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# Medieval Archaeology

## The Scale and Impact of Viking Settlement in Northumbria

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<b>Abstract:</b>	Based on previous research at the winter camp of the Viking Great Army at Torksey and Anglo-Scandinavian settlement at Cottam over 25 categories of metal artefacts are defined as diagnostic of Viking activity in Northumbria. Applying this model to over 15 sites, largely known only from metal-detecting, a common pattern is observed. At the majority, a large and fairly standardised Middle Anglo-Saxon finds assemblage is succeeded by just a few Viking finds, which we attribute to raiding following Halfdan's return to Northumbria with a portion of the Great Army in AD 876. At a smaller number of sites there are also assemblages of Anglo-Scandinavian finds, relating to the establishment of new settlements. The overall picture is of major settlement disruption and dislocation of existing land holdings in the late 9th century. This demonstrates, for the first time from archaeological evidence, the scale and impact of Viking activity in Northumbria.
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# The Scale and Impact of Viking Settlement in Northumbria

By JULIAN D RICHARDS<sup>1</sup> and DAVE HALDENBY<sup>2</sup>

*Recent archaeological research, notably at the Viking winter camp at Torksey, has indicated that the armies that invaded Anglo-Saxon England in the late 9<sup>th</sup> century were much larger than has often been assumed and that a literal reading of the Anglo-Saxon Chronicle's assessment of the size of Viking fleets may, after all, have been correct. Furthermore, study of the Torksey metalwork assemblage has allowed the identification of the archaeological signature of the Viking Great Army and, when applied to Cottam, it confirmed the identification of an initial phase of raiding by an element of the Army, followed shortly thereafter by settlement represented by the development of a hybrid Anglo-Scandinavian culture. Taken together, over 25 categories of non-ferrous artefacts are diagnostic of Viking or Anglo-Scandinavian activity in Northumbria. Applying this model to over 15 sites, largely known only from metal-detecting, we can observe a common pattern. At the majority of sites, a large and fairly standardised Middle Anglo-Saxon finds assemblage is succeeded by just a few Viking finds, which we attribute to raiding following Halfdan's return to Northumbria with part of the Great Army in AD 876. At a much smaller number of sites there are also assemblages of Anglo-Scandinavian finds, relating to the establishment of new settlements by the new landowners. The overall picture is of major settlement disruption and dislocation of existing land holdings and populations in the late 9<sup>th</sup> century. This demonstrates, for the first time from archaeological evidence, the scale and impact of Viking activity in Northumbria.*

In 1958 historian Peter Sawyer published a short paper which challenged the conventional wisdom concerning the scale of the Viking settlement of England.<sup>3</sup> For the first half of the century Sir Frank Stenton and other leading Anglo-Saxon historians and place-names scholars had assumed that the impact of Scandinavian influence on language, legal institutions, culture and society could only have resulted from large scale migration and settlement.<sup>4</sup> In his ground-breaking paper, and in his subsequent book *The Age of the Vikings*, Sawyer examined the evidence for mass migration and pulled it apart.<sup>5</sup> He argued that a literal reading of the *Anglo-Saxon Chronicle* was mistaken, and particularly that numbers for the size of Viking fleets in the hundreds were the exaggerated claims of the defeated. Sawyer also

pointed out that whilst the word *here*, generally used in the Anglo-Saxon Chronicle to describe the Viking forces had been translated as ‘army’, in fact its literal translation was a ‘war band’ possibly numbering no more than 7-35 men.<sup>6</sup> Similarly, he emphasised that Scandinavian cultural influences on personal and place-name traditions were not recorded until the Domesday Book, some two centuries later, and reflected subsequent cultural borrowings and name-giving habits, following the creation of Cnut’s Anglo-Danish kingdom.<sup>7</sup>

Sawyer’s minimalist views found favour amongst many archaeologists, who in general had dismissed the ‘invasion hypothesis’ as an explanation of culture change in British prehistory more widely.<sup>8</sup> Indeed, archaeological evidence for large scale Viking settlement in England had always been elusive, especially when compared with the obvious changes in material culture, settlement and burial forms in the immediate post-Roman period.<sup>9</sup> Instead it was argued that the numbers game was largely illusory, and what mattered was agency and ethnicity, since cultural impact was far more complex than relative scales of population figures.<sup>10</sup> These nuanced views of the complexity of Anglo-Saxon cultural assimilation reached fruition in an edited volume published in 2000, in which several contributors denied that there was a clear link between culture and biological identity, and argued for a socially created Anglo-Scandinavian identity.<sup>11</sup> Nonetheless the debate about the scale of settlement never completely went away, particularly on the part of place-name scholars.<sup>12</sup> In the last decade several new forms of evidence have contributed to the view that there was, after all, large-scale settlement, as the pendulum swings back from the minimalist approach, and there is increased confidence that there are ways of identifying Scandinavian settlement in the archaeological record.<sup>13</sup>

