The Memory of a Forgotten Landscape

A socio-topographical inquiry into the remains of Later Prehistoric Norfolk

Ethan Deane Aines

Peterhouse, Cambridge
October 2019

This dissertation is submitted for the degree of Doctor of Philosophy
This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text.

It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text.

I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text.

It does not exceed the prescribed word limit for the Archaeology Degree Committee.
The Memory of a Forgotten Landscape
A socio-topographical inquiry into the remains of Later Prehistoric Norfolk

Ethan D. Aines
Peterhouse, University of Cambridge

Four decades of meticulous collection of metal detected finds data in Norfolk by the Norfolk Historic Environmental Record (NHER) and the Portable Antiquities Scheme (PAS) have given rise to one of the largest regional datasets in English archaeology. It is estimated that this dataset contains approximately 1.5 million data points on artefacts spanning prehistory to the modern era. It provides a remarkably dense spatial and temporal distribution of past activity and a compelling opportunity to intensively analyse the circulation, deposition, and social significance of metals and metalwork in the prehistoric landscape. More than 70% of these finds come from arable land and not from traditional archaeological contexts, so the dataset covers enormous areas and indicates the presence of thousands of archaeological sites, many of which have never been examined in any detail. This information, coupled with the data compiled by cropmark surveys, like the National Mapping Programme (NNM) in Norfolk, provides vast potential for inferences about past landscapes. Yet questions remain as to the best ways to make use of these types of large datasets, a problem that collections of grey literature equally face.

However, the conscientious manipulation of the NHER/PAS datasets using a range of the latest techniques in GIS and statistics, including summed probability distributions for dating and geographically weighted regression to view the connections between disparate sites, coupled with the careful analysis and critique of biases in the underlying data structure, allows for a broad perspective on past patterns of life across much of later prehistoric Norfolk. It is possible to see trends occurring in both the circulation and deposition of metals in the longue-durée. This may shed light on the practice of votive deposition as a trend emerging from earlier prehistory but one that is largely dependent upon the social pressures of the current moment. This illuminates the ways in which certain features of social landscape recur again and again. The clustering and recurrence of hoards and other types of sites in certain localities across great time-spans is of particularly interest, and allows for commentary on place-making, social memory, and ritual during later prehistory.
As Cyril Fox’s famous regional study of archaeology showed, however, there is no substitute for being there, and a critique often levelled against GIS projects is that they are overly reliant on technical wizardry to see things that might not actually exist outside a computer. Therefore, a significant part of this research has involved many trips crossing the landscape on foot or by rail or by car, visiting sites much like Fox did in Cambridgeshire a century ago.

In such a way, it is possible to integrate the latest digital methods with more traditional landscape archaeology to present persuasive and novel models of the social, ecological, and geographical significance of Norfolk’s landscapes in the period leading up to the Roman conquest of Britain. Thus, this research clearly illustrates an array of methodological procedures for connecting the observations of metal detectorists to higher level discussions about the linkages between knowledge of place and knowledge of self, or identity, in the past. It also shows how large datasets can be used in thoughtful, contextual ways to learn about the past and to inform and shape future research agendas throughout the county.
I've ascribed these monuments
A false sense of permanence
I've placed faith in geography
To hold you in my memory

I'm sifting through these wreckage piles
Through the rubble of bricks and wires
Looking for something I'll never find

- *Gold Rush*, Death Cab for Cutie
The Iron Age hillfort at Warham, North Norfolk.
## CONTENTS

### LAYOUT OF THE DISSERTATION

List of Charts, Maps, & Figures ................................................................. xi  
Acknowledgements ............................................................................. xvii  

### Part I: The Pattern under the Plough

Chapter 1: Introduction ........................................................................ 1  
Chapter 2: What remains: the metal detected finds of Norfolk ............. 17  
Chapter 3: A methodology, or dealing with other people’s data ............... 53  
Chapter 4: The recent landscape ........................................................... 75  

### Part II: The Atlas of a Forgotten Landscape

Chapter 5: The monumental landscape ............................................... 127  
Chapter 6: The landscape of hoards .................................................... 173  
Chapter 7: Landscapes of memory ....................................................... 219  
Chapter 8: Conclusion ....................................................................... 249  

Appendix 1: The Later Prehistoric hoards of Norfolk .............................. 263  
Appendix 2: Some Explanatory Notes: Building the Model .................... 319  
Bibliography ....................................................................................... 329  
Index .................................................................................................. 373  
Copyright Notices for Maps, Figures, & Photos .................................... 381
MAPS, FIGURES, & PHOTOGRAPHS

Frontispiece: Warham Camp, North Norfolk ............................................................... viii
Spread 1: Heatmap—the metal detected remains of Norfolk ....................................... xviii

Chapter 1
Figure 1.1 The Pedlar of Swaffham ........................................................................... 3
Figure 1.2 Some examples of Iron Age metalwork from Norfolk ............................... 4

Chapter 2
Fig 2.1 Comparison between the NHER & PAS databases .......................................... 19
Fig 2.2: Cumulative growth of the PAS by county ..................................................... 19
Fig 2.3: Discovery methods for objects recorded in the PAS ........................................ 20
Fig 2.4: The spatial specificity of the PAS data ............................................................. 29
Fig 2.5: The temporal specificity of calendar dates, by period, in the PAS data ............. 30
Fig 2.6: The range of typological calendar dates, by period, in the NHER/PAS data ....... 30
Fig 2.7: The distribution of find-sites as regards special land, the Broads .................... 33
Fig 2.8: The distribution of find-sites as regards special land, Thetford Forest .............. 34
Fig 2.9: Major land cover categories in Norfolk ......................................................... 37
Fig 2.10: Comparison of land cover on find-site, Norfolk ........................................... 37
Fig 2.11: Correlation — PAS records of all finds & ha. of arable land ......................... 38
Fig 2.12: Correlation — PAS records of IA brooches & ha. of arable land .................... 38
Fig 2.13: Correlation — PAS records of IA terrets & ha. of arable land ....................... 39
Fig 2.14: Correlation — PAS records of IA hoards & ha. of arable land ....................... 39
Fig 2.15: NHER find-sites density per square kilometre .............................................. 41
Fig 2.16: Comparison of IA find-sites kernel density & total kernel density ................. 42
Fig 2.17: Comparison of archaeological contexts in which metals occur ...................... 44
Fig 2.18: IA iron objects recorded in the PAS by county .............................................. 44
Fig 2.19: Distribution of Bronze Age find-sites in Norfolk .......................................... 46
Fig 2.20: Distribution of Iron Age find-sites in Norfolk ................................................. 47
Fig 2.21: Distribution of Roman find-sites in Norfolk ................................................... 48
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.22</td>
<td>Distribution of early medieval find-sites in Norfolk</td>
<td>49</td>
</tr>
<tr>
<td>2.23</td>
<td>Distribution of high medieval find-sites in Norfolk</td>
<td>50</td>
</tr>
<tr>
<td>3.1</td>
<td>Statistical tests in regard to their uses, assumptions, &amp; references</td>
<td>60</td>
</tr>
<tr>
<td>3.2</td>
<td>The primary datasets utilized</td>
<td>63</td>
</tr>
<tr>
<td>3.3</td>
<td>The secondary datasets utilized</td>
<td>66</td>
</tr>
<tr>
<td>3.4</td>
<td>Organization of GIS model</td>
<td>69</td>
</tr>
<tr>
<td>4.1</td>
<td>The situation of the modern counties of East Anglia</td>
<td>79</td>
</tr>
<tr>
<td>4.2</td>
<td>The situation of the Cambridgeshire Dykes &amp; surrounding landscape</td>
<td>81</td>
</tr>
<tr>
<td>4.3</td>
<td>The situation of the Black Ditches &amp; surrounding landscape</td>
<td>82</td>
</tr>
<tr>
<td>4.4</td>
<td>Geological map of East Anglian soil parents</td>
<td>83</td>
</tr>
<tr>
<td>4.5</td>
<td>Fleam Dyke, the Anglo-Saxon earthwork near Fulbourn Fen</td>
<td>85</td>
</tr>
<tr>
<td>4.6</td>
<td>Scoulton Fen, near Dereham, an upland fen</td>
<td>87</td>
</tr>
<tr>
<td>4.7</td>
<td>Saham Mere, one of the 12 extant meres in the Brecks</td>
<td>88</td>
</tr>
<tr>
<td>4.8</td>
<td>Azimuthal equal-area projection centred upon Norfolk’s coast</td>
<td>90</td>
</tr>
<tr>
<td>4.9</td>
<td>the River Great Ouse at King's Lynn</td>
<td>93</td>
</tr>
<tr>
<td>4.10</td>
<td>The River Yare at Great Yarmouth</td>
<td>93</td>
</tr>
<tr>
<td>4.11</td>
<td>Rivers &amp; watershed basins of N. East Anglia</td>
<td>94</td>
</tr>
<tr>
<td>4.12</td>
<td>Grimes Graves, aerial view</td>
<td>97</td>
</tr>
<tr>
<td>4.13</td>
<td>Grimes Graves Neolithic flint mines</td>
<td>97</td>
</tr>
<tr>
<td>4.14</td>
<td>Mortared flint construction at Thetford Priory</td>
<td>100</td>
</tr>
<tr>
<td>4.15</td>
<td>A pump-house near Breydon Water, the Broads</td>
<td>107</td>
</tr>
<tr>
<td>4.16</td>
<td>Fields of spring wheat &amp; English oak near Toftwood</td>
<td>109</td>
</tr>
<tr>
<td>4.17</td>
<td>Dersingham Bog, near Sandringham, wide view</td>
<td>111</td>
</tr>
<tr>
<td>4.18</td>
<td>Dersingham Bog, near Sandringham, detail of flora</td>
<td>111</td>
</tr>
<tr>
<td>4.19</td>
<td>Dartmoor ponies grazing at Roydon Common, near Castle Rising</td>
<td>113</td>
</tr>
<tr>
<td>4.20</td>
<td>Cattle grazing on lowland salt-marsh at Holkham</td>
<td>115</td>
</tr>
<tr>
<td>4.21</td>
<td>Sheep grazing on heath near Weeting</td>
<td>115</td>
</tr>
<tr>
<td>4.22</td>
<td>Climate proxy, length of annual growing season for south-eastern England</td>
<td>118</td>
</tr>
<tr>
<td>4.23</td>
<td>Calluna vulgaris, heather, growing near Wolverton</td>
<td>119</td>
</tr>
<tr>
<td>4.24</td>
<td>Self-regenerating forests of Scots pine, birch, &amp; bracken at Dersingham</td>
<td>120</td>
</tr>
</tbody>
</table>
Chapter 5:

Figure 5.1: Mt. Ephraim & Bunker’s Hill barrow cemeteries ......................................................... 131
Figure 5.2: Barrows near Massingham Heath & Snettisham ............................................................. 132
Figure 5.3: Neolithic & BA barrow landscapes near Salthouse Heath & Roughton ...................... 133
Figure 5.4: Neolithic & BA barrow landscapes near Norwich ......................................................... 134
Figure 5.5: Intervisibility between IA find-sites of all types & BA barrows .............................. 137
Figure 5.6: Intervisibility between I.A find-sites & BA barrows near Salthouse Heath ............ 138
Figure 5.7: The landscape at Salthouse Heath .................................................................................. 139
Figure 5.8: The extant Iron Age hillforts of Norfolk ........................................................................ 140
Figure 5.9: The hills of Norfolk as modelled using slope height ..................................................... 142
Figure 5.10: Maximum possible visibility from the extant IA hillforts ........................................ 144
Figure 4.11: The profiles of a sample of named hills in Norfolk .................................................... 146
Figure 5.12: The profiles of a sample of hillforts in Britain .......................................................... 147
Figure 5.13: Simple histogram of English & Welsh hillforts by their local slope difference ..... 148
Figure 5.14: Burgh Castle aerial view .............................................................................................. 150
Figure 5.15: Burgh Castle along its southern walls ......................................................................... 150
Figure 5.16: Castle Acre Priory, Nar Valley .................................................................................. 151
Figure 5.17: Castle Acre Castle, Nar Valley ................................................................................ 151
Figure 5.18: Warham Camp, North Norfolk .................................................................................. 153
Figure 5.19: The landscape situation & surrounding monuments at Warham Camp .......... 154
Figure 5.20: The landscape situation & surrounding monuments at Bloodgate Hill .......... 155
Figure 5.21: The landscape situation & surrounding monuments at Narborough Camp .... 156
Figure 5.22: The landscape situation & surrounding monuments at Thetford Castle .......... 157
Figure 5.23: Thetford Priory, along the River Thet ...................................................................... 159
Figure 5.24: The linear earthworks of Norfolk with Black Ditches, Suffolk included ............ 166
Figure 5.25: The Launditch and its immediate setting ................................................................. 167

Chapter 6:

Figure 6.1: An open pool in the bog near Roydon Common ......................................................... 172
Figure 6.2: The major later prehistoric hoard clusters of Norfolk ............................................... 181
Figure 6.3: A major cluster of hoards near Snettisham ................................................................. 184
Figure 6.4: A view of Ken Hill, Snettisham, from the beach ....................................................... 185
Figure 6.5: A major cluster of hoards near Thetford ................................................................. 186
Figure 6.6: A wide angle view of the earthworks at Thetford Castle ........................................ 187
Figure 6.7: A major cluster of hoards near Brampton ................................................................. 190
Figure 6.8: A major cluster of hoards near Cawston ................................................................. 191
Figure 6.9: A major cluster of hoards near Carleton Rode ......................................................... 192
Figure 6.10: A major cluster of hoards near Great Ellingham ..................................................... 194
Figure 4.11: The River Nar near Narborough Camp ................................................................. 196
Figure 6.12: A major cluster of hoards near Fincham ................................................................. 197
Figure 6.13: Watton Stream, a tributary of the River Wissey, near Woodcock Hall .................. 199
Figure 6.14: A major cluster of hoards near Saham Toney ......................................................... 200
Figure 6.15: Summed probability temporal clustering of all metalwork .................................... 203
Figure 6.16: Summed probability temporal clustering of hoards, IA focus ................................. 204
Figure 6.17: Histogram of find-site elevations, all periods ......................................................... 209
Figure 6.18: Histogram of find-site proximity to rivers, all periods ......................................... 209
Figure 6.19: Histogram of LIA find-site elevations ................................................................. 212
Figure 6.20: Histogram of LIA find-site proximity to rivers ...................................................... 212
Figure 6.21: Bar graph of LIA find-site soil parents ................................................................. 213
Figure 6.22: Comparison of IA finds distributions through time ................................................. 214

Chapter 7:
Figure 7.1: Lieux de memoire; hot spots .................................................................................... 226
Figure 7.2: The LIA & Roman landscape surrounding Venta Icenorum, Norwich ................. 229
Figure 7.3: The LIA and Roman landscape near Roughton/Hanworth ..................................... 231
Figure 7.4: Examples of possible LIA enclosures labeled as “square barrows” ...................... 232
Figure 7.5: The square-ditched enclosure from the Longham excavation, 1990 ................... 233
Figure 7.6: The distribution of “square barrows” from the NHER database ......................... 234
Figure 7.7: The IA & Roman landscape near Aldeby, along the River Waveney .................. 236
Figure 7.8: The BA barrow at Mutlow Hill, Cambridgeshire .................................................. 238

Chapter 8:
Figure 8.1: The riverine landscape at Burgh Castle, the Broads ........................................... 251
Figure 8.2: The view across the wash from Snettisham, looking towards Lincolnshire ......... 253
Figure 8.3: The Norman motte at Thetford .............................................................................. 255
Figure 8.4: Castle Rising ........................................................................................................... 257
Appendix 2:
Figure A2.1: Example of simple NHER .SHP data map .......................................................... 320
Figure A2.2: An example of the NHER data attributes in QGIS ............................................. 321
Figure A2.3: An example of the NHER data attributes as viewed in the .XML files .......... 321
Figure A2.4: A kernel density estimation map of all activity in Norfolk............................. 323
Figure A2.5: KDE (heatmap) of branched Iron Age finds from the PAS in Norfolk.............. 325
Figure A2.5: KDE (heatmap) of grouped Iron Age finds from the PAS in Norfolk .............. 325
ACKNOWLEDGMENTS


I am indebted to your support, for your efforts both large and small. Looking back, I wish I had asked more people for more help. Thank you for helping me on my way.
Spread 1: 11,446 find-sites—the reported locations of at least one artefact—shine like newborn stars in the nebulaic hotspots of Norfolk's metal detected landscape. Constellations of meaning intricately connect the finds in these locations to the people who lost and intentionally deposited them sometime in the past. While the majority of the finds from these sites are Roman and medieval, a smaller but important proportion revealed the evidence of prehistoric activities from the Bronze and Iron Ages, from around 2400 BC to AD 100. Each find-site has at least one artefact associated with it, but many have hundreds.
I want to know what endures in these ruins, what remains inscribed upon the debris once the life that gave it meaning has forever vanished. I would like to know what will remain of us when we perish.

*The Dark Abyss of Time*, Laurent Olivier (2011: 4)
The research presented here is essentially all about the ways in which the landscape we observe today is full of the vestiges of the past. It looks at a small, but distinctive and continentally significant, area of England: Norfolk, with its back to the North Sea and a vast fen to its west flank. It examines the prehistoric, archaeological remains: ephemeral sometimes, like the cropmarks of ancient monuments that appear beneath summer wheat, or persistent, lasting, and confrontational like the blade of a large ceremonial knife uncovered beneath the plough. The question is how we connect these observations to what we think about the interplay between society and environment, as represented in that past landscape.

In the end, it is a story about old landscapes going on in their afterlives to influence the world in many ways that were never originally intended of them. It is about the ways people transform the landscape, and how it changes them too; but it is also, on a fundamental level, about the stories we tell ourselves about the places we grew up. A crucial interaction exists between the knowledge of self and the knowledge of a place. The exploration of these concepts begins by examining these, the remains of the past, and the linkages they share in constellations of forgotten meaning.
CHAPTER 1

Though other parts of this dissertation go into greater detail, this chapter sets the scene by briefly introducing some of these remains—metal detected and chance finds, cropmarks, other vestiges—and discusses how their study fits in with a long, rich history of landscape archaeology in the region. It introduces the research trajectory of the discipline and also some of the latest, digital tools archaeologists possess to process ever growing, metaphorical mountains of data generated by years of careful identification, curation, and remote sensing schemes. The state of affairs is considered very briefly for Later Prehistoric archaeology in Norfolk, and the social and political situation at the end of the Iron Age—the primary, though not sole, period of interest—is discussed. The major research aims, within the context of what we know and what we hypothesize about past landscapes, are clarified, and finally, the structure of the dissertation is outlined.

What remains...

In January 1984, a man was searching for newts in the spoil from an irrigation pond in West Norfolk, not far from the village of Congham, when he found a Late La Tène scabbard fashioned from bronze and etched with intricate, characteristic swirling. Bent in half and sticking out of the peat, the scabbard was similar to other important Late Iron Age metalwork found in the area. Deposited into the bog more than 2000 years before, it showed an unusually high level of preservation, the metal still un-patinated, indicating it had spent much of the first part of its afterlife in water (NHER 20427).

Only 11 kilometres from Congham, at Snettisham, a farmer was ploughing his fields more deeply than usual when he unearthed what, at first, appeared to be a piece of a brass bedstead. He left it by the side of the field for several months until the county archaeologist, R. Rainbird Clarke, happened to examine and recognize it as a Late Iron Age electrum torc (Clarke 1956). From the same corpus of metalwork as the scabbard found while searching for newts, the torc was only one of more than 170 others found deposited into a series of shallow pits and discovered by amateur metal detectorists over the course of several decades (Stead 1991b, 1991c; Joy & Farley in press).

Not far from this location, only two kilometres away, a farmer in the 1930s had been turning over land he had worked many times before without finding anything unusual, when he retrieved a Bronze Age socketed-axe with four ribs and a leaf shaped spear. In the following years, he found additional pieces of the same hoard, which may have been part of a cluster of similar hoards from the Bronze Age found in the immediate vicinity and made up of socketed axes, chisels, a razor, and fragments of a Carp’s Tongue sword blade (Lawson 2018: 58).

In 1988, a surveyor working in My Lords Woods near Oxborough, at the former fen edge, apparently stubbed his foot on a large, Middle Bronze Age ceremonial dirk: an enormous 70 cm blade with intentionally blunted edges and no rivet holes, indicating it was never hafted
(NHER 29157) (Needham 1990). For many years, a similar dirk found by a ploughman had been used as a doorstop on his farm in East Rudham. Curiously, the Rudham Dirk had been bent nearly in half before it was cast into a boggy area.

We could progress backwards, listing the numerous hoards and other objects found over the course of the Industrial Revolution, the construction of Norfolk’s rail lines, and the programs to improve Norfolk’s soil over the course of the nineteenth century. We could continue until perhaps arriving at the Pedlar of Swaffham—who, sometime in the medieval period, having dreamt of a treasure, unearthed a great hoard—today carved along with his dog into a church pew and the town sign in Swaffham (Aines 2015). But the pattern is clear enough from these few examples: the past keeps bumping into us, or us into it, again and again—sometimes very literally as at Oxborough. In ways large and small, these remains do not merely brush against us in chance encounters, but exist all around us embedded in familiar landscapes. Hoards, these enigmatic collections of objects unearthed from time to time, are only one highly visible yet small part of the story.

The incidents recounted here do not even consider the times people went looking for these objects, as metal detectorists do every day in Norfolk. Following the Second World War, the sale of metal detectors that had been used for mine clearance sparked an exponential growth

Above: a Late Iron Age copper-alloy vessel mount in the form a bull’s head, found near Kenninghall. Drawing by J. Gibbons, © NHER 2006.

Above: a Late Iron Age copper-alloy flat-ring terret with enameled decoration (shown in black). Drawing by S. White © NHER and NMSAS 2002.

Above: A Late Iron Age copper-alloy harness pendant found near Garboldisham. Drawing by J. Gibbons © NHER 2006.

Below: An Early Iron Age spearhead found deposited in-situ on the bank of the River Wissey near Cranwich. Drawing by A. West, © NHER 1997.

Figure 1.2: A selection of Iron Age metalwork found by detectorists in Norfolk. Drawn by NHER/NMSAS.
in the rate of finds of British metalwork from all periods of history and prehistory (Bland 2015). Today, more than 400 hoards dating from the Bronze Age to the civil wars in the 1600s, evidence of long tradition of fine metalwork and coinage in the region, have been found in Thetford, Hevingham, Saham Toney, Norwich, Sedgeford, and other locations throughout Norfolk, many as the result of metal detecting (Brown 1986; Chadburn 2006; Hutcheson 2007; Marsden 2012; Talbot 2017; Lawson 2018). Even so, an ancient legal framework, little incentive to report finds, and the hostility of many archaeologists towards metal detecting led to a situation that could have resulted in the loss of precious archaeological data (Bland 1996). Thanks to the pragmatic efforts of the Norfolk County Museum and archaeologists like Tony Gregory, beginning in the 1970s, however, this data was carefully curated (Green & Gregory 1978; Bland 2005). Norfolk, as certain other areas of East Anglia, today provides an exceptional opportunity to learn about the past using metal detected data. By some estimates, Norfolk may have recorded as many as 1.5 million finds over the past 40 years.

### Landscape studies in East Anglia

Metal detected data provide only one line of inference, and a growing body of work illustrates the ways in which the form and figure of the East Anglian landscape may in places be of ancient character (Harrison 2002; Barnes & Williamson 2006; Rippon 2018). As research such as the Historic Landscape Characterization project and efforts to record the cropmarks of ancient monuments and earthworks like the National Mapping Programme (NMP) in Norfolk, have shown, much of the environment we observe today was shaped by, and shares boundaries with, ancient landscapes (Williamson 2007; Horlock et al. 2008; Tremlett 2011). With unprecedented new knowledge from all past periods of time, it is possible to gain fresh perspectives on what has been referred to as Norfolk’s “hidden” prehistoric landscape, erased by centuries of activity from one of the most intensive agricultural regimes of anywhere in Britain (Ashwin 1999: 103). This pattern under the plough—of earthworks, and trackways, and metalwork finds—reminds us that disjuncture from the past is illusory, and that in so many ways we live everyday amongst the remains of the past (Evans 1966; Olivier 2011; Shanks & Tilly 1987a, 1987b). Many of us choose to ignore the past; some, like metal detectorists, seek it.

At a basic level, the research presented here is all about the ways in which the landscape we observe today is full of these vestiges. The question is how we connect our observations to what we think about the interplay between society and environment represented in that past landscape.

This research traces its origins in the region from a rich, intellectual genealogy. Perhaps the most famous study of the archaeology of East Anglia, still in print today, was that of Sir Cyril Fox. Undertaken on bicycle for his PhD thesis, Fox’s regional survey of archaeology from the Bronze Age to the Anglo Saxon period aimed to present a clear topographical catalogue of archaeology in the region with an eye towards future research (1923). Interestingly, Fox’s en-
CHAPTER 1

tire justification for the project occupies no more than a few brief sentences, indicative of the extent to which it was deemed entirely necessary at the time. Fox later more fully explored, in *The Personality of Britain* (1932), the influence of the landscape on the choices different cultures made. Long before affordances and object biographies were in vogue, Fox wrote, “I shall endeavour to express the character of Britain in prehistoric and early historic ages, and to indicate the effect of the environment she afforded on the distribution and fate of her inhabitants and her invaders” (*ibid.*: 10).

In only ten years, description had moved on to inferential modelling of the landscape, work that was continued by W.G. Hoskins in landscape history at Leicester (1955) and David Clarke (1968, 1972) at Cambridge in the 1960s. Even archaeologists like Ian Hodder were influenced by landscape archaeology and approaches to spatial science (Hodder & Orton 1976). This is a species of landscape archaeology that—quite apart from Barrett’s critique of the discipline as one that merely chronicled “a history of things that have been done to the land”—provided conjectural emphasis on the ways the landscape pushed back on human society and had influences, affordances, and restrictions of its own (Barrett 1999: 26).

GIS takes this one step further. As a natural outgrowth of landscape archaeology, distribution mapping, and spatial sciences, Geographical Information Systems (GIS) made their way into archaeology in the early 1990s. Although initially linked with the “new” geography and “new” archaeology of the 1970s and with positivist and functionalist approaches (Tilley 1994: 9-10), practitioners of GIS moved the field towards new “humanistic” approaches that investigated important social factors in regard to landscapes (Harris *et al.* 1995). In some ways, the models and cultural-landscape histories proposed by Fox and earlier archaeologists were deemed too determinist in the post-structuralist, intellectual landscape of the 1990s. So, ideas popular at the time like hermeneutics of landscape and cognition were incorporated into GIS to overcome the perceived rigidity of these earlier analytical approaches (Zubrow 1994; Lock & Stancic 1995).

More recently still, practitioners of archaeological GIS have sought new methods to integrate social theory with the unprecedented quantity of data that has been generated over the past four decades. Projects to collect metal detected data at the national level like the Portable Antiquities Scheme (PAS)—the outgrowth of Tony Gregory’s work—or at the regional level like the Norfolk Historic Environment Record (NHER) may find their intellectual roots in the rich tradition of English landscape archaeology, developed both locally and abroad, yet they help researchers attain scales of knowledge a bicycle survey could never attempt. Projects over the past decade have sought to establish and refine a methodology for working with metal detected distributions (Chester-Kadwell 2009; Robbins 2013; Brindle 2013, Daubney 2015), and

queries the same year.
other important research projects like EngLAID at Oxford have begun to lay the foundations for the incorporation of these huge, national, disparate datasets in order to learn about landscape and identity at tremendous scale (Cooper & Green 2016).

Yet as Cyril Fox showed, there is no substitute for being there, and apart from the technical wizardry possible with GIS, the discipline is still sensitive to phenomenological approaches e.g. visiting (Hutcheson 2004; Yates & Bradley 2010a, 2010b). Therefore, a significant part of this research has involved many trips crossing through the landscape on foot or by rail or by car, visiting sites much like Fox did in Cambridgeshire a century ago. In such a way, it is possible to integrate the latest digital methods with more traditional landscape archaeology to present persuasive and novel models of the social, ecological, and geographical significance of Norfolk’s landscapes in the period leading up to the Roman conquest of Britain.

In concomitant growth with digital methods for investigating landscapes since the 1990s, exciting theoretical approaches for thinking about landscapes as places of memory—lieux de mémoire (Nora 1996)—have also gained widespread acceptance within the archaeological literature (Bradley 1987; Van Dyke & Alcock 2003; Chadwick & Gibson 2013). Within the realm of archaeology, these ideas, which trace their intellectual genealogies to a range of sources from the nineteenth and twentieth centuries (Halbwachs 1952; Fustel de Coulanges 1864), have enjoyed cross-pollination with a number of fields like anthropology (Bloch 1971; Connerton 1989; Basso 1996), sociology (Olick & Robbins 1998), classics (Yates 1966), and history (Assmann 1992) among others. The central ideas within this field of thought are that entire landscapes may serve as a medium for cultural memory, and that these are often used in commemorative ceremonies to pass on ideas to future generations and to wield memory as a tool in the service of power (Bradley 1987). The political imagination, or the extent to which a group visualizes itself in regard to a shared, somewhat fictive past (Assmann 1992: 111), also takes on a prominent role. These approaches are useful in light of growing consensus that Later Prehistoric and Iron Age people did not inherit blank landscapes to craft as they saw fit, but took over a range of landscapes and monuments from people who had lived there before (Hey 2007). Thus, it is also possible to view certain prehistoric practices like the placing of hoard deposits as the creation of special places linked to new social identities (Farley 2011; Adams 2015).

Research context: Iron Age studies in Norfolk

In 2001, when Champion et al. published their detailed research agenda for better understanding the British Iron Age at the local, regional, and national level, Norfolk was already listed as an area with an established framework, thanks, in part, to work by John Davies, Tom Williamson, Tony Gregory and others involved, even earlier, in the Norwich Museums, like R. Rainbird Clarke (Champion et al. 2001: 26; Davies 1996; Davies & Williamson 1999; Gregory 1991, etc.). Clarke, a Cambridge alumnus, had—decades before Tony Gregory and metal de-
CHAPTER 1

tecting—encouraged large numbers of the public to bring their finds to the museum to be identified and recorded in the Norfolk Sites and Monuments Index, the foundations upon the NHER database and our current understanding of the prehistoric landscape was constructed (Green 1986). As Hill made clear twenty years ago, Norfolk was not a black hole of understanding or as parochial as it was made out to be (Hill 1999: 185). Yet it still may have been overly generous of the authors of the agenda to compare Norfolk with, for example, Central Wessex, which had seen an enormous amount of research up to that point. Indeed, a cursory search of regional research on the British Iron Age reveals that to the current day, Norfolk has only had a quarter of the total publication rate as Wessex in the Iron Age, and three-quarters that of Danebury itself. Furthermore, although neighbouring Cambridgeshire was listed as having only a partial framework at that time, it had (and has) seen a far greater amount of development-led archaeology than Norfolk.

However, over the past twenty years, a number of new research projects and syntheses of the region have been published, and more are shortly on the way. There have been excellent studies of material culture including coins (Chadburn 2006; Briggs 2011; Marsden 2012; Talbot 2017), brooches (Adams 2015), torcs (Joy 2016; Joy & Farley in press), terrets (Hutcheson 2004), hoards (Hutcheson 2004, 2007; Chadburn 2006; Talbot 2017, de Jersey 2015; Joy & Farley in press), ceramics (Brudenell 2011), and art, semiotics, and decorative styles (Davies 2011). Harlow (2018) also looked at many of these features within the PAS and NHER as part of a study on Late Iron Age and Roman identity in the region. The Iron Age landscape has been studied (Tremlett 2011), as well as regional social complexity (Ralph 2007), and there has been the publication of several surveys and excavations related to development-led archaeology (Gurney & Penn 2000-2006; Ashwin & Bates 2000; Bates et al. 2001; Hutcheson 2007). To avoid prolixity, omissions have been made from this list. An enormous amount has been added in the past 20 years to the corpus of knowledge on the Iron Age of Norfolk, in contribution to the century of prior, local knowledge gained from important surveys and excavations by many others who are discussed in this text.

However, one of the most exciting areas of research in Norfolk’s past relates to the distributions of its metal detected finds. Although Hutcheson’s (2004) work may be closely compared with the research presented here—as both study hoards within the landscape of Norfolk with some emphasis on memory practices—it is important to highlight the key differences. Hutcheson’s use of the metal detected data can probably best be described as qualitative, since her primary research methodology seems to depend on the visual inspection of distribution maps, a method that has been questioned elsewhere (Hodder 1977: 223; Brindle 2013). This may be an unfair characterization, since her methodology was never explicitly stated, and may be more fully expressed in her original dissertation.

Additionally, some of her conclusions were painted with a very broad brush, because they did not, crucially, include a source criticism of the metal detected data themselves. As studies
have since shown, metal detected data cannot be taken at face value and their distribution must be scrutinized extensively (Chester-Kadwell 2007; Brindle 2013; Robbins 2013; Aines 2015). Therefore, while Hutcheson’s approach was innovative for the time, her work was missing some key components that are now recognized as essential for metal detected studies, in particular, and GIS studies more broadly. These components include robust source criticism and some use of inferential statistics (facilitated by GIS) to compare distributions for difference. In support of her contribution, metal detected data had been discussed before (Davies 1996, 1999), but little had been made of it in aggregate up to that point.

Hutcheson’s work has been widely quoted, as the best available presentation of the evidence, but it is likely to be superseded when better methodologies are applied that are more appropriate for metal detected data and these will cast doubt on some of her conclusions about the isolation and earliness of certain crucial sites. Hutcheson’s use of her own catalogue numbers rather than NHER “PrefRefs” (Preferred Reference numbers), has additionally complicated the ease of using her work in cross reference to the extant NHER dataset from which her work originally derived.

The technology available for advanced GIS studies today are much more user friendly than even in the recent past, and high speed Internet and high-capacity hard drives have proven incredibly useful. For example, over the course of this project, more than 70 GB have been used—mainly to store data about Norfolk’s find distributions and landscape in high resolution raster images. For comparison, 70 GB is more than the average hard drive size of a personal computer in 2000 (Komorowski 2014). In this way, the growth and implementation of digital methods in archaeology over the past two decades have provided a range of very exciting options for landscape archaeologists that only two or three decades ago were new or difficult technologies requiring special hardware. The ease of implementation of, and access to, technologies like remote sensing, including LIDAR and satellite imagery, aerial photography using UAVs, photogrammetry, and geo-statistics have never been greater.

The Late Iron Age: a time of rapid social change

The study of material culture and landscape from East Anglia and other parts of Britain during the final centuries of the Iron Age indicate a fairly rapid social shift that is attested to by many different sources in different regions (Moore 2003; Van der Veen 2007; Haselgrove & Moore 2007). As Hill (1995) noted, there was a growing level of specialization, but as previous research had indicated the process was anything but straightforward (Haselgrove 1989). The extent to which Iron Age society was hierarchical or more fluid in the centuries leading up to the Roman conquest of Britain has been much debated (Karl 2008; Hill 2011). Yet because of what is known of the tremendous amount of social change that occurred at the end of the Iron Age, some have argued that whatever the geopolitical situation was in the first century AD, it differed very greatly from only a few generations before (Creighton 2000).

9
CHAPTER 1

This shift can be seen in a number of different forms. For example, although brooches were quite rare in the Early Iron Age and for much of the Middle Iron Age, suddenly, over a few generations from around 300 BC, their distribution along with other types of metalwork became increasingly common as people began to mark personal identity in new ways (Hill 1995c: 81; Adams 2014, 2017). Other objects such as mirrors (Joy 2010), toiletries (Hill 1997), serving dishes (Hill 2002), food (Ralph 2007; Lodwick 2013), and drink (Haselgrove 1982; Sealey 2009) all seem to show a marked shift in social structure over the course of the last century BC/first century AD. Melanie Giles has argued that the proliferation of forms seen over the course of the Iron Age “literally made new kinds of metaphorical relationships thinkable” (Giles 2007b: 395). In many locations throughout Britain, particularly in the south, and possibly earlier than originally thought (Sharples 2014), cosmopolitan ways of thinking and acting seem to arise in tandem with some aggregating force—the driver in the creation of new types of settlements and the emergence of urbanism and greater complexity (Pitts & Perring 2006; Aines 2015b, Moore 2017).

One of the most interesting aspects of the Late Iron Age in Britain is its diversity of regional practices, a factor that leads to the conception of “multiple Iron Ages” (Hill 1999: 186). In this regard, East Anglia and Norfolk are no different (Gosden & Hill 2008), and neighbouring areas sometimes have clear differences in the material culture they chose to engage with or not (Evans 2003a). For example, the people living in Norfolk during the Late Iron Age, seemed to have shunned early southern (Roman) gifts or imports of wine, despite sharing the eastern seaboard around the North Sea and even some rivers with neighbours who did have wine. Cambridge seems to have been a key boundary in this regard (ibid.). A complex web of kinship and socio-political ties seemed to have connected much of East Anglia and south-eastern Britain with the Continent (Haselgrove 1984: 12), yet it is unclear how much the distribution of material culture was influenced by this. Debates remain as to whether change during the period can be classified as more insular or influenced by events abroad (Creighton 2000).

The Late Iron Age of East Anglia is somewhat distinctive for its large quantities of metalwork (Hutcheson 2004); Norfolk has repeatedly shown evidence of La Tène metalwork in quantities only found in the Thames and in Continental Europe (Hill 1999). While the character of hoard deposits changed over the course of the Iron Age in Norfolk (Haselgrove 2005; Hutcheson 2007), depositions also increased markedly in the last two centuries of the Iron Age. Due to this temporal proximity to contact with the Romans, studies of Late Iron Age hoarding have viewed hoards in Norfolk and elsewhere in Southern Britain as the spoils of war or as valuables hidden for safe-keeping: some form of direct reaction to the invasion in the past (cf. Rodwell 1976: 198-203). As Cunliffe writes, “It has…been suggested that the invasion scare may have caused the sudden deposition of hoards. In all, twelve can be shown to be roughly contemporary with Caesar’s landing, many of them lying in Kent and Essex, the territory through which Caesar campaigned” (Cunliffe 1978: 73). However, these approaches have been
INTRODUCTION

critiqued (Aitcheson 1988, Bradley 1990, and more recent studies have almost totally abandoned this line of thought, instead emphasizing the changing nature of political allegiances and emerging systems of value (Farley 2016; Talbot 2017; Harlow 2018, Joy & Farley in press).

These kinds of debates have surrounded votive and hoard deposits from all periods for decades (Levy 1982; Bradley 1990), though more recent approaches have called for something like a unified theory of depositional practices that does not emphasize a duality between ritual and mundane activities (Bradley 2012; Chadwick 2012). There is also a growing consensus that the siting of hoards themselves is useful for learning about the social system into which they were placed. As Hutcheson, summing up these ideas, writes, “The suggestion that landscapes are ‘social’ places and that, therefore, ‘unstratified’ finds are located ‘meaningfully’ within the landscape, opens up a new way for investigating such material” (Hutcheson 2004: 38). Richard Bradley argues that the quantity and volume of material now available, often found by metal detectorists, does lack “the detail that specialists have mastered” and the resolution that we are accustomed to working with (Bradley 2017: 3). Yet this can only stop archaeologists “who have too much material at their disposal and not enough ideas to address it” (ibid.). The premise is straightforward, he writes, echoing Hutcheson: “It is to treat the deposition of distinctive artefacts and their associations as evidence of the cognitive geography of people who left little else behind” (ibid.: 7).

Research aims

The central aims of this research are set against this rich backdrop of landscape, GIS, memory, and Iron Age studies, through the exploration of a distinctive region of Britain across the span of prehistory and the practices of past people regarding memory and environmental concerns within the landscape. Following on the foundations of others in this field (Hutcheson 2004; Chester-Kadwell 2007; Brindle 20013; Robbins 2013; Daubney 2015, Cooper & Green 2016); this research explores methodologically exciting issues using one of the largest archaeological datasets in Britain. Particular to Norfolk and Suffolk (though other eastern English counties as well), large quantities of metal-detected data provide a perspective into the linkages between material culture, social memory, and place-making in a very particular part of Europe.

In combination with an extensive ancient landscapes and monuments record, these data provide a remarkably dense spatial and temporal distribution of past activity and a compelling opportunity to intensively analyse the circulation, deposition, and social significance of metals and metalwork in the prehistoric landscape. Furthermore, because most metal detected finds, cropmarks, and landscape observations come from arable land and not from traditional archaeological contexts, the NHER and PAS datasets cover enormous areas and indicate the presence of thousands of archaeological sites, many of which have never been—and probably never will be—examined in any detail.
CHAPTER 1

Therefore, the primary goal of this research was to concatenate a variety of different archaeological and environmental datasets in a GIS in order to model the changing prehistoric landscape at the regional scale over the course of the Bronze Age through the Early Middle Ages. While the Iron Age provides the major focus of this research, engaging with the monuments and metal detected finds from other periods is not assiduously avoided as in some other archaeological studies, because in many ways, as the later chapters explore in detail, earlier alterations in the landscape may have impacted or been used in later social configurations. Furthermore, later activity in the landscape may also sometimes be indicative of a continuity, either real or fictive, with an earlier, activity that took place or was seen to have taken place in that location. These concepts are broadly discussed later as affordances of the landscape, and cannot be seen in isolation. A snapshot of one sub-period (e.g. the Early Iron Age) does not provide enough time depth to view these relationships.

Using this assembled GIS database, a variety of different methodological and topical questions can be asked. Some of these are: how does the landscape we view today relate to the landscape as it existed at various points in the past? How have humans changed the environment, and how has it changed them? What does the landscape provide and afford in certain locations as a relationship between cultural factors like what people needed and believed? How do metal detected assemblages address some of these issues, and how can we tell given fairly significant “biases” in their distributions? How did prehistoric people, in the Iron Age and other periods, situate themselves, their settlements, and their monuments in the landscape of Norfolk, and how does this relate to movement and distribution in the landscape? Where are hoards situated, both in place and time, over long time spans, and how may the later placement of hoard deposits in the Iron Age relate to earlier Bronze Age practices? Is there continuity of practice, or is something else going on? How did Late Iron Age people view this past landscape, and how did it relate to their view of self? What are the ways in which these practices inform us about the aforementioned changing social landscape at the end of the Iron Age?

Thus, this dissertation will show that through the conscientious manipulation of the NHER/PAS dataset using a range of the latest techniques in GIS and statistics, including summed probability distributions for dating and sophisticated analytical, difference tests to view the connections between disparate sites, coupled with the careful analysis and critique of biases in the underlying data structure, it is possible to gain a broad perspective on past patterns of life across much of later prehistoric Norfolk. It will demonstrate one can see trends occurring in both the circulation and deposition of metals in the longue-durée. Further, we can shed light on the practice of votive deposition as a trend emerging from earlier prehistory but largely dependent upon the social pressures of the current moment, and we can observe the interplay between landscape and the political imagination at an array of Late Iron Age sites. The

---

2 The names for time periods used in this dissertation (e.g. Anglo-Saxon, Iron Age, etc.) are used solely to talk about a specific period of time, as discussed more in Chapter 3. They do not necessarily imply any cultural or ethnic background, only the time period in which given events occurred.
clustering and recurrence of hoards and other types of sites in certain localities across great time spans will be shown to be of particularly interest, as they allows for later commentary on place-making, social memory, and ritual during later prehistory.

It will also clearly illustrate an array of methodological procedures for connecting the observations of metal detectorists and observations in the landscape with more conceptual discussions about the linkages between knowledge of place and knowledge of self, or identity, in the past. It will finally demonstrate how large datasets (sometimes termed “big data”) can be used in thoughtful, contextual ways to learn about the past and to inform and shape future research agendas throughout the county.

This dissertation cannot, however, as a study of landscape, provide an in-depth discussion of all the objects in the hoards or provide a terribly comprehensive catalogue, as it is not a material culture study. While these elements are important for understanding the individual contexts of hoards, a study of the wider significance of these objects in the landscape risks something like a “new antiquarianism” by becoming too bogged down in the details (Bradley 2017: 7). It also cannot truly synthesize all of the data available or spend much time debating the significance of historical sources or refresh some of the long running debates mentioned earlier; it is not, therefore, a synthesis of Norfolk’s Iron Age. Instead, it is a one piece of a broader conversation, and it is the story of a landscape.

Structure of the dissertation

The dissertation is divided into two parts. Part one provides a vantage point from which to observe the past landscapes of Norfolk, drawing on the rich traditions of British regional landscape archaeology and incorporating newer methods in GIS and statistics. Part two presents several vignettes, or episodes, of that landscape over three different chapters, in regard to the research aims previously outlined. These three each look at the landscape from a different perspective, or cover a different aspect of the landscape during later prehistory.

The second chapter looks into deeper issues associated with the NHER and PAS datasets, as good examples of “other people’s data” (Atici et al. 2013). By looking at the genesis of metal detected data—how the dataset formed in the first place and how the law informed this process—it is possible to assess some of the strengths and weaknesses of it. While the major strength of the datasets is their unparalleled spatial and temporal coverage, one of the major weaknesses in the datasets is the presence of significant skew or bias in the distributions as the result of contemporary factors i.e. where metal detectorists choose to operate. Thus, spatial and temporal bias, more related to how items are catalogued, must be accounted for, particularly when considering gaps in metal detected distributions. Certain methods such as taking a probabilistic approach to distributions are discussed. Finally, some elements of the national
CHAPTER 1

distributions of finds within the PAS are discussed, particularly in regard to the correlation between high arable land acreage and high numbers metal detected finds per county. The spatial distributions of finds are also mapped.

The third chapter presents a methodology for dealing with this data, building on the work of authors like Robbins, Brindle, and Chester-Kadwell. However, beyond merely providing a list of the methodological steps involved in the construction and exploration of the GIS model that forms the primary point for analysis and interpretation in this research, it is important to place GIS and spatial analysis within a broader historical framework. Additionally, the importance of visiting sites to learn about the landscape and using photography and maps to convey a sense of it to the reader are discussed. Issues of knowledge discovery in large databases, the use of descriptive and inferential statistics, and dating the model used summed probability distributions are also considered from a variety of perspectives. Finally, a discussion follows of how the GIS model of Norfolk was built and which datasets were incorporated after the process of knowledge discovery.

The fourth chapter takes a more in-depth look at Norfolk’s “recent” landscape, since the end of the Roman period, considering the broad theme of how the story of a region can be told through its landscape. Topics like the regional boundaries of Norfolk, both spatial and conceptual, at different times in the past are discussed, and Norfolk’s geographical position in the North Sea is mentioned in regard to larger debates over the meanings of “centre” and “periphery” in archaeological, regional synthses. The ways in which landscapes change and the ways in which we think about them are both highlighted as essential to understanding the ways in which affordances, or the qualia of a region, influence and are influenced by people. The recurrence of certain landscape themes through time are also considered from a broad variety of sources in relation to the connection of people to places.

The fifth chapter discusses the past, monumental landscape of Norfolk. Far from being nearly devoid of monuments as it is today, by the end of the Iron Age, there were substantial and well established monumental landscapes around Norfolk. Although people living in the region shortly before the Romans arrived interacted with these older monumental landscapes, they themselves have not passed on a reputation for any great proclivity towards monument building. Thus the Neolithic and Bronze Age landscapes are discussed in terms of their topographical placement and arrangement. The siting of later, Iron Age hillforts is discussed in regard to the dominant pattern of settlement and activity in the Norfolk’s river valleys. This leads to a discussion of the ways the affordances of the landscape may be important to the provision of power, and the peculiar arrangement of hillforts in regard to later medieval sites, including priories, is considered in detail. Finally, there is a discussion about both movement on trackways and roads, and blocking that movement or delimiting space with earthworks and dykes, a debated feature of Norfolk’s prehistoric landscape.
The sixth chapter attempts to place itself into the social landscape of Norfolk, within a wider chronology of metalwork circulation in the region. It looks at a large set of hoards from Norfolk (the contents of Appendix 1) from the Early Bronze Age until the first century AD, and provides a summary of the total pattern of hoarding in the region, while focusing primarily upon the Late Iron Age, as a way to provide different scales for thinking about the utilization of the landscape over time. Furthermore, two facets of this pattern are highlighted in particular: the spatial and temporal clustering of hoards. By looking in some detail at these clusters, four different scenarios are proposed to help explain the clustering. Additionally, using tests of difference to compare some of the distributions of different finds types show how the locations of hoards differ, and do not differ, from other locations in the Iron Age landscape. These analyses, which shows that Later Iron Age hoard deposits tend to placed quite near to a variety of contemporary activities, open up a larger discussion about the importance of using hoards in place-making.

Finally, the seventh chapter, addresses landscapes of memory and the ways in which knowledge of the world around us mirrors knowledge of the self. It presents a theoretical background to different approaches to memory from anthropological, sociological, historical, and archaeological evidence. A sense of belonging in a place may also be related to certain ideas that a society or group thinks (or imagines) about the past, or what Jan Assmann refers to as the “political imagination” (Assmann 1992: 111). In turn, we will consider how groups during the Late Iron Age could have used older monuments, landscapes, and the social sense of the past in novel ways and with a mind toward establishing hereditary or group ownership of certain landscapes. The ways in which the archaeological palimpsests observed at many sites in Norfolk are “rarely... accidental and innocent” (Van Dyke & Alcock 2003: 1) are considered with specific examples. Three different themes are highlighted with regard to memory in the ancient Late Iron Age Landscape. The first of these looks at the re-use of monuments from the Neolithic and Bronze Age in their Iron Age afterlives. The second section considers living with the dead in areas where Iron Age settlements were integrated into barrow cemeteries, and thinks about some of the ways in which concerns about hereditary control at the end of the Iron Age were made manifest in the landscape. The third section considers some of the ways people in the Iron Age used boundaries to mark both space and sense of time, and how hoard deposits fit in with Iron Age ideas about place-making and marking time.

Together, the chapters of the second part form a series of stories about a forgotten landscape and address the wider theme of what a landscape affords as the relationship between society and the environment. The dissertation is concluded by summarizing some of the main findings and making recommendations for future research opportunities in these areas.
The NHER and PAS datasets: orphaned finds, other people’s data

The remains of one of the largest archaeological “collections” in England can be found in the twinned file cabinet archives at Gressenhall and Norwich Castle, Norfolk. Hundreds of thousands of paper records, duplicated as a fail safe, represent perhaps more than a million mostly copper-alloy archaeological artefacts found in Norfolk since 1975. These, along with thousands of Polaroid photographs and meticulous glassine drawings, are what remains—in the public domain, at least—of countless objects from across all periods of British prehistory/history found by amateur hobbyists: metal detectorists. The brooches, axeheads, coins, torcs, thimbles, blades, beads and hundreds of other types of finds that generated this monumental paper trail are long gone, in the possession of their finders in most cases. Only a small percentage of finds, typically hoards or groups of objects, were ever purchased by the British Museum or Norwich Castle Museum; but the paper trail remains.

The Norfolk Historic Environment Record (NHER) database is a curious artefact. It is a digital-analogue hybrid archive, almost like a regional library of finds. Much like a library, one can browse the catalogue entries, in this case the find-sites or the records of locations from which metal detected and other types of objects were found (available at http://www.heritage.norfolk.gov.uk), but can only see a limited quantity of meta-data about each catalogue entry. To view
the whole thing, one has to go to the library in person and read the book, in this case, access the files kept in the aforementioned archives. To researchers looking to access and analyse large amounts of data about the past, the library format of the archive presents some difficulties, and it feels very much like a product of its age. The story of how this dataset came to exist and be curated offers many vital hints to an underlying structure that deeply impacts how researchers understand the many distributions afforded by the data.

Beginning in 1975, the Norfolk Historic Environment Record (NHER) encouraged amateur metal detecting enthusiasts, gardeners, and others, to bring in their finds for recording, and all of the finders’ original hand drawn maps, finds officers’ notes on looted sites and treasure inquests, and press clippings relevant to cases are still in these files. Although digitization—akin to what Google Books has done to libraries—has been in the works, it is a difficult and costly undertaking. NHER barely survived cuts a few years ago after a spirited campaign by hobbyists and archaeologists, including those at Cambridge, to save the Norfolk institution (Grimmer 2016).

An alternative supplement to NHER presents itself in the Portable Antiquities Scheme (PAS), which began collecting similar data in 1997. Emulating the success of the NHER but on a national scale, the PAS provides a valuable resource to both hobbyists and researchers alike (https://finds.org.uk). Unlike NHER, however, the PAS is a fully digital archive and each record in the catalogue has both a spatial location and all data available on the object found at that location. The PAS is therefore easier for users to utilize for data studies, in addition to the fact that it has national coverage.

These two bodies of data, NHER and PAS, differ slightly from one another in ways that will be discussed further, but they both provide a valuable perspective on the past: the typological and spatial data of, in combination, more than 2.7 million objects, primarily metallic, but also made of ceramic, lithics, bone, and other materials encountered by metal detectorists. While Norfolk’s data obtained after 1997 is now part of the PAS, most finds from before that and going back to the 1970s are not included in the PAS and are only accessible at Gressenhall and the Norwich Castle Museum (See Figure 2.1 for comparison and Figure 2.2 for PAS growth by county).

Utilizing the NHER and PAS databases can provide enormous opportunities for learning about the past, although they equally present some challenges. Together, the databases are examples of what some researchers have termed “other people’s data,” or data which has been gathered as the result of the actions of a third-party who may no longer be around or interested in the outcome (Atici et al. 2012). Although these datasets have been cultivated by archaeologists, they fundamentally represent in the first instance the locations where hobbyists have been doing their hobby. The spatial element of the finds recorded in the NHER/PAS represent a strange coincidence of the landscape: the intersection of a metal detectorist sometime
THE METAL DETECTED REMAINS

Figure 2.1: The intersection of the Portable Antiquities Scheme and NHER in 2017. Although Norfolk takes up an outsized portion of the PAS database (just over 8% total), less than 6% of all Norfolk finds have been recorded in the PAS. N.b. it is currently impossible to provide an accurate count of all NHER finds and the total is based on estimates from the finds and records officers at NHER.

Figure 2.2: Cumulative growth of the PAS database over twenty years in the top six most prolific counties, highlighting the differential, regional nature of the PAS.
between 1975 and today and of the activities of a person in prehistory. Metal detecting is not the only activity that draws data into these collections—though it is the largest share—and gardeners, construction workers, and mudlarks, among other, contribute data to both NHER and PAS (Fig 2.3 illustrates the multiple ways in which objects are discovered and later reported to the PAS). NHER also curates data from archaeologists and grey literature, though again, this is not the largest part of the dataset.

The three largest known contributors to the PAS, as can be seen in Figure 2.3 and similar to the contributors to NHER, relate to the activities of metal detecting and amateur surveying clubs—other people’s data. Very little of the data in NHER/PAS come from systematic survey and the data are generally not as an archaeologist would make them. However, it has become increasingly clear in recent years, in the light of reduced funding for field work, coupled with a growing awareness that publication does not constitute preservation, that orphaned/legacy datasets and collections, grey literature, and other people’s data offer enormous opportunities to researchers with a little ingenuity and creativity (Richards & Naylor 2005; Voss 2012; MacFarland & Vokes 2016). As a result, archaeological research has increasingly turned from producing new data through fieldwork to using older, unloved datasets for pragmatic and ethical reasons. The tension that exists here for the NHER/PAS datasets is that, while they contain older data, they are in an ongoing process of weekly growth. The week that this sentence was written, 455 finds records were created and added to the PAS database.
Strengths and weaknesses of the dataset

One of the largest upsides to using NHER/PAS data for Norfolk is that it adds significant coverage of a somewhat understudied area. As a regional area within Iron Age studies, northern East Anglia remains less intensively studied than other areas of Britain. Barry Cunliffe famously called it, “a virtually blank area” where “surprisingly few Iron Age sites have been recorded” (1978: 89). Although many excavations have occurred since Cunliffe made this observation, development has been less intensive in Norfolk than in other areas of East Anglia such as the Cambridge region where developer funded archaeology has made a large impact. As mentioned in the introduction, frameworks for understanding Norfolk’s Iron Age were already relatively well established in the early 2000s (Champion et al. 2001), and a number of new excavations, including the Snettisham bypass, and a number of other research projects have produced interesting results. The past eighty or ninety years of research have revealed a distinctive region during the Iron Age. Yet when Norfolk is compared with other regions of Britain and Europe, it is paradoxically similar “by very virtue of the fact that it exhibits its own, distinctive characteristics” (Hill 1999: 186). Thus, while there are deep roots to the notion that northern East Anglia is different from the rest of Britain, perhaps in its difference it is actually similar (Gosden & Hill 2008). As noted by Martin, one of the risks in using traditionally excavated sites for analysis of the Iron Age in the region, is over-extrapolating on the basis of a relative paucity of sites (1999: 46).

As Ashwin (1999) writes, the low numbers of well-excavated sites in Norfolk are largely due to constraints on excavation and recovery of archaeologically useful information in the region. These constraints include large, amorphous, undefended settlements unlikely to leave traces of cropmarks, highly acidic soils, and an intensive history of agriculture that has all but obliterated the surface traces of most sites (Wiltshire & Murphy 1999). Thus, the landscape of the Iron Age is, as Ashwin refers to it, a “hidden landscape” (Ashwin 1999: 105-106). Nevertheless, Ashwin, Rogerson, and Davies have shown that surface scatters of ceramics observed in survey do often mirror sub-surface features when excavation later occurs (Rogerson 1999; Davies 1999; Gurney 1993; Ashwin 1996). The same has been shown for metal detected remains through the systematic use of metal detecting survey and metal detecting at each phase of excavation of subsurface features (Gregory & Rogerson 1984; Gregory 1991a).

In this regard, the NHER/PAS dataset truly contributes to a more robust regional understanding of the Iron Age. The metal detected data provide very real observations of Iron Age activity that fill in gaps in our understanding of the period (Davies 2011). While this data lacks the granularity to answer highly site-specific questions, because of a number of factors that shall be discussed, it is quite good for gaining an appraisal of the Iron Age landscape in a way that would otherwise be impossible. Furthermore, the nature of deposition under study
is thought to be a hallmark of Norfolk’s Iron Age, as more La Tène style metalwork has been found in Norfolk than in any other region of Britain apart from the Thames (Hill 1999). Although this interpretation is tempered by a very high recovery rate due in part to land-use and data collecting regimes, it forms one of the bases for our understanding of a wealthy population in the region at the time (Hutcheson 2004). The connection between these objects and hierarchy within society are unclear, and hierarchies might be flatter than traditionally thought (Hill 2006).

As far as the boons of such datasets are understood, so too are the difficulties in using them, and much of the remainder of this chapter specifically addresses the most important instances. Due to historical factors related to the creation of the datasets and the creation of laws regarding the use of metal detectors, the distributions of the data collected are significantly skewed in some regards. These are not the only sources of “bias” however. Every aspect of the acquisition of the objects to the data collecting process has to be scrutinized because many practices introduce systemic skew in the spatial and typological distributions of the data. For instance, metal detectors only work well on certain types of land, detectorists only submit positive data, they only metal detect for certain types of metals, and they tend to return to productive areas again and again in lieu of covering the maximum area possible. There are therefore real questions of the extent to which data distributions are more reflective of prehistoric practice or modern day metal detecting practice (Davies 1999). The following sections attempt to trace some of these factors and analyse their impact on the distributions of the data, beginning with a discussion of the genesis of metal detected data.

The genesis of metal detected data

In order to best profit from the NHER/PAS datasets, and in particular their metal detected component, it is essential to have an understanding of the factors which led to their creation and which shape their distribution today. As previously mentioned, the distributions in the datasets tend to be quite skewed in some very specific ways. Historical factors, including the ways metal detecting laws have been formulated and implemented in England and Wales have a direct relationship to the systematic biases present in the data, and understanding one helps to understand the other.

There are different ways to frame these questions. On the one hand, it may be appropriate to use the concept of path dependence, broadly borrowed from the political sciences, to understand the ways in which these datasets could have been different given different technical implementation and data gathering. On the other hand, the social construction of knowledge would also be an appropriate standpoint from which to investigate the issue. Both approaches emphasize the critical importance of the history of metal detecting in Britain after The Second World War and archaeologists’ attempts from the 1940s onward to stop metal detectorists or to
work with them to preserve data. These factors have shaped the systematic biases—both spatial and interpretive—inherent in the datasets today, and good research practice is contingent upon the investigation of systematic bias in order to challenge preconceptions (Norris 2007). Numerous studies have taken place over the past decade seeking to understand and quantify biases in metal detected data, and these point to a wide range of factors responsible for patterning within the distributions caused by modern recovery and research factors (Brindle 2013; Robbins 2013; Chester-Kadwell 2007).

From the 1950s to the 1980s, as metal detectors that had been used for mine clearing after WWII became available to hobbyists across Europe, metal detecting boomed. Different countries had different reactions to this development from a legal standpoint; countries like Sweden (though not Denmark) shut it down pretty quickly (for discussion see SOURCES). In Britain, on the other hand, and indicative as to which way the legislative wind was blowing, Prime Minister Harold Wilson was an honorary member of one of the largest groups of hobbyists, the National Council for Metal Detecting (Bland 2005: 442). Meanwhile, readership of popular hobbyist magazines like Treasure Hunting (founded 1977), Coin and Metal News, and The Searcher (founded 1986), far outstripped archaeological periodicals (Addyman 2009: 54).

While archaeologists lobbied for years to ban metal detecting outright, in sometimes vitriolic campaigns that failed any attempt at fostering engagement with hobbyists, they were unsuccessful at gaining many concessions towards halting metal detecting. One of the primary groups responsible for lobbying against metal detecting was the Council for British Archaeology (CBA), founded in the wake of WWII to address damage to monuments (Bland 2005). An offshoot of the CBA, the STOP (Stop Taking Our Past) Campaign, pushed for legislation that would at least ban metal detecting on scheduled monuments, an achievement that was realized by an update to the Ancient Monuments Act in 1979 that banned metal detecting on listed monuments. It would not be until 1994, however, that legislation was taken up to replace the medieval common law of Treasure Trove, and the Treasure Act, its legal successor, was not finalized and passed until 1996, 52 years after an intervention had first been proposed by the CBA (see more below: The law today).

Between the 1970s and 1980s, the hobby reached a peak number of participants in England and Wales, although some confusion exists as to how many people were actively metal detecting at the time. Dobinson and Denison (1995: 4) quote the number of active detectorists at the time as 300,000—half a percent of the entire UK population in 1985—and Addyman (2009: 59) repeats this figure. Roger Bland (2005: 442), however, quotes their figure as 30,000 and estimates it as “three-times too high.” In personal communication, Bland reiterated he thought the high-mark was “around 9,000,” which would make Dobinson and Denison's original figure more than 30 times too high. Regardless of the actual number, archaeologists were out-numbered by metal detectorists, and certain styles of lobbying for greater protections against metal
detecting were possibly more deleterious than wise (Addyman & Brodie 2002). It has been argued that groups like STOP would have been more effective if they had engaged in dialogue, instead of ostensibly arguing that a sizable portion of the English public had chosen a hobby that was not only wrong, but criminal (Brodie & Tubb 2002; Thomas et al. 2012).

In East Anglia, however, beginning in the 1970s, a dialogue was already underway. A group of archaeologists affiliated with the Norfolk Archaeological Unit (NAU) and the University of Cambridge began to seriously consider the practicalities of at least recording all the data recovered by metal detectorists by encouraging them, at a grassroots level in local metal detecting clubs, to submit their finds for identification and finds recording. Led by Peterhouse Cambridge alumnus Tony Gregory, a member of the NAU, the project was overwhelmingly successful, and the NHER have been gathering finds data since the 1970s. This grassroots campaign was so effective that by 2004 more than 15,000 objects were being recorded by NHER alone each year (Bland 2005). According to Heather Hamilton, a finds officer at NHER, the total number of finds in the dataset today may be as high as 1.5 million, though it is difficult to estimate because of the structure of the digital dataset. Similar things were happening in Suffolk, and when the PAS was picked up in 1996/1997, Norfolk and Suffolk already had the grassroots organization for effective finds recording in place; the PAS's inception only slightly tweaked the way data was gathered and recorded. Other areas where pilot studies were run in the lead up to the national roll out of PAS, as in Wales, were far less effective because they lacked this grassroots organization. Green and Gregory (1978) argue that in East Anglia the sheer amount of arable land, as compared with other areas in England, was one of the primary factors that led to an enormous volume of metal detecting (see Arable land and sampling bias in the PAS at the national scale for further discussion). Elsewhere in Britain during the period, however, thousands of artefacts were collected without any data collecting schemes while archaeologists raged against metal detecting.

In many ways, the data that have come out of East Anglia in the past 40 years have shown that some of the hyperbole over metal detecting was just that. There are today doubts as to the extent that metal detecting usually or often causes damage—despite some claims that metal detecting demonstrated a threat to archaeology “far greater than had been imagined” (Dobinson & Denison 1995: 58)—as it tends to predominantly take place on deeply ploughed soil. Furthermore, it has been argued that metal detecting in ploughsoil has actually resulted in salvaging thousands of objects that otherwise would have rapidly oxidized away due to exposure to turbulence introduced oxygen and chemical fertilizers in farmed land. According to Addyman, metal detecting may have been “a timely way of rescuing at least some data about objects that were otherwise doomed” (2009: 58).

Altogether, many archaeologists are today agnostic about metal detecting. Provided metal detectorists are responsible and stick to arable and pasture and properly record the locations
of their finds, there is probably very little in the way of “damage.” It is doubtful that most metal detectors penetrate below the plough horizon, which is very deep today (Connor & Scott 1999: 79; Chester-Kadwell 2007: 148), and large objects tend to aggregate upwards in ploughsoil anyway, as a result of granular convection (Barker & Grimson 1990). There are still many abuses, but these seem to fall outside of the current law anyway, under which there have been very few prosecutions (English Heritage 2009). While operations such as foreign metal detecting tourism may seem distasteful to many archaeologists, a moral crusade against metal detecting is a losing battle (Karl 2019).

The law today: the Treasure Act and Portable Antiquities Scheme

Lobbying by archaeologists eventually led to several successes, the first of which, as noted, was an update to the Ancient Monuments Act in 1979 to ban metal detecting on scheduled monuments. The Ancient Monuments Protection Act had been first passed in 1882 and was initially administered by Pitt-Rivers (Chippindale 1983), and several iterations of updates were passed in the intervening period (Saunders 1983; Murray et al. 1989). The primary purposes of the Ancient Monuments Act were to define and to establish the protection, acquisition, and guardianship of ancient monuments and land in the immediate vicinity of ancient monuments along with various miscellany related to these goals. Crucially, the third part of the legislation codified the use of metal detectors to a certain extent—a key demand from archaeologists. The law established that the use of a metal detector in protected areas was prohibited except with express permission from the Secretary of State, and that prohibited use could be punished by fine not exceeding £200 (Ancient Monuments Act 1979). The list of areas where metal detecting is restricted is today fairly broad and also includes National Nature Reserves, National Parks, and other similar types of public lands (see Understanding gaps in the distributions for a more complete discussion of the ways in which these restrictions have shaped the distribution of the datasets).

Finally in 1996, after languishing in parliament since its introduction in 1994, an update of the medieval common law of Treasure Trove was passed in the Treasure Act in 1996, which also paved the way for the establishment of the Portable Antiquities Scheme in 1997. The act replaced the earlier Common Law of Treasure Trove in England and Wales. The concept of Treasure Trove, as established by Edward the Confessor prior to 1066, was that treasure troves were groups of gold and silver objects (greater than 50% precious metal) that had been hidden, rediscovered, and which no person could show ownership of (Longworth 1992). Crucially, treasure trove had to be hidden with animus revocandi, or an intention to recover it later. So for example, the Sutton Hoo burial was claimed not to be Treasure Trove since, as a burial, no one had intended to recover it (Bruce-Mitford 1975). A similar argument was sometimes applied to hoards as well, meaning they fell beyond the legal ability of the British Museum or other institutions to acquire them (Bland 1996).
CHAPTER 2

The Treasure Act rectified some of these issues. The primary purposes of the Treasure Act, which influences England and Wales\(^1\) were to define specifically the meaning of “treasure,” to establish ownership of treasure and the jurisdiction of a coroner in establishing finds as treasure, and rewards associated with finding treasure (Treasure Act 1996). It defines treasure as any two or more connected prehistoric base metal objects, any two or more coins found together of at least 300 years old and more than 10% silver or gold, or ten or more coins if the silver or gold content is less than 10%, and all associated finds (ibid.). Crucially, the Treasure Act does not require objects to have been hidden with *animus revocandi*, and it sets a lower quantity of precious metal (10%) than the Common Law of Treasure Trove (ibid.).

The Portable Antiquities Scheme was implemented the year after the passage of the Treasure Act, and provided a program run by the government for the voluntary reporting of metal detected and other small finds. While the Treasure Act deals with materials made of gold and silver and prehistoric base metal, its major shortcoming lies with its inability to address other types of archaeological materials. The PAS is meant to fill this gap by recording as much data as possible about other types of finds that would probably never be purchased by a museum. The scheme was slowly rolled out across England and Wales over the next decade, following a series of pilot studies on the overall feasibility. Crucially, PAS provided coverage to areas like the North West, which, unlike Norfolk, did not have any established procedures for or culture of finds recording as the grassroots level.

From an analytical standpoint, these laws have shaped both the distribution of the datasets and, in many cases, the object records they contain. I suspect that the legal framework may have influenced interpretations of some objects in the dataset, as well. It is hypothetical that because of the Common Law stipulation that a trove have been hidden with *animus revocandi* the archaeological interpretation of hoards prior to the passage of the Treasure Act may have had pragmatic reason to lean this way. The debate between Stead (1991) and Fitzpatrick (1992) about the interpretation of the Snettisham hoards may be revealing. Archaeologists had an incentive to declare that hoards were hidden with intent to be recovered because then they could legally be obtained from the finders in cases where they had been legally obtained on private land. In certain periods, as Chapter 7 discusses in greater detail, interpretations of merchants or other parties hiding valuables during times of war are extremely popular in any case.

**Bias or skew in the distributions**

The legal and historical framework for metal detecting in Britain provide just one important source of “bias”—or a skewing from original representativeness of the archaeological record as it exists in the earth—but there are many others. Before we can understand what these mapped objects might have meant to the people who owned them and what links they may share, their

---

1 But not Scotland where treasure remains a concern of the Scots Common Law.
constellations of meaning entwined in the landscape, it is necessary to understand the factors surrounding their differential discovery and recovery as a concatenation of events happening far distant in time from each other. While these factors are complex, an informed analysis is required to understand what types of processes may have acted to skew the distributions of data away from what we might consider as representativity, or the extent to which an observation or group of observations can be said to represent some facet of life in prehistory and not merely an artefact of a modern recovery bias. However, as we shall come to appreciate, metal detected finds only occur at the spatial intersection of past and modern practice.

Therefore, while in the past I believed it was possible to separate the “signal” of prehistory from the “noise” of a messy, modern collection regime, I now think that the number of factors vary too greatly from one field to the next, in ways about which information is totally unavailable, to have any kind of overarching methodology that can separate out this signal. Green (2019) has therefore defended distribution mapping at the regional level on the principle that the resolution of the model matches the resolution of the question being asked, thus ruling out particularly high-resolution questions using particularly low-resolution datasets such as the NHER/PAS data. By adopting a kind of agnosticism about the incredible number of “biases” in the relevant datasets—to quantify them, to understand them, but to also accept that this understanding may not help in further “resolving” the resolution of the model—it is possible to move ahead. Metal detected archaeology will never be the same thing as a well-planned survey or excavation, it will never be able to answer the same kinds of questions, and that is OK. Its contributions may still be valuable in ways different from traditional archaeological methods.

It is important to understand from the outset that any data about the world contain sampling bias. Orton argues that in a sense, archaeology is sampling (Orton 2000: 1). Clarke puts it as, “Archaeology is the discipline with the theory and practice for the recovery of unobservable hominid behaviour patterns from indirect traces in bad samples” (Clarke 1972: 17). Bad samples, indeed. The central point that all authors recognize is that the record, or the sample, will be different in the ways in which we receive it from how it once was. As Orton notes, bias cannot be eliminated from a sample simply by increasing the size of the sample, and will be ever present (Orton 2000: 23, 148). He defines bias as such: “Strictly speaking, bias is the difference between the true value of a parameter (e.g. the mean of a population) and the expectation of the mean for a particular sampling procedure, i.e. the mean of the means of a very large number of samples” (ibid.: 23).

A range of literature today exists on the complex factors leading to the formation of the archaeological record, termed formation processes by Schiffer (1972), who later wrote an entire book on these factors (1987). Several models had existed up to and around that time (Ascher 1968; Cowgill 1970; Collins 1975). While Schiffer’s focus lay mainly on the factors, or agents of bias (Schiffer & Rathje 1973; Schiffer 1977), which led to the formation of the
CHAPTER 2

archaeological record, Kristian Kristiansen (1985) focused on the both ends of the spectrum, qualifying the depositional and post-exavation factors. Post-deposition factors influencing representativity were divided into only three classes: physical and environmental factors, cultural and economic factors, and research factors and archaeological factors of knowledge (Kristiansen 1985: 8). Each of these factors plays a role in how the archaeological record is ultimately received in both traditional contexts and in the case of metal detected finds. Cornelius Holtorf’s life history of a potsherd explores some of these issues further (Holtorf 2002).

Katherine Robbins, whose research focused upon the recovery and recording biases of metal detected finds, included an ethnographic approach much like Chester-Kadwell (2007), and concluded, following on Schiffer (1987), that seven levels of taphonomic bias were relevant for metal detected finds. She summarizes these biases as follows:

“1. Not all objects in a single body of material culture will be lost or buried in a particular time or place;

2. Of those that are buried, not all will be preserved;

3. Of those artefacts that are preserved, not all will survive to the present;

4. Of those that survive, not all will be exposed where a collector may see them;

5. Of those that are exposed to the collector, not all will be recovered.

6. Of those artefacts recovered by an amateur collector, not all will be reported to a professional body;

7. Of those that are reported, not all will be recorded in a professional dataset” (Robbins 2013: 55-56).

At each level identified by Robbins, the effects of differential processes on the distributions of finds take their toll, winnowing down the sample and, importantly, skewing the outcome slightly at each level. Using whichever scheme, Kristiansen’s or Robbin’s, it becomes clear that the odds are stacked against a prehistoric object coming down through time to us, as it were. Today, such a small piece of the “representative” original—whatever that means—is left. When a prehistoric object is discovered, it is typically only done on certain types of land, and further, there is no guarantee it will be taken in for identification.

Even at the level of classification, there is a room for the introduction of uncertainty in at least three different ways: the precision of the attribute definitions being applied, differences in opinion and perception between researchers, and changing perception by researchers over time (Beck & Jones 1989: 245). Within the PAS/NHER distributions, for example,
perceptions have recently shifted about the temporal distribution of certain types of first
century AD brooches with regard to whether or not they are pre or post conquest (A. Rogerson pers. comm. 2014).

Thus, even though this study aims to understand the factors that led to the deposition of objects (possibly as in a ritual), it must also contend with the factors that led to the recovery and recording of the objects themselves by quantifying, to the extent possible, the most influential of these factors. In the end, it is important to understand that on a fundamental level, the distributions of the data are not merely representative of prehistoric practice or modern day metal detecting, but both in the same instance.

**Spatial bias and specificity in the PAS/NHER distributions**

The NHER/PAS data are not distributed randomly. They do not come from all areas equally.

The spatial specificity, or precision, of the dataset is entirely dependent upon the ability of metal detectorists to accurately report find spots, and this varies to quite a degree according to finds officers at NHER in Gressenhall. Many find/sites are stored in the NHER as polygons representing the fenced field from which a find originated; others are depicted as points more or less near to where the actual object was found depending upon the individual reporting it.

