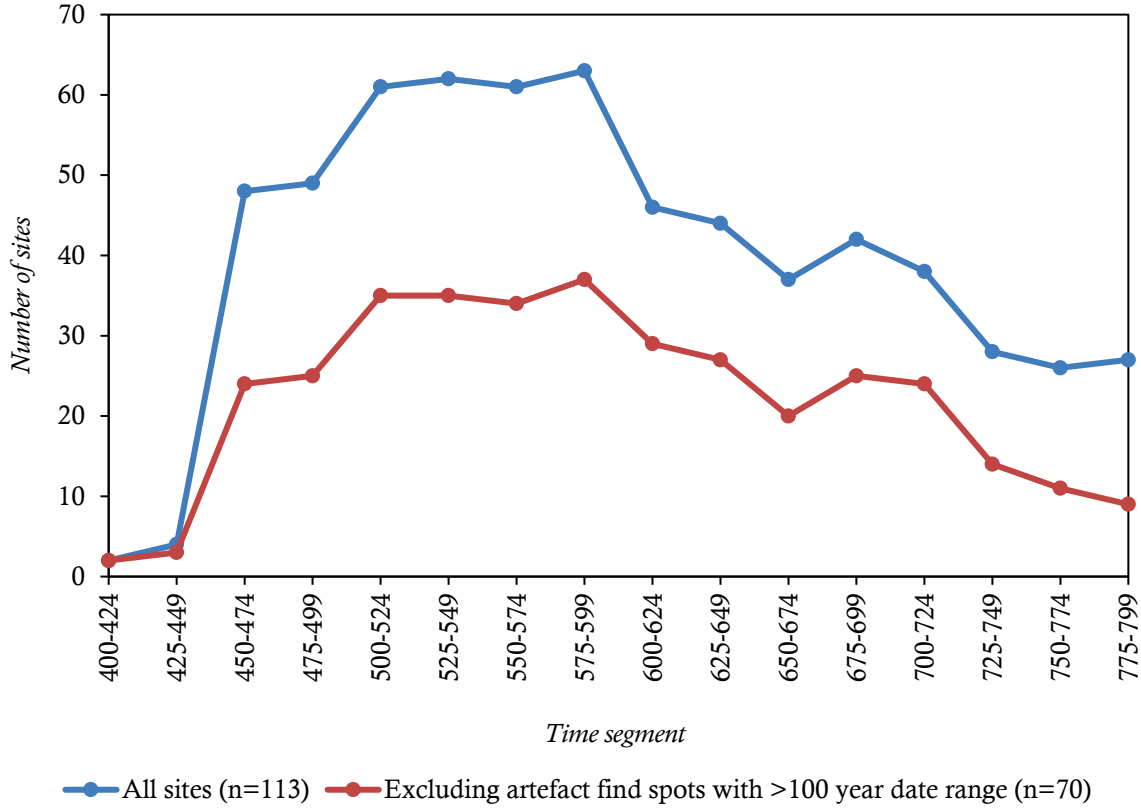



*Figure 7.10:* General activity modelling for the regional dataset, based on the results of the chronological seriation.

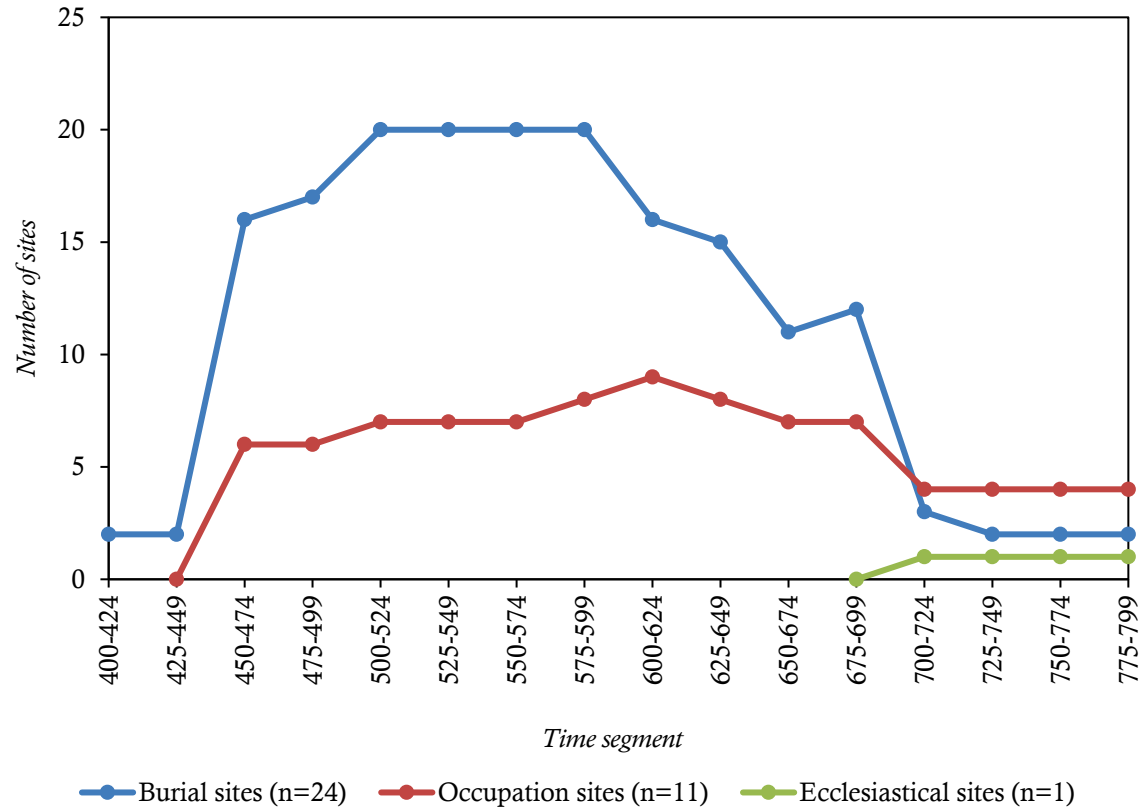



*Figure 7.11:* Specific activity modelling for burial, occupation and ecclesiastical sites in the regional dataset, based on the results of the chronological seriation.

lack of seventh-century burial sites is notable, especially when compared with the previous case study (**6.3.2**). The relatively small number of late seventh- and eighth-century stray finds is also conspicuous.

Looking beyond these general trends, the results were filtered to consider the burial, occupation and ecclesiastical site types separately (*Figure 7.11*). Beginning with the burial sequence, the number of 'active' sites can be seen to increase substantially during the period AD 450-525, plateau until *c.* AD 600 and then steadily decline throughout the seventh and early eighth centuries. In this it is encouraging that Ford's (1996, 96) analysis of the burial evidence from the wider Avon Valley identified a similar sequence. Occupation sites appear considerably less variable by comparison, with the number of 'active' sites being more or less consistent during AD 450-700 and only slightly reduced thereafter. Although settlement chronologies are often of lower resolution than those of cemeteries, the identification of a reasonably consistent and long-term pattern of occupation in the region is encouraging nonetheless. There is little to be said of the ecclesiastical sequence; Wootton Wawen (**WW_041**), the only certain church known in the region before the ninth century, is discussed below (**7.3.2**).

### 7.3.2 *Archaeological characterisation*

A consideration of the regional dataset in more explicit archaeological terms can further aid our understanding of the region. Though a moderately Romanised landscape in the fourth century (Bassett 2000, 109-10), there is very limited archaeological evidence for activity in the fifth. The only ostensibly genuine evidence for continuity in the region comes from the fourth-seventh-century cemetery at Wasperton (**WW_116**), which was discussed above (**7.2.1**). Aside from this albeit rather crucial site, activity that can be confidently dated to the fifth century is extremely scarce. A lone burial discovered in 1914 at Clopton (**WW_042**) seems likely, being buried with an early penannular brooch likely dating to *c.* AD 425-500 (Smith 1915). A fifth-century supporting-arm brooch, presumably from a ploughed-out grave, is also known from Grandborough (**WW_056**). It also seems likely that that some, if not most, of the *c.* 60 cremations excavated at Baginton (**WW_013**) dated from the fifth century, but the poor state of publication makes this difficult to argue with confidence (Leeds 1935). Further afield, Ford (1996, 66-8) has argued for a degree of contemporaneity between the Romano-British and Anglo-Saxon cemeteries at Stretton-on-Fosse, located some 5 km beyond the southern extent of the study region. Overall, the limited and scattered nature of the evidence makes it difficult to characterise the region during the fifth century.

By comparison, sixth-century material is of far greater quantity. Occupation is attested by lone SFBs at Baginton (**WW_012**), Brandon Wood (**WW_028**) and Barford (**WW_016**),

all of which were encountered during commercial excavations (Wilkins 1975; Bateman 1978; Palmer 2010a). Considerable settlement activity is further demonstrated by the various sites identified at Stratford-upon-Avon (**WW_001**, **WW_002**, **WW_007** and **WW_102**), which were discussed above. Occupation can also be inferred from a 2005 evaluation near Welford-on-Avon (**WW_014**), where pits containing early-middle Anglo-Saxon midden material were encountered (Hood 2005). Various burial sites help furnish the landscape, though most were excavated during the nineteenth century and have varying degrees of publication. One of the best known is Alveston Manor (**WW_006**), where a total of thirty-eight cremations and seventy-seven inhumations, mostly sixth-century in date, have been excavated since the 1930s (Meaney 1964, 262-3; Wilson and Moorhouse 1971, 134; Webster and Cherry 1972, 164; Ford 1996, 62-8; Caffell and Holst 2007). Of particular interest is the evidence for a possible pagan temple at Blacklow Hill (**WW_020**). Excavations in 1971 encountered two large enclosures, one rectangular and one circular, within which were two burials and some 270 pits (Webster and Cherry 1972, 164). Although mostly unpublished and of largely uncertain chronology, a late sixth- or early seventh-century seax found in the northernmost grave could make the site contemporary with other probable pagan temple sites, such as Slonk Hill in Sussex and Building D2 at Yeavering (Blair 1995, 18-19; Ford 1996, 69-70). By the mid-late sixth century, then, it appears that there were several communities – perhaps with changeable degrees of wealth and influence – operating within the landscape.

Our knowledge of activity in the later seventh and eighth centuries is hindered by a general scarcity of evidence in the region. Indeed, Simon Palmer, one of county's most experienced excavators, has described the middle Anglo-Saxon period in Warwickshire as '*nigh-on invisible*' and notes how '*the only way of finding it is by scientific dating*' (Palmer 2011, 23). The application of radiocarbon dating to a pair of otherwise undated burial sites illustrates this point well. Sixteen unfurnished inhumations were encountered during flood compensation works at Centenary Gardens (**WW_032**) in Stratford-upon-Avon (Capon 2008; Ives 2010). As shown in *Table 7.3*, radiocarbon samples from two of the burials returned late seventh to early ninth-century date ranges. More precisely, a date in the period *c.* AD 650-750 seems likely given the non-normal distributions of the samples: *cal AD 665-779* (78.4% probability) for SUERC-28369 and *cal AD 655-710* (53.6% probability) for SUERC-28370 (*Figure 7.12*). Ridge House (**WW_103**), located between the villages of Ratley and Arlescote, offers similarly important radiocarbon evidence for an unfurnished (and otherwise undated) burial site (Palmer 2011). Here, samples from two of the four skeletons encountered returned fairly broad ranges (*Table 7.3*). As with Centenary Gardens, though, the recalibration identified non-normal distributions that allow for a more precise estimation (*Figure 7.13*). A

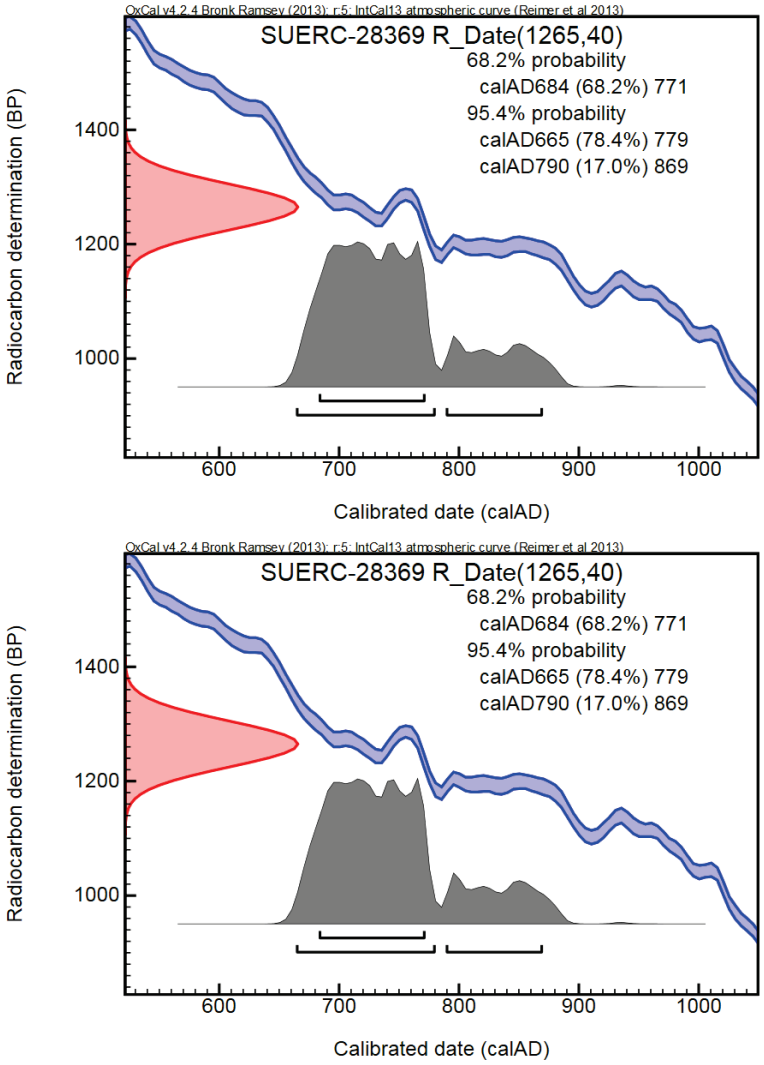



*Figure 7.12:* Recalibrated radiocarbon dates from Skeletons 4/016 and 4/036 at Centenary Gardens, Stratford-upon-Avon (data from Ives 2010, 69-72).

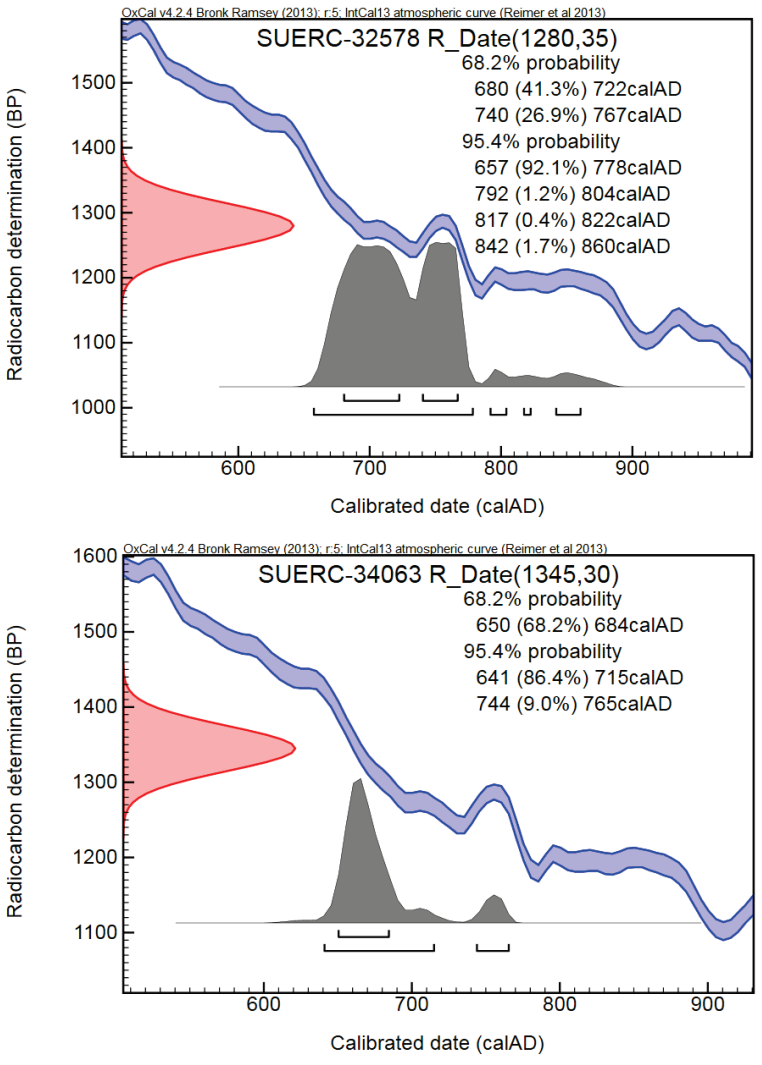



*Figure 7.13:* Recalibrated radiocarbon dates from Skeletons 3 (top) and 1 (bottom) at Ridge House, Ratley and Upton (data from Palmer 2011, 22-3).

date in the later seventh or eighth centuries therefore seems likely given ranges of *cal AD 657-778* (92.1% probability) for SUERC-32578 and *cal AD 641-715* (86.4% probability) for SUERC-34063.

Beyond Hatton Rock and Long Itchington, the settlement record is also rather meagre. The only definite ecclesiastical foundation known from the region is at Wootton Wawen (**WW_041**), which is attested in a charter of Æthelbald (S 94) and which may have been partly revealed during excavations in the 1970s (Gem 1971; Radford 1979; James 1982). As was noted in **2.4.2**, the apsidal structure (Building J) at Hatton Rock could represent a similarly early church (Rahtz 1970, 142). Further afield, there appears to have been an important middle Anglo-Saxon settlement just beyond the western edge of the study region at Bidford-on-Avon. Here, a very large mixed-rite cemetery of sixth-seventh-century date appears to have been a focus for subsequent settlement activity, with large numbers of coin finds indicating an important 'productive site' (Humphreys et al. 1923; 1925; Naylor and Richards 2010; Dyer 2012, 95-7; Laight and Metcalf 2012).[124]

### 7.3.3 *Exploratory spatial analysis*

With the archaeological and chronological context of the region adequately considered, it is now appropriate to undertake more empirical forms of analysis. As with the other case studies, this section details the results of various spatial techniques undertaken to explore and model the dataset. The extent to which environmental factors influenced the pattern of archaeological activity was explored using two different approaches (**3.4.2**). The first used the 'Generate Near Table' ArcGIS function to calculate the distance between each site in the dataset and its nearest river. Given that the region effectively centres on a major river valley, it is perhaps unsurprising that almost all sites are found in very close proximity to a river (*Figure 7.14*). Indeed, 89.31% of sites are positioned less than 1 km away and just 10.69% are situated at distances of 1-2 km.[125] From this we can conclude that access to freshwater sources was a major spatial influence for early medieval activity in the region.