Genetic evidence for the scale of Viking settlement has proved difficult to resolve in an unambiguous manner, given that large scale studies have to rely on sampling of modern populations, and the fact that Anglo-Saxon and Danish colonization both originated from much the same area of the continent, making their relative contributions to England’s modern genetic profile difficult to distinguish. The latest large-scale study – the *People of the British Isles* project – concluded that there was “no clear genetic evidence of the Danish Viking occupation and control of a large part of England, either in separate UK clusters in that region, or in estimated ancestry profiles”.<sup>14</sup> However, Kershaw and Røyrvik have challenged this interpretation of the data, arguing that in fact it could equally reflect the exact opposite.

Making a different series of assumptions they contest that the Danish Viking contribution to the Anglo-Saxon population was within a broad 10-50% range, and based upon overall population estimates for the Danelaw of 150,000-450,000, they conclude the “probable number of original migrants to be in the region of 20,000-35,000 over the course of the settlement period” in the late 9th and early 10th centuries.<sup>15</sup> Nonetheless it is clear that back-projecting from modern data to the 9th-10th centuries is based upon contested assumptions. Stable isotope analysis, indicating the area of childhood for specific individuals, bears more directly upon ancient populations, but can be hampered by the homogenous nature of the drift geology for eastern England and modern Denmark. Nonetheless it can be utilized to identify settlers born in those parts of Scandinavia where isotope values are likely to reflect the granitic bedrock, such as much of Norway. A recent study of a number of Late Saxon cemeteries has demonstrated that some of those buried without any notable Scandinavian material culture may still have had Scandinavian origins (in south-west Norway),<sup>16</sup> providing a further contribution to the long-standing debate about the rarity of Viking-style burials in England.<sup>17</sup> The authors conclude that isotope analysis can “begin to address the bigger picture and can both identify individuals who migrated and start to quantify the scale of migration”.<sup>18</sup>

However, it is the contribution of metal-detecting, and the large quantities of Anglo-Scandinavian and Scandinavian metalwork reported to the *Portable Antiquities Scheme* (PAS) that has provided the greatest upset to the minimalist position. The growing body of material was studied first by the *Viking and Anglo-Saxon Landscape and Economy* (VASLE) project, which showed a rich density of Scandinavian influenced dress-accessories in those areas of northern and eastern England which were later to be known as the Danelaw.<sup>19</sup> Kershaw went further and distinguished between Anglo-Scandinavian hybrid brooches which may reflect the response of indigenous Anglo-Saxon women to Scandinavian fashions, and those brooches in Scandinavian style which represent “the presence of significant numbers of Scandinavian women, dressed in a traditional Scandinavian manner”.<sup>20</sup> In addition, one can point to the increasing finds of silver and weights associated with bullion exchange, and amulets with iconography drawn from pagan Scandinavian mythology, as indicating the presence of those of Scandinavian ancestry, as opposed to Anglo-Saxons adopting Scandinavian ethnicity.<sup>21</sup>

The preponderance of Scandinavian artefacts, or objects linked with Scandinavian activity, in eastern and northern England, and particularly the large quantities of low value female dress accessories leads to a reappraisal of the idea that the impact of the Viking

invasions in the 9th century simply led to a change in who you paid your taxes to, and that there must instead have been a significant impact on the rural as well as the urban population of Anglo-Saxon England. In addition, metal-detecting has also taken us back to the old question of ‘How large were the Viking armies of the 9th century?’ refuting Sawyer’s assertion that they were relatively small. Until this century, the only camp of a Viking army to be investigated archaeologically was that at Repton, in Derbyshire, scene of the AD 873-4 over-wintering.<sup>22</sup> Here the D-shaped enclosure, containing an area of only some 0.4 ha, provided support for the minimalist view.<sup>23</sup> At Repton, apparently, only an army comprising a handful of ships’ companies could stay out the winter which, to adopt Halsall’s phrase, “would reduce the *Micel Here* to almost ‘Magnificent Seven’ proportions”.<sup>24</sup> However, two newly-discovered Viking camps, each initially worked by metal detectorists and later subject to archaeological fieldwork, have indicated that the ditched enclosure at Repton cannot represent the full picture.<sup>25</sup> At Torksey (Lincolnshire), where the army over-wintered in AD 872-3, and at Aldwark (North Yorkshire) apparently associated with the return northwards of a section on the army under Halfdan after AD 874, metalwork has been recovered from areas of 55 ha and 31 ha respectively.<sup>26</sup> Allowing for the fact that the Torksey camp pre-dates the split of the army into two factions in 874, these sites are consistent with a substantial force which could easily have numbered some 5000.<sup>27</sup>