Figure 2.4: The spatial specificity of the PAS dataset (n = 1,320,245). 10 figure precision is equivalent to +/- 1 m, whereas 6 figure precision is equivalent to +/- 100 m
Figure 2.6: The ranges of typological calendar dates given by metalwork objects found by metal detecting in Norfolk. Note the overlaps at the beginnings and ends of each broad period.
PAS records find/sites as discrete points, rather than polygons, and it is possible to quantify the spread of spatial specificity in the dataset. Figure 2.4 illustrates the spatial specificity of the PAS data.

Therefore, roughly 50% of the PAS dataset has fairly tight spatial precision, between 10 cm and 100 m., while roughly half of the dataset has spatial precision greater than 100 m. In the NHER dataset, which uses polygons, the mean error in spatial precision is +/- 114 m. Relatively poor spatial specificity is one of the major constraints associated with metal detected data, and it is important to temper interpretations to match the resolution of the model. There is also an element of spatial specificity and resolution in the secondary datasets included for analysis as well (see Figures 3.2 & 3.3, Chapter 3).

**Temporal bias in the PAS/NHER distributions**

As another consequence of being unstratified, in additional to spatial specificity lower than what most archaeologists are used to working with, metal detected objects cannot be dated by stratigraphy and instead researchers depend upon typological reference guides and many years of experience to identify and provide a date estimate for most objects.

The +/- margin of error attached to most dates, given by the terminus post quem and terminus ante quem of a particular typology, varies from artefact type to type, from period to period. On some metalwork items, such as coins, the margin of error is often quite small (+/- 10 years). Thus, the Late Iron Age and the Roman period, which have a surfeit of coinage, have lower mean errors than other periods. Other objects, such as brooches or terrets, often have a larger error (+/- 50-100 years), and other objects such as awls and nails, which change little typologically even over great lengths of time, may have errors as large as +/- 50% of the given broad period (e.g.: Iron Age) in which they are assumed to have originated. In the case of the Bronze Age, the highest outlying errors may be as large as 1,200 years. In Figure 2.5, the differences in the temporal specificity of calendar dates from a given period is displayed with error scaled as a percentage of the total broad period from which an item originated to show all periods on the same scale. Furthermore, as Figure 2.6 shows, time periods overlap to a certain degree.

**Understanding gaps in the distributions**

One of the key facts to appreciate about distribution maps obtained from non-systematic survey, including metal detecting, is that they are fundamentally different from most maps we are used to using in our everyday lives. For example, when we search on Google Maps for a pub nearby, the results shown will be of both the presence of pubs—where they are located in relationship to us—and where they are not located. Thus, modern maps have a full dataset of
CHAPTER 2

both presence (where pubs are located) and absence (where pubs are not located). The mapped distributions of metal detected finds, in contrast, can generally only reliably show the presence of archaeological remains. This is because while most metal detectorists submit their finds to NHER/PAS, they do not report negative data—the locations where they metal detected and found nothing. Therefore, particularly when looking at the data from one period (e.g. the Iron Age), it is not immediately obvious to tell where true gaps in the data may be.

For this reason, when a researcher produces a distribution map from metal detected data, it is only a positive-distribution map. While this is generally true for many archaeological distributions, metal detected finds present a particularly extreme example. The extant distributions of earthworks and monuments in northern East Anglia—take hillforts as an example—have been investigated from aerial photography, cropmarks, and systematic survey, and are a much more complete corpus of material than metal detected finds. Looking to Figure 5.8 in Chapter 5 (distributions of hillforts in Norfolk), for instance, we can see the presence of hillforts in northern East Anglia; following years of intensive survey of crop marks from aerial photographs by NHER, it is reasonable to assume a very low probability of a significant distribution of unknown or undiscovered hillforts (though there is still a chance that this may be the case). In comparison, looking at the distribution of Iron Age brooches in Norfolk available through the PAS, there is a very high probability of a significant distribution of brooches not represented anywhere on the map and as yet un-sampled.

There are a variety of reasons why the initial pool of available land shrinks rapidly when metal detectorists need to consider both the law and the practical realities of gaining access to potential areas. In the first instance, protected land and areas of restricted access constitute one of the most significant contribution to the large gaps—areas with no coverage—seen in the distributions across all periods. Under the provisions of the Treasure Act and subsequent PAS (English Heritage 2009: 6-8), it is not legal to metal detect on:

- Scheduled monuments
- Areas of Archaeological Importance
- Ministry of Defence Land
- Sites of crashed military aircraft
- Most National Parks
- Local Authority owned land (as provided by local by-laws)
- Forestry Land²
- Rights of way
- Sites of Special Scientific Interest, in most cases

---

² Except in some parts of Thetford Forest—although as of 2008 this has been under review because of incidents of nighthawking
THE METAL DETECTED REMAINS

Figures 2.7 and 2.8 illustrate the direct effect of these laws on the areas where metal detected finds have been recorded. As English Heritage notes in their 2009 report on nighthawking or illegal metal detecting, these areas may be still be targeted by illicit metal detectorists who usually do not report their finds to the NHER/PAS. In Figure 2.7, the distribution of all metal detected find-sites in north-eastern Norfolk are displayed with regard to classes of land on which metal detecting cannot ordinarily occur, notably the Broads National Park, Martham Broad, Hickling Broad, and surrounding special areas of conservation. It should be noted that not only is metal detecting ordinarily prohibited in these areas, but they are also a wetland in which metal detecting would not ideal conditions. In Figure 2.8, the same effect can be seen in the Breckland District, where Thetford Forest and the presence of the Stanford Training Area, administered by the Ministry of Defence, have impeded metal detectorists.

In the second instance, after protected lands and areas of restricted access are removed from the list of available areas, ostensibly only private lands remain. However, even this category is winnowed further for the simple fact that many privately held lands in Norfolk are in ambiguous ownership—either not owned by a single person, or owned by some form of corporation.
Figure 2.8: Map of metal detecting finds sites as compared to special land use categories in which metal detecting is prohibited in southwestern Norfolk in the vicinity of Thetford Forest and the Stanford Training Area. (Chester-Kadwell 2007). As much as gaining permission for metal detecting is a provision under the Treasure Act and Portable Antiquities Scheme, it is simply difficult for enthusiasts to gain permission to metal detect on many parcels of land. Therefore, metal detectorists tend to return to sites they have already been on when (a) they have permission and (b) they have found objects there in the past. Therefore, there is a certain type of reinforcement to metal detecting in certain areas that tends to reveal clusters. It does not mean the clusters themselves are not real—it just means there could easily be an even larger, unrevealed cluster just around the corner from a known one.

In the third instance of winnowing, metal detectors do not operate well in heavy ground cover (Gregory & Rogerson 1984). Therefore, most forests are out, as are most other areas without optimal ground cover. This is one of the major reasons that although metal detecting can be allowed in Thetford Forest with special permission, very few finds originate from this area because the conditions on the ground are not ideal for metal detecting. A similar case is

34
true for many areas in the Fens near King's Lynn where a major gap exists, though in this case it is related to the conditions being too wet. The result is that most metal detected finds tend to originate from privately held arable and pasture with prior or easily gained access permission.

An analysis of the types of land cover on which metal detecting has occurred in Norfolk clearly shows the influence of arable land and pasture upon determining where metal detecting typically occurs. Statistically speaking, metal detecting occurs much more frequently on arable and pasture than any other types of land (Figure 2.9). Figure 2.10 illustrates the percent of total land that a given land use category makes up (e.g.: arable), and the percentage of all metal detected finds in the region that have been found on a given land use category.

**Arable land, sampling bias, and the PAS at national scale**

It is worth a short diversion to discuss the issue of the national distribution of the PAS dataset, because a particularly interesting systemic bias may be observed. This issue of optimal ground cover in itself causes an enormous imbalance not only in the metal detected distributions observed in Norfolk but in the national distributions within the PAS database. In fact, the number of finds per county is strongly correlated with the number of acres of arable land available in that county. The Pearson correlation coefficient (r), which measures the strength and direction of a linear relationship, is .807 for the relationship between hectares of arable land and number of PAS finds per county, and its coefficient of determination, or measure of how much variability may be accounted for by this relationship, is .651. This indicates that fully 65% of the variability of where PAS has recorded finds may be explained by the available hectares of arable land alone. The two-tailed significance is <.000, indicating the result is significant at the .001 level. Figure 2.11 presents a scatter plot of this linear relationship.

Norfolk, Suffolk, and Lincolnshire top both arable land and number of finds, though Norfolk and Suffolk both have an over-representative number of finds as a function of their arable land. Dots above the line are under-performing in terms of the number of finds per hectare, and dots below the line are over-performing in terms of the number of finds per hectare. Interestingly, the Isle of Wight and London both significantly over-perform in terms of the number of finds. It is interesting to note that London and the Isle of Wight, in particular, display significantly higher densities of PAS records than would be expected by the number of available hectares of arable land. It can be hypothesized, though not measured, that additional variability relates to the longevity of established finds recording and data collecting schemes, having been established earlier in some areas and therefore already having a robust culture of recording when the PAS came into being. It can also be hypothesized that areas with high population densities like London, the West Midlands, and Isle of Wight illustrate greater finds densities than might be expected as a function of their availability of arable land as a result of
the potential for a greater number of “interactions” with a higher population density. These outliers deserve greater attention at some point (See Robbins 2013 for a discussion of the factors of Isle of Wight).

Yet the bias formed by the amount of arable land in a county runs deep, and even sub-distributions of the full PAS dataset illustrate this correlation. Figure 2.12 illustrates the correlation between the number of PAS records for Iron Age brooches and hectares of arable land per county; Figure 2.13 illustrates the correlation between the number of PAS records for Iron Age harnesses and harness fittings and hectares of arable land per county; Figure 2.14 illustrates the correlation between the number of PAS records for Iron Age hoards and hectares of arable land per county. All three sub-distributions, even though they are only represent a small fraction of the total set of PAS records, illustrate moderate to strong correlation between number of records and hectares of arable land. At the national scale, with regard to finds density, PAS data will display a significant skew in favour of counties with a higher proportion of arable land. For this reason alone, researchers using PAS data must exercise extreme caution when mapping distributions with regard to density at the national scale (Robbins 2012; Brindle 2013).

**Filling in gaps and probability distributions**

While it is not possible to calculate exactly what percentage of Norfolk has been metal detected (although Chester-Kadwell 2007 provides an estimate), it is possible to count the number of NHER find/sites per square kilometre. In this way, it is possible to see that fully 2610 km² or around 45.4% of the total in Norfolk have a finds density of zero, indicating there is no data from these areas. Thus, using this method of estimation, slightly less than 55% of Norfolk has a find/sites density greater than or equal to at least one site associated with at least one find at the resolution of 1 km².

One solution to the issue of understanding where gaps occur in the distributions, although it is not perfect, has been to explore the relative distributions of finds within the known metal detecting areas. For this reason, the entire metal detected datasets from both NHER and PAS have been included in this research (See Figure 3.2 in Chapter 3). Looking at all the locations from which finds have been metal detected, regardless of the periods from which they have originated, helps to define extant clusters a bit better and provide some resolution of where gaps exist within distributions. Therefore, for example, if we know a given field system has been extensively metal detected and scores of Roman and medieval artefacts have been discovered, but not Iron Age artefacts, we can tentatively assume this may actually be an Iron Age gap—but only in the observed distribution. It is entirely possible that Iron Age remains may be under the ploughsoil, that Roman or medieval activity has obliterated the traces, or that copper-alloy objects (the most commonly found type of object—see the next section) are not present whereas sherds or iron finds are overlooked or have been destroyed by abrasion and aeration.
THE METAL DETECTED REMAINS

Figure 2.9: Major land cover categories in Norfolk, comprising 39,676 parcels, from the Land Cover Map 2015.

Figure 2.10: Chart comparing the percentage of the total number of find-spots and the percentage of the total area of Norfolk over given categories of land cover.
Figure 2.11: The correlation between the number of PAS records and hectares of arable land.

Figure 2.12: The correlation between the number of PAS records of Iron Age brooches and hectares of arable land.
THE METAL DETECTED REMAINS

Figure 2.13: The correlation between the number of PAS records of Iron Age harness fittings and hectares of arable land.

Figure 2.14: The correlation between the number of PAS records of Iron Age hoards and hectares of arable land.
Therefore, this method is not perfect and has several assumptions that need to be tested with fieldwork. While Gregory and Rogerson have shown that surface scatters of metals can represent sub-surface features and the presence of other metal remains deeper in the plough-soil or below the plough horizon, it is not clear in all cases whether an extensive medieval occupation sequence, for instance, would erase or significantly modify an earlier distribution of lesser intensity (Gregory & Rogerson 1984, Gregory 1991a). However, it is important to note that not all archaeologists agree with the assessment that surface scatters are indicative of subsurface features (Haselgrove 1985: 9, Foley 1980). While many field systems show the presence of extensive multi-period scatters, sometimes dating from the Bronze Age to the Modern Period—thus illustrating that older traces can still weather the influences of later occupation sequences and end up in the same plough-soil—this may not always be the case and further experimentation with the relationship between surface observations and sub-surface features is needed.

However, this method, as illustrated by Figure 2.16, provides a better idea of the edges of clusters. Equally, a confusion matrix of the same data can be made (for example, the data from Figure 2.15, can be easily made into a confusion matrix in which each square is sampled and compared by time period), however, this method is more problematic than using kernel density because it presents a binning problem whereby two finds could occur right next to each other, yet end up in different “bins” in the confusion matrix as the result of the arbitrary grid. In the end, the result was not satisfactory and the results have not been included here.

Norfolk and the “ironless” Iron Age

Interestingly, one of the strongest skews in the NHER/PAS datasets is that they are totally incomparable with excavated contexts in terms of their actual metallic compositions. Mary Chester-Kadwell so clearly showed this in her research for the Anglo-Saxon period, however it is worth reproducing one of her graphics as it is incredibly telling (Figure 2.17). Among the metal detected finds that she counted, fully 96.7% of the finds were copper-alloy, nearly double the amount from any other contexts including cremations, inhumations, and settlements (Chester-Kadwell 2007: Figure 6.7). Furthermore, an astonishing .7% of all metal detected finds were gold, and an additional 1% were silver, whereas only 1.1% are iron. Compared with the other contexts in which iron makes up between 45 and 53% of all finds, this shows one of the major ways in which metal detected finds are fundamentally different from conventionally excavated contexts.

Iron is generally very sparse in metal detected contexts, and therefore immediately rules out certain types of study that can be done. There are several reasons for the dearth of iron in the datasets—in the Iron Age and in all other periods as well—primarily related to how metal detectorists choose to operate but also related, to a certain degree, to the soil in Norfolk.
2.18 illustrates the number of Iron Age iron artefacts recorded in the PAS by county. Despite having the most finds in the PAS, Norfolk, as a county, is only 11th on the list, with three recorded Iron Age iron artefacts.

The first reason for this, which accounts for the generally low number of iron artefacts found, is that metal detectorists intentionally discriminate against iron. As both Brindle and Chester-Kadwell point out, discrimination of certain types of metals (changing the sensitivity, on the detector itself, to exclude ferrous materials as modern materials, such as barbed wire or broken farm implements are generally made from steel) leads to a huge number of copper-alloy finds, and to a lesser extent lead, silver, and gold finds, turned into the PAS and HER. Remarkably few iron objects, therefore, ever show up unless they are very large objects (Brindle...
The second reason for the low number of iron artefacts in the Iron Age of Norfolk, is that the soil in most parts of Norfolk tends to be hard on the preservation of iron (Clarke 1957). This has been well observed in excavated contexts as well.

There are probably, in effect, two reasons for this. For one, many of the soils of Norfolk tend to be quite acidic—thus the extensive use of marl, or calcium-carbonate rich lime stone by farmers from the Middle Ages until the present day to help raise the pH for the attendant liberation of plant nutrients (Matthew 1993; see Chapter 4). Acidic soils may be quite challenging for the preservation of iron, because at a pH of around 4, ferrous oxide (FeO) which forms as a result of corrosion, rather than depositing in a film around the artefact, protecting it, will dissolve away as it forms, and corrosion proceeds at a rapid rate (DOE-HDBK-1015/1-93 2013; Chester-Kadwell 2007).
1993). Additionally, some authors have attributed chalky soils in areas untouched by the Devensian glaciation with corrosion of iron artefacts because of the basicity of the soil (Pryor 2010; Hoskins 1955; Iversen 1973).

However, corrosion is not very pH sensitive in the range where carbonates would buffer (7-9), and therefore this is unlikely to be the reason why iron artefacts would not survive well on chalk (M. Zavarin & R.D. Aines pers. comm. 2019). It may instead be the case that since carbonates are well drained, they may keep oxygen levels high, avoiding the anoxic conditions that will preserve iron in a bog, etc. So maybe it is not that they are corroding faster, but rather that there are no organic-rich environments to preserve them. This observation is additionally true of most sands in Norfolk, which are both freely draining and acidic. Ploughed soils are also highly aerated. This is one of the reasons why less well tempered prehistoric and Anglo-Saxon ceramics tend to disintegrate more rapidly than well-fired Roman and medieval ceramics, leading to an under-representation of the former in Norfolk, as well (Davies & Wilkinson 1999: 11). Therefore, if iron survived better in Norfolk and was always systematically collected and catalogued, these distributions would be markedly different.

For this reason, when using a metal detected dataset, it is only possible to study certain classes of objects. Indeed, for the Iron Age, these objects typically tend to be coins (1), brooches (2), terrets (3), and to a lesser extent certain types of personal objects such as tweezers, mirrors, toggles, and the like (4). For this reason, nearly all metal detected studies will tend to overemphasize certain types of activities such as ritual, personal “elite” representation and identity, and the production and circulation of coinage. They will de-emphasize, or be completely unable to discuss other facets of prehistoric life such as food production, agricultural practices, or the structure of home and family life, which largely depend upon other types of materials. Therefore, not only does metal detecting skew the distributions of objects, but it fundamentally skews the outcomes of studies that utilize metal detected data.

Spatial distribution

The maps (Figures 2.19-2.23) on the next pages illustrate the spatial patterning of metal detected finds for each period. From these, it is clear to see many of the effects that have been discussed in the previous sections. The find-sites tend to cluster in certain areas, but assiduously avoid others, and therefore we know that the entire landscape is not represented. However, there is another way to think about this problem. Are the distributions, despite not covering the entire landscape, representative of the entire landscape? One way to test this is by generating two complementary random samples: one in areas that have metal detecting, and one in areas where no metal detecting has occurred. Then, we can compare the three samples—random with find-sites, random without find-sites, and observed find-sites—with each other to form a comparative basis for understanding how much of the landscape is represented with
Figure 2.17: Comparison of contexts in which metals occur; replicated from Chester-Kadwell 2007, Figure 6.7.

Figure 2.18: The number of Iron Age iron objects recorded in the PAS by county. Note Norfolk’s lower than expected ranking, indicative of taphonomic factors not amicable to the preservation and discovery of iron.
regard to certain key features such as proximity to rivers, elevation, and underlying geology 
(soil parents). Then, using a simple difference test, the samples can be assessed to see if they are 
drawn from the same types of landscapes.

Interestingly, the results of this analysis show that the landscape is very thoroughly repre-
sented by areas in which finds occur, and that the areas in which finds do not occur are vir-
tually the same with regard to the features under consideration, with some minor variations 
particularly in regard to geology. The three samples share virtually the same mean with regard 
to proximity to rivers, although the metal detected set, in a pattern we shall revisit later, tends 
to occur slightly closer to rivers than a random sample would do. However, they are statisti-
cally the same, and the difference can only be spotted by using a logarithmic scale. Roughly 
the same phenomenon may be observed with regard to elevation. Again, virtually the same 
means across the three samples. However, the random sample from non-metal detected areas 
shows a slightly greater interquartile spread, skewing towards sites at lower elevation. This is 
because very low elevation spots in Norfolk tend to be in the Broads or in the Fens, which are 
under-represented by metal detected finds. However, again, the three samples are indistin-
guishable from each other using a test for difference.

With regard to geology, the picture is slightly different, and some differences between groups 
are evident through visual inspection of the data. However, because the data are non-par-
ametric and cannot be normalized in any justifiable way, it is difficult to quantify precisely 
because a between groups ANOVA test—a standard test for quantifying difference between 
normal population groups—would not be appropriate (Glass et al. 1972) (see Chapter 3 for a 
greater discussion of which statistical tests can and cannot be in certain instances). In such a 
way, we can see that find-sites tend to slightly favour diamicton (boulder clays) and chalk in a 
way that neither of the random samples would. Additionally, sand-gravel locations tend to be 
slightly under-represented in the observed set, whereas peat and most silt contexts are quite 
under-represented in the observed set. These contexts tend to, again, be in the fens, which we 
already understand to be under-represented as the result of modern selection factors based 
on where metal detectorists choose to operate.

More of these issues are discussed further in regard to the specific interpretations of the 
distributions in the following chapters.
Figure 2.19: Distribution of Bronze Age find-sites.
THE METAL DETECTED REMAINS

Figure 2.20: Distribution of Iron Age find-sites.

PAS/NHER find-sites
- Bronze Age
- Iron Age
- Roman
- Early Medieval
- Medieval
Figure 2.21: Distribution of Roman find-sites.
THE METAL DETECTED REMAINS

Figure 2.22: Distribution of early medieval find-sites.

- Bronze Age
- Iron Age
- Roman
- Early Medieval
- Medieval
Figure 2.23: Distribution of medieval find-sites.
Concluding remarks

As the preceding sections have shown, the NHER/PAS metal detected datasets offer enormous opportunity for understanding certain prehistoric activities in the landscape in a way that excavations could never provide. However, not being from excavations, they also lack the rigorous controls that an excavation or even a well-planned survey would provide. The biases and skews in the metal detected data originate from a range of different sources, from legal frameworks, to collection regimes, to the simple pragmatics of operating a metal detector.

While the nature of the data is difficult to grapple with, by accepting that it is different from traditional archaeological data—though complementary to it—and accepting that as a result of both the resolution of the data (at both a temporal and spatial scale) and the skews inherent in it, certain types of questions cannot be asked as an answer will not be forthcoming. As the coming chapters illustrate, the nature of the information provided by the metal detected datasets may be as amorphous and vague as the spatial data itself. As the NHER dataset is fully digitized in the (hopeful) future, some of these issues will be alleviated. However, many of them are simply a built-in feature, and as the next chapter illustrates, one of the most onerous tasks for a researcher currently wishing to use NHER data, and to a lesser extent PAS data, is the process of knowledge discovery and cleaning the data into structured, coherent sets that can actually be mapped and analysed in a meaningful way.

Although this process is doubtless frustrating, and the progress incremental, it is a worthwhile task. I think just as archaeologists today are expected to keep certain skills, such as excavation, in the future and with a greater emphasis on “other-people’s data” or orphaned find sets, researchers may not be excused from more data-driven analytical work. Certainly, at the least, the NHER/PAS datasets can provide an incredibly rich descriptive data set that is very useful for researchers undertaking a local excavation or landscape survey. It gives one a sense of what is out there, and although issues of the correlation between near-surface observations and sub-ploughsoil features remains somewhat unclear, it can help archaeologists find new sites that may be of interest to their individual research agendas. Therefore, I do not personally believe researchers in English archaeology can feasibly excuse themselves from utilizing these datasets. Work like this, and by Katherine Robbins, Tom Brindle, Mary Chester-Kadwell, and others, is therefore necessary to help guide researchers away from conclusions that hinge upon some of the more obvious skews in the data.
Introduction

This chapter explores some of the historical, methodological issues associated with this research and provides an explanation of the primary and secondary sources of data used to build the GIS model that forms the foundation of this project. First, it explores the rise to prominence of GIS as a method within archaeology, following in the footsteps of earlier landscape and spatial approaches. These factors are important to understand because of the extent to which GIS has been “black boxed” or made somewhat invisible as a methodology by its own success. Yet debate over several decades has sought to clarify the extent to which GIS can be used as more than a tool of positivism by exploring a range of social theory.

Second, the case for visiting sites and monuments, as has been raised by other researchers, is revisited. Powerful inferential and descriptive tools included in GIS do not obviate the need for an important perspective from the ground. Visiting can reduce interpretive errors and provide a richer backdrop for later analysis.

Third, the descriptive and inferential statistics that have been used are discussed, in light of recurrent concerns about the use of distribution maps as the primary mode of interpreta-
CHAPTER 3

Furthermore, knowledge discovery in large databases, like those used here, are considered from several different perspectives, as is the importance of using open-source software.

Finally, the methods used for dating the GIS model are discussed briefly, and the full process of building the model is explicated. Additionally, all of the primary and secondary datasets used in this research are tabulated with regard to their usefulness, scale, and a variety of other factors.

History and critique of GIS methodology and theory

Beyond merely providing a list of the methodological steps involved in the construction and exploration of the GIS model that forms the primary point for analysis and interpretation in this research, it is important to place GIS and spatial analysis within a broader historical framework. Many researchers have emphasized the importance of understanding the historical and social conditions behind the creation of knowledge (Shanks & Tilley 1987; Wylie 1985; Cooper & Green 2016). These factors are crucial for understanding issues of path dependence, a concept that has been utilized in the political sciences but which is equally useful in understanding technology and, here, the shape that datasets take over time—see Chapter 2 for a full discussion (Mahoney 2000; Pierson 2000, 2011).

One of the issues when using GIS as a technical methodology today is the extent to which it has been “black boxed” or made somewhat invisible as a methodology by its own success, to use Latour’s (1987) phrase. Today, all one need do to use QGIS, the open-source alternative to ArcGIS, is to download it, load in a primary dataset (archaeological data), a secondary dataset (environmental and geographic data), and hit play—so to speak. Analysis in GIS can be done with very little technical training and in a completely uninformed manner, but perspicacious interpretation of GIS results requires both a historical and theoretical framework (Burg 2017; Hacıgüzeller 2012). It is therefore important to understand that the current state of knowledge surrounding GIS/spatial statistics has involved a long process moving from what was initially conceptualized as a tool of positivism to one which today is much richer theoretically.

As an extension of cartography, a Geographic Information System (GIS) is designed to obtain, transform, and store spatial data allowing for its visualization and analysis. The data incorporated can be used to help better understand trends and patterns in space and time. Even a paper chart containing a base map and some additional information about the environment—such as rocks ships must avoid—could be a considered a primitive GIS (Tate 2018). The first modern conceptions of GIS were published between the 1830s and the 1860s, when the epidemiologists Charles Picquet and John Snow mapped cholera cases across the districts of Paris and London, respectively, to make specific public health and sanitation recommendations (Picquet 1832; Snow 1855; Rodriguez-Morales et al. 2015).
This represented part of the trend since the late 1700s toward the increasingly sophisticated graphical representation of data, which grew out of statistics following William Playfair who first published examples of bar and line graphs in 1789 (Wainer 2013). Picquet and Snow's work distilled the function of the graph—to display categorical data proportionately—into a geospatial format: the map. Ostensibly, these were the first data-distribution maps in which a sample of some quantifiable, categorical data was displayed with regard to its prevalence over given geographical districts. Throughout the course of the eighteenth and nineteenth centuries, GIS as distribution mapping became increasingly important and grew in tandem with epidemiology, demography, and statistics. It also contributed ideas to archaeology.

However, it was not until the 1960s that analysis was integrated into GIS as a computational application, pioneered by Roger Tomlinson (UCL 2014). In contrast to paper-map-and-ledger GIS predecessors, modern computer-based GIS excels at the amount of data that can be incorporated and marshalled for analysis. The limit to the amount of data that can be included is really only governed by storage space, which has greatly increased in capacity and greatly decreased in price over time.

Although there was, as already discussed, enormous interest in spatial methods and theories in archaeology in the 1960s and 1970s, it would still be several decades until modern GIS capabilities were broached within the discipline. Fundamentally, archaeology tends to adapt technologies derived from other sectors, and GIS was no different. Therefore, affordable software and computational power had to already be in place before the first explicit GIS methodology in archaeology was laid out in 1990, although computational spatial analysis within archaeology had already been a focus for the previous two decades at least (Hodder & Orton 1976).

In its infancy in the early 1990s, archaeological GIS was viewed with caution by many European archaeologists who were engaged in projects in the burgeoning field of social and critical archaeological theory (cf. Shanks & Tilley 1987; Tilley 1994; Barrett 1988). For roughly a decade, practitioners of GIS answered critics who felt uneasy with the totalising power of GIS to cast an “objective” eye over the landscape. A tool like any other, it was recognized that GIS was only as impartial as its user and that it needed guiding theoretical principles (Church et al. 1999). Critics, however, charged that the method was only capable of spawning environmentally determinist narratives about the past; that it excluded non-qualitative information that cannot be captured in points or polygons; that it presented an official, non-contradictory view of the world; and that it was overly, scientifically data-driven (discussion in Gaffney & Van Leusen 1995; Lock & Stancic 1995; Llobere 1996; Mark 1993; Harris et al. 1995; Lock 2001; 1

For instance, it is now possible to rent up to 35 terabytes of data on Google Drive—only around 70 GB have been required for this project—numbers that would have been science-fictionesque in the early 1960s when GIS was first proposed as a computational method. In another decade, these numbers will equally seem trite.
Huggett 2004, Green et al. 2017). These critiques helped GIS grow as a sub-discipline within archaeology, but some of them were partially misplaced. Technologically, early GIS simply was not capable of performing some of the tasks demanded of it. It was very good for presenting distribution maps with sophisticated environmental and topographic data, but it was not yet capable of particularly insightful observations.

In general, GIS methodology (although not necessarily referred to as such at the time) was linked to the “new” geography and “new” archaeology of the 1970s and with positivist and functionalist approaches (Tilley 1994: 9-10). It lacked a humanistic perspective, according to critics, the fault of the entire way space was conceptualized in GIS. Theoretically minded practitioners of GIS debated how best to incorporate approaches in the hermeneutics of landscape that were very popular in Europe at the time (Thomas 1993; Tilley 1993; Lock & Stancic 1995; Barceló & Pallares 1996; Hacığüzeller 2012). Cognition was seen as one way of bridging the divide between the perceived rigidity of analytical and theoretical approaches to landscape (Zubrow 1994), and debates of a similar nature were occurring and cross pollinating from other human disciplines including human geography (Schurrman 2000; Crampton 2010).

The claim that spatial analysis and GIS could only present environmentally determinist, orthodox views of the past was specious and ignored the legitimate archaeological study of past environments. As Llobera notes, the terms environmental and determinism need not be conjoined. “An archaeological study which incorporates environmental information is not condemned to determinism…” (1996: 613). The geographic nature of the data included for analysis in GIS often, necessarily produces models that explore environmental themes. Although mapping cognition and how past populations may have thought and consciously created their environments provides a focus beyond environmental determinism, GIS models do tend to highlight the affordances and limitations of the environment in relatively categorical ways as a result of the secondary data used in the GIS (things like Digital Terrain Models for example; see Figure 3.2 and Figure 3.3 for comparison of primary and secondary datasets used in this research). Today an entire discourse on the affordances and agency of things permeates archaeology (Kopytoff 1986; Gosden & Marshall 1999; Olsen 2010; Hodder 2014). The idea of landscapes as things with agency and long-term affordances has also been explored (Olsen et al. 2012). A slightly different expression, this discourse is not so dissimilar from ideas on the affordances of landscapes discussed in archaeology and geography from the early to mid-twentieth century (Fox 1923, 1933; Hoskins 1955).

While archaeologists interested in and proficient in GIS have been keen to address these critiques and as a result have succeeded in moving the conversation forward, it has been wryly noted that many critics of GIS were better versed in Heidegger than they were in actually using computers and understanding their limitations (Hacığüzeller 2012). The debate has led to the foundation of what is now established within the field of human geography as Critical GIS
METHODOLOGY

One of the underlying principles of CGIS is that practitioners cannot be excused from not using GIS in their research and then criticizing it from afar. Instead, they must engage with it and help to explore its technological, theoretical implications and limitations (O'Sullivan 2006: 783; Schurrman 1999, 2000, 2007; Hacıgüzeller 2012: 248).

In the broader perspective, the hand-wringing by some archaeologists about the uses and perceived abuses of computational archaeology and whether GIS methodologies are humanistic enough is largely symptomatic of the long-standing divide between analytical and descriptive approaches and disagreements on the creation of knowledge. Timpson argues that the opposition to computational methods in archaeology represents an attitude among some archaeologists that, “unless we have complete knowledge of all the factors that might possibly affect the record available to us, which of course we never will, then we cannot say anything at all” (Timpson et al. 2015). As Hacıgüzeller writes, “An ethical archaeology should yearn for inclusiveness rather than dismissals based on totalising accusations. Walking across the landscape or excavating a site is not the only legitimate way to create archaeological knowledge” (Hacıgüzeller 2012: 257).

The importance of being there

Yet, while walking across the landscape may not be the only way to create knowledge, it certainly helps. One of the most salient critiques of GIS by archaeologists who actually use GIS is that it can provide an over-orientating sense of the landscape in which factors that may be of small concern on the ground are over-hyped in a model (Hutcheson 2004). A colleague in Germany related the story of a researcher whose primary understanding of a particular topography was that it was cut by a deep ravine that would not have been easily traversable. Yet he had clipped and stretched the height model for the region, over emphasizing what was in fact a gentle, easily passable gully. The entire misunderstanding would have been avoided if this researcher had ever visited the area, which he had not. Fundamentally, deep knowledge of the landscape is a form of local knowledge, one born of being there for many years, but even a superficial visit can give one a sense of how to interpret a local spatial model in regard to on-the-ground conditions. It is therefore important to briefly highlight the major difference between traditional archaeological and antiquarian summaries of place and the analysis that can result from GIS methodology. Arguably, the key difference here rests on participation.

Much of the richness and authority of early landscape studies, coming from antiquarian itineraries and chorographies, originated from an engagement with place. Knowledge gathering was essentially participatory (Shanks 2012, 2013). The authority of many early landscape archaeologies originated from the fact that the writers had actually been there and experienced the character of a place. Indeed, one of the central premises of nineteenth and twentieth century archaeology as a whole was that the archaeologist was there, in the trenches, experiencing
it (Olsen et al. 2012: 59). In the nineteenth century, the itinerary was one of the most popular literary forms, and authors attempted to capture the essence of a place or a landscape while reviewing, often in the order of a trip, the noteworthy views or historic sites of value in the vicinity (Lowenthal 1978; Readman 2018). This was part of the process of seeking continuity with the past and creating historically (archaeologically) rooted and partially imagined understandings of national and regional identity (Anderson 1983; Shanks 2012; Readman 2018).

For example, works such as John Collingwood Bruce’s popular *Guide to the Roman Wall* (which was reprinted many times in Bruce’s lifetime and which has remained in print until today) presented a guide to participating with and understanding an archaeological landscape, or if that was not possible, at least experiencing it through prose (Breeze 2003; Bruce 1833). This type of writing continued in the vein of early works of landscape prose like Wordsworth’s famous *A guide through the District of the Lakes in North England* (1810) and much earlier antiquarian itineraries of the likes of Camden and Gordon in the seventeenth and eighteenth centuries, respectively (Camden 1586; Gordon 1727). This style remained popular well into the twentieth century. The *Highways and Byways* series, for example, was published from 1898 until 1948. Glyn Daniel’s *The Hungry Archaeologist in France*, is arguably one of the latest forms of these archaeological itineraries, informing readers from the 1960s how to replenish their energies with fine French cuisine after participating with megalithic monuments in rural France (Daniel 1966). These works all express the centrality of visiting a place and actually *being there*, which is arguably one of the unique features of archaeology as a discipline literally grounded in this physical engagement with place.

In contrast, the success of GIS relates to its ability to present a single, non-contradictory view of the landscape without a participatory element (Harris et al. 1995). One can look at and analyse a landscape in a GIS without ever having visited it, and still make authoritative, quantitative claims about said landscape. While early cartography was all about going off the edge, in person, to expand knowledge (arguably as a means of capitalism and control), today with remote sensing and judicious database mining, one can obtain enormous amounts of data about environment and geography of a region without ever having stepped foot there. However, as stated, without local knowledge, GIS can overemphasize features of the landscape that are not necessarily reflective of on-the-ground conditions, both environmentally and socially as in cases where GIS is used for planning and development (King 2002). It is contingent upon GIS practitioners to understand that the method is not infallible and is as subject to data uncertainty, error, and bias as any other method (Burg 2017).

Furthermore, as a model, GIS is necessarily reductive and cannot fully capture all elements of a landscape. Even when using a very comprehensive set of environmental features, it may not be possible to fully ascertain all natural elements of a site relevant to a particular topographic analysis. Looking at the locations of hoards in Britain, for example, Yates and Bradley...
determined that while GIS was very helpful at describing sites, it lacked the ability to tie all relevant features together in a way that was fully reflective of the actual sites (Yates & Bradley 2010a; Bradley 2015: 23). Sites must therefore be visited, an argument Tilley also makes (Tilley 2010: 477). However, it is important to note that even visiting sites to ascertain their essential nature relies on a range of prior knowledge and less explicitly stated conceptual models of how a site functions or ought to function. Additionally, as Basso’s studies have clearly shown, landscape may be as internal and related to one’s knowledge of self as it is external, and therefore it is important to recognize that not even a phenomenological approach can encapsulate the social importance and meaning of a past landscape (Basso 1996: 61). Chapter 7 provides a more in-depth discussion of Basso’s work in regard to the meaning of a landscape. In Norfolk, the landscape has changed so much over the past century alone that the landscape, apart from a few locations, bears very little in common with its appearance at the end of the Iron Age.

However, best practice in GIS studies must, whenever possible, also include as extensive an experience of the actual landscape as possible. Therefore, part of the methodology of this research has involved many trips through Norfolk by car, rail, and on foot to get a sense of the landscape and the areas in which hoards and find-site clusters are located. This process of visiting the landscape in different seasons over the years, has helped inform a richer idea of the ways in which the affordances and limitations of the landscape have shaped human activity over the past centuries. Yates and Bradley (2010a) and Tilley (1994) are both correct that there is no substitute to really being there.

The photographs of Norfolk’s landscape throughout this dissertation are one of the products of those visits. Unfortunately, the sites of most hoards in Norfolk are impossible to capture well using photography as they are usually just wheat fields, not really “framable”, and, frankly, boring as photographs. The aesthetics and framing of landscape photography are very genre specific (Cosgrove & Daniels 1988; Tacon 1994; Shanks 2013). As Shanks notes, “The viewer is abstracted from what is being represented, removed in an escape from social and historical reality” (Shanks 2013: 9). However, photographs are important to include in landscape studies as they give the reader that sense of being there and of being able to imagine what the landscape represented by the GIS model could look like—even if photos of the landscape today could just as easily have framed the parking lot behind Iceni Motorcycles or the massive wind turbines in the Wash. The photos included in the project take us back to the views presented as etchings in those early landscape itineraries and recalls the aesthetics of the *Highways and Byways* series,
<table>
<thead>
<tr>
<th>Statistical tools</th>
<th><strong>Test of</strong></th>
<th><strong>Assumptions</strong></th>
<th><strong>More information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Correlational</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Pearson Correlation | Tests the strength of association between two variables | Continuous measurement, normality, level of measurement, related pairs, absence of outliers, normality of variables, linearity, and homoscedasticity. | • Bishara & Hittner 2012  
• de Winter et al. 2016  
• Drennan 2010: 210  
• Kvamme 1991 |
| Spearman Correlation | Tests the strength of association between two ordinal variables | Ordinal measurement, no assumptions about distribution; non-parametric | • Jones 2003  
• Drennan 2010: 223  
• Orton 2000: 31 |
| Chi-Square | Tests the strength of association between two categorical variables | Categorical (ordinal or nominal), mutually exclusive categories, independent groups, value of cell counts exceeds five. | • McHugh 2015  
• Drennan 2010: 182, 199  
• Orton 2000: 49  
• Mueller 1974 |
| Fisher’s Exact Test | Tests the strength of association between two categorical variables | Categorical (ordinal or nominal), mutually exclusive categories, and groups. Low cell counts allowed. | • Upton 1992  
• Routledge 1992 |
| **Comparison of means** |             |                 |                     |
| ANOVA one-way analysis of variance | Tests the difference between group means, controlling for equality of variance other variance | Continuous measurement, normality, equality of variance | • Stoline 1981  
• Drennan 2010: 168 |
| **Regression** |             |                 |                     |
| Geographically Weighted Regression | Tests how the changes in the combination of two or more variables predicts level of change in an outcome of interest using non-stationary data | Continuous measurement, normality of distribution, linear relationship, predictors constant across study area, no multicollinearity, homoscedasticity | • Fotheringham et al. 2002  
• Mitchell 2012  
• Silva et al. 2015  
• Löwenborg 2009 |
| **Non-parametric difference tests** |             |                 |                     |
| Mann-Whitney U-test | Tests for difference between two independent variables | Equivalent to the independent t-test, but non-parametric | • Birnbaum 1956  
• Ruxton 2006 |
| Kruskal-Wallis one-way analysis of variance | Tests for differences across multiple groups; comparing the sum of ranks applied to the data | ANOVA one-way, but non-parametric | • Varga & Delaney 1998 |

Figure 3.1: (Left & right) Statistical tests in regard to their uses, assumptions, and references.
**Inferential and descriptive statistical methods**

While GIS lends itself to beautiful data visualization—a point of pride among practitioners who strive for graphic excellence—it can also be used for quite sophisticated data analysis through the use of descriptive and analytical statistics. This was not always the case, and Stephen Shennan famously suggested at a 1993 conference on GIS that archaeological research and problem solving had been reduced, through GIS, to “making pretty pictures” (Kvamme 1995: 7).

Though the incorporation of spatial statistics with GIS visualization in archaeological research had been proposed some years before (Lock & Harris 1992), it was not particularly rigorous at that time due to limitations in GIS software. In the early 1990s, there were no easy ways to complete the types of analyses needed in the aim of being more statistically rigorous (Kvamme 1991). However, visual inspection of distribution maps today remains one of the primary methods for regional analysis, despite four decades of research cautioning that these analyses are subjective and may not be repeatable (Hodder 1977: 223). Brindle (2013) notes that, despite known issues with the visual inspection of distributions as a method, most research projects using NHER/PAS data up to 2013 were still using visual inspection of distributions as a method.

Today, GIS studies within archaeology have the option of incorporating a statistical component to better understand distributions. Both descriptive and inferential statistics for sophisticated hypothesis testing about the nature of distributions. For instance, on a very simple level, being able to compare an observed distribution with an expected or hypothetical distribution has enormous inferential power. Additionally, a wide-array of geo-statistical tools have been incorporated into both ArcGIS and the open source QGIS, through modules available in SAGA. Even a few years ago tools like geographically weighted regression were difficult and unwieldy, but are now included as standard in GIS software.

Within this project, a range of different analytical statistical methods have been tried using both built-in modules in QGIS and using statistical analysis in other programs for the produc-
CHAPTER 3

...tion of many of the non-cartographic figures. There is not one single statistical method suitable to every question that needs to be asked, as each method is tailored to what types of data (scale, ordinal, categorical) is available or can be transformed from an extant variable. Some of the methods used include categorical coincidence, geographically weighted regression, multi-band variation, regression analysis, minimum distance analysis, cluster analysis, and zonal raster statistics. A discussion of each individual method is briefly given in the relevant section when considering how to interpret the results of a given question. Figure 3.1 provides a listing of the statistical methods used and in which contexts they were appropriate to be used in.

Yet it is also important to recognize the limits of spatial statistics and to use them self-consciously for archaeological analysis. Hypothesis testing of a model will only lead to a coherent result if the model itself has been appropriately conceptualized and is made explicit. For this reason, knowledge discovery and critique of the datasets represents a crucial methodological step. Questions need to be clearly framed in order to understand statistical results.

Knowledge discovery and critique in large datasets

Throughout this discussion of the methodological and theoretical limitations of GIS, repeated reference has been made to the centrality of large datasets to current, computational GIS, and it is worth briefly contextualizing this in lieu of the current trend towards hyper-classification of the world through increasingly sophisticated data gathering technology. In 1992, it was estimated that the amount of information in the world was doubling roughly every 20 months (Frawley et al. 1992). In 2013, this doubling was said to occur every 13 months, and in coming years the total amount of data will double every 12 hours (Schilling 2013; cf. Fuller & Kuromiya 1981). As the biologist and statistician Vaclav Smil notes, the amount of information available today is roughly more than a trillion times over the amount of information available in the library of Rome 2,000 years ago (Smil 2019). While archaeology only represents a tiny fraction of this proportion, similar dynamics are at play and even conventional archaeological datasets have already surpassed the ability of a single researcher to make meaningful, statements about the total sum of research in particular areas (Bradley 2017: 3).

In addition to the imperative of using more sophisticated forms of data analysis, archaeologists are now able to imagine the interpretative possibilities harnessing so-called big data for implementation of projects on a previously unprecedented scale (McCoy 2017). Recent projects like Digital Archaeological Record (tDAR) in the United States, Archaeological Records of Europe Networked Access (ARENA) in Europe, the Transatlantic Archaeological Gateway (TAG), and the English Landscape and Identities project (EngLaID) have begun to explore these new possibilities (Cooper & Green 2016). These developments are exciting, but it is also worth questioning what future, successful big-data projects in archaeology will look like and
### Norfolk Historic Environment Record Data

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Type</th>
<th>Mean Accuracy</th>
<th>Year</th>
<th>Other</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>All metal detected finds data regardless of period or monument type (inclusive &amp; exclusive)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Specific typologies, illustrations, figures, and supplementary information not available in digital format</td>
</tr>
<tr>
<td>All Bronze Age and Iron Age monuments records (inclusive &amp; exclusive)*</td>
<td>ESRI Shapefile</td>
<td>+/- 114 m</td>
<td>1978 - 2017</td>
<td></td>
<td><a href="http://www.heritage.norfolk.gov.uk">http://www.heritage.norfolk.gov.uk</a></td>
</tr>
</tbody>
</table>

### Portable Antiquities Scheme Data

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Type</th>
<th>Mean Accuracy</th>
<th>Year</th>
<th>Other</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>All finds for Norfolk (Bronze Age)</td>
<td>CSV (points)</td>
<td>See Figure N, Pg N</td>
<td>1998 - 2019</td>
<td>Specific typologies included in digital format</td>
<td><a href="http://finds.org.uk">http://finds.org.uk</a></td>
</tr>
<tr>
<td>All finds for Norfolk (Iron Age)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All finds for Norfolk (Roman)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All finds for Norfolk (Early Medieval)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All finds for Norfolk (Medieval)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Oxford Hillforts Atlas

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Type</th>
<th>Mean Accuracy</th>
<th>Year</th>
<th>Other</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Iron Age hillforts in England and Wales</td>
<td>GeoJSON (points)</td>
<td></td>
<td>2017</td>
<td></td>
<td><a href="http://hillforts.arch.ox.ac.uk">http://hillforts.arch.ox.ac.uk</a></td>
</tr>
</tbody>
</table>

Figure 3.2: The primary datasets utilized for this research. The data sources, their type, mean accuracy, years produced, and some other notes are included.
CHAPTER 3

what kinds of questions they will be able to ask and to answer. One area of concern is how big data studies in archaeology can articulate with traditional site-specific interpretations, and this relationship between the macro and micro scale presents some conceptual difficulties.

For this reason, the inclusion of non-systematic survey and third-party data like the NHER/PAS datasets is critical for understanding regional trends that operate at a supra-site level across large but internally consistent regions. These types of datasets present the possibility of an analysis above the level of site specific interpretations in most cases, but below the level of a discussion of broad regional trends in a given time period. The use of GIS to analyse the results of non-systematic survey methods was first proposed by Massagrande in 1995 (Massagrande 1995), and indeed, primary geospatial datasets obtained through a variety of different non-systematic methods make up one of the largest shares of digital-data driven research within archaeology today. Very different from carefully designed systematic surveys that have been used by archaeologists for decades in ploughsoil archaeology, these datasets present their own strengths and weaknesses because the archaeologists working with them usually had no part in the discovery process.

One of the most important steps in the process of knowledge discovery using large, primary archaeological datasets has therefore been to scrutinize and to critique the quality of the data at hand. For while there is a massive quantity of data, researchers agree that its quality is generally lower than what most archaeologists are accustomed to working with, being highly contextual and inconsistently collected (Cooper & Green 2016: 272). A host of different issues in the quality of datasets have been explored—from coordinating heterogeneous datasets obtained through differing methodologies to understanding interpretive errors common in some datasets—and recommendations, such as the peer-review of primary datasets have been proposed (Gobalet 2001; Atici et al. 2013; Dam & Hansen 2005; Mikkelsen 2012). Additionally, projects like EngLaID have embraced the concept of the historical and social construction of knowledge, as based on authors like Michael Shanks and Chris Tilley (1987), and Alison Wylie (1985), for a richer understanding of the unique contexts of different datasets (Cooper & Green 2016).

Within the study of metal detected datasets, similar and specific recommendations have been made for assessment and quality control of datasets (see for Brindle 2013; Gosden 2013; Robbins 2013; Chester-Kadwell 2009), and Chapter 2 has explored these issues in much greater detail. One of the most significant parts of this project has therefore been the process of understanding the extent and limitations of using the NHER and PAS datasets as a direct consequence of the historical factors surrounding their inception and curation. Without in-depth knowledge of these factors, a number of erroneous observations and skewed understandings of distributions are possible.
Additionally, Cooper and Green, following on Newman’s (2011) work on the philosophy of recording, have highlighted the importance of having a middle-range theory that can connect the records of the observations made by, for instance, metal detectorists, and what types of sites these records may represent (Cooper & Green 2016: 280). This is not always obvious from the condensed nature of the records under study. In the case of the NHER meta-dataset, for example, an entire excavation report may be summarized in a single paragraph; in the spreadsheet version of the dataset, this may be cut to a single sentence or word to allow for the creation of categorical data in order to make comparisons between find-sites. Therefore, the relationship of the original observation to the digital record created may be vague.

However, on a more profound level, the interpretation of the original observation is often incredibly vague and open to evaluation based upon a limited number of artefacts typically found by metal detectorists. As Haselgrove (1985: 8) notes, it is important to expose the distinction between the sampled population—or the artefacts that are found on the surface or through metal detecting—and the target population—or the sum total of artefacts that would be available for study if they were retrieved (e.g. through a total excavation of a given site). Coin dies, blanks, and metal slag may indicate a mint or metalworking site, for instance, but what type of site is represented by a small scatter of Iron Age brooches, a ferrule, and some tweezers found in a field? Is it ritual? Is it a settlement? Is it the lost cargo of a tipped wagon forgotten and abandoned? As Richard Bradley notes, there are a range of common and implausible accidents used to explain single finds and scatters (Bradley 2017: 10). There have been serious discussions about whether sets of Iron Age terrets could have been deposited when they flew off the chariot while the Celts were whizzing around the landscape (Hutcheson 2010). Particularly with metal detected finds, it can be very challenging to interpret what these patterns actually represent in a methodological way that does not just feel like conjecture.

Each cluster of objects must be judiciously assessed individually, though this is not particularly rigorous. Additionally, following each subsequent ploughing of a field, the number and type of artefacts available to be sampled or found, while a very small proportion of what undoubtedly exists in total, changes. Thus, the “cycle of exposure and burial which artefacts in the ploughsoil undergo ensured that the surface (and therefore the sampled) population is constantly undergoing renewal” (Haselgrove 1985: 8). While the high probability of a “productive” field being re-sampled many multiple times by an individual or group of metal detectorists rounds out the sample—leading to incredibly Byzantine records of sometimes thousands of artefacts from multiple periods found in the same field—the incredible number of factors that lead up to discovery of the sampled population and the highly unspecific spatial nature of most NHER observations place certain types of inference beyond the ability of even modern computational methods. Ultimately, while metal detecting and fieldwalking share certain
### Land/Height Data

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Scale</th>
<th>Accuracy</th>
<th>Year</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>England 2 m LIDAR</td>
<td>1:8 000</td>
<td>2 m</td>
<td>2010-2015</td>
<td><a href="https://digimap.edina.ac.uk/webhelp/lidar/lidardigimaphelp.htm#data_information/lidar_dtm.htm">https://digimap.edina.ac.uk/webhelp/lidar/lidardigimaphelp.htm#data_information/lidar_dtm.htm</a></td>
</tr>
<tr>
<td>OS Terrain 5 Contours</td>
<td>1:10 000</td>
<td>2.5 m RMS</td>
<td>2017</td>
<td><a href="https://www.ordnancesurvey.co.uk/docs/user-guides/os-terrain-5-user-guide.pdf">https://www.ordnancesurvey.co.uk/docs/user-guides/os-terrain-5-user-guide.pdf</a></td>
</tr>
<tr>
<td>OS Terrain 5 DTM</td>
<td>1:10 000</td>
<td>2.5 m RMS</td>
<td>2017</td>
<td><a href="https://www.ordnancesurvey.co.uk/docs/user-guides/os-terrain-5-user-guide.pdf">https://www.ordnancesurvey.co.uk/docs/user-guides/os-terrain-5-user-guide.pdf</a></td>
</tr>
<tr>
<td>OS Terrain 50 DTM</td>
<td>1:50 000</td>
<td>4 m RMS</td>
<td>2019</td>
<td><a href="http://www.ordnancesurvey.co.uk/docs/user-guides/os-terrain-50-user-guide.pdf">http://www.ordnancesurvey.co.uk/docs/user-guides/os-terrain-50-user-guide.pdf</a></td>
</tr>
</tbody>
</table>

Uses: Detailed overviews of landforms, topographic analysis, surface analysis, local viewsheds, hillshade, slope/aspect, valley depth, slope height, watershed, stream order, least cost path analysis

### Vector/Boundary/Location Data

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Scale</th>
<th>Accuracy</th>
<th>Year</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS Open Roads</td>
<td>1:25 000</td>
<td>2 decimal places</td>
<td>2019</td>
<td><a href="https://www.ordnancesurvey.co.uk/docs/user-guides/os-open-roads-user-guide.pdf">https://www.ordnancesurvey.co.uk/docs/user-guides/os-open-roads-user-guide.pdf</a></td>
</tr>
<tr>
<td>OS Open Rivers</td>
<td>1:25 000</td>
<td>2 decimal places</td>
<td>2017</td>
<td><a href="https://www.ordnancesurvey.co.uk/docs/user-guides/os-open-rivers-user-guide.pdf">https://www.ordnancesurvey.co.uk/docs/user-guides/os-open-rivers-user-guide.pdf</a></td>
</tr>
<tr>
<td>OS Open Names</td>
<td>1:25 000</td>
<td>N/A</td>
<td>2016</td>
<td><a href="https://www.ordnancesurvey.co.uk/docs/user-guides/os-open-names-user-guide.pdf">https://www.ordnancesurvey.co.uk/docs/user-guides/os-open-names-user-guide.pdf</a></td>
</tr>
</tbody>
</table>

Uses: Understanding and viewing road network, understanding and viewing the water network, river network analysis, river names, placenames, road names

Figure 3.3: (Left and right) the secondary datasets used in this research, along with their scale, accuracy, year published, and uses in the GIS.
## METHODOLOGY

### Geological Data

<table>
<thead>
<tr>
<th>Soil-Parent Material</th>
<th>1:50 000</th>
<th>Unknown</th>
<th>2009</th>
<th><a href="http://nora.nerc.ac.uk/id/eprint/8048/1/OR08034.pdf">http://nora.nerc.ac.uk/id/eprint/8048/1/OR08034.pdf</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Geological Indicators Of Flooding</td>
<td>1:50 000</td>
<td>Unknown</td>
<td>2009</td>
<td><a href="https://www.bgs.ac.uk/products/hydrogeology/indicatorsOfFlooding.html">https://www.bgs.ac.uk/products/hydrogeology/indicatorsOfFlooding.html</a></td>
</tr>
</tbody>
</table>

**Uses:** Mapping and understanding of soil properties, identifying soils and landscapes, identifying fluvial deposits from the sea and inland fluvial deposits, modeling the predominant groundwater flow mechanism and drainage.

### Environmental Data

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Cover plus: Crops</td>
<td>1:2 500</td>
<td>25 m</td>
<td>2018</td>
<td><a href="https://digimap.edina.ac.uk/webhelp/environment/environmentdigimaphelp.htm#terms_of_use/licence_agreement.htm">https://digimap.edina.ac.uk/webhelp/environment/environmentdigimaphelp.htm#terms_of_use/licence_agreement.htm</a></td>
</tr>
</tbody>
</table>

**Uses:** Local studies requiring land classification, showing the land cover of small parcels, viewing crops and productivity around Britain, identifying special land use categories and restricted areas.

### Climate Data

| HAD-UK Gridded Observational Climate Data | Unknown | 1 - 12 km | 1891 - 2019 | [https://www.metoffice.gov.uk/climate/uk/data/haduk-grid/overview](https://www.metoffice.gov.uk/climate/uk/data/haduk-grid/overview) |

**Uses:** Comparison of climate variables derived from the network of UK land surface observations including rainfall and annual growing season.
CHAPTER 3

characteristics in common (i.e. ploughsoil), they are methodologically so different that inferential methods developed for systematic survey cannot be used with certainty on metal detected assemblages (Chester-Kadwell 2007). It is, quite simply, a different kind of archaeology.

As Richard Bradley (2016) notes, conceptually even things like “votive depositions” and “hoards” are difficult to view as discrete categories of objects when there is so much debate about whether or not the ways archaeologists today conceive of hoards would have been internally consistent with the world views of the people who deposited them. Furthermore, something is referred to as a “votive deposition” only when it has no known functional purpose (ibid.). With NHER and PAS data, “hoard” is a category of data that can be explored, and this project has looked primarily at hoards found in the region dating from the Bronze Age until the Roman period. Yet it is much less straightforward to identify whether or not single metalwork finds made by metal detectorists may have had similar functions. Therefore, while it is possible to see the circulation and deposition (either intentional or accidental) of metalwork, it can be difficult to be very specific about what a find-site and the objects associated with clusters may represent. On another level, as both Haselgrove (1985) and Foley (1980) raise, there is little certainty that a cluster of artefacts at or near the surface—of which we have an abundance—actually even represent “sites” in the traditional archaeological sense. These clusters may arise because of numerous other factors that may only be tangentially linked to the past practices under study.

Other types of sites have similar interpretive difficulties, including “settlements,” “metal working sites,” “shrine/temples,” “enclosures,” and “prehistoric trackways” to name a few site types in the NHER database. For instance, Gregory and Rogerson note that while scatters of ceramics often indicate a settlement, the proximity of the settlement to the actual sherds is ambiguous because ceramics ended up in compost heaps that were then used to fertilize fields nearby (Gregory & Rogerson 1984). So while you know there is a settlement somewhere, it may not actually be at the location of the surface scatter of ceramics.

**Dating the model and SPD**

The unstratified nature of nearly all the objects in the NHER/PAS datasets provides a small complication in terms of accurately dating many of them, and it is worth discussing how dates and dating have been handled methodologically. Most objects, though certainly not all, in the PAS/NHER dataset have been assigned a typological date by one or a team of the researchers who originally identified and recorded the object. These are calendar dates given as a range (e.g. 500 BC to AD 10), which can be expressed as a date +/- a margin of error. Chapter 2 provided a much larger discussion of the dates used in the PAS/NHER databases and the GIS model.
METHODOLOGY

Primary Datasets (Figure N)
- Portable Antiquities Scheme
- Norfolk Historic Environment Record
- Oxford Hillforts Atlas

Monuments / Site Finds / Objects
- Type
- Easting/Northing
- Period
- Year min/max
- Associated Finds
- Related Records
- Full Description

Secondary Datasets (Figure M)
- Land/Height Data
- Climate Data
- Environmental Data
- Boundary/Location Data
- Environmental Data

Landscape Analysis
- slope
- aspect
- watershed
- viewshed
- cost surface
- stream order
- elevation profile
- proximity

Spatial Statistics
exploring the relationships between variables

Theoretical Framework
basis for contextual understanding of GIS methodology

Figure 4.3: A graphical representation of the GIS model. See Appendix 2 for more information on building the model.
CHAPTER 3

The range of dates provided by the PAS dataset (N = 58,478) provide an ideal opportunity to test out recent advances in summed probability distributions for dates (SPD). As noted by Christopher Bronk Ramsey, leading the OxCal project, “Combining probability distributions by summing is usually difficult to justify statistically but it will generate a probability distribution which is a best estimate for the chronological distribution of the items dated. The effect of this form of combination is to average the distributions and not to decrease the error margins as with other forms of combination” (Bronk Ramsey 2009). The concept of summed probability was first proposed by John Rick in 1987 (Rick 1987).

Although there has been robust debate about the validity of summed probability dates as population proxies (Torfing 2015; Timpson et al. 2015; Crema et al. 2017), the current consensus is shifting towards accepting that summed probability densities of radiocarbon dates may be used as proxies for past populations provided hypothesis testing and thorough investigation and quantification of bias. Timpson (et al. 2015) has pointed out that a proxy, containing information from other processes, is not necessarily valid or invalid, because all proxies intrinsically incorporate some data about the quantity of interest. Therefore, factors and events where neither is the direct cause of the other may still be used as informative proxies if their correlation is strong. It is interesting to note, as an aside, there have been long debates about the validity of various methods for population proxies in archaeology since before radiocarbon dating or summed probability. Using only one body of material for SPD, however, does not necessarily allow inference of population. It merely shows the relative popularity of certain types of objects—in this case metallic—through time. Therefore, it is best to view the summed probability distribution of metalwork typological dates as largely descriptive, and lacking somewhat in inferential power with regard to past populations as offered by the inclusion of dates from a wider range of activities. For a larger discussion of the results of the SPD of the PAS dates, please see Chapter 6, Figures 6.15 & 6.16.

Open Source PhD

One of the other methodological goals of this project has been, whenever possible, to use open-source software and data for this project. Over the course of the past two decades, open source software has been increasingly highlighted as important to the process of democratizing access to scientific methods, in a similar vein to the debate on opening access to research journals. Due to the fact that only the authors of proprietary software can legally copy, inspect, and alter that software, it can lead to the additional “black boxing” of technology, as previously discussed. Furthermore, open source software tends to have more engaged communities of users which aids immensely in training. Finally, open source software is free to use, has no licensing fees, and the user is free to use the output in any manner they wish.
I have tried, wherever necessary to use open-source software and data for this project. The primary software that were used for analysis—QGIS, OxCal, and R—are open source and freely available. The primary data that were used from NHER and PAS are also openly available online to the public, and researchers are able to download and obtain specific grid-references for where objects were found.

**Building the model: an atlas of the remains of Later Prehistoric Norfolk**

Based upon these ideas and principles, the methodological flow of this project was conceived to build a geospatial model of the landscape: an atlas of the metal detected and earthwork remains of Later Prehistoric Norfolk. This model provided the basis for visualizing and understanding the ways in which certain activities took place in certain types of landscapes based upon the various affordances of a given location. These affordances were represented by proxy data from secondary datasets about the nature of the landscape, and included for analysis with the primary datasets.

Firstly, several sets of meta-data were assembled by the NHER Records Officers Peter Watkins and Heather Hamilton. The first of these was a record of all the locations in Norfolk where an object was found by metal detecting and recorded, regardless of the date of the artefact. This set of records included metal detected objects from the Early Bronze Age until the modern period. The second set of records only pertained to Bronze Age and Iron Age artefacts and monuments. One set only contained Iron Age monuments; one set Bronze Age monuments; one set metal detected objects not associated with a monument; a final set metal detected objects associated with monuments. These meta-data were later used to establish the total area of metal detected coverage in the county and the relative density of objects from certain periods (e.g. Late Iron Age) (see Chapter 6).

Crucially, these sets of records are slightly different from actual finds data. It is best to think of them as find-sites, or as locations from which at least one artefact or feature has been recorded. Often, for NHER data, the field from which an object or group of objects originated is known, but the exact location where each individual object was found has not been recorded. Instead, the field in which a given set of artefacts or features has been recorded as a polygon. For the purposes of analysis, where appropriate these polygons were changed into centroids (a point representing the centre of the polygon with a distance error, $\text{+/-}$). While NHER’s meta-dataset shows the location of these find-sites an indication of the types of objects found, and sometimes a brief interpretation of a given scatter of artefacts or features related to the find-site, specific information about typology, photographs or drawings of the features and/or artefacts, and other information including grey literature can only can only be obtained in the actual NHER archives at Gressenhall or from the copy of that archive at Norwich Castle Museum.
CHAPTER 3

One of the first concerns when planning this research was how these primary datasets for analysis would be selected and later handled. Early on, in consultations with researchers and finds officers at the Norfolk Museum Service (NMS) and NHER including John Davies, Tom Williamson, Andrew Rogerson, Steven Ashley, Heather Hamilton, and Peter Watkins it became clear that although it would be fascinating to attempt to use the full dataset, it would be greatly impractical because, as stated, much of the actual data is still stored in hundreds of filing drawers. Therefore, after analysing the biases within the metadata of the full NHER dataset and using a full set of Iron Age data from Breckland that was collected for and used in my MPhil, it was determined that the Portable Antiquities Scheme dataset, crucially all of which is available online, does in fact represent a recent and representative sample of the full NHER dataset (See Chapter 3).

Therefore, secondly, all metal detected and chance finds from Norfolk recorded in the PAS, from the Bronze Age until the end of the Middle Ages (roughly AD 1650 in the PAS database) were obtained as Comma Separated Values (spreadsheet form). This set of data is smaller than the NHER dataset, but has a full range of qualitative and quantitative data, including specific typologies, photographs, and references available online, unlike the NHER meta-dataset. To this additional information was added such as hoards found prior to 1998 (the year recording began for the Portable Antiquities Scheme in Norfolk), earthworks identified from aerial photographs, and certain key Iron Age find types such as torcs, terrets, and brooches was also added from NHER to this to augment the PAS dataset. However, the datasets are not handled in a mixed way for analyses in a way that would skew the data distributions.

Thirdly, secondary geospatial datasets were obtained from a variety of sources including the University of Edinburgh’s digital map service Digimap (https://digimap.edina.ac.uk), the Met Office’s climate database (https://www.metoffice.gov.uk/climate/uk/data/ukcp09), and the Oxford Atlas of Hillforts (http://projects.arch.ox.ac.uk/hillforts-atlas.html). A full list of secondary datasets included, their scale, accuracy/precision, and date of creation can be found in Figure 3.3.

A wide range of geographical, geological, climatological, hydrological, and historic data were incorporated into a reference library in QGIS to provide the context for the metal detected finds and other archaeological data. These supplementary data can only be seen as a proxy of the environment during prehistory in the region. Proxies, importantly, result in an imperfect correlation with the quality or quantity of interest, yet can still contain useful information about the areas under study. For example, the locations of modern rivers and watercourses are not a perfect correlation to past watercourses in the region, which have much changed over the years. This is particularly evident with the Great Ouse, which has moved hundreds of metres since the Middle Ages, as an extreme example. The upland rivers of Norfolk tend to be more constrained, and have moved less over time than the Ouse or the Yare. Yet they are still not 1:1
correlates with the positions of Iron Age rivers. Even when using topography to model the watershed in Norfolk, there is a certain amount of error introduced to any measurement used for past inference. However, these errors fall within the range of error for the total resolution of the project which is generally around 50 to 100 m per pixel. Therefore, while it would probably be inappropriate to infer anything requiring a very fine spatial resolution, at the landscape scale the errors average out consistently across categories.

The primary and secondary datasets were then assembled in QGIS, and wide range of measurements were taken for each find-site point and a 500 m radius zone around each point. Both discrete and zonal measurements, listed under the “Uses” column for each dataset in Figure 3.3, were compiled in attribute tables within QGIS, included the elevation, slope, aspect, proximity to a water source, proximity to a river as classified by Strahler’s Stream Order (Strahler 1957), indicating the network connectivity of a river, the proximity to other findsites, to known monuments and cropmarks, to modern roads, and to ancient trackways and droveways, annual rainfall, annual growing season, underlying geology including soil parent and permeability indexes, local find-site densities, and other means of classifying a location. These attribute tables could then be exported for analysis as spreadsheets or queried using the SAGA geo-statistical modules available for hypothesis testing within QGIS.

Concluding remarks

It has proven important to discuss this process up front, because the success of GIS has rendered its inner workings somewhat opaque over the past several decades. Today, GIS is a ubiquitous method across many sectors of science and industry. One of the largest “problems” with GIS as a methodology, as highlighted, is how it is indicative of our world view today. It presents a very totalising view of the environment and uses distribution maps to explain the ancient world in a way people living in the past may never have done.

Consequently, this chapter aimed to present the historical trajectory of GIS as a technical methodology within landscape archaeology and to situate it within the broader discourse surrounding the use of models to explore and understand social factors in prehistory. The importance of “being there” was highlighted as essential to success, as well as the inclusion of a wide range of inferential and descriptive statistics to quantify distributions. The process of knowledge discovery within large databases was highlighted as key to efficiently utilizing somewhat Byzantine datasets. Furthermore, summed probability distributions were considered in regard to the dating of the metalwork typologies upon which this research depends. The process of building the model, as well as the contents of the primary and secondary datasets, was also tabulated. This chapter and the previous both set the foundations upon which the research presented in the next four chapter depends.
Introduction

This fourth chapter takes a more in-depth look at Norfolk's “recent” landscape, since the end of the Roman period, with the broad consideration of how the story of a region can be told through its landscape. Topics like the regional boundaries of Norfolk, both spatial and conceptual, at different times in the past are discussed, and Norfolk's geographical position in the North Sea is mentioned in regard to larger debates over the meanings of “centre” and “periphery” in archaeological, regional syntheses. The ways in which landscapes change and the ways in which we think about them are both highlighted as essential to understanding the ways in which affordances, or the qualia of a region, influence and are influenced by people. The recurrence of certain landscape themes through time is also considered from a broad variety of sources in relation to the connection of people to places.

The story of a region told through its landscape

One of the central engagements an archaeologist, or anyone with an imagination, has with a place, with a landscape, is the notion when walking over the rumpled ground, over ancient terrain and along time-worn streets and ways that something happened here; it is the knowledge that places have histories of their own. Michael Shanks compares this potential to a crime scene—anything could be a clue to what occurred here (Shanks 2012: 103-106). As he writes, the question is, “this happened here; or did it, could it have?” (ibid.: 103). Often seen as the
backdrop to historic events, landscapes tell important histories of their own. “The real subject of history,” he writes, “is always customs and manners, habitus, the background noise of what, with hindsight, get called historical events” (ibid.: 59-60; cf. Elias 1939).

Archaeologists tend to start the story of a landscape at the anthropogenic influence of our modern species. To chronicle and analyse the slow shift of habitus as recorded and patterned in the earth, we can use a medium-length time scale that comprises social, economic, and cultural history over the course of centuries and which Richard Bradley refers to as “social time” (Bradley 1998: 89; cf. Braudel 1949). But the landscape provides a perspective on millions, in some places on earth billions, of years of transformation (Irvine 2017): geological time, or what Braudel termed the longue durée (Braudel 1949: 149). Narratives about human evolution, for instance, set against the backdrop of several million years, may use such an approach, yet even these do not come close to the beginning. Moreover, the time-depth since our earliest hominid ancestors is so vast and the evidence so varied that any attempt to create a holistic narrative about human evolution is ill-fated (Latour & Strum 1984). But setting the archaeological perspective of social time against the longer-term changes in the landscape have proved amenable to understanding processes of social and landscape transformation at different scales. As Gavin Lucas emphasizes, a multiple notion of time helps with an understanding that “…history is not a linear process but one punctuated by cycles or periods of rapid transformation” (2004: 16). This idea also moves us away from a conception of history in which both change and continuity are used as simultaneous explanations, as historians like Braudel and Bloch stressed.

A researcher immediately realizes, when trying to piece together a landscape history from the metal detected and environmental data from NHER, the sense of multiple time at nearly every site in the catalogue; every file in the morass of file cabinets at Gressenhall tells a story—and it is not necessarily the story you came there to tell. These alternative histories of the same plots of land interrupt one at every step of the way. Leafing through countless printed pages of the inventories of finds, numerous Anglo Saxon brooches, medieval book fittings, seal matrices, and buckles, Roman coins, Neolithic blades and Combe-Capelle hand-axes call for your attention as you search for an Iron Age torc typology you think you might find somewhere inside. The landscape features and earthworks on a given site may be even more confusing given that they can span thousands of years of use in some cases (Cushion & Davison 2003). Ditches cut across fields with barrows behind an old manor house across from the Roman road where cropmarks taken from a plane show the shadow of a fort beneath summer wheat. Or, as in the case of some cropmarks, there may be multiple interpretations by multiple archaeologists for the same crop mark. Is it a hengiform, a ring ditch, a barrow, or a Roman temple? These are extreme examples, but like Shank’s crime scenes, which artefact or feature is a relevant clue? These sites, as a result of their time-depth, their variation, and the biases inherent in their distributions, test the limit of our interpretive abilities to tie together the relative facts of the region and present a narrative that is not too reductive. The format of the archive literally resists it.
But we do not need to understand, in such great detail, what every site did in the landscape to begin to see the patterns of use that emerge over centuries of normative practice. Statistical distributions are so useful, because they show what the average behaviour was when choosing a location for a certain type of site or monument, for instance, as well as highlighting outliers, which may be very interesting.

In telling these stories, questions of scale and resolution are critical (Braudel 1949; Bradley 1998; Lucas 2004). The impulse is clearly to focus on the Iron Age landscape and ignore these intrusions as one delves into the records. But looking at the landscape over a broader length of time helps to establish the regional tempo of landscape change in the longue durée, providing a richer, more complex frame of the landscape and its affordances from which to view the social tempo of the Iron Age. As Chapter 2 illustrated as well, understanding the distributions of the full dataset of metal objects—from the beginning of the Bronze Age to the end of the medieval period—can help us better see patterns in the metal detected data itself in a very direct way. As this chapter lays out, there are other benefits to the approach as well. Embracing the multiple time frames that landscapes operate under opens the study up to a more nuanced and perspicacious understanding of the region and its landscape-habitus-as-history (Lucas 2004: 39).

Laurent Olivier (2011) argues we must allow for “a present… made up of a series of past durations that makes the present multi-temporal,” as well as a past made up of series of past durations. A conventional sequential, chronological model of how sites and landscapes work, based on the Harris Matrix, can only show the temporality of production, not for how long afterward a site was used (Lucas 2004: 39). If these sites are difficult to fit into conventional time-frames, it is because they are messy and multi-temporal. Causation becomes difficult to assign, and the idea of sequence can become an interpretive obstacle (ibid.). Richard Bradley further notes that the “historical” events we would sometimes so like to study are lost between the gaps of the temporal resolutions we work with (Bradley 2017). This is especially true of the NHER data in many cases, which often use a very coarse chronology. “Social changes can happen through a whole series of short-term events,” he writes, “but, as we have seen, they can only be recognized by archaeologists working at a longer timescale. Numerous individual acts may be apparent, from making an artefact to building a monument, but they’re set against a very coarse chronology” (Bradley 1998: 89). Therefore, because of the coarse chronology and long time-frame inherent in NHER/PAS data, long duration studies may be more appropriate than shorter ones (Cooper & Green 2016), and the study of habitus may be better suited to the data than the study of historical events (Elias 1939).

Of the chapters in this dissertation, this one considers the metal detected finds themselves the least, and instead looks more at the landscape and provides a broad overview of how the region has been defined conceptually, historically, and topographically over the past 2000 years. It provides a discussion of the ways in which the landscape has changed over time, sometimes in a cyclical fashion. Furthermore, the theoretical frameworks within which landscapes may be
CHAPTER 4

understood are briefly discussed. Aspects of broad landscape patterns are considered from the point of view of what landscapes afford in the longue durée perspective and how this can help us to understand certain broad changes in how landscapes have been thought about and used within the temporal scale of social frameworks. Furthermore, this chapter considers sources for understanding the recent-past landscape of Norfolk through both an ecological lens and a social one. Finally, a brief discussion of modern land-use affordances is discussed and how these mirror past land-use in the region.