The second approach considered how soil quality might also have influenced site distribution. This used a readily accessible soil quality index, the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002), to gauge whether the distribution of sites favoured high-quality soils. As shown in *Figure 7.15* and *Table 7.4*, this appears to have been the case. While Grade 3 (good-moderate) soils make up the majority

[124] There are convincing reasons to view Bidford as having been part of the Droitwich salt industry, perhaps as a distribution centre (Maddicott 2005, 46-8). The implications of this for the wider study region are discussed in **7.4.1**.

[125] It is worth mentioning that the correlation between site location and freshwater sources identified in this region is the strongest of the four considered in this thesis (**8.1.3**).

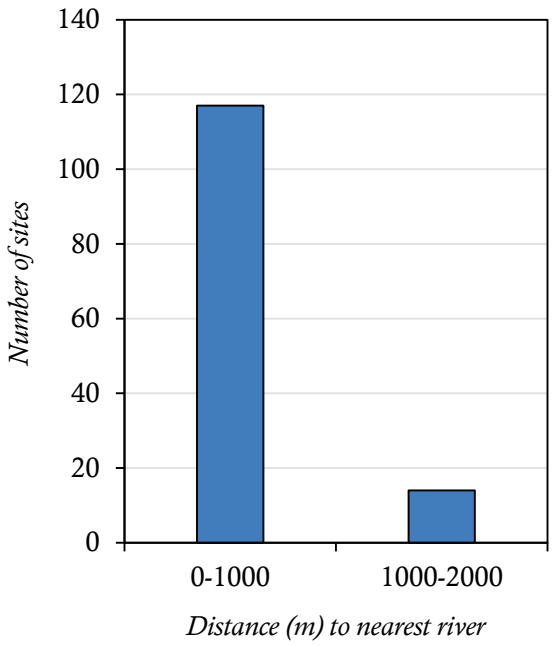



*Figure 7.14:* A histogram showing the distance between sites and their nearest watercourse, calculated using the regional dataset in its entirety (n=131).

of the land surface, it is perhaps telling that there are far more sites found in Grade 2 (very good) soils than there are in Grade 4 (poor) and Grade 5 (very poor) areas. This demonstrates a largely intuitive though nonetheless significant trend observed in all four case studies: that site placement appears to have favoured higher-quality soils over poorer-quality ones. Taking both sets of results into account, it is possible to argue for a degree of environmental determinism in the distribution of sites in the region. Put simply, activity appears to have been structured around areas that were (a) close to a river and (b) of good fertility. This is not to suggest that social and symbolic factors did not also play an important role, of course, but that river proximity and soil quality were significant influences in the spatial configuration of early medieval activity in the region seems undeniable.

Attempts were also made to explore spatial patterning in the dataset using statistical methods. This included the Average Nearest Neighbour statistic, a technique that measures the probability of a spatial dataset exhibiting spatial clustering, dispersion or randomness (**3.4.3**). The analysis was run for each phase of the regional dataset, with separate iterations based on whether artefact find spot sites were included or omitted. The results are presented in *Table 7.5* and *Figure 7.16*. Overall, the results are somewhat mixed. When artefact find spot sites were included, the results from the three phases are variable. Significant spatial clustering is indicated by the z-score of -2.226763 for phase 1, but the z-scores of -1.211227 for phase 2 and -1.110279 for phase 3 do not appear significantly different than random. The results were similarly inconsistent when artefact find spot sites were excluded. The z-scores of 0.295798 for phase 1 and 1.457283 for phase 2 indicate a random spatial pattern

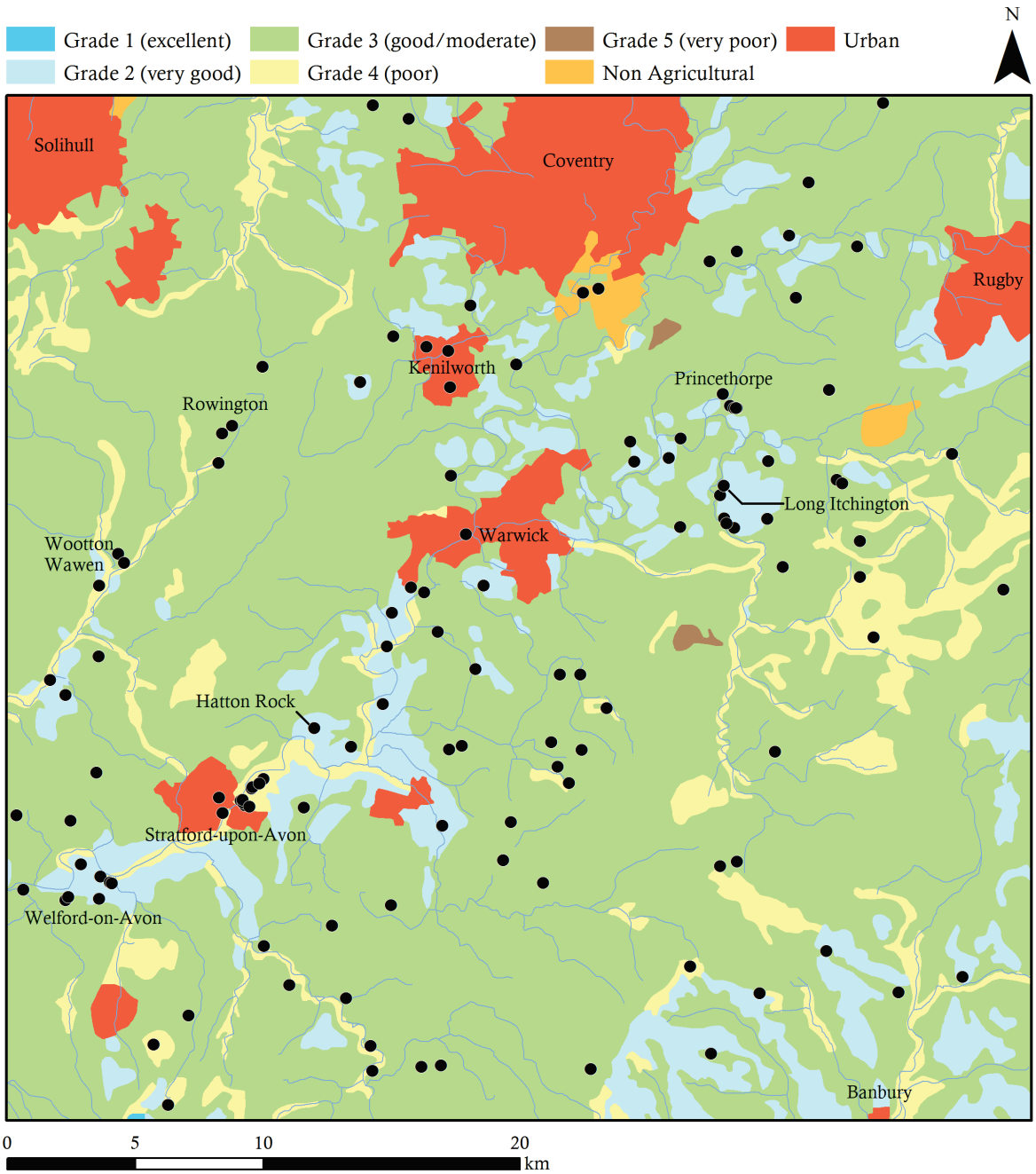



*Figure 7.15:* The distribution of the regional dataset in relation to the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002). Hatton Rock and Long Itchington are labelled for reference.

| | Land surface coverage |
|---|---|
| Grade 1 (excellent) | 0.01% |
| Grade 2 (very good) | 10.52% |
| Grade 3 (good to moderate) | 72.50% |
| Grade 4 (poor) | 7.47% |
| Grade 5 (very poor) | 0.12% |
| Non Agricultural | 0.62% |
| Urban | 8.76% |

*Table 7.4:* The overall quality of land within the study region as recorded in the 1988 *Agricultural Land Classification of England and Wales* (MAFF 1988; Natural England 2002).

| | Measure | Phase 1 (n=63) | Phase 2 (n=42) | Phase 3 (n=35) |
|---|---|---|---|---|
| All sites | Observed Mean Distance (m) | 2040.5137 | 2396.3923 | 2544.0841 |
| | Expected Mean Distance (m) | 2391.1716 | 2655.8547 | 2820.8038 |
| | Nearest Neighbour Ratio | 0.853353 | 0.902305 | 0.901900 |
| | z-score | -2.226763 | -1.211227 | -1.110279 |
| | p-value | 0.025963 | 0.225808 | 0.266879 |
| | Interpretation | Clustered | Random | Random |

| | Measure | Phase 1 (n=28) | Phase 2 (n=19) | Phase 3 (n=8) |
|---|---|---|---|---|
| Excluding artefact find spots | Observed Mean Distance (m) | 3168.0088 | 3723.0955 | 7503.8774 |
| | Expected Mean Distance (m) | 3078.0665 | 3169.2455 | 4545.3949 |
| | Nearest Neighbour Ratio | 1.029220 | 1.174758 | 1.650875 |
| | z-score | 0.295798 | 1.457283 | 3.521869 |
| | p-value | 0.767384 | 0.145038 | 0.000429 |
| | Interpretation | Random | Random | Dispersed |

*Table 7.5:* The results of the Average Nearest Neighbour Analysis. The p-value and z-score numbers are explained in *Figure 7.16* below.

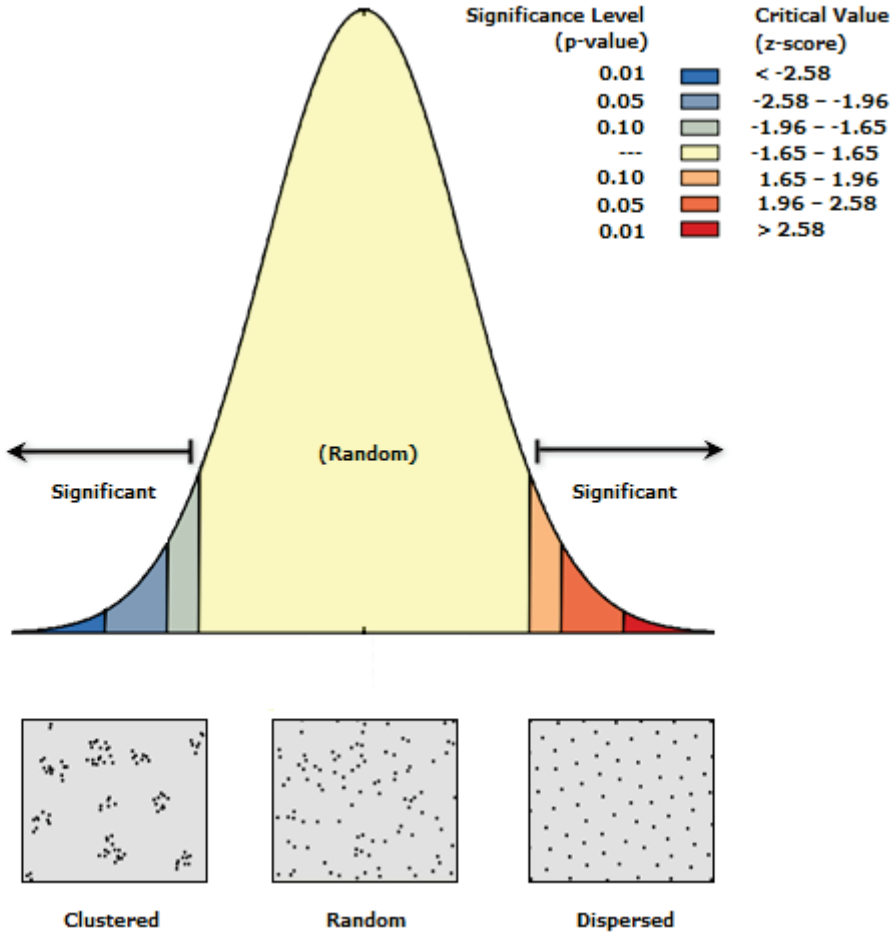



*Figure 7.16:* A visual summary of the Average Nearest Neighbour statistic. The p-value and z-score numbers in the top-right of the image are absolute benchmarks to compare the numbers in *Table 7.5* against.

whereas the z-score of 3.521869 for phase 3 demonstrates statistically highly significant spatial dispersion (p-value <0.001). Given the level of variability demonstrated in the six sets of results, it is difficult to offer a clear interpretation. It is therefore sensible to conclude that the regional dataset does not exhibit obvious spatial patterning.

A spatial statistic known as Ripley's K-Function was used as an alternative means of exploring the spatial characteristics of the dataset. Introduced in **3.4.4**, this multiscalar technique determines whether data points exhibit statistically significant spatial clustering or dispersion across multiple distance intervals. The analysis was undertaken for each phase of the dataset. As shown in *Figure 7.17*, the results are somewhat mixed. Phase 1 sites exhibit significant clustering (exceeding the 95% confidence envelope) at distances ≤3500 m, moderate clustering (within the 95% confidence envelope) at distances ≤17750 m and moderate dispersion (within the 95% confidence envelope) at distances >17750 m. The results for phase 2 sites demonstrate significant clustering (exceeding the 95% confidence envelope) at distances ≤1750 m, moderate clustering (within the 95% confidence envelope) that almost touches the blue line at distances ≤5000 m, very moderate clustering at distances ≤14000 m and moderate dispersion (within the 95% confidence envelope) at distances >14000 m. The clearest results come from phase 3 sites, which exhibit moderate clustering (within the 95% confidence envelope) at distances ≤6250 m and moderate dispersion (within the 95% confidence envelope) at distances >6250 m. As with the Average Nearest Neighbour analysis, then, the combined results suggest that the dataset is neither significantly clustered nor dispersed. Indeed, one need only compare *Figure 7.17* with *Figure 6.15* to appreciate the lack of obvious spatial patterning in the present study region.

Considering the results of both the Ripley's K-Function analysis and the Average Nearest Neighbour statistic, it is clear that the dataset is mostly without an identifiable spatial structure, and even where one is observable it is not especially pronounced. This is not to suggest that the spatial characteristics of the dataset do not change over time, however. Indeed, both statistics indicate that phase 1 sites tend more towards spatial clustering whereas phase 3 sites exhibit moderate dispersion. Even so, it is difficult to make tangible inferences about the archaeology of the region from these disparate results. This is to a certain extent exacerbated by the comparatively overt spatial patterning identified in the other three study regions (**8.1.3**). Though little can be offered by way of conclusion, it is at least possible to view the region as being characterised more by reasonably continuous settlement than particularly distinct occupational foci. In this we might consider the overall settlement pattern as essentially linear and perhaps spatially articulated with reference to the Avon.

Despite these mixed results, a final attempt was made to characterise the spatial structure of the dataset. This used a technique known as Kernel Density Estimation to consider

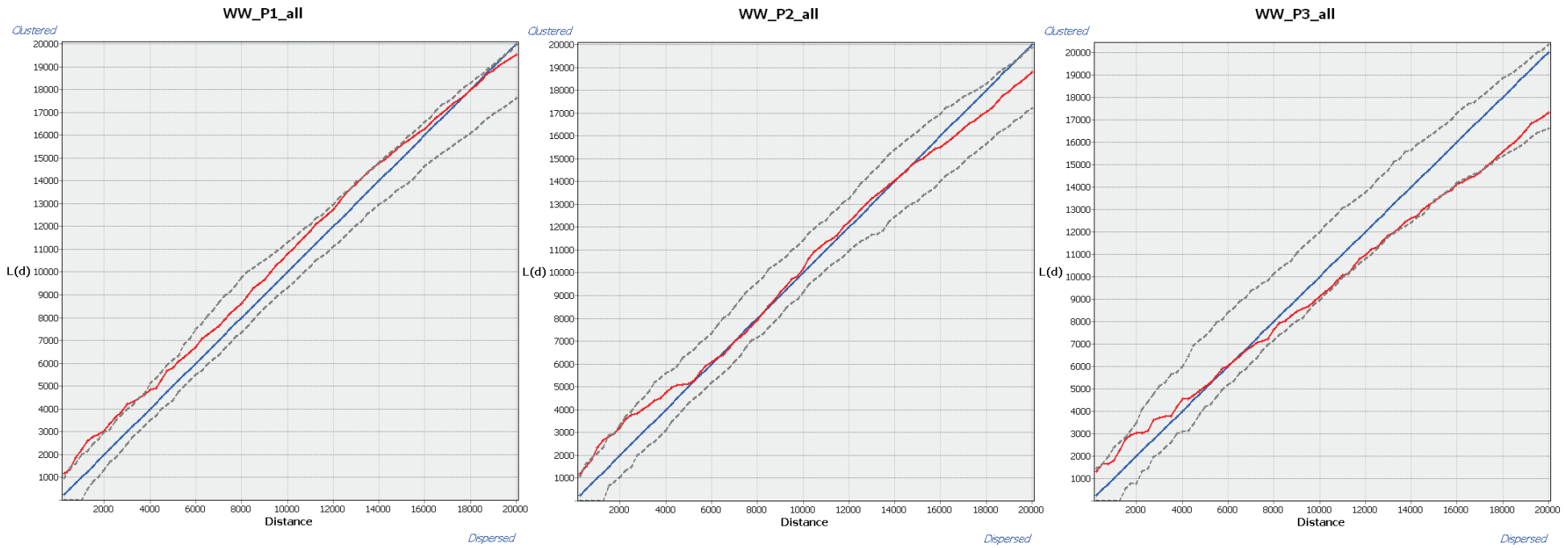



*Figure 7.17:* Ripley's K Function analysis for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively. The blue line indicates a random distribution, the dashed lines show the 'confidence envelope' created from 999 random permutations and the red line plots the actual observations. Where the red line extends above or below the confidence envelope indicates statistically significant spatial clustering or dispersion respectively.

the relative density of sites in the region (**3.4.5**). As with previous case studies, it was felt beneficial to first obtain some basis for comparison. This was achieved by running the analysis on two datasets. The first, a dataset of 1213 sites obtained from the *Archaeological Investigations Project* (AIP), was used to gauge the distribution of archaeological interventions in the region.[126] As shown in *Figure 7.18*, areas of high density are primarily found along the length of the Warwickshire Avon. This is perhaps to be expected given the location of modern population centres, but it does mean that the Arden and Feldon areas appear less active or 'colder' by comparison. The dataset of 3532 Roman-period sites described above (**7.1.2**) was used for the second round of analysis. As a period-specific comparative, the results demonstrate a spatial pattern that is noticeably less concentrated on the Avon (*Figure 7.19*). Also different are some of the 'cold' spots, with areas of low density in the north and east fringes of the region. Despite these subtle trends, there is considerable similarity between the two visualisations. Put simply, the results allude to a patchwork of localities interspersed among a more continuous spread of activity; not clustered, certainly, but not necessarily exhibiting a clearly dispersed spatial pattern either.