The assemblages from the Viking winter camps at Aldwark and Torksey – both deposited within a few years of each other – also allow us to identify a characteristic signature which can be seen to be linked with the activities of the Viking Great Army of the 870s and to look for it on other rural sites, where elements of the Army may have passed through, or eventually settled. This archaeological signature is characterized not by any one specific category of find, but is a classic cultural complex, comprising a number of objects found in combination. It may include: fragments of hack silver, including dirhams and ingots and fragments of Anglo-Saxon silver pennies; Northumbrian stycas, found outside their normal area of circulation; items of weaponry; evidence for metal-working; pieces of Anglo-Saxon dress accessories and mounts, deliberately pierced or cut for re-use; weights of Scandinavian type; Scandinavian jewellery forms; and lead gaming pieces.<sup>28</sup> These items are found in large numbers at Aldwark and Torksey, but their recovery in smaller numbers from rural sites elsewhere in Lincolnshire and Yorkshire implies some contact with elements of the Great Army.<sup>29</sup> The lead gaming pieces, in particular, indicate a relatively short chronological window: they appear first (and in large numbers) at Torksey, but by the time the first

buildings are constructed at Coppergate, in the early 10th century, they are no longer in circulation.

Renewed examination of the burgeoning metal-detected assemblage from Cottam (East Yorkshire) has been important for the development of this understanding. Careful plotting of all 1082 finds, combined with targeted fieldwork, has enabled a nuanced interpretation of the site's development. This includes the abandonment of the Middle Anglo-Saxon settlement and market place in the late 9th century, followed by two phases of Viking activity: an initial phase of looting, probably linked to activity by a group derived from the Viking Great Army, followed by the establishment of an Anglo-Scandinavian farmstead.<sup>30</sup> This captures the moment of a critical transition in Viking behaviour in England, from raiding to settlement activity, and is also the first time that the activity of a Viking raiding party has been identified at a rural site. The initial phase of looting was characterised by a wide distribution of finds, beyond the later settlement area. The assemblage associated with this phase comprises many of the categories of object identified at Torksey: bullion and metal processing related finds, including melts of silver, a pecked sceat of Eadbert, a broken silver penny of Æthelberht of Wessex (AD 858-865/6), lead weights, two balance beam fragments, crudely broken fragments of Anglo-Saxon metalwork, two spearheads and a sword guard.<sup>31</sup> The case for this reflecting looting and processing rather than settlement rests upon several factors. Firstly, the assemblage mirrors that found at the winter camps, albeit in microcosm. It has a military character, but also reflects the melting down of extant objects, including exotic items. Less archaeologically visible commodities, such as people, animals, and food may also have been taken. Certainly, trade may also have been involved, and those items which indicate bullion transactions may indicate exchange in archaeologically intangible goods, such as slaves, as well as precious metals, as is also assumed for the winter camps.<sup>32</sup> Whilst a bullion economy continued to operate in the region into the 10th century, and there are notable silver hoards of the 920-30s, these are not from known settlement contexts and have been linked to later incursions from Ireland. The single dirham fragment from Cottam is therefore to be associated with the settlement phase. Secondly, the lack of any settlement traces from the wide area from which the metalwork has been recovered, despite extensive geophysics and field-walking, is itself significant. It indicates temporary occupation, again as seen in the winter camps, rather than permanent settlement. Thirdly, the fact that the abandonment of the Anglo-Saxon site can be dated to the same moment confirms that this was not peaceful coexistence. Whilst there is no evidence for ethnic cleansing, it is still clear

that the original landholders departed. By contrast, in the subsequent settlement phase a new Anglo-Scandinavian farmstead was established, and here there is a more compact distribution of finds of a domestic nature, including buckles, brooches and rings in Anglo-Scandinavian style, Anglo-Scandinavian bells, and lead spindlewhorls.<sup>33</sup> The domestic character of the finds, as well as the fact that their distribution is focussed on the settlement area (as reflected in the geophysics) confirms that they belong to a second phase of activity. Although the looting may have been hit-and-run, there were clearly serious long term consequences for the native population as a result of the presence of large heathen armies in search of wealth, including slaves and bullion, and also later intent on land appropriation and settlement.

The sequence of activity at Cottam has provided a type site for the impact of the Vikings on Anglo-Saxon settlement. It demonstrates the value of detailed plotting of surface finds recovered by metal-detecting and establishes its place as a legitimate technique of archaeological investigation and as a major research tool for the writing of history. The fine degree of chronological resolution derived from the horizontal stratigraphy at Cottam also allows refinements of the typology and dating of early medieval artefacts with important implications for our chronology of the period. In 2016 we concluded our reassessment of the Cottam evidence with the statement that the detailed analysis of artefact types allows “a reassessment of their dating, particularly in relation to the transition from Anglo-Saxon to Anglo-Scandinavian England”.<sup>34</sup> In this paper we will try to provide that wider investigation of the importance of metal-detected evidence to elucidate the impact of Viking settlement on Northumbria.