Although the metal detected finds are not dealt with directly, this chapter provides a better context for understanding them. Like tendons, the landscape itself binds certain events together though they may be separated by great expanses of time. Understanding why these connections exist and how they have been conceived of in the past may offer us a greater course of understanding what the regional landscape of northern East Anglia affords.

Regional boundaries & topography of Norfolk

The concept of a region potentially raises more questions than it answers. What defines a region? What makes someone part of a region? What do you have to share in common with someone else to consider yourselves part of the same region? Does it have to do with material culture at all? Also, what makes a region internally consistent? Do modern regions have anything to do with prehistoric regions?

Not all of these questions will be answered at this point, but as well giving a description of the socio-topographic and environmental posture of Norfolk over the past 2000 years, this chapter aims to demonstrate the partial internal consistency of Norfolk as a region under study both in the current day and in prehistory (Figure 4.1). One of the early considerations in this research was whether or not a study confined to Norfolk represented a modern convenience or a long-standing, well-defined region that would have had coherence in the Iron Age as well as today. Do the modern boundaries of Norfolk have any meaningful archaeological significance in the periods under consideration, or are they actually arbitrary and “modern?” Would Norfolk have actually been a significant, internally consistent region in the Iron Age?

A handful of studies have tried to assess the antiquity of estate, parish, and county borders in England, and there are definite linkages between modern boundaries and those in the Anglo-Saxon period—and to a certain extent those in the Romano-British period as well (Chester-Kadwell 2007, 2009). Additionally, the layouts of field systems in certain regions of Britain, including northern East Anglia, have been assumed in places to show an enormous amount of congruity with Later Prehistoric field systems (Williamson 1986, 1987, 2013; Harrison 2002; Percival & Williamson 2005; Rippon 2018). Additionally, the antiquity of many of Norfolk’s roads and droveways are well established and probably also of prehistoric origin (Clarke 1960; Brooker 1999; but see also Harrison 2003; Chadwick 2016). More on both of these phenomena
Figure 4.1: The situation of the modern counties of East Anglia—Cambridgeshire, Suffolk, and Norfolk—as compared with topography at the end of the Iron Age. While inland areas of water have been drawn to represent higher Bronze Age/Iron Age sea levels and lack of drainage in the fens, it should be noted that the course of the Ouse is a modern, engineered route and not reflective of the river’s course in prehistory. Modern city/town locations included for reference.

is discussed in the next chapter on the prehistoric landscape of Norfolk. However, there are few, limited studies of how parish boundaries might extend back into Later Prehistory. This emphasizes the fact that few multi-period landscape studies have been undertaken that include both Prehistory and the Middle Ages (Catherine Hills pers. comm.). Two notable exceptions are Eamonn Kelly’s attempts to relate medieval boundaries with the location of bog deposits in Ireland (Kelly 2006, 2012) and Stephen Rippon’s recent work on the territorial evolution of Britain (Rippon 2018). Adam Daubney’s (2015) work also exceptionally provides a multi-period case study of the Middle Saxon period in Lincolnshire with reference to finds from the Palaeolithic to the present-day.
There are ostensibly two approaches to these questions. The first, *a priori* and conjectural, is backwards extrapolation of boundaries into the past based upon the known geopolitical reasons for boundedness in later times. The second approach which is *a posteriori* and equally suppositional is to chart cultural similarities across a wide spectrum of material preferences and prejudices from a given period in an attempt to gauge the boundedness of these preferences and prejudices and therefore of certain “cultural groups.” However, as many researchers have already highlighted, distributions of material culture, and particularly coins, do not always match up with specific groups—that is “tribes”—of people, and the process is difficult (Haselgrove 1987; Leins 2012). It is possible in South Eastern Britain that certain material culture styles have more to do with socio-economic status than with group identity, for example. Both approaches to determining Iron Age “boundaries” are fraught with complications and are not, in practice, mutually exclusive from one-another. However, for the time being, let us focus upon the former approach rather than the latter, by tracing back the boundaries of Norfolk as far as we can.

The establishment of the ancient, historic counties of England, including Suffolk and Norfolk, can be traced concretely to the Normans in the eleventh and twelfth centuries AD (Hackwood 1920). As will become a recurring theme, however, the Normans did not inherit a blank canvas by any means. They came to assume and live in landscapes that had previously existing structure. These previously existing structures, boundaries, and ownerships, as affordances of the landscape that this chapter later discusses, extended opportunities while also imposing a certain amount of restrictions (Jones & Page 2006). For example, at Thetford where one of the major East Anglian roads crosses the Little Ouse, the Normans under the command of Roger de Bigod expanded the extant Iron Age fort, adding the largest motte in England to a site that already commanded the valley and its important trans-shipment point.

Geopolitical affordances and constraints go deeper still, because following the conquest, the Normans inherited roughly the entire earlier Kingdom of the East Angles with little alteration to its boundaries (Chester-Kadwell 2007: 107; Yorke 1990). However, there is no historical reason to assume there would have been a meaningful boundary between Norfolk and Suffolk in the Early Anglo Saxon Period around the sixth century AD, though documentary sources from that time are remarkably scarce (Chester-Kadwell 2007: 107). The landscape itself, however, does have a contribution in this regard in the remarkable series of dykes running east-west parallel to Devil’s Dyke, just south of Newmarket (Fox 1922; Lethbridge 1958; Briscoe *et al.* 1964; Malim *et al.* 1996; Kenney 2007), along with Fleam Dyke and its extensions at Wilbraham and Fen Ditton, and Bran Ditch and Brent Dyke further south towards Royston. Devil’s Dyke, the longest of these cuts across the chalk for 12.1 km from Reach, a fenland port since at least Roman times, to Woodditton, at higher elevation where the chalk runs into the boulder clays (Figure 4.4). An additional earthwork in Suffolk—Black Ditches—seems to be part of the same system as well (Figure 4.3).
The situation of the Cambridgeshire dykes and surrounding archaeological landscape, based on Fox 1922, Malim 1996, and Harrison 2003. The area is notable for being a site of intense interaction at various times in the past, as evidenced by multiple archaeological sites and monuments. N.B. Wandlebury and Borough Hill may be classified as “ringwork sites.”
Figure 4.3: The situation of the Black Ditches, thought to be connected with the nearby Cambridgeshire dykes.
These dykes very successfully block one of the only easy, western routes into part of Suffolk and Norfolk, along the band of chalk extending up into northern East Anglia from the Chilterns. With the fens on one side, and the higher elevations of the boulder clays to the other, the dykes block one of the least-cost pathways between Cambridge, Thetford, and Northwest Norfolk. Part of Devil’s Dyke today forms the county border with Suffolk in a weird little enclave that sits almost fully inside Cambridgeshire. This enclave is a result of the redrawing of the county borders multiple times to encompass the growth of Newmarket and its environs including Woodditton (Wareham & Wright 2002). It was possible in the Early Anglo-Saxon period, when the dykes were built, to get from South Cambridgeshire into northern East Anglia without going this way along the chalk, but it costs quite a bit to go around. This interpretation of the dykes, while still feasible, was more feasible still when the Icknield Way—the prehistoric/Roman route connecting the many chalk monuments along the Chilterns with Cambridgeshire and Norfolk—was thought to exist. Today, archaeologists doubt if the fabled route connecting Norfolk with the Chilterns actually existed as such a coherent route, as so little archaeological evidence for the route, along with its local auxiliaries like Ashwell Street, has ever been uncovered (Harrison 2003).

Figure 4.4: Geological map of East Anglian soil parents. Of particular importance to regional models of prehistoric settlement and mobility in the region is the band of chalk running up into Norfolk from the Chilterns. This band was settled early in prehistory, and the boulder clays (diamicton) of the region were only settled later in the Iron Age.
Nevertheless, even without a road, GIS models using cost surfaces—a calculation that searches for a route based on the least elevation change or number of rivers crossed, for example—indicate this corridor would have been topographically the easiest to use for moving between say Snettisham and Cambridge without a boat. Note that the 10-20 km wide band of chalk which the dykes block continues upward to Thetford and finally Snettisham and Hunstanton (Figure 4.4).

But on the other hand, contrary to a “practical” explanation, the dykes seem to have also been used as the sites for Early Anglo-Saxon burials—as if burials were not also practical—and because of their position aligned along barrows (including Mutlow Hill, a high point along the line of Fleam Dyke, a Bronze Age barrow and site of later Iron Age depositions and a Romano-British shrine) and a causewayed enclosure and possible henge near Fulbourn Fen (Figure 4.5) and Wilbraham, one strong interpretation is that they provide more than a physical boundary (Evans et al. 2006). They possibly also trace an ancient route-way/alignment or mark a liminal social boundary, managing a relationship between neighbours. Mutlow Hill, so named because the moot court met there in Anglo-Saxon times, was an inter-territorial meeting place, much like nearby Wandlebury. Taylor (1979: 88) argues the dykes are the successive frontiers of territorial expansion. However, so much of the discourse on the Cambridgeshire Dykes is tangled up with concepts of how prehistoric goods and people travelled through the landscape: for instance, models of how the Grimes Graves flint axes came to circulate in the Neolithic (Childe 1940). However, while the dates of the dykes, largely from the end of the Roman period and the beginning of the Anglo Saxon period, around the fifth and sixth centuries AD, push back our proposed boundary slightly earlier, in total the evidence for the dykes’ function as far as managing relationships between neighbours is somewhat inconclusive (Malim et al. 1996).

Much of Chester-Kadwell’s research focused upon continuity between extant Roman and Bronze Age monuments and earthworks and the foundation of Anglo-Saxon cemeteries because of the broad connections between earlier earthworks and the placements of later cemeteries. While a certain body of scholarship has emphasized the ways in which barrows and ditches could have been territorial, marking boundaries, an opposing body of research proposes an alternative theory in which such structures were tenurial. No consensus exists between the two schools of thought, and cases can be made for both (ibid.: 31) However, the fascination of these sites to the Early Anglo-Saxons and even early Christians was undeniable, and a discourse existed about the monuments in early medieval writing. The sites were viewed with awe and reverence as supernatural sites, and local people had a wariness of these places and fear of them can be found in place names and literature from the later period (Semple 1998). Archaeological evidence also shows a respect for the monuments, with later route-ways intentionally going around barrows rather than continue in a straight line (Chadwick 2016). Additionally,
this would have been much easier than ploughing through earthworks as farmers were later able to do with modern ploughs. There is a slightly larger discussion of Bronze Age barrows in Chapter 5, on the prehistoric landscape of Norfolk.

Although Roman roads had largely fallen into disrepair during the Anglo-Saxon period, primarily because the European-wide economic networks they once supported became defunct after the collapse of the Roman Empire (Chester-Kadwell 2007: 62; Dark, K. 2000), many of the agricultural holdings from the Romano-British period remained functional. Therefore, there is little reason to believe rural settlement patterns changed dramatically from the fifth to the sixth centuries, even with the influx of new Anglo-Saxon populations from outside Britain (Upex 2002). Medieval furlongs in East Anglia illustrate broad continuity with Romano-British field systems. Furthermore, as studies have shown, roughly 28% of barrows and Anglo-Saxon burials occur on current parish boundaries (Goodier 1984; Arnold 1977), though what can be inferred from this depends entirely upon whether such sites are theoretically interpreted as territorial or tenurial (Chester-Kadwell 2007: 33). Rogers (2012), based on material culture and cemeteries, agrees that some Roman boundaries existed as late as the sixth century AD.

Even further back, based upon Roman written accounts including Tacitus’s *Annals*, Cassius Dio’s *Roman History*, and the accounts of Suetonius, archaeologists and historians have broadly construed Norfolk and Suffolk/Essex as similar to the lands inhabited by the Iceni.
and Trinovantes at the end of the Iron Age, respectively (Cunliffe 1978). Numerous Iron Age studies illustrate this phenomenon with nearly identical maps reiterated over many centuries. The concepts of Iceni and Trinovantes are based largely upon outside Roman classifications of identity, so they must be closely scrutinized in light of archaeological evidence. Yet as syntheses of Late Iron Age and Roman Britain from Gordon (1726) to Haverfield (1915) to Mattingly (2006) differ little in terms of historical facts presented, in spite of nearly 300 years of archaeological research, one must look askance at the ability of archaeological finds to actually challenge the rigidity of Roman historical metanarratives about tribal identity in Britain (cf. Collingwood 1930). Additionally, because of what is known of the tremendous amount of social change occurring at the end of the Iron Age, it is probably fair to say that whatever the geopolitical situation was, it was very different than only a few generations before (Creighton 2000; Haselgrove & Moore 2007). Additionally, Natasha Harlow’s recent research (2018) which also used the NHER and PAS datasets, has questioned whether the Iceni are uniformly, archaeologically visible across East Anglia.

As Snodgrass (1983: 141) notes, even the inscriptions and numismatic finds that have been used to bolster these accounts more closely resemble historic sources than archaeological evidence except in so far as they have been removed from the ground. Therefore, the picture presented by coin circulation in the Late Iron Age is very muddled and there are few major consensus models for how coinage works (Creighton 2000; Talbot 2017). For all these reasons, archaeological finds rarely directly challenge Roman historiographical sources. From the point of view that history is about events and archaeology tends to capture habitus, this makes sense. Shanks highlights the problem, noting the low number of archaeologically derived historical narratives of the classical world. Furthermore, if the archaeological record is a record, he writes, it is a record of what people did and not what historians said they did (Shanks 1996: 95).

While we can historically trace certain similarities between territorial holdings in Late Iron Age East Anglia and the current boundaries of Norfolk and Suffolk, our certainty is not as strong as for the linkages between the present and the more recent Norman boundaries. To what extent political boundaries actually defined groups of people even in the Anglo-Saxon and Norman periods should also be up for extensive debate. For example, the foundation of Alien Priories, the small dependencies of foreign religious orders in Norfolk—of which there are quite a number—demonstrates the border-bending relationships in which the religious orders could be held and managed by Continental powers and have totally different internal customs from the surrounding region at large. Almost akin to embassies, the Alien Houses were like small ships in Norfolk’s bounded landscape.

Connecting the county borders of Norfolk to anything that occurred in the Iron Age, let alone the Bronze Age, from which we have no written sources, is therefore difficult, though some strong patterns emerge. Yet, the further back along historical lines we move, the greater the challenge in saying with any certainty that the current boundaries of Norfolk had much
meaning in later prehistory. But from what we can observe, there is a remarkable longevity to the current geopolitical arrangement of Norfolk and Suffolk (Rippon 2018; Chester-Kadwell 2007, 2009).

However, we must cautiously approach the issue of political organization in East Anglia during the Iron Age, as Harlow’s work has questioned to what extent the Iceni were an archaeologically recognizable group during the Late Iron Age and Roman period. Her finding instead show an inter-regional patterning, suggesting that perhaps the idea of clear frontiers during the period should be discarded in favour of a more muddled situation (Harlow 2018). Comparing this with Talbot’s (2017) ideas about the presence of at least three mints in the region during the Late Iron Age, makes the picture more complex still.

However, geography and topography may offer a stronger argument in favour of a bounded, northern East Anglian region. Simply put, during Later Prehistory, Norfolk was hemmed in by water on three sides: the Fens to the west, the North Sea to the north, and the Broads to the east (Dutt 1903; Clarke 1967; Davies 2011). Following the last glacial maxima, the sea level has risen enormously covering vast expanses of land that once stretched from the Rhine valley to the Fens (Gaffney et al. 2007). More recently geologically, areas in the Fenland became water-logged as the sea-level, or tide-level, transgressed and regressed, depositing a series of marine clay sediments in estuaries (Shennan 1982). This is visible in Figure 4.4, where in the soil-par-
ents map, a dark green band on clays can be seen to form the extent of the fens from King’s Lynn into Lincolnshire. As rivers meandered through these clays, across what is still virtually a flat landscape, they became waterlogged and bogs grew during certain periods and in certain areas of the Fens. Efforts begun in the sixteenth century to drain the Fenland, however, have somewhat masked the extent to which the landscape really was bordered by water except along its southern frontier.

In the current era, traveling from Cambridge to Ely and onward to Norwich, one might miss the fact that during the Bronze Age and the Iron Age such an approach would have been highly impractical and slow because of the impenetrability of the fens. Walking in nature reserves in the Fens or Broads today—which are mere shadows of what were once some of the greatest wetlands in Europe (Rotherham 2013)—one realizes immediately that going off-piste is not a good idea, and that if you had to, you could say good-bye to any idea of moving quickly. Even with something like a canoe, it would take serious knowledge of the terrain to get where you wanted to go. Nevertheless, as many archaeological studies have shown, the Fens were populated in places during prehistory, most famously in the Fengate/Must Farm area of the Fens near Peterborough (Hawkes 1943; Pryor 1976; Pryor et al. 1986; French 1992; Knight 2009; Knight & Murrell 2012). In Norfolk, there are also locations in the Fens with evidence of Neolithic,
Bronze, and Iron Age activity including flint knapping sites, some settlements on higher spots, and several ritual deposits. Additionally, the presence of Late Bronze Age to Roman salterns in the Fens seem to trace growing regional populations, with marked acceleration from the Middle Iron Age onward (Bell et al. 1999; Chowne et al. 2001; Lane & Morris 2001; Maltby 2006; Morris 2007). At the same time, later historical sources from the period of the Danish raids along the coast of Norfolk beginning in the ninth century AD, attest to some safety in the fen landscape because of difficult access to those without local knowledge (Dutt 1903: 171).

Furthermore, fens, bogs, marshes, and meres (Figures 4.6 & 4.7) did not only occur in the lowlands of East Anglia, but also formed in many of the higher valley locations with low drainage gradients (Clarke 1960: 22). The growth of bogs in these areas accelerated around the Late Bronze Age and Early Iron Age, although few of these landscapes still exist in Norfolk (see Figure 4.6). Norfolk was much boggier in the past, and such an environment may have seriously curtailed freedom of movement and going in a straight line between locations in many areas. Furthermore, rivers that had not yet filled in with sediment and peat would have been more challenging to cross, but much easier to use for navigation than in the current period. As Michael de Bootman, a local amateur archaeologist said (pers. comm. 2019), because of the way the current county border is situated, in most cases one still must cross a bridge to get into Norfolk today, but this would have been particularly evident in prehistory when the rivers were deeper. The high number of place names in the East Anglian region with either a ford or a bridge are a testament to the importance of river crossings in the past. The modern convenience of roads and bridges today means we do not often think of rivers as barriers or as anything at all.

All of these factors proscribed easy overland access in the region, though this can be completely missed when just looking at distribution maps on the GIS and even using least-cost analysis. Least-cost analysis, at a basic level, assumes that someone is walking over arable land, not through a landscape in which low-spots could have bogs standing in them. Therefore, our entire orientation of what it means to travel or move around the region during this period needs to shift. River travel, in particular, seems relatively under theorized during the Iron Age.

In Norfolk—where the most easterly location in Britain lies at Lowestoft Ness near the Broads—there was a huge amount of interaction taking place around the local North Sea neighbourhood from prehistory until the nineteenth century. Geographically, Norfolk is closer to Belgium and the Netherlands than it is to most places in Britain, and thousands of years of history and archaeology show close connections between northern East Anglia and the Low Countries (Clarke 1960: 13). Thus, extensive interaction between Norfolk and both its continental neighbours and its neighbours on the east coast of Britain can be seen in every archaeological period.

More so than other counties one might potentially study, particularly those in the interior of Britain, Norfolk was at least quite clearly demarcated even without modern borders, although
the region’s southern boundary is much less clear and probably arbitrary (Figure 4.1). Would there have been a boundary during the Iron Age along the Waveney, the Thet, and the Ouse as in the current day? This is one area that would make sense for a border, but one could equally argue that it might have been located further south, as presented on traditional maps of the Early Romano-British tribes.

The distributions of certain objects during the Iron Age, such as so-called Aylesford-Swarling culture and Dressel amphorae, are very clear cut—they have so far never been found in Norfolk, and Cambridge seems to form an important interaction zone or boundary (Evans et al. 2006). Furthermore, certain divergent patterns of consumption can be observed in East Anglia, and Sarah Ralph (2007: 150-154) has shown different zones of interaction that may pertain to a Norfolk/Suffolk divide. In particular, certain types of drinking culture are found much more frequently in Suffolk than in Northern Norfolk (ibid.). However, these issues cut to the heart of questions about what someone has to share in common with someone else to be considered part of the same community. It is certainly about imagined communities—at least in the modern period (Assmann 1992; Anderson 1983). But regionality goes deeper, and some of our modern ideas about community and territory may not hold up very well in even the recent past.
Centre or periphery

The geographic situation of northern East Anglia bolsters archaeological conclusions of vastly different practices in East Anglia than those in other parts of the British Iron Age, for instance. For all intents and purposes, East Anglia would have been surrounded on three sides by water, whether by fenland or by the sea. Travel to the European continent from East Anglia would have been quicker than from East Anglia to most of Britain. In such a way, northern East Anglia's position cannot really be said to be isolated, in any sense, but geographical access is limited in some important ways. These access issues at least partially support the regional foundation of Norfolk and Suffolk beyond modern political boundaries. The relative geographic position and archaeological evidence from different periods shows a broad pattern of continuity in terms of Norfolk's perceived boundaries. Naturally, this conclusion must be scrutinized by the distributions of material evidence as compared with other parts of Britain and continental Europe, though it is a strong starting place for moving beyond the modern ar-

Spread 2 (Figure 4.8) (above-left & right): An azimuthal equal-area projection centered upon Norfolk's coast illustrates the region's prominence in the North Sea. Parts of Yorkshire and Lincolnshire are closer than London, and the coasts of modern-day Germany and Denmark are closer than Devon, Cornwall, and Scotland.
Norfolk’s trajectory over the past 2000 years has been driven, in part, by its interactions with the wider world. There is therefore no reason to view northern East Anglia as un-influential and peripheral in the past. Many archaeological sites and historical events point to the importance of the region in accumulating wealth and geopolitical influence both in its own right and in relationship to its neighbours. The depositions of a relatively high number of hoards particularly in the Late Bronze Age/Early Iron Age, and in the Late Iron Age point to the region having the ability, as a relationship between social and geographical factors, to aggregate large amounts of metalwork. This is especially notable in a region that does not produce any raw metallic materials of its own other than iron (Dungworth 1996; Armbruster 2011). Apart from the Thames River, Norfolk has the most finds of La Tène style metalwork of anywhere in Britain (Hill 1999; Worrell 2007). In later periods, the European wool trade contributed to incredible East Anglian wealth and is another good example of this connectivity to wider resources (Lloyd 2005) (Figure 4.8).

These archaeological vestiges illustrate a connectivity that is well established in the historic period, when Norfolk and its coast were at the centre of successive centuries of migration and shifting political control. Romans, Saxons, Danes, and Normans all played a huge role in the historical trajectory of the region and left vestiges of this interaction in the landscape. Norfolk played a large role in William I’s conquest of England, and also supported the rise of the Tudors and Henry VIII. It provided the fertile ground for the rise and spread of English Protestantism and the civil wars—though the region, particularly around Walsingham, has also been an important Catholic area. Norfolk was a central asset for asserting authority over England more broadly because it was an agricultural powerhouse throughout much of the Middle Ages. Far from being a backwater in the Middle Ages, Norfolk had the highest population of any region surveyed in the Domesday book in 1086, with an estimated population of 95,000 people—around 40% of the population in Norfolk today (Hoskins 1955: 61). Much of Norfolk’s situation at the time was due to its population and the ability of the managers of demesnes to expend labour lavishly on marling, ploughing, and weeding, greatly reducing the turnover time between crops (Campbell 1983: 38).

Trade with the North Sea and the Hanseatic League flourished in the fourteenth and fifteenth centuries, leaving traces in the warehouses of King’s Lynn (Pantin 1962; Fudge 1995) (Figure 4.9). Up until the twentieth century, Norfolk also had a flourishing fishing industry. Scandinavian sailors could be found at special Scandinavian pubs along the coast, and once a year special train services would bring young, single women from the Highlands to work in the canneries during the high season. Afterward, these Scottish ladies would buy household furniture in anticipation of getting married and return to Scotland (Evans 1966).
Figures 4.9 and 4.10: Much of Norfolk’s landscape was dominated by large rivers in the past, though silting has been a continuing problem since at least the fourteenth century AD. Above: the River Great Ouse flows to the North Sea at King’s Lynn not far from the Hanseatic warehouses of the Middle Ages, passing through the broad estuary of the Wash. Below: tug boats line the inner harbour at Great Yarmouth. Photos by E. Aines.
CHAPTER 4

Areas of flooding

Coastal sand

Landscape:

Figure 4.11: Rivers and watershed basins of northern East Anglia.

Figure 4.11: Rivers and watershed basins of northern East Anglia.
One of the interesting long-term tensions in the trajectory of the region is evident when visiting the coast of Norfolk today. From the eighteenth century onward, silting of the Ouse became so severe, that even following many engineering interventions, King’s Lynn gradually declined in importance as a harbour and as cargo ships grew larger (Boyes & Russell 1977: 144–146) (Figures 4.9 & 4.10). Cley, Wiveton, and Blakeney, all prosperous ports on the north coast of Norfolk, also all silted in between the seventeenth and nineteenth centuries, and today only small boats can make their way into the estuary of the Glaven. A similar event was recorded at Horsey Gap as early as the fourteenth century, and every monarch between Edward III and Charles I allocated funds for dredging and canals to try to keep Norfolk’s river ports functioning. Even as new havens were founded, these silted up too (Dutt 1903: 7) (Figure 4.11 shows these riverine networks).

By the mid-twentieth century, the view presented by anthologies of oral history collected by Enid Porter (1969, 1974) and George Ewart Evans (1960, 1966) is one of an increasingly peripheral East Anglia growing more isolated from the rest of the world. These accounts show at once both the scale of a landscape connected mainly by horses and boats and the strong local ties to place that, for instance, made interactions even between neighbouring parishes somewhat rare. As Evans writes, “The people who lived in the next parish were strangers, even foreigners, and were treated as such in dealing with them. Ordinary commerce was sometimes inevitable, but any intimacy was frowned upon: to be married to one of them was almost a crime…” (Evans 1966: 8). Although some important interactions still existed, particularly between Norfolk and Scotland and the Midlands—where Norfolk men worked seasonally in maltings—northern East Anglia has gradually become more and more peripheral in a changing world.

Following the relentless decline of herring fisheries off the coast of Norfolk over the twentieth century, Norfolk’s coastal economy was seriously disrupted again, and the entire region, not only coastal towns, was impacted (Evans 1966). Although Great Yarmouth was connected to the rail network in 1844, allowing for a new boom in tourism and the subsequent construction of Wellington Pier the next decade, the region is still not as prosperous in the twenty-first century as it was in the seventeenth and eighteenth centuries. Today, a person living in Norfolk has much a greater risk of living in poverty than anywhere else in East Anglia, particularly in King’s Lynn and West Norfolk, which were at times in the past some of the wealthiest areas in England (Index of Multiple Deprivation 2010).

The past landscape, full of elements attesting to broader interaction, contrasts with the present. How do we reconcile recent historical accounts of northern East Anglia as isolated and lacking prosperity whereas archaeological evidence tends to indicate the opposite during prehistory and the early historic periods? A variety of factors over the past couple of centuries have led to it being both less connected to Britain and less connected to Europe. But some things have not changed—the difficulty of getting to Norfolk overland is clearer today than it
was in prehistory, as Norfolk is still situated the farthest from a major motorway of anywhere in Britain other than Cornwall and the Scottish highlands. Its only dual carriageway was completed as recently as 2018, and in this way, although internal combustion technology completely changed Norfolk’s socio-cultural landscape at the beginning of the twentieth century, Norfolk’s geographical axis, situated significantly east of England’s main axis, has meant that the county has been partially left out-of-the-loop, as it were, in terms of arterial connections via road. Today, the morning and afternoon rush hour traffic on certain Norfolk roads that were originally built for horses can be a very unpleasant inducement not to drive there.

Although Norfolk is connected by rail, it has some of the largest railway-station catchment zones (i.e. the area served by each railway station) of any county in England, particularly along the coast and in the Breckland region, rivalled only by some parts of Yorkshire and Northumberland. This relates to the very low population density in these areas, but this was not always the case. Currently, also because of its geographical axis and location, Norfolk—along with all of eastern England—has no planned high speed rail connections. Politicians and urban planners have instead drawn the shortest lines connecting the most prosperous areas of the country, risking the further Balkanization of Britain.

**Landscape change in Norfolk**

However, not only has the geopolitical situation of Norfolk changed over time, but its physical landscape has transformed as well. This exchange forms an important object of study for understanding the interplay between landscape and society.

Riding on the train from Cambridge to Thetford takes one over a broad swathe of the different environments represented in the northern East Anglian landscape. First, passing through Ely, once an island among the fens, it is now an island among flat farmland and vast solar arrays that profit from some of the driest and sunniest conditions in the UK (Figure 4.22). Broad dykes—the highest points in the landscape here—physically enable this new productivity. Gentle chalk hills rise into the higher boulder clays, and the train passes large tracts of wheat and lots for raising pigs before skirting Thetford Forest and arriving into town. The station is not far from the flint ruins of the twelfth century priory here along the banks of the River Little Ouse (Figure 5.23, Chapter 5).

Apart from Thetford Priory on the banks of the Ouse, there is little in this journey that a person even as recently as the eighteenth century would recognize of the landscape, because it has changed enormously since then. It is even, in many respects, different than the landscape written of at the beginning of the twentieth century. As little as a century ago, vast areas of Norfolk were still sandy heath, and Thetford Forest was but young saplings planted as a strategic timber reserve following the First World War. Rapid technological development in the nineteenth and twentieth centuries have dramatically changed the way landscape in northern East
Figures 4.12 and 4.13: Grimes Graves seen from the air (top, © English Heritage 2019), and from the ground (photo by E. Aines). The Neolithic flint mining industry at Grime's Graves took advantage of the flint deposits that underlie much of Norfolk.
Anglia looks and is used. The power to drain the Fens, for instance, was not fully obtainable even to the Elizabethans, and only acquired by the engineers of the nineteenth century who with steam power finally “destroyed” the “water drowned” fens by draining Whittlesey Mere (Harrison 1830; Irvine 2017: 158-159). Yet there are many more examples of such anthropogenically altered landscapes.

Looking at the past environments and landscapes of Norfolk, one comes to realize that there was never one specific past landscape. Norfolk has some of the oldest evidence of human and proto-human settlement anywhere in the UK, and from the earliest Pleistocene gravels near Cromer and Happisburgh, through the periods of dense Mesolithic forests and cycles of gradual clearance, regrowth, and change in the forests in Later Prehistory, the landscape of northern East Anglia has been continuously, dynamically altered naturally and anthropogenically across centuries.

In large parts secluded, rural, and in places wooded, it is easy when visiting certain sites in Norfolk today to imagine this is how the past must have looked. At Grimes Graves (Figures 4.13 & 4.14), the Neolithic flint mines located in a large clearing of heath in the midst of Thetford Forest, the tracks from receding glaciers visible in the distance, the landscape dissimulates its more modern genesis beneath this primordial appearance. Look closer at the foxholes from The Second World War, the military base across the way, and the English Heritage interpretation centre and gift shop and it starts to become clearer that this site, in so many ways, is not really just a prehistoric landscape. Not anymore.

Yet the landscape is also so much more than just a palimpsest—a scrap of parchment used by parsimonious monks again and again. It is more dynamic than that (Chadwick 2016: 94). Along with Chadwick, Adam Daubney has also written about the problem with the palimpsest as a landscape metaphor (Daubney 2015:10). When asking the question, what does the current landscape reveal about the past, one realizes almost immediately that a more vibrant picture emerges if we can stop conceptualizing the landscape as a static backdrop to human activities that happened to scar the surface of the earth with a monument here and a monument there; if we stop looking for the signs of a snapshot of the landscape in a particular moment (cf. Ingold 2000: 189; Olsen et al. 2012). The more we open up time for analysis, the more fascinating cyclical changes we can observe, and—not only this—but also the ways in which people lived in and used much older landscapes.

While the specific discussion of the landscape in this project has been broken into two chapters, Recent Landscape and (Past) Monumental Landscape (Chapters 4 and 5), they obviously blur to quite a degree and are present in the same, overlapping locations. From a theoretical point of view, it is important to frame how the landscape—an ambiguous concept (Gosden & Head 1994; Thomas 2001)—is relevant archaeologically and how the landscapes we observe today are and are not yesterday’s landscapes. Particular to this study, a number of cyclical
changes can be observed from the ecological record as discussed below. One of the questions is how ecological cycles relate to cycles in the circulation of metals, which we observe from metal detected finds in the same areas. Although we lack robust ecological and geological data from some parts of Norfolk, overall it is possible to come up with a model of the past environment that, while general, provides an important outline to make relational observations. Another important question is how regional environmental and landscape affordances have influenced social processes in the region, and yet another is how current land use and boundaries (for instance, roads, fields systems, or parish boundaries) reflect past land use and boundaries in the same region.

A brief outline of landscape archaeology and its general relevance to the project is therefore warranted before going into the specifics of Norfolk’s recent topography, environment, and landscape in greater detail.

**Thinking about landscapes**

In general, studies of landscape have changed over the past 30 years to include a greater focus on the ways in which social processes may have transformed past landscapes. Trigger (2008: 472-473) traces the growth of landscape archaeology from humanist approaches which emphasized a concern with time, as practiced by archaeologists like Chris Tilley (1994), Chris Gosden (1994), and Julian Thomas (2002). These researchers underline the centrality of temporality to experiences with space (Lucas 2004), and they delve into ideas of being in the world acquired from phenomenologists like Heidegger (1927), Husserl (1913), and Merleau-Ponty (1945). Trigger’s account of landscape archaeology, however, ignores a much longer trajectory in Britain and at Cambridge specifically, and an intellectual genealogy that includes Cyril Fox (1923, 1932), David Clarke (1968, 1972), and pre-1980s Ian Hodder (Hodder & Orton 1976), all of whose work had a large amount of cross-pollination to and from human geography. Indeed, the first sentence of Tilley’s *Phenomenology of Landscape* mentions this genealogy, and he spends much of the first chapter outlining the differences between his approach and the older mode of landscape archaeology (Tilley 1994).

Yet even earlier still, landscape archaeology might be traced back to Pitt Rivers’ interpretations of Cranborne Chase, which attempted to place the findings within the broader context of a defined area (Pitt Rivers 1887; Thomas 2001: 165), though even earlier, antiquarian interactions often centred on ideas about regionality and place (Shanks 2012; Johnson 2008). Although these earlier iterations of landscape archaeology, and particularly those from the 1930s to the 1980s, had a positivist slant and were focused on environmental factors more than the phenomenological aspects that later landscape archaeologists came to embrace, Trigger’s reductive portrayal of landscape archaeology as cut from whole cloth in the late 1980s fails to account for this longer historical trajectory. Matthew Johnson (2008: 5-18) provides a more satisfying historical account of the development of landscape studies since classical times. In
contrast to Trigger, Johnson (2008: 1) argues that rather than a “new” theoretically laden landscape archaeology emerging from an older, empiricist school of thought, two distinct modes of landscape archaeology still exist today—one incumbent upon theory and one immersed in empiricism. He argues that this is because of fundamental differences between how different practitioners think about and use concepts of landscape in their work.

Hodder’s (1984) paper on the similarities between megalithic tombs and houses in Neolithic Europe was arguably one of the first to draw a line in the sand between the two approaches, however, stating that earlier processual approaches were too focused on general principles and therefore missed both specificity and particular historical context (Hodder 1984: 51). The growth of humanist landscape studies in the 1990s embraced the specific contexts that processual approaches had supposedly ignored in the pursuit of empiricism, and a range of studies around the world, but particularly in Britain, were published with a new concern for the social meaning of landscape and place (Bender 1993, 1998; Bradley 1993, 1998, 2000; Sherratt 1996; Ashmore & Knapp 1999; Thomas 2001). According to Gosden and Head,

“An emphasis on ‘social’ takes us away from environmental determinism and places the locus of change and action within society itself. The notion of ‘landscape’, on the other
hand, can help give the social a geomorphological timescale. As the physical processes shaping the land can be seen to unfold over hundreds and thousands of years, so can the social processes that are evident in the archaeological data” (Gosden & Head 1994: 113). Thomas (2001: 113) therefore views landscapes as living, encompassing a set of social relationships and constraints, a view Tilley (2010: 39-40, 473) shares.

These approaches, which continued to incorporate older ideas about the development of the landscape as a palimpsest and used field survey, excavation, documentary and historical study, attempted through theoretical reflection to go beyond what Barrett (1999: 26) argued was a kind of analysis that produced “a history of things that have been done to the land” (Thomas 2001). Thus, landscape studies over the past two to three decades have shown growing theoretical and technological sophistication and have attempted to incorporate more of what past people may have thought about the landscapes in which they lived and how identity takes a central role in this process. Identity, as Tilley (2010) argues, is key to the process of understanding landscapes archaeologically. He writes, “the identities of persons are significantly related to the topographies and the geologies of the landscapes they inhabit—they become part of people's characterful existence, as fundamental as the languages they speak, the occupations that they pursue, and the material things that they create and use. Social life and social reproduction are creative responses to landscapes…” (Tilley 2010: 33).

Several recent prehistoric landscape studies show, however, that from the regional (Giles 2012; Rundkvist 2015) to the pan-European (Bradley 2017), it is possible to focus on large, empirical datasets and incorporate theory to the degree that it is useful—or not—in conveying a narrative about a landscape and a peoples' intertwined histories. Furthermore, as part of the recognition that people have always lived in older landscapes, many landscape archaeologies today embrace aspects of memory (Alcock 2002, Bradley 2002; Van Dyke & Alcock 2003; Trigger 2008: 473; Stoddart & Aines in press). Chapter 6 looks into the specific case of memory and landscape in greater details.

The affordance of landscape

One of the most interesting patterns this research highlights is the recurrence of certain types of archaeological sites and finds that may be separated by hundreds of years’ difference in the same locations in contexts that do not seem to show direct continuity of practice. One instance of this occurrence is the proclivity of medieval monastic establishments in the same river valleys and in very similar landscape situations as the Iron Age forts of the region, part of a prevailing focus on river-valleys throughout the region’s past (discussed at length in Chapter 5). Another instance of this is, in a different way which has more to do with memory and reception, is the occurrence of Bronze Age barrows along medieval parish boundaries (Chapter 5). These two examples are slightly different. Yet are these juxtapositions coincidental or do they reveal a form to the landscape? These specific examples are discussed in greater detail
CHAPTER 4

later, but this section thinks through some of the implications of these concatenations in the landscape to help provide a more thorough understanding of how the interplay of social factors with the affordances of landscape shape the long-term trajectories of a region. In other words, why do similar things happen again and again in similar places?

Recent discourse upon the ways in which people live in and shape their landscapes through social dynamics acknowledges that the process is co-constitutive—people shape the landscape and the landscape shapes them. However, arguably, the more theoretically inclined landscape studies have been focused upon human agency and hesitant to tell narratives that would be viewed as environmentally determinist to the extent that they have shown relatively little concern for the ways in which the environment and its affordances, as first proposed by Gibson (or even earlier still by archaeologists like Fox), impact and potentially even have agency over human affairs (Gibson 1979: 127). A long-term focus within landscape archaeology over the past century on how landscapes shaped human mobility and settlement was so often derided from the 1980s onward, and the role of the affordances of a given landscape or the potential for long-term agency of a landscape have not been as popular a topic of discourse as the social agency of things.

Given the intense focus within archaeology over the past decades upon the ways in which things may act as social agents (Kopytoff 1986; Gosden 1999; Olsen 2010; Hodder 2012a, etc.) and the ways in which the affordances of things shape human interactions with them through material agency (Ingold 2000; Knappett 2005; Malafouris 2008), it is unexpected that there has not been more discussion of the ways in which landscapes do exactly the same (though see Renfrew 2001; Robb 2013; Chadwick 2008, 2016; Ingold 1993, 2002, as explained more in context in the coming pages). This under-explored element of landscape archaeology is somewhat surprising given that Fox broached the idea environmental affordances more than 50 years before Gibson, although he did not define the term precisely. x

1 Which Fox termed migrations and invasions, as per the fashion at that time (cf. Abercromby 1912; Crawford 1922; Peake 1923, etc.)
former tending to ever absorb the alien influences which impose themselves upon the latter” (Clark 1933: 323). Thus, for Fox, geographical location and topography were influential for the spread of culture, at once inviting it in the Lowland zone and in the Highland zone weathering its influences.

Over the course of the twentieth century, scientists in other fields also turned towards an interest to what the environment *affords* us. James J. Gibson, a psychologist at the University of Cornell, studied the impact of the environment on people and animals through perception, and first published his theory of affordance in 1979 in an influential study of visual perception. Gibson challenged the established notion that the nervous system is directly responsible for the construction of conscious visual perception, instead arguing that “the mind directly perceives environmental stimuli without additional cognitive construction or processing” (Fancher & Rutherford 2012: 641). Important for phenomenologists and adherents of systems theory as well, Gibson defined affordances in the following way:

“The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. The verb to afford is found in the dictionary, but the noun affordance is not. I have made it up. I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment” (Gibson 1979: 127).

Gibson suggested, among other things, that observed ecosystem niches could be best represented by a special set of affordances. As he explained, “The niche implies a kind of animal, and the animal implies a kind of niche. Note the complementarity of the two. But note also that the environment as a whole with its unlimited possibilities existed prior to animals” *(ibid.*: 128). Furthermore, humans, unlike most animals, have the ability to transform the environment to “change what it affords him” *(ibid.*: 130). To Gibson, there was also no difference between the natural and the cultural environment, echoing a cross-disciplinary call to abandon the duality of such a divide. He wrote:

“It is a mistake to separate the natural from the artificial as if there were two environments; artefacts have to be manufactured from natural substances. It is also a mistake to separate the cultural environment for the natural environment, as if there were a world of mental products distinct from the world of material products. There is only one world, however diverse, and all animals live in it, although we human animals have altered it to suit ourselves. We have done so wastefully, thoughtlessly, and, if we do not mend our ways, fatally” (Gibson 1979: 130).

Similar to Gibsonian affordances, in geography the notion of *ecosystem services* also exists (Daily 1997). Ecosystem services may be defined as “the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfil human life. They maintain biodiversity and the production of ecosystem goods, such as seafood, forage, timber…” and so on *(ibid.*: 3). In this way, ecosystem services tend to be positioned more as
catalogue-able, mappable, exploitable resources, and are less broadly construed than Gibson’s original definition of affordances. However, the concept of ecosystems services also tends to be used in a neoliberal sense to urge for the protection of resources, as interestingly, Gibson does as well in his theory of environmental affordances (Turner et al. 2007; Turner & Daily 2008).

Following in psychology and visual perception, Tony Chemero further elaborated on Gibson’s model by clarifying three different types of potential affordance models: selectionist, dispositional, and relationalist (Chemero 2003: 182-183). A selectionist model of affordances asserts that affordances exist latent in the landscape, with or without humans, while a more complex dispositional model sees affordances as situational and shifting, only manifesting under certain circumstances. Thus, under a dispositional model of affordances, the same landscape can have different affordances at different times, in the case of archaeology often because of different technological and social posture. Chemero’s third proposed model, a relational model, overcomes the contradiction between nature and culture, as critiqued by Gibson, stating that affordances are not properties of the environment but are instead relationships between the human and environment (ibid.). In this way, the affordances of landscape or environment as proposed by Chemero are very similar to what many humanist landscape archaeologists had already proposed were sets of relationships in a world that was not dualistically opposed by nature and culture (cf. Tilley 2010: 33, 39-40, Ingold 2000: 14).

One of the questions raised is the extent to which landscape affordance and limitation are linked with social agency and structure. Affordances offer the possibilities of certain types of actions—as they can also dis-afford certain other types of actions—in the landscape, and humans may delegate authority or agency to the landscape and particularly to designed and built landscapes and environments. Due to the longevity of the landscape, as compared with human life, designed landscapes and monuments often go on, in their afterlives, to do things that were not originally intended of them in the time in which they were built. People who come after must contend with them, even if it is to ignore them completely (Olsen et al. 2012; Stoddart & Aines in press).

This is obviously one of the central foci of memory/landscape archaeology, of which more shall be discussed in Chapter 7, although in landscape studies the issue is almost never framed in terms of agency or affordance. One of the central examples employed by Olsen (et al. 2012) to make this point is the fortress of Acrocorinth in mainland Greece, the second-longest continuously occupied citadel in Greece. Far from being a mere backdrop to action, the site has been central to and literally provided a form to the life-ways of the people who have lived there over the many centuries since it was first constructed. Indeed, the site played a pivotal role in the nineteenth century Greek War of Independence centuries after its initial construction as a fastness controlling the Isthmus of Corinth and access to and from the Peloponnesus and Mainland Greece (ibid.: 113-117). Landscape matters.
While not widespread, an affinity exists in landscape studies that use GIS for the study of relational affordances because it becomes a stepping stone for understanding possible frames of social action in past landscapes as related to elements of their essential topographic or geographic nature. GIS studies are excellent at presenting the latter—topography—but have had difficulty fully achieving the former. Llobera (1996), Hidalgo (2015), and Gillings (2009, 2012) have looked at bridging phenomenological and GIS based landscape approaches by investigating the affordances of landscape based primarily upon the theory of affordances as proposed by Gibson (1979) and Chemero (2003). As Gillings (2012: 605) outlines, however, the process of effectively modelling affordances with GIS is very difficult, while the theory is useful from a conceptual point of view.

An archaeology that looks more closely at the affordances of landscape as a changing set of relationships can perhaps better explain the influences of the landscape—or its personality as Cyril Fox put it (1932)—on people and people’s exploitation of those affordances according to their relative level of entanglement or material engagement within the landscape, society, and their general level of technological advancement (Hodder 2012a). Colin Renfrew (2001) argues that a sedentary society allows a wider range of these material interactions to occur as people settle down and have time to explore some of the material affordances of the environment. John Robb (2013) also looks into the transformative effects of the relationships between people, material culture, and the environment, detailing the ways that certain aspects of this material engagement made the Neolithic difficult to reverse locally. Chadwick (2008: 211; 2016) explains that time spent living and working in the environment leads to broader exploitations of these affordances within what Ingold (1993, 2002) termed the “taskscape.”

Simply put, modelling affordances, or at least thinking about them, can provide one with a means of understanding long-term patterns in settlement, land use, economy, and ritual that seemingly transcend cultural groups. Many trends we can see in a long duration perspective are bigger than an archaeologically defined age and have trajectories that cut across cultural boundaries. Furthermore, though we probably would not declare “landscapes R us” or discuss human-landscape cyborg gestalts in the same way that some theorists have thought about the importance of “things” in human society (Haraway 2006; Hodder 2012a; Olsen et al. 2012), cognitive psychologists assert that human memory and identity are not possible independent of landscape—a place upon which to structure the self. As the German historian Jan Assmann wrote, “Memory needs places and tends towards spatialization” (Assmann 1992: 25). So does identity.
CHAPTER 4

The connection of a people to a place

Tracing backwards in time slightly, the idea that even the character of a people could be deeply shaped their landscape’s personality or affordances was well established in historical and landscape discourses from at least the end of the Middle Ages. To explain the regional character of a population, the landscape was used for physiognomy by proxy. Put simply, under this conception, you are where you live. In this way, the topography of the landscape was conceptualized as literally having the affordance of shaping the minds and character of the people who lived in it.

For example, the landscape of northern East Anglia—“Very flat” as a character in Nöel Coward play once quipped (Coward 1930)—was somewhat frequently used to explain derisively the behaviour of local East Anglians. Enid Porter recounts that the Cambridge-trained philologist Robert Forby, who collected The Vocabulary of East Anglia: an attempt to record the Vulgar Tongue of the twin sister counties, Norfolk and Suffolk in the Victorian era viewed the locals as unimaginative as a result of the landscape.

“The relative flatness of the… landscape, however, has prohibited ‘anything grand or terrific’ in its folklore, to quote Robert Forby who believed that a gentle, undulating countryside dulled the imagination of its inhabitants. But the self-igniting marsh gas on the stagnant swamps and meres that covered the Fens and parts of Breckland and the Broads were turned by ‘unimaginative’ East Anglians into mischievous Jack-o-Lanterns or Lantern Men” (Porter 1974: 16).

In such a way, Norfolk’s landscape is literally taken to having the affordance of dulling its inhabitants’ wits (cf. Forby 1830). It is fascinating to compare this with Gibson’s later idea of the ecological niche, as discussed previously, in which “the niche implies a kind of animal, and the animal implies a kind of niche” (Gibson 1979: 128).

In the same vein, the former Cambridge University anthropologist and geographer Richard Irvine has written about the ways in which the efforts to drain the fens of Eastern Norfolk and North Cambridgeshire from the seventeenth century onwards were linked both with a desire to bring greater amounts of land into enclosure and under the plough and with moral ideas about the landscape and its inhabitants. Prompted by a desire to rid the East Anglian fens of their swamp-like culture and moral turpitude, the draining of the swamps (Figure 4.15) from which that culture was seen to have arisen was viewed as the noble pursuit of venture capitalism wherein the promulgators kept the lands they drained (Irvine 2017: 157). The historian Thomas Fuller wrote of the projects to drain the fens as such:

“The river Ouse, formerly lazily loitering in its idle intercourses with other rivers, is now sent the nearest way (through a passage cut by admirable art) to do its errand to the German Ocean” (Fuller 1840 [1655]: 149, cf. Irvine 2017).
As Irvine notes, the projection of moral values onto the landscape is remarkable. Other historians of the day also connected the environment of the fens with the health and moral character if its inhabitants, and the antiquary William Dugdale commented,

“What expectation of health can there be to the bodies of men, where there is no element of good? The Air being for the most part cloudy, gross, and full of rotten harrs; the Water putrid and muddy, yea full of loathsome vermin; the Earth spungy and boggy; and the Fire noisome by the stink of smoaky hassocks” (Dugdale 1662: 7).

The ideas that tie a people to a region are deeply-seated, a topic upon which more shall shortly be discussed (see “Sources for understanding the recent social landscape of Norfolk”). In these ideas we can again see the notion of the power of what a landscape affords over a people, and it easy to see why such narratives can quickly become deterministic. This type of thinking, which linked people with the landscape in which they lived, provided a way to cast the people who lived in “peripheral” landscapes as others whose alien customs had been acquired from years of living in an alien landscape. Very similar ideas about landscape and cultural development were already in use in other colonial prospects around the world in which “savage” people were linked to “untamed” wilderness, rich with potential resources.
This goes to show the power and the longevity of ideas about the capacity, or affordance, of landscape to intervene upon the character and customs of a people. We can discard the racist rhetoric today and still find examples of how firmly rooted these ideas remain. However, the current understanding of the way social processes are shaped and in turn shape these dynamics can lead us to a better understanding of how and why certain changes take place in a region over millennia.

**The recurrence of landscape**

The concept of relational affordances is specifically relevant to the discussion of the East Anglian landscape, not just as theoretical window dressing with little impact on the actual analysis, because it may help to understand the specific phenomena observed in the NHER/PAS datasets wherein it is difficult to pinpoint when causality is occurring.

In the first example, as explored in Chapter 2, there are strong indications that the distributions of metal detected datasets are nationally skewed strongly in favour of areas with either (a) high population density or (b) high density of arable land. While this certainly is a function of (a) the number of hobbyists in a given reporting zone and (b) where metal detectorists can metal detect (arable and pasture), it may also be a function of where metals were circulating in prehistory. It may be the case that causation is occurring at multiple different points in time in the same regions. The deeper one looks into these data, the more one begins to detect the pull of some dark matter on the fabric of the ancient world.

There is strong evidence that from the Late Bronze Age through to the Late Middle Ages, that far from being a backwater or isolated as Norfolk is perceived today, the region was well-connected and, because of environmental factors, could support a relatively large population which documentary evidence from the Middle Ages onwards connects directly with the amount of wealth the region’s elites were able to accrue. These are relational affordances, according to Chemero’s (2003) model, because they are neither environmentally or socially determinist but instead rely on a concatenation of social and environmental factors.

Thus, the region’s level of connectedness through time depended both upon Norfolk’s topographical position, which has changed little since the Mesolithic, *vis-a-vis* the Low Countries and France in Continental Europe and the Thames River Estuary, Southern England, and the Lincolnshire Wolds in Britain and upon a complex socio-cultural frame including shifting population centres and maritime and regional trade networks. This relationship can be referenced archaeologically through multiple periods in time at sites like specialist Scandinavian pubs for fisherman along the northern coast of Norfolk between the seventeenth and nineteenth centuries (Evans 1993), Hanseatic Warehouses in King’s Lynn between the thirteenth and fifteenth centuries (Alban 2014; Lukacher 2016), Anglo Saxon graves containing valuable metalwork from across Europe between the fifth and eighth centuries, etc. (Scull 1992; Bailey 1992) among many examples. The region’s ability to support large numbers of people relates
to the relative flatness of the landscape, the large numbers of springs and rivers, and relatively good soil and weather, which given sufficient technology—such as iron tools in one period and steam-driven pumps in another—could bring the Brecks and the Fens into productivity, respectively, even at alarming ecological cost (Rotherham 2013: 22). This relationship can be referenced archaeologically by the high density of settlements during the Iron Age and Roman period, the high population count in Norfolk (the highest of anywhere in England) at the time of the Domesday survey, and the high revenues obtained by Henry VIII from landholders in the Late Middle Ages. The confluence of its location and its landscape have afforded people living in the region with certain advantages that people living in the Scottish Highland, the Midlands, or the Welsh mountains did not have.

What is interesting, is that there is this connection between high numbers of arable fields and high numbers of metal detected finds today (see Figure 4.16). We have to take seriously the idea that causation for this relationship, if it exists, may be a multi-period path dependence. The EngLAID project has investigated some of these ideas previously, to a certain extent, although they were not explicit about thinking through the concatenation of factors, instead viewing them as singular. Yet, environmental and social factors, in an interplay with one another, may resonate across vast periods of time, well beyond the lives of individuals. One of
the central ideas that comes out of this, somewhat ironically, is that geo-statistical models of the landscape cannot fully encapsulate or explain why many sites are located where they are—there are deeper social factors at play (see Chapter 5).

Furthermore, some of the most interesting dynamics observable in the landscape of Norfolk actually are not the impact of monuments, for example, in the time periods in which they were built, but what they went on to do in their afterlives. For example, there are only a small number of papers on the Bronze Age barrow cemeteries of Norfolk in their own right. A far greater corpus of literature exists that investigates the uses of tumuli in later periods and in particular the Anglo Saxon (Whyte 2003; Chester-Kadwell 2007, 2009). However, in another way, the affordance of landscape can help explain long-term patterns in similar behaviour despite differences between cultures. Much of what we find familiar in the past is arguably a result of these affordances forcing a cultural similarity between us and them.

Additionally, social processes that result in landscape change may be completely different and yet yield similar results. As an example, the twentieth century in Britain saw one of the greatest periods of forest regeneration in the Holocene, correlated with population growth, increasing emission of greenhouses gases, and the intensification of land use. Other periods that saw the regeneration of forest in Britain, such as that following the Roman withdrawal from Britain and the Early Iron Age hiatus, show exactly the opposite correlations. The populations during those periods probably fell, production fell, and land became increasingly fallow and wild.

One of the key understandings of this research is that regional landscapes may be defined by certain geographic affordances and limitations that have changed little since Later Prehistory. The ground is still made of heavy glacial clays, the rivers still flow in the same valleys, the North Sea still borders the landscape, and so on. A person from the Iron Age, if they were to rise from the dead and survey the landscape, would find its topography or land surface largely similar to when they had been alive (although ground cover has changed). While the climate has gone through several variations over the same time, the fundamental characteristics of the land itself have changed little and in a uniform manner over the past 2000 years, with the exception of fairly significant coastal erosion and some sedimentation of the river valleys. So some places from the Iron Age landscape, apart from being hidden, are simply missing entirely. Despite sea levels rising since the Iron Age, there is also more land exposed today in the region than at any time in the past 10,000 years as the result of pumping and draining the fens.

But again, the fens had the affordance of becoming good, arable farmland in a way that a mountainous region in Wales could not (with past or present technology). It took a later series of technological variations to produce the result we see today, and that particular affordance—of being good farm land as a result of the fact that it is flat, near water, with soil quality good enough to be improved upon, and so on—offered different affordances before pumping tech-
Figure 4.14 and Figure 4.15: Dersingham Bog, near Sandringham. The bog is the largest acid mire in East Anglia and home to many nationally-rare species of plants and insects. The escarpment of the ancient coastline is visible, and like much of W. Norfolk and Breckland the site is sandy (Dersingham Bog Citation 1986). Photos by E. Aines.
nology. In the case of East Anglia, the topography to the west provided a significant barrier to easy access by land. Thus, the affordances have not changed, but the ways in which each culture that has passed has been able to make use of those affordances has changed.

Thus, in the land itself we find a certain type of analogy with a connection to the past under study. For this reason, understanding social responses to the landscape in the historic period since the Early Middle Ages can provide us with useful analogical frameworks for theorizing how specific responses may have been utilized by different cultures in the past (e.g. prehistoric people) with different levels of technological and cultural achievement.

Sources for understanding the recent social landscape of Norfolk

One of the sources for understanding Norfolk's pre-industrial social landscape is the collection of oral histories taken by local historians in the middle of the twentieth century. George Ewart Evans, Enid Porter, and W.H. Barrett all collected innumerable oral histories from people who had been born after the 1880s and were the last generation to grow up without internal combustion engines in East Anglia (Porter 1974; Evans 1966, 1993; Barrett & Garrod 1976). These accounts come from both Suffolk and Norfolk, and the authors often make little difference between the two counties when discussing the region culturally in the period.

Both Porter and Evans argue that internal combustion technology fundamentally changed the culture of the region in a way that no prior technology had (Evans 1993: 2; Porter 1974: 15). As internal combustion engines modernized both farming and transportation, the older pre-industrial ways rapidly fell out of use and were gradually forgotten after 1914. This period represented a time of significant disjuncture from the past, as countless historians and sociologists have remarked (Lowenthal 1987; Hobsbawm & Ranger 1983). One of the reasons why these accounts are so informative and interesting, is that they provide a social account of how the rural, mainly arable and heath landscape of nineteenth century Norfolk worked. They emphasize the importance of the family and village life, the vital difference that having a single horse made to small land holders, the closeness of a much smaller world, and many other facets of life that the landscape afforded in the period.

Porter, Evans, and Barrett captured the histories of this last generation who grew up in the pre-industrial era, and the authors were themselves at the end of a long line of regional folk historians and antiquarians who had written about northern East Anglia. Although today antiquarianism is mostly associated with archaeology, in the eighteenth and nineteenth centuries it also concerned local lore and folk customs; perusing many antiquarian journals from the period reveals typologies of local village bells, cobbling techniques, and farming superstitions (Aines 2015a). The earliest of these, titled *An Essay towards a topographical history of the County of Norfolk*, was published by Francis Blomefield between 1739 and 1775 (Blomefield 1806), and Forby's *Vocabulary of East Anglia* followed in 1830. The decades following, several
antiquarian journals and series on the region were published including *East Anglia Notes and Queries* (1858-1871), *Fenland Notes and Queries* (1889-1909), and the *Norfolk Chronicle* (1897-1905), all exploring similar themes on the nature of local folk traditions and connections to the region’s topography (Porter 1974: 12).

Evans best summarizes one of the reasons why folk studies, as well as archaeology, would have been part of the antiquarian project:

“My subject bears an analogy to the crop marks seen in the aerial photographs of some of our fields. Just as the pattern of the ancient settlement is still to be seen in spite of years of repeated ploughings, so the beliefs and customs linked with the old rural way of life in Britain have survived the pressures and changes of many centuries. They are so old that they cannot be dated; and on this count alone they are historical evidence, as valuable as the archaeological evidence that are dug from those sites so dramatically...”(Evans 1993: 2)

He highlights the vein in folk studies through which antiquarian activities emphasized a connection between the people, or folk, of a region and the particular, potentially ancient characteristics of that region. Today, as Shanks traces, much of the antiquarian tradition apart from archaeology falls under the umbrella of heritage studies, which concern themselves not just with the physical remains of the past but with the intangible heritage associated with those...
CHAPTER 4

places (Shanks 2013). Today, the study of folkways in academic contexts has grown increasing-
ly scarce, and in Britain only the University of Hertfordshire offers an MA in folklore studies. Internationally, and particularly in Germany at the University of Tübingen, folk studies are still taken seriously, albeit as linkage to understanding life in the pre-industrial era.

The utility of including oral history in landscape archaeology has been a topic for discus-
sion for many years in North American archaeology (Echo-Hawk 2000; Mason 2000; Whiteley 2002; Hegmon 2003; Scott 2003), though it has been little used in European landscape archae-
ology. Riley & Harvey used oral histories in their Landscape Archaeology and the Community in Devon: An Oral History Approach as a way to enrich their understanding of local narratives about the landscape and to challenge existing archaeological landscape paradigms in the region (Riley & Harvey 2005: 15). The contrast with ethnoarchaeology as practiced in certain regions of the world is certainly interesting, as very little in the way of ethnoarchaeology has been done in Europe for the prehistoric period. This is because the contexts in which the ma-

ority of Europeans live today are not seen as concomitant with the more traditional life-ways that may still be found in Asia, South America, and Africa. Although these pre-industrial life-ways are not totally gone in Europe, they are increasingly scarce, as they are also growing scarce elsewhere in the world. Approaches that incorporate oral history are not the same as ethnoarchaeology, but it can be argued that both help augment archaeological understanding of the traditional ways in which people living in a region have developed their own ecologies of practice to help live within a given environment. Continuity of practice is rarely so direct, and many historians have traced the ways in which even seemingly ancient customs have their roots in more recent times (Anderson 1983; Trevor-Roper 1983; Hobsbawm 1983).

However, as we have explored, the affordances and restrictions of a landscape lead to the recurrence of practice, and certain past choices for the configuration of landscape may be difficult to change later, leading to continuity. Although the social structures of Iron Age and Victorian Norfolk were significantly different, it is fair to assume a plough driver, a horseman, or a potter from both periods would share a certain common, local knowledge and experien-
tial impression of the landscape. The past may be a foreign country, but in this case it shares the same literal ground with the nineteenth century oral histories. The landscape is the common thread that runs through tapestries of past practice. On a concrete level, as the palynological studies have shown, Late Iron Age Norfolk and nineteenth century, both shared in common a landscape depleted by unchecked deforestation in which large tracts of the landscape had become sandy heath—the next section explores these ideas further. Therefore, another understand-
ing of the landscape from a pre-industrial point of view and a closer look at understand-
ing peoples’ relationships to the environment and the tasks they needed to undertake to make a living actually can be quite helpful for thinking more broadly about whether the evidence we see in the Iron Age or in other periods differs or indicates similar strategies. This can provide an important link to considering how the landscape can be concretely co- constituent of prac-
tice, of habitus, in a region.
Figure 4.20 & Figure 4.21: The practice of grazing cattle on lowland salt marsh (top, near Holkham Camp), and sheep on upland heath (bottom, near Weeting Heath) is still common today. Photos by E. Aines.
CHAPTER 4

Sources for understanding the recent environment

There are a fair number of pollen studies for understanding Norfolk's environment during the prehistoric period (Jennings 1955; Bradshaw 1981; Bennett 1983a, 1983b, 1984, 1986, 1988; Bennett et al. 1990; Peglar et al. 1989; Peglar 1992, 1993a, 1993b). Mainly taken from meres, shallow lakes found predominantly in the Breckland district, pollen samples (see below) provide a local snapshot of the environment and human impacts upon it over the course of the Holocene. Three Holocene sequences in southern Norfolk have been dated using $^{14}$C dates: Hockham Mere (Sims 1978; Bennett 1983a, 1988), Sahara Mere (Bennett 1988), and Stow Bedon Mere (Bennett 1986). Diss Mere and Quiddenham Mere were analysed by Sylvia Peglar (1992, 1993a, 1993b), though they were dated by comparison to other sequences because it was estimated $^{14}$C dates would contain significant errors due to hard water in the contexts. Bradshaw (1981) analysed a pollen core from a hollow in Oxborough Wood, on the border between the Fens and the Breckland, and Jennings (1955) completed an early analysis of pollen in the Broads. More broadly still, fluvial sequences have been analysed and correlated with palynological studies to illustrate which periods had higher rates of flooding as a result of clearance in the landscape (Macklin et al. 2005).

Although these observations are local, they are can be related to more general regional, environmental regimes in prehistory. Unfortunately, issues with dating during the Iron Age remain a problem for studying the period in detail (Wiltshire & Murphy 1999). Due to East Anglia's position relative to the European continent and successive waves of migration during the prehistoric and historic period, the region was at the forefront of agricultural development in Britain (Peglar 1993b: 1). Therefore, many cultivated species arrived to East Anglia relatively early compared with most areas of Britain.

Broadly speaking, the palynological analyses show that woodland dominated by elm began to decline around 3000 BC, and the forest in northern East Anglia subsequently became more open. The decline is attributed to the likely spread of a fungal parasite by bark beetles (Peglar 1993a), though it coincides with the time period in which Neolithic sites were in use nearby. Anthropogenic burning of vegetation increased during the Neolithic, probably as a land-clearance strategy from around 5000 BC onward (Bennett et al. 1990). A decline in human activity around the end of the Neolithic period resulted in scrubland taking over the clearings in the oak, hazel, and linden forests, followed by a similar dereliction around the end of the Bronze Age (Peglar 1993b: 33). Charcoal sequences found at sites like Grimes Graves show similar woodland dynamics at play (Clarke 1925: 17). By around 500 BC, a marked up-tick in the pollen of herbaceous plants may be observed, continuing throughout the Roman period. An increased percentage of pollen from plants that grow well in poor soil, like *Calluna vulgaris*, or heather, the dominant species on European heathland (Stace 2010), indicates that much of Norfolk had been deforested and gone over to heathland in this period (Peglar et al. 1989: 217) (See Figure 4.23).
Throughout Britain, increased deforestation in the Iron Age, as a result of better technology and larger populations, may be identified by the pollen signature of these shrubby plants (see Figure 4.23). By the end of the Roman period, it is thought few woods remained anywhere in Britain (ibid.). The deforestation that accompanied the Iron Age in turn led to environmental problems throughout Britain including widespread flooding, particularly in northern England and southern Scotland (Macklin et al. 2005: 939). Charly French has shown that the river valleys nearby in Cambridgeshire were first populated on terraced gravels that were later covered by clay and silt alluvium over large areas beginning as early as the Neolithic (French 1990; French et al. 1992). Much of the sedimentation seems to have occurred around the end of the Iron Age and the beginning of the Roman period as sediments were swept down from cleared lands (French 1983, 1988). However, flooding was much more stable in northern East Anglia during the period than in other regions of Britain, and Norfolk shows some of the lowest rates of flooding correlated to land management changes (Macklin, Johnstone, & Lewin 2005: 939). Rather than silt alluvium, by contrast many Late Bronze Age and Early Iron Age gravel terraces in Norfolk—apart from the eastern valleys of the Breckland—are today overlain with a layer of peat nearly 2 m deep in the river valleys (Whiltshire & Murphy 1999: 136; Evans & Hodder 2006a, 2006b). This layer began accumulating during cooler, wetter weather around the time of the Iron Age (Clarke 1925: 22).

It is thought that, generally, the boulder clays of Norfolk, forming the central spine of higher elevations in the county, were more heavily forested than the lighter soils along the chalk to the west (see Figure 4.4). Clarke estimated that a heavy band of forest largely divided Bronze Age Norfolk into two sectors, east and west (Clarke 1960: 15). Metal detected data supports this idea, to a degree, showing much greater densities of Bronze Age materials in the east and west than in the centre of the county along this “ridge” of the boulder clays. However, metal detected data perhaps more clearly reflects settlement in the river valleys, which happen to be divided in an east/west manner because of higher elevations in central Norfolk. Much lower densities of finds exist from the Bronze Age in higher elevations or locations farther from water. The available palynological data largely originate from locations to the south of the area under discussion, though on very similar geological subsoil, and therefore also do not provide much insight.

Flooding aside, one of the greatest prevailing threats to the ecosystem in Norfolk since medieval times has been the loss of good soil to aeolian erosion; a threat Iron Age populations also faced given the transformation of forest into heathland during the period. Due to extensive rabbit farming in Norfolk during the medieval period—a lucrative business that has left fortified towers, or warren lodges, in the landscape—the topsoil in many places was completely ruined, exposing the sands from which the Breckland district takes its name (Carter 2019). This period of instability in the soil of Norfolk led to “sandfloods” or great dust storms that occurred whenever the wind was strong, which it often is in East Anglia. These storms were
N.B. Climate maps do not represent prehistoric climate but provide a reasonable geographical proxy for relativistic weather patterns in the region. The relative climatic affordances of a region are one of the major factors that influenced settlement and productivity in the past. As can be seen, not only do Norfolk’s boulder clays have harder soil, but they also would have been relatively and slightly less productive in prehistory than areas in the Cambridge region.
Figure 4.23: \textit{Calluna vulgaris}, heather, grows freely in poor soil on heathland throughout Europe, and its pollen may be detected in prehistory following periods of deforestation. Sandy soil in W. Norfolk and in the Brecks, as here near Wolverton, caused frequent sandstorms until recent decades as soil as has been better managed following extensive rabbit warrening during much of the Middle Ages. Photo by E. Aines.

particularly bad after the fields were ploughed (Clarke 1925: 21). Although these sandfloods, also termed “fen blow,” are now less common as the soil has stabilized with better management over the course of the twentieth century, they still occur today.

Farmers since at least the Middle Ages have struggled with the sandy soil in Norfolk, and the planting of screens and hedgerows and the use of marl, the calcium carbonate rich clay of which there is an abundance in the region, to amend the poor soil was recorded as early as 1263 (Campbell 1983: 33). Agricultural improvement accelerated especially beginning in the seventeenth and eighteenth centuries. At the time, the agriculturalist Arthur Young wrote, “Half the country of Norfolk within the memory of man yielded nothing but sheep feed” (Young 1785: 281), and yet by the middle of the nineteenth century, much of the county was arable (Hoskins 1955: 147). The Enclosure Acts in tandem with agricultural improvement schemes resulted in one of the largest transformations of heathland to arable pasture throughout Britain. In Norfolk, Thomas Coke, First Earl of Leicester, known as the Coke of Holkham, was responsible for some of the most sweeping land transformations. As Hoskins recounts, “When he began farming… in 1778, he found an open and almost barren country, much of it worth only five shillings an acre. Chiefly by digging the underlying marl and spreading it over the sandy top-soil, he converted it into rich cornlands…” and tripled the value of his lands within 15 years (\textit{ibid.}).
Much of the further decrease in the characteristic sandiness and poor soil quality in Norfolk can be attributed to the growth of Thetford Forest, which was planted as a strategic timber reserve following the First World War and to alleviate high rural unemployment that occurred as a result of the introduction of fully mechanized farming at the beginning of the twentieth century. Today, Thetford Forest is the largest lowland pine forest in England, covering more than 19,000 ha (Skipper & Williamson 1997). The predominant and iconic tree in the region is the Scots pine (*Pinus sylvestris*), although the forests of Norfolk have gradually diversified over the course of the past century to include an astonishing number of species (Watkins 2011). Today, oak, beech, lime, walnut, maple, and a variety of conifers make up the forest.

Walking through Thetford Forest, it is difficult to imagine that the entire arboreal landscape was at first planted by hand-gathered seed only a century ago. On such a walk, it is easy to imagine that this is how the landscape looked in prehistory—as at Grimes Graves. Yet as the palynological studies show, the character of Thetford Forest is very different from past forests of the region, and for much of the later part of the Iron Age, there was probably little forest here anyway. Although *P. sylvestris* had been indigenous in the region, perhaps since ancient times in one of the only southern enclaves where the species remained widespread, it predominates today as a result of human selection (Bennett 1984: 134) (see Figure 4.24). *P. sylvestris* had long
been used in the region for plantations and windbreaks to prevent sandfloods, and Thetford Forest Version 1.0 was initially sown using *P. sylvestris* simply because the seed was abundant already because the trees do very well in poor soils (Peglar 1993b: 25; Bennett 1984: 149). Thus, the quantity of *P. sylvestris* pollen has been found to increase in the region after the beginning of the nineteenth century (Bradshaw 1981: 952).

In fact, few if any ancient woodlands pre-dating the Iron Age remain in Norfolk at all, and several supposedly ancient woodlands in the region have revealed high counts of Iron Age ceramic during survey indicating they have grown since then (A. Rogerson pers. comm. 2015). These last small pockets are all that remains of the forests that were mainly cut during the medieval period. It is not surprising so few remain given the appetite for timber during the Middle Ages—not for new farm land, as many medieval forests were left as wastes after they were cut, but for timber (Young & Young 1979). Ship building in the late Middle Ages and early modern period was particularly deleterious to England's old growth forests, and by 1905 forests covered only 5.2% of England, down from an estimated 15% in 1086 (van der Zee 2013). As a result of the strategic timber reserves established after the First World War, the landscape of England today with regard to forest more closely resembles the landscape of the Early Middle Ages, with around 13% coverage of forests (*ibid.*).

One result of the reforesting in the twentieth century and the spread of arable land, however, has been the destruction of the heathland habitats that had formed in the wastes left by deforestation and warrening. Today, the heathlands that originally formed as a result of poor land management practices in prehistory and in the medieval period have mostly been destroyed, though they still exist in some locations throughout Norfolk, most of which are now Sites of Specific Scientific Interest and local nature reserves because of the unique ecosystems they form. Although many of the heaths in Norfolk had formed as the result of poor land management, past human populations quickly adapted to using the heath for resources including fuel, litter, and pasture, and it became culturally important to people living in the region in the period (Clarke 1925: 20). In some ways, the wild coast and heathland with its scrub and a lonely, twisted Scots pine form an enduring image of the Norfolk landscape, but this is an idealized view of how Norfolk looked over the past 1000 years or so. The landscape has been in flux for thousands of years, and today, because of so much productive farmland, these heath locations are rarer than in the recent past.

One other aspect of landscape change in Norfolk worth mentioning briefly is the loss of much of its northern coast, where in some places several kilometres have vanished since the thirteenth and fourteenth centuries AD. The medieval village of Shipden (NER 11727), for example, was lost following a change in sea level recorded sometime in the fourteenth century, at a time when nearby Cromer—not yet a beach town—was inland. The village was completely lost in the reign of Henry VIII, and for many years after, foragers would dive down to salvage whatever they could of the town at low tide. Today, the ruins of Shipden's church spire can
supposedly be spotted from Cromer pier at low tide, and in 1888 a ship ran aground on the 
church spire and had to be dynamited “free” (Trett 1982; Batcock 1991). Aside from Shipden, 
countless other archaeological sites are now lost along the coast, including a timber circle—
dubbed Seahenge (NHER 33771)—that was discovered near the village of Holme-next-to-Sea. 
The timber circle, fully excavated by the Norfolk Archaeological Unit in 1999, was constructed 
in a salt-marsh from the timbers of at least 25 trees sometime in the summer of 2049 BC (Bay-
liss et al. 1999, Gurney & Penn 1999, Gurney & Penn 2000, Brennand & Taylor 2003). Most of 
the entire Mesolithic landscape between Yarmouth and Belgium has also been lost because of 
rising sea levels, and archaeological surveys of the sea-floor have recently revealed potential 
sites for future investigation by underwater archaeologists (Gaffney et al. 2007). Thus, inter-
preting the coastal landscape since Later Prehistory presents some difficulty as unknown yet 
large quantities of it are missing.