With these direct comparatives in hand, we can now consider the fifth-eighth-century dataset. Calculated for each phase, the Kernel Density Estimation revealed a rather different set of results (*Figure 7.20*). The significantly reduced size of the dataset notwithstanding, it is far easier to isolate spatially distinct 'hot spots' from the much larger 'cold' areas. Though not as obviously clustered as other case studies (e.g. compare *Figure 7.20* with *Figure 6.18*), it is possible to gauge the relative importance of certain localities over time. The distribution of phase 1 sites is densest in the vicinity of the Stratford-upon-Avon, Chesterton, Warwick and Long Itchington localities. Alderminster and Aston Cantlow also appear reasonably important at this point. The significance of Stratford-upon Avon, Warwick and Long Itchington continues into phase 2 but the overall distribution becomes somewhat more dispersed. By virtue of the greater distance between them, the clustering of phase 3 sites is the most obvious. Dense activity around Long Itchington continues, but the once distinct clusters in the centre and south-west of the region appear to coalesce into a more continuous band of moderately high activity, with a clear focus on Welford-on-Avon. Clusters can also be identified either side of the Avon Valley, in the Arden and Feldon. Overall, the pattern of fifth-eighth-century activity in the region – at least as it can be understood from this specific visualisation – seems much less static than previous case studies. In this there is a linear trend along the Avon, with the importance of certain localities appearing to shift over time.

[126] The AIP online database (https://csweb.bournemouth.ac.uk/aip/) was accessed on 4th September 2016 and data downloaded using the 'Export Query to Excel' function.

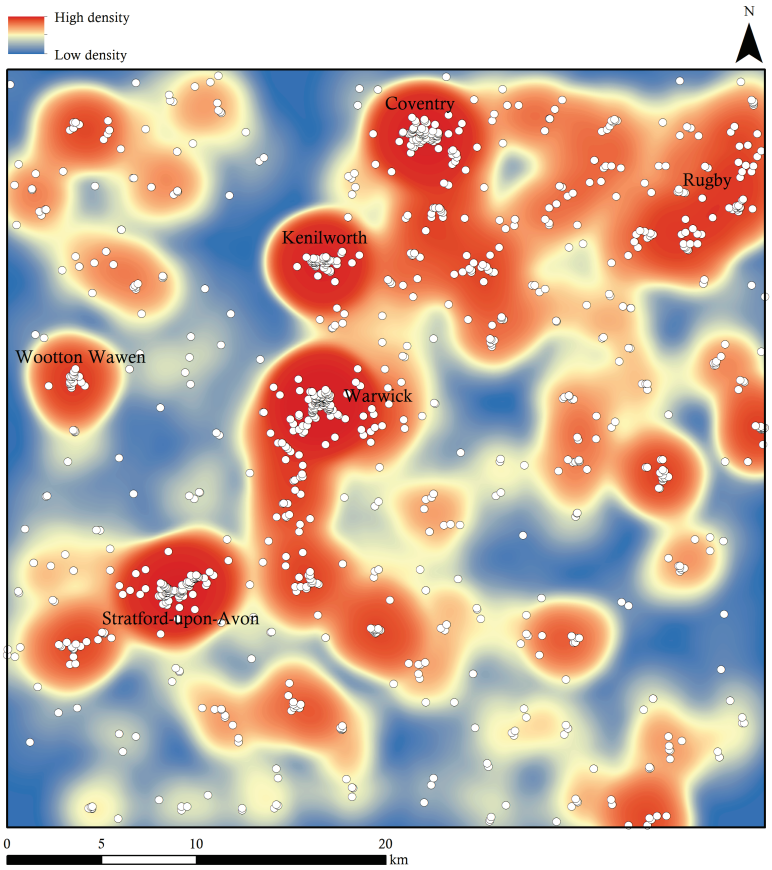



*Figure 7.18:* A Kernel Density Estimate using the AIP dataset (n=1213) and visualised using the 'Histogram Equalize' option (see **3.4.5**).

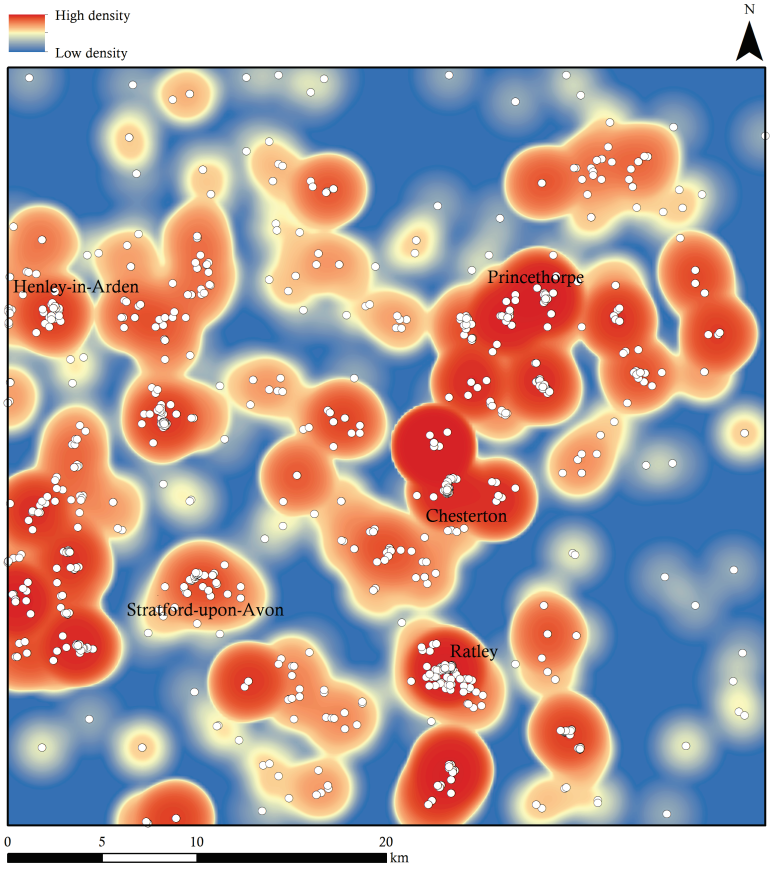



*Figure 7.19:* A Kernel Density Estimate using the Roman dataset (n=3532) and visualised using the 'Histogram Equalize' option (see **3.4.5**).

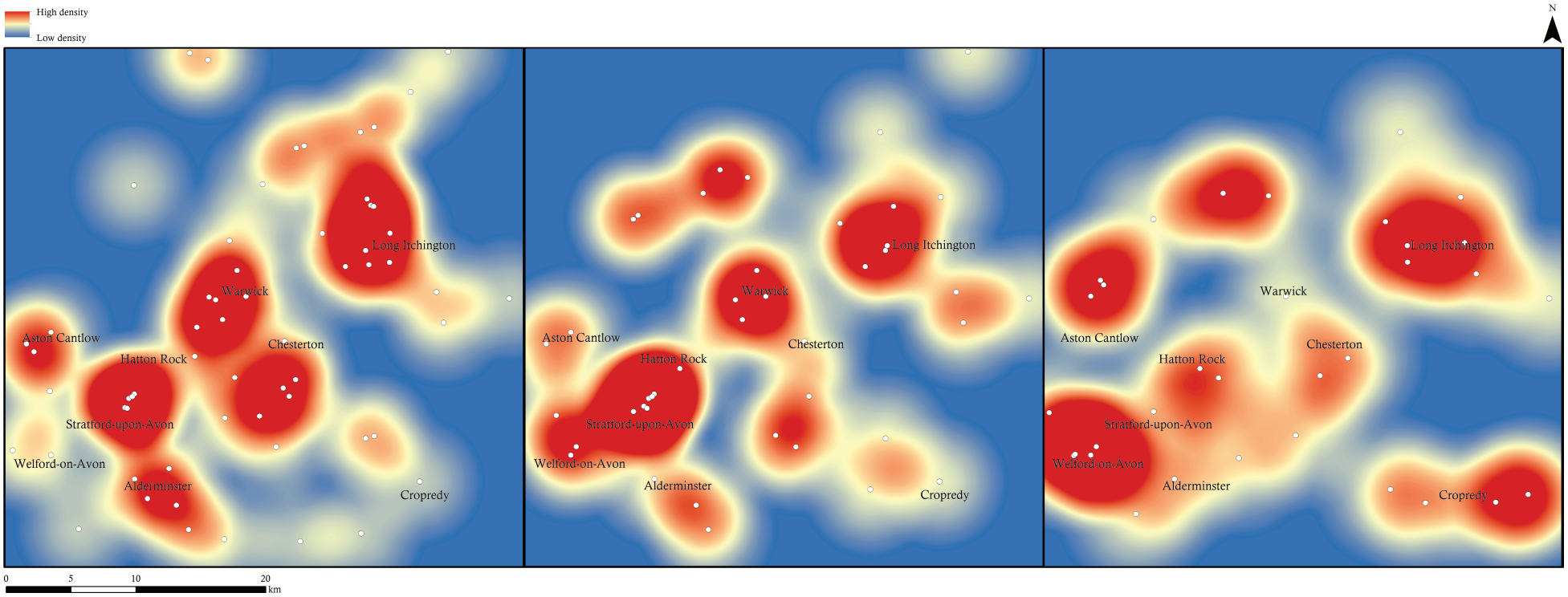



*Figure 7.20:* Kernel Density Estimates for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively. The results are visualised at 1.5 standard deviations (see **3.4.5**).

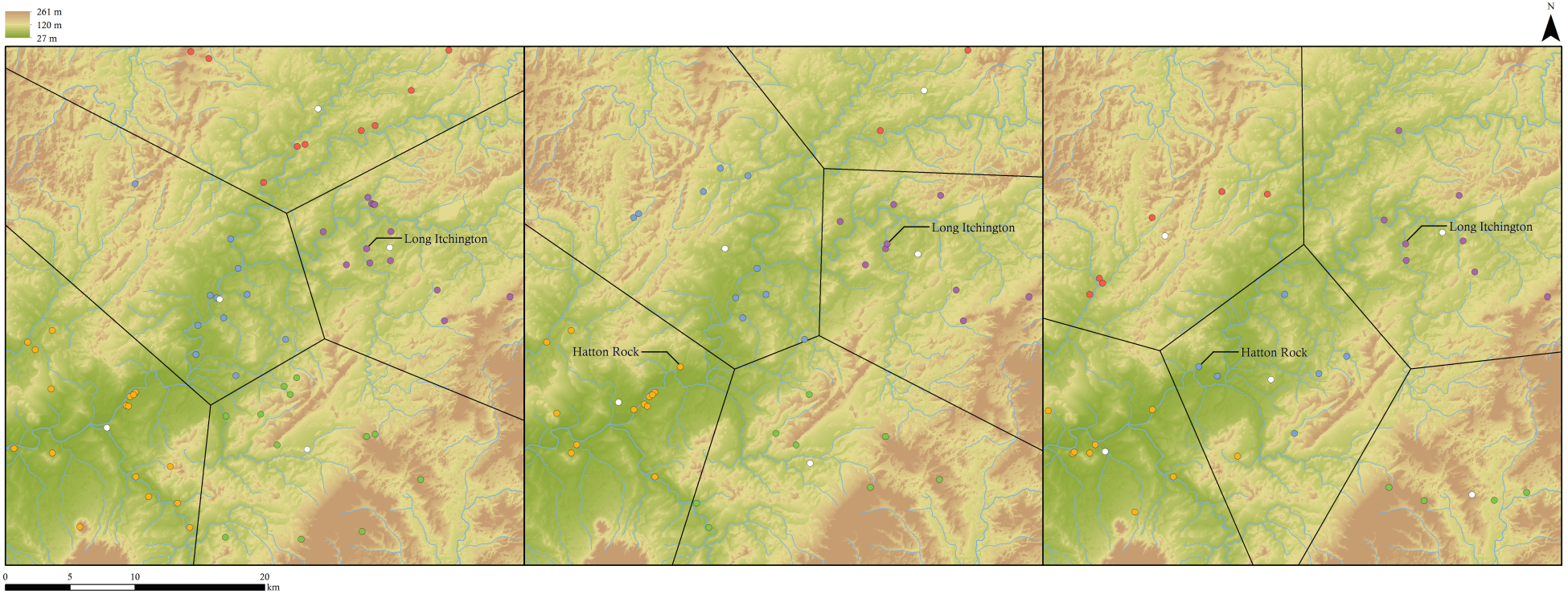



*Figure 7.21:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively. The model was created using Voronoi Tessellation of the group centres identified in the Grouping Analysis (white dots). Sites are represented by coloured dots, with the colour representing group membership as defined by the Grouping Analysis (*contains Ordnance Survey data © Crown copyright and database right 2017*).

The results of the various analyses presented in this section allow us to make some tentative conclusions about the spatial characteristics of early medieval archaeology in the region. While the results of the spatial statistics were somewhat mixed, more visual analyses identified the Warwickshire Avon as a major spatial influence. Indeed, it is significant to note that the regional dataset features the greatest overall proximity to rivers of any case study in this thesis (**8.1.3**). Beyond this seemingly linear trend a number of important localities can be identified, though their archaeological significance appears to shift over time. Germane to our present focus is the realisation that activity was reasonably dense in the vicinity of Long Itchington and, to a lesser extent, Hatton Rock.

### 7.3.4 *Territorial modelling*

In previous case studies, where there was generally convincing evidence for spatial clustering and geographic zoning, undertaking a programme of territorial modelling was a logical extension of the analytical process. Given that the results of the exploratory spatial analysis in this case study were somewhat mixed (**7.3.3**), there is perhaps less reason to do so here. In the interests of methodological consistency, however, the programme is nevertheless attempted. The ensuing section should therefore be taken as highly tentative – more an analytical experiment than a serious attempt to model territoriality and social organisation in the region. Adopting the same approach as before, the analysis began with an attempt to identify spatial groupings in the regional dataset. This used the 'Grouping Analysis' function in ArcGIS as outlined in **3.4.6**. Since the researcher must predetermine the number of spatial groups to identify for this technique to be successful, iterations of the analysis were computed with the number of groups set to four, five and six. Though none were a particularly good fit for the data, the five-group solution was the most topographically realistic and was therefore used as the basis of the territorial modelling presented below.

The territorial modelling was approached in three analytically distinct ways. The first used Voronoi Tessellation to delineate spatial zones (**3.5.4**). This relatively simple technique calculates a series of polygons around point data, in this case the geographic centre of each group identified in the Grouping Analysis. The calculation works according to the principle of equidistance, meaning that the boundary between two entities is defined by the midpoint between their respective centres. Calculated for each phase of the regional dataset, the results are visualised in *Figure 7.21*. Arguably the most significant result is that of the phase 3 reconstruction, which roughly divides the landscape into Arden, Feldon and upper, middle and lower Avon territories. This seems the most geographically plausible of the reconstructions, though is perhaps somewhat arbitrary. Another interesting observation is that, during phase 2, both Hatton Rock and Long Itchington are situated at the edges of

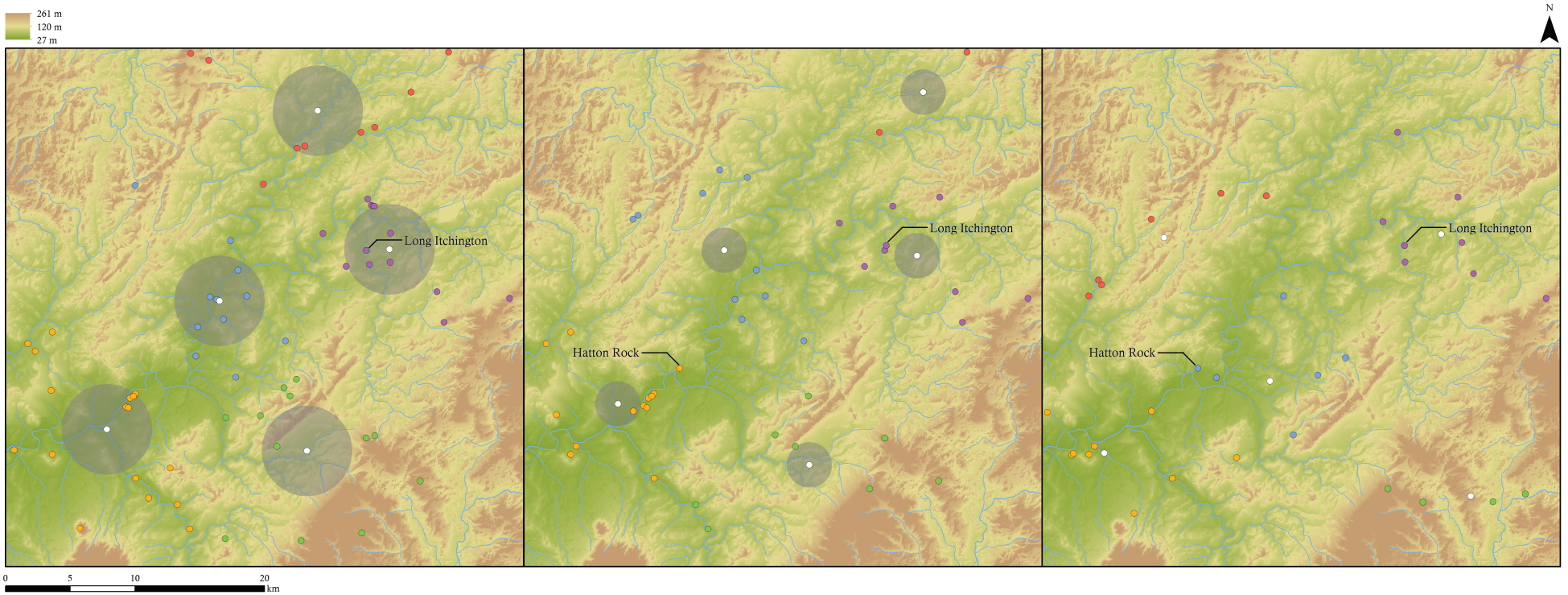



*Figure 7.22:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively. The model was created by calculating buffer zones around the group centres identified in the Grouping Analysis (white dots). The extent of buffer zones was informed by the results of the Ripley's K Function analysis. Sites are represented by coloured dots, with the colour representing group membership as defined by the Grouping Analysis. Note: Phase 3 sites did not exhibit statistically significant spatial clustering so buffer zones could not be calculated (*contains Ordnance Survey data © Crown copyright and database right 2017*).

their hypothetical territories (orange and purple respectively). This accords with the seemingly peripheral position of the two sites when viewed from a broader geopolitical perspective (**7.4.2**). Ultimately, the exercise illustrates some of the issues one faces in identifying distinct territorial units from a mostly continuous spread of activity along the Avon; the results are plausible, though not especially convincing.

The second approach made use of the 'Buffer' function in ArcGIS (**3.5.5**). Simply put, the function calculates spatial zones around point data of a size specified by the user. Throughout the thesis the size of spatial zones has been inferred by the results of the Ripley's K-Function statistic, specifically the distance at which sites ceased to exhibit statistically significant spatial clustering. This worked remarkably well in the previous case study (**6.3.4**) but was a qualified failure in others (**4.3.4** and **5.3.4**). As shown in *Figure 7.22*, the results for the present case study fall into the latter group. Due to the inconsistency of the Ripley's K-Function results, buffer zones were calculated at radiuses of 3.5 km for phase 1 and 1.75 km for phase 2; the analysis was not run for phase 3 sites as they did not exhibit statistically significant spatial clustering. While the results for phase 1 could be seen to demarcate a 'core zone' around blue and purple sites, they make little sense for the others. The buffer zones calculated for phase 2 sites are likewise mostly unhelpful. Overall, then, the results fail to present a plausible reconstruction. The spatial model cannot therefore be considered a useful contribution to our knowledge of the region.

The third and final approach used standard deviational ellipses to demarcate activity areas. Using the 'Directional Distribution (Standard Deviational Ellipse)' function in ArcGIS, this process involved two calculations: first, the x and y coordinates of all data points in a group were averaged to determine the mean centre; then, the standard deviation of the x and y coordinates from the mean centre was calculated to define the shape of the ellipse (**3.5.6**). The resulting standard deviational ellipse reflects the spatial distribution of the data in question, with the number of standard deviations computed affecting the overall size of the ellipse. As with other case studies, 1 and 2 standard deviational ellipses were calculated for each group of sites identified in the Grouping Analysis (*Figure 7.23*). The results present an intriguing reconstruction that identifies territorial foci (dark grey) and the more liminal or contested areas between them (light grey). For a case study where it has been extremely difficult to recognise any sort of coherent spatial patterning, this is a welcome result indeed. This approach is perhaps well suited to a region like this, where the shifting importance of individual localities might be obscured by the more continuous pattern of riverine-focused settlement.

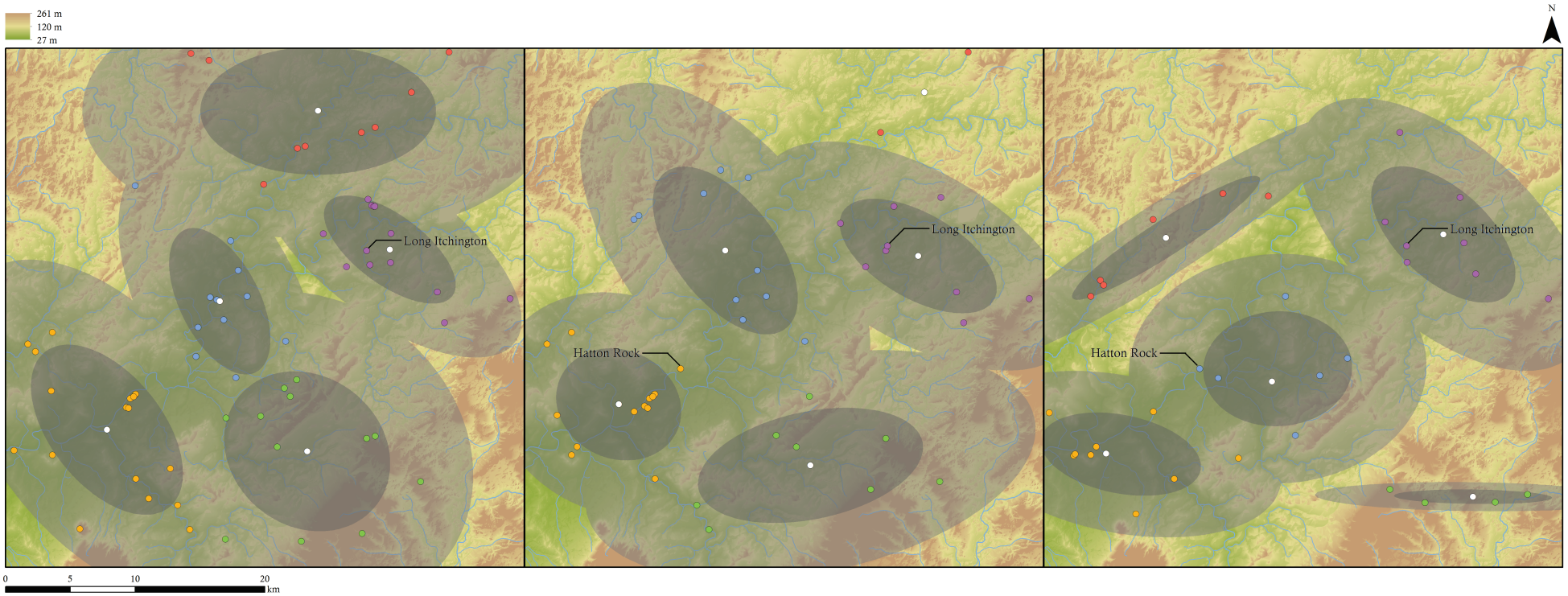



*Figure 7.23:* A hypothetical spatial model of territoriality for each phase of the regional dataset, dating to AD 400-600 (left), AD 600-700 (centre) and AD 700-800 (right) respectively. The model was created by calculating 1 and 2 standard deviational ellipses (the dark grey and light grey areas respectively) for each group of data points identified in the Grouping Analysis (coloured dots). The group centres also identified in the Grouping Analysis are represented by white dots. Note that the 'Directional Distribution (Standard Deviational Ellipse)' function requires at least three data points for accurate analysis, hence the lack of a result for phase 2 red sites (*contains Ordnance Survey data © Crown copyright and database right 2017*).

While territorial reconstruction of the sort attempted in this thesis is fraught with conceptual issues and methodological limitations, it remains an interesting – if necessarily speculative – means of investigating the spatio-temporal characteristics of archaeological data. No correlation with historical reality is assumed, of course, but from a spatial and archaeological perspective the exercise has been broadly informative. Indeed, it has been possible to identify plausible territorial scenarios from an otherwise uncertain distribution of material. Based on the results we might therefore propose loose territorial units centring on the lower, middle and upper Avon, as well as the Arden and Feldon areas.[127] More broadly, and by way of methodological evaluation, the standard deviational ellipse model can be seen as the most nuanced reconstruction when compared with the simplicity of the first model and the failure of the second.

## 7.4 DISCUSSION

### 7.4.1 *The political geography of the region*

In reviewing the findings of this study, it is appropriate to situate the evidence from the Warwickshire great hall complexes – and the region more generally – into a broader spatio-temporal and politico-historical context. Much like the preceding case study, the region appears to be something of a territorial interface between two historically documented kingdoms. Conventional reconstructions would attribute the south-western half of the region to the kingdom of the Hwicce (e.g. Hooke 1985), a political unit that was introduced more fully in the preceding chapter (**6.4.1**). The upper courses of the Warwickshire Avon instead appear to have been under Mercian influence, albeit situated beyond its putative territorial core (Brooks 1989b, 162; Welch 2001, 147-8). Of particular interest to our territorial understanding of these two entities is the evidence of diocesan boundaries. The first Mercian diocese (of Lichfield) was created by Diuma, who was installed as bishop of the Mercians and Middle Anglians after the death of Penda in AD 655 (*HE* III.24). It covered an immense area, and was subsequently broken up and reorganised during the period AD 669-90 by Archbishop Theodore (Godfrey 1962, 133-4; Sims-Williams 1990, 87-8; Blair 2005, 79-80). The Diocese of Worcester was created during this restructuring and can be considered a major landmark in the social geography of the region (Sims-Williams 1990, 63; 87-91). Although not recorded until *c.* AD 1291, there is evidence to suggest that the late medieval boundary was broadly similar to that of the late seventh century (Hooke 1985, 12-13; Bassett 1989a, 6-17). With cautious back-projection, then, it is possible to view the study region as

[127] That this middle Avon area was something of a territorial interface between Hatton Rock and Long Itchington will be considered below (**7.4.1**).

being divided in a roughly north-west to south-east fashion (*Figure 7.24*). Interestingly, the historic border between these two entities appears to have been at Warwick – the approximate midpoint between Hatton Rock and Long Itchington.

That this ecclesiastical division resembled an earlier territorial partition can be inferred from various sources. Indeed, some have argued for such a division on ethnic grounds, interpreting the historical and archaeological evidence as indicating two tribal groupings, centred on the upper and lower courses of the Avon respectively, that were reflected in the later diocesan boundaries of Worcester and Lichfield (Gelling 1992, 98; Hooke 1996, 100). This has to an extent been confirmed by Ford's (1996) quantitative analysis of the burial evidence from the Avon Valley, in which two main zones of cultural influence were identified on either side of Warwick. He interpreted the sixth-century evidence from the upper Avon as being of predominantly 'Anglian' affiliation, characterised by a high number of burials with cruciform, small-long and annular brooches, while noting how the lower Avon sites exhibited more 'Saxon' influences, as distinguished by burial with disc and saucer brooches (*ibid*, 92-6).[128] Although overt differences in material culture are less detectable in the seventh century (Welch 2001, 151), it seems likely that the diocesan boundaries drawn up in the AD

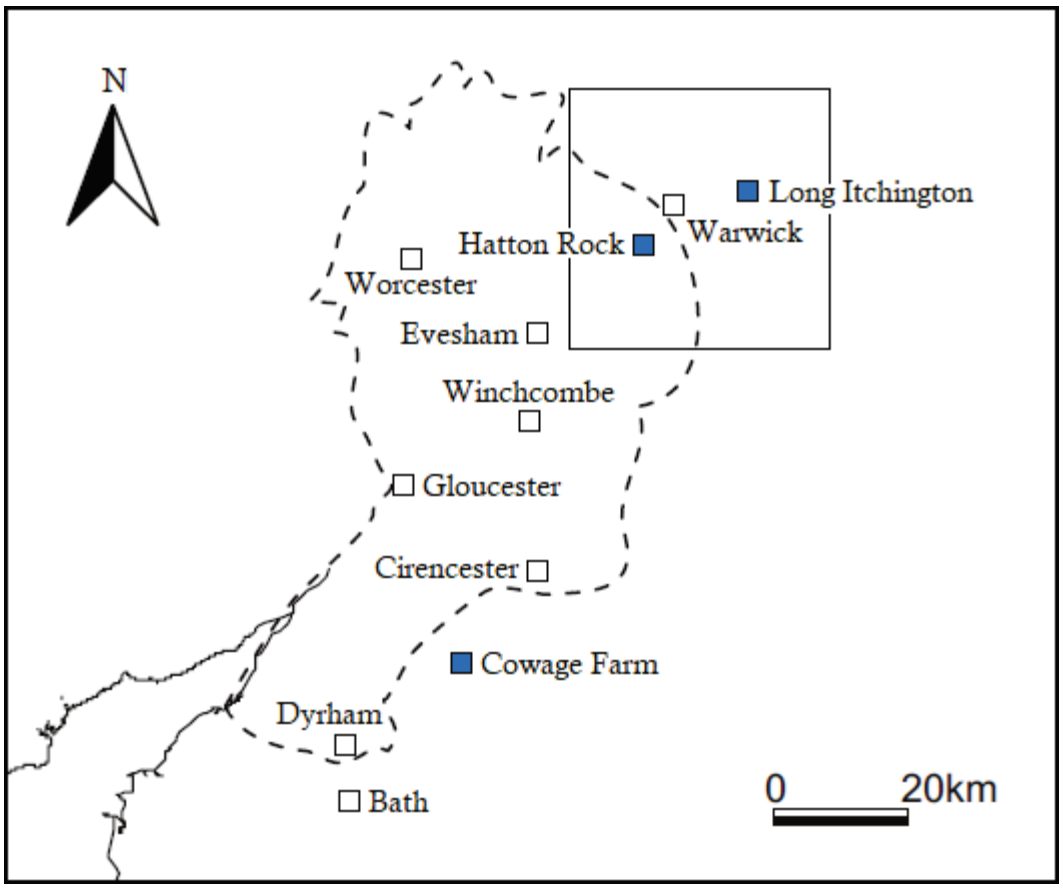



*Figure 7.24:* Hatton Rock, Long Itchington and the study region in relation to the Diocese of Worcester as recorded in *c.* AD 1291. Cowage Farm and other notable localities are marked for reference (adapted from Gerrard 2013, 214).

[128] More recent work by Abigail Tompkins (2017, 254-8) has further defined and characterised this trend.

680s were based on pre-existing territorial divisions. This is strongly suggested by the possible pagan temple at Blacklow Hill (**WW_020**), situated in the immediate vicinity of this boundary (Sims-Williams 1990, fig. 2; Ford 1996, 69). Discussed briefly in **7.3.2**, excavations ahead of the Kenilworth Bypass in 1971 identified two inhumation burials and *c.* 270 pits that were set within a pair of large enclosures (Webster and Cherry 1972, 164). Possibly of late sixth- or early seventh-century date, the site compares favourably with sites like Slonk Hill and Yeavering (Blair 1995, 18-19; Ford 1996, 69-70). The presence of a probable cult centre at the midpoint between two early power centres, on an ecclesiastical boundary that is thought to correspond with an earlier territorial division, should not be seen as coincidence (Bassett 1989a, 6-17; Sims-Williams 1990, 5).

The albeit limited historical evidence from the region broadly confirms the notion of a more marginal landscape on the periphery of established political units. Bede (*HE* III.21) informs us that, in AD 653, the Middle Angles accepted the faith under their ruler Peada, son of Penda. A few passages later we are also told that, upon the death of Penda in AD 655, Oswiu of Bernicia granted Peada overlordship of a kingdom known as Southern Mercia (*HE* III.24).[129] While Middle Anglia is somewhat difficult to reconstruct (e.g. Bassett 2000, 114), Southern Mercia is said to be divided from its northern counterpart by the Trent, thereby placing it south of the 'original lands' of the Mercians (Yorke 2001, 19-20). Conventional reconstructions of this territory would place it in east and north Warwickshire, broadly corresponding with the north-eastern half of the study region (e.g. Hart 1977). The lack of recorded battles in the region might also be seen to indicate its political marginality, although this does not preclude the region having acted as a staging post and logistical corridor during the various campaigns between Mercia, Northumbria and the West Saxons. For example, and assuming that the Mercian forces originated from somewhere within the East Midlands, the battles recorded in the *Anglo-Saxon Chronicle* at Cirencester in AD 628 and Benson (Oxfordshire) in AD 779 could have included some logistical operations within the study region (*ASC* 628; 777 [779]). Indeed, much of the westward expansion of Mercia could have been funnelled through the Avon Valley, especially given its ready access to the Fosse Way.

Though not a region of obvious political centrality, there is reason to consider it one of economic importance. Specifically, it seems likely to have been involved – whether directly or indirectly – in the Droitwich salt industry. Situated in northern Worcestershire, some 20 km beyond the western edge of the study region, the brine springs at Droitwich are known

[129] Bede notes that this territory consists of 5000 hides, somewhat less than the 7000 recorded for the *Hwinca* (Hwicce) in the so-called *Tribal Hidage*, a document typically dated to the seventh century (e.g. Davies and Vierck 1974; Dumville 1989b; Higham 1995, 74-111).

to have been used in the production of salt since at least the Iron Age (Hurst 1997). Significant economic activity in the early medieval period is attested by a series of sixth-seventh-century boiling hearths excavated at the largest brine pit (*ibid.*, 17-27). Although evidently located within Hwiccian territory, being less than 10 km from the episcopal see at Worcester, it is clear from the late seventh- and eighth-century charter evidence that this key economic resource was under Mercian control (Maddicott 2005, 26-9). Of interest to our present investigation is the potentially significant role the study region may have played in the distribution system of this precious commodity. The likely importance of Bidford-on-Avon, mentioned briefly above (**7.3.2**), is attested by its nodal position within the reconstructed network of 'salt-ways' (Hooke 1981, 138; Maddicott 2005, 46-7). Though much of the salt flowing from Droitwich via Bidford-on-Avon is presumed to have headed south-eastwards towards London, some of it may well have travelled along the axis of the Avon Valley and thus into the study region proper.

Considering these various strands of evidence together, two main conclusions can be drawn about the landscape under study. Firstly, it appears to have been of some logistical and economic significance. Secondly, and perhaps more interestingly, the region seems to have comprised the eastern extent of Hwiccian territory and its interface with the southern district of Mercia. Nuance can be added to this picture of oppositional political monoliths through the provisional identification of smaller administrative sub-units, as is possible with two *-ingas* place-names in the eastern part of Hwiccian territory. These comprise the *Stoppingas*, a *regione* named in an eighth-century charter (S 94) whose territorial extent presumably relates to the medieval *parochia* of Wootton Wawen minster, and the *Arosætna* of the Arrow valley (Bassett 1989a, 18-19; Yorke 1995, 42; 1996, 160-4; Hooke 2001, 163-5). Attempts to model and reconstruct the territorial extents of other units in the region were largely unsuccessful, though several localities were identified as being of greater relative importance (**7.3.4**). At a broader scale, intermittent periods of non-Mercian and non-Hwiccian (i.e. West Saxon and East Anglian) political and cultural influence seem likely on the evidence of grave goods (Welch 2001, 148-52). The prospect of substantial British continuity in the West Midlands, though ostensibly invisible to archaeology, also needs to be borne in mind (e.g. Bassett 1992, 2000).