Concluding remarks

In several different ways we have observed how society has shaped and changed the land-
scape, and how the landscape, in return, has equally shaped the economic and social life in 
Norfolk over the past 2000 years. From the earliest times, Norfolk’s potential, or affordance, 
for highly productive farming, as a result of both relatively good land and high populations, 
coupled with its position in the North Sea neighbourhood and its deep river harbours in pre-
history and in the Early Middle Ages, served as a major driver for the creation of wealth in 
the past. For many centuries, northern East Anglia was one of the most prosperous areas in 
England. However, shifting geopolitics, the silting of Norfolk’s deep river harbours, and the 
collapse of vital resource systems including the North Sea herring fisheries have led to a slow 
decline in the region’s fortunes since the 1800s. However, the growth of the renewable energy 
industry at the end of the twentieth and beginning of the twenty-first centuries are leading to 
a resurgence in prosperity and jobs in the region. Once again, old affordances—strong coastal 
winds and relatively sunny days—have found new outlets for productivity as the social need 
has arisen in hand with innovation. In many ways, the trajectories that both constrained and 
provided for opportunities in the Iron Age are similar today, but in use in very different ways.

Looking at affordance and limitation, there are some major topographic and environmental 
reasons why the landscape resists a total social re-organization and can explain certain types of 
“continuity” and what can look, in hindsight, like the destiny of a region. However, as Chapter 
6 explores in more detail, some of the most fascinating ways people interact with past land-
scapes have nothing to do with continuity and instead have much to do with political imagi-
nation. For now, it is time to add another layer of complexity in Chapter 5 as we continue our 
journey backwards through time and the landscape to address the situation during the Bronze 
Age and Iron Age regarding the monuments and the circulation of metal objects.
Spread 3 (above): The landscapes slumbers and dreams of what it once was. The modern-day landscape of Norfolk, ploughed flat over centuries, bears little resemblance to how it would have appeared in the past. Here, monuments and sites from the Nar Valley, many recorded from cropmarks and metal detected finds, are projected onto the same space, providing a glimpse into the forgotten worlds of the people who have come before us.
THE ATLAS OF A FORGOTTEN LANDSCAPE

“What wouldn't I give now for a never-changing map of the ever-constant ineffable? To possess, as it were, an atlas of clouds.”

*Cloud Atlas*, David Mitchell (2004: 373)

“…looking at maps is much more than an act of aesthetic replacement. Anyone who opens an atlas wants everything at once, without limits—the whole world.”

Introduction

While the first part of the thesis provides a vantage point from which to observe the past landscapes of Norfolk, drawing on the rich traditions of British regional landscape archaeology and incorporating newer methods in GIS and statistics, the second part presents several vignettes, or episodes, of that landscape over three different chapters. These three each look at the landscape from a different perspective, covering different aspects of it during later prehistory.

Chapter 5 discusses the past monumental landscape of Norfolk. Far from being nearly devoid of monuments as it is today, by the end of the Iron Age, there were substantial and well established monumental landscapes around Norfolk. Although people living in the region shortly before the Romans arrived interacted with these older monumental landscapes, they themselves have not passed on a reputation for any great proclivity towards monument building. Instead, the Late Iron Age is known for an impressive series of metalwork and coin hoards, which Chapter 6 attempts to place into the wider social landscape of Norfolk as well as within a wider chronology of metalwork circulation in the region. Finally, the last chapter of this triad, Chapter 7, addresses landscapes of memory and the ways in which knowledge of the world around us mirrors knowledge of the self. Together, they form a series of stories about a forgot-
ten landscape. This supports the wider themes of what a landscape affords as the relationship between society and the environment.

In such a way, we will begin to connect observations in the present with how we think social landscapes may have functioned in the Iron Age, given what we know about the tempo of landscape change throughout the region in the period before and since the Iron Age. Thus, we can see landscape operating at two different time-scales. As Haselgrove and Moore note, there is a need to understand in more concrete terms the ways in which Iron Age people negotiated previously existing landscapes and how the use of these locations in turn influenced the formation of both local and group identities and the formation of power at the end of the Iron Age (2007: 2-4). Therefore, looking at the prehistoric monuments extant today, and trying to assess how obvious prehistoric monuments may have been in the past forms a consequential part of this research. In many cases, as we shall see, it is undeniable that the previous Neolithic, Bronze Age landscapes would have been of great prominence in some places around northern East Anglia during the Iron Age, in a way that is completely obscured today by centuries of ploughing in the region.

The Middle Iron Age, too, made not insignificant contributions to the landscape, and it is informative to look briefly at the siting of Norfolk’s Iron Age hillforts and some other types of monuments to better understand the overriding dominance of Norfolk’s riverine landscape on development and movement. This relates to the broader debate surrounding why Norfolk has relatively few hillforts compared to certain other parts of Britain and Ireland. Movement—not of people as in great migrations—but of individuals and communities on an everyday basis will also be briefly explored in the frame of larger debates on the antiquity of roads and trackways in the regions. Finally, some of the broader ways in which the Iron Age conceptual landscape may have had a deeply systemic influence on the later structuring of the Roman and early medieval landscape, in a way we still live with today, are examined.

Plotting the ruins of Norfolk
Maps feature prominently in all this; those over the coming pages illustrate the distributions of the monuments under discussion in Norfolk. Only certain types of monuments have been included, pertinent to the discussion, but it is further important to note that there is a general degree of uncertainty surrounding the representativity of these monuments. It is unclear how many are missing from the record due to the aforementioned extensive history of farming and the removal of barrows, henges, and the like (Clarke 1913).

Additionally, there may be alternate interpretations of sites that are identified primarily through cropmarks and/or metal detected finds. For instance, the classification of “ring ditch” and “round barrow” sometimes coincide and in other cases do not, and these classificatory
problems have already been discussed in Chapter 3 and elsewhere in the literature (Cooper & Green 2016: 280).

In general, the following sections look at the following monument types: Neolithic long barrows, causewayed enclosures, henges and timber circles\(^1\), Bronze Age barrows of all types\(^2\), Bronze Age enclosures, burnt mounds, and ring ditches have also been looked at\(^3\), as well as Iron Age forts and camps, enclosures, settlements, major metal production sites, salterns, and additionally, Romano-British forts, camps, enclosures, roads, shrines and temples, also castles and priories from the Saxon age onward. Appendix II addresses specifically how these sites were chosen and their locations obtained. They are have been classified this way in the NHER since at least the 1950s, and it would be an entirely different undertaking to try to re-conceptualize them. As sociologists of science and archaeologists have noted, some of these terms and ideas contribute to the rigidity of metanarratives about the past (e.g. Latour & Strum 1986; Shanks 1996; Aines 2015b).

The maps included here have been made as comprehensive as possible, including the topography and riverine networks of the region as the backdrop of these maps along with the set of sites under consideration. The hillshade and colour gradation for the region have been exaggerated slightly (z dimensionality by a factor of 1) to make them more visible. Cubic re-sampling (x/y dimensionality, by a factor of 2) has also been employed to smooth the terrain as much as possible to avoid a pixelated look at nearer scales, although this reduces the fidelity of the height models to a certain degree when zoomed in close. Ten-meter contours have been included to remind the reader that while Norfolk does have landscape variation in terms of height, these variations are small compared to mountainous regions of Britain, yet were and are still impactful upon human perception of the region (J. Joy pers. comm. 2016). As noted in the methodology, the landscape has been visited as many times as possible to ensure that the cartographic perception of the landscape does not lead to over-interpretation or over-emphasis of what may be, on the ground, small variations in topography.

**Extant Neolithic and Bronze Age monuments**

The landscape that one encounters today in Norfolk, as the last chapter discussed, is very different from the landscape you might have encountered in the past. Environmentally this is so; but it is also true in terms of the monumental character of the landscape. The monuments one encounters in Norfolk today are largely medieval and modern. It is not one of the areas of the country where an immediately obvious prehistoric landscape presents itself. For example,\(^1\) Which often get classified as “hengiform monuments”—which are really just large, round ditches with at least one causeway cutting the ditch.

\(^2\) No effort has been to classify the different types, as this data is only sometimes available in NHER entries.

\(^3\) Though not included on every map because it starts to get messy...
in *Highways and Byways of East Anglia*, William Dutt’s popular chorography of Norfolk, speculating on the histories and myths of the people buried in the few remaining tumuli, the author writes “we know nothing… we can only point to the grass grown barrows and let them speak for themselves.” (Dutt 1901: 3). The guide rarely concerns itself with anything prehistoric—although Grimes Graves and flint knapping are mentioned—because the prehistoric landscape is not overtly evident, whereas the region *does* have some truly exceptional and important examples of medieval architecture.

Grimes Graves is one of the most famous vestiges of the Neolithic in Norfolk. The impressive flint mines from around 2600 to 2300 BC present a pockmarked, sinusoidal landscape, the focus of activity in many subsequent periods. They are by no means the only flint mine in Norfolk. Nor are they the only Neolithic “monument.” As surveys of cropmarks show, Norfolk once hosted impressive prehistoric monumental landscapes, though these have mainly been ploughed flat through centuries of one of the most intensive agricultural regimes of anywhere in England. Both Neolithic and Bronze Age monuments exist throughout the county, with some particular zones of concentration (Figures 5.1 through 5.4). These include cursuses, henges, causewayed enclosures, and long barrows as elsewhere in Britain.

These Neolithic sites, in turn, often became the later foci of Bronze Age tumuli. W.G. Clarke, writing in 1913, estimated around 200 extant barrows, primarily from the Bronze Age, but noted that extensive rabbit farming since medieval times and programs to flatten agricultural land had resulted in significantly culling the original distribution of these monuments (Clarke 1913: 416-417). In 1980, Andrew Lawson (with Edward Martin and Deborah Priddy) reported that there were 549 recorded ring ditches (Lawson *et al.* 1980: 45). Today, there are 768 “ring ditches,” 1149 “round barrows,” 83 “barrow cemeteries,” and 41 “bowl barrows” recorded in the NHER, though these overlap to a large extent. For example, 63 monuments have been classified as both round barrows and ring ditches, 12 monuments are both round barrows and bowl barrows, and so on. Often, a monument record may have more than one barrow or ring ditch represented.

Both Clarke and Lawson noted a very clear distribution pattern of the barrows, with their placement “generally on the highlands of the country…. the northern group averaging 190 feet above [sea level] those in the middle of the country at 103 feet and those in the southern group 122 feet; the average for the whole country last being 138 feet” (Clarke 1913: 416-417). Lawson reported that the ring ditches tended to avoid the heavier clay soils, particularly in Breckland, and instead clustered around the edge of the plateau where the soil was slightly lighter. Lawson also noted a marked correlation between the presence of recorded barrows on chalk soils, with markedly few on sand or gravel. However, the distribution of the monuments “reflects the susceptibility of different soils to produce cropmarks… obscurity by afforestation in Breckland but also the variation in available aerial photographs” (Lawson *et al.* 1981: 45). Furthermore,
Figure 5.1: Possible and probable Late Neolithic and Bronze Age monuments in the landscape. The area surrounding the Mt. Ephraim and Bunker’s Hill barrow cemeteries has one of the greatest densities of the Bronze Age barrows in Norfolk. All numbers NHER.
CHAPTER 5

Figure 5.2: Possible and probable Late Neolithic and Bronze Age monuments in the landscape. The area surrounding Massingham Heath has a number of Neolithic flint mines and Bronze Age barrow cemeteries. All numbers NHER.
Figure 5.3: Possible and probable Late Neolithic and Bronze Age monuments in the landscape near Salthouse Heath and the north-eastern edge of the Broads. All numbers NHER.
Figure 5.4: Possible and probable Late Neolithic and Bronze Age monuments in the vicinity of present-day Norwich. This is the densest cluster of Late Neolithic monuments in Norfolk. All numbers NHER.
the writers acknowledged that traditional geological interpretations of the paucity of earlier prehistoric sites on the clays were at least partially biased by the relative obliteration caused to these sites by the necessity of using heavier farming equipment to utilize these lands over time. These averages will obviously have changed with additional information aided by better aerial surveying techniques and a much greater corpus of photographs and satellite images.

Although barrows are known from the Neolithic, Bronze Age, Roman, and Anglo-Saxon periods in the region, the widespread practice of “hill-digging” in the fifteenth and sixteenth centuries meant that by the early twentieth century, most of the extant barrows were assumed to have been opened, most without any publication even through the course of much of the nineteenth century (Lawson & Brown 1986). The vast majority of ring ditches, however, are assumed to have originated in the Bronze Age, and a wide range of probabilistic dates from 2000 BC until 1200 BC have been obtained from modern excavations utilizing radiocarbon dates (ibid.: 2).

There are several notable clusters of the primarily Bronze Age monuments, which tend to occur near Late Neolithic henges, hengiform monuments, and earlier causewayed enclosures and cursuses as at the confluence of the Rivers Yare, Tas, and Wensum just outside modern-day Norwich (Figure 5.4). Two other large clusters of the monuments exist around Salthouse Heath and Roughton in North Norfolk (Figure 5.3), and a third significant cluster is located between the Rivers Little Ouse and Wissey between Thetford and Methwold (Figure 5.1). The position of barrows in the landscape provides one of the clearest examples of a highly-spatially contextual monument; they tend to cluster at both the major confluences of rivers, as outside Norwich and Thetford, but also at the high spots where rivers gather as near Rougham near the source of the River Nar, near Roughton where the Hagon Beck gathers, and near Massingham Heath near the watershed of the Rivers Wensum and Babingley. As Lawson notes, they tend to be built on slightly higher ground, though he contends that in Norfolk this has more to do with soil conditions than wanting the monuments to be more visible (Lawson et al. 1981: 53, 56).

It is possible to better assess how the Bronze Age and Neolithic landscape may have been at the end of the Iron Age, but a number of assumptions need to be made, such as whether or not the landscape was clear or mostly clear of natural vegetation i.e. forests (see Chapter 4 for discussion). Furthermore, the heights of the monuments themselves—few of which today exist as more than crop marks—need to be assumed. According to Historic England, round barrows with a diameter of over 50 m may be as tall as 6 m, and others with smaller diameters are obviously shorter in stature (Historic England 2018). Some may be little more than amorphous swellings, however, for a conservative estimate, heights of 2 to 3 m were assumed for an intervisibility model. Using the advanced viewshed analysis module, it is possible to calculate the intervisiblility of any number of points given their assumed heights and an underlying terrain
model—see Chapter 3 for details—(Cuckovic 2016). This method is explained by Wheatley (1995) and Wheatley and Gillings (2013).

The intervisibility model of Iron Age sites and Bronze Age round barrows in Norfolk, although only a rough estimate given the number of unknown factors, indicates that from a total of 1,496 possible Iron Age locations (PAS find-sites), 1,271 or 85.01% of these locations, an observer 1.6 m tall could on a clear day and in a fairly clear landscape see a round barrow on the near or far horizon (Figure 5.5). These figures account for static locations, and a moving observer would obviously, depending on location, have an even greater level of intervisibility with these older monuments. Figure 5.5 illustrates the results of the intervisibility analysis, though it is difficult to interpret given the high density of information. However, generally, one can see that the areas with greater line density have a greater number of intervisibility “interactions.” Areas that have few round barrows or few Iron Age find-sites tend to have less. Figure 5.6 presents an up-close illustration of the analysis at Salthouse Heath, on Norfolk’s northern coast.

Generally, and under specific conditions, the earlier prehistoric landscape would have been very obvious during the Iron Age. Although archaeologists talk about how barrows would have been shining, bright white when made on chalk, I suspect this appearance would have lasted a very short time as ruderal species quickly covered the barrows. Centuries later, they would have not been as obvious as when they were first built, but they were still a major part of the visual perception of the landscape during the Iron Age. This is something we miss today, because that landscape has all but vanished.

However, beyond visual perception, there are many indications that Iron Age people were interacting with these monuments in much more direct ways, as well. One of the major outcomes of the Norfolk Archaeological Unit and Norfolk Museums Service’s excavations of barrows between 1950 and 1982 was that a notable number of them had Iron Age ceramic sherds in the backfill from the ring ditches (Lawson & Brown 1986). While these, and other interactions with earlier landscapes, are discussed at greater length in Chapter 7 on the implication of memory and landscape, it is important to note, for now, that these interactions were often much more significant than mere visual perception of older monuments. This is in keeping with a broad European tradition within the Iron Age for the focus of certain activities within older, potentially numinous or ritual landscapes.

Furthermore, these locations were undoubtedly important not only in prehistory, but also in later historic periods as well. In Norfolk, for example, the locations of the Anglo-Saxon and early medieval moots or the meeting places of the Hundreds are known in 13 locations, and all of them coincide with Bronze Age barrows in areas of significant prehistoric activity. The same may be observed at other sites in Cambridgeshire (as at Mutlow Hill) and in Suffolk (Fox 1923), as has been observed throughout other parts of England. Although it is debated wheth-
Figure 5.5: The intervisibility between Iron Age find-sites of all types and the Bronze Age and Neolithic landscapes that would have been extant in the period. Maximum distance of viewshed is 18 km. This illustrates that in many locations, barrows would have been visible on the horizon in a cleared landscape, and much closer in several key clusters.
Figure 5.6: The intervisibility between Iron Age find-sites and Bronze Age round barrows near Salthouse Heath. The intervisibility lines indicate that a person standing at 1.6 m tall would be able to see a round barrow between 2 - 3 m in height from that location in a clear landscape.
er Bronze Age barrows were placed territorially or tenurially in the Bronze Age, Anglo Saxon and later medieval borders show a strong preference for the monuments as well as roads and rivers, as illustrated by the placement of the historic parishes. For instance, at the moot hill at Salters Lane, Longham (Figure 5.25), five parish borders come together at the moot, which also marks the location where the Launditch crosses the Fen Causeway Roman road. The Launditch forms a border between Longham and Wendling parishes, while the Roman road marks the border between Beeston and Mileham, and Little Bittering and Longham parishes. It is interesting to note that the Launditch itself, like several of the other Norfolk linear earthworks, exactly divides the watershed between the Rivers Wensum and Yare at the Black Water to the east and the Nar and the Ouse to the west. Parish boundaries sometimes also follow watersheds elsewhere in Norfolk.

The implications for these concatenations of monuments, boundaries, and the like will be discussed at greater length in later sections. Yet, we are beginning to see and to trace the ways in which various landscapes and the monuments in them go on and on in their afterlives, as it were.
Extant Iron Age hillforts and their siting

In addition to the earlier prehistoric landscapes of Norfolk, not insignificant contributions were made to the monuments of Norfolk during the construction of the hillforts. There are seven extant hillforts in Norfolk: at Thetford (NHER 5747), Narborough (NHER 3975), South Creake (NHER 1910), Holkham (NHER 1776), Copy’s Green (NHER 2072), Tasburgh (NHER 2258), and Warham (NHER 1828) (Figure 5.18) (Davies et al. 1991; Rickett 1992). First identified by Clarke—called “camps” (1939)—Davies, Gregory, et al. (1991) were able to add the flattened fort at South Creake (also known as Bloodgate Hill) to the list in 1991. There are additional defended enclosures at Warham Burrows (NHER 1827), nearby Wighton (NHER 1113), and at Tasburgh included in the NHER as “probable Iron Age/Roman forts”. Furthermore, near Roydon (NHER 12834) there is what appears to be a fortified Iron Age settlement, and another possible fortified settlement exists on the outskirts of King’s Lynn near Bawsey, though this is

Figure 5.8: The extant Iron Age forts of Norfolk.
the least certain (NHER 25962). However, these are very unusual for the area as almost all Iron Age settlements in Norfolk were basically undefended, and therefore very difficult to identify in the landscape. It should also be noted that the fort at Barnham (just across the border in Suffolk, is intervisible with Thetford Castle in a cleared or heath landscape. Both sit north and south of the Little Ouse, twinned, as it were, as are the sets of the nearest forts outside Cambridge, though Thetford and Barnham may not be direct contemporaries of each other (Lock & Ralston 2017). Figure 5.8 provides a map of their locations in the landscape. The defended enclosures not known to be hillforts are marked with question marks.

Generally speaking, the hillforts of Norfolk share several overarching similarities. Firstly, all of them are located directly uphill of a navigable river. Secondly, all but South Creake (59 m asl) and Barnham (51.5 m asl) are located between 15 and 30 m above sea level—relatively low for “hillforts” considering Norfolk has elevations above more than 90 m. Thirdly, none of the forts are positioned on the highest possible point in their immediate vicinity—common with many hillforts in Britain—though in this case, it is quite notable. Fourthly, all but Tasburgh are located on chalk. Although called hillforts, their locations have decidedly more to do with the rivers nearby than with hills, of which more will later be discussed.

The question of why hillforts dominate in certain regions of Britain at times during the Iron Age whereas other areas like northern East Anglia see a sparseness of the monumental meeting and defensive monuments remains a topic for debate. Suffolk, for comparison, has even fewer hillforts than Norfolk—three. Both archaeologists and casual observers have been led to causatively link the paucity of hillforts—as compared with regions like Wessex, the Welsh Marches, and the Scottish border hills—with Norfolk’s perceived lack of hills. Davies and Gregory write, “Hillforts were often positioned in naturally defensible locations, making use of cliffs, hills, and plateaux. In Norfolk, the flatter terrain did not provide more spectacular natural locations adopted in areas such as Wessex but there was still a choice of naturally defensible sites” (1991: x). Clarke (1939, 1960: 10) and Fox (1932) make similar arguments. Martin (1999: 63) highlights the theory that large hillfort enclosures were less common in northern East Anglia because in the flat landscape they would have been less obvious and thus less desirable as a form of elite competition. It is certainly true that Norfolk is rather flat to both its east, in the Fens, and to its west, in the Broads. Norfolk also has the lowest high-spot in Britain at Beacon Hill (105 m with a 79 m slope) along its northern coast (Edwardes 2001). However, a causative link between geology, topography, and the low number of hillforts in Norfolk cannot necessarily be supported using a geographical-statistical model that looks at the full set of hillforts in England and Wales.

A small diversion to discuss the problem is warranted, although it does not directly involve the distribution of metalwork, because so many of our ideas of how the British Middle Iron Age worked revolve around models developed in Wessex and particularly at Danebury. J.D.
Figure 5.9: The hills of Norfolk as modeled using slope height (greatest distance of slope gradient in a local area), and normalized height (0 = low, 1 = top) from standardized elevation and mid slope position in a given area.
Hill has famously gone so far as to declare the Iron Age of Wessex “a fiction” (1996: 95). It’s therefore tempting to abandon the truism that Norfolk lacks hillforts because it lacks hills if only because it is too neat and because questioning it opens the door to more interesting environmental or sociological explanations. Importantly, the data also support this tack, and the question is ideally suited to analysis by GIS. Chris Evans and Jackson et al. have also explored some of these issues in regard to Stonea Camp and Wardy Hill in Cambridgeshire, the contexts of which are also not particularly hilly (note that Wardy Hill may be considered a ringwork) (Jackson et al. 1996; Evans 2003b).

Riding on the country bus from the Fens along the River Great Ouse in King’s Lynn to Dereham in the higher regions of Breckland, one immediately appreciates the long views. Today the region is mostly cleared farmland and pasture, apart from small patches of forest and wind-breaks, and on a clear day it may be possible to see as far 30 km from locations near Dereham. Viewshed analysis supports the 30 km, and personal experience of the landscape substantiates far horizons—maybe not quite 30 km—possible on a clear day4. The Oxford English Dictionary agrees that, as “a naturally raised area of land, not as high or craggy as a mountain,” a hill should afford, among other qualia, a view. And really, topographically, Breckland and North Norfolk are both much more similar to other counties in southern England than they are to the fens, the broads, and the flatness of the North Sea that borders them. Therefore, while Norfolk is relativistically flatter than most places in Britain, a subjective experience of the available elevation gain in a low county is impactful. Put simply, one can see and be seen a long way from low hills in a flat landscape.

To further this line of argument, the Digital Elevation Model (DEM) of Norfolk was queried in QGIS to assess how many hilltops in Norfolk exist that have not been utilized for hillforts: locations (a) at the local high spot, as calculated using the SAGA Relative Heights and Slope Positions module (Boehner & Selige 2006) (b) with relatively long views, as calculated using the SAGA Visibility module (Wichmann 2013). Figure 5.9 presents the results. As none of the aforementioned forts, apart from South Creake (and Barnham if we are to temporality poach a fort from Suffolk) are actually on hills, in the conventional sense, this leaves quite a few hilltops to choose from to position a hypothetical hillfort. At least 40 locations in Norfolk can be identified, at least 25 of which have place names indicating a hill. None is the location of an actual hillfort, but interestingly, around 28%, do have stately homes—in Norfolk, a long view is apparently more important for seventeenth and eighteenth century country homes than for fourth century BC hillforts. The same can be seen at other locations in England including Wandlebury in Cambridgeshire. As can be seen in Figure 5.9, these hilly locations cluster in

---

4 Viewshed analysis is one of the more dangerous games one can play in GIS. A default viewshed can almost always see farther than the human eye because by default it assumes nearly perfect atmospheric conditions. These conditions, e.g. the curvature of the earth and the refraction, can be modified.
the higher elevations of the Breckland, Northern, and Western districts of Norfolk. The views afforded by these locations is comparable with, and in some cases better than that, afforded by both Wessex-style hillforts and local correlates in Suffolk and Cambridgeshire.

Therefore, while Norfolk certainly does not have as many relative hills (being high places and with a relatively long slope and view), it certainly does have hills. Most of the pink line of hills seen in Figure 5.9, from Ken Hill to Dunham Lodge, are also located on chalk—so it is fair to say Norfolk does have chalk hills as well. Furthermore, all of the proposed hilltop locations
in Norfolk have better visibility of the total surrounding landscape than the locations in which the Iron Age hillforts were actually sited. Few of the hillforts in Norfolk have visibility greater than around 5 km in either direction, and they are sited with visibility of their local river valley, not the total surrounding landscape (see Figure 5.10). Even the higher forts at South Creake and Barnham miss the best possible visibility in their local vicinities. They are all, therefore, seemingly sited with access to/control of rivers being the main criterion. This is very different from some, though not all, of the Wessex-style hillforts that, like Danebury, seem located almost enigmatically far from the nearest source of fresh water.

It is important to note, that as Frodsham et al. (2007: 251) point out, the entire corpus of hillforts in Britain may share little in common apart from the name “hillfort.” As they write, “Indeed, to lump all these sites together as ‘hillforts’ could be likened to classifying Buckingham Palace and an average [terraced house]… as ‘houses’…” (ibid.). Therefore, as in that paper, I have made no attempt to classify or define “hillforts” in any way other than by their inclusion in the Oxford Atlas of Hillforts with both confirmed data and confirmed interpretation status (Lock & Ralston 2017).

In order to further compare Norfolk’s topography and geology with the hills on which actual hillforts occur throughout England and Wales, the Oxford Hillforts Atlas data (ibid.) was concatenated with the most recent Soil Parent Material Model of England and Wales and the OSGB 50 m DEM. As for the forts in Norfolk, the local high-spot and slope were calculated using the SAGA Relative Heights and Slope Positions module (Boehner & Selige 2006) and viewshed was calculated using the SAGA Visibility module (Wichmann 2013). A buffer zone with a 500 m radius was extended around each hillfort site, and zonal statistics were calculated for each hillfort, thus creating a basis for comparing the local topography of the hillforts in the atlas and the proposed hilltop sites in Norfolk.

In total, 83 hillforts and ringworks in Britain were identified as being similar in geology, slope height, and viewshed to the proposed Norfolk hilltops (most of which are on boulder clay, not chalk). None of these occur in the traditional hill-fort dominated zone of Wessex, however, and instead occur in the Midlands and in Northumberland, predominantly. All told, this figure represents around 4% of the hillforts in England and Wales. However, setting geology aside and looking at all soil-parent types, 443 hillforts in England and Wales, or around 25%, had slope and viewshed profiles matching Norfolk hilltops. In some regions, the majority of the hillforts are sited on hills of similar slope. In Oxfordshire, for example, 30 hillforts, or 81%, are sited on hills that match the hill profile for Norfolk. A high percentage of low-slope hillforts can also be observed in Warwickshire, and Northamptonshire. Even Danebury itself is only marginally steeper than the proposed hills in Norfolk. Figure 5.11 and Figure 5.12 show a comparison of a sample of Norfolk hill profiles with similar hillforts sites in England and
Wales. This nicely illustrates the fact that hillforts often occur in areas with gentler slope and that do not have a huge elevation gain over the surrounding landscape.

In terms of geology, although hillforts are most often sited on sedimentary rock (>55% of hillforts are located on clastic or carbonate sedimentary rock), there are a variety of other possible geological settings including glacial and glacifluvial sediments like clay and diamicton, as in Norfolk (13%), metaphoric mudstones (9%), and a range of intrusive and extrusive igneous rock (10%). Put simply, slightly less than half of the hillforts in England and Wales are not built on chalk. When this geological variety is considered, there does not seem to be a compelling geological reason why none were constructed on the boulder clays of upland Norfolk. In England and Wales, there are 198 examples of hillforts included in the Oxford Hillforts Atlas.
that are built on glacial sediment in similar conditions to the conditions under investigation in Norfolk. The nearest of these are Stonea Camp in Cambridgeshire and Clare Camp in Suffolk. Therefore, we cannot conclude that geology is the sole determining factor in where a fort is positioned. Geographically weighted regression supports this assertion, showing that a model of hillfort locations that considers slope and geology can only account for slightly more than 50% of hillforts in England and Wales. Although the slope-differences of the local areas around the hillforts at first appear bimodal (Figure 5.13), the sample’s bimodal coefficient of .39 strongly indicates a unimodal distribution (Pfister et al. 2013).

According to a model of Iron Age archaeology dominated by the idea of Wessex-style hillforts, therefore, one could argue that geologically and topographically, Norfolk is not “built”
for hillforts: it does not share a single real hillfort site or conjectural hilltop site alike in geology and topography with Wessex. However, when compared with the total number of hillforts in the Oxford Atlas of Hillforts, Norfolk is more similar to other regions of Britain in terms of both actual hillforts sites and proposed hilltops. This is yet another instance of the strong regional traditions of the Iron Age in Britain (Gwilt & Haselgrove 1997). When we compare the certain and probable Iron Age forts of Norfolk to regions other than Wessex, there is a larger basis for comparison. This a point that Frodsham (et al. 2007) raises, as well, but in regard to the differences and comparisons between hillforts in the Wessex region and hillforts in Northumberland. These points further challenge the dominance of the Wessex model of the Iron Age.

Therefore, it can tentatively be concluded that there are not more forts in Norfolk not because there are not suitable hilltop locations for them (there are many) or because the geology of the region is antithetical to hillfort construction or grain storage (many regions have hillforts with poorly draining soil). Thus, it may be better to think of Norfolk’s paucity of hillforts in terms of more local, socio-topographical phenomena than overarching geographical models. There are a low number of hillforts in Norfolk because the people living there chose not to invest resources in an extensive number of them, despite that there are ample locations in Norfolk that are statistically similar to the locations of other hillforts throughout England and Wales. We are looking at a social phenomenon, not the result of geographic determinism.
The affordance of landscape & the provision of power: hills and river valleys

Another basis of comparison are the Roman forts, medieval castles, and priories—which we shall come to momentarily—in the region, which are likewise sited on rivers and on the coast or on marshes, rather than being located on the tops of hills. Examples of these include Burgh Castle (NHER 10471) the Roman “Saxon Shore fort” located outside Great Yarmouth and overlooking the intersection of the Waveney and the Yare at Breydon Water (Figures 5.14, 5.15), Castle Acre (NHER 3449) (Figure 5.17) a substantial private Norman castle overlooking the River Nar, Castle Rising (NHER 3307) a Norman and later royal castle overlooking the estuary of the River Babingley, Norwich Castle (NHER 429) the medieval royal fortification overlooking the River Wensum not far from its confluence with the River Yare, and Caister Castle (NHER 8671) the fifteenth century moated fortification overlooking the estuary of the River Bure, not far from Great Yarmouth. Other known Roman forts, like Branodunum (NHER 1001), may be located on the coast. Each of these sites demonstrates, again, the fundamental importance of the rivers in Norfolk’s landscape.

The potential exceptions to this are a probable Late Iron Age/Roman rectilinear enclosure located at High Banks (NHER 8745), which is sited on top of the highest location in the immediate landscape, a triple-ditched Roman fort near Cawston (NHER 21849) likewise located near, but not on, the highest local point in the landscape, Mileham Castle (NHER 7230) which straddles a pre-conquest road, the B1145, and the watershed between the River Nar and the Black Water, a tributary of the Wensum—very similar to and very near to the potential Iron Age linear fortification, the Launditch (NHER 1082)—and a pair of potential medieval castles at Scoulton (NHER 8808 and 8809), located again on a high spot between two watersheds, that of the Yare and the Wissey. These watershed locations are often near known roads or potential roads, being well suited to a route way.

Most settlements, both ancient and more recent, are located in the river valleys, and this has been much more important in siting than focus on higher elevations. As the previous sections demonstrated, hill sites farther from rivers, though quite common in parts of England including the Wessex region, are much rarer in Norfolk, though many later manor homes may occupy these sites provided they have access to water. Another point, which is fair to mention, is that it is actually quite difficult to be far from water in northern East Anglia. Yet the early medieval priories, in particular, demonstrate a clear selection preference at the intersection of navigable rivers and roads (Figure 5.16).

Certain types of archaeological sites from different periods cluster together in specific niches that offer certain relational possibilities, or affordances, in the landscape. One of the best examples of this type of recurrence in Norfolk is the situation of Anglo-Saxon and Norman priories up/down river and near to Iron Age hillforts. As Figure 5.19 through 5.22 demonstrate, both Iron Age hillforts and medieval priories are almost always sited on river valleys, yet they
Figures 5.14 and 5.15: Burgh Castle, one of the Saxon Shore forts and potentially the site of Gariannonum, was built in the third century AD. A large vicus grew outside its walls, which are still nearly pristine along its western side. The Irish monk Furseus may have founded a monastery within the fort around AD 640, though archaeological evidence has thus far proven inconclusive about this point. Fig. 5.14 © English Heritage 2015. Fig. 5.15 by E. Aines.
The gently sloping Nar Valley and the placement of Castle Acre Priory (top) and Castle (bottom) illustrates the important place of rivers in the lowland Norfolk landscape. The Iron Age camp at Narborough is just 4 km down the valley from Castle Acre. Photos by E. Aines.
also tend to occur relatively near to each other—within one to six km up or down river. The two types of sites are not related in any way, and yet they occur nearer to each other than would random points within the same landscape criteria (e.g. distance from a river and elevation) by a statistically significant margin.

Yet both types of sites—monasteries/priorities and hillforts—have similar situational requirements and therefore tend to occupy similar landscape “ecosystem” or affordance niches. In this case, it may be argued that the locations of both priories and hillforts, the latter always being located very near the former, relates to both sites having a potentially redistributive function in the landscape. They aggregate and distribute people, animals, resources, and ideas, and the locations in which they have been built provide excellent connectivity to the surrounding world while also allowing a watchful, defensive presence. These locations can generally be summarized as both nodal, with access to efficient seasonal transportation, and as already illustrated with excellent views of the river valleys upon which they are sited. Although none of these rivers are now navigable by large ships, they would have been in the past, as explored in Chapter 4 (cf. Dunmore & Carr 1976: 8; Davies et al. 1991: 29). It is further worth considering, briefly, the ways in which priories and hillforts are alike in terms of function and why these would be often sited in the same locations.

Firstly, hillforts have several basic functions whether they are viewed, classically, as primarily defensive or involved in warfare (Wheeler 1943; Avery 1986; Sharples 1991; Finney 2005, etc.), or as “central” places used for community gatherings, seasonal exchanges, or the display of power and symbolism as (somewhat) more recent approaches may emphasize (Bowden & McOmish 1987, 1989; Cunliffe 1995; Hill 1995a; Frodsham 2007). Armit (2007: 26-31) provides an excellent and comprehensive synthesis of the various schools of thought surrounding hillforts. As Armit traces (ibid.: 31), the two separate schools of thought rarely engage with each other, often to the total exclusion in published work of one or the other.

Yet, from a functional, landscape perspective, these two uses require very similar things from the landscapes in which they are placed and, to a lesser degree, on the architecture of the sites themselves. “Military” provisioning and communal feasting both require storage. A place of refuge or retreat for livestock and people and the storage of food on one hand, and a place of gathering, potentially related to seasonal economic activities, feasting, and ritual on the other hand ostensibly need the same things. Both also require a form of protection. It is easier to see this in the militaristic interpretation, but even if many hillforts show scant signs of warfare, storing large amounts of resources (e.g. grain, livestock, people) in one place, even if only from time to time or seasonally, represents an intensification that requires a bit of care. Whether it requires double and triple ramparts is an entirely different matter, but the point of this section is not really to propose a unifying theory of hillforts in which everything suddenly makes sense, only to suggest that their locations reveal their social form, to a degree.
Equally, being watched (by envious neighbours, nervous acolytes, whomever) and watching (approaching enemies, a returning contingent, whomever) require almost the same location as well, and further, it requires connectivity to the landscape. Both hillfort functions depend upon access—people have to be able to get there, whether fleeing or fêting. Additionally, these elements both imply communication. As models that emphasize the ritual nature of hillforts, and—more broadly—other types of enclosures within the prehistoric tradition of the region, infer there would have been an element of the exchange of somewhat structured ritual knowledge and the transmission of collective histories (Whittle 1996: 190). These stories, told within that location, would have explained and supported the location within the landscape, but also the fundamental identities, at some level, of the assembled individuals. Building and maintaining monuments also requires a community and a significant number of people.

The shared functions of the different interpretations are at least one of the reasons why both interpretations are pervasive. This argument—whether military or symbolic—will be familiar to medievalists who also do not fully agree over the solely militaristic interpretations of castles (Hull 2006; Johnson 2013). Castles often also embody both perspectives. Power and its manifestations do not solely flow from one strategy (Earle 1989: 4-5). As Armit lucidly explains and

Figure 5.18: The extant earthworks at Warham Camp, gently sloping down towards the River Stiffkey. The siting of the camp is very similar to the Iron Age enclosure at Narborough. None of the Iron Age forts of Norfolk are sited on the crowns of hills, and instead they overlook a river or marsh. Photos by E. Aines.
Figure 5.19: The landscape situation and surrounding monuments at Warham Camp in North Norfolk. Again, at Warham Camp, the close proximity to a river and to late medieval priory sites may be observed. All numbers NHER.
Figure 5.20: The landscape situation and surrounding monuments at Bloodgate Hill, and Iron Age hillfort in North Norfolk. All numbers NHER.
Figure 5.21: The landscape situation and surrounding monuments at Narborough Camp, and Iron Age fort in the Breckland district. All numbers NHER.
Figure 5.22: The landscape situation and surrounding monuments at Thetford Castle, an Iron Age fort and later Norman motte and bailey in the Breckland district. Note the close proximity of Thetford Priory and a large, Iron Age rectilinear ritual enclosure or elite residence. All numbers NHER.
CHAPTER 5

uses ethnographic examples to explicate, for the case of hillforts, often ritualism, symbolism, community, and warfare all go hand in hand (Armit 2007: 36). And again, and finally, we are reminded that hillforts, being incredibly variable (even to a smaller degree in northern East Anglia), cannot all be exactly the same (ibid.).

Secondly, we can look at the case of priories and monasteries. Although separated from Iron Age hillforts by more than 1000 years, these early medieval monastic communities arguably required similar, if not the exact same, possibilities within the landscape (Figure 5.23). Again, this major function can be described, as for the hillforts, as distributive or redistributive. Although there are more monasteries in Norfolk than hillforts, it is evocative that all but one of the hillforts (Tasburgh) shares its immediate vicinity with a later monastic community. For example, a function of many of the priories was to collect tithes and money from pilgrims, as castles and manors equally extracted their due, largely in-kind from the surrounding populace and through the re-structuring and acquisition of existing land holdings (Ward 1981; Berman 1986). They also often served as local landlords; they also leased land and provided socio-political and economic stability and structure for their tenants and nearby communities and generated economies (S. Hanebaum pers. comm. 2020). Yet the monks, nuns, and others who lived in these locations also produced and safeguarded texts and were an important source for the transmission of information—from medicine, church doctrine, and even hydraulic and other forms of technology—in a proto-scientific age (Mulder-Bakker 2000; Magnusson 2003; Lardos & Heinrich 2013). Therefore, locations conducive to this movement of goods, people, and ideas within the landscape were required. That these happened to be placed in older locations that had much the same cultural affordances should not be surprising.

In some respects, the cultural needs of a priory and architecture and siting have a tension between connectivity and defence. Architecturally and in their siting in the landscape, monasteries illustrate this mind towards defence. Indeed, following their decline and ruination in the centuries following Henry VIII’s dissolution of the monasteries, one of the main architectural features that remain on many of these sites today are the huge, fortified gatehouses. The locations in which they were placed, watchful, often with one or more sides facing a river, and the fact that they are storing valuable resources and reflect, in an unambiguous way, an enormous amount of human capital and work. Intensification invites risks, and these risks are mitigated by defending these locations. They were worth defending, simply, because they were worth raiding in the first place. Several written accounts and some archaeological evidence primarily from the end of the Anglo-Saxon period attest to this (Jennings 1998; Coupland 2003). Yet, as some authors emphasize, the symbolic nature of walls—representing “authority and the power to control or rights of ownership”—frequently also become the centres of social tension and conflict (Samson 1992: 26). Their visible defences aside, monasteries, like hillforts, are not free from military and other connotations. As Ward (1981) outlines, the connection between the foundation of monasteries, the expansion of territorial holdings, and making grants to military
Figure 5.23: Thetford Priory, along the River Thet. The priory is an excellent example of medieval flint construction. Photo by E. Aines.
CHAPTER 5

orders provided a potent source of power to elite families in the Middle Ages. Again, the exercise of power through many different means is clear.

Thus, in a way very similar to medieval castles and Iron Age hillforts, monasteries embody a range of different functions and connotations, all important to the exercise of a particular brand of power. The locations in which they are located must then be seen as having affordances in aid to this power. Part of this originates from the locations’ connectivity, as has been explored. They are located at, what the Germans call, trans-shipment points or Umschlagplatz (singular) or Umschlagplätze (plural). While this term is more commonly used in German for trading places, it can also be used for the locations where multiple transport systems converge, and where you would have to unload goods to change transport systems e.g. from a river to a track or road. Ultimately, they are places where you turn over goods or Ware umschlagen (G. Stegmaier pers. comm. 2019). This exchange, with regard to people, things, and ideas in the landscape, is noted in the redistributive functions described earlier. Another way to classify these locations is as crossroads in potential low-cost paths of movement, which themselves take on a special group, cultic, or religious aspect in the landscape.

Something that strikes one about the Norfolk landscape, with regard to these proposed trans-shipment points, is how it would not have been easy to cross the landscape wherever one fancied in the past. There are many barriers to movement—even on a horse—as soon as you move away from the hilltops—which were, at least at certain times, heavily forested in the past. Despite its gently rolling hills, Norfolk does not drain very well or very quickly in most valleys. In many lowland valleys there were bogs and mires, and there were also fens and bogs in higher valleys that lacked good drainage. Locations like these still exist today around Dereham and Saham Toney (see Figures 4.6, 4.7, & 4.19). Furthermore, in one episode of colder, wetter weather during the Iron Age, evidence points to bogs that were rapidly accumulating, impeding drainage even further as the build up of plant material in a valley bottom further inhibited drainage, slowly changing gradients of the valleys to cause further accumulation of water in a bio-mechanical feedback system. This, itself, led to more or less circumscribed routes and crossings being established and used in prehistory, which, it can be assumed, were widely adopted during the Roman period (Robinson & Rose 1983: 10). The next section considers some of these routes in greater detail.

It is important to describe about these connections within the landscape, and the ways in which architecture, at a focal point within the landscape, communicates power using these sites, like hillforts, that are very obviously evident, in order to better understand locations that may have the same pull yet are much less evident. Archaeologists have a tendency to draw on these highly evident sites for models of the past, yet as authors like Richard Bradley (2000) and Keith Basso (1996) emphasize, often other places (e.g. “natural” places, landmarks, etc.) may be as important.
It is important to describe about these connections within the landscape, and the ways in which architecture, at a focal point within the landscape, communicates power using these sites, like hillforts, that are very obviously evident, in order to better understand locations that may have the same pull yet are much less evident. Archaeologists have a tendency to draw on these highly evident sites for models of the past, but there are many less evident sites as indicated by some of the metal detected clusters that have a virtual absence of any surface features. Additionally, as authors like Richard Bradley (2000) and Keith Basso (1996) emphasize, often other places (e.g. “natural” places, landmarks, etc.) may be as important socially as monuments. Yet these other types of sites receive relatively little attention from archaeologists because of the obviousness of monuments. These ideas will be discussed more in the final two chapters, however, for now it is important to note that some of these characteristics of sites with a redistributive function for the provision of various types of power may be extant in less evident sites as well. The two may be complementary to each other in important ways.

Movement through the landscape: roads, droveways & tracks

Ultimately, one of the functions under discussion here is that of movement and connection in the landscape. In a way it is certainly a question of phenomenology, and many authors have been interested in questions of movement and visual and sensual perception in the landscape. This in turn raises clear questions about design, and leads us back to the reminder that even design is co-constitutive with pre-existing conditions and landscapes (Chadwick 2016).

Although it has long been assumed that many present day roads and those used by the Romans share some of their alignments with routes used in the Iron Age or earlier, this is difficult, if not impossible, to show (Robinson & Rose 1983). Additionally, previous studies that have tried to assess the importance of the known Roman roads in the region by testing for the proximity of the roads to certain types of finds, have proven unsuccessful simply because the sample of known Roman roads is quite small compared to what once existed (Hutcheson 2004: 41-42). Therefore, no attempt has been made in this research to use the proximity to known Roman roads as a criteria of statistical testing. However, they are included in many maps in this chapter, particularly those of the Iron Age/Roman periods for reference.

In general, there has been a growing discussion regarding the unspoken assumptions of including Roman roads in maps (Chadwick 2016), and in particular the enigmatic Icknield Way (NHER 1398), which despite prior questions as to whether or not it actually exists (Harrison 2003), continues to appear in even recent, regional syntheses (e.g. Rippon 2018, although he acknowledges and is aware of the debate). I have also included it in my maps. A brief discussion is warranted. Although it is not fruitful to discuss every road and droveway in Norfolk some of the issues surrounding the Icknield Way are interesting and more broadly applicable to how we think about transportation in the past more generally.
Fox, as earlier and contemporary authors did (Beldam 1868; Tingey 1901; Clarke 1924), discusses the Icknield Way and conceptualizes it as so obvious to the development of prehistory in East Anglia that he does not even need to comment on it (1923: 143). He writes of the Way, “Its importance for East Anglian pre-history has been frequently noted in this book directly or by implication, and need not be further emphasized” (ibid.). One of the pieces of evidence proffered for its existence from the Bronze Age, and possibly even Neolithic period, was the high number of monuments built along the “ridge”5 of chalk that comes up from the Chilterns in Cambridgeshire, crosses part of Suffolk and Norfolk along the Fen Edge, and makes its way to near Snettisham on the west coast of Norfolk where it nearby ends (ibid. 10-11, 14) (see also Ch. 4, Figure 4.4). The road was also used, variously, an explanation for the transportation of axes from the Neolithic flint mines of northern East Anglia to the wider world, and in later times, a significant factor in the spread of coinage (ibid., cf. Harrison 2003: 5).

Taylor (1979) was one of the first to question the wider implications of the existence of the Icknield Way, noting that in fact, settlements were mainly confined to river valleys and along the fen edge, which also fit the description of the Way. Yet even as early as the 1960s, the Way was considered “generic,” according to R. Rainbird Clarke, who wrote that “the course of most ancient trackways was somewhat flexible, and to label a particular modern road as an ancient highway is a rather dubious procedure” (Clarke 1960: 25). Yet Clarke also notes it would be difficult to explain the distributions of certain monument and find types in Norfolk without recourse to smaller trackways and roads that may have been seasonal. Harrison’s argument is not so much that the route did not exist at all, but that it is perhaps better thought of as a loose agglomeration of medium-range tracks from the Saxon period, and less likely—because of scant prehistoric evidence—to have existed in all its purported locations as a long-range track or roadway in prehistory and even in the Roman period (Harrison 2003: 18).

Adrian Chadwick argues that the entire focus on roads or tracks being merely a means of getting from one to place to another prevents a richer understanding of the dynamic ways in which people moved around and thought about the landscape (Chadwick 2016). Truly, such trackways were only linear in the simplest sense (Macfarlane et al. 2012), and as Chadwick emphasizes, “In small-scale communities, travels from place to place are rarely uneventful, functional journeys between two points” (Chadwick 2016: 111; cf. Weiner 2001, 17–18). Yet, without moving too far into the theoretical realm, this is easy to “see” in action. Oral histories from the pre-industrial northern East Anglian landscape are rich with examples of the ways in which trips we today view as trivial or “small” were important and could consume to what seems to us now as an outsize portion of resources.

For example, George Ewart Evans recounts how local horsemen, when they took their horses to larger regional markets, “rose very early in the morning—3 o’clock or even earlier—to put

5 Harrison (2003) also writes that this “ridge” while once a popular concept in English regional geography is scarcely mentioned in modern texts.
the finishing touches to harness they had perhaps oiled the night before, and to paint the horses’ hoofs with harness oil to make them look smart” (Evans 1993: 115). Leonard Aldous, one of Evans’s informants, explained how “these horsemen were so jealous, in a way, and particular about their horses that they wouldn’t put another piece of harness on belonging to another horse. Each horse had his own harness; and if it couldn’t be spared to be sent down to the shop for repair, the horseman brought it himself, got it seen to, and took it back ready for work the next day” (ibid.: 117). Likewise, brass components of the harnesses were polished highly in a time consuming process, (Evans 1960, 1993). Even farmers, the informants made clear, were as picky. Other preparations were also undertaken, such as braiding the a horse’s tail and mane in different styles for summer and winter, often with fine ribbons. George Sadler, another informant, recounted how this process often took half an hour to complete, and that “there was never a horse went out unless that tail was done up” (Evans 1993: 78). The horses’ coats were also brushed until they shone, and their coats were sometimes treated using herbs including tansy and byrony to aid this goal (ibid.: 77).

One could write much of the elaborate customs surrounding horses in the region, including the extensive “horse magic” and rituals farmers and horsemen undertook to ensure the good behaviour of even their most capricious beasts (Evans 1960, 1966, 1993). However, suffice it to say that going from point A to point B entailed a great deal more, socially, than the act of traveling, alone. It is important to note this, because this way of life has all but vanished in East Anglia—and in much of Britain. The modern fuel economy of vehicles means being able to drive practically all day without stopping, if you do not want to. It also, fundamentally, means being able to travel all day without interacting with anyone or the wider world on the road between point A and point B. The situation today is totally non-concomitant with behaviour even 40 years ago. The impetus towards signalling social class and identity, while traveling, then may seem muted to us today. However, even in the recent past, people used to dress more nicely for occasions of traveling, and particularly when traveling by air.

We are reminded further that roads were not only for going between communities, but were in and of themselves communities (Chadwick 2016: 111). Evans wrote in 1960:

“At the present time not a horse is to be seen on the stretch of road… The long tradition of horse traffic is now almost completely broken: the blacksmiths are all dying out; the harness makers and the old ‘horse’ tailors are almost as rare; and the posting and baiting houses along the road are now hardly distinguishable from ordinary pubs. The road bears few signs or little visible evidence of the colourful community that once bowed along it…” (Evans 1960; n.p.).

Within this frame—of communities, of the expressions of social identity on the road, and of the time and care taken with regard to these issues in the past—it is interesting to note

---

6 Several popular British TV programs are based upon this premise, alone.
that some of the finest Iron Age material culture from Norfolk relates to horses and to travel (Hutcheson 2004). After coins and brooches, terrets, or rein rings, and various other types of copper-alloy materials related to horses, are the third most commonly found objects in the NHER/PAS datasets. Although most terrets found in Norfolk have been discovered as singles—that is, not in hoards, or at least not initially identified as such—it is thought that while in use, they would have occurred in sets of five—with four smaller rings and one large ring placed at the centre of the yoke. Both the “Stanwick Hoard” (discovered 1843) and the Yorkshire cart burials—where all six burials contained five terrets (apart from one grave which was damaged) and suggest the outline of a paired yoke—confirm this configuration (MacGregor 1962; Stead 1991a: 50-52).

Up to now, the most recent and comprehensive work available on the subject belongs to Hutcheson (2004), although more distant work, heavily reliant on historic sources, exists as well (Leeds 1933; Ward Perkins 1939; Clarke 1951; Clarke & Dolley 1955; Barber & Megaw 1963; Manning 1972; MacGregor 1976; Palk 1984, 1991; Smith 1994; Davies 1996). In general, because both single finds and hoards of horse gear are found by detectorists or by chance on ploughed land lacking stratified context, dates instead derive from excavated hoards of horse gear and graves, of which there are several good examples: Polden Hills in Somerset (Brailsford 1975), Stanwick in Yorkshire (MacGregor 1962), Santon in Norfolk (NHER 5663) (Spratling 1966, 2009), the Yorkshire cart or “chariot” burials (Stead 1991a, Hutcheson 2004: 28), and the Ringstead hoard (Clarke 1951). These objects are also known for their presence, as hoards, assemblages, or single finds from sites where metal working may have occurred including Ashill/Saham Toney (NHER 8712). Typologies of terrets tend to have a broad overlap, and may date from the third century BC to the mid-first century AD (Palk 1984; Hutcheson 2004). Ringstead may be the earliest example in Norfolk, though Hutcheson (2004: 61) dates this hoard earlier than Clarke (1951)7.

All told, while these finds are not necessarily associated with roads or trackways—as roads or trackways are not, strictly speaking, necessary for horses—Hutcheson did find a small connection between the finds’ locations and proximity to extant Roman roads (2004: 88). She stated that “roughly a third” of all finds had occurred within 200 m of a Roman road, and therefore could have fallen off in transit. Frankly, I think this explanation could easily fall within Richard Bradley’s catalogue of “accidents,” or his list of somewhat implausible practical explanations used to justify certain types of single finds and hoards (Bradley 2017: 8-9).

While it is certainly possible, accounting for nearly a third of the assemblage of items as casual losses that simply flew off a chariot in transit strikes me as somewhat unlikely. Several Appendix I uses NHER’s dating scheme based upon Clarke 1951, though Hutcheson has made the case that Ringstead, based on analogy with East Yorkshire, may be as early as the second century BC.
metal detecting sites have unearthed single terrets or other horse gear only to find later pieces at the same sites. Examples include Cranwich (NHER 1039) where between 1987 and 2012 two ring-and-loop type terrets were found along with a two-link bridle bit, Loddon (NHER 17808) where between 1994 and 1997 two terrets and a fragments of a bridle bit were found, Brampton (NHER 1124) where between 1995 and 2000 two terrets and a harness mount were found. All of these sites comprised fairly dense metal detected scatters from multiple periods and/or represented later Roman settlements or towns. Less than five metal detected find-sites in Norfolk have only one terret and no other metal detected finds. Therefore, it seems likely that terrets tend to occur in areas where people are working with horses and/or metal—one of these major areas. It is obviously impossible to tell if single terrets may have been “votive” or not, however this would not be so hard to believe.

As oral histories illustrate, there was a closeness in the pre-industrial world between smiths, harness makers, and horses. Certain types of metal production went hand in hand with horses until the first third of the twentieth century, and it seems likely that horse and “chariot” gear would be relatively common items in these types of cultural ecosystems, possibly also as special deposits. At the same time, being on the road, or moving through the landscape suggests more than mere transportation or movement. This was an important venue for exchanging ideas about yourself in the wider world.

Furthermore, as broader landscape studies indicate, there are certain other places in the world that act as a conduits to human movement and which facilitate a meeting of ways. This, again, is the affordance of the landscape as offered by geological and topographic potentials of in culmination with cultural factors. Fox’s model, for example, proposes that certain areas of the landscape, because of their relative affordances, would tend to induce greater amounts of interaction among humans (Fox 1923). These locations included the ways that followed the contours of hills, the saddles and cols of valleys where river crossings would have been better facilitated, and the bundles of tracks that tended to go across ridgeways and deeply incise the landscape on the descent (ibid.: 142). Roddons—or the dry, raised bed of ancient watercours-es—are another really clear example of this in Norfolk in the fen region (Godwin 1978). The Fen Causeway (NHER 2796) Roman road is built, in places, along a series of roddons, and therefore meanders to an extent.
Figure 5.24: The linear earthworks of Norfolk with Black Ditches, Suffolk, included. These may form a system of Iron Age or Saxon defense or territorial marking. All numbers NHER.
Figure 5.25: The Launditch and its immediate setting. The ditch may have originated in the Iron Age, though this remains uncertain to a degree. The borders of the parishes and the boundary of the watershed are both illustrated as well. All numbers NHER.
The linear earthworks of West Norfolk

As well as movement through the landscape becoming more circumscribed and formalized moving from prehistory into the historic period, there is also a debate as to the extent that Iron Age boundaries may have ossified in the Roman period and remained important during the Saxon period. The linear earthworks of West Norfolk provide an interesting example.

In 1946, the Society of Antiquaries recommended that local societies invest time in studying linear earthworks, among other features, owing to the relative ease of surveying and excavating them with few people or resources (Clarke 1955: 178). Cyril Fox, William Palmer, and T.C. Lethbridge had already spent quite a large amount of time investigating the Cambridgeshire and Suffolk system of dikes comprising Devil’s Dyke, Fleam Dyke, Bran Ditch, Car Dyke, and the Black Ditch (Fox 1922, 1923b; Fox & Palmer 1923, 1924; Fox et al. 1926; Lethbridge & Palmer 1929; Lethbridge 1958), and they determined they were from the Late Roman to the Early Anglo Saxon periods, though no similar research had been carried out on the West Norfolk dikes at that time. Although it was assumed that most linear dikes in Southern Britain were of a similar age, research undertaken by the Wheelers at St. Albans and Hawkes at Colchester indicated that linear earthworks could come from the Iron Age as well (Wheeler & Wheeler 1936; Hawkes 1937).

Since the 1950s, then, the West Norfolk dikes have seen a number of research programs, some of them recent, that have also cast doubt on the monuments being primarily Anglo-Saxon in date, and they may also be from the Iron Age (Clarke 1955; Lewis 1957; Wade-Martins 1974; Reid & Wade-Martins 1980). As Wade-Martins emphasizes in the most recent publication on the matter, the topic is, however, an unresolved debate (Wade-Martins 2016). The Bichamditch (NHER 3937)—“Devil’s Dyke” identified as the Bichamditch mentioned in a landscape charter in AD 1053 after excavations by Williams in 1923 (Clarke 1955)—and the Fossditch (NHER 1089) were of particular interest because of their alignment with each other and also with the Black Ditches (NMR 1065078) just across the border in Suffolk (see Figure 5.24). The great antiquity of the ditches and dikes was already well established, as many of the parishes in the region take their borders along the edges of the monuments, and in 1923, following excavations by Williams, the “Devil’s Dyke” was identified as the Bichamdich, mentioned in a landscape charter in AD 1053 (ibid.).

Excavations and survey undertaken in 1949 by R. Rainbird Clarke, showed further evidence of a large, previously known Roman settlement at the southern terminus of the Fossditch just against the River Little Ouse. In the section where the Fossditch crosses through the settlement, excavations illustrated that it clearly contained a number of Roman ceramics and coins, and was thus initially dated to the fifth century AD, similar to the Cambridgeshire dikes (ibid., Wade-Martins 1974: 36; Malim et al. 1996). Excavations between the 1950s and the 1970s on

---

8 Nearly all of the dykes and ditches take the colloquial name devil’s, making this somewhat confusing.
all of the ditches provided similar dates (Lewis 1957; Wade-Martins 1974; Reid & Wade-Martins 1980).

However, archaeological work in 1980 by Andrew Rogerson cast doubt on the age of the Launditch. In an excavation near Salters Lane, Rogerson found a series of 94 post holes running parallel to the Launditch, 25 m from it, the remains of what seemed to be a kind of palisade. At the bottom of 20 of the post holes, Iron Age ceramic sherds were found, indicating that perhaps an earlier Iron Age boundary had been drawn here (Wade-Martins 2016). Additionally, in the late 1990s, an excavation where a haul road for a nearby gravel pit was being constructed, showed that the Roman Fen Causeway road cut over the fill of the ditch. This could be taken as additional evidence of an earlier date, however, as Wade-Martins notes, the road in this area has never been conclusively dated (ibid.: 331; Aswhin & Flitcroft 1999). As the previously mentioned debate on the Icknield Way demonstrates, these issues can be contested (hotly), as roads and movement form such a pivotal part of the narratives of the region “worked” in prehistory. Wade-Martins has taken issue with both Williamson (1993: 69) and Davies’s (1996: 76) assertions that the Launditch (and by association the other dikes/ditches in the area) is definitively Iron Age in date (Wade-Martins 2016: 333). Wade-Martins firmly maintains that the five ditches are all Saxon in date, and that, as Clarke stated in the 1950s, they are probably complementary but not related, as the ditches face in contradictory directions.

Similar debates as to whether the Cambridgeshire dikes follow Iron Age or even earlier alignments have already been noted in Chapter 4. The position of the ditches through rather dense (for Norfolk) distributions of important monuments and sites, including their proximity to the major Late Iron Age ritual/metal working site at Saham Toney, have led Davies to believe the dikes of Western Norfolk delimit important Iron Age boundaries in the region (Davies 1996, 2008). Wade-Martins maintains this cannot be known without further excavations, but notes that because the ditches have been obliterated in most places, this would be challenging (Wade-Martins 2016: 332-333).

Concluding remarks

This chapter has considered the monumental landscape of Norfolk. Far from being nearly devoid of monuments as it is today, by the end of the Iron Age, there were substantial and well established monumental landscapes around Norfolk. These Neolithic and Bronze Age landscapes were discussed in terms of their topographical placement and arrangement. Although people living in the region shortly before the Romans arrived interacted with these older monumental landscapes, they themselves have not passed on a reputation for any great proclivity towards monument building.
In contrast to Wessex and other areas of western Britain, Norfolk does not have many hillforts (though it has more than neighbouring Suffolk). The siting of later, Iron Age hillforts was discussed in regard to the dominant pattern of settlement and activity in the Norfolk’s river valleys. It has been illustrated, with recourse to terrain analysis in QGIS, that although Norfolk has more hills than one might initially estimate (for a region with a reputation for relative flatness), there are many hills that have not been utilized for hillforts. Interestingly, the topographic settings of Norfolk’s hillforts are not very different from many other areas of Britain, and as the Oxford Atlas of Hillforts demonstrates, these occur in a wide range of situations in contrast to the dominant Wessex model of hillforts.

This has lead to a wider discussion of the ways the affordances of the landscape may be important to the provision of power, and the peculiar arrangement of hillforts in regard to later medieval sites, including priories, was considered in some detail. Finally, the chapter has concluded with some reflections on both movement via trackways and roads and blocking movement or delimiting space with earthworks and dykes, a debated feature of Norfolk’s prehistoric landscape.

This conversation continues in the next chapter, where Norfolk’s hoards and votive deposits are considered with regard to the landscape at the end of the Iron Age. Furthermore, the analysis of Norfolk’s monumental landscape helps with the discussion about memory and the use and re-use of older monuments in Chapter 7.
Figure 6.1: An open pool in the bog near Roydon Common. Locations like these may have attracted "votive" and hoard deposits, particularly in the Early to Middle Bronze Age. Locations later shifted to include more settlement and special contexts in the Later Iron Age. Photo by E. Aines.
THE LANDSCAPE OF HOARDS

Introduction

In the previous chapter, Norfolk’s reputation for a lack of monuments in the Iron Age was discussed, noting that there are a certain number of hillforts, inscribed tracks, linear earthworks in the landscape, though fewer than elsewhere, resulting from social configurations different from other parts of Britain. Chapter 6 presents another facet of Norfolk’s later prehistoric landscape, analysing the distribution within the landscape of Norfolk’s metalwork hoards. These hoards and other single-finds of high quality bronze, gold, and, from the LIA onwards, silver—part of a long tradition of high quality metalwork in the region stretching from the Bronze Age into the Early Middle Ages— are particularly dense in parts of East Anglia. A hallmark of Norfolk’s Iron Age, notably, are the Late La Tène style artefacts found in the region in densities only equalled by those around and in the River Thames in the southeast (Hill 1999; Worrell 2007).

Part of this rich tradition relates to the other two rich traditions in Norfolk and Suffolk: agriculture and metal detecting. With more arable land than anywhere else in Britain, East Anglia provides more opportunities for metal detectorists, and consequently the region has, as discussed in Chapter 2, the highest density of metal detected finds anywhere in England and Wales. However, on another level, as Andrew Rogerson put it, the metal detectorists would not
have anything to find if there was nothing there. In this way, Chapter 4 raised the possibility that northern East Anglia’s rich tradition of metalwork—notable for a region that has no metallic mineral wealth of its own—relates to its good farmland, the possibility of putting large acreage under the plough in combination with higher average populations than other parts of the island, and its broader connections by many rivers to the interconnected North Sea.

This chapter looks, partially, at the concatenation of these factors in the locations where hoards occur in light of the re-emerging consensus in archaeological literature about the ways in which geography plays a role in where these activities are located in the landscape (Hutcheson 2004, 2007; Bradley 2000, 2017). It provides a summary of the pattern of hoarding in the region over the Bronze Age and Iron Age, while focusing primarily upon the Late Iron Age, as a way to provide different scales for thinking about the utilization of the landscape over time. Furthermore, two facets of this pattern are highlighted in particular: the spatial and the temporal clustering of hoards. These aspects, made clearer with cluster analysis and summed probability dating, can elucidate several features of hoarding as a social phenomenon and the broader circulation of metals over the course of Norfolk’s “social timescale.”

Furthermore, this chapter presents an analysis using both descriptive and inferential statistics into the locations of hoards as opposed to other types of metal detected find-sites, with a particular emphasis upon the Late Iron Age, and questions whether it may be accurate to classify the locations of hoards as particularly special from a topographic point of view. Indeed, tests of difference on these distributions seem to indicate that, contrary to expectations, the topographic description of many hoards does not seem terribly different, in the period, from the locations of other, contemporary Late Iron Age sites. Simply put, a researcher has to make quite a stretch to definitively show many of these locations are “special” with regard to testable phenomena within the GIS model. This lends itself to a brief discussion of the differences between ritual and functional interpretations, and a discussion of the ways in which people might have thought about and perceived the Late Iron landscape. Finally, this leads us into the penultimate chapter of the dissertation on Norfolk’s Late Iron Age landscapes of memory.

Some difficulties with single finds

At a very basic conceptual level, it is difficult to more broadly study, from the point of view of metal detected objects, the phenomenon or phenomena that include but are not limited to the deposition of hoards as groups of objects. These phenomena are perhaps closest to what we might describe as a form of sacrifice, though on a more detailed level this may be a difficult definition. Everyone agrees that many single objects may fit the same or similar criteria as objects in hoards—that is, they are intentionally and probably ritualistically deposited or cast away in various locations without obvious intent to ever recover them. As Chapter 2 discussed, simply from a modern legal standpoint this definition causes some tension, but in other ways,
archaeologists have struggled to come up with a compelling definition for “votive depositions”
or these hoards-of-one-object, as they may appear (Bradley 2017). For example, brooches
(Haselgrove 1997; Jundi & Hill 1998; Mackreth 2011; Adams 2014, 2015, 2017), terrets (Hutch-
eson 2004, 2007), and other types of “common” Iron Age objects, including miniatures (Farley
2011) and coins (Briggs 2011; Talbot 2018) are metal objects that have been found deposited
in a special manner in well-excavated contexts throughout Britain.

Although I spent a lot of time thinking about how to look at metal detected datasets for
these types of single objects, it is, in fact, very problematic in practice. Simply put, there are
very few criteria for identifying this type of intent from single, unstratified metal detected
objects that originate from ploughsoil. Certain single objects, as discussed in Chapter 1, such
as the Oxborough dirk (NHER 51682), the Congham scabbard (NHER 20427), or some of
the brooches found at Woodcock Hall (NHER 4697) all seem to have very obvious marks of a
“sacri
fi
fical” ending. In the case of all three examples, “peri-mortem” damage seems to indicate
the objects were altered (‘destroyed’) before or at the same time as they were deposited. In the
case of the scabbard and the brooches, as well, patination on the objects themselves, the soil
they were found in, and their locations when found seem to indicate the objects were dumped
into streams or bogs. These are all classic hallmarks of Later Prehistoric metal depositions.
(Bradley 1990).

It is easy to pick out the special examples, but it is very difficult for the majority of sin-
gle-finds to identify anything “special” about the object at all, other than the fact that as the
result of a complex chain of actions, one person parted with it (either intentionally or acciden-
tally) and one person found it 2000 years later. On a very basic level, neither the PAS nor the
NHER use the term “votive deposition” as a find type, though both include “Hoard” and “Coin
Hoard.” Therefore, to identify every instance of a potential “votive deposition” a researcher
would have to individually assess around 13,000 records by hand, and even then, many of the
records would not have enough information to make a determination.

Brooches, as an Iron Age find type, cause a fair amount of consternation in this regard,
because some sites do illustrate incredibly dense distributions of brooches—which have been
found from a variety of “ritual” contexts around Britain and Continental Europe—sometimes
which even show intentional damage such as crushing, as at Woodcock Hall (Davies 1999).
Yet there are many archaeologists who interpret dense fibulae distributions as a normal conse-
quence of occupation and activity in the Iron Age. Special cases have to be identified through
stratigraphic relationships, so there may be no way of telling the difference between a metal
detected distribution of brooches intentionally deposited into pits and 300 years of occupation
and people losing brooches. Additionally, it can be difficult, except in the fullness of time,
to recognize a scattered hoard. Around 25% of Bronze Age hoards, for example, have been
discovered in multiple episodes sometimes over several decades. This in itself raises another
interpretive difficulty, because many hoards do seem to cluster in the same locations. It is apparent in several locations from the reported distributions of objects that there are multiple hoards in one location being discovered over the course of decades!

There have been so many hoards and single finds of a votive character (e.g. intentionally damaged before deposition or deposited in a watery grave) that they are getting difficult to keep track of, although recent studies have tried to fill gaps (Lawson 2018). At one level, the confusion in tracking these finds and presenting a unified picture of them is not the fault of individual researchers. Until there is a unified catalogue for all these hoards—which at present there is not, though de Jersey and Haselgrove offer good catalogues for coin hoards—it is very challenging to fully assess the corpus of material. As Chris Evans noted in conversation, this is true on a broader level as well. For example, there is currently no one service that a researcher can go to find distribution maps of a given class of artefact (C. Evans pers. comm. 2018). Every attempt has been made to ensure inclusiveness and to exclude duplicates from the dataset used for analysis, though these duplicates are intentionally listed in Appendix I and are noted on distribution maps in this chapter when relevant.

So, as of now, the data structure for a large scale study of individual metal finds does not exist, and even if it did, there are some major interpretive hurdles that I am not sure can be overcome for non-stratified finds. These single finds can provide interesting data about the landscape and they can be useful for mapping where Iron Age activity or activity in other periods occurred, but they may not largely be a good fit for studying Iron Age ritual in a systematic way that does not rely too much upon conjecture.

Summary of Later Prehistoric hoards

In total, there are approximately 212 records of hoards from the Early Bronze Age to the Late Iron Age in Norfolk as of April 2019 recorded in both the PAS and the NHER databases (Appendix I: Later Prehistoric Hoards of Norfolk). It is important to note that these are the records, and they overlap to a small degree. For example, NHER has a meta-entry for “the Snettisham Treasure” (NHER 1487), while PAS lists several of the hoards (though not all) separately. Philip de Jersey, however, lists 22 different hoards under “Snettisham” in his book (de Jersey 2015: 310). Furthermore, hoards may be added to over time, leading to addenda later being recorded as additional PAS records and treasure inquiries. For example, over the course of August 1997, members of the Sedgeford Historical and Research Project found a cow bone filled with 20 “Gallo-Belgic-E” gold staters, and an additional 19 coins of the same type were found again in September (PAS 509995; Dennis & Faulkner 2005). Seven coins of the same type had previously been found on the site in 1997 (PAS 2760), probably from the same hoard, but were

The PAS ID numbers used in this chapter and Appendix I are internal PAS numbers linked to their records and are not widely used elsewhere. These can still be used in the URL for each hoard record online and are furthermore searchable by their names as listed in Appendix I.
disclaimed as treasure. Thus, there are two distinct records of the hoard. In other cases, such as at Shernborne, near Snettisham, there were at least two Late Iron Age coin hoards, potentially more, located near the site of a later Roman temple, recorded in three different records (PAS 2766; PAS 2868; NHER 23504). In other cases, such as two Iron Age coin hoards found in two discrete locations in the same area in Shouldham Parish, two hoards may be recorded under one record (NHER 56729). In some other cases, it is unclear whether new finds should be an addendum to an older hoard or classified as a new hoard in the same cluster.

Therefore, out of 212 records, it can be said that approximately 155 of these are unique locations. Neither of these figures—the 212 records or the 155 locations—accurately represents the true number of hoards there are. This ends up being quite a difficult question to answer in a straightforward way without over-stating the evidence.

Of these hoard locations, a majority contain a hoard or group of hoards that dates to the Late Bronze Age (77) and the remaining largest group date to the Late Iron Age (59). Hoards from the Early Bronze Age (2) and Middle Iron Age (none) are the rarest. There are only two Early Bronze Age hoards (NHER 685, a hoard of two decorated flat bronze axes with bow-hammered flanges, found in 1977 while gardening outside Norwich; NHER 29875, a hoard of Early Bronze Age axes found while metal detecting on a multi-period site near Hingham) and there are ostensibly no Middle Iron Age hoards apart from Middle Iron Age artefacts found in the Snettisham hoard and other hoards (NHER 1487). Some of the finds in the Snettisham hoards, for example, date from 300-50 BC and were probably deposited around the beginning of the Late Iron Age when the region began to shift its metalwork emphasis toward new forms of material culture including coins (Joy & Farley in press). This is generally concomitant with relatively very low deposition of metals during the Middle Iron Age in general, though obviously many of the torcs in the Snettisham hoard were made at the end of the Middle Iron Age.

Otherwise, there are a handful of hoards on the cusp of the Late Bronze Age/Early Iron Age divide, including a Llyn Fawr Phase harness mount and fragments of swords from near Wendling in 2009 (PAS 281105), and a slightly larger handful of earlier Middle Bronze Age hoards. By far the largest remainder is Late Iron Age coin hoards and a smaller number of torc, horse harness, and mixed hoards. Late Bronze Age hoards are likewise well represented, consisting generally of fragmentary and broken tools and weapons. Most of these contain exclusively copper-alloy objects, though some like NHER 42656 from Foxley Parish, a hoard of seven Late Bronze Age peninsular gold bracelets, contain other metals. Some of the Late Bronze Age/Late Iron Age hoards, such as the Snettisham Bowl Hoard, which may have contained between 6000 and 8000 Late Iron Age coins (PAS 2767), are among the largest hoards in Britain (de Jersey 2015: 311).