### 7.4.2 *Hatton Rock and Long Itchington: an interpretation*

Despite this apparent admixture of diverse cultural influences, the principal division in the region appears to have been between two territories that would come to be known as the Hwicce and Southern Mercia. Our understanding of the landscape under study is therefore contingent on the nature of Hwiccian-Mercian relations during the fifth-eighth centuries.

More specifically, our interpretation of Hatton Rock and Long Itchington must acknowledge their proximity to this territorial intersection, and what this spatial position signifies about their function and broader significance. Considering Hatton Rock first, conventional reconstructions of Hwiccian territory would locate the site at its easternmost fringe (*Figure 7.24*). Support for this identification can be sought from an early eighth-century charter (S 1177), which records the sale of land at nearby Ingon, the parish adjoining Hampton Lucy to the west, by two princes of the Hwicce (Sims-Williams 1990, 191-2). A similarly peripheral position might be argued for the complex at Long Itchington, which is situated just beyond the diocesan boundary of Worcester but at some distance from the Trent Valley, an area generally regarded as the Mercian heartland (Brooks 1989b, 160-2; Yorke 1990, 101-2; Welch 2001, 147-8). It certainly fell within the lands of Southern Mercia as defined by Bede (*HE* III.24) and could conceivably have been at the south-western edge of Mercian territory, either before or at some point during its rapid expansion from the second quarter of the seventh century (Brooks 1989b, 159; Dumville 1989a, 128-9; Gelling 1989, 188). Rather than being territorially central, then, the Warwickshire great hall complexes seem to have existed on the peripheries of two early polities. Though presumably operating as high-status residences and centres of administration, Hatton Rock and Long Itchington may also have served a more fundamentally ideological function – as statements of authority in a contested landscape.[130]

This brings us to our final consideration: the relationship between Hatton Rock and Long Itchington. It has recently been argued, primarily on the basis of their archaeological similarity, comparable landscape position and spatial proximity (being 18.5 km apart), that the Warwickshire great hall complexes were part of a single system of landscape organisation (Tompkins 2017, 185-201). In this they were understood as strategic expressions of Mercian authority – and 'English' identity more generally – in a political, cultural and ethnic frontier zone (*ibid.*, 198-200). This is a plausible interpretation, though it is perhaps something of an interpretative leap to consider Hatton Rock a Mercian establishment given the aforementioned evidence for a territorial divide, which it appears to be situated beyond. Assuming that political frontiers were permeable and changeable during this time, it is entirely possible that Hatton Rock was constructed during a Mercian advance into Hwiccian territory – or even that our current reconstructions of Hwiccian territory are simply wrong. Even so, that land at Ingon just 2 km away was still owned by the Hwiccian royal family at the beginning of the eighth century surely indicates otherwise (S 1177).

If we are to view the Warwickshire great hall complexes as having been part of separate

[130] This argument has recently been advanced by John Blair (2013b, 11-13; 25) and is engaged with more fully in **8.2.4**.

territories, as is suggested here, is it possible to draw parallels with similarly proximal sites elsewhere in England? Yeavering (**2.2.1**) and Milfield (**2.4.4**), both in Northumberland, offer one such example, though are much closer (4 km apart) and are likely to have been occupied at different periods (*HE* II.14). A more useful comparison can be made with the great hall complexes known from Oxfordshire. Situated 7 km apart, and with some indication of contemporaneity, the great hall complexes at Sutton Courtenay (**2.3.2**) and Long Wittenham (**2.4.6**) are thought to have been part of the same political network (Hamerow et al. 2013, 68; Brennan and Hamerow 2015, 347). There is a significant difference between the Oxfordshire and Warwickshire sites, however. While both pairs of sites were located on political frontiers, their position within them differs: Sutton Courtenay and Long Wittenham are found south of the Thames, and thus surely belonged to the West Saxon realm, whereas Hatton Rock and Long Itchington appear to have been situated on either side of the Hwiccian-Mercian divide. This is a key distinction, and thereby renders the Warwickshire great hall complexes without parallel.

To conclude, it seems the more sensible approach to view Hatton Rock and Long Itchington as having belonged to separate territorial units with different political affiliations. Although they presumably had a number of important administrative roles, perhaps operating as *villae regiae* for their respective hegemonies, they must also be understood in the context of a political frontier. Given that neither complex can be closely dated, it would be foolish to link their establishment to particular historical figures or events. Even so, an appreciation of their role as statements of authority in a contested landscape at least allows us some insight into the nature of early Anglo-Saxon rulership, and why these complexes may have been constructed in the first place.

# 8
# DISCUSSION

Given that the results of the case studies have already been discussed individually, this chapter presents a more general discussion of the evidence and its implications for our knowledge of Anglo-Saxon England. It begins with a summary of the results. This is followed by a thematic discussion in which the results of the thesis are used to inform existing knowledge and current scholarly debate.

## 8.1 SUMMARY OF THE RESULTS

### 8.1.1 *Overview*

This thesis has considered the evidence of Anglo-Saxon great hall complexes in a number of ways and at several scales. It began with an extensive review, from which it was possible to identify the key archaeological characteristics that define the phenomenon. These were summarised in **2.6.2** and will be variously incorporated in the thematic discussion below. A series of regional case studies were also undertaken, each consisting of two main elements: the first considered the evidence of a great hall complex within a local archaeological and landscape context, while the second undertook a programme of formal analysis aimed at gauging a more regional perspective. The principal results from these approaches are now considered in turn.

### 8.1.2 *Great hall complexes in context*

The five sites considered in the regional case studies (Lyminge, Cowdery's Down, Cowage Farm, Hatton Rock and Long Itchington) were initially considered as part of the review presented in Chapter 2. From this it was possible to identify a degree of architectural, morphological and contextual similarity. They were each located in close proximity to prehistoric and/or Roman features, for example, and all featured planned layouts with axial or coaxial alignments centred on the largest structure. Insight into their landscape context was gained through focused local-scale investigation. It was noted how sites tend to be situated on reasonably prominent features such as spurs, ridges, terraces and low hills. In this they did not dominate the local landscape as a hillfort would, but appear conspicuous nonetheless – having a kind of understated authority. This is perhaps best evidenced by the results

of the viewshed analysis (**3.5.2**), which identified rather impressive levels of local and supra-local visibility. Indeed, these viewsheds often featured a degree of intervisibility with nearby sites, but also frequently demonstrated some long-distance vistas of dramatic features. In light of the latter point, it is interesting that great hall complexes appear to have been located in areas of topographic liminality. Yeavering is perhaps the best example of this, being situated at the foot of the striking hillfort known as Yeavering Bell, but comparable surroundings can be identified for the case study sites. Indeed, the rolling hills of the Cotswolds may have served as an evocative backdrop for the activities taking place at Cowage Farm (**6.2.1**).

At a broader scale, it has been show how there may have been an element of logistical strategy in the placement of these sites. For example, Lyminge's position afforded the settlement strategic control of the Elham Valley, one of the major routeways between the south and east coasts of Kent (**4.2.1**). The proximity of Cowdery's Down to a former *civitas* capital and its associated (and extensive) road infrastructure further underscores this point (**5.2.1**). Being less than 500 m from the Warwickshire Avon, the complex at Hatton Rock would similarly have enjoyed access to a major logistical corridor (**7.2.1**). In summary, the study has identified a number of similarities exhibited by great hall complexes when viewed in relation to their wider landscapes, indicating that there may have been a greater element of strategy in their placement than has hitherto been realised.

Situating the evidence of great hall complexes within a local archaeological context was similarly revealing. It was possible, for instance, to identify an immediate hinterland around Cowdery's Down that included a smithy, associated settlement, possible founder's burial and wider cemetery (**5.2.2**). Despite having more limited contextual evidence, the author was likewise able to demonstrate supra-local importance and a degree of functional continuity at Cowage Farm on the basis of charter evidence and stray finds (**6.2.2**). At Lyminge, a pair of high-status cemeteries were seen to frame a long-term sequence of secular and ecclesiastical occupation, with antiquarian excavations and metal-detected finds indicating further activity – albeit of decidedly lesser status – in the neighbouring parishes of Elham, Postling and Newington (**4.2.2**). These realisations begin to align our understanding of great hall complexes with hall sites in Scandinavia, which are frequently found as part of chronologically enduring polyfocal complexes – featuring domestic, ceremonial, industrial and funerary elements spread over a large area – that were in turn situated within wider settlement hierarchies (e.g. Fabech 1999a). The identification of one such complex at Rendlesham well demonstrates the benefits of large-scale survey projects, and will hopefully serve as an exemplar for future work (Scull et al. 2016).[131]

[131] A combination of Lyminge's open-area excavation strategy and Rendlesham's large-scale survey methodology would no doubt revolutionise our knowledge of great hall complexes even further.

Looking beyond the immediately local, attempts were also made to investigate potential *feorm* networks around great hall complexes and visualise them using least-cost path modelling (**3.5.3**). The use of this technique was a novel approach to the task, but was not without limitation; being largely hypothetical, there is no real way to validate the results. Moreover, assuming relationships based on chronological similarity is problematic, although is perhaps justifiable given the difficulties in identifying settlement networks without clearly identifiable features like specific artefact traits (e.g. Felder 2015). Despite this, the least-cost path modelling can be seen as a useful exercise. In a general sense, the analysis tended to emphasise the central location of great hall complexes within regions of relatively diverse topography. For instance, Cowdery's Down appeared as something of a gateway node between the communities that were naturally separated by the Hampshire Downs (**5.2.3**); Cowage Farm seems to have assumed a similar position within a lowland landscape bounded by two bands of upland (**6.2.3**). Of particular interest were instances of overlap between the least-cost paths and other features. Intersection with Roman roads, as in the Cowdery's Down and Cowage Farm case studies, offers an intriguing suggestion of structural continuity, while a greater emphasis on riverine transport might be inferred from the Warwickshire case study (**7.2.3**). Also significant was the correspondence between least-cost paths and burial sites, from which we might argue that visibility was a key factor in the creation of funerary and ceremonial landscapes (Brookes 2007b). A more pragmatic and real-world application of the analysis was undertaken using the charter evidence from Lyminge (**4.2.3**). This reconstructed the economic hinterland of a royal monastery and allowed us to gauge the breadth of resources it was able to exploit. Notwithstanding methodological limitations, the least-cost path analysis can be seen as an interesting reconstruction attempt.

### 8.1.3 *Regional patterns*

Regional variation has long been recognised as a key feature of Anglo-Saxon archaeology (e.g. Leeds 1945), and it is therefore only fitting that the present study has identified differences among the regions considered. There is, for example, significant variation in the scale of the evidence. At 675 sites, the regional dataset associated with the Lyminge case study is more than five times larger than that associated with Cowage Farm (*Figure 8.1*). This is unsurprising, of course; the abundance of Kentish archaeology has long been known, with a recent study finding that it accounts for 31% of all early Anglo-Saxon sites known from southern England (Harrington and Welch 2014, 22-3). In contrast, the numbers of sites in the other regional datasets are far lower, though are perhaps more in line with what we might expect from an 'ordinary' or 'non-Kentish' region. Interestingly, there is a broad similarity in the ratio of site types between the regions (*Figure 8.2*). The only obvious anomaly

in this respect is the Cowdery's Down study region, which had proportionally fewer burial sites and no identifiable ecclesiastical sites (**5.3.1**).

A number of regional patterns were also discernible from the results of the chronological seriation. Using the seriation tables (*e-Appendix 2*), a series of visualisations or 'activity models' were produced to examine archaeologically attested activity throughout the study period (**3.3.5**). Although featuring a degree of regional variability, a general pattern of activity was identifiable from the combined results. This saw the number of 'active' sites: increase significantly from the mid-fifth until the early sixth century; plateau until the end of the sixth century; decrease throughout much of the seventh century; recover somewhat in the late seventh and early eighth centuries; and then gradually decline until the end of the study period. Attempts to explain these trends within a regional context were made for each case

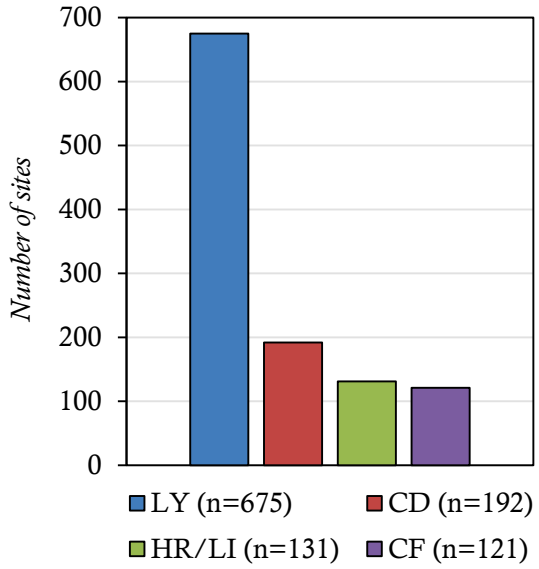



*Figure 8.1:* A bar chart showing the number of sites in each of the regional datasets. Note: LY=Lyminge; CD=Cowdery's Down; HR/LI=Hatton Rock and Long Itchington; and CF=Cowage Farm.

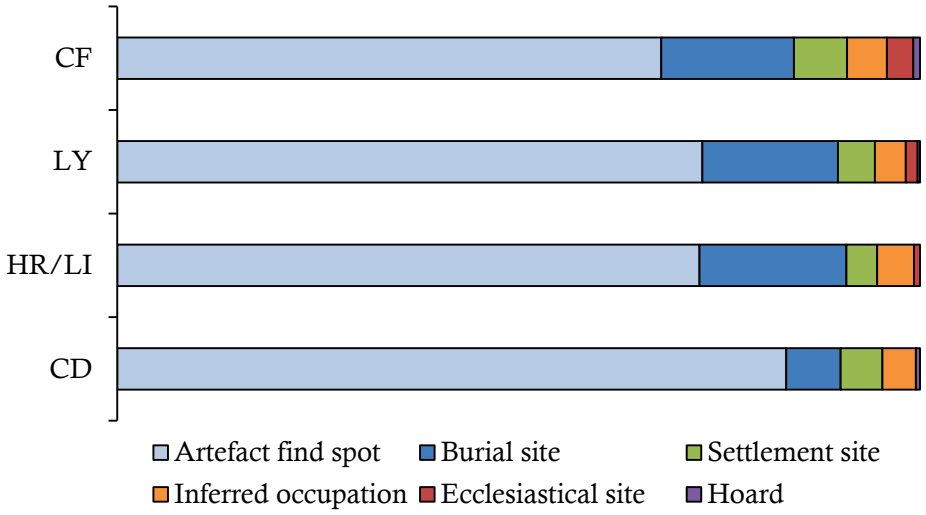



*Figure 8.2:* A bar chart showing the relative proportions of site types in the regional datasets. Note: CF=Cowage Farm; LY=Lyminge; HR/LI=Hatton Rock and Long Itchington; and CD=Cowdery's Down.

study, but it is interesting that this general pattern of activity appears somewhat uniform across historically, archaeologically and topographically disparate regions. Arguably the most striking result relates to the activity modelling for burial sites which, in every region, closely matches the standard model of furnished burial (Dickinson 2011, 228-32; Hines and Bayliss 2013, 459-62). Indeed, one need only look at the results from the Lyminge case study to appreciate the very real difference in burial activity before AD 700 than after it (**4.3.1**). The evidence of occupation sites appears more consistent by comparison, although it is worth noting a greater level of fluctuation in the Cowdery's Down model (**5.3.1**). Much more could be said of the activity modelling, especially given its methodological originality, but it must be acknowledged that the findings are of greater relevance to general discussions of early-middle Anglo-Saxon archaeology than they are to the specific debates surrounding great hall complexes and their wider contexts.

The programme of exploratory spatial analysis was primarily concerned with the identification and characterisation of spatial patterning in the regional datasets, but was also useful in the contextualisation of the evidence for great hall complexes at a broader, regional scale. The distribution of sites within each region was initially investigated through a consideration of soil quality and riverine proximity (**3.4.2**). The former revealed a general tendency for sites having been located in high-quality lands or, to put it more accurately, to have avoided poor-quality lands. This trend was strongest in the Lyminge case study (**4.3.3**), but this is perhaps to be expected given the region's greater overall soil quality (*Figure 8.3*). Sites were also found to be typically located in relative proximity to rivers. The strength of this trend varied between the different regions, however; 89.31% of sites in the Hatton Rock and Long Itchington dataset were located less than 1 km from a watercourse (**7.3.3**), whereas the figure was only 60.42% for the Cowdery's Down dataset (**5.3.3**). The overall trend is undeniable, though, and broadly supports the conventional view of early settlement having been primarily located on fertile river terraces (Hamerow 1992; 2012, 3). By including stray finds in the calculations, the analysis also demonstrated how activity appears to have taken place in the vicinity of watercourses at a more general level, presumably as a consequence of settlement having been situated as such.

Attempts to characterise the underlying spatial pattern of the regional datasets produced somewhat mixed results, but did facilitate the identification of some interesting regional patterns. The first technique to be used, the Average Nearest Neighbour statistic (**3.4.3**), showed how the archaeological data tend towards spatial clustering. This was most confidently demonstrated with the Lyminge regional dataset, which exhibited consistent and highly statistically significant spatial clustering across all three phases (**4.3.3**). Other instances were less clear-cut, with the Warwickshire dataset having no obvious spatial pattern

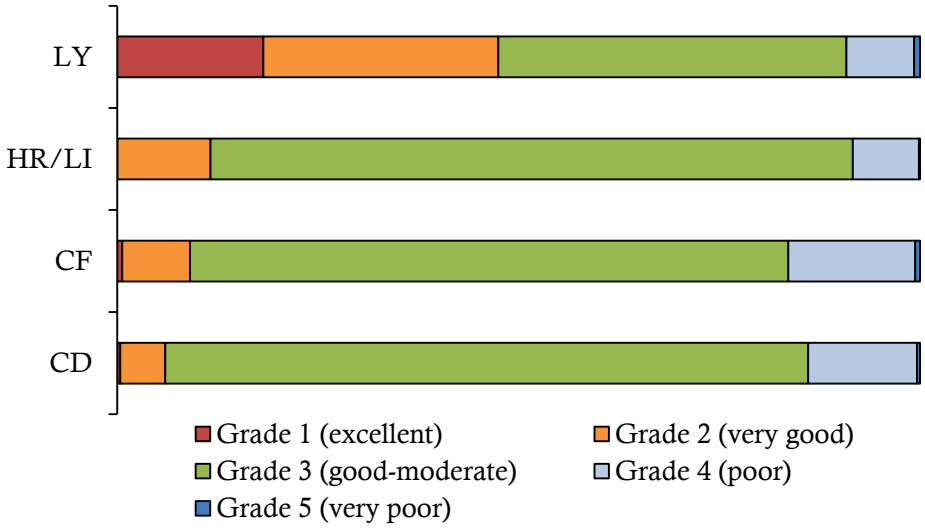



*Figure 8.3:* A bar chart showing the relative proportions of different agricultural land classes for each of the case study regions. Note: LY=Lyminge; HR/LI=Hatton Rock and Long Itchington; CF=Cowage Farm; and CD=Cowdery's Down.

whatsoever (**7.3.3**). The results of the Ripley's K-Function analysis were similarly varied but did allow for the spatial extent of clustered sites to be tentatively identified (**3.4.4**). Analysis of the dataset associated with the Cowage Farm case study was particularly intriguing, showing how the data formed discrete clusters of approximately 7 km in radius (**6.3.3**). This was taken to indicate a patchwork of largely distinct localities that, if a circular area of influence was assumed, would have been approximately 150 km$^2$ in extent. A similar data structure was indicated by the analysis of the Lyminge case study dataset, but the areas of statistically significant clustering were much larger (**4.3.3**). Elsewhere, the results were inconclusive: the datasets associated with both the Cowdery's Down (**5.3.3**) and Hatton Rock and Long Itchington (**7.3.3**) case studies returned inconsistent and largely unhelpful results.

In visualising the relative density of archaeological sites in the four study regions, the Kernel Density Estimation proved to be a rather more useful method of exploratory spatial analysis (**3.4.5**). Limitations of importance weighting and chronological resolution notwithstanding, the analysis successfully identified several 'core areas' of archaeological activity in each region. Interestingly, these clusters were on the most part geographically plausible. For example, broad groupings of archaeological sites appear to have been separated by topographic features such as the Hampshire Downs and North Downs in the Cowdery's Down and Lyminge case studies respectively. Also significant was the degree of temporal consistency, with early activity centres typically continuing as such into the middle Anglo-Saxon period and perhaps even beyond. Subtle variations were observable, though; a gradual westward expansion of archaeological activity was detectable in east Kent, for instance (**4.3.3**). Comparison with other datasets also allowed for a greater appreciation of spatial patterning, with the results of the Kernel Density Estimation that used Roman-period and

AIP-derived datasets returning some significantly different results. Overall, the results of the exploratory spatial analysis well demonstrate the problems associated with the use of these techniques, and the degree of scepticism that must be maintained in their interpretation and use. They did, however, offer a useful and empirical means of investigation, revealing various insights into the case study datasets that would not otherwise have been possible.

Arguably the most interesting – and technically challenging – element of the analysis were attempts to model territoriality in the case study regions. This utilised a number of spatial techniques, some of which had not previously been applied in this manner, to approximate the spatial extents of archaeologically derived territorial units. This endeavour was by no means free from technical and conceptual issues, but returned some genuinely exciting results nevertheless. For example, it was interesting to note a broad similarity between the *regiones* or 'small shires' of south-central England recently described by Bruce Eagles (2015) and the territorial units identified in the Cowdery's Down study region (**5.3.4**). A reasonably strong correlation was also apparent between archaeologically derived territoriality in the Lyminge case study (**4.3.4**) and the lathes of Kent as reconstructed from documentary evidence (e.g. Brookes 2011). Although there was less contextual evidence upon which to corroborate the results, the application of these techniques to the Cowage Farm case study likewise revealed a series of intriguing and wholly plausible territorial configurations (**6.3.4**). Much less certainty can be afforded the final case study, which proved to be the least conducive to spatial interrogation and modelling; being dominated by the Warwickshire Avon, it may simply have been the case that settlement in this region was spatially distributed in an altogether more linear manner (**7.3.4**). Given the limitations outlined in **3.5.4**, **3.5.5** and **3.5.6**, one must adopt a somewhat sceptical perspective when using such a methodologically experimental approach. That these methods are capable of producing intriguing and valuable results is evident nonetheless.

The final element of the thesis to summarise relates more to the overall findings of the individual case studies than to any particular analytical technique. In this it was possible, in some cases for the first time, to situate the evidence of a great hall complex within a broader archaeo-historical framework and offer an original interpretation as to its likely political association and broader significance. This revealed a number of insights, not least the ability to understand certain sites within a specific territorial context (i.e. Lyminge and the *Limenwara*; Cowdery's Down and the *Basingas*). Arguably the most significant insight was the realisation that many sites appear to have been located at the fringes – rather than the cores – of political entities. In this Cowage Farm appears to have been located at the geopolitical interface between Mercia, the Gewisse and the Hwicce (**6.4.1**), while Hatton Rock and Long Itchington were understood in the context of a Hwiccian-Mercian territorial fringe

(**7.4.2**). It was also seen how Cowdery's Down, interpreted as the principal residence of a minor and largely independent polity, likely operated within a broader landscape of competing political influences (**5.4.2**). These realisations indicate that, at least for certain great hall complexes, their role in the negotiation of political and territorial authority may have been as important as their roles as estate centres. Lyminge provides an obvious contrast in this respect, being located in what can unequivocally be identified as the ancestral heartland of a major kingdom (e.g. Brooks 1989a). Yet even here it is possible to discern a degree of liminality, with the site having been located adjacent to the less politically secure western half of the kingdom, and in relative proximity to the marginal landscapes of Romney Marsh and the Weald. While their importance as socio-economic and politico-religious centres should of not be overlooked, one of the key findings of this thesis is that there may have been a greater degree of pragmatism, political strategy and situational nuance in the placement of great hall complexes than has been previously acknowledged. Interestingly, this realisation is consistent with contemporary discussions on the broader cultural significance of boundaries in early medieval Britain (e.g. Griffiths et al. 2003; Jones and Semple 2012).

# 8.2 THEMATIC DISCUSSION

## 8.2.1 *Overview*

The preceding synthesis has outlined a series of original findings and knowledge claims that are, in most instances, of direct relevance to our understanding of Anglo-Saxon great hall complexes. Following on from this account, it is now appropriate to consider how the results of the thesis – and the evidence of great hall complexes more generally – contribute to existing knowledge and current scholarly debates. Participation in a series of workshops organised by the *Royal Residences Network AD 500-800* has greatly enriched the author's thinking on these matters; so much so, in fact, that the structure and content of the thematic discussion that follows draws direct inspiration from these meetings.[132]

## 8.2.2 *Site dynamics and long-term chronologies*

Before discussing the evidence of great hall complexes, it is useful to begin with a brief consideration of their antecedent phases. Set within a long-term context, the appearance of

[132] These comprised: *Site Dynamics and Long-Term Chronologies* (University of Reading, 25th-26th February 2016); *Architectures of Power: Ritual Action, Performance and the Built Environment* (Durham University, 8th-9th June 2016); and *Royal Residences and Networks of Power* (University of Aberdeen, 8th-9th November 2016). Audio recordings of the presentations are available at: www.royalresidencenetwork.org/videos, with the proceedings due to be published as an edited volume or journal special edition in due course. The author wishes to thank Gabor Thomas and Gordon Noble, who organised the network, and all those who attended the meetings and made them such a stimulating and useful experience.

great hall complexes marks a distinct shift in the architecture and spatial configuration of Anglo-Saxon settlement. This does not mean that high-status elements cannot be inferred in the settlements of the fifth and earlier sixth centuries, however. As has been convincingly demonstrated for Lyminge, occupation prior to the great hall phase was by no means 'ordinary'; evidence for conspicuous consumption, specialist craftwork, high-status burial and monument reuse are all apparent (Thomas 2017, 111-12). Based on the presence of fenced enclosure and coaxial alignment, a legitimate case can be made for Periods 4A and 4B at Cowdery's Down having also been of relatively high (or at least above-average) status (**2.2.2**). The evidence from Rendlesham can be read in a similar way (Scull et al. 2016); though spanning the fifth-eighth centuries, the quantity and quality of fifth-sixth-century finds attest the locality's importance before its life as a documented *vicus regius*. In particular, the presence of rare Frankish brooch forms indicates cross-Channel contacts from the early sixth century onwards (*ibid.*, 1602-3). Metal-detected finds in the vicinity of Sutton Courtenay, including gilded saucer brooches of the sixth century, offer a further example of a great hall complex with prior importance (Hamerow 1999, 32-8; Hamerow et al. 2007, 170-83). Similar arguments might also be made on the basis of substantial antecedent occupation phases at sites such as Yeavering, Dover and Northampton (Hope-Taylor 1977; Williams et al. 1985; Philp 2003). The appropriation of settlements to construct monumental complexes in the later sixth and seventh centuries may thus have been informed by their pre-existing importance. Although we must continue to view the emergence of great hall complexes as a major innovation in the way power was archaeologically manifested, we must also appreciate that they are unlikely to have formed out of nothing. Indeed, taking a longer-term perspective has the added benefit of aligning our outlook with Scandinavian scholarship, where the evidence for long-lasting polyfocal complexes is far easier to discern (e.g. Hedeager 2001; Rundkvist 2011; Skre 2011).

When viewed collectively, two aspects of great hall complexes stand out: their architectural and morphological similarities, and their chronological correspondence. Both indicate a relatively discrete archaeological phenomenon, one that is made all the more significant when placed within the broader context of Anglo-Saxon settlement forms. Put simply, there is limited evidence for monumental architecture, spatial formality or overt settlement hierarchy in the settlement record before the inception of great hall complexes in the late sixth century (Ulmschneider 2011, 157-65; Hamerow 2012, 70-83). Not only do they represent an important class of settlement, then, but their emergence also has much wider implications for our understanding of sixth-seventh-century society. Viewed in such a manner, what might we attribute to this sudden shift? Andrew Reynolds' (2003) seminal study of settlement morphology concluded that the significance increasingly placed on boundaries and

spatial formality from the late sixth century onwards reflected changes in the social order that were brought about by the emergence and expansion of kingdoms. This was a long-term view, which placed great hall complexes at the start of a broader trend towards the more permanent and bounded settlement forms of the medieval period (*ibid.*, 130). A similar interpretation has recently been proposed by Helena Hamerow (2012), who emphasised how fundamental changes in the relationship between production and exchange – i.e. from subsistence to market-based surplus production – appear to be reflected in the wider settlement record. The argument follows that changes in the archaeological signature of settlements – more evidence for enclosure, spatial formality and structural longevity, for instance – are reflections of broader societal changes like as increased social stratification, relative political stability, the development of market-based exchange and greater agricultural and technological specialisation (*ibid.*, 163-8). These perspectives situate great hall complexes within a useful long-term context, but might we also look to more immediate reasons for their emergence?

One reason may have been a desire to legitimise and institutionalise newly established regional hegemonies through monumental displays of power and wealth. The construction of a great hall complex would have been an immense undertaking, requiring investment in labour and natural resources on a scale that had not been attempted since Roman times.[133] It has been estimated that as many as eighteen mature oaks would be needed to build a single great hall (Arnold 1997, 63). This indicates an impressive degree of woodland management and directly evidences how sixth-seventh-century elites were able to readily exploit resources that would take decades to replace (Gerrard 2013, 194). As argued in an influential study of prehistoric chiefdoms, monuments and monumental landscapes should be understood as expressions of power that serve to institutionalise the social order through ceremonial activity (Earle 1997, 155-8). Indeed, the high structural capacity of a great hall complex would have allowed social activities like drinking and feasting to be experienced by significant numbers of people. Their large, controlled spaced would also have facilitated formal duties such as charter issuing, meetings of council and the dispensation of justice. Fenced enclosures, internal partitions and restricted doorways may have been a significant aspect of these displays, demarcating space within the complex and regulating access to elites (Semple 2013, 207). Beyond impressing one's own followers, the ability to garner the respect of foreign guests and rivals must surely have been an important element in the construction of monumental buildings. Frands Herschend (1998, 37) has termed this 'competi-

[133] The tentative identification of a very large fifth- or sixth-century structure (Building 10) at Wroxeter may be an exception to this statement (Barker et al. 1997), though this interpretation has since been largely discredited (Fulford 2002; Lane 2014).

tive architecture', viewing great halls as a reflection of their owner's aspirations and economic means. One can certainly detect an element of self-aggrandisement from structures such as the 'theatre' at Yeavering, for example (Hope-Taylor 1977, 119-22). That some of the great halls at Lyminge (and possibly also at Eynsford) were decorated with fragments of *opus signinum* surely evidences a similar desire to impress (Philp 2014, 134; Thomas 2017, 111).

Political legitimisation might also have been sought through cultic activity. At the Scandinavian hall site of Lejre, a silver figurine likely depicting Odin was interpreted as part of a symbol of royal authority designed to liken the bearer to the king of the gods (Christensen 2013, 75-8). Similar – though perhaps less obvious – examples can be drawn from Anglo-Saxon England. At Lyminge, a long-term politico-religious centre is attested by various strands of evidence, including: the identification of horse sacrifice in associated cemeteries; the finding of 'cultic' objects as grave goods, such as a rock crystal ball, sieve spoon set and bracteate; the identification of a definite spatial relationship between structures and antecedent monuments; a deliberate attempt to emulate ecclesiastical traditions through *opus signinum* adornment; and, of course, its documented afterlife as a royal monastery (Thomas 2010, 409; 2013, 116-20; 2017). Evidence of cultic activity has also been identified at other sites. At Yeavering a sizeable quantity of cattle skulls were found in a pit that cut the foundations of Building D2 (Hope-Taylor 1977, 97-102). This building was in turn associated with several burials and was tentatively interpreted as a temple (*ibid*., 168; 276-8). Mention might also be made of a peculiar double burial at Sutton Courtenay, where an adult female was found interred with an infant and the skulls of two cows and one horse (Leeds 1947, 86-7; Sofield 2015, 360). An infant burial was found in similar conditions at Cowdery's Down, being interred in the axial posthole of an Structure C18 (Millett and James 1983, 217; Sofield 2015, 358). Cultic activity of an altogether different kind may well be indicated by the presence of possible churches at Atcham, Cowage Farm and Yeavering (Rahtz 1970, 142; Hope-Taylor 1977, 73-8; Hampton 1981, 316-18; Hinchliffe 1986, 251-3). Arguably the most visible aspect of this 'legitimising' process is the proven association of great hall complexes with antecedent (primarily Bronze Age) monuments. This was noted for Yeavering several decades ago (Bradley 1987), but recent studies have identified a much wider phenomenon (Crewe 2010, 309-36; 426-33; Semple 2013, 94-107; 207-11).[134] As Sarah Semple (2013, 99; 210) has remarked, these were places of '*royal theatre*' where connections with the ancestral and supernatural worlds helped confirm identities and signal territorial power. Taken together, the evidence certainly suggests that great hall complexes were foci for cultic

[134] Though antecedent association need not necessarily indicate elite status, there does appear to be some correlation between elite settlement sites and prehistoric monuments (see examples above). For a recent exploration of this theme with specific reference to the burial archaeology of Wessex see Mees 2014.

activity, presumably representing attempts by worldly elites to consolidate their position by making connections with – and drawing inspiration from – the mystical and mythical realms.

How the notion of a great hall complex spread among the Anglo-Saxon kingdoms remains an intriguing practical consideration. Indeed, the configurational and chronological similarities exhibited by the evidence prompt a critical question: how does the great hall complex – a radical departure from previous settlement forms – come to be found throughout much of the Anglo-Saxon realm within a century or so? A recent paper has noted how the close similarities between Yeavering, Sutton Courtenay and Lyminge could indicate a shared 'court culture', with the Gewissan kings trying to '*emulate successful innovations originating in other kingdoms*' (Brennan and Hamerow 2015, 346). Gabor Thomas (2017, 112-13) has argued along similar lines, noting how the '*simultaneous replication of this tradition across several kingdoms bespeaks of the social proximity between emergent hereditary dynasties and pervasive modes of aristocratic self-expression which transcended political boundaries*'. This seems, at least to the present author, an entirely sensible approach. Through what other mechanism than long-distance communication could an architecturally distinct building tradition have spread so widely?

There is, after all, ample evidence in the written sources for non-violent interaction between kingdoms. Bede (*HE* III.7) informs us that, in *c.* AD 640, the baptism of Cynegils of Wessex was sponsored by Oswald of Northumbria (Kirby 2000, 74). This connection is made all the more interesting by Hope-Taylor's (1977, 277-9; 309-10; 321-3) ascription of Yeavering Phase IV to Oswald's reign. Examples of dynastic intermarriage also provide a context for interaction, such as Bede's (*HE* III.21) description of the marriage between Cyneburh, daughter of Penda of Mercia, to Alhfrith, son of Oswiu of Bernicia, around AD 650 (Kirby 2000, 79). These events may well have taken place at a great hall complex, possibly inspiring the building of new complexes upon the visiting party's return. Indeed, it is known that the baptism of Swithhelm of the East Saxons took place outside of his kingdom – at Rendlesham – and was sponsored by Aethelwold of East Anglia (*HE* III.22). Beyond this, one suspects that it would only take a few recitals of *Beowulf*-style poetic description to consolidate in the minds of seventh-century elites a general picture of what a royal residence should look like. At a much broader level, the late sixth-seventh centuries can be thought of as a period of innovation in the practice of kingship, of which new forms of architectural and funerary monumentality presumably formed a key part (e.g. Yorke 1999; Shapland 2015). Viewing the spread of the great hall phenomenon in the context of a 'court culture' is thus entirely consistent with the available documentary evidence, and appears to be the most satisfactory explanation for the remarkable degree of similarity exhibited by great hall

complexes.