Generally, as noted in the introduction, it is not within the purview of this research to analyse the contents of each hoard or provide a detailed catalogue of the items in them. For
Bronze Age hoards, which are generally used as a temporal backdrop in this research, Lawson (2018) and Pendleton (1992) provide a fairly comprehensive overview. Needham (1988) also discusses the selective deposition of certain objects in hoards from the period. For terrets and horse gear, Hutcheson (2004) provides a reasonable overview and also addresses hoards of other kinds elsewhere (2007). Joy and Farley’s forthcoming publication on Snettisham will provide a comprehensive publication of that set of hoards, and Davies’s forthcoming catalogue of the remains of Iron Age Norfolk will provide a comprehensive catalogue of many of the other objects. Talbot’s (2017) study on Icenian coinage provides an excellent overview of coins in the region, also covering coin hoards, and as previously mentioned de Jersey (2015) and Bland (et al. 2020) provides an overview of all the Iron Age coin hoards in Britain including those in Norfolk.

What many of these studies lack, however, is an overview of the landscapes in which hoards tend to occur and how these relate to contemporary Iron Age activity in the surrounding landscape. Furthermore, while Hutcheson’s appraisal of the landscape situation of many of the hoards she discusses is excellent, it seems to primarily rely upon the visual inspection of distribution patterns and does not effectively use statistical tests of difference or regression to assess the locations as compared to the locations of other known artefacts. As discussed in Chapter 1, however, this may have been discussed more fully in Hutcheson’s dissertation.

When tests of difference are effectively used to compare these distributions, instead of revealing the unique character of the sites of hoards, it shows that, in many cases, one has to plead a special case for why the locations of some hoards are unique. This is another reason why visiting a site is important, but should also give us pause to consider the criteria for how we interpret the site when we do visit it.

Obviously, some very special cases can be highlighted—such as those mentioned in the introduction in Chapter 1—and indeed, Richard Bradley has made a very effective industry out of these types of comparisons (1980, 1998, 2017). However, when we look at the entire corpus of locations for both hoards and non-hoard metallic objects, their topographic locations are virtually indistinguishable from each other. The reasons why, which are discussed later in this chapter, become a fascinating story about place making. This research argues, in one way, that the topographic, geographic locations of hoards are actually some of the least special things about them. The locations of hoards are special because of what they are socially tied to in the landscape.

To summarize the two major groups of hoards (those from the Late Iron Age and those from the Late Bronze Age), it can be said that, of 59 total hoard locations from the Late Iron Age, the setting of hoards is as follows (categories may overlap):
Late Iron Age locations

High locations:
- 33% of LIA hoards are on hills (20)
- 13% on higher, boulder clay hills (8)
- 8.5% on lower, chalk hills (5)
- 5.1% on hills or rises overlooking the sea (3)
- 5.1% on hills overlooking the confluence of a river (3)

“Watery” locations:
- 25.4% are located in a river valley (15)
- 8.5% are in coastal marshes (5)
- 5.1% are located along the fen edge (3)
- 22% overall are associated with fens, bogs, or marshes (13)
- 17% associated with areas where rivers gather or originate (10)
- 8.5% on major watershed lines (5)

Connected locations:
- 45% are associated with later Roman activity (29)
- 17% are associated with areas where Roman roads cross a river (10)
- 85% are visible (less than 1.5 km and intervisible) from contemporary Iron Age find-sites (50)

Late Bronze Age locations

High locations:
- 32% of LBA hoards are on a hill (30)
- 14.3% are on a boulder clay hill (11)
- 9.1% are on a chalk hill (7)

“Watery” locations:
- 27.1% are in a riverine location (25)
- 20.8% are in a fen or marsh (16)
- 19.5% are located at a spring or source (15)
- 6.4% were placed near the confluence of a river (5)
- 5.3% were placed on an island (4)
- 2.6% are located at a major watershed line (2)
CHAPTER 6

Spatial clustering

Given the high density of metal detecting in Norfolk, it is possible to observe some of the ways in which hoards tend to cluster both spatially and temporally. This first section considers clustering in the landscape, and the next section, following examples of this clustering, explores the temporal clustering of hoards.

Firstly, in terms of their spatial distributions, hoards even from disparate periods tend to cluster in the same locations. Out of the total number of hoards from the Bronze Age to the Iron Age, one of the major predictive factors of where a hoard will be is the presence of another hoard within <2 km. Of the 155 known hoard locations, a minimum of 26% (41) of locations are less than 500 m from the location of another hoard/group of hoards; 32% (50) are within 1 km, 55% (86) are within 2 km, and only 10% (16) are greater than 5 km from another hoard location. Only three hoards, or around 2%, are as far as 9 km from another hoard. As mentioned, many of these locations have multiple hoards (such as Snettisham), and therefore the actual number of hoards that cluster will be higher than the percents and counts presented here.

It is possible to complete a nearest neighbour analysis on the locations of hoards, which examines the distances between each point and the closest point to it, and then compares these to expected values for a random sample of points from a complete spatial randomness pattern over the same area. In this analysis, the mean observed distance between hoard locations was 2.17 km, whereas a completely random distribution of the same number of points would be spaced at 3.13 km. The index, z-score, and p-value of this analysis are 0.69, -7.2, and <0.0001 respectively, which indicate that the distribution tends towards a clustered nature (0 is perfectly clustered, 1 is perfectly random), and that we should reject the null hypothesis that the distribution matches a spatial randomness pattern (Hodder 1971; Donnelly 1978; Getis & Boots 1978). For comparison, when we allow locations with multiple hoards to be counted multiple times, the mean observed distance drops to 1.29 km, the nearest neighbour index drops to 0.49, and the z-score drops to -14.31 (p-value <0.0001). For comparison, the mean distance between all prehistoric metal detected finds, which also tend to cluster, is 341 m, and the nearest neighbour index is 0.65 (p-value <0.0001).

There are two caveats to this analysis. The first is that it works best over an even area (e.g. a rectangle), which the region of Norfolk (and any real life scenario) is not. The second caveat is that because the county border bounds the sample, there could be other hoards just over the county line that could lower the distances for some of these hoards’ nearest neighbours. Instead, they may have higher values than in a non-bounded system.

There are eight examples of these clustered locations given throughout the next section, though there are, in fact, other areas where clustering occurs as well. Figure 6.2 shows these

---

2 Exact test unavailable. See Chapter 3 for discussion of appropriate statistical tests.
Figure 6.2: The major clusters of hoards, from all later prehistoric periods: Snettisham (Figure 6.4), Fincham (Figure 6.12), Saham Toney (Figure 6.14), Thetford (Figure 6.5), Great Ellingham (Figure 6.10), Carleton Rode (Figure 6.9), Brampton (Figure 6.7), and Cawston (Figure 6.8). Brandon Parva is discussed in Chapter 7, and the Norwich cluster is primarily Bronze Age and therefore not discussed in this chapter.

There are several possibilities as to why this clustering occurs, and they may be mutually inclusive of each other. The first possibility is that hoards are simply one of the “residues” of past settlement and activity in the landscape. In this model, hoards occur wherever people were active in the past, and they are uncovered at a certain rate as a function of metal detecting activity and geology in a given area. For example, areas with deep alluvial layers would probably show a low density even given high metal detecting rates. Areas with high numbers of hoards in the past and high levels of metal detecting in the present will see this number increase over
time as a function of more metal detecting given conducive geological conditions. Detectorists themselves tend to return to productive areas, so more hoards will be uncovered in these areas and other areas that may also have hoards may go undetected as a result of this preference to return to known sites rather than search for new ones.

Over time, this will cause some areas to remain, in combination with other factors such as land ownership, as explored by Katherine Robbins and Mary Chester-Kadwell, relatively undetected and thus never subject to further archaeological scrutiny. Many of these clusters share a common feature in that they have had some form of excavation that was triggered as the result of unusually high stray finds or metal detecting “success.” This is true of Snettisham, Saham Toney, Thetford, and others. Unfortunately, many areas like this can also be shown, or suspected, of having high rates of nighthawking and the illicit sale of antiquities. Even in cases when these illegal objects are later discovered, detailed information about the locations from which they came and the circumstances under which they were found is not often forthcoming. However, it is possible to envision many other hoards, possibly also clustered, in uninvestigable areas where people also lived in the past. These have been shown to include, somewhat frequently, cities and towns (Pendleton 1992). Bronze Age and Iron Age hoards have been found in Thetford, Great Yarmouth, and Norwich (see Appendix 1).

The second possibility is that these areas are “numinous,” to use Meskell’s phrase (Meskell 2003). They are locations that because of exceptional beauty, exceptional past focus, or cross-culturally evident features—such as the presence of notable springs, meres, etc.—are selected again and again as the landscapes of hoards. These locations may be either natural, cultural, or a mix of the two. Many of these locations show a long-term cultural trajectory that arcs towards ritual. Often, there is a Bronze Age or Neolithic feature, such as a monumental landscape that was the focus of burials or hoards in the past, and this location is later re-selected for special, cultural emphasis such as the placement of hoards in the Late Iron Age, followed by the placement of shrines or temples in the Romano-British period, followed, sometimes again, by the placement of moots, meeting places, or burials in the Anglo-Saxon period. Several of the clusters mentioned fit this criteria as well—particularly Saham Toney/Ashill, the area focused around Narborough, and most certainly Snettisham, as well—and open up interesting discussions about memory, landscape, and the formation of power.

A third possibility is that certain areas are “expedient” to the deposition of hoards. This possibility, as raised by Rundkvist (2015), is very similar to the idea of numinous landscapes. In these cases, hoards or depositions occur in areas like springs or rapids, again and again, because they are available and tempting areas to throw things, no matter who you are or when you live. The cluster outside Great Ellingham offers this possibility, potentially. Although medieval hoards have not, generally, been mapped in this chapter to avoid too much clutter, they are included in the GIS set used for this analysis, and the hoards cluster at Great Ellingham
THE LANDSCAPE OF HOARDS

includes a number of Bronze Age hoards and several thirteenth century AD coin hoards, all of which have been deposited in an area that may have once been near/in a bog and which is still the gathering ground of one of the tributaries of the River Thet. It is probably not reasonable to assume people in the thirteenth century had any knowledge of the Bronze Age hoards or any cultural, ritual connection to the locations of Bronze Age hoards, and yet here, in an area of about 1.5 km$^2$, there are many hoards from both periods. The supposition here is that the landscape in this location was somehow expedient to the deposition of hoards.

Each of these landscape possibilities obviously overlap in many cases, and there is no point in trying to classify each location as one or the other, or even really to insist upon this analytical framework as the only potential option. Fundamentally, hoarding is a social phenomenon, and like all other social phenomena, we should expect it to cluster. In effect, it would be much stranger if hoards were randomly placed around the landscape and displayed no spatial connections to each other.

Yet a fourth scenario we have to consider is the possibility that these concatenations of multi-period hoards are purely coincidental. While there are elements of objects being coincident with each other in these other scenarios, the landscape is seen as a tie between two different behaviours separated by time, as we have explored in the previous chapters. In a purely coincidental grouping, however, the landscape would have no bearing upon the placement of hoards. Though this seems somewhat unlikely for many of these groupings, it is a stronger possibility in others, such as the aforementioned cluster in Great Ellingham. Potentially, instead of being either numinous or expedient, the two groups of hoards—Bronze Age and medieval—were deposited in the same location for reasons entirely unconnected to each other and the landscape. Additionally, we have to keep in mind that, to a degree, interpretation of clustering has been influenced by areas where little or no metal detecting can take place (e.g. Thetford Forest, Stanford Training Area, etc.).

One issue that has come up recently, with regard to the placement of hoards, is the possibility that they were not hidden or “deposited” in the landscape at all, but placed in full knowledge in open pits or out in the open and potentially left in full view of many people (Ballmer 2016). It is also possible that the knowledge of past hoards placed in the landscape remained current for years afterward through mnemonic devices in the landscape itself or stories and oral histories shared among a family or local community. They may have also been marked by trees, stakes, or other impermanent signs that have now been lost (J. Joy pers. comm.). Certain locations associated with cultural memory may have shifted over time from “natural” places to those areas increasingly associated with ceremonial sites that may have been controlled by certain groups in a given society (Ballmer 2017). Therefore, knowledge of hoarding locations may even be more direct than a tenuous bond to the landscape through what it affords. There may, in these instances of hoards being found very near to each other (not simply within the same 2 km$^2$), be known locations where hoards are left.
Figure 6.3: A major cluster of hoards near Snettisham (see Appendix 1 for more information). *N.b.* The Sedgeford Hoard, although found in two pieces, was not found on two sides of the Heacham River as shown. The locations of hoards may sometime be different on map given grid reference protection.
Snettisham cluster

One major example of the phenomenon of clustering is at Snettisham where, between the River Heacham and the Ingol, in area approximately $3.5 \times 8$ km, a large number of hoards and find-sites believed to be associated with those hoards have been found. These are from multiple periods spanning the Bronze Age to the Roman period. The most famous of these are the Iron Age hoards from Ken Hill (Figure 6.4) containing more than 170 torcs, coins, and other objects deposited sometime at the beginning of the first century BC and found between 1948 and 1990 (Allan 1948, Brailsford 1951; Clarke 1954, 1957; Clarke & Dolley 1955; Burns 1971; Stead 1990, 1991a, 1991b, 1995; de Jersey 2015; Joy & Farley in press). However, more than three Late Bronze Age hoards containing both fragmentary and complete socketed axeheads, gouges, chisels, spears, knives, sword blades and hilts, and ingots have also been discovered in a long series of chance and metal detecting events between the 1770s and today (Armstrong 1781; Cromwell 1819; Clarke 1952; Lawson 2018), though metal detected and chance finds recovered between the 1960s to the 1980s including a “continental antenna-hilted sword” remain unpublished. It is unclear exactly how many hoards these items represent due to their dispersed nature and the spread out nature of their discovery. Additionally, large Iron Age and Roman coin hoards have been found in the area along with a Roman so-called jeweller’s hoard (de Jersey 2015; Johns 1997; Bland et al. 2020). Along with evidence of a large Late Iron Age/Roman enclosure, this location comprises one of the densest scatters of prehistoric to Roman
Figure 6.5: A cluster of activity, including hoards, at Thetford. The name of the town indicates the importance of the crossing. A Roman hoard, the famous Thetford Treasure (NHER 5853) has been included from near the site of the Iron Age enclosure, probably then the site of a Roman temple.
hoards anywhere in Norfolk. It is also one of a number of Iron Age “ritual” sites in East Anglia with prior Bronze Age activity and later Roman religious and ritual activity. Other sites of this type include Narborough in Norfolk (see Narborough Cluster) and Mutlow Hill in Cambridgeshire along the line of Fleam Dyke (Neville 1854; Fox 1923; Fox & Palmer 1924; Malim & Brück 2000).

**Thetford cluster**

The Thetford cluster of hoards is interesting, and will be discussed slightly more in the next chapter on memory practices, because while there are Iron Age hoards and potential depositions in the area, it has a significant amount of other known Late Iron Age activity including a large multi-variate ditched enclosure of some special focus at Fison Way, excavated 1980-1982 (Gregory 1991b). The large enclosure, which seems to have been used for a variety of “industrial” and “ritual” functions, may have been the site of feasting in the Late Iron Age (Ralph 2007: 87) (See also discussion in Ch. 7 in the section, Living with the dead). Here, on a hill raised slightly above the bend at the confluence of the Rivers Thet and Little Ouse, there was also a Bronze Age cremation cemetery, and the possible remains of a Bronze Age round barrow (NHER 5745) with a possible Roman barrow (NHER 5744) just adjacent. Just across
from the Iron Age enclosure, the Thetford Treasure (NHER 5853), a fourth century Roman hoard of spoons, finger rings, silver strainers, among other objects was discovered illegally by a metal detectorist in 1979, and by the time it was reported, the site had been built over (Johns & Potter 1983). It may have been the site of a Roman temple dedicated to the god Faunus (who may have been associated with spoons) (Watts 1988).

There were two other hoards nearby from the Early to Middle Bronze Age located to the north of Gallows Hill. Additionally, the river crossing, near where the Nuns’ Bridges stand today and near where the Thet and the Little Ouse join, a group of finds possibly representing depositions into the river were found. These include a seventh century BC Cowen’s Thames type Hallstatt derivative sword (NHER 28985) and a Middle Bronze Age Acton Park phase looped palstave (1500 to 1300 BC). Another find, a Late Bronze Age decorated bag-shaped chape with two rivets, was also found nearby and with the same encrustations as the sword and palstave, leading the Norfolk County Museum to conclude the finds may have been deposited on the site in river dredgings and later built over. Therefore, while not a hoard, these three finds represent fairly obvious examples of potential “votive depositions.” The confluence of the river is significant, and the crossing here, Nuns’ Bridges (NHER 46326, 46327, 46481), and the site of the supposed Icknield Way (Edwards 1964), was also significant from at least the Middle Iron Age onward, when the nearby fort was thought to have initially been built, and certainly in the Middle Ages, when Thetford Castle (NHER 5747) sat over the site (Figure 6.6). Today, its bailey still dominates the site. The largest in England, the bailey is also the second largest man-made mound in England after Silbury Hill. The much earlier Bronze Age and early Iron Age activity on the site indicate that the area was long the focus of special activity.

Just to the north-west, along a small creek that enters the River Little Ouse, the Santon Late Iron Age hoard (NHER 5663), was presumed to have been found (Smith 1909). Although it was originally ascribed to Santon Downham (Suffolk) mistakenly, it is now thought the hoard, primarily of a smith’s tools, a batch of new and repaired brooches, and enamelled horse gear including a harness and a linchpin, came from Norfolk. It was found in 1897 (Clarke 1934; Spratling 1975, 2009).

The fact that the area became a town shows that it is an excellent aggregation site, and the long-term focus on the site is not necessarily exceptional, though it is interesting. Unfortunately, because it is an urban/suburban site, very little is known about what other Bronze Age and Iron Age activity might have taken place in the area, other than some excavations (Davies 1993). Finds around Thetford, including a number of flint implements from nearly every period, indicate the area was often if not continuously peopled in the past.
**The Landscape of Hoards**

**Brampton and Cawston Clusters**

These two clusters (Figure 6.7 (Brampton) and Figure 6.8 (Cawston)), are both located along the upland continuation of the Fen Causeway Roman road that leads from Denver towards Brampton and Caistor St. Edmund (NHER 2796). There are areas along here of both high and low metal detecting (lower at the Roman fort (NHER 21849) and much higher just to the west and south of Brampton, north of Hevingham). Again, the area along the road seems to have been densely populated in the Late Iron Age and Roman period, and the later hoards in proximity to the fort and Roman town at Brampton are not surprising in the least. However, there is also a notable density of Late Bronze Age hoards, including the Hevingham Hoard (NHER 36973), and a large Ewart Park LBA/EIA hoard of the “waste… of a metalworker” in the parish of Wood Dalling (PAS 834069; NMS-B0FEF9).

A large scattered hoard (NHER 7396) was found on a new housing estate in the late 1960s, which included socketed spearheads, a barbed spearhead fragment, socketed and faceted axes, a socketed hammer and fragments of a flanged disc and sword and rapier blades (Clough 1971). It was located on a slight rise just above the River Bure approximately 1 km across the river from a large Neolithic/Bronze Age cluster of monuments including a round barrow cemetery and two hengiform monuments, one of which may be a very large causewayed enclosure visible in the area of a number of other archaeological anomalies evident through cropmarks (NHER 36457). Just down the Bure from here, at least two more hoards were found between the Bure and the King’s Beck (NHER 52906/PAS 280299 and NHER 24343). These are in an area of unusually dense Neolithic monumental activity that seems to be associated with the confluence of the tributaries of the River Bure (this is quite similar to the cluster in Norwich that is not reported here). Both hoards are on the smaller size, though the former—the Oxnead Hoard—contained a high proportion of knives and swords, including a Thorndon knife, among approximately 30 other objects. Just across the Bure from here, the Hevingham Hoard (NHER 36973) was discovered. Notably the hoard, originally found in 2002, contained the two halves of a mould for socketed axeheads, as well as two complete socketed axeheads and a socketed hammer (Powell 2014). This hoard is similar to others in Norfolk (NHER 500 at Norwich and 58729 at Hempnall).

On the other side of the Bure from the Roman town at Brampton, just where the road crosses the river, a Late Iron Age coin hoard of 16 Gallo-Belgic E staters were found scattered between 1991 and 1992 (de Jersey 2015: 283). This hoard is interesting, because it was found in the immediate vicinity of a double concentric ring ditch and six smaller ring ditches (NHER 31741, not shown on Figure 6.7). It is not known whether the larger concentric ring ditch is a Bronze Age barrow, but the size of the smaller ring ditches on the site seem to be consistent with Roman hut circles. There is also a large, linear type enclosure here, consistent with a cursus, but in the vicinity of so many Roman features, likely to be Roman as well (Massey 2001).
Figure 6.7: A cluster of activity, including hoards, near Brampton.
THE LANDSCAPE OF HOARDS

Figure 6.8: A cluster of activity, including hoards, near Cawston.
CHAPTER 6

No excavations or further archaeological observation has taken place here, but this find-site may represent one similar to the coin hoard (NHER 3953) mentioned in the Fincham/Nar cluster, akin to a small coin hoard found at Mutlow Hill, Cambridgeshire (Fox 1923).

The Cawston cluster (Figure 6.8) includes a small hoard (PAS 2754) of Freckenham flower type gold staters, reddish in colour indicating a high copper content to the gold alloy. They were found by two detectorists in 2017, scattered just outside the cropmark of the Roman fort (NHER 21849) that sits on the watershed between the Wensum and Bure tributaries, and quite near a Late Bronze Age hoard (NHER 51514) of 13 fragments representing at least three spearheads, a tubular ferrule and a knife. Just north of here, where a tributary of the Wensum gathers, two other Late Bronze Age hoards (NHER 41976 and 42594) were also found.

Carleton Rode cluster

Much like the cluster at Fincham, the group of hoards around Carleton Rode seem mostly unrelated and the consequence of settlement and occupation over a long period in the area. Here, on a raised portion of the ground approximately 100 to 200 m from the watershed of the Thet and the Tas (leading to the Yare), in July 2004, a small, Late Iron Age hoard of two terrets and a fragment of a harness mount were found scattered in a field (NHER 39434).

In the adjacent field, in October 2007, metal detecting uncovered a hoard of a linchpin head, two linchpin feet, the handle from a Roman vessel, and a possible Roman sceptre handle (NHER 51343). In the field just south of here, an unusual Late Iron Age/Roman strap-fitting was found along with a potential Iron Age scabbard chape. The groupings are undoubtedly related, but located in a locally sparse area of metal detecting. While there are large Roman and medieval groupings of find-sites 2 km to both the east and west, the area of the Iron Age hoards seems to have been only metal detected or surveyed in the three adjacent fields reported here, and one immediately north that only returned medieval and Roman artefacts. Other higher elevation, watershed hoards are discussed in some of the other clusters mentioned in this chapter.

Just to the north-west of this hoard grouping, along the River Tas, there are at least two Late Iron Age coin hoards both located in the immediate gathering ground of a small tributary of the Tas. The smaller of the two was only two coins, found accreted together—East Anglian silver units of pattern-horse type (PAS 2876/2775 IARCH-A8334D). The larger hoard is known as Forncett St Peter (PAS 1384), was found by metal detectorists in multiple episodes between 1996 and 1997, including 14 coins found at metal detecting rally. Later, a detectorist found 369 coins and the sherds of a wheel-made globular beaker were found nearby, possibly a container for the hoard (Chadburn 2006, hoard 54; de Jersey 2015: 290). The hoard included 44 denarii,
Figure 6.9: A cluster of activity, including hoards, near Carleton Rode.
Figure 6.10: A cluster of activity, including hoards, at Great Ellingham. This cluster includes medieval coin hoards (not shown) found in the same area as the Bronze Age hoards.
including silver Republican denarii (*ibid*). These hoards are not particularly surprising, given the otherwise high numbers of Early Roman find-sites in the area, indicating this a high population at the end of the Iron Age.

There are also a number of Late Bronze Age hoards following roughly the same contour above the River Tas including the Carleton Rode hoard (NHER 10022), which was found in 1844 while digging a ditch. The hoard contained more than 22 objects, including ten socketed axes, two winged axes, one spearhead, one palstave, one hammer, two chisels, and five gouges. The Bunwell hoard was found scattered just east of here over several years in the 1980s, and contained mainly tools and scrap, classified as a metalworkers hoard, though notably also containing an annular collar (NHER 17474).

**Great Ellingham cluster**

Another good example of spatial clustering of hoards in Norfolk include a group near Great Ellingham between Attleborough and Hingham, in a 1.5 x 3 km area centred on a tributary of the River Thet. This cluster includes two major groups of hoards. This cluster of hoards spans two primary periods—the Bronze Age, shown on Figure 6.10, and the thirteenth century AD, evident from a cluster of coin hoards in the same 2 km², not shown.

The first includes a cluster of Late Bronze Age hoards including a hoard of 26 cake fragments—either slag or raw material—and a socketed axe (NHER 51148), a hoard of copper alloy objects, including six socketed axeheads, one socketed gauge, ingots, and two joining sword fragments, a sword hilt, and various metal working debris including casing jets (NHER 31588). These first two were found over several years by detectorists, and it is unclear how many hoards (if more than two) these scatters may represent. Another hoard (NHER 54009) included socketed axes and sword blades were recovered from ploughsoil and had originally been deposited in a square pit cut into the natural oranges clay. Pieces of woven cloth and the remains of a wooden plank were visible in the pit. Later, nine other fragments were attributed to this hoard as well. Four socketed axeheads were also found just south, and may have also represented a scattered hoard (NHER 30938). The finds here are part of a large scatter of metalwork and other objects including ceramic and flint found by detectorists since the 1980s (Gurney & Penn 1997). The area shows very dense occupation during all periods in the past. There are at least four records in the Portable Antiquities Scheme located here, as well, though it is unclear how many of these (beyond one obvious) are duplicates, as the scattered hoards have been identified only in the fullness of time. Just north of this scatter, one of Norfolk’s few Early Bronze Age hoards (NHER 29875) was found in 1997 by a detectorist. The hoard consists of four EBA flat axeheads and is located on the crest of a hill overlooking a tributary of the River Tiffey, not far from Crownthorpe Roman Temple (NHER 8897), and overlooking Wicklewood Mere and Hackford Marsh.
Interestingly, the second grouping includes a cluster of medieval coin hoards deposited sometime before the mid-thirteenth century AD (NMS-8A5BC3; NMS-20BF31; NMS-1064D3; NMS-EDF534; NMS-6FBC80). It is open to debate as to whether or not the two clusters, separated by almost 2000 years yet overlapping in space were somehow connected to each other, however this type of recurrence is fairly common and has been noted previously in other archaeological contexts (more on this shortly). Topographically the area is very similar to a number of nearby fens and meres that form at the heads of valleys in this region of Norfolk, feeding small tributaries of the Thet and the Yare, including nearby Old Buckenham Fen, Scoulton Fen, Sea Mere, and Wicklewood Mere. While the area where the main cluster of LBA/medieval hoards are may not have been a mere, as it lacks the requisite chalk geological setting, it may have been a slow draining marsh or bog, as the area is cut with several drainage ditches today. Therefore, both sets of hoards may have been deposited in watery areas.

**Fincham/Nar cluster**

The main grouping of hoards at Fincham sits in an area of the densest metal detecting activity in Norfolk. Within approximately 3 km², there are three Late Bronze Age hoards, and at least three Late Iron Age hoards. Dense settlement is evident in the area through both scatters of ceramics and the widespread scatters of metalwork and flint objects from all periods. The
THE LANDSCAPE OF HOARDS

Figure 6.12: A cluster of Late Bronze Age and Late Iron Age/Roman activity near Fincham. The number of hoards here, primarily coin hoards from the Late Iron Age and several Bronze Age hoards deposited into what may have been “watery locations” in the past, is not surprising given this is the densest cluster of prehistoric metal detected find-sites anywhere in Norfolk.
main scatter of hoards sits on either side of the Fen Causeway (NHER 2796) (Silvester 1991) near where it crosses the line of the Bichamditch (NHER 3937) which bends up toward to the Iron Age camp at Narborough (NHER 3975).

The main group of Iron Age hoards is at Shouldham, on a prominent chalk hill overlooking both the fen edge, to the north, and the tributaries of the River Wissey, to the south. Here, at least two discrete Late Iron Age coin hoards (NHER 56729), recorded in multiple PAS records, were found as well as Roman and Late Iron Age fibulae. The hill is widely visible throughout the surrounding area and from the locations of contemporary Late Iron Age settlements, and a later Roman villa or settlement (NHER 28645) lies just west of the hoards and downhill slightly, near the gathering spot for a small tributary of the River Nar (Figure 6.11). This area, between Shouldham and Marham is now drained, but the area, which yielded many Iron Age artefacts including Late Iron Age fibulae and horse gear, would have sat just on the edge of the fens during the Roman period. There is also extensive evidence of Anglo-Saxon inhumations in the area around the Roman villa/settlement. Two other Late Iron Age silver coin hoards were found nearby (NHER 30039 and 30049), the latter of which includes a rare coin of Prasagustus. Like the other find-sites in the area, these also had many other objects around including silver-working waste, bracelets, and gold coinage (Davies 2000). Two other Late Iron Age hoards were found just across the stretch of fen that would have been here in the Iron Age, one where there would have been an island, at Wormegay—a small scattered hoard of Gallo-Belgic E staters (PAS 513493)—where there is also a priory, and another small, silver coin hoard at Pentney (PAS 51190) (de Jersey 2015: 306, 340). Furthermore, in 2012 a small hoard of four East Anglian silver units (one plated with a copper-alloy core) were found in the immediate proximity of a Bronze Age ring ditch (NHER 3953; PAS 2772); this is just to the west outside of the group on the map. This find is discussed more in the next chapter in regard to its similarity to a small coin hoard found at Mutlow Hill in Cambridgeshire in the nineteenth century (Fox 1923b).

A small Late Bronze Age hoard of a socketed-axehead, the fragment of an axehead blade, and metal working waste (NHER 29491) and a slightly larger hoard of four axeheads and the fragments of two swords (NHER 33343) were also found in the same location not far from the two Iron Age coin hoards outside Fincham. Several of the objects still had wood or wooden fibres in their hafts when they were found near a well-incised, ancient waterway (NHER 50474). The Lode Dyke now drains the area. The Late Bronze Age hoards were all deposited in an area that, without drainage, may have been seasonally or permanently swampy at the time.

The cluster at Fincham probably best represents a group of hoards that are unrelated to one another, yet all deposited in an area that was very well connected with the surrounding landscape and probably also had a sizable population for periods of later prehistory. The
connections in the area are represented by the later Roman road and the broad potential for movement through the fens, which the three medieval priories in the immediate area (Shouldham, Marham, and Wormegay) undoubtedly also took advantage of.

Saham Toney cluster

The area, near the village of Saham Toney, is centred around one of Norfolk’s high points, with the “plateau” at the top of the hill sitting between 70 and 87 m. This is one of the high spots in Norfolk without a hillfort, as discussed in Chapter 4. The area is described by Gregory as a “peninsula”3 (1977: 9) between the Wissey, Watton Stream (Figure 6.13), and is further bounded to the east by the Blackwater, a tributary of the River Yare. Here, along the Wissey, at least two Late Bronze Age hoards were found, including the Bradenham Green Hoard, a well-excavated hoard from the Ewart Park phase of the Late Bronze Age, found after a field walking survey (Hind & Bates 2010).

Although there is only one official hoard here on the hill above where the Bronze Age hoards were found, the area seems to have been the focus of special attention at the end of the Iron Age.

---

3 Snettisham has also been described as peninsula, possibly by Hutcheson (2004).
Figure 6.14: A cluster of hoards and other significant Late Iron Age activity near the villages of Saham Toney and Ashill. The hilly area, bounded by Watton Stream and the River Wissey, plays host to one of the largest densities of Iron Age find-sites in Norfolk.
Age, where a large, 12 acre ritual enclosure (NHER 8712) was found near Ashill during the construction of the Watton and Swaffham rail line in 1874 (ibid.). The enclosure, which seems to have been built shortly after AD 40 was the setting for a series of ritual wells or shafts, into one of which more than 50 complete ceramic vessels were deposited between AD 50 and 130 (ibid. 14). Enigmatically, the partial remains of a full-size bronze horse statue from the Roman period, which had been chopped up at some point in the past, were also metal detected from the site.

There was probably also a tumulus somewhere on the hill, although it was removed around the turn of the nineteenth century. Nothing was found inside, and it may have been a “spectatorium” (ibid.: 11). The area, which is mostly fields today, has a very high density of Bronze Age and Iron Age metal detected find-sites, many high status objects, and evidence of settlements. A copper alloy dirk with a riveted butt (NHER 8710) was found approximately 350 m to the south of the enclosure, and the tip of a Bronze Age sword (NHER 34627), thought to have broken in prehistory, was found near the Panworth Ditch (NHER1082) approximately 1 km from the enclosure. A Middle Bronze Age dirk with two rivet holes was also found (NHER 8710). Iron Age materials found in the immediate vicinity include a red and blue enamelled Westhall type terret with curvilinear decorations (NHER 16140), a protected loop terret (NHER 31828), and a possible Iron Age axehead (NHER 29432; report by J. Davies, unpub.). Iron Age gold coins have also been found in the immediate vicinity of the hill.

The main group of hoards found here, at Quidney Farm, near Saham Toney, (NHER 29429) included at least two hoards in distinct areas. This scatters were so blatant that a limited excavation was carried out here (Bates 2000). The first of these contained four complete transverse wing terrets and two broken or incomplete terrets of the same type (Davies 2000: 226-229). The second contained two bronze horse bits, a composite linchpin in the shape of a horse’s hoof complete with red-enamelled recesses, a pair of manacles—one of the only examples from Norfolk—and other fragments (ibid.; Hutcheson 2004: 110). The hoards here were associated with a significant amount of activity during the Late Iron Age, and a sizable settlement with metalworking activity would have been present on the site (Gurney 1996; Bates et al. 2000). More than 300 fragments of clay moulds and 44 crucible sherds along with associated finds of slag show that terrets may have been manufactured at the site (Davies 1999: 35).

Just to the south, another hoard of horse gear (NHER 15050) was recorded near Ovington, just outside of the High Banks linear enclosure (NHER 8745). The hoard, originally found in 1838, contained seven objects, including five platform-decorated terrets from the middle of the first century AD, an enamelled cruciform strap-union, and a cheek ring of the same style (Ward Perkins 1939; Taylor & Brailsford 1985; Hutcheson 2004: 33).

Just down the hill from here, at Woodcock Hall, along the Watton Stream, a large number of Late Iron Age fibulae were found in a significant scatter that has been both the focus of metal detecting activity and field walking over the years (NHER 4697). Many of the brooches were
CHAPTER 6

broken or crushed, and had probably been deposited at the site arguably between AD 30 and 50 (Brown 1986; Haselgrove 1997: 66; Davies 1996: 80; Davies 1999: 34-35). A large Claudian fort sits just above the site here, visible as a cropmark during an unusually dry summer in 1996. The fort was probably built to control the crossing of the Peddars Way at Watton Stream.

All told, this is one of the most significant Late Iron Age scatters in the region, and with the three Iron Age/Roman rectilinear enclosures in the area and the presence of the (presumably) later Panworth Ditch, it is possible that this area formed part of a significant polyfocal landscape in the Late Iron Age involving industrial, settlement, and ritual functions.

Temporal clustering and metalwork circulation

In addition to spatial clustering, hoarding in the region has been noted to be episodic rather than continuous in nature, as it has been throughout Europe (Bland 2015; Talbot 2017: 108). Therefore, the practice of depositing hoards displays temporal clustering, because they are not spread evenly through time; most known hoards tend to come from specific time frames. Due to the nature of how the material is dated, it is really not sensible to talk about fine-grained changes in the past. However, the coarse resolution does lend itself to longue durée approaches that look at trends over a large period of time.

To clearly observe the tempo of this phenomenon, it is possible to display as a histogram the summed probabilities for the possible dates of deposition for hoards and single finds based upon their typologies. As explained in Chapter 3, each typological phase assigned to a given hoard of the earliest possible date it could have been deposited (e.g. Ewart Park phase) has an assumed date (e.g. 800 to 700 BC or 750 BC ± 50). These dates are not very specific in late prehistory, apart from certain types of Late Iron Age coin hoards, and their typological dates tend to overlap. Therefore, there are a range of probabilistic dates in which a given hoard could have been deposited; there is a chance it could come from 701, 702, 703 BC, and so on. By simply taking all the dates and summing their probabilities, as first proposed by John Rick (1987) but for C-14 dates, it is possible to see the range of dates in which depositions are occurring more or less frequently. In such a way, it roughly shows the circulation of metalwork over time through the proxy of deposition. As mentioned in Chapter 3, proxy data result in an imperfect correlation with the quality or quantity of interest, yet can still contain useful information about the area of study. In this case, deposition may seen as a proxy for circulation.

Figure 6.15 shows the summed probability calendar dates of all the metalwork typological dates in the PAS database for Norfolk from the first introduction of metals until the Late Middle Ages. Three different data sets are shown: in dark blue, the records of all metalwork in the PAS from Norfolk from 2500 BC until AD 1400 are shown. In light blue, the records of all hoards in the PAS from Norfolk from 2500 BC until AD 1400 are shown. In pink, the records of both PAS and NHER hoards from 2500 BC until AD 100 are shown. The third
inclusion, that of PAS/NHER combined data, is necessary because a high proportion of Bronze Age hoards in particular were found prior to the inception of the PAS. A dataset that uses only PAS records will under estimate the density of hoards in the Bronze Age. In contrast, the PAS records of all hoards (light blue) also show a higher number of Late Iron Age hoards because they overlap with the probabilities of Early Roman hoards to a degree. However, because a full range of dates for all NHER items is not available, the PAS/NHER combined hoards group shows hoards out pacing the general circulation of metalwork in the Bronze Age, which is not actually true. Ideally, this graphic would also include a full summed probability of all NHER dates.

With the regard to temporal clustering, the data clearly show how hoards cluster during certain periods of time and, importantly, that this only occurs in periods that already have a high rate of circulation of metalwork objects. Yet despite this, the probability of a find from a given year having been found in a hoard is not overall relative to the quantity of metalwork in circulation. For example, of the finds whose typologies can include the date AD 30, around 24% were found in hoards, whereas of the finds whose typologies can include the date AD 724, only 15% were found in hoards. Therefore, the quantity of hoards reported from a given period is not fixed relative to the possible rate of deposition.

Furthermore, the deposition of hoarding is clearly shown to be episodic, not continuous. The first major episode of hoarding peaks around the end of the Bronze Age and beginning of
the Iron Age (*ca.* 850 BC—the most common Bronze Age typological date). The second peak occurs around 57 BC, with a third large, dispersed peak centred around AD 13. In all, the micro-data from the end of the Iron Age show four other episodes within the first century AD, leading into the Roman period. These four spikes are centred on AD 42, AD 51, AD 63, and AD 87 (*cf.* Garrow & Gosden 2008; Garrow *et al.* 2009). (Figure 6.16). Following the Roman period, there is a small peak centred around AD 715, and a long span of hoarding centred around AD 1247. Although not shown on figures 6.15 and 6.16, there is a final bout of hoarding in the lead-up to the English Civil War around the mid-fifteenth century AD, however, because data have not been included from the early modern period, the histogram drops steeply at this point, and the data have been truncated at AD 1400 to reflect patterns for which data have been included.

These micro-variations, although they are also the result of typological issues, show that while many models of hoarding in the Late Iron Age are events-based—centred around Caesar’s campaigns in Gaul, the Boudiccan revolt—events that explain the circulation or deposition of certain types of material, such as silver—there is actually a lot more going on than a simple, historically based events model accounts (*cf.* Talbot 2017, Harlow 2018). The typologies themselves originate from these original historical understandings, therefore, the histograms also reflect modern archaeological practice as much as past practice/events.

These peaks have been noted before in other studies, particularly in regard to coin hoards (Bland 2015: 217-219; Talbot 2017: 108), but it is interesting to see them reflecting
“independently” by recent metal detected materials as well. Bland also notes the strong tendency for spatial and temporal clustering of coin hoards, including at Hallaton, Leicestershire (ibid.: 219; Yates & Bradley 2010b). These types of clusterings lead Bland (et al. 2020), Yates and Bradley (2010b) to believe these types of depositions are likely “ritual” in nature and unlikely to have ever been deposited with the intent of retrieval, though this is a long topic of much debate (cf. Levy 1982). In contrast to Bland’s work, the sum probability histograms—as opposed to a bar or line graphs—can better account for some of the uncertainty built into the dates and therefore presents a slightly higher resolution version of issues he has already cogently addressed.

In the case of the hoards deposited in the Middle Ages, it is interesting to note the connection between the number of hoards deposited during the period as compared to the population at the time and the availability of portable metallic objects. The population during this time was greater than in prehistory, the circulation of metalwork was, during the later years, on par with much of the Roman period, and yet the proportion of hoards to the total number of depositions is low.

These graphs tell a broader story about what metal detecting data, in aggregate, represents and the ways in which, through temporal and spatial data, these finds relate to much broader cultural trends occurring in the world. This chart shows several trends that are observable throughout Europe such as the large accumulations of bronze at the end of the Bronze Age, the relative paucity of metalwork finds during the Middle Iron Age, the rise and fall of the Roman Empire, the turbulence in Britain surrounding the eighth century AD, and the steep curve of accumulation post-1300s leading up to the early modern period. It is further interesting to note that it takes centuries following the collapse of the Roman Empire for the production of certain types of metals (remembering these data largely only reflect copper alloys) to reach their former levels.

These graphs should not be taken to stand as a proxy for population of the region during this period, but instead reflect the rate at which metalwork was being deposited in certain periods and later recovered by metal detecting. Typologically speaking, it reflects the popularity, availability, and circulation of certain (predominately copper-alloy) objects. One cause of low popularity may be low population, but there are other potential explanations as well, such as scarcity of raw alloy materials, parsimonious recycling of available resources, or both during particular periods. Some of these data seem to map on to other proxies for population such as low settlement density, particularly during the Middle Iron Age. Interestingly, however, there is no appreciable drop in the circulation of metals during the period of the Black Death (AD 1340s). Carenza Lewis (2016), who used ceramic typologies as a proxy for population in

---

4 These dates are not wholly independent, as they are tied to typologies used throughout southern England. It would be interesting, by way of contrast, to compare the Norfolk histograms with histograms from Kent and Essex, as well.
fourteenth-century England, has argued that the drop in population following the Black Death was 62% in Norfolk, the highest of anywhere in England. In the summed probability dates of metalwork objects, by contrast, only an appreciable plateau is evident. Yet, it is important to note that the medieval period also has the highest median margin of error and broadest interquartile spread for typological dates (refer back to Chapter 2). Yet, in a way, this actually makes sense from one perspective, because although many people died during this period, their metallic objects did not die with them and did not, as suddenly as their former owners and makers, drop out of circulation.

We can also infer that objects of greater antiquity will not have survived to the same degree as more recent objects. However, this still provides an interesting chronology of the region somewhat independent from archaeological excavations and radiocarbon dating regimes because they are also based on the frequency of certain finds in ways that may be totally different from excavations. It would also be useful to compare with other datasets. For example, how would a summed probability density of radiocarbon dates from sites across Norfolk compare to the summed probability density of the metalwork items’ typological calendar dates?

At the heart of this issue are some deep, fundamental issues in archaeology. As a product of the identification regime over the years, it is reasonable to assume the total typological sequence is heavily influenced by existing knowledge and not really independent or necessarily even region specific. As mentioned, it would be informative to compare these dates with other methods of archaeological dating in a given region and look at how the chronologies match up. Using different proxies, you could come to differing understandings of a region. Furthermore, a critique of summed probability dating regimes of $^{14}$C dates has long been that sites dated using numismatic analysis, such as many Roman and medieval sites, would be underrepresented in a collection of $^{14}$C dates for a long time span from a given region. Using numismatic data could therefore be used to reach different understandings. However, comparisons with $^{14}$C dates would, at least in the Iron Age, be contingent upon calibration curve issues for the period overall.

The issue of identification stands writ-large in all this, and it is relevant to reflect back on Kristian Kristiansen’s (1985) scheme for the differential survival and reporting of artefacts in archaeological practice as mentioned in Chapter 3. There are the research biases, there are environmental, taphonomic biases, and there are recovery biases. So, in a way, thinking of these distribution patterns—both temporally and spatially—as being mainly influenced by prehistoric factors or mainly influenced by metal detectorists is overly simplistic. There are a host of other factors, and metal detected data, while different, are not a “separate” form of archaeological knowledge. The spatial distributions are novel (or at least different from excavated distributions), and they are very useful in determining large-scale landscape models. However, the typologies and identifications of the objects themselves are intricately intertwined with larger disciplinary concerns. There have been, for example, a variety of differing brooch chronologies proposed over the years, and older entries in the NHER database have not necessarily been
changed to reflect this. Thus, some brooches that were once thought of as solely Roman may now be thought of as Late Iron Age too. However, the original determination in the database as “Roman” has not necessarily changed to reflect this (A. Rogerson pers. comm. 2014).

Locations over time

Hoarding occurs on a punctuated, episodic basis over many centuries, so it is appropriate to wonder how much the locations themselves, as topographical entities, shift over time. It is possible to partially address this question by looking at a range of environmental proxies using difference tests comparing the distributions of metalwork and hoards over time. This reveals that finds from different periods do indeed tend to be situated in (somewhat) unique environmental niches, but the effect seems to generally be quite small, concomitant with small sample sizes in certain categories. While the non-parametric tests of independence and difference used here, such as the Kruskal-Wallis one-way ANOVA or Pearson Chi-square test as discussed in Chapter 3, allow for small sample sizes in the groups compared, these smaller sample sizes (for example finds from the Early to Middle Iron Age) tend to show lower strength of associations\(^5\). Nevertheless, the tests are still valid hypothesis tests.

Unfortunately, because of a very patchy knowledge of past settlement and imperfect knowledge about monuments in given periods, this type of analysis tends to be strongly geographical and less social in nature. Therefore, it is easy to compare the distribution of hoards over time with natural features such as elevation, underlying geology, proximity to a river, proximity to a spring, and so on, but very difficult to compare whether or not certain types of hoards are located near or far from settlements, for example, a factor that has been previously used to gauge whether or not depositions may be “ritual” or “mundane” (Levy 1982; Bradley 1990, 1998), though this has lately been discussed as overly simplistic (Bradley 2017; Rundkvist 2015). However, despite marking a clear dichotomy between ritual places and everyday places that prehistoric people may or may not have made, this type of analysis is also not possible on the full set of metalwork or hoards data. There are trade-offs. Studies that are able to be highly specific about social behaviour are not able to consider a full range of sites, whereas studies that use the full range of sites are not able to be highly specific about social behaviour. As discussed in Chapter 3, this one of the reasons why GIS projects that use a large area of study and a large number of sites may have been seen as environmentally determinist.

For example, when directly comparing Late Iron Age finds of all types, including hoards, with Late Bronze Age finds of all types, including hoards, using Fisher’s Exact Test—a good statistical test of independence when the expected group counts are lower than 5, as in some cases they are—shows that hoards from disparate periods differ with regard to elevation (2-sided sig. .008, Cramer’s V .196). With regard to the proximity of hoards to rivers of all Strahler stream orders, by contrast, they are drawn from the same distributions (2-sided sig. .598). However, Cramer’s V, as a strength of association using with the Pearson Chi-square test of independence, tends to produce low correlation measures even for highly significant results, regardless (McHugh 2013).
CHAPTER 6

when sites on the Fen Edge are excluded from tests (these are slightly strange sites as they are very close to water but may be some of the farthest from mappable rivers due to no elevation differences), the 2-sided sig. rises to .012 (Cramer’s V .326), showing that for inland sites, the distribution of rivers is significant with regard to the placement of hoards. Although post-hoc testing is limited for these types of tests, unlike other forms of ANOVA tests (that require homoscedasticity and normality of distributions, assumptions this dataset rarely meets), it is possible to use box plots to visualize the differences between groups. Figures 6.17-6.18 illustrate these results.

Many of the differences result from the Early Iron Age, which is only represented by two hoards. However, find-sites of other Early Iron Age (n = 32) in the PAS, provide a slightly larger sample that also supports these topographic observations. Generally, the find-sites from the Iron Age, overall, show a “spreading” effect over the landscape, whereby as the Iron Age advances, more and more different areas in the landscape are utilized. However, surprisingly, contrary to assumptions from excavations in the region that show people in the Middle Iron Age moving away from the fen edge to take advantage of the perched water table slightly higher up (e.g. Evans 2018), sites from the Late Iron Age illustrate the lowest mean distance from rivers at the lower elevations. This could be regional in variation, however, as Evans’s observations were in the Cambridge region (ibid.), while although similar to some parts of Norfolk, is quite different from the Brecks.

One of the most salient comparisons is between the Late Bronze Age and the Late Iron Age with regard to hoards. When we compare these two groups on their own, they are shown to be different in statistically significant ways for all categories below the .05 alpha level. While the two find groups sit in similar parts of the environment, for example they have the same range of elevations above sea level, the Late Iron Age finds, in contrast to many models of settlement during prehistory, have a significantly lower mean elevation. The same goes for proximity to large Strahler order rivers and rivers of all types.

The finds from both the Late Iron Age and the Late Bronze Age, however, do both share the same soil parents, fundamentally, with the most common soil type for both periods being diamicton—the famous boulder clays upon which Bronze Age people were supposed to be repelled from like vampires from garlic. However, metal detected data do not necessarily support these conclusions. They show unambiguously that people in the Late Bronze Age were utilizing the environment in slightly different ways than people in the Late Iron Age. This may be related to land clearance, farming, and graves—that is, it may have a variety of different influences and there is not one single factor that we can identify. Furthermore, it is only possible to track the circulation of metals via their deposition, and not for instance, settlement patterns more broadly, because there is insufficient data about settlements in both periods.
Figure 6.17 & 6.18: Histograms comparing distributions of finds with regard to elevation and proximity to rivers with a hypothetical, random sample placed in the same areas where metal detecting is known to have occurred. There are some statistically significant differences, but the effect size is quite small.
This is true for hoards, as well. Late Iron Age hoards, for example, tend to be closer by a statistically significant margin to rivers than hoards from the Late Bronze Age. The former also tend to be located at slightly lower elevations than the former. This mirrors the results of the total bodies of finds, so this is not particularly surprising. Though not surprising, it is interesting, because it shows the placement of hoards is related to the overall utilization of the environment. It would be more surprising if the locations of hoards remained fixed over time while other activities shifted around them.

There is also generally a weak, positive correlation between proximity to rivers and elevation with regard to the locations of hoards (Pearson's R: .227 at the .001 level of sig.), showing that hoards which are closer to water tend to be at lower elevations, and though further from water being at higher elevations.

**Late Iron Age hoards in the world**

Archaeologists have spent a lot of time looking at the locations of hoards, analysing them, and trying to figure out why their locations are special. What sets them apart? After all, the act of hoarding objects seems apart. The idea of special ritual places to do special, ritual things also fits closely with our modern world view, wherein the mundane world and the sacred world do not overlap. However, ritual and symbolism pervade everyday life in ways we often overlook (Brück 1999; Bradley 2005: 3; Chadwick 2012). While archaeologists recognize this, they have also still spent a large amount of time trying to figure out what sets the locations of hoards and other depositions apart, often productively (Yates & Bradley 2010a).

In this way, a type of tension exists between recognizing that in prehistory the mundane world and the ritual world overlapped, but that certain locations were still conceptualized as different or as appropriate to certain types of depositions. For example, Levy (1982) has demonstrated that in Denmark, certain hoards were placed near conspicuous landmarks (cf. Ballmer 2016). Fontijn (2003) has shown that in the Netherlands, certain types of depositions were placed in specific contexts, such as swords being deposited far from settlements, often in rivers. Farley (2011) argues that weapons were bound up with “powerful, transgressive identities” and needed to be set apart both in the landscape and socially (Farley 2011: 104). Yet she further noted that people did not always follow the rules (ibid.: 105).

A common thread that runs through these examples, however, is that they predominately come from excavated sites either from development-led archaeology or from excavations that have been carried out after a hoard has been inadvertently found. Yet few sites in Norfolk have this context, and further, as has been explored, the landscape of northern East Anglia has been so thoroughly scoured by ploughing that we have to be quite imaginative to understand how
the landscape may have been in the past. As further noted, when archaeologists use these very specific examples, they ignore other less-understood examples from the same regions, therefore overlooking a range of behaviour that cannot be conceptualized at the same scale or which does not fit their models.

As discussed briefly before, when looking at the overview of the locations of hoards—albeit on the larger, landscape-level scale allowed by the rough resolution of how metal detected finds are recorded—there is little to suggest that the locations of most of the Late Iron Age hoards’ locations, at least, were chosen specifically for their apartness. While the contexts of Bronze Age hoards do differ in statistically significant, albeit slight ways from the contexts of other Bronze Age find-sites, the locations of Late Iron Age hoards are practically indistinguishable as a group from the locations of all other Late Iron Age find-sites. Thus, one of the shifts in behaviour from the Bronze Age to the Iron Age does seem to be a greater emphasis on hoards and depositions happening in and around settlements.

In fact, unless Late Iron Age hoards were located in a groves of trees, thickets, or behind walls, fully 85% of extant hoards sites, as noted, were visible from contemporary Iron Age find-sites and people moving in the landscape. Generally speaking, one has to work pretty hard to make the case that the locations are “special” or marked as different from a range of other activities happening in the surrounding landscape. Hoards tend to be near water, particularly in the Late Iron Age—but so does everything. As Chapter 4 and 5 traced, activity centred around river valleys is the dominant mode for Norfolk. The locations of hoards are not different from this, and being located primarily in rivers, they are actually in some of the most connected and “public” locations possible. As Jody Joy said, this could be very similar to how modern-day churches are located in populated areas but marked as different by the graveyards around them; they can also be on the outskirts of towns. Thus, hoards may be the archaeologically visible manifestations of possibly more frequent and important activities that occur in the same places (J. Joy pers. comm. 2019, cf. Ballmer 2016, 2017). We can tell these locations are special by the activities that take place at them, but in terms of their comparisons with other types of sites, they do not have a specific environmental, ecosystem, or affordance niche.

Out of 895 Late Iron Age find-sites identified in the PAS, 223 or 24.9% were under 2 km apart and intervisible with a Late Iron Age hoard site. This means two people standing at either site would, in a heath or arable landscape, be able to observe each other with relative clarity unless they were obscured by a thicket, a grove of trees, or a structure. Moreover, fully 85%, or 50 out of 59 total Late Iron Age hoard locations, were within 2 km and visible from another “contemporary” find-site. In such a way, these sites were not particularly sequestered from the areas in which other activities were occurring in, and from what we know about contemporary settlement patterns more generally and in the decades after these hoards were deposited, they were mainly placed in areas that had relatively dense settlement and/or industrial activity.
Figure 6.19: Histogram comparing the proximity to rivers of all Strahler orders to LIA artefacts and hoards in Norfolk. Note the two share the same distribution.

Figure 6.20: Histogram comparing the elevations of LIA artefacts and hoards in Norfolk. Note the two share the same distribution.
Some of these places are clearly special, and sometimes, as will be discussed in Chapter 7, older landscapes were chosen as the focal point of hoards, but this tends to be rarer than the “average” case. By and large, rather than being apart, Late Iron Age hoarding practices were very much a part of the Late Iron Age social world.

However, 15% of Late Iron Age hoards were located in somewhat more “secluded” places that were not near other (known) contemporary find-sites. These hoards were typically not part of the clusters presented earlier. Four of these sites that lack intervisible connections to contemporary find-sites came from areas with very low surrounding metal detecting activity. Therefore, these sites may show no connections because no connections have been found. The other five hoard sites, however, were found in locations with a medium to high level of background metal detecting activity that recovered large amounts of medieval material, for example, but indicated little in the way of local, Late Iron Age activity. This may indicate that these sites were actually “secluded” from Late Iron Age contemporary activity. However, future metal detecting or archaeological survey or excavation near these areas could disprove this idea in future years.

When comparing the locations topographically, as well, by performing a test of difference between the two different groups (hoards and non-hoards), the two groups also do not appear statistically different, and they are drawn from the same underlying distributions with regard
to their elevation (2-sided sig. .986), their distance from water (2-sided sig. .554), and their soil parents (2-sided sig. .320).

Different object types, all from the Late Iron Age (e.g. terrets, coins, certain types of personal ornaments, toiletries, brooches, etc.) show the same lack of difference between groups with regard to topography as well. Therefore, in contrast to Fontijn’s (2003) Bronze Age work, for example, that showed different types of finds tended to occur in different settings, in the Late Iron Age of Norfolk, there is no indication of this occurring. While it is very unclear without stratified context if all, many, or any of these single finds are special depositions, brooches occur in the same types of areas as coins, terrets occur in the same types of areas as bracelets, and so on. While it is possible to topographically compare hoards from all periods (e.g. to compare hoards from the Late Bronze Age, Early Iron Age, Late Iron Age using difference tests) and find differences, these differences seem largely predicated upon the overall landscape context of the Late Iron Age. For instance, while Late Iron Age hoards do occur slightly nearer to rivers, as a group, than hoards from other periods, this seems concomitant with Late Iron Age activity in general (Figure 6.22 illustrates the overall pattern of activity during the Iron Age, including both hoard deposits and other types of finds.

While certain Late Iron Age find-sites, like the potential “votive” depositions at Woodcock Hall, demonstrate a clear focus on “watery locations,” in other cases there is very little basis for stating the Late Iron Age hoards generally or always show a predisposition for these locations more so than any other type of find-sites.

Figure 6.22: The metal detected signature of all periods of the Iron Age: Early (top), Middle, and Late (bottom). While several absolute gaps in the distribution exist around Thetford Forest and the Broads because of metal detecting bias, the overall picture that emerges does not contradict John Davie’s (1996) model of regional activity (cf. Ashwin 1999), but a band of sites along the upper tributaries of the Yare in the Early Iron Age may suggest there are more, unknown Early Iron Age sites elsewhere in the Broads, as Aldeby (see Ch. 7, Figure 7.7), the early iron working site (far left, top map, this fig.). Sites from this period are located at the lowest mean elevations and closest to rivers, so the absence of metal detected data from the broads may be significant re: this distribution.
in Norfolk. Again, this is perhaps an inapt comparison as Woodcock Hall has had excavations, whereas many of these other locations have not. Nevertheless, the Late Iron Age, in general, shows a greater emphasis on the river valleys than in other periods. This is partially the effect of simply having greater knowledge about the Late Iron Age landscape, as it is more evident because of higher populations and higher numbers of surviving artefacts. Yet, there is a very high probability of finding Iron Age find-sites near rivers, period. Therefore, while Hutcheson (2004, 2007) states that certain Late Iron Age depositions were placed with prominent views of rivers or the sea or so on, this statement can be made about greater than 80% of all Late Iron Age find-site in Norfolk. Hutcheson's work is not incorrect, but it lacks the fuller context of find-sites at large. 

In all, this interpretation fits in well with other research on Late Iron Age metalwork hoards, which shows, compared to the Bronze Age, a growing emphasis on marking settlements and their immediate environs (such as field boundaries) with depositions rather than distinctive “natural” locations out in the world. Julia Farley writes that the deposition of metalwork objects like brooches and terrets, in both hoards and as single deposits, may have infused these locales with special meanings and specific, local identities. It was also a way “for the inhabitants to construct their own identities and emphasize their social networks and contacts” (Farley 2011: 111). As Ballmer (2016, 2017) emphasizes, as well, this is part of a growing move from the Bronze Age onward away from special natural locations towards sites of growing consensus where collective memory was engaged with in a range of ways including depositions and hoards.

**Concluding remarks: the dark matter of prehistory**

As the last section emphasized, it is often difficult to determine why the locations of Late Iron Age hoards were special. So many studies of hoarding and deposition, based upon the Bronze Age throughout Europe, have highlighted the placement of hoards in dramatic landscapes, watery locations, or placed marked as otherworldly, prominent, and special. However, Late Iron Age hoards in northern East Anglia do not tend to particularly show this trait, and indeed, their locations seem to match up with the locations in the landscape in which normal, everyday activities were occurring. Although this dichotomy between ritual and everyday activities and locations may not be an appropriate way to view prehistory, there is no discernible difference between the locations of many Late Iron Age hoards and the locations of other types of find-sites.

Therefore, in some ways, as Julia Farley (2011) emphasizes, what makes the places in which hoards were deposited special is the act of placing the hoard there. This act of placing hoards as well as single depositions of brooches, terrets, miniatures, and the like, is an act of

---

6 This may also be a bias of the metal detecting, because arable land tends to sit in a specific affordance niche that is often near, but rarely directly on, a river.
place-making. The act creates these special places in many cases, and yet there is also a persistent and recurring theme in archaeological literature that the special places, too, predispose the act. Again, there is a kind of co-constitutive act through which the landscape makes people and people make the landscape. Yet even this model is too simple.

The ways in which metalwork hoards cluster spatially may, as discussed, indicate different kinds of social phenomena in the past such as selecting sites because they were numinous, having a cross-cultural allure or belonging to a specific genre or species of landscape that had specific connotations to people throughout prehistory. This process also involves one relating to social memory that must be discussed in greater depth. This chapter also mentioned that perhaps the clustering of hoards merely represents the areas where past people lived and worked, a residue of their activity, which more granular studies of metal detecting have little recourse to interpret without better contextual information. Perhaps hoards cluster because the landscapes were merely expedient; perhaps the concatenation is purely coincidental.

Although there is little possible discernment of the ways in which these locations were topographically different from other locations in which people were living and working in the Late Iron Age, there are hints of the deeper flow of meaning through the past landscape than is detectable using the somewhat rudimentary topographic tools provided by GIS. Even visiting a site of a hoard does not suddenly give us, through the homologues of our bodies, eyes that can see what Iron Age people saw and felt and knew about themselves and their places in the universe with regard to this landscape that they lived and moved and worked in. In the choice of these locations, there seems to be the detectable pull of other purposes that are not fully understood.

“Dark matter” was one of the terms Michael Shanks used to, in seminars at Stanford University, describe certain social behaviours that we could infer using theory or, ultimately, common sense. The presence of this dark matter could be detected by its influence upon the archaeological fabric, yet rarely by direct, observable evidence. This idea of dark matter, describes the effect of partially unseen social forces upon the form of the ancient world.

The gravity of this dark matter pulls these sites together, one of the possible causes of their clustering. The force can be inferred, yet we do not have completely satisfactory explanations for it. The temporal clustering, as well, implies social processes happening in punctuated equilibrium set against the backdrop of longer-term themes and symbolism emerging from earlier prehistory. This dark matter, at least partially in this case, implies a kind of social memory that must be accounted for, as well. The next chapter aims to add the last layer of complexity by considering the ways in which social memory is constructed and how landscapes become imbued with memory and the ways in which individual identity is informed by this relationship.

---

7 In this particular seminar he was discussing piracy in the Iron Age Mediterranean. The phrase does not appear in his published work, to my knowledge.
Introductory remarks: remembering not to forget

As the last chapter discussed, hoards—as well as the markers of other types of activity, both ritual and domestic—tend to cluster in space. Therefore, some of the most “popular” locations on a broad landscape scale for hoard deposits were landscapes that already had hoard deposits—or would in future times. The points where rivers or streams gather, the confluences of rivers, and the boulder clay and chalk hills overlooking these locations were widely used in the past as the locations for hoard deposits. This matches up well with the predominant theme of riverine settlement in the region throughout all periods of the past. Due to this focus, few hoard locations could be definitely said to be far from settlement evidence, although there is far less settlement evidence from the Bronze Age. For example, burnt mounds, a typical proxy for settlement in other Bronze Age studies of hoard deposits (Yates & Bradley 2010a; Rundkvist 2015), are relatively scarce in Norfolk, numbering slightly more or less than 100 total, whereas the total number of Bronze Age hoard sites has a similar figure.

Thus, locations could not be shown to be particularly sequestered or secluded from everyday activities, particularly in the Late Iron Age. Additionally, for hoards placed during the Late Iron Age, by the far the largest predictor of location was the presence of later Roman activity, in particular river crossings, temples or shrines, and villas, indicating some ways in which the
CHAPTER 7

Roman world mapped onto the Late Iron Age world in very clear ways. Hoard deposits, it was further noted, tended to cluster in time, illustrating a punctuated equilibrium somewhat different to certain types of domestic activity though very similar to certain types of monument building. Most interestingly of all though, Late Bronze Age and Late Iron Age hoards often occurred in the same landscape settings together in spatial groupings.

The persistent pull of social memory and imagination on the distributions of past objects, like hoards, was discussed within the wider frame of understanding metal detected distributions with all their biases. Consequently, it is important to consider the ways in which social memory is constructed; how landscapes become imbued with memory; how individual identity is informed by this relationship.

In this chapter, theoretical approaches to memory are discussed from a variety of philosophical, historic, sociological, and ethnographic sources, each with advantages and disadvantages. In particular, it will be noted that an important tie exists between cultural or social memory and place. Thus, sense of self can be related to sense of place (in the landscape, in the “universe,” or in the wider cosmological scheme of things). A sense of belonging in a place may also be related to certain ideas a society or group thinks (or imagines) about the past, or what Jan Assmann refers to as the “political imagination” (Assmann 1992: 111). In turn, we will consider how groups during the Late Iron Age could have used older monuments, landscapes, and the social sense of the past in novel ways and with a mind toward establishing hereditary or group ownership of certain landscapes. Groups and families can also use such landscapes, as examples from Iron Age Europe and the middle ages demonstrate, to aggregate resources by being important steps on trade routes or pilgrimages.

The ways in which the archaeological palimpsests observed at many sites in Norfolk are “rarely... accidental and innocent” (Van Dyke & Alcock 2003: 1) will be discussed with specific examples. Three different themes will be discussed with regard to memory in the ancient Late Iron Age Landscape. The first of these is the re-use of monuments from the Neolithic and Bronze Age in their Iron Age afterlives. The second section considers living with the dead in areas where Iron Age settlements were integrated into barrow cemeteries, and thinks about some of the ways in which concerns about hereditary control at the end of the Iron Age were made manifest in the landscape. The third section considers some of the ways people in the Iron Age used boundaries to mark both space and sense of time, and how hoard deposits fit in with Iron Age ideas about place-making and marking time.

Theoretical approaches to memory

The issue of collective memory in prehistoric archaeological contexts can be approached from a variety of theoretical sources, some more and some less appropriate to the task. Philo-
Landscapes of Memory

Sophical, historic, sociological, and ethnographic sources each have their advantages and disadvantages (cf. Lane 1994), though the first two approaches (the first based, at least in part on the second) place Western and somewhat anachronistic ideas at the fore. While other methods such as cognitive psychology and artistic expression present themselves, the focus here shall primarily be on the first four mentioned.

Maurice Halbwachs, the French philosopher, sociologist, and colleague of Émile Durkheim, presented some of the earliest and most complete writings on collective memory, later assembled in the 1952 volume On Collective Memory (Halbwachs 1992 [1952]). One of Halbwachs's most important contributions is the concept that memory is not possible outside of a social framework. Even individual memory and imagination are forms of social memory because they occur within the milieu of social influence (Halbwachs 1992: 49). Importantly, family, whether consanguine or fictive, forms one of the major loci of collective memory. Halbwachs writes, “No matter how we enter a family... we find ourselves to be part of a group where our position is determined not by personal feelings but by rules and customs independent of us that existed before us” (Halbwachs 1992: 55). Drawing on the work of Fustel de Coulanges (1864), Halbwachs illustrates how even religious expression, often seen to operate on a higher ideological level, finds its primary dissemination within the family (Halbwachs 1992: 63). Some sociological and historic models of memory, drawn from nineteenth and twentieth century examples, tend towards a top-down model, but Halbwachs clarifies the processes of memory at a variety of different levels.

Two of the most important historical studies of collective memory may be found in the work of Jan Assmann (1991, 1995) and Paul Connerton (1989, 2009). Assmann focuses on what he terms “cultural memory”, or the need for collective identity to reside in, and be passed on through, ceremony. Assmann also highlights the importance of memory landscapes, writing that “Memory needs places and tends towards spatialization” (Assmann 1992: 25; cf. Bachelard 1964; de Certeau 1984; Casey 1987; Nora 1989). As Yates (1966) also emphasizes in her monograph on mnemotechnics and the creation of “memory palaces,” from a cognitive perspective, place is the basis of all memory. Another important aspect of Yate’s work on the ars memoriae, is the concept of spatial memory functioning well in sequences. Individual landmarks in the memory are significant, but even more significant is the progression through a series of semioticized landmarks within a landscape, whether internal as in the sense of the memory palaces or external as in the sense of a familiar journey or chorography. Consequently, as we shall explore further, “entire landscapes may serve as a medium for cultural memory. These are not so much accentuated by signs (monuments) as raised to the status of signs, that is, they are semioticized” (Assmann 1992: 44; cf. Strehlow 1970). Political imagination, or the extent to which a group visualizes itself in regard to a shared, somewhat fictive past (Assmann 1992: 111), as noted also takes on a prominent role in Assmann’s work (cf. Anderson 1983: 6).
Connerton (1989) focuses on bodily practices (habitus) and, like Assmann, commemorative ceremonies. The latter are (more or less) ritual performances through which social memory is sustained. The use of commemoration in late eighteenth, early nineteenth century France (Connerton 1989: 10) and Germany between the First and Second World Wars (Connerton 1989: 43) are two major foci. As Hobsbawm (1983) and Lowenthal (1987) note, these periods were times of rapid transformation in which the social patterns and traditions of the past became dislocated. The past, to use Lowenthal's phrasing, became a foreign country. Therefore, Connerton's examples are highly applicable to heritage studies, but may be more difficult to apply fully to prehistoric societies except through more general analogies. Assmann also bases many of his observations upon literate, although ancient, cultures in the Middle East and North Africa. This raises the question that the application of theoretical models derived from historical studies may not provide the best basis for understanding prehistoric societies. I suggest that we can become overly general when discussing collective memory, and thus lose the unique contexts in which commemorative practices may take place. On the other hand, the use of overly specific examples risks directly comparing prehistoric societies with the disjuncture from the past that occurred over the course of nineteenth and twentieth century urban life.

The primary responsibility of archaeologists when applying Halbwachs, Assmann, and Connerton's theoretical approaches in prehistoric studies is to understand that these have historical, literate biases. As they caution, the transmission of memory in literate societies relies on highly specialized practices (e.g. writing and historiography), and thus in pre-literate societies we may expect the transmission of memory, in lieu of such specialized practices, to be subject to greater and greater distortion as time goes by (cf. Knox 1991).

The concern with memory in Western tradition has deeper origins that are connected with the advent of literacy. The Etruscans (Pfiffig 1975; Stoddart 2007-9) had a profound sense of historical time whose format was finalized as they sought absorption in the Roman world. A central facet of this construction of time was the *saeculum*, a period ranging from 123 to 100 years in length, a term adopted by the Romans (Varro De Lingua Latina 6.11; Forsythe 2012) who admired their temporal religiosity. Romans use of the "*saeculum*" or the end-point when the last surviving member of a generation and the last carrier of its particular memories had died amounted to some 80 years. "Half the generational limit of 80 years—that is 40 years—seems to represent a critical threshold" for memory. So basically, after 40 years a person who witnessed a significant event in their adulthood will now be retired and will focus more on the memory of the past.

On the other hand, Lilios (2003: 129) cautions against viewing prehistory in stark contrast to the historic period, placing literacy in opposition to oral tradition, as it could lead to the assumption that prehistoric societies were "memory-challenged," when in fact they may have had hitherto unrecognised specialized mnemonic materials.
Assmann places the maximum fidelity of “living” memory at around 80 years, and some anthropological studies bear this out (1992: 37). Bradley (2003: 221) estimates the maximum extent of stability stands at somewhere between 100 and 200 years, while Vansina recounts that the shortest living memory he encountered as an anthropologist was of the Aka of Lobaye, reaching back only one generation (1985: 24). Working in an archaeological context at Deir al-Medina in Upper Egypt, Meskell (2003: 37) claims the same of the workers whose family commemorative practices reached back scarcely two generations. Interestingly, they could, however, “remember” Amenhotep I and his mother, regarded as founders of the village, stretching back many generations. This points to memory practices operating at different scales within the same society relating to different types of foci for that memory.

Against these broadly general agreements, there is strong ethnographic evidence that hunter gatherer and by implication other prehistoric memories can be very deep in certain circumstances. Australian ethnography recalls that myths can carry cataclysmic events back from deep time (Hirsch 2006). At a more general level, Minc (1986: 103) has shown how “oral tradition clearly provided one enduring means for the preservation of hard-won survival experience between occurrences of resource crises.” Hegmon and Fisher also emphasize that long-term information on resources were similarly embedded in ritual codes (Hegmon & Fisher 1991: 141).

**The importance of context for memory**

Recent developments in neuroscience show that memory at an individual level requires context. The human brain constructs memory out of the experience of repeated and multiple contexts, which may be sensory, and may be related to repeated visits to places or may be socially constructed.

Paul and Laura Bohannan noted cases of socially embedded “structural amnesia,” to use Barnes’s (1947) phrase (see also Forty & Küchler 1999; Connerton 2008), when living with the Tiv of central Nigeria in the late 1940s and 1950s (Bohannan 1952, Bohannan & Bohannan 1953). The recitation of genealogies was of central importance in disputes among the Tiv, as they established claims about the past. Noting this, the British colonial administrators carefully recorded these genealogies. The Bohannans, comparing later, noticed they shifted and changed over time (Bohannan 1952). Jack Goody has written, based on the work of Malinowski (2014 [1926]), that this type of genealogy acts as a “social charter” that is more reflective of current and ongoing institutions than they are faithful historical records (Goody 1968: 33). More recently, Jan Vansina (1985) has discussed the “floating gap” that occurs between these fictive genealogies and more distant, “mythical” founding ancestors (as in the example from Meskell above). These gaps may be obvious to ethnographers, yet are reported to go unnoticed by those recounting them (Assmann 1992).
Consequently, as the previous two cases would suggest, an important, third source of theorizing collective or cultural memory presents itself in ethnographic work and the observation of memory systems at play in living societies. One of the most important studies of the interchange between memory and place is Keith Basso’s (1996) ethnography of the Western Apache, *Wisdom Sits in Places*. Through exploration of toponyms and the stories behind them, Basso examines spatial conceptions of history and myth and the ways in which knowledge of place is closely linked with one’s knowledge of self (Basso 1996: 34). Some of Basso’s informants report being figuratively “stalked” by the landscape, as they reflect on the moral lessons of its features as they pass through it or remember it from afar. They may, through memory and introspection, be led to more moral or traditional ways. As Basso writes, “insofar as places and place names provide Apache people with symbolic reference points for the moral imagination and its practical bearing on the actualities of their lives—the landscape in which the people dwell can be said to dwell in them” (Basso 1996: 102).

Of great importance to archaeologists is the idea that people do not need man-made monuments to act as mnemonics in a landscape. In the case of the Western Apache, “…geographical features have served for centuries as indispensable mnemonic pegs upon which to hang the moral teachings of their history” (Basso 1996: 62). Furthermore, this suggests that landscape may be as much an internal concept as it is an external reality. Recovering memory-relationships in a landscape is therefore attended by great difficulty when we cannot speak with the subjects of our studies. Prehistoric landscapes, although we share them with our forebears and walk in their vestiges today, may be truly lost to us. A phenomenological approach, as promoted by Tilley (1994, 2010), can only go so far. Although our bodies are homologous to prehistoric men and women's bodies, our internal world-views are not. Richard Bradley (2000) calls attention to the fact that “natural” places, equally present in the minds of people, are no less the object of archaeological study than monuments that were intentionally constructed. Indeed, some natural places can be simply touched delicately by culture to mark that presence (Stoddart 2012). Basso and Bradley both emphasize the need to be imaginative when exploring the linkages between landscape, place-making, and memory, and their research cautions that, as with many things in archaeology, we cannot see the whole picture.