Having examined the origins and development of great hall complexes, it is appropriate to conclude this section with a discussion of their afterlives. As was recognised in **2.6.1**, the available evidence strongly indicates that the phenomenon centred in date on the seventh century. Moreover, it was observed that there is very little evidence for direct occupational continuity into the eighth century. The metal-detected evidence from Rendlesham may indicate this, but without excavation of the complex itself this cannot be proven (Scull et al. 2016, 1602). Northampton appears to be a genuine contender, but its chronology and interpretation is far from secure (**2.5.2**). It is acknowledged that future work may modify our chronological understanding of the phenomenon, but a consideration of the available evidence raises two important questions: why did great hall complexes seemingly not survive the seventh century, and what became of them afterwards?

The first question is difficult to answer with any real certainty. It is entirely possible, of course, that great hall complexes of the eighth and later centuries simply await discovery. This might be viewed as a productive line of inquiry given how documentary references to royal vills continue well into the tenth and eleventh centuries (e.g. S 454). However, it was argued in **1.2.1** that a great hall complex need not necessarily have been a royal vill, and a one-to-one relationship should not therefore be assumed. Indeed, an enduring institution like the royal vill may have undergone several archaeological manifestations over time (Blair 2005, 279). Alternatively, we might emphasise the increasing importance of the church as a factor in the decline of great hall complexes. As is indicated by the number of late seventh- and eighth-century land grants, the church may have become the principal recipient of secular investment by this period (Blair 2005, 84-91). Elites may therefore have chosen to build churches instead of aristocratic residences, thereby accounting for the rather sudden cessation of great hall building activity. A third explanation might be to view great hall complexes as having been short-lived by design. Martin Welch (1992, 50-1) thought the seemingly brief occupational lifespan of a great hall complex might be understood in reference to the documentary evidence for single-lifetime leases of land. Andrew Reynolds (2003, 103) has drawn upon the lawcode of Ine in support of this argument, noting how Clause 63 implies that the movement of an estate may have been relatively commonplace: '*If a nobleman moves his residence he may take with him his reeve, his smith and his children's nurse'*. That several of the great hall complexes considered in the case studies appear to have been located at territorial intersections – rather than stable heartlands – may add further support to this view (**8.1.3**). A different approach, considered further below (**8.2.4**), might view great hall complexes as a bespoke and short-lived response to socio-political developments in the sixth-seventh centuries. Ultimately, none of the explanations thus far proposed are

entirely satisfactory. Put simply, it is difficult to reconcile the level of investment and architectural monumentality with their ostensible chronological brevity. At present, it is perhaps best to reserve judgment on the issue in the hopes that future excavations will resolve these chronological issues and allow us to more convincingly link the decline of great hall complexes with the emergence of other forms of high-status residence.

With regard to the afterlife of a great hall complex, two trajectories emerge from a consideration of the evidence. The first is abandonment, as appears to have been the case at sites like Yeavering and Cowdery's Down. Here, the sites themselves seem to have been left and not returned to, although arguments can be made as to where successor communities may have been subsequently established – the former at Milfield, as described by Bede (*HE* II.14), and the latter possibly at nearby Riverdene (as was argued in **5.2.2**). Why these sites were abandoned is a matter of conjecture, with no easy or universally applicable explanation. The second trajectory is one of monastic appropriation and reconfiguration. Lyminge exemplifies this, with considerable documentary and archaeological evidence charting the development of a pre-Christian power centre into a royal double monastery (Kelly 2006; Thomas 2013, 128-37). Although the evidence is far less secure, similar sequences have been tentatively suggested by the author for Cowage Farm (**6.2.2**) and Hatton Rock (**7.2.1**), both of which appear to have had a secondary (presumably monastic) phase of occupation featuring a church-like building (Rahtz 1970, 142; Hampton 1981, 316-18; Hinchliffe 1986, 251-3). The existence of early ecclesiastical establishments in relative proximity to other great hall sites, such as at Wroxeter (Atcham) and Abingdon (Sutton Courtenay), might also indicate a broader process of monastic replacement. In what might be considered direct and indirect forms of emplacement, it appears that pre-existing places of power proved to be enticing locations for the establishment of monastic communities (Blair 2005, 183-95; Thomas 2013, 139-40). Elsewhere, these sites appear to have ceased to be occupied for reasons largely unknown.

### 8.2.3 *Great hall complexes and landscapes of power*

A key finding of this research has been the identification of a reasonably distinct landscape context for great hall complexes (**8.1.2**).[135] This 'landscape signature' can be characterised as a tendency for sites to have been located in areas of reasonably prominent topography, such as hills and ridges, that were also in close proximity to antecedent features and relative proximity to infrastructural and logistical elements such as rivers and routeways. More

[135] Although it is contended that this landscape context is fairly specific to great hall complexes – and can therefore be understood as an indicator of elite status – it is fully acknowledged that the validity of this identification depends on comparative analysis being undertaken for other types of settlement.

broadly, an argument can also be made for great hall complexes having been situated in topographically varied areas with somewhat dramatic surrounding landscapes. Not every site exhibits all of these elements, of course, but there does appear to be a degree of proclivity in site placement. How, then, might these tendencies be interpreted? The siting of a settlement in a position of topographic prominence relative to the local landscape represents a deliberate choice to eschew the shelter and concealment of lower elevations for the increased visibility of high ground. That virtually all great hall complexes appear to have made this trade-off reveals an important insight into the mindset of their owners. While relative topographic prominence guarantees a commanding viewshed for inhabitants, which would have brought with it a number of strategic benefits, it also ensures a high degree of visibility to onlookers. This awareness is crucial: these are sites that, due to their monumental architecture and spatial formality, would have easily been the most impressive structures for many kilometres around. That the already imposing presence of great hall complexes was accentuated by their landscape position strongly suggests that sixth-seventh-century elites were deliberately manipulating perspective to increase the visual impact of their residences. These statements of authority may have been designed to instil a sense of awe in onlookers, perhaps to remind individuals of their place in the new social order.

The visual impact of these statements of authority would have been augmented by dramatic landscapes. Yeavering was noted above as an exemplar of this, having been largely framed by the imposing hillfort known as Yeavering Bell. Of this impressive feature Hope-Taylor (1977, 6) remarked: '*At close range it dominates the site of the ancient township and establishes those qualities of character and atmosphere which, though partially indefinable, are yet not wholly irrelevant to studies such as this*'. Indeed, the great hall complex was clearly positioned in reference to the hillfort, as it was also to other prehistoric features such as barrows and a stone circle (Bradley 1987, 5-9). Sarah Semple (2013, 107) has remarked how these visual elements were combined to '*create a theatrical environment*' that '*embedded and valorized*' the authority of newly established elites. Although somewhat less dramatic, Sutton Courtenay offers further evidence for a great hall complex having been incorporated within dramatic surroundings (Crewe 2010, 309-36; Semple 2013, 208-9). Here, both the antecedent and great hall phases were configured with direct reference to an extensive and pre-existing monumental landscape that included a barrow cemetery and a very large Neolithic cursus. Reasonably dramatic topography also appears to have been a feature of the Cowdery's Down palimpsest. Situated on the crest of a prominent ridge, less than 30 m from a Late Roman enclosure and several Bronze Age ring-ditches, the site would have enjoyed extensive views of the Hampshire Downs to the south and the low-lying and fertile plains to the north (**5.2.1**).



*Figure 8.4:* Looking north from Rhynie, with the Craw Stane Pictish symbol stone in the foreground and the Tap O'Noth hillfort in the background. *Photo*: author.

An element of topographic juxtaposition can likewise be identified at Cowage Farm, where settlement on a low-lying and fertile river terrace can be contrasted with the rolling hills of the Cotswolds to the west. Indeed, the main ridgeline of this topography appears to have been visible from the site on the evidence of viewshed analysis (**6.2.1**). Interestingly, similar landscape contexts can also be argued for elite residences beyond the Anglo-Saxon realm.[136] As shown in *Figure 8.4*, the complex at Rhynie in Aberdeenshire was situated on a prominent plateau and set within a dramatic and mountainous landscape (Noble and Gondek 2011, 317-19). In appropriating pre-existing monuments, manipulating perspective and exploiting the physical landscape, elites of the period were able to create evocative visual displays that combined the natural, ancestral and possibly supernatural realms. Although inherently speculative, it seems likely that these attempts were undertaken as a means to consolidate socio-political control and maintain elite identities (Williams 2006, 179-98; Crewe 2010, 426-33; Semple 2013, 193-223). More broadly, we might understand this integration of site and setting as a landscape or topography of power – a place where political authority

[136] It is perhaps also worth mentioning that, in a more general sense, early medieval palaces are often found in liminal zones – set between forested and cultivated lands, for example (Rollason 2012).

found physical manifestation in a distinctly visual manner (Jong and Theuws 2001; Wickham 2001).

Beyond issues of display, it is also instructive to consider the landscape context of great hall complexes from a more pragmatic perspective. In an interim publication for *The Origins of Wessex* project, viewshed analysis of Sutton Courtenay, Long Wittenham and the minster at Dorchester revealed a number of insights (Hamerow et al. 2013, 65-8). It was noted how each had a relatively distinct viewshed, with limited visual overlap and no discernible intervisibility between sites. This was taken to reflect reasonably discrete zones of visual control around each site. Crucially, the analysis revealed an apparent spatial relationship between visibility and routeways, with stretches of an ancient trackway connecting the three sites being visible from each. This trackway has been excavated in two different places and seems likely to date from at least the Early Roman period (Hamerow et al. 2007, 153-4; Booth 2011, 9). It was therefore recognised that Sutton Courtenay and Long Wittenham were located at '*nodal points*' in a wider transportation network that '*connected terrestrial and riverine routes*' along the Thames (*ibid*., 68). As was noted above (**8.1.2**), similar logistical relationships can be observed at other sites. In having strategic control over the Elham Valley, Lyminge would have been a nodal point of comparable significance; as indicated by the least-cost path modelling (**4.2.3**), this routeway may have linked the lathes of Lyminge, Eastry and Borough. Relative proximity to the Roman road network is evident at other sites, as with Cowdery's Down and the road to Silchester (*Figure 5.2*), or Cowage Farm and the road to Cirencester (*Figure 6.2*). Cowage Farm is also significant in having a routeway immediately south of the main complex, which may have been contemporary (Reynolds 2003, 106).[137] The pair of structures at Atcham appear to have been similarly aligned with respect to a routeway of some antiquity. Now known as Pelham Road, the routeway follows the alignment of the medieval ridge and furrow identified by St. Joseph (1975, 294) and can be seen on the Ordnance Survey six-inch 1st edition.[138] It is difficult to make similar arguments elsewhere, but there is sufficient evidence to note a general tendency for great hall complexes having been located in proximity to wider transportation networks.

This leads us to consider some of the more functional aspects of great hall complexes, namely their putative role as collection centres in regional *feorm* networks. Although slight, certain aspects of the archaeological record allude to this function. A series of very large pits at Lyminge were tentatively interpreted as '*receptacles for the centralized storage of grain or other types of food render*' (Thomas 2017, 112). The 'Great Enclosure' at Yeavering may well have

[137] The modern Foxley-Malmesbury road appears to have been diverted through part of the site, but the crop-mark evidence indicates that it previously formed the southern boundary of the complex.
[138] OS County Series 1:10560 (6 inch), 1st edition, Shropshire, Sheet XXXV.SW (1887). This map was consulted using the National Library of Scotland's map archive, available at: http://maps.nls.uk/os.

fulfilled a similar function for livestock, permitting the periodic assembly of large numbers of animals brought 'on the hoof' (Hope-Taylor 1977, 157; Welch 1992, 45). The storage of foodstuff and beverages more generally could also have been accommodated by the large number of ancillary structures at these sites. Despite these indications, a key piece of the puzzle is missing: if these were centres for the collection and periodic consumption of food render, why is there a general dearth of material culture at these sites?

To Hope-Taylor (1977, 168), the absence of domestic refuse at Yeavering was to be explained through a combination of periodic occupancy, general cleanliness and disposal of waste away from the site. Having encountered a comparable lack of finds at Cowdery's Down, the excavators took a broadly similar view (Millett and James 1983, 249-50). It can be noted that not all sites exhibit this sterility, however. Though much of it relates to the pre-great hall phase, it is worth emphasising the scale of domestic refuse recovered from the excavations at Lyminge. Of particular significance was the discovery of an SFB with an unusually rich fill that was contemporary with the great hall complex (Thomas 2013, 123-5; Maslin 2015, 203-4; Thomas et al. 2016, 743-5). That several of the SFBs excavated by Leeds at Sutton Courtenay were also in use during the seventh century is similarly noteworthy (Hamerow et al. 2007, 183-6). Distinct spatial patterns of artefact deposition have also been identified at Rendlesham, where a midden area immediately west of the high-status residence seems probable (Scull et al. 2016, 1605-6). While relative artefact sterility remains a feature of great hall complexes, it is perhaps not as pronounced as previously thought.[139] Furthermore, an absence of artefacts need not imply an absence of occupation activity – unexcavated production areas, perhaps located some distance away from the complex proper, may simply await discovery. More broadly, that ceremonial complexes were regularly cleaned and kept presentable is hardly surprising.

Given that the available archaeological evidence does not preclude great hall complexes having functioned as centres for the collection and periodic consumption of render, it is instructive to consider how this system may have worked in a practical sense. Although attempts were made to do so using least-cost path modelling (**3.5.3**), this was a largely speculative exercise. Put simply, it is extremely difficult to translate the broadly contemporary documentary evidence for *feorm* systems into specific archaeological case studies. While we might plausibly identify great hall complexes as collection centres, it is extremely difficult to determine which sites were obligated to them. While an estate centre might have large pits and ancillary buildings for the storage of render, there is unlikely to be anything in the archaeology of the *feorm*-giving settlement to distinguish it as such. To express the problem

[139] Excavation strategy, not explicitly considered here, remains a major factor in the retrieval of material culture. The benefits of Lyminge's open-area excavation and Rendlesham's large-scale survey are evident. Soil stripping and sampling methodologies can also have a major impact on data recovery.

in Christallerean terms: we can identify the 'central place', but have little knowledge of the 'central-place system' to which it related.

The situation is perhaps not quite so dire, though. At Lyminge, an extensive *feorm* network can be tentatively inferred from a combination of archaeological and historical evidence (as visualised in *Figure 4.8*). The back-projection of a charter-attested network of monastic provision into an earlier *feorm* context is somewhat problematic, of course, but recent research has argued for an element of continuity in resource networks and exploitation of strategies across the seventh-eighth centuries (Thomas 2016). What of great hall complexes that do not have a well-documented afterlife? In lieu of demonstrable *feorm* connections, the least-cost path modelling undertaken in this thesis used spatial proximity and chronological correspondence to identify relationships between sites.[140] While a sensible approach given the available evidence, there is a conceptual issue in assuming *feorm* obligations without any real archaeological basis. This is not an exclusively English problem. For example, while the excavators were able to demonstrate high levels of beef and beer consumption at Hrísbrú, a tenth-eleventh-century farmstead in Iceland, it was not possible to archaeologically identify the associated procurement network (Zori et al. 2013). The development of new analytical techniques may facilitate a better appreciation of any such interactions, but it is at present extremely difficult to identify *feorm* networks in the archaeological record. Even so, there is a strong suggestion that great hall complexes operated as important nodes within these systems. In doing so, elites would have been able to exercise lordship over the surrounding landscape through the extraction of agricultural surplus. This was likely a system of social obligation – perhaps underpinned by a façade of voluntary hospitality – that ultimately served to perpetuate an intrinsically uneven balance of power (Faith 2009, 31-3; Gautier 2009, 43-4).

### 8.2.4 *Great hall complexes and wider society*

While the discussion has thus far been confined to the local and regional scales, there is scope to situate the evidence within a broader societal context. This is an inherently difficult endeavour, of course, but must be attempted if we are to truly appreciate the significance of the great hall phenomenon. To do so we must confront a most difficult concept – the emergence of the Anglo-Saxon kingdoms. Although a surety by the seventh and eighth centuries, at least on the evidence of written sources, there is far less certainty as to the origins of kingdoms (Yorke 1990, 1-24; Kirby 2000, 1-22). Indeed, the sources are curiously silent on the matter, describing neither the processes of kingdom formation nor the circumstances

[140] The underlying assumption being, after Tobler's Law, that '*everything is related, but near things are more related than distant things*' (Tobler 1970, 236).

from which they emerged (Harrington and Welch 2014, 4). These omissions have stimulated considerable scholarly debate, leading to a plurality of opinion as to the fundamental nature of fifth-sixth-century society. Thus, there is currently no overall explanatory framework or consensus view. Broadly speaking, scholarship can be divided into two main camps: those who see the origins of kingdoms in Romano-British structural continuity (e.g. Yorke 1990; Dark 1994, 2000; Thacker 2005; Halsall 2013; Burch 2015), and those who view them as having emerged from more dynamic, bottom-up processes (e.g. Hodges 1986; Arnold 1988; Bassett 1989a; Scull 1993, 1995; 1997; 1999, 2011). The point of origin is thus disputed; while those in the former camp might argue that '*the basic infrastructure of the early Anglo-Saxon kingdoms was inherited from late roman or sub-Roman Britain*' (Yorke 1990, 8), those in the latter camp have viewed kingdoms as responses to '*relatively short-term transformations*' in sixth-century society such as population growth, resource competition and territorial expansion (Scull 1999, 23). For simplicity, these competing viewpoints shall be termed the 'structural continuity' and 'social change' models respectively.

The debate has continued along similar lines into the new century. In a recent book, Guy Halsall (2013) has presented a new case for the 'structural continuity' model. Through comparison of post-Roman Britain with continental examples, Halsall identified similarities in the scarcity of archaeological evidence even in places such as Merovingia, where a developed kingdom is well documented (*ibid*, 271). Accordingly, he posits that the archaeology of the fifth-sixth centuries '*is by no means incompatible with sizeable kingdoms and fully-fledged, effective kingship*' (*ibid*, 272). This is an interesting though somewhat paradoxical argument – if one needs neither archaeological nor explicit historical evidence to support one's claim, then the debate becomes somewhat moot. Although the substantial and seemingly all-encompassing *Oxford Handbook to Anglo-Saxon Archaeology* featured no dedicated chapter on kingdoms (Hamerow et al. 2011), Christopher Scull's (2011) contribution offered a new model of socio-political development . This placed particular emphasis on landholding, inheritance and exchange as major stimuli in the growth of socio-political stratification, which in turn led to territorial expansion, external conflict and a longer-term process towards permanent overlordship and formalised client-lord relationships (*ibid.*, 859-60). In support of his case, Scull emphasised a shift in the archaeological record from the late sixth century onwards, drawing in particular on the evidence of great hall complexes, princely burials and economically specialised settlements to argue for '*a new degree of social differentiation and political centralization*' that broadly coincides with greater visibility in the historical sources (*ibid.*, 849). The existence of this 'late sixth-century threshold' has long been known (e.g. Lucy 2000, 4-5; Reynolds 2003, 130-1; Ulmschneider 2011, 157-65; Welch 2011, 269-75; Hamerow 2012, 70-83), though some would view it as redolent of established – rather than

nascent – political institutions (Burch 2015, 215-26).

Using the recent work of Halsall and Scull as exemplars of the two main approaches, the fundamental question is thus: are we to use historical analogy and particular readings of the documentary sources to argue that kingship – and by proxy kingdoms – emerged to fill the power vacuum left by Roman withdrawal, perhaps as early as the fifth century, or are we to use archaeological trends informed by evolutionary and agent-based models to view its emergence as the product of specific circumstances in the sixth century? There is of course no easy answer to this question, and a detailed consideration is clearly beyond the scope of the present thesis. A contribution that can be made, however, is to consider this question from the perspective of great hall complexes. Put simply, are they to be understood as the products of well-established political institutions or as reflections of their earliest iterations?

In a contribution to the *Royal Residences Network AD 500-800*, Gabor Thomas set the evidence from Lyminge against both the 'structural continuity' and 'social change' models.[141] In this he found more support for the latter, noting dynamic changes in occupation patterns and power expressions across the life of the site. It was posited whether these changes might reflect a local lineage laying claim to an ancestral territory and ultimately emerging in the seventh century as a paramount Kentish dynasty. He also argued that this process was to be understood within the broader context of population growth, resource competition and territorial expansion. More recently, Thomas has emphasised how the '*short-lived trajectory of great hall sites provides a clear embodiment of the fragility of power in the seventh century as well as the fluid cultural basis of contemporary rulership*' (Thomas 2017, 113). Although Lyminge was evidently a long-term politico-religious centre, the specific expression of power evinced in its great hall phase appears more an act of situational agency by ambitious political actors than the creation of a reasonably stable political system. Viewed like this, great hall complexes might be understood as a '*transient experiment in the discourse of Anglo-Saxon kingship that soon passed into monumental history*' (Thomas 2017, 113). The evidence from sites such as Cowdery's Down and Yeavering would certainly support this model, being reasonably important sixth-century settlements that subsequently underwent a short-lived period of monumental reconfiguration. That these 'experiments' were initiated by kingdoms that were already of some antiquity is entirely possible, but the evidence seems more suggestive of newly emergent dynasties taking a somewhat radical course of action to consolidate their tenuous position. At a much broader level, the emergence of political elites a has been linked to periods of monumental architecture throughout prehistoric and protohistoric Europe and

[141] 'Lyminge: networks of power', given at *Royal Residences and Networks of Power* (Aberdeen, 8th November 2016).

beyond (Trigger 1990; Bradley 2013).

Whether great hall complexes were established by long-standing and stable or emergent and fissile political institutions is, to a certain extent, irrelevant – we know that documented kingdoms and great hall complexes were in most parts contemporary, we just don't know by how much the former predated the latter. Considered as such, there is clearly a productive discussion to be had as to the functional relationship between great hall complexes and kingdoms. To return to the example above, it was argued in **4.4.1** that Lyminge operated as an important node within a wider royal network. This network would have included other paramount settlements (most likely at Eastry, Sturry and Wye) that functioned as the centres of administrative units known as lathes (Brooks 1989a, 69-74; Welch 2007, 242-5; Brookes 2011, 158-63; Thomas 2013, 116). It is therefore possible to view the seventh-century kingdom as having comprised a series of territories, each administered by one or more great hall complex under the authority of an important lineage, that were in turn connected by an overarching royal superstructure. This model does not preclude a highly developed kingdom during the sixth century, as is indicated by the historical sources and cemetery evidence, but it does indicate that great hall complexes played a crucial role in its governance and administration during the seventh. Although difficult to argue with any certainty, the pursuit of *feorm* and other forms of taxation in kind might be viewed as a major factor underpinning this consolidatory shift. The specific question as to whether these estate centres were royal impositions or more organic developments is perhaps less interesting than the overall realisation: that great hall complexes appear to have been closely linked with royal developments, at least in Kent where our administrative understanding is relatively strong. The evidence from Cowdery's Down, which was tentatively interpreted as the administrative centre of the *regio* of the *Basingas* (**5.4.2**), could be considered a non-Kentish and less explicitly royal example of this trend.

While the Kentish evidence permits an appreciation of the role great hall complexes seem to have played in strategies of governance and political consolidation, examples of their usage as ideological and territorial statements can be drawn from elsewhere in England. For example, Cowage Farm, Hatton Rock and Long Itchington were each viewed as symbols of territoriality in what appear to have been politically contested lands (**6.4.2** and **7.4.2**).[142] Though seemingly of the same political affiliation, the proximal establishments at Sutton Courtenay and Long Wittenham might be understood along similar lines – as a desire to assert political and territorial identity in a key frontier zone (Brennan and Hamerow 2015, 347). At a more local level, they may also have been built to emphasise the status of

[142] It may be pertinent to note that Rhynie, mentioned above, appears to have also been situated on the putative border between two documented kingdoms: *Fortriu* and *Cé*.

individual lineages; although the inhabitants of Sutton Courtenay and Long Wittenham were presumably on the same political 'side', they could have been in social competition nevertheless. Due to their outlying, almost anomalous spatial positions, it is tempting to view sites such as Atcham, Yeavering, Milfield and Sprouston as more fundamental expressions of 'Anglo-Saxon' identity in culturally (and perhaps ethnically) mixed environments. Indeed, John Blair (2013b, 12) has recently suggested that great hall complexes (and other forms of monumental architecture) may have been '*deployed in fluid and eclectic cultural milieux near frontiers, where they asserted English identity*'. While a desire to assert 'English' identity might not be universally applicable, it certainly appears to have been the case for some sites. It is perhaps in this role – as explicit symbols of power and identity – where we begin to truly glimpse the fragility and volatility of seventh-century politics.

From the above considerations, it is possible to understand great hall complexes from two different but complementary perspectives. Where evidence permits, their role as centres of governance can be demonstrated, as can their involvement in the consolidation of royal authority. They can also be viewed as symbols in a broader sense – as statements of political and territorial authority, often in areas where this may have been in question. In this they can be understood as bimodal entities, fulfilling a range of pragmatic and ideological functions that were tailored to the unique set of circumstances in the sixth-seventh centuries.

This brings us to our final and most speculative consideration: what the emergence of great hall complexes can tell us about the nature of sixth-seventh-century society. A great hall should not be considered a public good – whatever its practical and public functions, it was ultimately a privately owned monument intended as a statement of elite power. Egalitarian societies do not build monuments like these because they have no use for them (Earle 1997, 157). Their construction relied on elites being able to coerce communities into contributing labour and resources towards a project from which they might not personally benefit. This does not occur in a social arena of equal agents; it can only be achieved through a skewed balance of power. This dynamic may not have always involved unwilling subjugation – a freeman may have freely given up his service to a worthy leader or ambitious dynasty, for example – but it would have relied on unequal power relations nevertheless. This is not to suggest that the fifth and early sixth centuries were essentially egalitarian (e.g. Gerrard 2013, 179-207), but it is to argue that the system of social organisation in the late sixth and seventh centuries was more overtly unequal; the emergence of great hall complexes and princely burials can be considered reflections of this, as can the increased polarity in burial wealth (Scull 2011, 852-3).[143]

[143] This period also corresponds with a significant decrease in the overall number of weapon burials as compared with the early sixth century. Andrew Welton, *pers. comm.*, 30th March, 2017.

Territorial expansion, economic developments and increasing socio-political complexity may have necessitated the creation of nodal places to facilitate rulership, but this could have been achieved via less monumental means. That these places were quite so overtly opulent suggests an element of elitism – perhaps more even-handedly thought of as aspiration – that is altogether more difficult to detect in the archaeological record of the preceding century. Power, authority, influence, status and image; each appears to have been a fundamental motivator for early Anglo-Saxon elites. It is possible, of course, that these ambitions were ubiquitous in earlier periods. Be that as it may, one need only compare Spong Hill with Sutton Hoo, or Mucking with Cowdery's Down, to detect a more visible shift towards exclusivity and exceptionalism, at least for certain sections of society. As has been noted previously, great hall complexes '*both expressed and helped shape the more hierarchical society that was emerging in Britain in the later sixth and seventh centuries*' (Brennan and Hamerow 2015, 348). Their key significance, however, may have been in its entrenchment and institutionalisation.

# 9
# CONCLUSION

Inspired by recent excavations, this thesis set out to investigate the great hall phenomenon of Anglo-Saxon England. As the first study to do so in a detailed and systematic way, it represents an original contribution to the field of early medieval studies. The principal aims were to define and characterise the phenomenon, investigate it through a series of focused regional case studies and interpret the evidence within a broader archaeo-historical framework. With these aims successfully realised, it falls upon the author to review the overall programme of research, assess its key findings and outline some future priorities.

## 9.1 THE RESULTS AND THEIR IMPLICATIONS

### 9.1.1 *The Anglo-Saxon great hall complex*

Based on the results of this study, it is now possible to define and characterise the great hall phenomenon in a more explicit manner. Great hall complexes first emerge during the late sixth century (in some cases from settlements of prior importance) and were occupied throughout the seventh. The peculiarities of Northampton notwithstanding (**2.5.2**), all sites appear to be have been abandoned by the late seventh century, though some were appropriated by monastic communities. The sites themselves are characterised by their great hall architecture – a striking development in the repertoire of Anglo-Saxon building forms – and by their overall spatial formality. They can also be appreciated in more subtle ways; from their high-status zooarchaeological assemblages, direct association with antecedent features and overall landscape context, for example. A handful of documentary and literary accounts attest their important position within contemporary society – as places where charters were issued, royal assemblies met and ceremonial activities took place. Although there is no definitive evidence *per se*, these sites are widely assumed to have been estate centres involved in *feorm* networks, a form of tax in kind that would be collected and periodically consumed by the royal entourage. Some are also known to have operated as royal vills, although as many are undocumented it would be unwise to assume a simple correlation. Overall, great hall complexes can be thought of as an architecturally distinct and chronologically specific form of elite residence. It is beyond reasonable doubt that they were the permanent or periodic seats of the most important individuals, families and kin groups of the period.

### 9.1.2 *Synthesis*

The significance of great hall complexes can be appreciated in a number of ways. That their emergence coincides with a broader shift in early Anglo-Saxon archaeology is important. Described by the present author as the 'late sixth-century threshold', this saw the introduction of new burial practices and settlement forms that were centred around a small group of high-status individuals (Lucy 2000, 4-5; Reynolds 2003, 130-1; Ulmschneider 2011, 157-65; Welch 2011, 269-75; Hamerow 2012, 70-83; Blair 2013b, 11-12). This has previously been understood as signifying the '*the development of an increasingly ranked and polarised society*' (Reynolds 2003, 131). A similar perspective was adopted in this thesis, arguing that great hall complexes should be seen as archaeological manifestations of a more overtly hierarchical society. Early Anglo-Saxon elites may thus have built monumental complexes as a way to legitimise and institutionalise an emergent political order. Based on the available evidence, this appears to have been achieved using cultic and ritualised activity, and through grand architectural displays of power and wealth.

One of the key findings of the thesis was the identification of a reasonably distinct landscape context for great hall complexes. This included sites being situated: in a reasonably prominent location (e.g. on a ridge or low hill); in close proximity to antecedent monuments; in relative proximity to rivers and routeways; and within a topographically varied surrounding landscape more broadly. Drawing on recent research into appropriation as a power strategy (e.g. Semple 2013), it was argued that elite communities sought to appropriate pre-existing monuments, exploit topography and manipulate perspective to create landscapes of power that helped consolidate their position. It was further contended that there was a strategic element to the placement of great hall complexes within the landscape, with access to – and visual control over – wider transportation networks being deemed particularly valuable. In identifying several examples, the author was able to corroborate a trend initially identified in Oxfordshire (Hamerow et al. 2013, 65-8). A greater understanding of the hinterlands of great hall complexes was also gained through the use of several GIS techniques. Overall, the evidence indicates that they operated as nodal points within wider networks and were able to exploit a diverse range of resources.

After consideration of the two main perspectives on kingdom formation, the evidence of great hall complexes was found to more closely align with the 'social change' model as proposed by Stephen Bassett (1989a) and Christopher Scull (1993, 1995, 1999, 2011). In this the great hall phenomenon was understood in the context of recently established elites seeking to reinforce a tenuous political settlement, rather than as products of sophisticated and well-established political institutions. Although its exact nature is difficult to pinpoint, it was reasoned that the relationship between great hall complexes and the early Anglo-

Saxon kingdoms might be understood in two main ways. At a practical level, and where evidence permits, they appear to have functioned as the centres of territorial units known as *regiones* or lathes. They may thus have played a key role in strategies of governance and political consolidation, operating as focal points within royal networks. *Feorm* seems likely to have been a major aspect of this, connecting communities to the royal household through the acquisition and periodic consumption of renders. On account of their tendency to be located in areas of political dispute, it was maintained that great hall complexes fulfilled a further role as ideological and territorial symbols.

To conclude, it is the view of the present author that Anglo-Saxon great hall complexes likely emerged as part of broader societal changes during the late sixth century. In this they may have been something of a short-term experiment in political centralisation, perhaps stimulated by a combination of social change, population growth, economic development and territorial conquest. They appear to have been explicitly involved in the consolidation of the early Anglo-Saxon kingdoms, both as nodes of governance and as broader political and territorial symbols. These were places where, for both pragmatic and ideological reasons, power was expressed in a monumental and visually striking arrangement. They might therefore be understood as a product of their time, forged in response to – and shaped by – the idiosyncrasies of the sixth and seventh centuries. That they were ultimately short-lived underscores the dynamic and transient nature of power, and the tenuous foundations upon which regional hegemonies were maintained and expanded (Thomas 2017, 113). It was certainly the case that the Anglo-Saxon kingdoms underwent significant transformations during the seventh century: Christianity; the written word; major changes in burial practice; a codified legal framework; formalised modes of exchange; and greater economic specialisation are to name but a few. While a great many sites may await discovery, it is conceivable that power was expressed in a different – and perhaps less overtly monumental – manner by eighth-century kings. As the corpus of excavated sites continues to expand, we may yet come to appreciate great hall complexes as a unique and fascinating bridge between the early and middle Anglo-Saxon worlds.

## 9.2 FINAL THOUGHTS

### 9.2.1 *Reflections and caveats*

The genesis of this thesis was in the author's undergraduate dissertation (Austin 2011), which attempted to apply Lotte Hedeager's (2001, 2002) cosmological approach to the royal site at Lejre in Zealand, Denmark. This gave the author a firm grounding in the archaeology of the Scandinavian Iron Age, and fostered a particular interest in the so-called 'central places'. This thesis began as an attempt to apply a Scandinavian perspective to the evidence

of Anglo-Saxon great hall complexes. After an extended period of familiarisation, two realisations changed the course of the research quite considerably. The first was an awareness that the Scandinavian conception of a 'central place' was theoretically hollow and of limited practical benefit. The second was a deeper appreciation of the very real differences between the English and Scandinavian evidence, not least in terms of overall quantity and quality. It was decided that the best course of action would entail two elements: a systematic review of the evidence to characterise and define the phenomenon, and a series of focused case studies to test methodologies for their study.

While the former was a relatively simple exercise, the latter proved rather difficult. No template existed for how these sites should be approached from an analytical – and, particularly, geospatial – perspective. As such, the programme of analysis presented in this thesis was largely the result of experimentation and iteration. All the same, the analytical process has revealed some interesting insights into the regions and datasets under study. Although certain analyses were not of direct relevance to the study of great hall complexes, each contributed to a process in which a deeper appreciation of the archaeo-historical context of great hall complexes was gained. Some techniques proved particularly useful. The viewshed analysis, least-cost path modelling and territorial reconstructions helped question assumptions and generate new ideas, while the overall scheme of chronological analysis can be seen as an original approach to modelling regional chronologies. While many of the key insights of this thesis came from more conventional approaches, such as site comparison and thematic discussion, it is maintained that the programme of formal analysis contributed a series of insights that might otherwise have gone unrecognised. Whether this approach gains traction in the study of great hall complexes going forward remains to be seen.

### 9.2.2 *Future priorities*

The most obvious recommendation to be made regards excavation. To put it plainly, our archaeological knowledge of the great hall phenomenon is limited. Recent excavations have greatly improved our understanding, but there are many sites left to excavate. Undertaking excavations on a similar scale to that of the *Lyminge Archaeological Project*, preferably also with the wider spatial focus of *The Rendlesham Project*, should be the main priority. This is routinely achieved in Scandinavia, though may prove extremely difficult within the current funding model of academic excavation in the UK. The long-standing, remarkably extensive and predominantly privately funded excavations at Silchester demonstrate that this is not impossible, however.[144] Productive investigations of a smaller scale would also be welcome,

[144] See http://www.reading.ac.uk/silchester/Excavations/sil-excavations.aspx for an overview.

particularly at the many unexcavated crop-mark sites. Recent excavations at Sutton Courtenay could serve as a model for these endeavours, at the very least confirming the locations and general sequence of features. More broadly, it is essential that collaborations fostered by initiatives like the *Royal Residences Network AD 500-800* are maintained and expanded. This will help align the study of Anglo-Saxon great hall complexes with monumental trajectories identified elsewhere in early medieval Britain and Europe.

In addition to the investigation of known sites, it is also hoped that the corpus of great hall complexes will be expanded in the coming years. Although well beyond the current technical ability of the author, it should be possible to construct a GIS predictive model to facilitate this endeavour. Lutz Klassen (2014) has recently done this to great success for the causewayed enclosures of South Scandinavia. His model computed a range of geological, topographical and archaeological variables to identify areas of high potential which, when combined with a programme of investigative fieldwork, led to the discovery of many new sites. Given their relatively distinct landscape position, this approach could be a highly productive means in which to detect new great hall complexes.

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