Bloch (1971) also presents a clear case study of the ties between land, kinship groups, and memory in his study of the Merina of the northern part of the central plateau of Madagascar between 1964 and 1966. At the time of Bloch’s study, the Merina saw themselves as a society beset by rapid social change, instigated in part by missionaries, colonialists, and foreigners in general. The introduction by these outsiders of new ways of doing had resulted in a disjunction between “Malagasy times” and the present. One of the major ways in which life was different in the 1960s than in the past was the dispersed nature of the Merina people, with most families living away from their ancestral lands. Even if a family had been in a given location for four or five generations, they still thought of themselves as “guests” or “strangers.” A family felt they
only “belonged” to the place where their particular kinship group kept their family tombs. It was impossible to fully act within both the traditional ways of life, those of the ancestors, and modern ways, with their economic and political advantages, so many Merina people existed with a tension between the two. However, through death, this tension dissipated. The act placing of the dead in the ancestral tomb was “the final act of atonement by at last transforming the social being into an actor in the imaginary society of ancestors” (Bloch 1971: 216). Consequently, through death there was a spatial, social transformation.

In Bloch’s case study it is possible to find similarities with prehistoric societies, and particularly with Alasdair Whittle’s concept of tethered mobility in the Neolithic (1996, 1997). According to Whittle, one of the primary functions of ditched enclosures may have depended much upon the “symbolic representation of community cohesion” (1996: 190). Consequently, “through reinforced attachment to specific places, chosen times for communal gathering and ritual, predetermined ways of seeing and experiencing ordered space, people were encouraged to maintain the rhythms and obligations of tethered mobility” (1996: 192). Through both ethnography and archaeology, it is possible to see the connection between people and the places to which they retain a deep connection through memory and ritual practices, although they may live elsewhere.

Significantly for the archaeological study of memory, as these multiple examples suggest, there is no universal way to remember, and cultural memory practices take on a great array of forms. Certainly there are some generalities we can trace across cultures, but memory and how groups of people choose to remember and to forget are often highly contextual. Some of the ways in which people recollect, re-remember, and often imagine their own pasts, and the ways in which they choose which members of society are part of the in-group and which are not, present a predominant, recurring theme. Building on the ideas of Halbwachs, it makes sense that memory—being entirely socially mediated—would take on as many different forms as there are different social groupings around the world, despite similar cognitive processes involved. These various studies also highlight the importance of scale when discussing memory and point to the fact that these scales are by no means uniform. From the formations of familial histories to the foundational stories of nations and religions, a great variety may be observed, and importantly, larger scale configurations of memory are often experienced differently from one smaller-scale setting to the next.

Understanding landscapes of memory in Norfolk

Many archaeological studies of the inventive ways in which past societies were aware of and used their own pasts in the active maintenance of their identities have sprung from this font of theoretical work over the past two decades. This closely mirrors trends within the social sciences in general (Assmann 1992: xi). Several articles, edited volumes, and monographs
stand out among this work (Bradley 1987; Ingold 2000; Van Dyke & Alcock 2003; Yoffee 2007, Bradley 2010; Hamilakis 2014; Chadwick & Gibson 2013) and each has contributed to an understanding of the ways in which the archaeological palimpsests observed at many sites are “rarely... accidental and innocent” (Van Dyke & Alcock 2003: 1). Indeed, the juxtaposition of later monuments with earlier ones on the same sites are frequently so obvious and impactful that they cannot be ignored.

Some examples of these relationships include the construction of early Christian churches on Roman buildings (Morris & Roxan 1980), the relationship between Iron Age and early medieval landscapes (Meredith-Lobay 2009), and the placement of Anglo-Saxon boundaries along earlier ritual routes (Malim et al. 1996; Rippon 2018). Long-term continuity of population and practice presents one possible explanation for the observed collocation, yet as many of the ethnographic and historic examples illustrate, “continuity” is rarely simple and often
created. Convincing evidence for a break in continuity followed by using past monuments as part of the political imagination has been provided in many of these cases.

In Norfolk’s Iron Age landscapes, there are several different kinds of concatenations with older landscapes that we can observe. The first of these is the growth of ritual sites, sometimes represented by small to large rectilinear enclosures of several different types and sizes, in Bronze Age barrow cemeteries and Neolithic landscapes that may have later become the sites of larger Roman temples. Locations like this exist at Thetford, Hartford Farm in Norwich, and possibly outside Aldeby. In turn, this must direct us to look more closely at the sites of other Roman temples and shrine sites, such as at Snettisham and Shouldham, in the future to try and assess any important antecedents. A second type of juxtaposition is epitomized by the placement of Iron Age settlements including round houses and enclosed fields directly in older landscapes including barrow cemeteries as at Hartford Farm, again, Sweet Briar Rd., Norwich, and near the village of Hanworth. The third, and most common type of relationship is the presence of large amount of Iron Age and Roman ceramics in the enclosing ditches of many barrows throughout Norfolk (Lawson et al. 1981; Lawson & Brown 1986), and sometimes the placement of “votive” deposits of metal including coins, as near Narborough and Venta Icenorum, outside of Norwich. The fourth, and most nebulous type of relationship, are the proposed “numinous” landscapes evident at the sites of several hoards, including Snettisham, where a long-term focus on the placement of hoard deposits from the Bronze Age until the end of the Roman period raise questions about certain sites remain the focus for certain types of ritual activity over many centuries.

These particular concatenations in the landscape have been often uncovered through excavation, though they are also evident through the combination of monuments or their crop-marks and metal detected find-sites in the landscape. Listing all of these areas would be cumbersome, as there does seem to be a particular focus, particularly in the Late Iron Age, to focus certain activities around older monuments and hoard sites. The locations of particularly dense numbers of Late Iron Age find-sites in relationship to older monuments or landscapes have been highlighted using a heat-map in Figure 7.1. As can be seen, there are at least 14 larger clusters identified as the sites of Neolithic/Bronze Age monuments (see Chapter 5 for details) that also indicate, through excavations or metal detected find-sites, a renewed focus on these sites in later periods. Not all of these locations can be discussed in detail, but the particulars of several of them are shared in the paragraphs ahead. Among these clusters, there are at least 16 find-sites with Iron Age ceramic, nine with fibulae, three with harness fittings, and at least five locations with LBA/LIA hoards. As Chapter 6 partially discussed, hoards often display this connectedness with the landscape around them and are reflective of broader social trends in the landscape during the periods in which they were deposited.
CHAPTER 7

The afterlife of monuments

In archaeological work over the past two decades, the “turn to things” and the cultural biographies of things (Kopytoff 1986; Gosden & Marshall 1999; Olsen 2010; Hodder 2012, etc.) have been enormously productive, and very little needs to be said of these approaches here. In short, objects have social lives of their own, and may go onto to lead new lives, as it were, that may not have originally been conceptualized by their makers (Olsen et al. 2012). In this way, monuments as things and landscapes as things, may be said to have agency, although the origins of this agency (does it lie with the things themselves or the people who perceive them?) has been debated (Foxhall 2018; Kristiansen 2019). Monuments, as discussed in Chapter 5, are large scale implementations of these ideas. Landscapes, as discussed in Chapters 4 through 6, are even larger scale implementations, and they may offer particular affordances or venues for action in a relationship with social needs.

Within this frame, it is interesting to view the ways in which certain types of monuments in Norfolk have a notable influence upon the Late Iron Age landscape. In several important examples, it is possible to observe some of the ways in which the Iron Age landscape makes explicit references to the past, probably as part of a known discourse on the local political imagination. Defined by Assmann (1992: 111), the political imagination is the extent to which “a group—whether it be a tribe, race, or nation—can only be itself to the degree in which it understands, visualizes, and represents itself as such.” Monumental architecture, even when it is newly built, makes reference to the past simply by its resistance to change over the years (Olivier 2011: 15-16). Thus, monuments of various types, as symbols of “national,” regional, and local identity have the immediate advantage of presenting a literal facade of continuity with the past, even when continuity with the past is imagined. When we stand in the foundations of these ruins, we can imagine what may have happened here, as ancient people also did. Shanks (2012: 100), highlighting this type of engagement, terms it “place/event,” building on the definition of Bernard Tschumi (1994). As Shanks explains, this type of engagement focuses “upon the question: this happened here; or did it, could it have?” (2012: 103).

Intangible heritage may come and go, move around, and be “appropriated,” but the earthworks of older monuments presents a more stable image upon which to base these “imagined communities” and from which to draw a certain amount of political power. Although many of these ideas have been derived from contexts in which nationalism is considered, they may also fit in with Late Iron Age views on hereditary power, group control, and differences with neighbours (Creighton 2000). In the Iron Age, barrows and henges may have no longer been “used” in the sense they once were, yet their use as a symbolic element of the landscape continued in their afterlives. They provided material, enduring reminders of the region’s past. In this way, monuments provided the settings in which real and fictive histories are set, and thus enable us to give a spatial dimension to the past. Furthermore, even if, as some archaeologists think, many of the groups living in northern East Anglia at the end of the Iron Age may have
Figure 7.2: The Late Iron Age and Roman landscape surrounding Venta Icenorum and Hartford Farm, Norwich reference the earlier, prehistoric landscape of barrow cemeteries and henges. Peterson’s (2002) proposed Roman cadastral alignment between Arminghall Henge and the LIA/Roman enclosures at Hartford Farm is illustrated.
been radically different than only a few generations earlier because of either migration or rapid, internal cultural change (Davies 1996; Ashwin 1999: 102-103), a focus upon fictive histories or imagined pasts still provides us with recourse to think about Late Iron Age identity in interesting ways.

In Norfolk, there are several potential examples of this and the use of older monuments as the settings of “contemporary” ritual and memory practices. The area around Norwich, and particularly near Arminghall Henge (NHER 6100) provides an excellent example (Figure 7.2). Here, the Neolithic henge at Arminghall, constructed between four and five thousand years ago, was located just east of the junction of the Rivers Yare, Tas, and Wensum. The henge, a concentric ditch surrounding a horseshoe shaped grouping of huge wooden posts, was used periodically over the course of the Bronze Age, and became the centre of a significant funerary landscape that possibly included other monuments including Bronze Age barrows and alignments (Clark 1936). During excavation, the ditches of the henge were found to contain thousands of Iron Age and Roman ceramics as well as coins, a common feature at other Neolithic/Bronze Age sites in the region, as at Sweet Briar Rd., among other locations (Lawson 1986). Metal detected finds, as well as those catalogued in excavations and surveys, illustrate this activity as well. One coin stands out in particular: a Late Iron Age gold, Durotriges stater from southwestern Britain, metal detected just adjacent to the henge (CCI-30522). Others may have also been deposited at the site as well, more examples of the Late Iron Age tradition of depositing single coins or small hoards in the vicinity and ditches of older monuments.

The Late Iron Age/Roman settlement at Venta Icenorum (NHER 9759), just a couple of kilometres south along the Tas, is also located in the midst of this large, polyfocal prehistoric landscape, and sits surrounded by Bronze Age barrow cemeteries and Neolithic henges (Clarke 1936). Some of the area just above the settlement was excavated in the early 1990s when the Norwich Southern Bypass was constructed (Ashwin & Bates 2000; Penn 2000). A group of at least nine rectilinear enclosures of Late Iron Age or Caesarean date sat just above the LIA/Roman settlement here at Hartford Farm, directly inside a large Bronze Age cemetery that itself focused upon older Neolithic alignments (Ashwin & Bates 2000). Similar enclosures were found nearby at Valley Belt, Trowse, just east of Arminghall Henge (ibid.: 180).

These “enclosures,” although they have been compared to the Iron Age barrows of the “Arras” in North Yorkshire, may actually share few similarities with square barrows (ibid.: 138, 180; Lawson et al. 1981: 31). Other cropmarks very similar in shape to supposed square barrows have also been found in Norfolk at other significant multi-period, sometimes higher-elevation landscapes, as at Salters Lane, in direct proximity to the Launditch and later Anglo-Saxon moot (NHER 13025), within a barrow cemetery at Roughton/Hanworth (NHER 38475/38476, see more below and Figure 7.3), within the priory precinct at West Acre (NHER 16580), within a barrow cemetery at Bacton (NHER 6914), possibly in a Neolithic mortuary
Figure 7.3: The Late Iron Age and Roman landscape identified by cropmarks near Roughton/Hanworth. Here, an Iron Age to Roman settlement sits in the midst of a very large Bronze Age funerary landscape that itself focuses around a series of Neolithic monuments including a well preserved cursus. A nearby LIA coin hoard was found at Sustead, and as at Aldeby, a possible Iron smelting/extraction site sits just at the end of barrow cemetery.
enclosure with a cursus at Filby (NHER 32226), and in two barrow cemeteries in Broom and Kirby Cane parishes (NHER 25647, 44854) (Gurney 1995; Stocker 1996; Cushion 2003). Figure 7.4 illustrates some of these locations.¹

As the enclosures at Hartford Farm show, these structures are enigmatic and may not be square barrows—although they are the same shape as square barrows. The enclosures at Hartford Farm lack central burial shafts and evidence of ever having had a mound above the earth. Furthermore, they were built at the top of a hill, whereas the Arras barrows were built at valley bottoms (ibid., Stead 2014). In other locations in Norfolk, however, square barrow cropmarks have also been found in valleys, as at Morton (NHER 50650). The main correlate with these find-types seems to be the presence of older monuments, not elevation. A very similar 10 m square enclosure in direct proximity to a barrow was also excavated on Salters Lane, Longham, as mentioned above (Ashwin 1999: 332-334). As at Hartford Farm, the ditches comprising the enclosure had Iron Age ceramic but no other finds, no evidence of a mound was uncovered (Figure 7.5). Additionally, no finds were recovered from a “sub-circular” pit feature in the centre of the enclosure (ibid.) The excavators compare the enclosures at Hartford Farm to similar enclosures

¹ There are several reasons why this listing may not be fully representative of the same monument type, however. Firstly, as a cropmark category “square barrows” have often been compared with certain types of later medieval monuments in deliberations. Therefore, because they are undated and somewhat variable in size, some of the square barrows (which occur on 39 find-sites in the NHER database) may be misidentifed. Additionally, because areas of complex cropmarks have been subject to additional scrutiny, there may be unidentified enclosures in other areas of the county that have not been identified. Furthermore, few have been excavated.
found at Maxey, in nearby Cambridgeshire, which also lacked concrete, datable evidence or a grave shaft or pit (Pryor et al. 1985). Cropmarks from the Midlands of a very similar type indicate these enclosures may be a little known yet distinctive type of Iron Age site (Whimster 1981; Ashwin & Bates 2000: 138).

One of the enclosures at Hartford Farm, identified as a “temple” in the NHER dataset (NHER 9794), is also comparable, although larger, to the Heathrow “temple” site (ibid., Grimes et al. 1993). The excavators consider that the site, despite lack of datable evidence and finds, may be a type of Late Iron Age mortuary complex. In any case, evidence of Late Iron Age burials in Norfolk during the Iron Age is incredibly scant, although some are known from the Middle Iron Age, a similar problem to other parts of Europe at the same time (Davies 1999; Stegmaier 2009).

Yet if these enclosures, at Hartford Farm and elsewhere in Norfolk, are in fact from the Late Iron Age/Early Roman period, they are one of the strongest links in the region between Late Iron Age landscapes and earlier Bronze Age and Neolithic mortuary landscapes. Although they have been discussed elsewhere (Davies 1996), there is not, to my knowledge, a publication that yet addresses them as a cohesive group of monuments in northern East Anglia without recourse to the “Arras” comparison. As we know from Hartford Farm Valley Belt, Trowse, and Salters Lane, Longham the enclosures did not contain burials, or anything in fact, a characteristic of some other Iron Age “sanctuaries” at other sites throughout Europe.

There is one fact of the distribution of these monuments that is worth noting here, although it is not fully explainable at this time: the distribution of the so-called “square barrows” is completely unlike the metalwork distribution at large for the Late Iron Age. All but three of the square-barrow cropmarks are associated with the watershed of the River Yare and tend to cluster in the south-east of Norfolk (Figure 7.6), whereas most metalwork and hoards tends, particularly in the Early and Middle Iron Age, to cluster in the west near Fincham and Thetford. John Davies (1996) proposed there something like a local “heartland” existed in this direction, and believed the area may have been delimited by some of the ditches in the area (1999). Two of the cropmarks (5%) are located on the watershed of the Ouse, and one (2.5%) is located on the watershed of the Stiffkey, though still closer to the main distribution than the two on the Yare. The other 87% are centred around the Broads and the rivers that feed into them.
However, the idea that these older monumental landscapes, as at Hartford Farm, may have taken greater prominence in the Late Iron Age potentially points to the emergence of a kind of polyfocal landscape that is later fully adopted by the time it becomes an urban site in the Roman period. The area maintained its importance during the Early Roman period, when a cadastral axis was laid out through the grouping of monuments in an alignment with Armington Henge, approximately 2.5 km away and visible downhill from the site at the confluences of the Tas, Yare, and Wensum rivers. Thus, Peterson (2002) has demonstrated that the entire Late Iron Age/Roman landscape at this location has a harmony with the older Bronze Age and Neolithic landscapes. Indeed, the line of the bypass ostensibly follows this alignment, which Peterson argues was evident in medieval times as well. The intense settlement in the region during the Late Iron Age is additionally confirmed by metal detected densities, and just across from Venta Icenorum, not far from the site of a later Roman villa and kiln (NHER 9791), a La Tène III brooch was found in another group of Bronze Age barrows. In regard to the concat-
enation of the rectilinear enclosures, the site is similar to other enclosures located at sites of older activity including the Gallows Hill site at Thetford, and the site of the Snettisham hoards.

Just across the way from here, a Roman temple, the building of which was probably constructed in the fourth century AD, was shown, through excavations in the 1950s, to have been the site of fairly intense coin deposition in the Late Iron Age, centred around AD 60 (Clarke 1957; Gurney 1986). As mentioned, coin deposits and small coin hoards are fairly common at the sites of certain Bronze Age barrows. Other locations in Norfolk that observe this phenomenon are a ring-ditch just outside of Narborough where a small hoard of four East Anglian silver units (one plated with a copper-alloy core) were found in the immediate proximity of a Bronze Age ring ditch (NHER 3953; PAS 2772). As Williams (1998b) notes, other similar sites like these in Britain from the Late Iron Age and Early Roman period include Haddenham (Evans 1985) and Stanwick, Northants. (Neal 1989: 156-157) where the enclosures deliberately include Bronze Age barrows, the Uley temple complex (Woodward & Leach 1993) which is built on a Neolithic long barrow, Brean Down (ApSimon 1964), and Mutlow Hill, Cambridgeshire, which also had a poorly recorded small, square structure, said to be a Roman “shrine” (Malim et al. 1997: 50; Fox 1923).

The occurrence of these coin hoards, as a new medium in Late Iron Age Britain being placed at older sites, potentially represents a hybrid practice that makes creative use of the past. Other examples of deposits can also show creative uses of the past, and some of the ways hoards reference the past will be discussed in the last section on “beating the bounds”. Yet examples include the Iron Age Salisbury Hoard, which includes Bronze Age artefacts and numerous miniature weapons, that makes multiple references to the past (Stead 1998; Hingley 2009). At Nettleton Top, in similar depositions, some of the miniatures, made in the Iron Age, take on the idealized shapes of objects that would have circulated in the Bronze Age (Farley 2011: 109).

Yet excavations are only one source of evidence for these intentional uses of older landscapes, and surveys of cropmarks in conjunction with field walking and metal detecting provide another. Just north of the River Waveney in the Broads, slightly to the north of the village of Aldeby (Figure 7.7), archaeologists identified a site using cropmarks and metal detected finds, but not excavations that contains several hengiform ring ditches (NHER 45032), round-barrows, and the cropmarks of a circular Romano-Celtic temple or cella within an undated enclosure complex or temenos (NHER 45018) thought to be from the Late Iron Age/Roman period and similar to but also different from those found at Arminghall Henge in Norwich and Mutlow Hill in Cambridgeshire (Edwards 1978). Additionally, extensive field walking in this location has revealed large amounts of Iron Age and Roman ceramics, and the rectilinear structures are thought to be a Late Iron Age or Roman temple (NHER 45036). The site may represent a Late Iron Age site and an intermediate Roman site that links the earlier site with later Roman features on the site (Massey 2006).
Figure 7.7: The Iron Age and Roman landscape near Aldeby, along the River Waveney in the Broads. A Late Iron Age/Roman temple site, potentially with different sequential phases, has been identified by cropmarks near the site of a large Neolithic mortuary landscape. The iron working site just south-east of the cluster may be one of the earliest yet found in Britain.
This cluster of sites, generally, sits in an area of relatively dense Iron Age activity, not only in the Late Iron Age, but also in the Early and Middle Iron Age. Less than one kilometre away, archaeologists excavated nine Early to Middle Iron Age furnaces used for smelting iron. At the sites, extensive Late Bronze Age and Early Iron Age ceramics have been found as well, indicating the site may be one of the earliest iron smelting sites found so far in England (Fullilove & Dennis 2006). The area has well-attested, nearly continuous population during much of later prehistory and itself could provide a good example for the incorporation of memory practices in the local landscape in conjunction with the pattern of settlement and industry in the area. Interestingly, there are two other sites in Norfolk with possible iron extraction during the Iron Age in direct conjunction with Bronze Age barrow cemeteries near Roughton (NHER 38670) and Weybourne (NHER 6280), though these pits remain largely undated.

There are many other examples of the ways in which former monuments and buildings may be used for innovative practices and novel interpretations beyond the uses they were originally intended. One other important instance from East Anglia, although not related directly to the Iron Age relates to the siting of the Anglo-Saxon moots and later open-air hundred courts at prominent prehistoric monuments including hillforts, causewayed enclosures, and burials mounds (Gomme 1884). Three examples in East Anglia are the moorhill, Grimshoe Mound, at Grime's Graves (NHER 5640), the Smethdon Hundred Moot (NHER 11313)—where the moot met on a Bronze Age barrow overlooking two Roman villa sites and the location of several Late Iron Age hoards around a spring—and the meeting site at the Bronze Age tumulus at Mutlow Hill along the route of Fleam Dyke —where a rare Hellenistic coin was deposited on top of the barrow, which later became a Roman shrine and Saxon moot (Malim et al. 1997; Anderson 1934; Fox 1923b: 33) (Figure 7.8). As Semple explains, these sites were viewed with awe and caution as a species of space associated with past supernatural activity (1998, 2013). Settlements were consequently often placed a comfortable distance away. Prehistoric tumuli were also often used for early Anglo-Saxon burials, and toponymic analysis has illustrated that people had different vocabulary for contemporary burial mounds and ancient, re-used ones (Semple 1998; 2013; Chester-Kadwell 2007)

Living among the dead

As Chapter 5 noted, analysing networks of visibility between find-sites from the Iron Age and Bronze Age barrows and Neolithic monumental landscapes demonstrated that around 85% of all Iron Age find-sites—which include a range of different activities including settlement, production, and ritual—could have had views of these earlier landscapes. In many cases, the monuments’ visibility would have been limited to the horizon; for instance, at the end of the Iron Age a woman walking or riding through a wooded portion of Norfolk might come out from the trees onto the heath, which was increasing as time went by, and in the far, hilly distance observe a Bronze Age barrow cemetery. While one could ignore the barrows in this kind of an interaction, they were probably part of a meaningful landscape “background” with
which this individual would have been aware to some degree (Tilley 2010: 39-40). As Sarah Semple points out, in specific reference to the Anglo-Saxon period, certain kinds of people in society would have had different levels of knowledge of particular types of sites (Semple 1998). For example, elites in that period, who would have travelled more often and gone to moots—often the locations of barrows in East Anglia, sites viewed with supernatural awe—would have had a greater number of references about these monuments than someone who travelled only locally (Chester-Kadwell 2007: 40). This could be applicable in the Iron Age as well, and so again we can see that a phenomenological understanding of the landscape really depends on the given individual’s knowledge and social stature. As discussed earlier, it is widely agreed that in prehistoric societies a large component of early-life learning would have been about the landscape (Tilley 2010).

But some interactions with the older monuments were much more sustained. For example, there are several locations in Norfolk where, aside from ritual activity discussed in the previous section, people were living directly in the shadow of barrow cemeteries during the Late Iron Age. At Hartford Farm, for example, people used to live near the once “looming” barrows, where at least four round-houses from multiple generations sat nearly side-by-side with the Bronze Age round barrows (Ashwin 1999).
Although Ashwin (1999: 109) noted that the setting of Iron Age roundhouses in such close proximity to Bronze Age barrows was unique in Norfolk, since this publication, other sites like this have been identified in Norfolk. It is unclear how common this type of arrangement was, but there are now multiple examples of this type of juxtaposition. While it has not been excavated, another case was identified by cropmarks near Hanworth/Roughton (NHER 38363) in 2004 (Figure 7.3). Here is an Iron Age to Roman settlement in the midst of a very large Bronze Age funerary landscape that itself focuses around a series of Neolithic monuments including a well preserved cursus (NHER 18190) and several hengiforms and causewayed enclosures (NHER 38501, 13358, etc.). As discussed, this location plays host to the species of enigmatic square cropmarks of probable Late Iron Age date. Many metal detected finds in the area attest to Late Iron Age activity, including a small hoard at Sustead of nine un-inscribed gold staters from around 20 BC to AD 20 (de Jersey 2015: 329; Talbot & Leins 2010: 12). Perhaps most interestingly, the enclosures and tracks from the Iron Age farmstead respect and align with the Bronze Age barrows (Tremlett 2014).

Development-led archaeology has, as at the Southern Bypass project in Norwich, uncovered similar evidence of Iron Age settlement located in direct proximity to Neolithic and Bronze Age ritual landscapes in a variety of different contexts throughout England. For example, outside Oxford, at Lower Windrush and Abingdon, there are several examples very similar to those in Norfolk, which Gill Hey calls “inherited landscapes” (Hey 2007: 159). At Lower Windrush, for example, there is an Iron Age settlement located just at the edge of a very significant core of Neolithic and Bronze Age activity. Here, a henge monument known as Devil’s Quoits, provides the central focus for an extensive Bronze Age barrow cemetery and a number of other monuments including at least two hengiform ring ditches. The Iron Age settlement excavated at Gravelly Guy, shows five to six households that may have survived over a period of around 700 years (Lambrick & Allen 2004). The settlements at Abingdon show a similar focus on the edge of a major barrow cemetery. As at Gravelly Guy and the sites observed in Norfolk, the settlements respect the monuments themselves and are situated so that the layout of their fields and enclosures sit between the monuments (Hey 2007: 162). At Abingdon, the monument complexes were kept open for grazing. Other concatenations like this can be found throughout England, and as Cripps (2007) reminds us, Iron Age people did not live in a landscape “vacuum” and often used older sites for a variety of purposes.

As the previous section on the afterlife of monuments raised, the novel use of older sites as focal points within the “contemporary” landscape can be related to both individual and group identity, and it is easy to conceptualize the ways in which the dead, encased in their monuments, were useful for Iron Age people from the standpoint of a political imagination. It is difficult not to view some of these sites as explicit political statements about the arrangement of older contexts. He hypothesized that due to the difficulty in identifying settlements and a tendency to only excavate ring ditches and barrows in isolation, many sites like this may have been missed during prior barrow excavations (ibid.; Lawson 1986).
between the people living there (or nearby) and the people buried there. Bradley (1987), building on the ideas of Maurice Bloch, discusses the ways in which certain social groups used the concept of time and the memory or imagination of past political power as a resource to secure new social hierarchies, particularly in times of instability and change. In this model, similar to that proposed by Ballmer (2016, 2017), ritual became more marked from the everyday experience of earlier prehistory, where certain mundane functions took on elaborate performative aspects (Bradley 2005), and transitioned into a new sphere wherein a “new” social elite could legitimize their power through rituals occurring outside everyday occurrence at ancient sites (Bradley 1987: 3). In the cases of the roundhouses built near the barrows and the ritual elements occurring at the square enclosures in barrow cemeteries in the Late Iron Age, there also seems to be an element of “borrowing” ancestors or at least the need to make a clear connection with the physical embodiment of past ancestors.

On the other hand, James Whitley (2002) has objected to using “ancestors” as a means of blanket interpretation in archaeology, yet his emphasis on folklore and ancient written sources overlooks the multitude of ethnographic studies that illustrate the foundational importance of ancestry to the identity of many cultural groups around the world. Instead, he favours the hypothesis that veneration and fear of otherworldly beings motivated certain practices in prehistoric societies. These fears abound in literature, folklore, and even toponymy (Semple 1998, Chester-Kadwell 2007), but in relevance to individual archaeological contexts, these ideas need to be examined on a case by case basis.

However, other sites in East Anglia also illustrate a focus towards displaying a relationship between the powers of the living and the siting of the dead, such as at Bartlow Hills, Cambridgeshire, where the burial mounds were constructed not so much as a display for people traveling via the nearby Roman road, but were built to be clearly seen from the local estate in the Late Iron Age/Early Roman period (Eckhardt et al. 2009). Although this example is slightly different, it emphasizes a certain Iron Age interest in the importance of tying land to visible and prominent evidence of dead people. For a period in which Roman textual sources emphasize a growing obsession with hereditary control, some of the observed relationships in the landscape seem like the physical embodiment of these concerns. These concerns were, at least for the Romans, a primary driver for political action in the period and are often the subject of archaeological syntheses of the Late Iron Age. The entire saga of Boudicca, so famously associated with the northern East Anglian region, may be seen as a parable of what could happen when these hereditary bonds or contracts were ignored or discarded.

Sarah Ralph (2007: 85-87) has raised the prospect that the enclosure at Fison Way—mentioned earlier for its similarity to other lieux de memoire because of its close proximity to important earlier and later ritual sites (see also Ch. 6, Figure 6.5 and discussion)—may have been the site of communal feasting and possible commemoration of the dead as the site also

3 Though this may reflect Roman obsessions more than local ones.
included part of a Bronze Age cremation cemetery. The enclosure—which has been compared with Virekschanzen—showed extensive evidence of the production of fine metalwork and other goods, including weaving, over the phases of its construction, though little in the way of “domestic” activity. The site was routinely remodelled in a period of “frantic” activity over as little as twenty-years (Gregory 1991b: 192). This, in addition to large amounts of grain that may have been stored on the site, has led Ralph to believe the feasting that occurred on the site may have been a communal gathering in repayment of the lavish expenditure of labour (Ralph 2007: 87). The connection here is between marking community, the burials, and the construction of “new” sites at old locations. As Ralph writes, “Memories behind the site and the histories of things used and deposited, drew the past into the present, and offered the cyclicity of time for contemplation” (ibid.: 88).

Additionally, at a range of other Late Iron Age sites throughout Europe, a clear emphasis upon older graves as a means of political power may be noted. At the Heidengraben oppidum in southwestern Germany, for example, the main route-way through the settlement and across the plateau led first through a monumental gateway—a display of physical power—and then through a Hallstatt period cemetery that was also the focus of Late Iron Age processions and votive deposits—a display of spiritual power and a claim to the right of the political power being wielded (Steigmaier 2009). The landscape physically reflects the social order and makes powerful claims about to whom the past belongs. Here again, the concatenation of the two landscapes is not coincidental or innocent. This is yet another example of the dead making themselves useful, to use Shapland and Armit’s phrase in a slightly different context (2012).

As Halbwachs noted, in regard to the growth of contemporary institutions from ancient ones in Europe throughout the early modern period, political power and the prestige of class is not necessarily tied to wealth—although later it becomes that—but it is tied to the land, the estate, the castles, and the monuments of the family that owns them (Halbwachs 1992 [1952]: 123). Therefore, family names and families are, in fact, tied to the place and to land. In a simple way, identity is tied up with place and power. As he wrote,

“When a noble family dies out a tradition dies along with it; part of history falls into oblivion. It cannot be replaced at another history, in the same way that one bureaucrat is replaced by another. Since people always die, feudal society must restore itself continuously through an incessant renewal of homages, through new merits and feats of valour. It is not enough to put new material into ancient frameworks. Since the persons themselves and their actions—and the memory of those actions—constitute the frameworks of this social life, these frameworks disappear when the persons and families vanish” (ibid.).

Although these ideas, based as they are upon historical and literate societies, may not be entirely applicable to the Iron Age, they provide a useful lens for thinking about how hereditary power is tightly tied between people and their place. Thus, as Halbwachs concludes, “It is upon a
General: Why do I sit here? To escape from the pirates’ clutches, I described myself as an orphan; and, heaven help me, I am no orphan! I come here to humble myself before the tombs of my ancestors, and to implore their pardon for having brought dishonour on the family escutcheon.

Frederic: But you forget, sir, you only bought the property a year ago, and the stucco on your baronial castle is scarcely dry.

General: Frederic, in this chapel are ancestors: you cannot deny that. With the estate, I bought the chapel and its contents. I don’t know whose ancestors they were, but I know whose ancestors they are, and I shudder to think that their descendant by purchase (if I may so describe myself) should have brought disgrace upon what, I have no doubt, was an unstained escutcheon.

*The Pirates of Penzance*, Gilbert & Sullivan, 1879

foundation of remembrances that contemporary institutions were constructed” (*ibid.*: 125). And it may be the case that institutions of the Later Iron Age were also necessarily based upon the foundation of remembrance as well. Although cynical and from yet another era obsessed with nobility and the trappings of the past, a comedic exchange in the Pirates of Penzance perfectly sums up some these social anxieties (Gilbert & Sullivan 1879). Sometimes it does not matter whose ancestors’ remembrance is based upon, only that they are somebody’s ancestors and tied to the place.

Finally, as settings and through their material durability, the architectural elements within landscapes, whether urban or monumental, add gravitas to power. We are reminded through the maintenance required, through the patina that these environments acquire over many years, that before us someone has walked here: an ancestor, a forebear, a predecessor to part of the identity we assume in such a location. These are powerful places.

Beating the bounds, marking special times & places

The importance of place, and the ties between kinship and ownership in societies with hereditary ownership (as ours is now, and as the Iron Age may have been to a certain degree) are clear. And it should also be clear that *marking*, remembering, and passing down these boundaries effectively in societies without maps was an essential function. The tradition of “beating the bounds”—or “The Processioning” as it was known in parts of East Anglia—has existed in Britain for centuries, if not millennia, though probably not as a direct continuity of practice (Porter 1969: 116). As Porter recounts, the tradition of marking the boundaries in East Anglian parishes was still common “until the enclosure of the common fields early in the last century” (*ibid.*). The religious ceremony, attended by the clergy, choir, and mostly male parishioners of a given parish, went in a procession around the landmarks of the parish, pausing at important landmarks so that young people—who would be expected to lead this ceremony one
day—could note them. Some accounts say the younger generation were then beaten at each landmark to make it more memorable⁴, whereas others say they beat or tapped the landmarks with sticks to better remember them; thus the name, beating the bounds.

This process of perambulation mixed with touching or tapping the landmarks literally used the *ars memoriae* as described by Yates (1966: 37); the working of physical memory by repetition of place. As Quintilian wrote,

“…it is an assistance to the memory if places are stamped upon the mind, which anyone can believe from experiment. For when we return to a place after a considerable absence, we not merely recognize the place itself, but remember things that we did there, and recall the persons whom we met and even the unuttered thoughts which passed through out minds when we were there before.” (Quintilian, *Institutio Oratorio*, XI, ii, 17-22) (37)

Melanie Giles, in discussing Iron Age linear earthworks described the process of perambulation best,

“In order to verify their nature and upkeep, such boundaries had to be walked, ridden, and beaten: felt in the sole of the foot and (for the unfortunate youngsters) the bumps and bruises earned during the rite of passage” (Giles 2012: 41).

Evans (1966) traces these traditions back to the ancient Roman festivals of *Terminalia* and *Ambarvalia*, both of which had similar aims to beating the bounds and which were also inscribed in the religious calendar at particular times of the year (Cleary 2005: 4). Plough Monday, another medieval tradition in which the town ploughs were blessed at the parish church before being conveyed through the parish from house to house has similar undertones (Evans 1966). As Evans and Cleary (2005: 1) both note, today these practices—where they still “survive”—are good examples of “invented traditions,” having largely gone out of fashion for many years to experience a resurgence of interest in the practice later in the twentieth century. However, epigraphic, artistic, and literary evidence supports the longevity of such traditions, enacted in differing ways, in Britain over the past 2000 years or so (Cleary 2005: 5). The importance of marking boundaries and remembering them, passing down knowledge of them, became increasingly important in a polyfocal, urban environment. In Roman and Etruscan times, one of the central components of establishing a new urban landscape was ritually ploughing its boundaries (Armstrong 1943; Turfa 2014).

As we have already seen in some of these other examples, there are elements to keeping boundaries and marking space that will be familiar to those who have studied the Iron Age in Britain. Indeed, perhaps one of the characteristic elements of the period as compared to earlier periods seems to be an obsession with marking boundaries, marking *certain* boundaries with *certain* types of special deposits, and a preoccupation with delimiting both space

---

⁴ This seems apocryphal but highly amusing, however Giles (2012: 40) also recounts the beatings. I think we must wonder how severe they were...
and time (Bowden & McOmish 1987; Hill 1995b, 1996). Indeed, there are many specific examples of this type of behaviour through Europe during the Iron Age. At Garton Slack, chalk figurines had been deposited in a ditch, part of a broader network of enclosures in the area (Stead 1988; Giles 2007a). Equally, cemeteries marking boundaries were also found there and at nearby Garton Station and Wetwang Slack (Stead 1991a; Dent 1982). As Giles explains, the cemetery sequence at Wetwang Slack showed an increasing intensification as time went by, with ever smaller barrows squeezed into the spaces between others, illustrating an “obsession” with position and “desire” to be near particular monuments or ancestors (Giles 2007a: 240).

Elsewhere in Britain, human remains have been used to mark processional and ceremonial boundaries, again showing the connection between people and place, sometimes in very literal ways as at Lindow (Stead et al. 1986) and Folly Lane (Niblett 1999). Additionally, in both Britain and on the Continent, hoards, deposits, and human remains are often associated with ramparts, ditches, doorways, gates and other types of liminal positions at hillforts and other types of enclosures (Hingley 2006; Ralston 2006; Von Nicolai 2014).

Although Norfolk was a much more “open” landscape in the Late Iron Age (Bradley 1993; Ashwin 1999: 106) than other areas of Britain, lacking many defended settlements, it nevertheless has a number of examples of Late Iron Age/Early Roman field systems that were often bounded and enclosed by fences, trackways, and droves. This is part of a pattern of behaviour in the Iron Age of what Hill (1995c: 65) refers to as “regionalization” or the tendency of people in the Iron Age to radically distinguish themselves from their neighbours through both physical and symbolic means. Giles (2007: 247) views this demarcation of the world as evidence of a fundamental social shift in how people viewed themselves and their communities in the world.

Although it is much harder to find examples of this type of phenomenon using metal detected finds, which are generally unstratiﬁed and in ploughed land, there are some examples that come up in the NHER dataset. The excavation of a Bronze Age barrow on Sweet Briar Road (NHER 366), for example, showed that a linear ditch ran alongside a trackway that lined up with a Bronze Age round barrow on the site. Not only did the line of the ditch respect the barrow, but a first century AD brooch was found deposited inside of it (Brown 1986). This has raised the question as to whether or not Iron Age societies used barrows as boundary points in the same way the early Saxons may have (Goodier 1984; Arnold 1977; cf. Chester-Kadwell 2007: 33). Indeed, as Chapter 4 discussed, there is a growing consensus that the Iron Age world lends a great number of its features to the constellation of field systems and roads in the Roman and Anglo-Saxon world (Rippon 2018).

However, even votive depositions in Late Iron Age Norfolk may sometimes emphasize the connection of a person or group of people to a place; through the act of placing hoards, people in the past were creating or contributing to lieux de mémoire, or places of memory. This place-making may or may not take place at boundaries, but these practices were employed in
the past to emphasize connections between a landscape (or a local feature in one) and a people. Metal objects are durable, and also, somewhat differently to monuments, they could have been owned and passed down and physically carried by individuals. The objects in certain types of hoards may therefore have been associated with people both living and dead. Thus, the act of placing the hoard in a particular location may have been a way of binding up people with special places during special, ritual times. The deposition of heirlooms provides an example of these memory practices taking place at a familial level (Lillios 1999; Joyce 2000; Giles 2012: 78, 249; Stig-Sørensen 2018). As already emphasized, family is one of the loci for ritual in both traditional and modern societies (Fustel de Coulanges 1864; Halbwachs 1992 [1952]: 63). According to Joy & Farley (in press), the deposition of the Snettisham torcs marked a phase shift in Iron Age material culture as fashions in society shifted away from torcs as an older style. The torcs, potentially as heirlooms and objects that had been around for a long time, had been cared for and some of them had been mended (ibid.). Therefore, it may not be a stretch to view certain depositions as genealogical in character and physically representing something of a charter between the living and their forebears.

As Adams (2017: 53-54) notes, most brooches from the Early and Middle Iron Age—like torcs—entered the archaeological record independent of people, as was the case at Middleton, in Norfolk. Here, on another hill-peninsula at the fen edge, more than 40 La Tène style brooches were deposited into an “amorphous spread of material” that overlay a series of pits in which complete ceramic vessels had been placed. These type of deposits may have been tokens of new communities and deposited to, again, demarcate some kind of boundary in time yet potentially related to individuals alive or deceased (Adams 2014: 231, 234). Brooches are often excavated from the layers that have built up in and around settlements, rather than having been specifically deposited, and according to Adams they are rarer in the context of marking physical boundaries as in the Sweet Briar Road example (ibid. 224, cf. Haselgrove 1997: 55). This, however, adds to case against reading too much into the distributions of single-find metal detected brooches found out of context, as this context has been so key in each of these examples (See also Ch. 6 on Woodcock Hall). Thus, it is difficult to say if the majority of single brooches were from so-called votive deposits, as at Middleton, or associated with occupation layers in other contexts.

However, as some of these examples have shown, votive deposition, as a long-term practice emerging from earlier prehistory, takes place through a large repertoire of forms and mediums, some of which directly reference the past while others resemble past depositional practices yet provide an array of innovative forms. As Bradley (1990) writes, hoarding and votive deposition have never satisfactorily been shown to be unitary practices throughout prehistory and may have taken place for a variety of different reasons, and indeed, in their episodic nature hoards do more closely resemble other hoards from their own contemporary period than the entire abstract corpus of hoards.
CHAPTER 7

Thus, as discussed earlier, the composition of a hoard may be relatively novel, as for some of the earliest coin hoards. However, these, placed in older locations like Bronze Age barrows or in “numinous” landscapes with many other hoards, take on a different meaning. Furthermore, the recurrence of hoards at certain sites again and again in multiple periods, such as Ken Hill, Snettisham, illustrate another potential form of commemorative practice. Yet in a warning against such interpretations, Martin Rundkvist (2015) writes about similar depositional practices around Lake Mälaren in Sweden, where memory notwithstanding, people have been throwing things into rapids from the Neolithic period until the modern era because of cross-cultural allure (described as expediency in Chapter 6). This tension was discussed at greater length in Chapter 6.

As some of these examples show, as much as continuity, we may also find dislocation from the past and the invention of traditions. Meskell (2003), for example, traces the importance in Graeco-Roman culture of paying obeisance in sites that were awe-inspiring. On one such site, at Deir al-Medina near Luxor, rather than the worshipping in the foundations of a grand temple, devotees found themselves in the ruins of a worker’s village, failing to recognize they were not in a former holy place. “In this sense,” Meskell writes, “they were not performing an act of cultural memory but were constituting new, hybrid forms of commemorative practice” (Meskell 2003: 50). Bradley illustrates similar phenomena in both the Boyne Valley and in North Umbria where after a long intervening period between prehistory and the middle ages, older sites were re-activated in new ways for political benefit (Bradley 1987).

In these ways, the past provides important tethering points with which to draw boundaries in time and space. Instead of merely marking themselves as different from their neighbours, as in the many different Iron Age contexts discussed throughout Europe, the placement of certain types of hoards may have consciously marked the celebrants themselves as different from people in the past, as well. Thus, boundaries may be seen as both spatial and temporal, again.

Concluding remarks

Sean Carroll, the theoretical cosmologist’s recent (2010), popular work made the case that from a physical perspective time is ostensibly change. When we observe the passage of time, Carroll argues, we are observing a natural consequence of the second law of thermodynamics, that there are more ways for a system to become disordered, or entropic, over time than there are ways for it to remain the same. Therefore, we are experiencing change when we speak of experiencing the passage of time. As many authors maintain, we can very precisely measure this change through chronometric means—at the atomic level, measuring the decay of an isotope, or at the cosmological level, marking the passage of seasons—but we cannot measure the experience of this change, as it is by no means objective (Gosden 1994; Lucas 2004).
The cultivation of memory is one of the defences that many cultures around the world employ in the face of this unstoppable change; this unending remodelling of the world. We are constantly aware of the past, and of time as a finite resource, and as people, we have to deal with or confront this. Laurent Olivier writes that as a natural consequence of facing the vestiges of the past that surround us, people strive continuously to “transcribe” themselves onto the environment and into history beyond the limit of what we know will be finite lives (Olivier 2011: 15-16). This urge, he contends, explains the “unshakable power conveyed by monument building.” Monument building “was not done simply to create permanent structures capable of withstanding the forces of deterioration; it was just as much an attempt to link them, through the very sight on which they were built, to the most remote origins of which they were supposedly the continuation” (ibid.). Yet, as we have explored in this chapter, while some sites made creative, political use of older monuments, others eschewed monuments entirely, creating instead lieux de mémoire of a different, more private character, possibly in the confines of a family or small group.

While these forms of commemoration involve remembering people—potentially ancestors, but unknown persons as well (Hobsbawm 1983; Inglis 1999)—motives may be multifaceted and ulterior. We can conclude with a cautionary question. Did ancient societies need monuments at the heart of cultural and collective memory and in commemorative practices or is it archaeologists who need monuments to identify memory in the past? As Basso’s work, and several other examples herein, illustrate, memory can be held within, in ways that leave few physical traces.
Conclusions

This chapter briefly summarizes the results of the research presented in this thesis. After discussing some of the findings, a broader consideration will be made of a few of the methodological implications of working with large sets of data. Furthermore, several recommendations for improving future data frameworks are suggested, and opportunities for future fieldwork based on the results of metal detected landscapes are discussed. Finally, this chapter concludes with a reflection on our modern preoccupation with memory and commemoration compared with the practices of ancient societies.

This dissertation makes an argument for linkages between material culture, social memory, and place-making, in the line of several other projects that have used large, aggregate sets of data (Hutcheson 2004; Chester-Kadwell 2007, 2009; Brindle 2013; Robbins 2013; Cooper & Green 2016), by presenting a methodologically novel and exciting venue for exploring these issues. Extensive metal-detected datasets and historic landscape characterizations, which provide a remarkably dense spatial and temporal distribution of past activity, can be used to intensively analyse the circulation, deposition, and social significance of metals and metalwork in the prehistoric landscape. This can in turn shed light on large tracts of the countryside that may never see any formal, detailed examination. By concatenating a variety of different archaeolog-
ical and environmental datasets in GIS, it has therefore been possible to model the changing prehistoric landscape at the regional scale over the course of the past several thousand years. The Iron Age, in particular, provided a major focus and a comparative basis for understanding changes in the landscape at other times. Some of these concepts were broadly discussed as affordances of the landscape, or changing relationships between society and the environment, a phenomenon that, it is argued, cannot be viewed entirely in temporal isolation. While the landscape scope of this research prevented an in-depth consideration of certain features of material culture, several interesting aspects of past activity in the landscape were discussed.

Through a series of episodes, one of the central engagements with place—namely the idea that our conceptions of places are based on events that took place, or which we imagine took place, there (Shanks 2012)—was explored. Chapter 2 went into some of intricacies of using metal detected data on a broad, landscape scale, for the process of understanding past landscapes and how they may have worked in prehistory. One of the key steps in this process was first identifying sources of bias or skew in the distributions themselves. Without this understanding, certain interpretations of the past may be less valid (Robbins 2013), and a series of examples from the Portable Antiquities Scheme were used to illustrate some of the ways finds tend to correlate closely with, for instance, the availability of arable land.

Moreover, Chapter 4 more closely questioned some of these interactions. For example, could the distributions of some metalwork in the past have related, at a larger, regional level, to certain proxies we can still observe today? Perhaps the correlation between metal detecting, arable land, and finds density also had to do with ancient affordances of the landscape. From the earliest times, Norfolk’s potential for highly productive farming, as a result of both relatively good land and high population, coupled with its position in the North Sea neighbourhood and its deep river harbours in prehistory and in the Early Middle Ages, served as a major driver for the creation of wealth.

It is difficult to tell if this was true in the Iron Age, as well, as much of the productivity of Norfolk in historic times seems to have related to the exploitation of a large population to overcome recurrent environmental problems like the loss of topsoil (Campbell 1983). Very little is understood about Norfolk’s pattern of settlement throughout much of the Iron Age, however, and it is difficult to tell how much this was occurring (Ashwin 1999: 103). Yet environmental studies have shown markers in both pollen and sedimentation related to high rates of deforestation as the Iron Age and Roman period progressed (Peglar, Fritz, & Berks 1989). As a consequence, both of this silting, which affected Norfolk’s deep river harbours, and the collapse of vital resource systems including the North Sea herring fisheries, a slow decline in the region’s fortunes has been noted since the 1800s. By contrast, the growth of the renewable energy industry at the end of the twentieth and beginning of the twenty-first centuries is leading to a resurgence in prosperity and jobs in the region—based, in part upon Norfolk’s geopolitical situation.
Chapters 5, 6, and 7 further explored some of these issues. One major theme—the reliance of past populations on Norfolk’s riverine resources—was highlighted as central to the siting of certain sites in prehistory. Hillforts, in particular, provided an interesting case study. Though hillforts have traditionally been conceived of as being located on hills, Norfolk’s hillforts seem to have been sited primarily with dominance of its river valleys in mind. Not surprisingly, the ways in which Norfolk’s landscape circumscribed certain types of movement led to the establishment of specific important route-ways and trans-shipment points in prehistory. Interestingly, the presence of some of these hypothetical locations was highlighted by the form of the landscape in the later medieval periods, when priories and castles—both of which depended upon redistributive functions—were located in very similar areas as Iron Age hillforts. A series of linear earthworks from the Anglo-Saxon or possibly Iron Age periods has underlined some of these issues (Aswhin & Flitcroft 1999; Wade-Martins 2016). Furthermore, trackways and paths, although they have been little theorized (Hind 2004; Chadwick 2016), provide other avenues for exploring material culture distributions (Hutcheson 2004). Oral history from Norfolk’s past gives weight to the idea of roads being about more than movement, embodying ideas of community (Evans 1966).

Figure 8.1: Riverine landscapes were the predominant foci of human activity in Norfolk throughout history and prehistory, as here at the Roman fort, Burgh Castle. There was probably once a deep water harbour in the river where the navigation markers are now. Due to silting, now only small craft can pass at this point near the confluence of Waveney and the Yare. Photo by E. Aines.
The positions of some of these sites, including a huge array of hoard deposits from the Bronze Age until the Iron Age, have raised questions about how continuity of practice, numinuous locales (Meskell 2003), or the expediency of certain geographic features may have influenced an observed clustering of hoards from disparate periods. Certain areas like those near Snettisham, Thetford, and Saham Toney seem to have had an undeniable, deep lure. Yet the patterning of modern-day metal detecting across the region raises questions about how to interpret some of these clusters, ideas that Chapters 2 and 3 explored in more detail.

Statistical tests of difference were used to compare the distributions of metal detected finds of different types and different periods, and in general it was found that specific areas were preferred for hoards, like the points where rivers or streams gather, the confluences of rivers, and the boulder clay and chalk hills overlooking these locations. This matches up well with the predominant theme of riverine settlement in the region throughout all periods of the past. Due to this focus, few hoard locations could be definitely said to be far from settlement evidence, although there is far less settlement evidence from the Bronze Age. For example, burnt mounds, a typical proxy for settlement in other Bronze Age studies of hoard deposits (Yates & Bradley 2010a; Rundkvist 2015), are relatively scarce in Norfolk, numbering slightly more or less than 100 in total, whereas the total number of Bronze Age hoard sites has a similar figure.

However, the locations of Late Iron Age hoard deposits could not, generally, be shown to be either particularly different, topographically, than the locations of other contemporary activities, nor could they be shown to be particularly secluded or sequestered from those locations. This aligns with a general trend throughout Europe of a greater emphasis upon settlements, “industrial” areas, and communal, ceremonial locations as the foci for specific types of ritual, including the placing of hoard deposits, moving from the Bronze Age into the Later Iron Age (Adams 2015; Ballmer 2016). Additionally, for hoards placed during the Late Iron Age, by the far the largest predictor of location was the presence of later Roman activity, in particular river crossings, temples or shrines, and villas, indicating some ways in which the Roman world mapped onto the Late Iron Age world in very clear ways. This highlights the extent to which the Iron Age landscape may have already been, in its configurations, somewhat concomitant with later Roman activity and the growth of polyfocal, proto-urban locations.

Furthermore, by using summed probability distributions (SPDs), it was possible to observe the tempo of the hoard deposits across the region in relation to the overall rate of metalwork deposition (or loss). These dating structures, reliant on metal-detected finds as a source of dates and based upon Rick’s (1987) original methodology, seem to highlight certain European wide “historical” events, such as the rise of Iron Age complexity, the fall of the Roman Empire, the nature of instability in the eighth century AD, the impact of the Black Death on development, and the economic climb into the modern industrial era. These methods could be used to view the site-specific tempos represented by metal detected finds, though some questions
remain about biases in temporal classifications. SPDs also demonstrated that hoard deposits tended to cluster in time, illustrating a punctuated equilibrium somewhat different to certain types of domestic activity though very similar to certain types of monument building.

While Norfolk is today viewed as an area of Britain with little in the way of prehistoric monuments, in part because of its paucity of “hillforts,” studies of cropmarks (Horlock et al. 2008; Tremlett 2011) in combination with metal detected data have demonstrated that at the end of the Iron Age, a very prominent Neolithic and Bronze Age landscape would have been evident to people living in the region. Indeed, a range of Iron Age activities was highlighted in regard to these older, monumental landscapes. Against the backdrop of broader anthropological, historical, and sociological theory about commemoration and place-making, three facets of Late Iron Age interaction with older sites were underscored. The first of these was a noticeable level of Late Iron Age activity around barrows built from the Middle to the Late Bronze Age. These activities, evident through both excavations (Lawson et al. 1981; Lawson & Brown 1986; Ashwin & Bates 2000) and metal detected distributions, included the placement of small votive deposits, including coin hoards, as at Narborough, brooches, and possibly ceramic vessels. However, it is difficult to separate these activities from more general Iron Age living arrange-
ments, as some of the aforementioned excavations also showed several examples of Iron Age people living near barrows. This is the second important facet of interaction.

In addition to “living with the dead” at some locations, and using earlier monuments to bound the later world (Brown 1986; Ashwin 1999), the issue of using fictive ancestors for political and social means at some of these locations was raised. Most prominently, a species of as-yet under theorized Late Iron Age monuments in Norfolk was discussed. These square enclosures, often located in older barrow cemeteries, seemed to have played some ceremonial function in the landscape. Their distribution, mainly noted on cropmarks and not securely dated, seems to contrast with traditional metal detected distributions of artefacts, though it is unclear how much these differences rest upon modern biases in the distributions of both metal detected finds and cropmarks.

Generally, these activities and a series of other small votive deposits at crucial boundaries (Brown 1986; Peterson 2002; Adams 2015) also illustrate an aspect of marking boundaries in the Late Iron Age world. In these ways, the past provided important tethering points with which to draw boundaries in time and space. Instead of merely marking themselves as different from their neighbours—another important facet of Late Iron Age behaviour (Giles 2007a; Hill 1995c)—the placement of certain types of hoards may have consciously marked the celebrants themselves as additionally different from people in the past. Thus, boundaries could sometimes be seen as both spatial and temporal.

Consequently, this research has illustrated an array of methodological procedures for connecting the observations of metal detectorists and observations in the landscape to higher level discussions about the linkages between knowledge of place and knowledge of self, in the past. It demonstrated how large datasets (sometimes termed “big data”) can be used in thoughtful, contextual ways to learn about the past and to inform and shape future research agendas throughout the county. Although it was unable to truly synthesize all of the data available or spend much time debating the significance of historical sources or refreshing some of the long running debates mentioned earlier, this research constitutes one piece of an important, broader conversation about place-making, memory, and landscape in the Late Iron Age.

**Buried under data**

One of the major points of this research was to demonstrate some of the ways in which we can learn about the past landscape by considering an impressive volume of sites. In this project, slightly more than 11,000 Neolithic, Bronze Age, and Iron Age find-sites from the NHER were analysed for inclusion in various sub-datasets that ultimately went into spreadsheets and were represented as map-points following the full process of knowledge discovery. Around 58,000 typological dates from the PAS dataset were analysed to provide the background tempo of metalwork deposition over the past 4500 years—from AD 1500 back to 3000 BC. While it
is not entirely accurate to categorize this as a “big data” project, according to a very strict definition, one of the largest components of this story has been how much data we have about the past.

So it is apt to briefly consider the obvious fact: the past, as represented by this material, is nearly ubiquitous in the landscape today. Forty-years of collecting metal detected data and a century or so of cultivating large, landscape catalogues—as Cyril Fox, R. Rainbird Clarke, and Tony Gregory, and many others in the Norfolk Museums and NHER all did—has illustrated the extent that there is material everywhere. In contrast to traditional archaeological television programs or the view that inadvertently arises from many excavation reports, archaeological sites are not little islands afloat on a sea of modernity, the last fragments of worlds that time has worn away into dust. “Rare glimpses into the past,” one might say. As development-led archaeology has also shown throughout Europe, it is difficult to strip a large area and not have “significant” findings. Metal detecting seems to be somewhat similar.

So, there may be some conflation of what significance means. Are these sites significant because we rarely get to see them—as they are usually under the ground—or are excavated sites significant inasmuch as they provide an enormous amount of information about the past? The larger picture presented by metal detected material is one of more data and more sites than

Figure 8.3: The Norman motte (left) and Iron Age ramparts (right) at Thetford Castle. While little of the prehistoric monumental landscape survives visible on the surface today, its remains are ubiquitous in the landscape and part of our everyday interactions. Photo by E. Aines.
CHAPTER 8

dreamt of in a typical archaeological philosophy. But the distributions are under-theorized and the available data on artefacts is under-utilized, as Bradley points out (2018: 3).

Although the past landscape, as has been illustrated in several of the episodes in this dissertation, is somewhat ubiquitous, our knowledge of it sits somewhere on a spectrum. At one end of the spectrum, there are find-sites like NHER 23324, a single Westhall-type, red-enamelled terret with empty sockets that would have once contained blue glass. Its nearest neighbour is a post-medieval candlestick found 500 m away. In Hutcheson’s (2004) catalogue, the site ticks none of the “special feature” boxes: it is not near a swamp, it is not near a river, it is not near a Roman road (Hutcheson 2004: 76-77; catalogue number 129). So it passes by unexplained. In other cases, if a single find-site is near a Roman road, then maybe it fell off a chariot by accident (ibid.: 75). Therefore, one of the flaws in this “cognitive geographical” method, is that when a find cannot be located within a certain pattern of meaning, it is ignored or classified as an outlier: as a casual loss. Much of this dissertation also allows single-finds to pass without much commentary, because orphaned in the landscape, they are extremely difficult to place in a broader schema. While many of these finds may have been “votive deposits” or used to mark boundaries and foundations, unstratified and singled out, they provide us with little recourse to understanding. Brooches (as discussed in Ch. 7), also provide a good example.

At the other end of the spectrum of knowledge about the past landscape there are sites like the Fison Way enclosure in Thetford (Gregory 1991b) or the site of the Snettisham hoards (Stead 1991b, 1991c; Joy & Farley in press). These sites have an enormous amount of information, much more of it consisting of well-stratified observations at Thetford than at Snettisham where many of the observations tend to be typological. Yet in both cases there are still basic questions about how the sites may have functioned in the past. The quantity of data we have, although its quality exists along a spectrum, is vast. How do we link objects at polar ends of these spectrums? One relevant observation from a range of literature has been the recurrence of the theme that landscape archaeology suffers a split personality, a duality that cannot be overcome (Johnson 2008: 1). On the one hand, landscape archaeology is too empiricist and has no incorporated theory, and on the other, it is too theoretical and cannot handle large amounts of data in sophisticated ways. This project also walks that tightrope.

As Vaclav Smil, the well-regarded statistician recently lamented, “We are buried under information.” The adjectives to describe the amount of data available today—in all disciplines, not just archaeology—are inadequate (Watts 2019; Smil 2019). Although computers can help parse this information, people are still needed to make decisions, and there are not enough people compared to the amount of information available. “Big data,” Smil argues, is perhaps paradoxically not doing anybody any good. Richard Bradley’s critique echoes these sentiments and he argues, in a way, there are two options: throw a huge team of experts at a question for a sustained period of time, or—a more realistic option—relinquish the narrative of total control.
over a topic that some synthesizes project (Bradley 2017: 3). There is simply too much data for a single researcher to adequately parse and come to a meaningful conclusion.

I enjoy sharing a quote written by W.G. Sebald in his masterpiece of wandering Norfolk and Suffolk’s landscape, *The Rings of Saturn* (Sebald 1995), pondering questions of identity and history and the idea of synthesis. “This then, I thought, as I looked round about me, is the representation of history. It requires a falsification of perspective. We, the survivors, see everything from above, see everything at once, and still we do not know how it was.” It seems as fitting to the ideas presented by atlases or by GIS as it does to the idea of history. The methodology of control that mapping presents still cannot lead us to the total knowledge of the world that an atlas extols. We see everything from above, he writes, and still we do not know how it was. Consequently, a tension exists in this type of work (and maybe all of archaeology, more generally) that arises from the different scales and spectrums at play.
CHAPTER 8

**Future work**

Part of the process of unravelling the Byzantine catalogue of metal detected finds and other, potentially disparate batches of data, will involve making the process a bit easier for researchers. Much of the work done by Chester-Kadwell, Brindle, Robbins, and this dissertation helps. Yet one of the main critiques of the NHER and PAS datasets is that they are not really easy to use from the beginning. In order to be more useful, the datasets have to use standardized methods for categorizing and binning data. Some of the issues that arise are that datasets from different recording regimes can be non-concomitant with each other in regard to categorical data; the finds themselves can overlap; yet no set contains the full record. Standardization and categorization are essential for mapping and statistics, but these goals may stand at odds with material culture approaches that often consider the uniqueness of certain objects and the contexts in which they circulated. Again, the issue is scalar. At one end of the spectrum we need parity between observations by diluting contextual difference, and at the other end, we must enhance these differences to show why certain objects and their social settings are special. So some of the “fixes” may be more complex than others. This highlights the need for better archaeological discussion and understandings of scale.

To be frank, however, there is no point in drawing out this particular discussion, because at the moment it comes down to funding more than theory. No one is paying to prioritize the speedy digitization of these records from before the 2000s, to collate newer and older datasets, or to host them with support for researchers—although some work is being done in these areas. Even the PAS is something of a patchwork. This is not the fault of the finds officers in the PAS/HER systems; the government has systematically reduced or removed funding for these types of projects. The NHER barely survived funding cuts in 2014 (Grimmer 2016). This relates to another critique, more generally of the structure of archaeological data today, in that there is no single source to find certain artefact distributions (C. Evans 2018 pers. comm.). The PAS is more convenient to use than NHER, for example, but NHER has a lot more data. So, if a researcher used one or another of these datasets, but not both, they would miss many pieces of information, although the distributions are similar. This one of the reasons why both sets of data were included in the maps in Chapter 6: a clear illustration of this principle. Additionally, while the finds from “grey literature” and development-led archaeology are sometimes included in HER datasets, this may not universally be the case.

However, while the process of using the datasets may be slow and somewhat laborious, the distributions shown by metal detected finds and cropmarks make fantastic cases for small, limited archaeological interventions to learn more about distributions and how ploughsoil observations relate to the subsurface features. This is work that has been going on since the 1980s (Gregory & Rogerson 1984; Gregory 1991a). It could also be informative to run ground penetrating radar or other geophysics at the sites of metal detected distributions to learn more
CONCLUSION

about the interplay between ploughing, metal detecting, and the subsurface distributions of finds.

Additionally, as Chapter 7 highlighted, while large, landscape datasets are good for knowledge discovery, in order to really understand some of these landscapes of memory at a hyper-contextual level, excavations are required. The research in this dissertation makes a good case for a number of limited archaeological interventions, for instance in the cluster of barrows and square-ditched enclosures near Roughton. While these square-ditched enclosures have been excavated before in Norfolk (Ashwin 1999: 332-33; Ashwin & Bates 2000; Penn 2000), and while similar structures have been excavated in Cambridgeshire (Pryor et al. 1985), none of these excavations produced secure dates or much in the way of artefactual evidence. Therefore, it is possible that by using methods such as optically stimulated luminescence (OSL) dating, new dates might be forthcoming from the sandy soils that these enclosures often sit in (Jacobs & Roberts 2007). This is particularly interesting, because while the enclosures have been compared to the monuments of the so-called Arras “culture,” and other types of monuments in the Midlands (Whimster 1981; Ashwin & Bates 2000: 138), they have shown remarkably little similarity in actual excavations. Furthermore, their distribution, primarily along the watershed of the River Yare, seems to indicate something of a local or clustered phenomenon. Future excavations may be able to answer some of these questions.

A preoccupation of our times…

In conclusion, this research has illustrated using examples of Norfolk’s prehistoric landscape—a landscape that still exists today, forgotten perhaps—the complicated interplay between the sense of place and sense of self. Utilizing a longue durée time-frame, it has been possible to view the ways in which society physically structures, and is structured by, the landscape and the ways in which certain economic and cultural practices and challenges emerged from these relationships, or affordances, over centuries. Through an examination of the physical remains of Norfolk’s past, it was possible to probe some of the ways in which we can connect the nearly ubiquitous observations of this past landscape with the ways in which we think it may have worked.

In the process, it explored a fascinating dynamic between the political imagination and how memory can be carried in physical objects or “left” in particular places (Lillios 1999; Lillios & Tsamis 2010; Giles 2012). The interplay between visiting sites, crossing paths with ancestors, and belonging—or alternatively being haunted or even stalked by the landscape (Basso 1996: 102; Semple 1998; Shanks 2013)—was explored from a variety of archaeological sources in Norfolk and compared with a body of modern historical, anthropological, and sociological thought.
CHAPTER 8

Given the proliferation of memory studies within modern scholarship and the concomitant growth of popular past-times like metal detecting, researching family genealogies, and even at-home DNA testing to learn more about ancestry, it may tentatively be suggested that we are reflecting some of the preoccupations of our own time upon the ancient past. These memory practices are certainly present today. People who experienced the traumas of the Second World War, for example, are now disappearing as direct receptacles of memory, and are now memorialised by their immediate descendants, as key centenaries come into focus. The crucial forty-year time-gap (the saeculum or the end-point when the last surviving member of a generation and the last carrier of its particular memories had died, as discussed in Chapter 7) was crossed in the 1980s, setting off this trend of the recall of memory. Furthermore, globalization has profoundly affected senses of identity, so that many seek more localized and memorialised roots.

All of this is to suggest that people in the past were not the only ones experiencing a disjuncture from idealized pasts. Although we can debate how familiar or unfamiliar the Iron Age is to our own times, it may be too tempting, on final reflection, not to compare modern practice with Iron Age ideas about the ways in which family and genealogy “can define the place of both the living and the dead” (Giles 2012: 249). Locating ancestors on Ancestry.com (fictive or not)—one of the hugely popular past-times just mentioned—may be different than physically locating yourself next to an “ancestor” (fictive or not) in a barrow as people may done in East Yorkshire during the Iron Age (Stead 1991a; Giles 2007a), or during the Anglo-Saxon period in Norfolk (Chester-Kadwell 2007). Yet in both it may be argued that we can see the compelling, fundamental interaction that exists between what we think about ourselves, our pasts, and the places we, and our ancestors, have called home. These traits may not be universal, but there does seem to be parity, on one level.

We are constantly aware of the past, and of time as a finite resource, and as people, we have to deal with or confront this. The traces of the past—ever-present, as we have seen—constantly remind us of this fact (Olivier 2011: 15). In the landscape, all around, here a scattered hoard, and there a shattered blade, or the cropmark of a barrow: these are the remnants of people that have now gone. In recalling times gone by we must ask: how will we be remembered?
Notes on Appendix 1

This appendix provides a catalogue of the Bronze Age and Iron Age hoards of Norfolk. The hoards are labeled by either their NHER Preferred Reference (“PrefRef”) number or by their PAS identification number. The PAS identification numbers cited here, in text, and in maps are web-generated numbers, and unless otherwise noted, they are not true IDs. The true ID of a PAS find (NMS, PAS, or IARCH) has been noted where applicable beside this internal ID. This allows for cross-referencing between this Appendix and the PAS website (https://finds.org.uk). NHER IDs “PrefRefs” may also be cross-referenced with the Norfolk Heritage Explorer (http://www.heritage.norfolk.gov.uk/advanced-search).

The hoards are organized chronologically by date of likely deposition. Each hoard is classified by its likely period of deposition given by a BC/AD date with a +/- margin of error, which parish it was located in, a description of the hoard, what the primarily metallic composition of the hoard is (e.g. Au, Ag, Cu, Fe), whether the hoard was dispersed or found in-situ, whether the hoard was part of a cluster of hoards, notes on the contents of the hoard, how it was found, and whether a treasure inquiry case was generated as a result of finding it. All data within the appendix originates from the NHER/PAS or their cited references. It should be noted that this catalogue may not be fully comprehensive, and data on some PAS hoards could not be accessed because they are either still under review or quarantined; these often have an available NHER correlate.

Duplicates, or correlates, between PAS and NHER are noted. There is significant overlap between the two. Note also, dates for PAS finds are often more precise. Therefore, although finds are organized chronologically, PAS and NHER correlates, duplicates, and clusters may not appear next to each other. Due to the higher precision, PAS dates were used in the SPD analyses and Figures 6.15 & 6.16 in Ch. 6. Duplicates and correlates were not used together in any analysis. See Appendix 2 for greater discussion of grouping versus splitting finds and hoards.
<table>
<thead>
<tr>
<th>ID No.</th>
<th>PERIOD</th>
<th>YEAR DEPOSITED</th>
<th>PARISH</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>No. OBJECTS</th>
<th>YEAR FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHER 29875</td>
<td>Early Bronze Age</td>
<td>1925 BC +/- 425 yrs.</td>
<td>Deopham</td>
<td>Early Bronze Age hoard of axes</td>
<td>Cu/Tn</td>
<td></td>
<td>1997</td>
</tr>
<tr>
<td>NHER 685</td>
<td>Early Bronze Age</td>
<td>1925 BC +/- 425 yrs.</td>
<td>Norwich</td>
<td>Early Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>2</td>
<td>1977</td>
</tr>
<tr>
<td>NHER 1101</td>
<td>Middle Bronze Age</td>
<td>1300 BC +/- 300 yrs.</td>
<td>Old Hunstanton</td>
<td>Hunstanton Middle Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>5</td>
<td>1974</td>
</tr>
<tr>
<td>NHER 24606</td>
<td>Middle Bronze Age</td>
<td>1300 BC +/- 300 yrs.</td>
<td>Croxton</td>
<td>Bronze Age hoard, prehistoric flints and multi period pottery sherds</td>
<td>Cu/Tn</td>
<td></td>
<td>1988</td>
</tr>
<tr>
<td>NHER 29362</td>
<td>Middle Bronze Age</td>
<td>1300 BC +/- 300 yrs.</td>
<td>Woodbastwick</td>
<td>Middle Bronze Age palstave hoard</td>
<td>Cu/Tn</td>
<td>3</td>
<td>1993-1994</td>
</tr>
<tr>
<td>NHER 32041</td>
<td>Middle Bronze Age</td>
<td>1300 BC +/- 300 yrs.</td>
<td>Ashmanhaugh</td>
<td>Middle Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>7</td>
<td>1995</td>
</tr>
<tr>
<td>NHER 4726</td>
<td>Middle Bronze Age</td>
<td>1300 BC +/- 300 yrs.</td>
<td>Stoke Ferry</td>
<td>Bronze Age metal hoard</td>
<td>Cu/Tn</td>
<td></td>
<td>1881</td>
</tr>
<tr>
<td>NHER 58729</td>
<td>Middle Bronze Age</td>
<td>1300 BC +/- 300 yrs.</td>
<td>Hempnall</td>
<td>Middle Bronze Age pair of two-piece looped palstave moulds</td>
<td>Cu/Tn</td>
<td>2</td>
<td>2012</td>
</tr>
<tr>
<td>PAS 427618</td>
<td>(PAS-9474B1)</td>
<td>Middle Bronze Age</td>
<td>West Acre</td>
<td>West Acre 1 scattered hoard</td>
<td>Cu/Tn</td>
<td>9</td>
<td>2008</td>
</tr>
<tr>
<td>PAS 459344</td>
<td>(NMS-26F828)</td>
<td>Middle Bronze Age</td>
<td>Feltwell</td>
<td>Information unavailable</td>
<td>Cu/Tn</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Key: **Au** Gold  **Ag** Silver  **Cu/Tn** Bronze  **Fe** Iron
### Hoards of Later Prehistoric Norfolk

#### EBA Hoard of Axeheads
- **Condition**: Dispersed
- **Notes**: Metal detector
- **Discovery**: Gardening
- **Treasure Case**: 1977

A hoard of two Early Bronze Age copper alloy axeheads was found in the back garden of this house in 1977. While erecting fence in back garden a hoard of two decorated flat bronze axes with bow hammered flanges— one has a slight bevel.

#### Ornament Horizon Bronze Age Hoard
- **Condition**: Dispersed
- **Notes**: Archaeological excavation
- **Discovery**: Metal detector, Controlled archaeological excavation
- **Treasure Case**: 1974.9.1-3

A hoard of two decorated flat bronze axes with bow hammered flanges—one has a slight bevel. These axes were found in the back garden during the period 1988-89. The hoard comprises a palstave, torc, necklet, pin, and bracelet.

#### Dispersed MBA Hoard
- **Condition**: Dispersed
- **Notes**: Metal detector
- **Discovery**: Archaeological excavations
- **Treasure Case**: Metal detector

This hoard of three Middle Bronze Age palstaves of varying quality was discovered during an archaeological excavation in 1988-89. Findings included a Bronze Age gold torc and a copper alloy spearhead.

#### MBA Hoard Including Dirk, Rapier, and Spearhead
- **Condition**: Metal detector
- **Notes**: Controlled archaeological excavation
- **Discovery**: Metal detector
- **Treasure Case**: 2012 T72

A hoard including a dirk, rapier, and spearhead was recovered by metal detecting. Findings included a Middle Bronze Age side-looped spearhead with three fragments of tang and blade. One fragment of a Middle Bronze Age dirk was also recovered.

#### Small Socketed Chisel, Fragments of Socketed Axes, Sword Handle and Blade, Awl, Bronze Cake, Lead Ingot
- **Condition**: Rail/road works
- **Notes**: Metal detector
- **Discovery**: Metal detector
- **Treasure Case**: 2008T454

A hoard of small socketed chisels, fragments of socketed axes, sword handle and blade, awl, bronze cake, and lead ingot was discovered during rail/road works.

#### Possible MBA Hoard Pair of Two-Piece Looped Palstave Moulds
- **Condition**: Dispersed
- **Notes**: Metal detector
- **Discovery**: Metal detector
- **Treasure Case**: 2012 T72

A possible hoard of two-piece looped palstave moulds was discovered by metal detecting.

#### Socketed Axheads and Fragments of Swords and Spears, 9 Pieces Total
- **Condition**: Dispersed
- **Notes**: Metal detector
- **Discovery**: Metal detector
- **Treasure Case**: 2008T454

A hoard of socketed axheads and fragments of swords and spears, totaling 9 pieces, was recovered by metal detecting.
<table>
<thead>
<tr>
<th>ID No.</th>
<th>PERIOD</th>
<th>YEAR DEPOSITED</th>
<th>PARISH</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>No. OBJECTS</th>
<th>YEAR FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS 942758</td>
<td>Middle Bronze Age</td>
<td>1300 BC +/- 200 yrs.</td>
<td>Hopton-on-Sea</td>
<td>Middle Bronze Age hoard comprising of 6 copper-alloy objects</td>
<td>Cu/In</td>
<td>6</td>
<td>2011</td>
</tr>
<tr>
<td>PAS 477943</td>
<td>Middle Bronze Age</td>
<td>1300 BC +/- 300 yrs.</td>
<td>Hopton-on-Sea</td>
<td>Information unavailable</td>
<td>Cu/In</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>PAS 951483</td>
<td>Middle Bronze Age</td>
<td>1300 BC +/- 200 yrs.</td>
<td>Bressingham</td>
<td>Information unavailable</td>
<td>Cu/In</td>
<td>6</td>
<td>2019</td>
</tr>
<tr>
<td>PAS 523621</td>
<td>Middle Bronze Age to Late Bronze Age</td>
<td>1275 BC +/- 125 yrs.</td>
<td>Hempnall</td>
<td>A cast copper-alloy hoard of Middle Bronze Age date formed from a pair of two-piece looped palstave moulds</td>
<td>Cu/In</td>
<td>2</td>
<td>2007</td>
</tr>
<tr>
<td>PAS 914669</td>
<td>Middle Bronze Age to Late Bronze Age</td>
<td>1200 BC +/- 300 yrs.</td>
<td>Hindringham</td>
<td>Information unavailable</td>
<td>Cu/In</td>
<td>13</td>
<td>2018</td>
</tr>
<tr>
<td>PAS 259938</td>
<td>Late Bronze Age</td>
<td>975 BC +/- 175 yrs.</td>
<td>Fincham</td>
<td>Fincham 2, addedendum to hoard found in 1997</td>
<td>Cu/In</td>
<td>1</td>
<td>2008</td>
</tr>
<tr>
<td>PAS 275380</td>
<td>Late Bronze Age</td>
<td>975 BC +/- 175 yrs.</td>
<td>Sparham</td>
<td>A Late Bronze Age hoard of several fragmentary objects and one socketed axhead</td>
<td>Cu/In</td>
<td>3</td>
<td>2009</td>
</tr>
<tr>
<td>PAS 399144</td>
<td>Late Bronze Age</td>
<td>975 BC +/- 175 yrs.</td>
<td>Cawston</td>
<td>A hoard of 10 fragments of spears and a blade</td>
<td>Cu/In</td>
<td>10</td>
<td>2008</td>
</tr>
</tbody>
</table>

See NHER 58729

See NHER 51514
Six object including quoit-headed pin, quoit-headed pin, spiral twisted torc, spiral twisted torc, spiral twisted armring/bracelet, plain penannular bracelet, some object have ancient breaks on them. The 'Hopton-on-Sea' hoard can be dated typologically to the Middle Bronze Age (1500-1100 BC). Their dating can be further narrowed down to type and metalwork phase. The quoit-headed pins, twisted torcs and bracelet are characteristic of the Middle Bronze Age 'ornament horizon' which has been dated to the Taunton and Penard metalwork phases (1400-1150 BC) (Roberts 2007: 139-41). It is notable that some of the objects in the hoard display ancient breaks, others are utilised or incomplete (though still usable) indicating this group is likely to be of a functional and personal nature, a common feature on most Middle Bronze Age hoards in the region. The torcs and quoit-headed pins appeared to have been deposited in the ditch fill as pairs of objects and there may therefore be some intentional grouping in the way the hoard was deposited.

These moulds are of Middle Bronze Age date. According to Rowlands (1976, ) looped palstaves do not occur until the Taunton Phase of the Middle Bronze Age, so probably dating from between 1400-1100 BC. Bronze palstave moulds are extremely rare and prior to these examples only nine others were known from mainland Britain. The only other examples from East Anglia are the complete example from Harling, Norfolk and a fragment from the Late Bronze Age Isleham, Cambridgeshire hoard (O'Connor 1980: 366). The form of the palstaves suggests they belong in Rowlands' Class 1 Group 3 palstaves with similar complete palstaves noted from Norfolk (e.g. Rowlands 1976: pl. 28 no. 801).

Tip of socketed spear, broken before base of socket and the tip of blade with very straight sides and flattened oval in section

One socketed axhead, one fragment of a socketed knife broken in antiquity, and a fragmentary socketed axhead from the LBA.

Hoard consists of the fragments of spears and a ferrule, one blade

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTENTS / NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six object including quoit-headed pin, quoit-headed pin, spiral twisted torc, spiral twisted torc, spiral twisted armring/bracelet, plain penannular bracelet, some object have ancient breaks on them. The 'Hopton-on-Sea' hoard can be dated typologically to the Middle Bronze Age (1500-1100 BC). Their dating can be further narrowed down to type and metalwork phase. The quoit-headed pins, twisted torcs and bracelet are characteristic of the Middle Bronze Age 'ornament horizon' which has been dated to the Taunton and Penard metalwork phases (1400-1150 BC) (Roberts 2007: 139-41). It is notable that some of the objects in the hoard display ancient breaks, others are utilised or incomplete (though still usable) indicating this group is likely to be of a functional and personal nature, a common feature on most Middle Bronze Age hoards in the region. The torcs and quoit-headed pins appeared to have been deposited in the ditch fill as pairs of objects and there may therefore be some intentional grouping in the way the hoard was deposited.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DISCOVERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlled archaeological investigation 2012T73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal detector</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metal detector</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Metal detector</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Metal detector 2012T722</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Metal detector 2009T316</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Metal detector 2009T653</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Metal detector 2008T273</th>
</tr>
</thead>
</table>

267
<table>
<thead>
<tr>
<th>ID No.</th>
<th>PERIOD</th>
<th>YEAR DEPOSITED</th>
<th>PARISH</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>No. OBJECTS</th>
<th>YEAR FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS 205064</td>
<td>Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Salle</td>
<td>Scattered hoard of Late Bronze Age of socketed South-Eastern type axes and fragments</td>
<td>Cu/Tin</td>
<td>9</td>
<td>2005</td>
</tr>
<tr>
<td>PAS 205143</td>
<td>Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Great Ellingham</td>
<td>Scattered hoard of Late Bronze Age axes, blades fragments, and assorted other fragments</td>
<td>Cu/Tin</td>
<td>4</td>
<td>2005</td>
</tr>
<tr>
<td>PAS 260912</td>
<td>Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Great Ellingham</td>
<td>A hoard of 27 fragments and a South-eastern type socketed axhead.</td>
<td>Cu/Tin</td>
<td>27</td>
<td>2007</td>
</tr>
<tr>
<td>PAS 399012</td>
<td>Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Ludham</td>
<td>Ludham 1 Late Bronze Age hoard of 40 copper-alloy objects</td>
<td>Cu/Tin</td>
<td>40</td>
<td>2012</td>
</tr>
<tr>
<td>PAS 399073</td>
<td>Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Ludham</td>
<td>A scattered hoard consisting of 1 fragment of a sword hilt/blade intersection, and a socketed spear.</td>
<td>Cu/Tin</td>
<td>2</td>
<td>2008</td>
</tr>
<tr>
<td>PAS 437674</td>
<td>Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Erpingham</td>
<td>A hoard of 14 late Bronze Age axe heads, socketed and looped.</td>
<td>Cu/Tin</td>
<td>14</td>
<td>2011</td>
</tr>
<tr>
<td>PAS 493448</td>
<td>Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Fleggburgh</td>
<td>Fleggburgh 2 hoard addendum</td>
<td>Cu/Tin</td>
<td>5</td>
<td>2012</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS / NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>-----------------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The hoard is composed of seven complete or almost complete and two fragments of socketed axes of the South-Eastern type. Although the axes are not fragmented, they do show signs of heavy wear and use and it is likely that they were collected to form a metal resource for recycling. Although these artefacts were found as a scatter over a limited area, it is likely that it originated as a hoard and was dispersed by the action of the plough.</td>
<td>Metal detector</td>
<td>2005 T362</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Previous finds comprise eight socketed axes, two sword blade fragments, one sword hilt fragment, two fragments of cake, and a casting jet. Terminal of sword hilt joining fragment found in 1995.</td>
<td>Metal detector</td>
<td>2005T450</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Southeastern socketed axe can be further classified as type A1 Plain (Needham 1990: 28 fig. 2) and broadly dates the hoard to the Ewart Park metal phase (1000-800 BC) (Needham et al. 1997). The remaining objects are bronze fragments of varying size. Several of these appear to have been part of plano-convex ingots. Thus, though the edges are corroded, the forms, patinas and dimensions suggest that certain fragments may have been part of the same ingot.</td>
<td>Metal detector</td>
<td>2007T555</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fourteen spearheads, one sword blade fragment, six socketed axeheads, two tanged knives, four socketed chisels, one socketed knife, one socketed gouge, cake fragments, and other assorted fragments. The object types such as the Southeastern and Southern English type socketed axes (Needham 1990) and socketed chisels date the hoard to the Ewart Park metal phase (1000-800 BC) (Needham et al. 1997). In terms of composition and dating the hoard is comparable to the Reach hoard, Cambridgeshire (Smith 1956) which contained a similar cap mounting, socketed knife, chisels and axes as well as pegged leaf shape spears. The placing of apparently scrap metal in the landscape is well documented during this period and has been well researched in Norfolk and Suffolk during this period (e.g. Pendleton 1999). The discovery of other bronze objects in the Ludham vicinity (e.g. 2008 T 117, 2006 T307) and a socketed axe found in March 1985 seems to highlight a particular concentration</td>
<td>Metal detector</td>
<td>2008T95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Objects previously found in the same area indicate a scattered hoard also containing three additioned Ewart Park socketed axeheads</td>
<td>Metal detector</td>
<td>2006 T307, 2008T117</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Twelve complete and partial socketed axeheads and two looped. Late Bronze Age.</td>
<td>Agricultural or drainage work</td>
<td>2011T231</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fragments of a sword blade, socketed axe head, casing jet, ingot, and a socketed knife.</td>
<td>Metal detector</td>
<td>2012T174</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## APPENDIX 1

<table>
<thead>
<tr>
<th>ID No.</th>
<th>PERIOD</th>
<th>YEAR DEPOSITED</th>
<th>PARISH</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>No. OBJECTS</th>
<th>YEAR FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS 531029</td>
<td>(NMS-CA57D7) Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Ludham</td>
<td>Ludham 2 hoard addendum.</td>
<td>Cu/In</td>
<td>4</td>
<td>2012</td>
</tr>
<tr>
<td>PAS 563825</td>
<td>(NMS-1FB7C5) Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>West Acre</td>
<td>West Acre 2 hoard addendum.</td>
<td>Cu/In</td>
<td>36</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See NHER 31075</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAS 583743</td>
<td>(NMS-37F7D3) Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Docking</td>
<td>A Late Bronze Age hoard consisting of 17 objects or fragments of objects</td>
<td>Cu/In</td>
<td>17</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See NHER 24951</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAS 585019</td>
<td>(NMS-CF0A11) Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Great Ellingham</td>
<td>Dispersed hoard of fragments of 2 copper alloy objects</td>
<td>Cu/In</td>
<td>2</td>
<td>2013</td>
</tr>
<tr>
<td>PAS 619255</td>
<td>(NMS-7517F1) Late Bronze Age</td>
<td>900 BC +/- 100 yrs.</td>
<td>Brandon Parva, Coston, Runhall and Welborne</td>
<td>Late Bronze Age hoard of the fragments of 6 copper alloy objects</td>
<td>Cu/In</td>
<td>6</td>
<td>2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See NHER 59739</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 10022</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Carleton Rode</td>
<td>Carleton Rode Late Bronze Age Hoard</td>
<td>Cu/In</td>
<td>22</td>
<td>1844</td>
</tr>
<tr>
<td>NHER 10245</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Surlingham</td>
<td>Bronze Age axehead hoard</td>
<td>Cu/In</td>
<td>3</td>
<td>1865</td>
</tr>
<tr>
<td>NHER 10556</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Great Yarmouth</td>
<td>Late Bronze Age hoard found at Gorleston on Sea</td>
<td>Cu/In</td>
<td>118</td>
<td>1952</td>
</tr>
<tr>
<td>NHER 10557</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Great Yarmouth</td>
<td>Late Bronze Age hoard found at Gorleston on Sea</td>
<td>Cu/In</td>
<td>31</td>
<td>1962-1966</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS</td>
<td>NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>----------</td>
<td>-------</td>
<td>-----------</td>
<td>--------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
<td>Four fragments of socketed spearheads and an axehead from the Ewart Park Phase, part of a scattered hoard.</td>
<td>Metal detector</td>
<td>2012T828</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image3" alt="Image" /></td>
<td><img src="image4" alt="Image" /></td>
<td>Beads, ingots and molten fragments and other objects including the fragments of 4 awls, and other pieces of tools. Part of a dispersed LBA hoard.</td>
<td>Metal detector</td>
<td>2013T374</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image5" alt="Image" /></td>
<td><img src="image6" alt="Image" /></td>
<td>Three incomplete Ewart Park swords, one socketed leaf shape spear head, 1 socket axehead South-east type, two fragments socketed axheads, one Yorkshire type socket axehead, one Meldreth type socketed axehead, other fragments. Late Bronze Age.</td>
<td>Metal detector</td>
<td>2013T708</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image7" alt="Image" /></td>
<td><img src="image8" alt="Image" /></td>
<td>Fragment of socketed axe head and possible fragment from an axe head or other copper alloy object. Probably Late Bronze Age.</td>
<td>Metal detector</td>
<td>2013T740</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image9" alt="Image" /></td>
<td><img src="image10" alt="Image" /></td>
<td>Five fragments of socketed axes and one unidentified fragment. The small area from which these objects were recovered and the presence of fragments within the socket of axe head No. 4 clearly suggests that these objects were deposited together as a hoard of prehistoric metalwork. The finds appear to represent a hoard of Late Bronze Age 1000-800/700 cal BC metal in a fragmentary condition, often referred to as a 'founders' hoard'. It is not been possible to assign the axes to more particular typological grouping because of their fragmentary condition but it may be possible to do so in the course of future study.</td>
<td>Metal detector</td>
<td>2014T364</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image11" alt="Image" /></td>
<td><img src="image12" alt="Image" /></td>
<td>LBA hoard of twenty-two + object, including at least ten socketed axes, two winged axes, one spearhead, one palstave, one hammer, two chisels and five gouges.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image13" alt="Image" /></td>
<td><img src="image14" alt="Image" /></td>
<td>LBA hoard of three Bronze Age socketed axeheads was recovered from the former brickyard here</td>
<td>Building work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image15" alt="Image" /></td>
<td><img src="image16" alt="Image" /></td>
<td>A LBA hoard of 118 copper alloy objects and fragments of objects, including axes, swords and a rare looped guide ring, was found during the construction of Peterhouse Junior School in 1952. The hoard may be a metal workers collection of material that was deposited in the 7th century BC. It was placed in the gathering ground of a small stream.</td>
<td>Building work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image17" alt="Image" /></td>
<td><img src="image18" alt="Image" /></td>
<td>LBA hoard of over thirty objects, including copper alloy socketed axes, spearheads, sword fragments and a jet were found during bulldozing in 1962 and laying a sewer in 1966. The hoard may be a metalworker's collection of material buried for safekeeping. This was found close to another Bronze Age hoard (NHER 10556). In 1962, Hoard II, Six socketed axes. Spearheads, two broken. Two complete ones. Sword, hilt</td>
<td>Agricultural or drainage work, Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
<td>PARISH</td>
<td>DESCRIPTION</td>
<td>MATERIAL</td>
<td>No. OBJECTS</td>
<td>YEAR FOUND</td>
</tr>
<tr>
<td>--------</td>
<td>---------------</td>
<td>----------------</td>
<td>--------------------</td>
<td>---------------------------------------------</td>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>NHER 10765</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Pulham St. Mary</td>
<td>Hoard of Bronze Age copper alloy weapons</td>
<td>CuTn</td>
<td>8</td>
<td>1828</td>
</tr>
<tr>
<td>NHER 10797</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Kenninghall</td>
<td>Possible Bronze Age axehead hoard</td>
<td>CuTn</td>
<td>12</td>
<td>1966</td>
</tr>
<tr>
<td>NHER 1123</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>North Elmham</td>
<td>Late Bronze Age hoard of 48 copper-alloy objects</td>
<td>CuTn</td>
<td>48</td>
<td>1970</td>
</tr>
<tr>
<td>NHER 11969</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Northrepps</td>
<td>Hoard of Bronze age axeheads</td>
<td>CuTn</td>
<td>3</td>
<td>1976</td>
</tr>
<tr>
<td>NHER 12872</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>West Caister</td>
<td>Late Bronze Age hoard, Caister on Sea Roman vicus and enclosure and multi-period finds</td>
<td>CuTn</td>
<td>6</td>
<td>1977</td>
</tr>
</tbody>
</table>
## HOARDS OF LATER PREHISTORIC NORFOLK

<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In a field called Coles Field formerly and now known by the name of the 8 Acres (1843) in the occupation of Mr. Colby was discovered by...about 1828, eight bronze celts, some spear and arrowheads and a sword, all of the same sort of metal, but little care was taken of them. I was only able to discover one of the celts which the finder of them had kept as a Memento of his discovery. This field is situate on the north side of a valley at the Bottom of which is a considerable stream, and in a field on the opposite side (was a barrow, see under NHER 10766)</strong></td>
<td><strong>Agricultural or drainage work</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LBA hoard of two Bronze Age socketed copper alloy axeheads were found here in 1966. Ten more were reported in 2000 but were found around 1998 by a metal detectorist. These may be part of a Bronze Age hoard. The other was found while hoeing sugar beet after deep ploughing for first time to depth to about 30m to 35cm (12 to 14 inches). Around 503m (550 yards) east of Grove Farm. Two socketed bronze axes, one plain and one with linear-wing decoration and horizontal rib below or is raised above seat, and has double horizontal ribs above. Around 1998. Metal detecting by person unknown. Approximately ten socketed axes found in area of previously reported finds. Now sold and not available for study. Reported to A. Rogerson anonymously in 2000.</strong></td>
<td><strong>Agricultural or drainage work,</strong> <strong>Metal detector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LBA hoard of of 48 Bronze Age copper alloy objects, including socketed axeheads, sword and spearhead fragments and ingots, was excavated in 1970. Original finds ploughed up were seven socketed axes and one ingot fragment. The excavation (14 and 15 February) located the base of the pit in which hoard had been buried: also two small fragments of spearheads, two fragments of tongue, chape, two joining fragments of leaf-shaped sword, another fragment of similar, one rapier fragment, twenty six complete or fragmentary socketed axes, eight ingot fragments (a total of forty eight objects).</strong></td>
<td><strong>Agricultural or drainage work,</strong> <strong>Controlled archaeological excavation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LBA hoard of three socketed axes found in harvesting potatoes. Two found at same time; third in adjacent run of harvester. Field ploughed deeper for potatoes indicated possible interpretation that this is a disturbed hoard. One axe is plain, one axe is facetted, one axe with three pellet on each face. Metal detecting. Discovery Tours Field 5, extended to whole field. Two socketed axeheads additional to above hoard.</strong></td>
<td><strong>Agricultural or drainage work,</strong> <strong>Metal detector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LBA hoard consisting of a socketed axe, a baluster bead, a hollow ring, a decorative comb-shaped plate, and two pieces of lead. The hoard has been dated to the 8th or 7th century BC and has Carp’s Tongue affinities. Only one other cast bead is known from this period and there are no known parallels for the lead piece.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX 1

<table>
<thead>
<tr>
<th>ID No.</th>
<th>Period</th>
<th>Year Deposited</th>
<th>Parish</th>
<th>Description</th>
<th>Material</th>
<th>No. Objects</th>
<th>Year Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHER 13891</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Hilgay</td>
<td>Bronze Age axeheads and palstave</td>
<td>Cu/Tn</td>
<td>2</td>
<td>1964-1979</td>
</tr>
<tr>
<td>NHER 15534</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Beeston Regis</td>
<td>Late Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>19</td>
<td>1979</td>
</tr>
<tr>
<td>NHER 15915</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Cranwich</td>
<td>Bronze Age hoard, flint and metal finds</td>
<td>Cu/Tn</td>
<td></td>
<td>1905</td>
</tr>
<tr>
<td>NHER 16229</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Ketteringham</td>
<td>Multi-period objects, coins and pottery sherds</td>
<td>Cu/Tn</td>
<td>3</td>
<td>1991</td>
</tr>
<tr>
<td>NHER 16398</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Costessey</td>
<td>Late Bronze Age hoard, Prehistoric worked flint and pot, and medieval sword chape</td>
<td>Cu/Tn</td>
<td>5</td>
<td>1980</td>
</tr>
<tr>
<td>NHER 16461</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Thetford</td>
<td>Late Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>4</td>
<td>1978</td>
</tr>
<tr>
<td>NHER 16592</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>North Tuddenham</td>
<td>Multi-period finds and Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>8</td>
<td>1991</td>
</tr>
</tbody>
</table>
Possible LBA hoard Two Bronze Age socketed copper alloy plain axes were found when a dyke was recut. Later a Bronze Age unlooped palstave with trident decoration was ploughed up near the site. The two socketed axeheads are of similar date so these may be part of a Bronze Age hoard.

LBA hoard comprised of fourteen socketed axes, three fragments of same, one spearhead, one socketed axe mould, one jet, one cake fragment. It was found in a pottery jar thought to be Iron Age in type. This hoard is one of the most important Bronze Age hoards to have been found in Norfolk. Found on playing field immediately beneath topsoil during metal detecting, later excavated

LBA hoard of Bronze Age copper alloy objects, including axes, palstaves and scrap metal. Found together during ploughing around 1932. Contained two socketed axes, palstave, four pieces cake or scrap. In 1905 at the same location, were found an 'Ornamented bronze celt' (probably triple ribbed palstave, looped and small bronze with six spikes on top' (casting jet). Also possibly from this location - Bronze brooch and ring. Finds in Cambridge Museum of Archaeology and Ethnography. For full details see report in file by A. Lawson (NAU) March 1980.

Possible LBA hoard three Bronze Age copper alloy socketed axeheads

LBA hoard of three complete socketed axes along with fragments of two more, a knife, an ingot and a piece of scrap metal. Subsequent metal detecting on the site in 1988 and 1989 recovered a sixth socketed axe, a prehistoric flint scraper, a piece of prehistoric pottery and a medieval sword chape. More recently, a program of archaeological evaluation and excavation in 2003 and 2005 recovered at least three additional Late Bronze Age axes and other copper alloy items which are probably part of the dispersed hoard (see NHER 39351).

LBA hoard including several socketed axes.

LBA hoard of Late Bronze Age sword fragment, socketed knife fragment, two socketed axe fragments. Two Bronze Age blade fragments, two vessel fragments.
<table>
<thead>
<tr>
<th>ID No.</th>
<th>Period</th>
<th>Year Deposited</th>
<th>Parish</th>
<th>Description</th>
<th>Material</th>
<th>No. Objects</th>
<th>Year Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHER 1670</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Snettisham</td>
<td>Snettisham Bronze Age Hoard II</td>
<td>Cu</td>
<td></td>
<td>1930</td>
</tr>
<tr>
<td>NHER 1671</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Snettisham</td>
<td>Snettisham Bronze Age Hoard III</td>
<td>Cu</td>
<td></td>
<td>1946</td>
</tr>
<tr>
<td>NHER 1672</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Snettisham</td>
<td>Snettisham Bronze Age Hoard IV</td>
<td>Cu</td>
<td>33</td>
<td>1962</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS/NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE/CASE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>---------------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LBA hoard of socketed axeheads and spearheads were recovered from Snettisham. It is thought that this hoard is related to a number of axeheads found in 1797 (NHER 1504) and later in the 20th century (NHER 1671, NHER 1672). In September 1930 a bronze socketed axe with four tangs (or ribs) found (inf. R. R. Clarke August 1934) finder states that he has ploughed this land on many occasions without finding anything of a similar nature. Leaf shaped spearhead presumably found with it. Small hoard. Finder had four bronzes (the best) from this site and promised them, now presumed lost. Also, a bronze spearhead, leaf shaped with decorative bands at base of socket found with a socketed axe. Labelled 'Shernbourne.' Also Socketed bronze spearhead with peghole, leaf shaped blade, mouldings and incised lines on socket, tip missing. Looped and socketed axehed, five ribs and pellets on each face.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LBA hoard of an number of copper alloy objects including a razor, fragments of a leaf-shaped sword, a chisel, three gouges, six socketed axes, one tracer and a casting jet. It is thought that this hoard may be related to earlier finds in 1797 (NHER 1504) and the 1930s (NHER 1670), as well as a hoard recovered later (NHER 1672). Metal founders bronze hoard in soil 15 to 18 inches (38-46cm) deep found by deep ploughing. Class II bronze razor; hilt and tip of blade of v-type leaf sword; one socketed mortising chisel; three socketed gouges, six socketed axes (including one with vestigial wings (two faceted, one with three ribs, two could be chisels)); one tracer, one jet. Lawson gives gouges and chisel as two socketed gouges, one socketed punch, one tanged gouge, sword is tip of carp's tongue and hilt of Ewart Park.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Between 1962 and 1986 a large number of Late Bronze Age metal objects were recovered in the parish of Snettisham. These included whole pieces and fragments of over twenty individual pieces including axeheads and a very interesting 'continental antenna-hilted sword'. It is thought that the presence of ingot and metal cake fragments, in both copper alloy and lead, indicates that this is the hoard of a metal-worker. It is thought that this hoard may be related to earlier finds in 1779 (NHER 1504), the 1930s (NHER 1670) and 1948 (NHER 1671). July 1962: Part of Late Bronze Age founders hoard. 1. Socketed axe, cutting edge. 2. Another (small) 3. Part of hilt of European antenna-hilted sword. 4. Ingot fragment. Before 1965 5. Another socketed axe (mouth fragment), Before 1971 surface finds, variously over several years. 6-15. Ten fragments of socketed axes, including mouth of octagonal faceted axe with fragment of another jammed in it. Three ingot fragments. March 1976; search with a metal-detector produced thirteen pieces from the topsoil. No evidence of any further material remaining in situ. Seven cake ingot fragment,Two axe fragments, Complete axe, Casting jet, sword blade fragments.</td>
<td>Agricultural or drainage work, Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
<td>PARISH</td>
<td>DESCRIPTION</td>
<td>MATERIAL</td>
<td>No. OBJECTS</td>
<td>YEAR FOUND</td>
</tr>
<tr>
<td>-------</td>
<td>--------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------------------------------------------------</td>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>NHER 1679</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Shernborne</td>
<td>Bronze age metal finds, Shernborne Common</td>
<td>Cu/Tn</td>
<td>3</td>
<td>1963</td>
</tr>
<tr>
<td>NHER 1685</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Dersingham</td>
<td>Two Bronze Age axeheads</td>
<td>Cu/Tn</td>
<td>2</td>
<td>1954</td>
</tr>
<tr>
<td>NHER 17472</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Great Melton</td>
<td>Great Melton Late Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>19</td>
<td>1980</td>
</tr>
<tr>
<td>NHER 17474</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Bunwell</td>
<td>Bunwell Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>5</td>
<td>1981</td>
</tr>
<tr>
<td>NHER 17713</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Methwold</td>
<td>Possible Bronze Age hoard</td>
<td>Cu/Tn</td>
<td></td>
<td>1941</td>
</tr>
<tr>
<td>NHER 18037</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Runton</td>
<td>Late Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>8</td>
<td>1982</td>
</tr>
<tr>
<td>NHER 18149</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Norwich</td>
<td>Bronze Age metal hoard</td>
<td>Cu/Tn</td>
<td></td>
<td>1759</td>
</tr>
<tr>
<td>NHER 1858</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Stiffkey</td>
<td>Bronze Age metal hoard</td>
<td>Cu/Tn</td>
<td>6</td>
<td>1967</td>
</tr>
<tr>
<td>NHER 1944</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>South Creake</td>
<td>Bronze Age sword blade and axehead hoard</td>
<td>Cu/Tn</td>
<td>6</td>
<td>1952</td>
</tr>
<tr>
<td>NHER 1997</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>South Creake</td>
<td>Bronze Age axehead and sword blade hoard</td>
<td>Cu/Tn</td>
<td>5</td>
<td>1959-1994</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS / NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>----------------</td>
<td>-----------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard of copper alloy spearhead and two socketed axeheads, possibly a small hoard, were dug up in about 1963.</td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard of two Bronze Age copper alloy socketed axeheads were found at this spot at different times in 1954.</td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispersed. LBA hoard of at least fourteen socketed axeheads, a winged axehead, sword fragments, a razor, a spear head and metal working debris. The majority of the finds were found in a line as if they had been disturbed from a single location by ploughing.</td>
<td></td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard includes fragments of a socketed axe, a hammer, a knife, a gouge, an annular collar, a barbed spearhead and several unidentified objects.</td>
<td></td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispersed. LBA possible hoard. A Bronze Age copper alloy looped palstave was found in 1941 or 1942. Metal detecting on the site has recovered other Bronze Age finds including the butt end of a halberd or dagger, parts of a dagger or rapier and a complete looped spearhead. An Iron Age terret and an illegible Roman coin were also found. The Bronze Age finds may be part of a scattered hoard. It appears that Iron Age pottery has also been recovered at this site.</td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard, four socketed axes, three broken axes, one fragment axe, one palstave, two lumps</td>
<td></td>
<td>Building work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Situ. LBA hoard copper alloy objects, including socketed axeheads, was foundby children in a ditch in 1759</td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard five Bronze Age copper alloy socketed axeheads and a decorated mount were found in the same area at the edge of a wood between 1967 and 1972.</td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard hoard was ploughed up in a field in South Creake. The objects were contained in a round container which disintegrated on removal. Hoard includes—hilt and upper part of blades of three swords, three fragments of blades which do not join with each other or hilts. Two socketed spearheads, one very small, and a fragment probably part of the socket and midrib of another spearhead. See for comparison Stoke Ferry Hoard in Ashmolean Museum.</td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard of five Bronze Age socketed axes were found in a field in South Creake. In 1968 another two were ploughed up in the same area as the previous finds. Metal detecting on site during 1994-96 recovered more Bronze Age metalwork finds including sword blade fragments, more socketed axeheads and two sherds of a gritty pottery. It thus seems likely that these items are all part of a Bronze Age hoard.</td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>Period</td>
<td>Year Deposited</td>
<td>Parish</td>
<td>Description</td>
<td>Material</td>
<td>No. Objects</td>
<td>Year Found</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>NHER 2078</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Hindringham</td>
<td>Bronze Age socketed axeheads</td>
<td>Cu/Tn</td>
<td>2</td>
<td>1968</td>
</tr>
<tr>
<td>NHER 21440</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Ludham</td>
<td>Multi-period findspot</td>
<td>Cu/Tn</td>
<td>2</td>
<td>1985-2006</td>
</tr>
<tr>
<td>See PAS 399073, PAS 35617</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 21440</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Stiffkey</td>
<td>Bronze Age metal hoard and Iron Age pottery find</td>
<td>Cu/Tn</td>
<td>18</td>
<td>1985</td>
</tr>
<tr>
<td>NHER 22306</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Stiffkey</td>
<td>Bronze Age metal hoard and Iron Age pottery find</td>
<td>Cu/Tn</td>
<td>18</td>
<td>1985</td>
</tr>
<tr>
<td>NHER 22927</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Pulham St. Mary</td>
<td>Possible Late Bronze Age hoard and multi-period finds</td>
<td>Cu/Tn</td>
<td>18</td>
<td>1986</td>
</tr>
<tr>
<td>NHER 24343</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Brampton</td>
<td>Late Bronze Age hoard, Prehistoric flint, and Saxon to post medieval metal objects.</td>
<td>Cu/Tn</td>
<td>30</td>
<td>1988</td>
</tr>
<tr>
<td>NHER 24951</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Docking</td>
<td>Dispersed Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>17</td>
<td>1955-2013</td>
</tr>
<tr>
<td>See PAS 583733</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 25920</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Snettisham</td>
<td>Late Bronze Age axehead and ingot hoard</td>
<td>Cu/Tn</td>
<td>17</td>
<td>1990</td>
</tr>
<tr>
<td>See also NHER 1672</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Contents/Notes

<table>
<thead>
<tr>
<th>Condition</th>
<th>Cluster</th>
<th>Contents/Notes</th>
<th>Discovery</th>
<th>Treasure Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><img src="image1.png" alt="image" /></td>
<td>LBA hoard of two Bronze Age socketed axeheads found in a trench in 1968. Other Bronze Age axes are rumoured to have been found in the area.</td>
<td>Agricultural or drainage work</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td><img src="image2.png" alt="image" /></td>
<td>Possible LBA hoard. Upper two-thirds of Late Bronze Age socketed axehead, with triple rib decoration and one large and one small mouth moulding, (S1). See NHER 18013 for fragment of another axe nearby. Identified and drawn by J. J. Wymer (NAU). A. Gregory (NAU), 1985. Before 17 May 2006. Metal-detecting. Another Late Bronze Age socketed axehead found very close to the first, (S2). See description in file.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td><img src="image3.png" alt="image" /></td>
<td>LBA hoard of copper alloy objects, consisting of fifteen socketed axeheads, fragments of three further axeheads, part of a sword blade and an ingot.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td><img src="image4.png" alt="image" /></td>
<td>LBA hoard of copper alloy objects, consisting of fifteen socketed axeheads, fragments of three further axeheads, part of a sword blade and an ingot, was found in 1985</td>
<td>Metal detector, Controlled archaeological excavation</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td><img src="image5.png" alt="image" /></td>
<td>Possible LBA hoard. Found with metal detector. General finds scatter is context: Bronze Age bronze spear tip, compare with, bronze chape fragment of unknown date and use. Bronze hollow ring of unknown section, approximate diametre 2.25 inches (5.7cm) Additional metal detecting in 1987. Fragment of Late Bronze Age sword handle.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td><img src="image6.png" alt="image" /></td>
<td>Dispersed LBA Hoard. Found with metal detecting in area 18 square metres with 2 to 3 outliers. 204m north northeast of track, 66m west of old path. Context 1 scatter in ploughsoil around findspot. Retouched flint flake, pot boiler, worn Roman greyware and medieval sherds including late medieval/early post medieval. Context 2 at grid reference. The Oxnead Late Bronze Age hoard. About 30 pieces. Axe (S2), spearheads, part of axe mould valve, Thorndon knife, other knives, swords. Some items found in sockets of axes but removed by finders.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td><img src="image7.png" alt="image" /></td>
<td>Dispersed. LBA hoard. Between 1955 and 1988 two Bronze Age copper alloy socketed axeheads and a palstave were recovered at this location. Metal-detecting in 2013 identified a Late Bronze Age hoard comprising 17 objects/object fragments. It is likely that the earlier discoveries were originally part of this dispersed hoard.</td>
<td>Agricultural or drainage work, Metal detector</td>
<td>2013 T708</td>
</tr>
<tr>
<td>8</td>
<td><img src="image8.png" alt="image" /></td>
<td>LBA hoard of the cutting end of a socketed axehead and a hoard of copper alloy and lead cake ingots</td>
<td>Metal detector</td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX 1

<table>
<thead>
<tr>
<th>ID No.</th>
<th>Period</th>
<th>Year Deposited</th>
<th>Parish</th>
<th>Description</th>
<th>Material</th>
<th>No. Objects</th>
<th>Year Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHER 28136</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Snettisham</td>
<td>Late Bronze Age hoard</td>
<td>Cu,In</td>
<td>38</td>
<td>1990</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yrs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 28338</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Fritton and St. Olaves</td>
<td>Bronze Age metal finds</td>
<td>Cu,In</td>
<td>2</td>
<td>1989</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yrs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 2853</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Dereham</td>
<td>Late Bronze Age hoard</td>
<td>Cu,In</td>
<td></td>
<td>1899</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yrs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 28817</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>South Creake</td>
<td>Bronze Age spearhead</td>
<td>Cu,In</td>
<td></td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yrs.</td>
<td>and sword blade hoard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 28817</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>South Creake</td>
<td>Bronze Age spearhead</td>
<td>Cu,In</td>
<td></td>
<td>1992-2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yrs.</td>
<td>and sword blade hoard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 30636</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Bradenham</td>
<td>Bronze Age hoard and</td>
<td>Cu,In</td>
<td></td>
<td>1994</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yrs.</td>
<td>Roman to medieval</td>
<td>settlement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 3089</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Foulsham</td>
<td>Bronze Age metal hoard</td>
<td>Cu,In</td>
<td>141</td>
<td>1953</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yrs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 30938</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Attleborough</td>
<td>Possible Late Bronze Age hoard</td>
<td>Cu,In</td>
<td>4</td>
<td>1994</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yrs.</td>
<td>and multi-period</td>
<td>finds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 31075</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>West Acre</td>
<td>Multi-period findspot</td>
<td>Cu,In</td>
<td></td>
<td>2008</td>
</tr>
</tbody>
</table>

See PAS 56825
<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS/NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBA hoard of thirty-eight Late Bronze Age objects, which may be associated with sites NHER 1679 and NHER 17665. Finds include axes, spears, sword fragments, knives, a socketed gouge, a socketed chisel, a hammer, a scabbard mount, and fragments of ingots.</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible LBA hoard. Miniature knife made from rapier or sword blade.</td>
<td>Metal detector</td>
<td>Spear fragment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard of objects and metal working debris was found in Dereham cemetery. This included socketed axes, fragments of a slashing sword, ingots of copper alloy, a fragment of palstave, charcoal and part of a stone hone.</td>
<td>Grave digging</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispersed. LBA hoard of Bronze Age sword blades and spearheads. This hoard was probably part of a larger hoard in the area (NHER 1944)</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard Metal detecting in an area of South Creake in 1992-94, 2003 and 2004-07 recovered a large collection of metal objects and pottery sherds. The most noteworthy find was a hoard of Bronze Age sword blades and spearheads. This hoard was probably part of a larger hoard in the area (NHER 1944). Hoard site at Waterden, South Creake. Probably the same as site NHER 1944. No obvious archaeological features discernable. A few anomalies of possible ‘natural’ origin. Interesting to note the presence of two ponds in the vicinity and the area is known as 'Spring Close’.</td>
<td>Metal detector, Controlled archaeological excavation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard of many Bronze Age metal items suggest this may be the site of a hoard which has been scattered by ploughing including two unusual awls, four dagger/dirks,</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard of one hundred and forty one Bronze Age copper alloy socketed axeheads was found in 1953 during drain cutting works. R. R. Clarke visited the site on the 9 January 1953 and excavated the spot. All the axes were drawn for. Of the hundred and twenty eight axes at NCM and six in finder’s possession the following is a rough classification: Three with winged ornament. One with two ribs. Thirty five with three ribs. Five with four ribs. One with five ribs. One with three ribs and deep collars. Nine facetted. Fifty seven plain with one rib round neck. Two plain with two ribs round neck. Twelve plain. Plain one rib round neck with sharp corners.</td>
<td>Building work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible LBA hoard with fragments of four Late Bronze Age socketed axes</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard see file for details.</td>
<td>Metal detector</td>
<td>2012 T 468</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
<td>PARISH</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>--------</td>
<td>------------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>NHER 31130</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Fleggburgh</td>
<td>Late Bronze Age hoard and multi-period finds</td>
</tr>
<tr>
<td>See PAS 493448</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 31588</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Great Ellingham</td>
<td>Bronze Age hoard and multi-period finds</td>
</tr>
<tr>
<td>See PAS 205143</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 32005</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Kenninghall</td>
<td>Late Bronze Age hoard</td>
</tr>
<tr>
<td>NHER 32820</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Syderstone</td>
<td>Late Bronze Age socketed axeheads</td>
</tr>
<tr>
<td>NHER 33343</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Fincham</td>
<td>Late Bronze Age hoard and multi-period finds scatter</td>
</tr>
<tr>
<td>NHER 35269</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Great Witchingham</td>
<td>Late Bronze Age hoard and multi-period finds scatter</td>
</tr>
<tr>
<td>NHER 35617</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Ludham</td>
<td>Late Bronze Age hoard, medieval and post medieval finds.</td>
</tr>
<tr>
<td>NHER 35907</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>East Rudham</td>
<td>Late Bronze Age hoard</td>
</tr>
<tr>
<td>NHER 36081</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>North Tuddenham</td>
<td>Multi-period finds</td>
</tr>
<tr>
<td>See PAS 40602</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 36176</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150</td>
<td>Fincham</td>
<td>Late Bronze Age hoard</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS/NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>----------------</td>
<td>-----------</td>
<td>---------------</td>
</tr>
<tr>
<td>HOARDS OF LATER PREHISTORIC NORFOLK</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**285**

**LBA hoard of various copper alloy objects, including socketed axeheads, knives and fragments of swords and spears** were found by a metal-detectorist in 1995. Metal-detecting in 2012 recovered further similar fragments plus a copper alloy ingot, all relating to the hoard.

**Metal detector**

**LBA hoard of copper alloy objects, including socketed axeheads, ingots and sword fragments. Six socketed axes. Two joining sword blade fragments. One sword hilt fragment. Two more socketed axes and two bronze cakes numbers 11 to 14 Bronze Age axe and axe fragment. Two small Bronze Age ingots. 1 Bronze age Sword hilt terminal, 1 sword blade tip, 1 socketed axe, and one socketed gauge.**

**Metal detector**

**LBA hoard containing one copper alloy socketed palstave and nine copper alloy socketed axeheads. One of the axeheads is missing its blade.**

**Metal detector**

**Possible LBA hoard of two Late Bronze Age socketed axeheads from this site.**

**Metal detector**

**LBA hoard of four socketed axeheads, a Bronze Age spearhead, sword**

**Metal detector**

**LBA hoard consists of three socketed axeheads and three cakes**

**Metal detector**

**LBA hoard containing 31 objects including spearheads, sword fragments, socketed axes, socketed knives, tanged knife, socketed gouge, double-ended implement, cake and cap-mounting. Eight more objects from dispersed Late Bronze Age hoard: spearheads, knives and socketed gouge.**

**Metal detector**

2008

**In-situ. A hoard of over forty Late Bronze Age socketed axeheads, made of copper alloy, which was found on the surface, during excavation and by metal detecting in 2001**

**Agricultural or drainage work, Metal detector**

**?**

**LBA hoard of copper alloy objects, including axes, spearheads, sword fragments and knives.**

**Metal detector**

**LBA hoard of several spearheads, swords, and other metalwork. The hoard may be related to another Late Bronze Age hoard found nearby, see NHER 33343**

**Metal detector**
<table>
<thead>
<tr>
<th>ID No.</th>
<th>PERIOD</th>
<th>YEAR DEPOSITED</th>
<th>PARISH</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>No. OBJECTS</th>
<th>YEAR FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHER 36973</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Hevingham</td>
<td>Hevingham Late Bronze Age hoard and medieval coins</td>
<td>Cu/In</td>
<td></td>
<td>2002</td>
</tr>
<tr>
<td>NHER 37104</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Bradenham</td>
<td>Bradenham Green Late Bronze Age hoard</td>
<td>Cu/In</td>
<td></td>
<td>2002</td>
</tr>
<tr>
<td>NHER 41091</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Thornham</td>
<td>Bronze Age hoard</td>
<td>Cu/In</td>
<td>4</td>
<td>2004</td>
</tr>
<tr>
<td>NHER 41383</td>
<td>Late Bronze Age</td>
<td>800 +/- 50 yrs.</td>
<td>Norwich</td>
<td>Eaton Bronze Age hoard and a Late Saxon brooch</td>
<td>Cu/In</td>
<td>135</td>
<td>2005</td>
</tr>
<tr>
<td>NHER 4144</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Swaffham</td>
<td>Hoard of Bronze Age copper alloy rapier blades</td>
<td>Cu/In</td>
<td></td>
<td>1939</td>
</tr>
<tr>
<td>NHER 41976</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Salle</td>
<td>Salle Late Bronze Age hoard , Hoard 1</td>
<td>Cu/In</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>NHER 42594</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Salle</td>
<td>Salle Late Bronze Age hoard , Hoard 2</td>
<td>Cu/In</td>
<td>6</td>
<td>2005</td>
</tr>
<tr>
<td>NHER 42656</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Foxley</td>
<td>Bronze Age bracelet hoard</td>
<td>Au</td>
<td>7</td>
<td>2005</td>
</tr>
<tr>
<td>NHER 4795</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Northwold</td>
<td>Bronze Age spearhead from West End Farm</td>
<td>Cu/In</td>
<td>1</td>
<td>1975</td>
</tr>
</tbody>
</table>

See PAS 894199

NHER 36973
Late Bronze Age
850 BC +/- 150 yrs
Hevingham Late Bronze Age hoard and medieval coins
Cu/In

NHER 37104
Late Bronze Age
850 BC +/- 150 yrs
Bradenham Green Late Bronze Age hoard
Cu/In

NHER 41091
Late Bronze Age
850 BC +/- 150 yrs
Thornham Bronze Age hoard
Cu/In

NHER 41383
Late Bronze Age
800 +/- 50 yrs
Norwich Eaton Bronze Age hoard and a Late Saxon brooch
Cu/In

NHER 4144
Late Bronze Age
850 BC +/- 150 yrs
Swaffham Hoard of Bronze Age copper alloy rapier blades
Cu/In

NHER 41976
Late Bronze Age
850 BC +/- 150 yrs
Salle Salle Late Bronze Age hoard , Hoard 1
Cu/In

NHER 42594
Late Bronze Age
850 BC +/- 150 yrs
Salle Salle Late Bronze Age hoard , Hoard 2
Cu/In

NHER 42656
Late Bronze Age
850 BC +/- 150 yrs
Foxley Bronze Age bracelet hoard
Au

NHER 4795
Late Bronze Age
850 BC +/- 150 yrs
Northwold Bronze Age spearhead from West End Farm
Cu/In
<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS/NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LBA hoard of metalworking equipment and objects.</strong> The hoard contained two halves of a mould for socketed axes, two almost complete socketed axeheads, a cutting edge fragment and a socketed hammer.</td>
<td></td>
<td>Metal detector</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>An NAU excavation as part of the watching brief revealed a shallow pit containing the well-preserved remains of a probable Late Bronze Age metalworker’s hoard of scrap metal. The hoard contained twenty-seven objects including socketed axes, gouges, a spearhead, a chisel, an awl and fragments of a sword, knife and vessel. Further analysis of this hoard revealed that these thirty objects belonged to the Late Bronze Age Ewart Park metalworking tradition. The hoard included thirty pieces of which nine are complete and another one is near-complete. The total weight of the hoard is 1.74 kg. The hoard is significant as all of the objects were found together in situ, apparently undisturbed until their discovery during these excavations.</strong></td>
<td></td>
<td>Controlled archaeological investigation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dispersed. Three MBA palstaves and a LBA socketed axehead.</strong></td>
<td></td>
<td>Metal detector rally 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>In-situ. LBA hoard, one hundred and forty-five items dating to about 800 BC</strong></td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Agricultural or drainage work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LBA hoard, consisting of seven copper alloy socketed axeheads and fragments of two further axes. Also found were Bronze Age flint scrapers and a flint core</strong></td>
<td></td>
<td>Metal detector 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dispersed. LBA hoard, consisting of a copper alloy socketed axehead, three fragments of axes, a ring and a casting jet.</strong></td>
<td></td>
<td>Metal detector 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LBA hoard of seven gold penannular bracelets were found during a metal detecting rally near Bawdeswell. Four of the bracelets were found in a group and the other three were found nearby.</strong></td>
<td></td>
<td>Metal detector rally 2005 T347</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bronze spearhead with leaf shaped blade and peg holes three groups of horizontal lines on socket, upper two groups of five lines each and lower of six. Edge of blade badly damaged, intact only at tip and at junction with socket. Mid rib cracked and blade bent out of true, peg holes also cracked. It is uncertain how much of this damage was caused in recent times by farm machinery etc, or if this piece was damaged in antiquity and can be regarded as possibly part of a founders hoard.</strong></td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
<td>PARISH</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>---------</td>
<td>--------------</td>
<td>----------------</td>
<td>--------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>NHER 51148</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Great Ellingham</td>
<td>Late Bronze Age hoard</td>
</tr>
<tr>
<td>NHER 51514</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Cawston</td>
<td>Late Bronze Age hoard</td>
</tr>
<tr>
<td>NHER 5169</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Feltwell</td>
<td>Late Bronze Age hoard and prehistoric, Roman, medieval and post-medieval objects</td>
</tr>
<tr>
<td>NHER 52598</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Feltwell</td>
<td>Possible Middle Bronze Age Hoard</td>
</tr>
<tr>
<td>NHER 52906</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Brampton</td>
<td>Late Bronze Age hoard and Middle Saxon pin</td>
</tr>
<tr>
<td>NHER 54009</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Great Ellingham</td>
<td>Late Bronze Age metalwork hoard</td>
</tr>
<tr>
<td>NHER 55424</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Erpingham</td>
<td>Hoard of Late Bronze Age socketed axeheads</td>
</tr>
<tr>
<td>NHER 59739</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Brandon Parva, Coston, Runhall and Welborne</td>
<td>Late Bronze Age hoard</td>
</tr>
<tr>
<td>NHER 6877</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Paston</td>
<td>Bronze Age hoard</td>
</tr>
<tr>
<td>NHER 7147</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Stibbard</td>
<td>Stibbard Bronze Age founder's hoard</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS/NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>----------------</td>
<td>-----------</td>
<td>---------------</td>
</tr>
<tr>
<td>LBA hoard consisting of socketed axe and 26 cake fragments</td>
<td></td>
<td>Metal detector, Controlled archaeological excavation</td>
<td>2007 T555</td>
<td></td>
</tr>
<tr>
<td>Dispersed. LBA hoard consisting of 13 fragments representing at least three spearheads, a tubular ferrule and a knife.</td>
<td></td>
<td>Metal detector</td>
<td>2008 T273-2010 T333</td>
<td></td>
</tr>
<tr>
<td>LBA hoard many Late Bronze Age copper alloy items and metal working waste from a metalworker’s hoard.</td>
<td></td>
<td>Metal detector, Controlled archaeological excavation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible MBA hoard, palstave and fragment of rapier, plus small fragment of molten copper alloy.</td>
<td></td>
<td>Metal detector</td>
<td>2009 T161</td>
<td></td>
</tr>
<tr>
<td>LBA hoard of three socketed axe heads, a casting jet, a socketed gouge, and a socketed chisel.</td>
<td></td>
<td>Metal detector</td>
<td>2009 T738</td>
<td></td>
</tr>
<tr>
<td>LBA hoard of metalwork including socketed axes and sword blades. Fragments of Late Bronze Age metalwork indicative of a hoard were recovered from the ploughsoil deposited in a square pit (30 x 30cm) cut into natural orange clay to a depth of 9cm. The clearly defined edges of the pit indicated that it was quickly infilled and not left open for any great length of time. Pieces of woven cloth were also recovered and the decayed remains of wood, probably a plank, was visible on the base in the southern end of the pit. See secondary file. May-June 2010. Metal-detecting. Nine more fragments from Late Bronze Age hoard</td>
<td></td>
<td>Metal detector</td>
<td>2010 T240</td>
<td></td>
</tr>
<tr>
<td>LBA hoard of socketed axeheads was recovered over two occasions in 2011, initially as a chance find followed by a further investigation with the aid of a metal-detector. The Norfolk Finds Liaison Officer then investigated the site and recorded the original deposition pit.</td>
<td></td>
<td>Agricultural or drainage work, Metal detector</td>
<td>2011 T231</td>
<td></td>
</tr>
<tr>
<td>LIA coin hoard, LBA hoard of socketed axeheads</td>
<td></td>
<td>Metal detector rally 2014 T370</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard of three palstaves and at least one socketed axe.</td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBA hoard of 72 small Bronze Age palstaves, and nine to ten spearheads. These are thought to be unfinished castings from three different moulds, and hence the hoard has thought to be deposited by a metal worker.</td>
<td></td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# APPENDIX 1

<table>
<thead>
<tr>
<th>ID No.</th>
<th>Period</th>
<th>Year Deposited</th>
<th>Parish</th>
<th>Description</th>
<th>Material</th>
<th>No. Objects</th>
<th>Year Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHER 7396</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Aylsham</td>
<td>Late Bronze Age hoard</td>
<td>Cu/Tn</td>
<td></td>
<td>1968</td>
</tr>
<tr>
<td>NHER 8446</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Horning</td>
<td>Bronze Age hoard and other finds</td>
<td>Cu/Tn</td>
<td>9</td>
<td>1978</td>
</tr>
<tr>
<td>NHER 873</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Norwich</td>
<td>Bronze Age metal object hoard</td>
<td>Cu/Tn</td>
<td>4</td>
<td>1991</td>
</tr>
<tr>
<td>NHER 8777</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Watton</td>
<td>Bronze Age socketed axeheads</td>
<td>Cu/Tn</td>
<td>6</td>
<td>1958</td>
</tr>
<tr>
<td>NHER 9551</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Norwich</td>
<td>Bronze Age hoard</td>
<td>Cu/Tn</td>
<td>14</td>
<td>1952</td>
</tr>
<tr>
<td>NHER 9552</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Norwich</td>
<td>Bronze Age objects</td>
<td>Cu/Tn</td>
<td></td>
<td>1953-1983</td>
</tr>
<tr>
<td>PAS 783847 (NMS-6DAFAC)</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Information unavailable</td>
<td>Information unavailable</td>
<td>Cu/Tn</td>
<td>29</td>
<td>2016</td>
</tr>
<tr>
<td>PAS 40602 (NMS-2464)</td>
<td>Late Bronze Age/Early Iron Age</td>
<td>850 BC +/- 50 yrs.</td>
<td>North Tuddenham</td>
<td>Late Bronze Age Founder's hoard, contemporary with the Ewart Park and Carp's Tongue traditions</td>
<td>Cu/Tn</td>
<td>82</td>
<td>2001</td>
</tr>
<tr>
<td>PAS 280299 (NMS-F8C4F1)</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td>Brampton</td>
<td>A Late Bronze Age hoard of several socketed axes and tools.</td>
<td>Cu/Tn</td>
<td>5</td>
<td>2009</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS/NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>---------------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❌</td>
<td>❌</td>
<td>LBA hoard of metalwork was found on a new housing estate at Sir Williams Close between 1968 and 1969. The hoard included socketed spearheads, a barbed spearhead fragment, socketed and faceted axes, a socketed hammer and fragments of a flanged disc and sword and rapier blades.</td>
<td>Building work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❌</td>
<td>❌</td>
<td>Possible Late Bronze Age hoard in ploughsoil. Two socketed axes (one crushed). One fragment socketed axe. Five fragments of one spearhead. One D-section bracelet fragment. Surface find. Small Early Bronze Age flat axe.</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❌</td>
<td>❌</td>
<td>LBA hoard consists of one socketed axe, one awl, one pin (no head) and one pair of tweezers.</td>
<td>Rail/road works</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❌</td>
<td>❌</td>
<td>LBA hoard of six Bronze Age socketed axeheads were recovered from a field surface. All these axes were of the same type with ‘ribbed wing’ decoration on each face, many also appeared to be unfinished. In 1964 another Bronze Age socketed axehead was retrieved from the same area.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❌</td>
<td>❌</td>
<td>LBA hoard of Late Bronze Age implements of twelve socketed axes, fragment of sword, socketed chisel head. R. R. Clarke (NCM) carried out trial excavation 17 March 1952 and recovered some of the above. Found in three groups. One socketed axe (and lump of cake found 46m (50yds) from axe) was found on opposite side of houses in November 1951 (10.7m (35ft) north of hoard, 46cm (1ft 6in) deep). See also spearhead and cake from Peckover Road adjacent.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❌</td>
<td>❌</td>
<td>LBA hoard. In 1953-1954 and 1983-1984 a number of Bronze Age objects were recovered from this location. These included a spearhead, ingot, three socketed axeheads and a socketed gouge, all of copper alloy. Metal detector</td>
<td>Agricultural or drainage work, Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❌</td>
<td>❌</td>
<td>Two fragments of Gundlingen sword hilts (one Type B and one Type C). The hoard comprises 82 pieces in all, including 9 complete gouges, 2 complete socketed axeheads, 8 complete spearheads, fragmentary pieces of all of these plus many fragments of sword (including Carp’s Tongue), knives, 2 bag-shaped chapes, part of an axe mould, a fragment of winged axe, 3 casting sprues, 3 lumps of cake and many odd fragments.</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❌</td>
<td>❌</td>
<td>2 socketed axheads, 1 socketed gouge, 1 socketed chisel, and a casing jet</td>
<td>Metal detector</td>
<td>2009T738</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
<td>PARISH</td>
<td>DESCRIPTION</td>
<td>MATERIAL</td>
<td>No. OBJECTS</td>
<td>YEAR FOUND</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>----------------------</td>
<td>-------------------------------------------</td>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>NHER 500</td>
<td>Late Bronze Age</td>
<td>850 BC +/- 150 yrs.</td>
<td></td>
<td>Late Bronze Age hoard</td>
<td>Cu\text{In}</td>
<td>16</td>
<td>1817</td>
</tr>
<tr>
<td>PAS 390071 (NMS-126827)</td>
<td>Late Bronze Age/Early Iron Age</td>
<td>800 BC +/- 200 yrs.</td>
<td>Great Ellingham</td>
<td>Information unavailable</td>
<td>Cu\text{In}</td>
<td>183</td>
<td>2010</td>
</tr>
<tr>
<td>PAS 769922 (NMS-DCA196)</td>
<td>Late Bronze Age/Early Iron Age</td>
<td>800 BC +/- 200 yrs.</td>
<td>Heacham</td>
<td>Information unavailable</td>
<td>Cu\text{In}</td>
<td>29</td>
<td>2006</td>
</tr>
<tr>
<td>NHER 42701</td>
<td>Late Bronze Age</td>
<td>799.5 BC +/- 100 yrs.</td>
<td>Wendling</td>
<td>Multi-period metal objects</td>
<td>Cu\text{In}</td>
<td></td>
<td>2009</td>
</tr>
<tr>
<td>PAS 832069 (NMS-B0FEF9)</td>
<td>Late Bronze Age/Early Iron Age</td>
<td>750 BC +/- 150 yrs.</td>
<td>Wood Dalling</td>
<td>Hoard of 37 copper alloy objects</td>
<td>Cu\text{In}</td>
<td>35</td>
<td>2017</td>
</tr>
<tr>
<td>PAS 894199 (NMS-F9AC63)</td>
<td>Late Bronze Age/Early Iron Age</td>
<td>750 BC +/- 150 yrs.</td>
<td>Bradenham</td>
<td>Scattered hoard of 14 Middle, Late Bronze Age artefacts</td>
<td>Cu\text{In}</td>
<td>14</td>
<td>2018</td>
</tr>
</tbody>
</table>

See NHER 37014

See PAS 281105

See NHER 54009

See PAS 281105

See NHER 37014
<table>
<thead>
<tr>
<th>CONTENTS/NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBA A hoard consisting of a bronze mould for socketed axes and six socketed axes and four spearheads, all scrap for melting. Eleven objects in all and five fragments.</td>
<td>Gardening</td>
<td>METAL DETECTOR</td>
</tr>
<tr>
<td>Possible LBA/EIA hoard. See file for details</td>
<td>Metal detector</td>
<td>2009 T703, 2009 T754</td>
</tr>
<tr>
<td>Containing the fragments of 7 socketed axehead, 22 complete socketed axeheads, a spearhead, a double casting sprue, the fragment of a sword blade. The hoard belongs to the Ewart Park phase, or O'Connor's Late Bronze Age 3 period, and the axe types identified above are all common components of LBA hoards in Southern Britain, whilst the spearhead is a common example of a LBA artefact. The presence of metalworking waste and fragmented axes could suggest this assemblage is a waste hoard or that of a metalworker. Many of the axes are in a good condition, however a number are damaged around the socket potentially intentionally. Further conservation is needed to remove the remaining earth fully and assess the condition of these artefacts. Two groups of fragments found in the same area.</td>
<td>Metal detector</td>
<td>2017T167</td>
</tr>
<tr>
<td>Eight socketed axeheads including damaged and broken ones, 1 socketed gouge, two socketed spearheads including one broken, 2 sword pieces, and a fragment of sheet metal. The variety of forms exhibited are typical of the Late Bronze Age Ewart Park phase. Work as part of a watching brief by NAU in 2002 recovered a Late Bronze Age hoard of 27 artefacts (HER no. 37104), including socketed axes, gouges, a spearhead, a chisel, an awl and fragments of a sword, knife and vessel, described by Hinds &amp; Bates (2010: 84, 91) as a metalworker’s hoard, also dating to the Ewart Park Phase. As with the current assemblage under discussion, the hoard contained a mixture of complete and fragmentary artefacts. The fragments described in this report are highly likely to be associated with the hoard found in 2002 although Hinds &amp; Bates (2010: 84) note that the deposit appeared to have been undisturbed prior to discovery. According to the finder, the field had been recently ploughed for the first time in living memory. Hinds &amp; Bates (ibid) also note that the field had not been ploughed in living memory. This, along with the composition and dating of the two groups would suggest that the current assemblage is related to the original hoard, but may constitute a second deposit.</td>
<td>Metal detector</td>
<td>2018T176</td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>NHER 29491</td>
<td>Late Bronze Age</td>
<td>700 BC +/- 300 yrs.</td>
</tr>
<tr>
<td>PAS 281105 (NMS-7B59C7)</td>
<td>Early Iron Age</td>
<td>675 BC +/- 75 yrs.</td>
</tr>
<tr>
<td>See NHER 42701</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 28985</td>
<td>Early Iron Age</td>
<td>600 BC +/- 200 yrs.</td>
</tr>
<tr>
<td>NHER 4137</td>
<td>Early Iron Age</td>
<td>600 BC +/- 200 yrs.</td>
</tr>
<tr>
<td>NHER 1487</td>
<td>Middle Iron Age to Late Iron Age</td>
<td>178 BC +/- 222 yrs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAS 529927 (NMS-370E90)</td>
<td>Late Iron Age</td>
<td>125 BC +/- 75 yrs.</td>
</tr>
<tr>
<td>CONTENTS/NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------</td>
<td>---------------</td>
</tr>
<tr>
<td>LBA hoard of a socketed axehead containing a number of crushed copper alloy items, including the blade of another axehead, and metal working fragments. The axehead, which may have belonged to a Bronze Age metalworker.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>Consists of 1 incomplete harness mount, 1 fragment of a sword blade, and 2 additional joining fragments of a sword blade. Harness mount is broadly similar to mount found in a hoard dating to the end of the Late Bronze Age/Early Iron Age (c.750-600 BC) at Llwynfawr, Glamorgan, illustrated in Savory (1980), p.194, fig.46, no.19.</td>
<td>Metal detector</td>
<td>2009T754</td>
</tr>
<tr>
<td>LBA hoard In 1992 a Late Bronze Age sword was found here. It was identified as a Hallstatt derivative of Cowen's Thames type and dated to the 7th century BC. An unlooped palstave of the Shield pattern type with wood between the flanges was also recovered at the same time. It is possible that river dredgings have been spread over site which may explain the curious encrustations on both these artefacts and the find from NHER 28984.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>In 1961 a hoard of Bronze Age gold objects were found on the surface of a field in Sporle. The hoard consisted of two bracelets and a flanged torc fragment. These objects dated to around 1000-550 BC and were probably concealed in around 700-550 BC. No other gold objects were found, with the only other finds comprising fifty-three fragments of scrap iron of recent date.</td>
<td>Agricultural or drainage work</td>
<td>1961</td>
</tr>
<tr>
<td>MIA to LIA hoard of the largest collection of Iron Age torcs found in Western Europe. Between 1948 and 1990 nearly 180 torcs, (75 of those complete and the rest fragmentary) were recovered, of varying types and materials. In addition, over 100 ingot rings/bracelets were found, as well as 170 coins, ingots and other pieces of metal. Actually makes up as many as 7 hoards in the area.</td>
<td>Controlled archaeological investigation, Metal detector</td>
<td>1990</td>
</tr>
<tr>
<td>&quot;handfuls&quot; of coins, purportedly of cast bronze (potin), found near the village. The record is based on information from Tony Gregory; Haselgrove (1987: 323-4 no. 68) notes that it is &quot;not certainly a hoard.&quot;</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>
## APPENDIX 1

<table>
<thead>
<tr>
<th>ID No.</th>
<th>Period</th>
<th>Year Deposited</th>
<th>Parish</th>
<th>Description</th>
<th>Material</th>
<th>No. Objects</th>
<th>Year Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS 2760</td>
<td>Late Iron Age</td>
<td>100 BC +/- 50 yrs.</td>
<td>Sedgeford</td>
<td>Sedgeford Hoard, loose coins</td>
<td>Au</td>
<td>39</td>
<td>1997</td>
</tr>
<tr>
<td>PAS 2764</td>
<td>Late Iron Age</td>
<td>75 BC +/- 25 yrs.</td>
<td>Snettisham</td>
<td>Snettisham I.A. Hoard E</td>
<td>Au</td>
<td>3</td>
<td>1950</td>
</tr>
<tr>
<td>PAS 610552</td>
<td>Late Iron Age</td>
<td>75 BC +/- 25 yrs.</td>
<td>Snettisham</td>
<td>Snettisham I.A. Hoard C</td>
<td>Cu</td>
<td>155</td>
<td>1948</td>
</tr>
<tr>
<td>PAS 619807</td>
<td>Late Iron Age</td>
<td>75 BC +/- 25 yrs.</td>
<td>Snettisham</td>
<td>Snettisham I.A. Hoard B</td>
<td>Au</td>
<td>72</td>
<td>1948</td>
</tr>
<tr>
<td>PAS 873631</td>
<td>Late Iron Age</td>
<td>75 BC +/- 25 yrs.</td>
<td>Snettisham</td>
<td>Snettisham I.A. Hoard F</td>
<td>Au</td>
<td>176</td>
<td>1990</td>
</tr>
<tr>
<td>PAS 2752</td>
<td>Late Iron Age</td>
<td>70 BC +/- 10 yrs.</td>
<td>Ingoldisthorpe</td>
<td>Hoard of 2 uninscribed Eastern gold staters</td>
<td>Au</td>
<td>2</td>
<td>1988</td>
</tr>
<tr>
<td>PAS 2768</td>
<td>Late Iron Age</td>
<td>70 BC +/- 10 yrs.</td>
<td>Snettisham</td>
<td>Snettisham I.A. Hoard N</td>
<td>Au</td>
<td>6</td>
<td>1991</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS/NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>---------------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Hoard" /></td>
<td><img src="image" alt="Hoard" /></td>
<td>Hoard found by the Sedgeford Historical and Archaeological Research Project. The hoard was partly contained within a bovine front right humerus. The main portion was located by metal-detecting at the end of the excavation season. &quot;The bone itself was buried in a small pit (0.54 m x 0.42 m) and the position of the hoard seemingly marked by the deposition of a cow’s pelvis at the top of the backfill (ibid.: 46). There was considerable disturbance to this area in the Anglo-Saxon period, which was presumably when some of the coins were scattered (ibid., 51-2). The exact status of the site on which the hoard was buried remains open to debate, but further evidence of Iron Age occupation has been revealed (ibid: 50).&quot; The site was used as a middle to late Saxon inhumation cemetery. Ploughed in the 1950s, extensive Saxon cemetery and Iron Age settlement. Other coins recovered from excavation prior to discovery of the hoard in 2003.</td>
<td>Metal detector during controlled archaeological investigation</td>
<td>2003 T181</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Hoard" /></td>
<td><img src="image" alt="Hoard" /></td>
<td>Snettisham hoard E consists of two gold torcs, a gold ring and asingle &quot;Gallo-Belgic&quot; quarter stater (Clarke 1954, pl. XIV.14) which was found within the terminal of one of the torcs after discovery. Sills (2003: 376 no. 57) considers this type to be an insular production.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Hoard" /></td>
<td><img src="image" alt="Hoard" /></td>
<td>155 cast bronze Potin. Unclear which coins were with the torcs.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Hoard" /></td>
<td><img src="image" alt="Hoard" /></td>
<td>Uninscribed Gallo-Belgic staters and torcs. Hoards B and C mixed after excavation.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Hoard" /></td>
<td><img src="image" alt="Hoard" /></td>
<td>Snettisham hoard F, consisting principally of 9.2 kg of broken metalwork contained within a bronze vessel (Stead 1991, 447). De Jersey (2015) writes: &quot;The hole dug by [the finder] to recover the items was 60 cm deep. The metalwork included &quot;fragments from at least 50 torques, at least 70 ingot rings/bracelets and three straight ingots, as well as nine coins&quot; (ibid.). Five of the coins were contained within a piece of tubular torc. One of the coins had been chopped in two.&quot; Coins include Gallo-Belgic, Eastern, Southern, and East Anglian Staters</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Hoard" /></td>
<td><img src="image" alt="Hoard" /></td>
<td>Two Ingoldisthorpe staters (a new type at the time of discovery) found in 1988 between one and two metres apart.</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Hoard" /></td>
<td><img src="image" alt="Hoard" /></td>
<td>A collection of six Gallo-Belgic A and C staters almost certainly from a scattered hoard.</td>
<td>Controlled archaeological investigation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
<td>PARISH</td>
<td>DESCRIPTION</td>
<td>MATERIAL</td>
<td>No. OBJECTS</td>
<td>YEAR FOUND</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>----------------</td>
<td>--------------</td>
<td>-------------------------------------------------</td>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>PAS 2750</td>
<td>(IARCH-29C6B2)</td>
<td>Late Iron Age</td>
<td>55 BC +/- 5 yrs. Welney</td>
<td>Gold Hill Hoard of 13 Gallo-Belgic and Eastern gold staters</td>
<td>Au</td>
<td>13</td>
<td>1995</td>
</tr>
<tr>
<td>PAS 2769</td>
<td>(IARCH-430B51)</td>
<td>Late Iron Age</td>
<td>55 BC +/- 5 yrs. Buxton with Lammas</td>
<td>Hoard of 18 Gallo-Belgic staters</td>
<td>Au</td>
<td>17</td>
<td>1991</td>
</tr>
<tr>
<td>PAS 513493</td>
<td>(NMS-D43521)</td>
<td>Late Iron Age</td>
<td>55 BC +/- 5 yrs. Wormegay</td>
<td>Scattered hoard of Gallo-Belgic gold staters</td>
<td>Au</td>
<td>7</td>
<td>1998</td>
</tr>
<tr>
<td>PAS 521068</td>
<td>(NMS-891408)</td>
<td>Late Iron Age</td>
<td>55 BC +/- 5 yrs. Fring</td>
<td>Fring 2 Hoard of 173 Gallo-Belgic gold staters and quarter staters</td>
<td>Au</td>
<td>173</td>
<td>1990</td>
</tr>
<tr>
<td>PAS 509995</td>
<td>(PAS-B1F065)</td>
<td>Late Iron Age</td>
<td>51 BC +/- 50 yrs. Sedgeford</td>
<td>Sedgeford Hoard and Cow Bone: 20 Iron Age gold coins concealed within or associated with a cowbone</td>
<td>Au</td>
<td>39</td>
<td>2003</td>
</tr>
<tr>
<td>PAS 709631</td>
<td>(NMS-DA0078)</td>
<td>Late Iron Age</td>
<td>51 BC +/- 50 yrs. Sculthorpe</td>
<td>Information unavailable</td>
<td></td>
<td>24</td>
<td>2015</td>
</tr>
<tr>
<td>PAS 2868</td>
<td>(IARCH-F6CCCEB)</td>
<td>Late Iron Age</td>
<td>35 BC +/- 15 yrs. Snettisham</td>
<td>Shernborne 1 hoard of gold and silver East Anglian units and staters</td>
<td>Au</td>
<td>92</td>
<td>1987</td>
</tr>
<tr>
<td>PAS 2875</td>
<td>(IARCH-A8334D)</td>
<td>Late Iron Age</td>
<td>36 BC +/- 15 yrs. Snettisham</td>
<td>Shernborne 2 hoard of gold and silver East Anglian units and staters</td>
<td>Au</td>
<td>92</td>
<td>1987</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS/NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>---------------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>De Jersey lists a possible scattered hoard but notes &quot;the presence of several later, inscribed coins might indicate several episodes of deposition, or the existence of some sort of temple site. De Jersey lists another seven coins possibly from the same location (De Jersey 2014).</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;In January 1991 fourteen Gallo-Belgic E staters were discovered over an area of ploughsoil of approximately 10m x 25-30m, the deepest about 40 cm beneath the surface. There were no traces of any container. The hoard was declared Treasure Trove at Norwich on 19 March 1991. Two more staters were discovered in the following two years, and declared Treasure on 20 April 1993 (BMHF). A Clacton quarter stater was recorded as an addition to the hoard in October 1992.” (De Jersey 2014)</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A small scattered hoard of Gallo-Belgic E staters, found between October 1998 and March 2003 in several batches up to 30m apart</td>
<td>Metal detector</td>
<td>2003 T55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A hoard of 170 Gallo-Belgic staters and 3 quarter-staters found between October 1990 and March 1991. Roman villa several hundred yards away, according to handwritten note in file. Found mainly in an area measuring 30 by 20 yards (cf de Jersey) with a maximum spread of 100 yards by 60 yards. No map of findspot. Relationship between two hoards uncertain.</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>All 39 coins belong to the same type. They are so-called 'Gallo-Belgic E' staters, made in the first century BC, probably in northern France. These coins are frequently found in southern Britain where they circulated in large numbers, and where they may also been produced. The coins are made from an alloy of mostly gold and silver, but appear gold. In the same area since 1997 seven coins of the same type have previously been found by members of the Sedgeford Project. They have all been disclaimed.</td>
<td>Metal detector</td>
<td>2003T181</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A series of finds made over two or three years, probably representing two hoards predominantly of uninscribed East Anglian gold. The two separate parcels or deposits are listed separately. Associated pottery from a number of vessels and not necessarily a container for the pot.</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A series of finds made over two or three years, probably representing two hoards predominantly of uninscribed East Anglian gold. The two separate parcels or deposits are listed separately. Associated pottery from a number of vessels and not necessarily a container for the pot.</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>Period</td>
<td>Year Deposited</td>
<td>Parish</td>
<td>Description</td>
<td>Material</td>
<td>No. Objects</td>
<td>Year Found</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>PAS 650838</td>
<td>Late Iron Age</td>
<td>35 BC +/- 15 yrs.</td>
<td>Ashby St. Mary</td>
<td>Hoard of 44 uninscribed East Anglian gold staters</td>
<td>Au</td>
<td>44</td>
<td>2012</td>
</tr>
<tr>
<td>NHER 1331</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Ringstead</td>
<td>Iron Age horse harness hoard</td>
<td>Cu, In, Fe</td>
<td>12</td>
<td>1950</td>
</tr>
<tr>
<td>NHER 1661</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Fring</td>
<td>Roman villa and Iron Age gold coin hoard, Fring, Sedgeford and Shernborne</td>
<td>Au</td>
<td></td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 1787</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Burnham Thorpe</td>
<td>Iron Age silver coin hoard</td>
<td>Ag</td>
<td></td>
<td>1900</td>
</tr>
<tr>
<td>NHER 23504</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Snettisham</td>
<td>Hoard of Iron Age gold and silver coins</td>
<td>Au</td>
<td>42</td>
<td>1987</td>
</tr>
<tr>
<td>NHER 25578</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Fring</td>
<td>Fring Iron Age silver coin hoard</td>
<td>Ag</td>
<td></td>
<td>2011</td>
</tr>
<tr>
<td>NHER 25777</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>North Creake</td>
<td>Multi-period finds including 1st century AD coin hoard</td>
<td>Au</td>
<td>16</td>
<td>1990</td>
</tr>
<tr>
<td>NHER 28394</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Buxton with Lammes</td>
<td>Iron Age hoard and multi-period metal finds</td>
<td>Au</td>
<td>14</td>
<td>1991</td>
</tr>
<tr>
<td>NHER 28850</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Heacham</td>
<td>Iron Age coin hoard and multi-period finds</td>
<td>Au</td>
<td>11</td>
<td>1991</td>
</tr>
<tr>
<td>CONDITION</td>
<td>CLUSTER</td>
<td>CONTENTS / NOTES</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>-----------------</td>
<td>-----------</td>
<td>--------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A coin hoard comprising 44 Iron Age staters of the 'Norfolk Wolf' Uninscribed Icenian JB type. These were found scattered in what appear to have been two groups over a relatively small area, the first group in November 2012 and the second around March 2013. If two hoards were concealed, however, these must surely be two part of one main deposit; the two groups of coins share die-links as well as being of the same type.</td>
<td>Metal detector</td>
<td>2012 T863</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA hoard of horse harness items was discovered at this location and excavated. The collection was thought to originate from the Middle Trent and Upper Witham Basin and comprised bridle-bits, bronze plates, rivets, a clasp and a strap union. At the time it was felt to be an Iron Age chariot burial of one of Queen Boudicca's chieftains although this notion has remained unproven. Founder's hoard, concealed late 1st century BC. Fox dates it to around 40 BC and thinks comes from Middle Trent and Upper Witham Basin. Consists of two or three bronze bridle-bits (outer rings bronze coated iron), two elliptical bronze plates (?from shield), two rivets, one clasp, one strap union, one flat strap of sheet metal, thick disc (ingot), curved object of sheet metal, and fragments.</td>
<td>Controlled archaeological investigation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA coin hoard of 173 gold Iron Age coins made in France in the 1st century BC were found here by a metal detectorist on the site of a roman villa with mosaic floor</td>
<td>Metal detector</td>
<td>1991</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA coin hoard of silver coins with horses on them was ploughed up near Scarboro Wood around 1900. It is now lost.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA coin hoard of 42 gold coins and a single silver coin, was recovered. In 1988 a further 40 gold coins and two silver were also recovered.</td>
<td>Metal detector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>In-situ. LIA hoard of 201 silver coins in a pottery container sealed with a linen or hemp cloth</td>
<td>Metal detector</td>
<td>1992</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dispersed. LIA hoard of 16 Iron Age and Roman coins that were probably deposited as a hoard in the first century AD. Other interesting finds include an Iron Age terret</td>
<td>Metal detector</td>
<td>1995</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dispersed. LIA hoard of 14 gold staters— Gallo-Belgic E type. (60 to 50 B.C.) Found over an area approx 20 to 30m by 10m and to a depth of 43cm.</td>
<td>Metal detector</td>
<td>1991-1993</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dispersed LIA hoard of 11 Iron Age gold wolf staters were found by a metal detectorist in 1991 and 1993.</td>
<td>Metal detector</td>
<td>1992-1995</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
<td>PARISH</td>
<td>DESCRIPTION</td>
<td>MATERIAL</td>
<td>No. OBJECTS</td>
<td>YEAR FOUND</td>
</tr>
<tr>
<td>--------</td>
<td>--------------</td>
<td>----------------</td>
<td>--------------</td>
<td>-------------------------------------------------</td>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>NHER 29277</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Bradwell</td>
<td>Iron Age coin hoard</td>
<td>Au</td>
<td>12</td>
<td>1990</td>
</tr>
<tr>
<td>NHER 29429</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Saham Toney</td>
<td>Romano-British settlement/metal working site</td>
<td>Au</td>
<td></td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ag</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cu/In</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 30049</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Fincham</td>
<td>Iron Age coin hoard, Early Saxon inhumation</td>
<td>Ag</td>
<td>200</td>
<td>1993-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>cemetery and multi-period finds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 30059</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Fincham</td>
<td>Iron Age coin hoard and multi-period finds</td>
<td>Ag</td>
<td>200</td>
<td>1998</td>
</tr>
<tr>
<td>NHER 30335</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Fring</td>
<td>Iron Age silver coin hoard and other finds</td>
<td>Ag</td>
<td>200</td>
<td>1993</td>
</tr>
<tr>
<td>NHER 30894</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Runton</td>
<td>Iron Age coin hoard</td>
<td>Au</td>
<td>2</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>See PAS 752576</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 31450</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Dereham</td>
<td>Iron Age and Roman coin hoard</td>
<td>Ag</td>
<td>8</td>
<td>1995</td>
</tr>
<tr>
<td></td>
<td>See PAS 2882</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 32950</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Burnham Thorpe</td>
<td>Possible Iron Age hoard</td>
<td>Ag</td>
<td></td>
<td>1997</td>
</tr>
<tr>
<td>NHER 37080</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Weybourne</td>
<td>Iron Age coin hoard</td>
<td>Au</td>
<td>206</td>
<td>1954</td>
</tr>
</tbody>
</table>

APPENDIX 1

NHER 30049
Late Iron Age
28 BC +/- 72 yrs.
Fincham
Iron Age coin hoard, Early Saxon inhumation cemetery and multi-period finds
Ag
1993-2005

NHER 30059
Late Iron Age
28 BC +/- 72 yrs.
Fincham
Iron Age coin hoard and multi-period finds
Ag
200
1998

NHER 30335
Late Iron Age
28 BC +/- 72 yrs.
Frind
Iron Age silver coin hoard and other finds
Ag
200
1993

NHER 30494
Late Iron Age
28 BC +/- 72 yrs.
Runion
Iron Age coin hoard
Au
2
1993

NHER 31450
Late Iron Age
28 BC +/- 72 yrs.
Dereham
Iron Age and Roman coin hoard
Ag
8
1995

NHER 32950
Late Iron Age
28 BC +/- 72 yrs.
Burnham Thorpe
Possible Iron Age hoard
Ag
1997

NHER 37080
Late Iron Age
28 BC +/- 72 yrs.
Weybourne
Iron Age coin hoard
Au
206
1954
<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS/NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dispersed. LIA hoard of 12 'Norfolk Wolf' staters.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA hoard including terrets, axes, manacles, griddle, brooches, coins and pottery sherds. Subsequent archaeological surveying, trenching and metal detecting was undertaken in 1995 to explore this area further. A number of features including ditches, gullies, pits, post holes, cobbled flooring and building remains were found along with metal working debris. Evaluation of this excavated evidence and the finds suggested that this was an important settlement site in the Romano-British period with metalworking occurring on some scale. This interpretation would tally with the fact that Saham Toney is believed to have been a major centre of importance for the Iceni tribe during this period.</td>
<td>Metal detector, Controlled archaeological excavation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA hoard of silver Iron Age coins was found by metal detectorists at this site, as well as silver metal working waste, and a gold Iron Age coin. The hoard includes a very rare example of a coin of Prasutagus. Also includes IA mounts</td>
<td>Metal detector 2000-2005</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA hoard Late Iron Age coin hoard of 200 silver coins was found at some point before 1998, on site of significant Bronze Age scatter as well.</td>
<td>Metal detector 1998</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA hoard of approximately 2000 silver units</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dispersed. LIA coin hoard of two Icenian Iron Age gold coins</td>
<td>Metal detector 1994</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA coin hoard of four Icenian silver units and four Roman silver denarii minted between 89 BC and AD 37</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA hoard of An Iron Age silver coin, an Iron Age brooch dated to 400 to 250 BC and a possible Iron Age or Roman copper alloy ring or earring were found here by metal detecting. These may be an Iron Age hoard. One Iron Age coin. One Iron Age La Tene I type brooch. One Iron Age penannular ring/earring, copper alloy.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>In-situ. Following a storm, two dark soil-filled features exposed in clay in section at back of beach. Finder and another recovered 206 coins from beach below these features. Description indicates that these were Gallo-Belgic E (uniface) type. Finder retains one stater and one quarter stater. Rest sold. There may have been other quarters amongst the 206.</td>
<td>Storm</td>
<td></td>
</tr>
</tbody>
</table>

303
<table>
<thead>
<tr>
<th>ID No.</th>
<th>PERIOD</th>
<th>YEAR DEPOSITED</th>
<th>PARISH</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>No. OBJECTS</th>
<th>YEAR FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHER 37080</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Weybourne</td>
<td>Iron Age coin hoard</td>
<td>Au</td>
<td>206</td>
<td>1954</td>
</tr>
<tr>
<td>NHER 39434</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Carleton Rode</td>
<td>Iron Age hoard and post medieval lamp</td>
<td>Cu/In</td>
<td>4</td>
<td>2004</td>
</tr>
<tr>
<td>See NHER 51243</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 4697</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Saham Toney</td>
<td>Woodcock Hall Iron Age to Roman settlement and Roman forts</td>
<td>Au</td>
<td>Cu/In</td>
<td>1740-2010</td>
</tr>
<tr>
<td>NHER 51243</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Carleton Rode</td>
<td>Multi-period findspot</td>
<td>Cu/In</td>
<td>5</td>
<td>2007</td>
</tr>
<tr>
<td>See NHER 39434</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 52837</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Mattishall</td>
<td>Multi-period finds including an Iceni and Roman coin hoard</td>
<td>Au</td>
<td>Ag</td>
<td>2009</td>
</tr>
<tr>
<td>See PAS 2761</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 55521</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Whinburgh and Westfield</td>
<td>Late Bronze Age and Iron Age artefacts</td>
<td>Cu/In</td>
<td>4</td>
<td>2011</td>
</tr>
<tr>
<td>See PAS 44434</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHER 5663</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Lynford</td>
<td>Santon Late Iron Age and Roman hoard</td>
<td>Cu/In</td>
<td>Fe</td>
<td>1897</td>
</tr>
<tr>
<td>CONDITION</td>
<td>DISCOVERY</td>
<td>TREASURE CASE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIA coin hoard of 206 coins from beach below these features. Description indicates that these were Gallo-Belgic E (uniface) type. Finder retains one stater and one quarter stater. Rest sold. There may have been other quarters amongst the 206.</td>
<td>Storm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A small late Iron Age hoard found scattered in ploughsoil, consisting of two terrets and a fragment of harness mount or plaque, submitted for consideration as Treasure.</td>
<td>Metal detector 2004 T301</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An area of significant settlement from the Late Iron Age until the 4th century AD. The finds scatter is widespread between Throxton and Saham Toney. To the south of the stream the number of mid 1st century military finds recovered from a small plateau suggests this is the site of a Claudian fort built to guard the river crossing. The very hot summer in 1996 enabled the identification of cropmarks of a second later fort straddling the Peddar’s Way (NHER 1289, a Roman road) where it crosses the stream. Traces of roads and structures within the large fort can also be seen on aerial photographs. A separate possible annexe or horse compound has also been identified. The fort was the garrison for around 800 Roman legionaries and cavalry and was probably built in the second half of the first century AD on the site of an earlier Iron Age site. It may have been constructed in response to the Boudican revolt. An archaeological watching brief was carried out on the site by NAU Archaeology in 2007, this recovered 17 sherds of Roman pottery, as well as human skeletal remains which may represent an in-situ inhumation. Metal detecting in 2009 recovered a hoard of Roman objects secreted within a cauldron.</td>
<td>Controlled archaeological investigation, 2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIA hoard consisting of a linch pin head and two linch pin feet, a handle from a Roman vessel and a possible Roman sceptre handle. See NHER 39434 and NHER 50145 for details of other Iron Age objects found in the immediate vicinity.</td>
<td>Metal detector</td>
<td>2009 T318</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispersed. LIA Iceni coin hoard mixed with Roman coins.</td>
<td>Metal detector</td>
<td>2009 T318</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIA hoard, LBA finds. A Late Bronze Age socketed spearhead and a hoard of Iron Age objects comprising two terrets and a bull's head mount.</td>
<td>Metal detector</td>
<td>2011 T340</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIA hoard found in 1897. It was originally recorded as coming from Suffolk but is now thought to have been found in Santon. The hoard contains mid 1st century copper alloy and iron metalwork including smiths' tools, scrap metal, offcuts and unfinished new and renovated articles including ten brooches. Amongst the pieces are three fragments of Roman armour. Also a cauldron.</td>
<td>Agricultural or drainage work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX 1

<table>
<thead>
<tr>
<th>ID No.</th>
<th>PERIOD</th>
<th>YEAR DEPOSITED</th>
<th>PARISH</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>No. OBJECTS</th>
<th>YEAR FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHER 56729</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Shouldham</td>
<td>Two Late Iron Age coin hoards</td>
<td>Ag</td>
<td>41</td>
<td>2011</td>
</tr>
<tr>
<td>NHER 58442</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Wighton</td>
<td>Iron Age coin hoard and Roman coins</td>
<td>Au</td>
<td>2</td>
<td>2013</td>
</tr>
<tr>
<td>NHER 5853</td>
<td>Late Iron Age</td>
<td>LIA site, Rom. hoard</td>
<td>Thetford</td>
<td>The 'Thetford Treasure' and Roman temple, Fison Way</td>
<td>Au</td>
<td></td>
<td>1979</td>
</tr>
<tr>
<td>NHER 59739</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Brandon Parva, Coston, Runhall and Welborne</td>
<td>Multi-period finds</td>
<td>Ag</td>
<td></td>
<td>2014</td>
</tr>
<tr>
<td>NHER 6264</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Weybourne</td>
<td>Iron Age gold coin hoard</td>
<td>Au</td>
<td>12</td>
<td>1940</td>
</tr>
<tr>
<td>NHER 7720</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Weston Longville</td>
<td>Weston Longville Iron Age and Roman coin hoard</td>
<td>Ag</td>
<td>300</td>
<td>1852</td>
</tr>
<tr>
<td>NHER 7818</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Honingham</td>
<td>Honingham Iron Age coin hoard</td>
<td>Ag</td>
<td>300</td>
<td>1954-1988</td>
</tr>
<tr>
<td>PAS 1410 (IARCH-D7D1E6)</td>
<td>Late Iron Age</td>
<td>28 BC +/- 72 yrs.</td>
<td>Snettisham</td>
<td>Cluster of upto three hoards including torcs, gold droplets, and Roman coins</td>
<td>Au</td>
<td></td>
<td>2003</td>
</tr>
</tbody>
</table>

See PAS 1487
Two LIA coin hoards, totalling some forty-one coins, found in two discrete areas.

LIA coin hoard comprising two gold staters.

LIA/Roman temple site and large Roman hoard on site of LBA cremation cemetery

LIA coin hoard, LBA hoard of socketed axeheads

LIA coin hoard of at least twelve gold coins found on beach near coastguard station, all Gallo-Belgic E (plain, reverse inscribed)

LIA hoard of two to three hundred silver Iceni coins and a few early Roman coins was found in an urn by men digging a ditch in 1852

LIA coin hoard of over 300 coins were retrieved, all of which are believed to have been buried inside a pot. An Iron Age Iceni coin hoard that was buried after AD 45 and possibly during the Boudican revolt of AD 60/61. It was found by a farmer in 1954 and excavations followed.

The material discussed below consists of the metal objects found in a third season of work on the site, the first and second being the subject of previous Treasure cases (2003 T169 and 2005 T487 respectively). As mentioned in previous coroner's reports, the finder has been systematically detecting in woodland immediately next to the field in which important discoveries of Iron Age torcs and other material have been found. Metal detectors were used after stripping of the soil using a mechanical digger. Evidence of a stone structure was found. This work was carried out with the permission of the landowner and in consultation with staff at Norfolk Archaeology. In addition to the metal objects discussed below, quantities of pottery and tile have been seen by local archaeologists in Norfolk, dated in the first coroner's report to the Late Bronze Age / Early Iron Age.
<table>
<thead>
<tr>
<th>ID No.</th>
<th>PERIOD</th>
<th>YEAR DEPOSITED</th>
<th>PARISH</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>No. OBJECTS</th>
<th>YEAR FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS 2749</td>
<td>(IARCH-B17DEA)</td>
<td>Late Iron Age</td>
<td>25 BC +/- 25 yrs.</td>
<td>Ashby St. Mary Hoard comprising 44 Iron Age staters of the 'Norfolk Wolf' Uninscribed Icenian JB type.</td>
<td>Au</td>
<td>44</td>
<td>2012</td>
</tr>
<tr>
<td>PAS 246645</td>
<td>(NMS-41A985)</td>
<td>Late Iron Age</td>
<td>25 BC +/- 75 yrs.</td>
<td>Carleton Rode Information unavailable</td>
<td></td>
<td>3</td>
<td>2007</td>
</tr>
<tr>
<td>PAS 2757</td>
<td>(IARCH-BD63EC)</td>
<td>Late Iron Age</td>
<td>20 BC +/- 10 yrs.</td>
<td>Wighton Hoard consisting of 2 gold Norfolk Wolf staters</td>
<td>Au</td>
<td>2</td>
<td>2013</td>
</tr>
<tr>
<td>PAS 2758</td>
<td>(IARCH-9CF0D8)</td>
<td>Late Iron Age</td>
<td>8 BC +/- 13 yrs.</td>
<td>Swaffham Hoard of at least 30 East Anglian gold staters</td>
<td>Au</td>
<td>130</td>
<td>1994</td>
</tr>
<tr>
<td>PAS 752576</td>
<td>(NMS-C9FCD1)</td>
<td>Late Iron Age</td>
<td>8 BC +/- 13 yrs.</td>
<td>Runton Two Freckenham staters, part of a larger undeclared hoard</td>
<td>Au</td>
<td>64</td>
<td>1994</td>
</tr>
<tr>
<td>PAS 2754</td>
<td>(IARCH-9DCAFF)</td>
<td>Late Iron Age</td>
<td>5 BC +/- 15 yrs.</td>
<td>Cawston Scattered hoard of six Iron Age gold alloy staters recovered by 2 finders.</td>
<td>Au</td>
<td>6</td>
<td>2017</td>
</tr>
<tr>
<td>PAS 2764</td>
<td>(IARCH-186FC8)</td>
<td>Late Iron Age</td>
<td>5 BC +/- 15 yrs.</td>
<td>Brandon Parva, Coston, Runhall and Welborne Hoard of four Icenian staters</td>
<td>Au</td>
<td>4</td>
<td>2014</td>
</tr>
<tr>
<td>PAS 2766</td>
<td>(IARCH-5B6A7C)</td>
<td>Late Iron Age</td>
<td>4 BC +/- 46 yrs.</td>
<td>Snettisham Snettisham large, mixed coin hoard</td>
<td>Au</td>
<td>99</td>
<td>2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ag, CuIn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAS 399014</td>
<td>(NMS-EE8B03)</td>
<td>Late Iron Age</td>
<td>1 AD +/- 100 yrs.</td>
<td>Carleton Rode Information unavailable</td>
<td></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
These were found scattered in what appear to have been two groups over a relatively small area, the first group in November 2012 and the second in March 2013. If two hoards were concealed, however, these must surely be two parts of one main deposit; the two groups of coins share die-links as well as being of the same type. All of the South Norfolk coins are struck from the same rather pale debased gold, implying a date of production some years after the beginning of the Norfolk Wolf series, probably around the end of the third quarter or beginning of the fourth quarter of the first century BC. The hoard will have been deposited in the late first century BC.

Both are Norfolk wolf staters, so-called JB types with a left facing wolf. The two coins were found approximately 40 yards apart and they must represent part of a dispersed coin hoard. The coins were made between about 50-20 BC. Date of loss of deposition will have been in the closing decades of the first century BC, 30-10BC.

At least 30 East Anglian gold staters that were sold, possibly up to 130 coins in the hoard to begin with.

Two Freckenham staters found in a cliff fall at West Runton, apparently part of a larger undeclared hoard of 62 staters according to de Jersey (2015)

Freckenham flower types and are reddish in colour indicating a high copper content to the gold alloy. The six coins are typically sub-oval with a wedge-shaped cross-section and circumferential V-shaped yieldage cracks induced by the strain of striking.

All are of the Snnettisham or early Freckenham types, suggesting a date of deposition in the late 1st century BC or very early 1st century AD.

The majority of the coins are from the local East Anglian British Iron Age coin producing area (traditionally associated with the tribe referred to as the Iceni, issuing coins in Norfolk, Suffolk and parts of Cambridgeshire). The assemblage also included a gold stater attributed to the Eastern British Iron Age (produced in the area North of the Thames), plated gold Age coins from the North Eastern British Iron Age coin producing area (traditionally associated with the tribe referred to as the Corieltavi, issuing coins in Lincolnshire and surrounding counties to the North and West) and from Gaul (modern France). The coins are of varied dates (see full catalogue for details) but were mostly produced in the second half of the first century BC or the first half of the first century AD.
<table>
<thead>
<tr>
<th>ID No.</th>
<th>Period</th>
<th>Year Deposited</th>
<th>Parish</th>
<th>Description</th>
<th>Material</th>
<th>No. Objects</th>
<th>Year Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS 44344 (NMS-E51D37)</td>
<td>Late Iron Age</td>
<td>1 AD +/- 100 yrs.</td>
<td>Whinburgh and Westfield</td>
<td>Information unavailable</td>
<td></td>
<td>3</td>
<td>2011</td>
</tr>
<tr>
<td>PAS 2767 (IARCH-E32256)</td>
<td>Late Iron Age</td>
<td>13 AD +/- 8 yrs. Shouldham</td>
<td>Shouldham 2, Hoard of 34 East Anglian silver units and staters</td>
<td>Ag</td>
<td>6</td>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>PAS 2867 (IARCH-DD26DC)</td>
<td>Late Iron Age</td>
<td>13 AD +/- 8 yrs. Sustead</td>
<td>Hoard of at least 9 East Anglian gold staters</td>
<td>Au</td>
<td>9</td>
<td>1998</td>
<td></td>
</tr>
<tr>
<td>PAS 51190 (PAS-B80CE1)</td>
<td>Late Iron Age</td>
<td>13 AD +/- 8 yrs. Pentney</td>
<td>Hoard of 2 uninscribed East Anglian silver units</td>
<td>Ag</td>
<td>2</td>
<td>2001</td>
<td></td>
</tr>
<tr>
<td>PAS 2753 (IARCH-744618)</td>
<td>Late Iron Age</td>
<td>17 AD +/- 27 yrs. Mattishall</td>
<td>Silver unit of the Iceni, ECEN type</td>
<td>Ag</td>
<td>1</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>PAS 2771 (IARCH-96AD0F)</td>
<td>Late Iron Age</td>
<td>21 AD +/- 20 yrs. Trowse with Newton</td>
<td>Uncertain Pre-Claudian silver hoard</td>
<td>Ag</td>
<td>4</td>
<td>1658</td>
<td></td>
</tr>
<tr>
<td>PAS 2773 (IARCH-44A0F9)</td>
<td>Late Iron Age</td>
<td>21 AD +/- 20 yrs. Easton</td>
<td>Hoard of unknown East Anglian silver units</td>
<td>Ag</td>
<td>1849</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAS 2760 (IARCH-44F34A)</td>
<td>Late Iron Age</td>
<td>25 AD +/- 35 yrs. Grimston</td>
<td>Three Iron Age silver units, fused together, units of Iceni</td>
<td>Ag</td>
<td>3</td>
<td>2015</td>
<td></td>
</tr>
<tr>
<td>NHER 31949</td>
<td>Late Iron Age</td>
<td>30 AD +/- 10 yrs. Fornceit</td>
<td>Early Roman coin hoard and multi-period finds</td>
<td>Au, Ag</td>
<td>340</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>PAS 2763 (IARCH-61213F)</td>
<td>Late Iron Age</td>
<td>31 AD +/- 11 yrs. Brandon Parva, Coston, Runhall and Welborne</td>
<td>Hoard of five East Anglian gold staters</td>
<td>Au</td>
<td>5</td>
<td>2014</td>
<td></td>
</tr>
</tbody>
</table>

See NHER 56729, PAS 2761, PAS 2878, PAS 2747

See PAS 1370

See NHER 59739, PAS 2764
<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS/NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Information provided by the finder suggests that the assemblage comprised two discrete hoards (here hoard 2867 and 2868). The first (2867) consisting of the staters (nos. 1-6) and perhaps the bronze unit (no. 7), which was found at the centre of this scatter. The second (2868) comprising the remaining (silver) coins. As the first hoard included only uninscribed coins, it could have been deposited anytime after c. AD 20. The second hoard included uninscribed and inscribed coins and was probably deposited at the time of, or soon after, the Roman invasion of southern Britain in AD 43.</td>
<td>Metal detector</td>
<td>2012T71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>At least 9 uninscribed gold East Anglian staters, &quot;Several Freckenham staters recorded in the trade with this provenance seem likely to have originated in a hoard, but no further details are available&quot;. (De Jersey 2014)</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two boar/horse B silver units stuck together</td>
<td>Metal detector</td>
<td>2001 T22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addenda to a hoard discovered in the same area</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chadburn (2006; hoard 1) suggests that the hoard contained the uninscribed normal face/horse type...but it is possible to interpret Browne's comments as implying that only inscribed types, presumably ECEN or ECE, ANTED and CAN DVRO, were present (as did Allen (1970: 21))&quot;</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potentially two hoards here</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Only two faces are visible, one of each coin at the two ends of the pile. One is the obverse of an Iceni Pattern-Horse type, the other the reverse of an ECEN Pattern-Horse type, and thus represent a hoard. The date of deposition of this hoard could lie at any time between the very late 1st century BC and the period of the Boudiccan revolt or even a little later.</td>
<td>Metal detector</td>
<td>2015T883</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LIA coin hoard included over three hundred Iceni coins and over forty Roman coins. Other finds included a prehistoric flint flake, a Bronze Age spearhead, a Bronze Age axehead, Roman metalwork, Early and Middle Saxon strap fittings, part of a Late Saxon stirrup and medieval and post medieval coins.</td>
<td>Metal detector rally 1997</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Four of the coins below are &quot;Snettisham&quot; or &quot;Freckenham&quot; types, struck in about 20 BC-AD 20, which also made up the first batch of Runhall coins. One is a slightly earlier type of &quot;Norfolk Wolf&quot; gold stater, produced in about 50-20 BC.</td>
<td>Metal detector</td>
<td>2014T819</td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
<td>PARISH</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>--------</td>
<td>--------------</td>
<td>----------------</td>
<td>---------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>PAS 2761</td>
<td>(IARCH-A49507)</td>
<td>Late Iron Age</td>
<td>32 AD +/- 12 yrs.</td>
<td>Shouldham 2 large, mixed coin hoard</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See NHER 56729, PAS 2767, PAS 2878, PAS 2747</td>
</tr>
<tr>
<td>PAS 2878</td>
<td>(IARCH-59F505)</td>
<td>Late Iron Age</td>
<td>32 AD +/- 12 yrs.</td>
<td>Shouldham 1 large, mixed coin hoard</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See NHER 56729, PAS 2767, PAS 2761, PAS 2747</td>
</tr>
<tr>
<td>PAS 1370</td>
<td>(IARCH-43F45E)</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Large mixed hoard of 381 local silver units and Republican denarii</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See NHER 31949</td>
</tr>
<tr>
<td>PAS 1384</td>
<td>(IARCH-59E201)</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Hoard of local silver units and much older Republican denarii</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See NHER 25777</td>
</tr>
<tr>
<td>PAS 2747</td>
<td>(IARCH-E2C795)</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Shouldham 1, group of two hoards of East Anglian silver units and staters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See NHER 56729, PAS 2767, PAS 2761, PAS 2878</td>
</tr>
</tbody>
</table>
### Second hoard comprising the remaining (silver) coins.

As the first hoard included only uninscribed coins, it could have been deposited anytime after c. AD 20. The second hoard included uninscribed and inscribed coins and was probably deposited at the time of, or soon after, the Roman invasion of southern Britain in AD 43.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Second hoard comprising the remaining (silver) coins. As the first hoard included only uninscribed coins, it could have been deposited anytime after c. AD 20. The second hoard included uninscribed and inscribed coins and was probably deposited at the time of, or soon after, the Roman invasion of southern Britain in AD 43.</td>
<td>Metal detector</td>
<td>2013T121</td>
</tr>
</tbody>
</table>

### Forty of the forty-one coins are British Iron Age coins.

Forty of the forty-one coins are British Iron Age coins. Five of these are gold 'staters', one is a base-metal stater (struck on a flan of the same module as the gold staters), thirty-two are silver 'units', one is a smaller silver 'half-unit' and one is a silver 'minim' (or 'quarter-unit'). All of these coins belong to the local East Anglian coin series, traditionally attributed to the Iceni. The other coin is a Continental Iron Age bronze coin imported from Belgic Gaul (modern north-western France). 2 hoards: the first consisting of the staters and perhaps the bronze unit, which was found at the centre of this scatter.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Forty of the forty-one coins are British Iron Age coins. Five of these are gold 'staters', one is a base-metal stater (struck on a flan of the same module as the gold staters), thirty-two are silver 'units', one is a smaller silver 'half-unit' and one is a silver 'minim' (or 'quarter-unit'). All of these coins belong to the local East Anglian coin series, traditionally attributed to the Iceni. The other coin is a Continental Iron Age bronze coin imported from Belgic Gaul (modern north-western France). 2 hoards: the first consisting of the staters and perhaps the bronze unit, which was found at the centre of this scatter.</td>
<td>Metal detector</td>
<td>2012T71</td>
</tr>
</tbody>
</table>

### "10 Iron Age silver units and 4 denarii to Tiberius.

The first part of this hoard, consisting of fourteen coins, was found by five metal detectorists at a rally held between 24 and 26 August 1996; another detectorist found the second batch, of c.369 coins (see below for problems with the precise figure), on 26 July 1997, at a depth of c.30 cm. Seventeen body sherds of a wheelmade vessel in a sandy, micaceous fabric were found nearby, possibly from a globular beaker and perhaps the container for the hoard (Chadburn 2006, hoard 54).” CANI DVRO, ANTED, ECEN/ECE, SAENV, AESV, and denarii. In John Talbot’s unpublished thesis (2015, 241) he dates this hoard to AD 60/1 on the basis of additional coins allegedly found at the hoard site, including a Neronian denarius of this date.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&quot;10 Iron Age silver units and 4 denarii to Tiberius. The first part of this hoard, consisting of fourteen coins, was found by five metal detectorists at a rally held between 24 and 26 August 1996; another detectorist found the second batch, of c.369 coins (see below for problems with the precise figure), on 26 July 1997, at a depth of c.30 cm. Seventeen body sherds of a wheelmade vessel in a sandy, micaceous fabric were found nearby, possibly from a globular beaker and perhaps the container for the hoard (Chadburn 2006, hoard 54).” CANI DVRO, ANTED, ECEN/ECE, SAENV, AESV, and denarii. In John Talbot’s unpublished thesis (2015, 241) he dates this hoard to AD 60/1 on the basis of additional coins allegedly found at the hoard site, including a Neronian denarius of this date.</td>
<td>Wymondham Heritage Society (part)</td>
<td>2013T121</td>
</tr>
</tbody>
</table>

### "Between 1990 and 1995 some twenty-two East Anglian silver units and a single Republican denarius were found in a field at North Creake... In May 1995 two detectorists found another sixteen coins within an area of 6 m x 6 m, which were declared Treasure in December 1995 ...it seems likely that all of the coins may have come from a single scattered hoard.”

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&quot;Between 1990 and 1995 some twenty-two East Anglian silver units and a single Republican denarius were found in a field at North Creake... In May 1995 two detectorists found another sixteen coins within an area of 6 m x 6 m, which were declared Treasure in December 1995 ...it seems likely that all of the coins may have come from a single scattered hoard.”</td>
<td>Metal detector</td>
<td>2013T121</td>
</tr>
</tbody>
</table>

### Information provided by the finder suggests that the assemblage comprised two discrete hoards (here hoard 2976 and 2977). The first (2976) consisting of the staters and perhaps the bronze unit), which was found at the centre of this scatter. The second (2977) comprising the remaining (silver) coins. As the first hoard included only uninscribed coins, it could have been deposited anytime after c. AD 20. The second hoard included uninscribed and inscribed coins and was probably deposited at the time of, or soon after, the Roman invasion of southern Britain in AD 43.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Information provided by the finder suggests that the assemblage comprised two discrete hoards (here hoard 2976 and 2977). The first (2976) consisting of the staters and perhaps the bronze unit), which was found at the centre of this scatter. The second (2977) comprising the remaining (silver) coins. As the first hoard included only uninscribed coins, it could have been deposited anytime after c. AD 20. The second hoard included uninscribed and inscribed coins and was probably deposited at the time of, or soon after, the Roman invasion of southern Britain in AD 43.</td>
<td>Metal detector</td>
<td>2013T121</td>
</tr>
</tbody>
</table>
### APPENDIX 1

<table>
<thead>
<tr>
<th>ID No.</th>
<th>PERIOD</th>
<th>YEAR DEPOSITED</th>
<th>PARISH</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>No. OBJECTS</th>
<th>YEAR FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS 2752</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Fring</td>
<td>Fring 1 larged, mixed coin hoard</td>
<td>Ag</td>
<td>201</td>
<td>1990</td>
</tr>
<tr>
<td>PAS 2767</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Snettisham</td>
<td>Snettisham I.A. Bowl Hoard (P)</td>
<td>Au</td>
<td>7000</td>
<td>1991</td>
</tr>
<tr>
<td>PAS 2772</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>West Acre</td>
<td>Hoard of 4 Iron Age East Anglian silver units</td>
<td>Au</td>
<td>4</td>
<td>2012</td>
</tr>
<tr>
<td>PAS 2775</td>
<td>Late Iron Age</td>
<td>35 AD +/- 25 yrs.</td>
<td>Tacolneston</td>
<td>Hoard of 2 Iron Age East Anglian silver units of pattern-horse types</td>
<td>Ag</td>
<td>2</td>
<td>2012</td>
</tr>
<tr>
<td>PAS 2876</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Tacolneston</td>
<td>Hoard of 2 East Anglian silver units</td>
<td>Ag</td>
<td>2</td>
<td>2012</td>
</tr>
<tr>
<td>PAS 2882</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Dereham</td>
<td>Hoard of 8 East Anglian silver units and Republican denarius</td>
<td>Ag</td>
<td>8</td>
<td>1995</td>
</tr>
<tr>
<td>PAS 2889</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Wighton</td>
<td>Hoard of 2 uninscribed Eastern gold staters</td>
<td>Au</td>
<td>2</td>
<td>2013</td>
</tr>
<tr>
<td>PAS 508479</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Stoke Ferry</td>
<td>Hoard of 12 East Anglian, Eastern, and North Eastern silver units of uncertain location</td>
<td>Ag</td>
<td>12</td>
<td>1999</td>
</tr>
</tbody>
</table>

---

See NHER 1661

See PAS 508479

See NHER 31450

See NHER 58442

---
<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CLUSTER</th>
<th>CONTENTS/NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>315</td>
<td></td>
<td>Metal detector find of a large hoard of Icenian silver coins, along with ceramic sherds and fragments of textile. 51 uninscribed East Anglian silver, 41 ANTED, 96 ECEN/ECE, 2 SAENV, eight uncertain, three later uninscribed. De Jersey (2015) writes: &quot;The limited archaeological evidence (Chadburn and Gurney 1991, 219) suggested that the pottery vessel containing the hoard had been smashed by a previous episode of subsoiling, in 1988; no evidence of any pit or other feature which might have contained the vessel had survived. Nine sherds of pottery were recovered from which it was possible to reconstruct the container... a wheel-made concave-sided cup or bowl...dating probably to the mid-first century AD. The textile which survived was made in a simple tabby weave from vegetable fibre, possibly flax or hemp, and probably covered the mouth of the pot (Liu and Crowfoot 1991).&quot;</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td></td>
<td>One of the largest coin hoard in British history, illegally detected and distributed by two well known dealers. Contained 6000-8000 coins of local types including ANTED, ECEN/ECE, VEP CORF, and uninscribed units of both gold and silver. It appears to have been contained in a metal bowl and was associated with further gold coins, ingots and torc fragments buried above and below it</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td></td>
<td>Three inscribed, probably with ANTED, though cannot read on two, and one uninscribed East Anglian silver unit of regular Face/Horse type</td>
<td>Metal detector 2012T377</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td></td>
<td>East Anglian pattern-horse silver unit. The reverse was too worn for the type to be fully identified. Weight: 0.83g, diameter 14mm. Inscribed East Anglian pattern-horse silver unit of Anted inscribed with ANTED monogram on reverse (ABC 1645, BMC 3800ff). Weight: 0.80g, diameter 13mm.</td>
<td>Metal detector 2012T345</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td></td>
<td>1 uncertain, 1 ANTED, Two Iron Age East Anglian silver units of pattern-horse types, the reverse sides of which were found accreted together.</td>
<td>Metal detector 2012 T345</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td></td>
<td>4 silver denarii to Tiberius and 4 Icenian silver units found in a small concentration in February and March 1995.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td></td>
<td>Iron Age coin hoard consisting of two gold staters. Both are Norfolk wolf staters, so-called JB types with a left facing wolf (Cottam et al 2010, Ancient British Coinage, p.78, no.1399). The two coins were found approximately 40 yards apart and they must represent part of a dispersed coin hoard.</td>
<td>Metal detector 2013 T250</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td></td>
<td>Twelve iron age coins reported in January 1999 and not considered to be a hoard at that time.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>ID No.</td>
<td>PERIOD</td>
<td>YEAR DEPOSITED</td>
<td>PARISH</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td>----------------</td>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PAS 508479</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>West Acre</td>
<td>Hoard of 4 East Anglian silver units</td>
</tr>
<tr>
<td>PAS 531978</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>West Acre</td>
<td>Hoard of 22 Icenian silver units, location unknown</td>
</tr>
<tr>
<td>PAS 557408</td>
<td>Late Iron Age</td>
<td>35 AD +/- 15 yrs.</td>
<td>Brettenham</td>
<td>Hoard of 5 Icenian silver units</td>
</tr>
<tr>
<td>PAS 2761</td>
<td>Late Iron Age</td>
<td>47 AD +/- 67 yrs.</td>
<td>Mattishall</td>
<td>Mattishall large, mixed coin hoard</td>
</tr>
<tr>
<td>PAS 2765</td>
<td>Late Iron Age</td>
<td>52 AD +/- 9 yrs.</td>
<td>Stanfield</td>
<td>Hoard of 18 silver Iron Age coins, all silver units of the Iceni</td>
</tr>
</tbody>
</table>

See PAS 508479
See NHER 52837

APPENDIX 1

PAS 508479 (NMS-076680)
Late Iron Age
35 AD +/- 15 yrs.
West Acre
Hoard of 4 East Anglian silver units
Ag
4
2012

See PAS 508479

See NHER 52837

West Acre
<table>
<thead>
<tr>
<th>CONTENTS/NOTES</th>
<th>DISCOVERY</th>
<th>TREASURE CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four Iron Age East Anglian silver units (one of which was a plated copy with a copper alloy core). One ANTED</td>
<td>Metal detector 2012T377</td>
<td></td>
</tr>
<tr>
<td>This is the eighth group of finds from this site which increasingly looks like a series of different deposits whose precise contents are now irrecoverable. For a recent summary of the find as a whole up to the end of 1999, see Treasure Annual Report 1998-1999, no. 277, and for the last addenda, see Treasure Annual Report 2000, no. 235.</td>
<td>Metal detector</td>
<td></td>
</tr>
<tr>
<td>5 coins total: 2 ANTED, 1 ECEN/ECE, 1 uncertain half-unit, and one uninscribed. De Jersey notes: &quot;There is a significant Romano-British settlement here, possibly including a temple (Chadburn 2006, hoard 20), and thus it would not be unexpected to find late Iron Age bronze and silver coinage.&quot;</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Fifteen Iron Age coins and twenty-three Roman coins. All of the Iron Age coins belong to the East Anglian regional series. Possibly two hoards The types represented here were struck between about 20 BC and AD 50. There are thirteen Roman Republican issues, the earliest struck by the magistrate P Maenius in 132 BC. The remaining ten coins are Roman Imperial issues, ranging from those of the first emperor, Augustus, to a coin of Trajan struck in AD 114-7.</td>
<td>Metal detector 2009T318</td>
<td></td>
</tr>
<tr>
<td>Found scattered over a small area, one (no. 15 in the catalogue) found some 70m from the main body has clearly travelled due to agricultural action. They clearly represent a scattered hoard which went into the ground together in the late Iron Age or early Roman period. Often these hoards are associated with the Boudiccan revolt of AD60.</td>
<td>Metal detector 2015T546</td>
<td></td>
</tr>
</tbody>
</table>
Notes on choices regarding knowledge discovery

This appendix of the PhD briefly explains how sites and typologies were gleaned from the NHER and PAS datasets, and how choices were made about the inclusion and exclusion of certain types of data at various stages. It also describes other choices such as whether to group or split finds from the same geographic location for specific tests. The contents of this appendix originated as a conversation during the viva with the examiners of the dissertation, Profs. Charly French and Colin Haselgrove, regarding how and why certain types of data were examined in the model in depth.

It is firstly important to understand that decisions regarding the model largely arose from methodological concerns. It is therefore appropriate to briefly explain how the data were acquired and what steps were taken to “clean” them in order to make them more actionable. The information provided here is complementary, but more in-depth, than the outline provided in Chapter 3. In the case of the NHER data, one of the finds officers at NHER at Gressenhall searched the database for the time periods I requested, to obtain all prehistoric sites and sites where metal detecting had occurred. Chapter 3 explains this as well, however, the datasets requested were as follows (see Figures 3.2 and 3.3 in Ch. 3 for further information):

- All records with prehistoric activity (exclusive)
- All records containing a single time period (e.g. Iron Age)
- All records with prehistoric activity (non-exclusive)
- All records containing multiple periods (e.g. Neolithic, Iron Age, Roman, Industrial)
APPENDIX II

Figure A2.1: NHER data points with monuments (in red), find-spots (in blue), negative evidence (in green), or buildings (in purple). Location near Salthouse Heath, North Norfolk. An example of vector data using a Shapefile.

- All records containing broad typologies (e.g. Neolithic-Iron Age)

- All records of metal detecting activity regardless of period

The results from this search were emailed as different packages. Each package contained the spatial data, or Shapefiles, of ellipses, points, polylines, and regions—all the referenced locations in Norfolk associated with the periods or activities I was interested in, marked by a unique ID number (PrefRef). Additionally, the packages contained the full descriptions of all of those find-sites as an .XML and .HTML document. .XML and .HTML documents are crucially readable by both people and machines.

These datasets were first added to QGIS as Shapefiles (.SHP). For the uninitiated, Shapefiles are a simple format for storing attribute data of geographic locations. In QGIS or ArcGIS, they appear on the map as points, lines, or polygons, and opening their attribute files show that they are just items in a spreadsheet. The individual Shapefiles that I requested from NHER had slightly less than 12,000 unique points, polygons, and lines, or slightly less than 12,000 entries on a spreadsheet. As Figure A2.2 illustrates, columns in the spreadsheet are attributes and rows are (usually) individual geographic points, lines, or polygons. They can be roughly categorized based upon the information contained in the attribute table, but it is actually more useful to clean the data first. Figure A2.1 shows a simple categorization of the NHER data, as a .SHP in QGIS.
Additionally, as Figure A2.1 shows, making sense of the MONTYPES (monument types) and PERIOD column in the attribute table requires reading the entry in the .XML or .HTML files also provided by NHER. In QGIS, by clicking a link to each entry within the .HTML and .XML files, it is possible to learn more about what a given entry actually represents. Often specific typologies of find-types found at this location will be inside this file. The .XML/.HTML file further specifies whether there is more information on a given entry, whether photographs, illustrations, or further information—sometimes an internal report—can be found in a physical, secondary file.

At this point in the process, QGIS is not very helpful, and it is better to go through the .XML and .HTML files using the NHER Heritage Glossary (http://www.legacy.norfolk.gov.uk/heritage-glossary) of find-types to learn what kinds of finds and monuments occur in a given area, and then finding individual find-types in the .XML file. Using these, it was possible to search inside the full set of requested records for specific attributes, such as monument or monument component types, find-types, and actions associated with a given site—such as times that metal detecting had occurred and returned finds, when legal action was taken against a given party, or when an excavation was conducted. These records also contain references relevant to
APPENDIX II

each ID, and a summary and description of the location. Figure A2.3 shows an example of this type of data.

Once this information has been obtained, by browsing QGIS, using the attribute table, and particularly a site’s “PrefRef” or ID number, and the .XML file allowed for splitting, or branching out, the original single entry into multiple entries of interest.

Thus, a record containing many multiple find types and/or monuments/components could be split into many multiple points. So, in the example from Figure A.2.3, PrefRef 16789 could be split into “Neolithic Flint Scrapper_16789,” “Iron Age Sherds_16789,” “Roman Coin_16789” “Roman Brooch_16789,” “Roman Settlement_16789” and so on, based on the information in the .XML file. Often, for both finds like prehistoric brooches, coins, terrets, hoards, and monuments like burnt mounds or long barrows, there would be more detailed typologies available along with a summary of the site. These detailed typologies have associated date ranges, in turn. In the case of find-types, the typologies originate from the finds-identification officers at NHER, while the monument typologies originate in part, from the National Mapping Programme in Norfolk (Albone et al. 2007a, 2007b; Horlock et al. 2008; Tremlett 2011.).

These branches allow for new types of analyses and visualizations to be made. Instead of having a map of monuments and find-spots (as in Figure A2.1), it is possible to have a distribution map of Neolithic and Bronze Age monuments, for example (as in Chapter 5), with each site-type having its own icon. Branching the dataset allows for a greater number of ways to think about and display the data. However, these branches were only possible to map if they were first “discovered” in the dataset, or if I already knew about them from reading (e.g. Hutcheson's PhD) or speaking with someone (e.g. Jody Joy). That is why the discussion of knowledge discovery in Chapter 2 of this dissertation is important. The same process operated on the PAS data, as well, though it did not include monument types, but only find-spots. A key piece of information is that one can download a dataset and not immediately know everything inside it. This is in the nature of “big data” projects.

There is a certain amount of choice in the process of knowledge discovery. For this research, for the most part, only find-types from the Bronze and Iron Ages were comprehensively branched (apart from coins, but more on that shortly) along with monuments from those periods. Monuments from the Neolithic were comprehensively branched, as were monuments from the Roman period, whereas find-types were not. Only certain monument types from periods later the Roman were branched. For example, because of the interest in the proximity of priories to hillforts and ringworks in Norfolk, churches, priories, and monasteries were branched, as were castles, manors, and defended sites, but other types of medieval sites, including Anglo-Saxon burials, for example, were not branched. There may be many other sets of important relationships between other sites and evidence for continuity that we are hitherto unaware of.
Figure A2.4: A kernel density estimation map of all activity in Norfolk between the Bronze Age and the Roman period, based on Green’s (2017) blog post on regionality and complexity. In it, areas with long-term continuity or multi-period use appear white, combinations of two periods appear yellow, cyan, or magenta, and areas with evidence from primarily only one period appear red, green, and blue.
Generally, within these categories of data that were branched, I opted for inclusiveness and tried to “discover” as many examples as possible, in order to understand as rich as possible an idea of what kinds of social activities had been uncovered in a particular location, remembering that these distributions have to be understood with regard to biases and taphonomy. There are always caveats when using these types of tools, and it is important to highlight that there are many sites missing completely from this analysis because they have never been found or recorded for a large list of reasons. Chapter 2 discussed these caveats at length.

With this in mind, it is possible to use kernel density estimation (KDE) or heatmaps. These provide a simple raster proxy of the data, showing where concentrations are highest and lowest over a discrete scale. These can help with discovery by highlighting areas of dense metal detecting activity or dense monuments records to investigate further. It is a cartographic research process of learning about the map to answer key questions.

As an example of one of the key questions in this dissertation, Chapter 7 asked “Are there sites where metal detecting has uncovered Iron Age find-types near monuments from before the Iron Age?” To answer this question, I plotted a kernel density map of Neolithic and Bronze Age monuments over a kernel density map of metal detected finds from the Iron Age, and looked at the intersections between the two. This plot was similar to, but different from, Figure A2.4. It was only then that I “discovered” the monument type “square barrow” as mentioned in Chapter 7. So-called “square barrows” often exist in areas with both older monuments and Iron Age activity, including activity uncovered through metal detecting. However, until I used the model, I had not been aware of their existence, although if I had asked the right question of the finds officers at Gressenhall, I might have known. From notes in the .XML file, it became clear that several of the initial “square barrows” I found by searching for the term were probably medieval or later or highly uncertain, and so these were excluded from the later analyses.

Thus, the GIS model, once branched so that as many classifications as possible are clear and accessible, acts as a heuristic, allowing the user to learn about the past environment, although not necessarily in an optimal way. The method of plotting kernel density estimates over each other, although an obvious method, is one that I had previously seen in Chris Green’s blog on the University of Oxford’s English Landscape and Identities project, which looked at English archaeology between 1500 BC and AD 1086. Green’s post on regionality and complexity (2017; Green et al. 2017), was particularly informative, and I produced a similar series of maps. Although they did not make it into my final dissertation, they were highly instructive as heuristics. Figure A2.4 shows an example.

In Figure A2.4, a series of three kernel density estimates are mapped over each other. The first, Bronze Age activity, is shown in blue, the second, Iron Age activity, in red, and the third, Roman, activity in green. This method can only show the concurrence of three different types
Figure A2.5: KDE (heatmap) of Iron Age finds from the PAS in Norfolk. Branching, or splitting, coins from the Iron Age leads to a huge hot spot near Snettisham, the result of a huge number of coins from the CCI being entered into one discrete point.

Figure A2.6: KED (heatmap) of Iron Age finds from the PAS in Norfolk, with coins not branched (left as part of sites and not given individual weights). Leaving coins together leads to a much more even map of Iron Age activity in Norfolk.
or periods. Then, the three different KDE maps were merged so that a type of Venn diagram can be appreciated. Areas with overlap have now changed colour, and areas that are white show regions with the confluence of all three periods. This map became a point of divergence for exploring different areas of Norfolk in greater detail. What was happening in areas that are white? What was happening in areas with only one colour? It is important to highlight that this learning process is not really automated: it involves decision making and choices, and because it is heuristic, it is not an optimal strategy.

One of the other major choices made while making the model revolved around grouping versus splitting, and weighting. These cases are clearly exemplified by Snettisham. For example, since 2006, the PAS has taken over the hosting of the Celtic Coin Index (CCI), which was originally hosted at the Institute of Archaeology, Oxford University. Many, or most, of the entries from the CCI were added to the PAS as individual entries. Whereas one hoard could be tens or hundreds of find-types all merged under one entry, these coins were added individually. At Snettisham, because of sensitivity surrounding the exact locations of some of the discoveries, particularly illegal discoveries, every coin found there was put into the same location, a truncated grid reference. Thus, if we look at a kernel density map of all the individual finds in the model, Snettisham has such a high density that it greatly distorts any KDE. Coins at other sites that were recorded through the NHER were lumped together (rather than split), and information on NHER-recorded coins is often only available through a paper file at NHER, in any case. Figures A2.5 and A2.6 illustrate this issue clearly.

This factor of the paper files for coins is one major reason I chose not to branch coins from both PAS and NHER in more detailed analyses. Furthermore, John Talbot’s recent (2018) work on the distribution of coins in Norfolk is so comprehensive that, although it does not focus specifically on landscape contexts, emphasizing on coins did not seem warranted.

Additionally, there is the major problem of duplication between the PAS and NHER. Although the NHER has many records that are completely separate from the PAS, there is also some overlap since the inception of the PAS. Thus, many hoards from the PAS are also hoards in the NHER (e.g. Snettisham, Shouldham, Fincham, etc.). Figure 2.1 (Ch. 2) clearly illustrated this issue. Thus it was necessary to project the NHER and PAS hoards data together and then check for locations where duplications occurred so that these could be excluded from analysis. However, this is why, as explained in Chapter 6, it is tricky to count exactly how many hoards there are in Norfolk.

Some practicalities of the datasets were discovered early on, and it was important to make a decision to limit how much information I included. One of the major limiting factors was access to the paper files at Gressenhall. Everyone from NHER was very clear in meetings that it would not be possible to study every aspect of one period like the Iron Age, let alone look
comprehensively at deposition between the Bronze Age and Roman period.

Even within a truncated study of the landscape, however, it was not possible to focus extensively on questions of typology. As previously explained, typologies were generally taken for granted as being correct in the NHER/PAS datasets. Although there are clear examples that have been raised, particularly with Jody Joy, about whether or not a reported find actually represented a recorded typology, the alternative would have meant checking every typology in the secondary file or photography files at NHER. Therefore, typologies were only questioned when we had a good reason to think something might be off. However, because only exceptional objects are usually photographed or illustrated, most objects in the NHER database cannot actually be checked—the objects were returned to their owners. It was principally important to accept the NHER typologies and move on. It is necessary to be slightly agnostic about the nature of the data, accepting that it probably does have problems from time to time. It is impossible to carry on with a consideration of the finds in a broader consideration without accepting this.

The same is true for the provenance issues that have been raised repeatedly throughout the dissertation: we often do not have the exact location of where a find-type came from. People lie, people illegally metal detect and then report their finds to other locations, people forget, and some people are bad at geography; there are many reasons why locational accuracy is not assured (A. Rogerson & S. Ashley, pers. comm. 2016). Using NHER or PAS data means accepting this and moving on.

Carrying on from the point of discovering and deciding which data to branch out, to split or to group together, it was possible to then add the full range of environmental, raster data with which useful environmental comparisons could be made. As opposed to Shapefiles, or vector data, raster data are presented as a matrix of pixels where each pixel has a value. As Chapter 3 and Figures 3.2 and 3.3 (pgs. 63, 66-67) explain, a large number of secondary datasets (both raster and vector) were added to the project. These included 2 m LIDAR (raster), 5 m terrain contours (raster), place names (vector), rivers (vector), indicators of flooding (raster), and so on. Again, when including these secondary datasets, I opted for as much inclusivity as possible, trying to add as much relevant secondary data as possible. Even though some of the datasets included, such as the gridded observational climate data, could only act as proxies for past environment (as the environment has changed greatly over the centuries), I still added them. As Chapter 3 explains, supplementary data can only be seen as a proxy of the environment during prehistory in the region. Proxies, importantly, result in an imperfect correlation with the quality or quantity of interest, yet can still contain useful information about the areas under study. For example, the locations of modern rivers and watercourses are not a perfect correlation to past watercourses in the region, which have much changed over the years.

With these primary and secondary datasets in the model, it was then possible to complete
the analyses presented in the chapters of the dissertation. However, as this brief discussion has made clear, this process was not automated, and relied extensively upon decision making processes based upon research questions and pragmatic concerns. Ultimately, it would be very useful to make a model of East Anglia that includes every site and the find-types found therein, as a way of understanding social change and continuity in the past. However, until the NHER and PAS records are better digitized—until all information is available online and easily linked to the records, instead of being available as physical files at NHER—this will be a difficult task for any researcher. This is one reason why English archaeological research and the protection of sites and monuments would greatly benefit from more funding.

In the final analysis, these are problems that researchers face today when using orphaned or curated datasets. As this dissertation and other authors (Bradley 2017, Lawson 2018) have made clear, there is simply too much data accumulated over too many years to make a comprehensive study of the type that Fox and other archaeological practitioners made around a century ago. As Bradley writes, “rather than making a comprehensive study”—or synthesis—“of evidence that has expanded beyond anyone’s control...” it is better for a single researcher to design a study that “makes [one] contribution to a discussion that is likely to continue” (Bradley 2017: 3). Lawson (2018: 2-3) makes a similar argument for the Norfolk material, specifically. As Bradley emphasizes, this approach is “more circuitous and involves some subjective judgments” (2017: 197). Thus, by choosing to approach the finds as the evidence of a lost cognitive geography, by choosing to simplify the great quantities of data available, this study, by elaborating on a methodology used by other researchers, has made one contribution to a larger, continuing discussion about the past social landscape of East Anglia.
BIBLIOGRAPHY


Armstrong, M. J. 1781. “Hundred of Smithdon.” *The History and Antiquities of the County of Norfolk*, 9, 93-4.


Avery, M. 1986. “‘Stoning and fire’ at hillfort entrances of southern Britain.” *World Archaeology*, 18, 216-30


BIBLIOGRAPHY


Blomefield, F. 1806. An Essay Towards a Topographical History of the County of Norfolk.


BIBLIOGRAPHY


Burg, M. B. 2017. “It must be right, GIS told me so! Questioning the infallibility of GIS as a methodological tool.” *Journal of Archaeological Science, 84*, 115-120.


Camden, W. 1586. *Britannia.*


BIBLIOGRAPHY


Cromwell, T. 1819. *Excursions Through Norfolk.* Vol II.


De la Pryme, A. 1669. The diary of Abraham De la Pryme the Yorkshire Antiquary.


Evans, C. & Hodder, I. 2006b. *Marshland communities and cultural landscape from the Bronze Age to the present day*. Cambridge: McDonald Institute for Archaeological Research.


Fustel de Coulages, N. D. 1864. La cité antique.


BIBLIOGRAPHY


Hingley, R. 2006. “The deposition of iron objects in Britain during the later Prehistoric and Roman periods: Contextual analysis and the significance of iron.” *Britannia*, 37, 213-257.


Knight, M. 2009. “Excavating a Bronze Age Timber Platform at Must Farm, Whittlesey, Near Peterborough.” *Past,* 63, 3-6.


BIBLIOGRAPHY


BIBLIOGRAPHY

Lodwick, L. 2014. “Condiments before Claudius: new plant foods at the Late Iron Age oppidum at Silchester, UK.” *Vegetation History and Archaeobotany*, 23(5), 543-549.


BIBLIOGRAPHY


BIBLIOGRAPHY


Penn, K. 1992. *NAU Report No. 1. Excavations on the Launditch (Site 7235) and Roman Road (Site 2796), Norfolk*. Norwich: Norfolk Archaeological Unit.


BIBLIOGRAPHY


Robbins, K. J. 2013. “Balancing the scales: Exploring the variable e ects of collection bias on data collected by the Portable Antiquities Scheme.” Landscapes, 14, 54-72.


Shanks, M. 2012. The archaeological imagination. Walnut Creek, CA: Left Coast Press.

Shanks, M. 2013. Let me tell you about Hadrian's Wall... Heritage, Performance, Design. Amsterdam: Reinwardt Academy.


366


Wichmann, V. 2013. “Module Visibility (points) This module computes a visibility analysis using observer points from a point shapefile.” SAGA-GIS Module Library Documentation. Online.

BIBLIOGRAPHY


Wright, T. 1861. Essays on archaeological subjects: and on various questions connected with the history of art, science and literature in the middle ages. London: JR Smith.


INDEX

Index

A

Abington, Oxfordshire 239
aesthetics 59
agency 56, 102, 104–105, 228
Aldeby 214, 227, 231, 235–236, 236
Alien Houses 86
Ambarvalia 243
ancestors 223, 244, 247
ancestral tombs 225
Ancient Monuments Act 23, 25
animus revocandi 26
ArcGIS 54, 61
Archaeological Records of Europe Networked Access 62
Arminghall Henge 229, 230, 234, 235
Arras ‘culture’ 232–234, 244
ars memoriae 221, 243
Ashill. See Saham Toney
Ashley, Steven 72
axeheads
  possible Iron Age 201
  socketed-axes (B.A.) 2, 185, 189, 195, 198
Aylesford-Swarling 90

B

Babingley, River. See rivers
Barnham 141–142, 144–145
barrow cemeteries. See also Fison Way; See also visual perception
Bunker’s Hill 131
Massingham Heath 132, 135
Mt. Ephraim 131
re-use
  in Anglo-Saxon period 237, 238
  in Iron Age 228–238
  Roughton 230, 231, 237, 239, 259
  round barrows, size of 135
  Salthouse Heath 133, 135–137, 138–139
  Basso, Kieth 160, 224, 247
  Bawsey 140
  Beacon Hill 141
  beating the bounds 242
  Beeston 139
bias. See also formation processes
  and arable land 35, 37–39
  in distributions of artifacts 26
  PAS/NHER interpretive bias 23. See also Kristiansen, Kristian; See also Robbins, Katherine
  probability distributions 36
  removing sampling bias 27
  spatial bias 29–32
  temporal bias 31
Bicham ditch. See dykes and ditches
big data 62, 64, 254, 254–257
Black Ditches. See dykes and ditches
Bland, Roger 23, 205
Bloch, Maurice 76, 224, 240
Bloodgate Hill 140–141, 143, 145, 155
bogs 89–90, 107, 109
  and deposits 79
  Dersingham Bog 111, 120
  Roydon Common 172
Bohannan, Paul and Laura 223
Boudicca 204, 240
  Roman metanarratives 86
boundaries 5
  Anglo-Saxon 80, 84
  Aylesford-Swarling 10, 90
  in time 15, 242–245
INDEX

Iron Age 244
Norman 86
of Norfolk 78–89
parish 79, 167
and barrows 85, 101
remembering 242
rivers 90, 139, 200
social 78, 84, 86
Brampton 165, 181, 189–192
Brandon Parva 181
Braudel, Fernand 76. See also longue durée
Brean Down 235
Breydon Water 107, 149. See also Burgh Castle
bridle bits
  cheek ring 201
two-link 165
Brindle, Tom 41, 51, 258
Bruce, John Collingwood 58
Bunker's Hill 131
Bure, River. See rivers
Burgh Castle 149, 150, 251
burnt mounds 129, 219, 252

C
Caistor St. Edmund 189
Calluna vulgaris 116, 119
Carleton Rode 181, 192–195
Carp's Tongue complex. See Ewart Park phase
Cassius Dio 85
Castle Acre 149
Castle Acre Castle 151, 156
Castle Acre Priory. See priories
Castle Rising 149, 257
causewayed enclosures 84, 129–130, 135, 139, 189, 237
Cawston 149, 181, 189–192
chalk figurines 244
'chariot' burials 164
chariots
  relation to terrets 65, 164, 256
Chester-Kadwell, Mary 14, 28, 51, 182, 258
  presence of iron in record 40, 41
chorography 58–59, 130, 221
Clare Camp, Suffolk 147
climate 96, 110, 118
cognition 6, 56. See also Refrew, Colin
coins. See also Gallo-Belgic E; See also denarii; See also hoard deposits
Durotriges stater 230
ey 237
Prasagustus 198
silver units
  pattern-horse type 192
Colchester 168
commemorative practice 7, 222–223, 245, 246–247
Congham 2, 175
Council for British Archaeology 23
Cranborne Chase. See Pitt Rivers, Augustus
Cranwich 165
Critical GIS (CGIS) 56
Cromer 98, 122
cropmarks
  complex 232
  Roughton 239
  siting of monuments 227
  square cropmarks 230. See also square-ditched enclosures
Crownthorpe Roman Temple. See also Roman temples

D
Daniel, Glyn 58
Davies, John 7, 72, 178, 233
De La Pryme, Abraham 3
denarii. See Republican denarii
Denver 189
Dereham 87, 143, 160
Dersingham Bog 111, 120
Devil's Dyke, Cambridgeshire. See dykes and ditches
Devil's Dyke, Norfolk. See Bicham-dich
Devil's Quoits, Oxfordshire 239
Digital Archaeological Record 62
Diss Mere 116
DTM (digital terrain model) 56, 71–73
INDEX

Dunham Lodge 144
Dutt, William 130
dykes and ditches
  Bichamdich 168
  Black Ditches 80, 82, 166, 168
  Devil's Dyke, Cambridgeshire 80, 83, 168
  Fleam Dyke 80, 84, 168, 187, 237
  Fossditch 168
  Launditch 139, 149, 167, 169, 230

E

English Heritage 25, 32–33, 98
English Landscape and Identities project 7, 62, 64, 109
entanglement 105. See also Hodder, Ian Etruscans 222, 243
Ewart Park phase
  Carp's Tongue complex 2
  hoards 189, 199

F

Farley, Julia 215
feasting 152, 187, 240
fen blow. See sandfloods
Fen Causeway 139, 165, 169, 189
fertilizer
  impact on corrosion 24
Fincham 181, 192, 196–198
Fison Way 187, 240, 256
Fleam Dyke 80, 84, 168, 187, 237
flint 84, 89, 96, 100, 130, 132, 159, 162, 188, 195–196
floating gap 223
folklore 106, 114, 240
Folly Lane 244
Forby, Robert 106, 112
formation processes 27–29, 40–43, 206
Forncett St. Peter 192
Fossditch. See dykes and ditches
Fox, Cyril 5–7, 141, 162, 165, 168, 255
Foxley 177
Fulbourn Fen 84

G

Gallo-Belgic E 189, 198
Garton Slack 244
Garton Station 244
genealogical thought 223, 245, 260
Geographic Information System (GIS) 9, 54–57, 58
  and affordance 105
  and 'black-boxing' 53, 73
  and cost surfaces 84, 89
  and landscape archaeology 6
  and perception 89. See also viewshed analysis
  and phenomenology 57
  and specificity 207
  and statistics 61–62
  and surveys 64
  and visualization 61
  further critique 257
Giles, Melanie 10, 243–244
Glaven, River. See rivers
Goody, Jack 223
Gravelly Guy 239–240
Great Ellingham 181, 182–183, 194–196
Great Yarmouth 93, 95, 149
Gregory, Tony 5, 6, 7, 24, 255
Gressenhall 17–18, 29, 71, 76
Grimes Graves 84, 98–99, 116, 120, 130
Grimshoe Mound 237
Guide to the Roman Wall. See Bruce, John Collingwood

H

Hackford Marsh 195
Haddenham 235
Hallstatt
  axeheads 201
  derivative swords 188
  swords 185
Hanseatic League 92
Hanworth. See Roughton
Happisburgh 98
Hartford Farm 227, 230, 232–234, 238
Hawkes, Christopher 168
INDEX

Heacham, River. See rivers
Heathrow ‘temple’ site 233
Heidegger, Martin 56, 99
Heidengraben 241
heirlooms 245
Hempnall 189
henges. See also Arminghall Henge; See also Wilbraham
extant monuments 128–130
Fulbourn Fen 84
importance in Bronze Age landscape 135
Norwich 229
Seahenge, Holme-next-the-Sea 122
hengiform monuments. See henges
hereditary ownership 220
hereditary power 228, 240
Hevingham 5, 189
High Banks 149, 201
Highways and Byways 58–59, 130
hillforts 14, 128, 152–161, 170
Barnham 141–142, 144–145
Bloodgate Hill 140–141, 143, 145, 155
Clare Camp 147
g eo l o y of 146
Holkham Camp 140, 144
Narborough Camp 144, 156, 196
profiles of 147
siting of in Norfolk 140–142
Stonea Camp 143, 147
Tasburgh 140–141, 144, 158
Thetford Castle 141, 144, 157, 187–188, 255
Wandlebury 84, 143
Wardy Hill 143
Warham Camp viii, 140, 144, 153–154
Wighton Camp 154
hillforts, Oxford Atlas of 63, 72, 145–146, 170
Hill, J.D. 141, 244
hills in Norfolk 142
hoard deposits
and time 246, 254
Bunwell 195
Carleton Rode 181, 192
coin hoards
Fornecett St. Peter 192
E.B.A hoards 195
Great Ellingham 181, 182–183, 194
Hevingham 5, 189
placement of at liminal places 244
Ringstead 164
Saham Toney 160, 164, 169, 182, 199, 252
Salisbury 235
Sedgeford 5, 176, 184
Shernborne 177
Shouldham 177, 198, 227
Snettisham 2, 26, 176–177, 181, 182, 185, 227, 235, 245, 246
Stanwick Hoard 164
temporal clustering 202–206
Thetford 183
Thetford Treasure 186, 188
Hockham Mere 116
Hodder, Ian 6, 99
Holkham 115
Holkham Camp 140, 144
Holkham, Coke of 119
horsegear. See terrets; See also bridle-bits
care of 163
“horse magic” 163
Horsey Gap 95
Husserl, Edmond 99
I
Ingol, River. See rivers
intervisibilidad. See viewshed analysis
iron production
EIA. See Aldbey
extraction pits 237
J
Joy, Jody 129, 178, 183, 211
K
Ken Hill 144, 185, 246
King’s Beck 189
King’s Lynn 35, 93, 95, 108, 140, 143
knowledge discovery 54, 62–68
Kristiansen, Kristian 28, 206

L
landscape
   itineraries. See chorography
   photography 59
Launditch. See dykes and ditches
lieux de memoire 226, 240, 244, 247
Lindow Man 244
linear earthworks 139, 243. See also dykes
   and ditches
   at Colchester and St. Albans 168
Little Bittering 139
Llyn Fawr phase
   harness mount 177
Lode Dyke 198
long barrows 84, 100, 129–130, 235
Longham 139
longue durée 76, 78, 202, 259
Lower Windrush 239

M
Malinowski, Bronislaw 223
Massingham Heath 132, 135
Maxey, Cambridgeshire
   square-ditched enclosure 233
memory
   archaeological study of 225
   in Norfolk's landscape 227
   the importance of context 223
meres 98, 116
Merina 224
Merleau-Ponty, Maurice 99
Methwold 135
Middleton 245
Mileham Castle 149
monumental landscapes 127, 130, 169
   and power 242
semiotics of 228
moots 84, 136, 139, 182, 230, 237–238. See
   also Mutlow Hill; See also Grimshoe
   Mound
Mt. Ephraim 131
Mutlow Hill 84, 136, 187, 192, 198, 235,

N
Narborough Camp 156, 196
Nar, River. See also rivers
National Council for Metal Detecting 23
National Mapping Programme iv, 5
near Wilbraham 81
Nettleton Top 235
‘new’ archaeology
‘new’ geography 6
nighthawking 33, 182
Norfolk Sites and Monuments Index 8
Norwich 5, 135, 177, 181, 189, 227, 230,
   235, 239
Norwich Castle 149
Norwich Castle Museum 17, 18, 71
numinous locales 227, 246, 252

O
Old Buckenham Fen 196
Olivier, Laurent xix, 5, 77, 247
Orton, Clive 27
Ouse, River. See rivers
Oxborough 2, 116, 175
Oxborough Wood 116

P
Pentney 198
perambulation 243–244
phenomenology 59, 99, 103, 105
Picquet, Charles 54
Pinus sylvestris. See Scots pine
Pirates of Penzance 242
Pitt Rivers, Augustus 99
place/event 228. See also Shanks, Michael
Plough Monday 243
political imagination 7, 12, 220, 221, 228,
   239
pollen analysis 116–122
Portable Antiquities Scheme iv, 6
   as compared with NHER 19, 72
distributions and density. See also Appen-
   dix 3
INDEX

Thet, River 159, 183, 195
Tiffey, River. See rivers
Tiv 223
Toftwood 109
toponyms 224
   Anglo-Saxon 237
   and folklore 240
Transatlantic Archaeological Gateway 62
trans-shipment points 80, 160, 251
Treasure Act 23, 25–26, 32–34
Treasure Trove 23, 25–26
Tschumi, Bernard 228

U
Uley temple complex 235

V
Venta Icenorum 227, 229, 230, 234
viewshed analysis
   module 135, 145
   of barrows 136–138, 237
   of hillforts 144–146
   of landscape 143
Virekschanzen 241
visual perception
   of barrows 136, 237
‘votive’ deposits 2, 245. See also watery
   locations; See also chalk figurines
   coins 230, 237
Congham Scabbard 2, 175
Middleton 245
Oxborough Dirk 2–3, 175
Rudham Dirk 3
Woodcock Hall 175, 201, 214

W
Wandlebury 84, 143
Wardy Hill 143
Warham Burrows. See Warham Camp
Warham Camp 140, 144, 153–154
watery locations. See also bogs
   for deposits 179, 214–215
Watton and Swaffham rail line 201
Weeting Heath 115
Welsh Marches 141
Wendling 139, 177
Wensum, River. See rivers
Wessex 170
Western Apache conceptions of place 224
Wetwang Slack 244
Wheler, Mortimer and Tess 168
Whitley, James 240
Whittle, Alasdair 225
Whittlesey Mere 98
Wicklewood Mere 195, 196
Wilbraham 84
Williamson, Tom 7, 72
Wilson, Harold, Prime Minister 23
Wisdom Sits in Places 224
Wissey, River. See rivers
Wolverton 119
Woodcock Hall 175, 201–202, 214
Woodton 83
Wordsworth, William 58
World Wars
   First World War 96, 120, 121, 222
   Second World War 3, 22, 98, 222, 260

Y
Yare, River. See rivers
COPYRIGHT NOTICES FOR MAPS, FIGURES, & PHOTOS

All maps contain background digital elevation/terrain models and data subsequently calculated from these data that are Ordnance Survey data © Crown copyright and database right 2015-2019 (Digimap License).

All photographs, apart from Figs. 4.12, 5.7, & 5.14, © Ethan D. Aines 2015-2019.


Figs. 2.2-2.5 contain finds data © Portable Antiquities Scheme 2015-2019.

Fig. 2.6 contains finds data © Portable Antiquities Scheme & Norfolk Historic Environment Service 2015-2019.

Figs. 2.7-2.10 Land use data from LCM2007 © and database right NERC (CEH) 2001. All rights reserved.

Figs. 2.11-2.14 contain finds data © Portable Antiquities Scheme 2015-2019.

Figs. 2.15-2.16 contain finds data © Norfolk Historic Environment Service 2015-2019.


Fig. 2.18 contains finds data © Portable Antiquities Scheme 2015-2019.

Figs. 2.19-2.23. contain finds data © Norfolk Historic Environment Service 2015-2019.

Fig. 4.2-4.3 contain finds & monuments data © Portable Antiquities Scheme, Norfolk Historic Environment Service, CHER, NMR, & English Heritage, 2015-2019.

Fig. 4.4 contains contains soils data © Cranfield University Soilscape 2015. Geological Map Data © NERC 2015.

Fig. 4.12 photograph © English Heritage 2019.


5.1-5.6 contains finds & monuments data © Norfolk Historic Environment Service 2015-2019.

Figure 5.7 photograph © Nick Stone 2015-2019 (https://www.invisibleworks.co.uk/lost-in-a-landscape-salt-house-touching-our-past/)

Fig. 5.8 contains finds & monuments data © Norfolk Historic Environment Service 2015-2019.


Fig. 5.15 photograph © English Heritage 2019.

Figs. 5.19-5.22 contain finds & monuments data © Norfolk Historic Environment Service 2015-2019.

Fig. 5.24 contains finds & monuments data © Norfolk Historic Environment Service & English Heritage 2015-2019.

Fig. 5.25 contains finds & monuments data © Norfolk Historic Environment Service 2015-2019.

Figs. 6.2-6.3 contain finds & monuments data © Norfolk Historic Environment Service 2015-2019.

Fig. 6.5 contains finds & monuments data © Norfolk Historic Environment Service 2015-2019.

Fig. 6.7-6.20 contain finds data © Portable Antiquities Scheme & Norfolk Historic Environment Service 2015-2019.

Fig. 6.12 contains finds & monuments data © Norfolk Historic Environment Service 2015-2019.

Fig. 6.14 contains finds & monuments data © Norfolk Historic Environment Service 2015-2019.


Fig. 7.1-7.4 contains finds data © Norfolk Historic Environment Service 2015-2019.


Fig. 7.6 contains monuments data © Norfolk Historic Environment Service 2015-2019.

Fig. 7.7 contains finds & monuments data © Norfolk Historic Environment Service 2015-2019.

Appendix 1 contains finds data © Portable Antiquities Scheme & Norfolk Historic Environment Service 2015-2019.


All other photographs, figures, & maps © Ethan D. Aines 2015-2019.