## PART 1: SETTLEMENT DISRUPTION ON A LARGE SCALE

With characteristic brevity the *Anglo-Saxon Chronicle* records that on departure from their winter camp at Repton, the Viking Great Army split into two factions: one led by Guthrum, Oscetel and Anwend which continued campaigning in southern England until forced to make peace with Alfred after its defeat at Edington; the second under Halfdan which returned North and famously ‘seized the land of the Northumbrians and proceeded to plough and to support themselves’.<sup>35</sup> Thus is one of the great land partitions of the former Anglo-Saxon kingdoms briefly described. This land seizure has generally been more apparent from the rich Scandinavian place-name evidence for Yorkshire than it has from archaeology.

According to one calculation, at Domesday Book, approximately 49% of place names in the East Riding were either Old Norse in origin or showed Scandinavian influence; 46% in the North Riding, and 31% in the West Riding.<sup>36</sup> Nonetheless Sawyer challenged us not to read Scandinavian place names as direct evidence for Scandinavian settlement, and others have maintained that the place-names simply reflect a change in lordship. Christopher Morris, for example, examined the evidence for the continuity of Anglo-Saxon estate structures in Northumbria, whilst Alan Binns suggested that the sculptural evidence reflected a new warrior-based elite in Eastern Yorkshire.<sup>37</sup> Matthew Townend has provided the most recent restatement of value of the place-name as evidence for large numbers of Scandinavian settlers.<sup>38</sup> Furthermore, recent research has reversed the old adage that the 150 *-thorp* names recorded in Yorkshire in Domesday Book reflected secondary settlement of Scandinavians forced onto marginal and uncultivated land. Reassessment of soil taxonomies has shown that *thorps* actually occupy superior sites to *bys*, on land more suitable for arable farming, and that they tend to be compact nucleated (and thereby planned) settlements.<sup>39</sup>

Nonetheless, excavations of the classic deserted medieval village at Wharram Percy appeared to show continuity of settlement rather than disruption, with the Anglo-Saxon manor succeeded by an Anglo-Scandinavian village, and even the Middle Anglo-Saxon smithy continuing to operate, but now with a weapon smith producing Viking swords.<sup>40</sup> The incoming Anglo-Scandinavian lords adopted Christian burial adjacent to the Anglo-Saxon church, their graves marked by recumbent slabs and, whilst Wharram Percy was under new management, it was largely business as usual for the Anglo-Saxon peasant.<sup>41</sup> Wharram became the type site for village nucleation and was generally assumed to represent the usual trajectory. The unusual circumstances of its gradual desertion from the later Middle Ages, and the opportunity to excavate it over many years, allowed archaeologists to define a pattern which was assumed to be widespread but which was generally hidden under present-day Yorkshire villages which were still occupied and thereby safe from the archaeologist's spade. The assumed trajectory was therefore from Middle Anglo-Saxon settlements which became Anglo-Scandinavian villages which evolved into late medieval villages.

On the other hand some settlements were identified that defied that pattern – large scale stripping of the landscape at West Heslerton in the Vale of Pickering revealed an Anglo-Saxon settlement completely abandoned in the 9th century.<sup>42</sup> Similarly, wider landscape studies in the Wolds at Cottam, Cowlam, and Burdale have shown abandonment of the

majority of Middle Anglo-Saxon farmsteads in the 9th century, with a much smaller number of sites continuing, albeit, as at Cottam B, with a shift in location.<sup>43</sup> Examination of the much larger corpus of Middle Anglo-Saxon sites in Northumbria, now available largely as the result of reporting of metal-detecting, shows a much wider pattern of settlement abandonment. Indeed, far from continuity, with changes only in the lord in charge, we begin to see major disruption and dislocation in the settlement pattern in Northumbria, such as could only have resulted from large-scale invasion and conquest. In fact, a large number of Middle Anglo-Saxon sites is replaced by a much smaller number of Anglo-Scandinavian settlements.

Our sample comprises the majority of Middle Anglo-Saxon sites known from the southern sub-kingdom of Deira whose location can be confidently stated (Figure 1). This focus is largely a result of the density of metal-detecting which reflects the extent of arable agriculture in the Vales of York and Pickering, as well as on the uplands of the Wolds. A similar pattern may apply in the northern half of Northumbria. Indeed, we know from historical sources and sculpture that there was both raiding and Anglo-Scandinavian settlement in parts of County Durham and coastal Northumberland, as well as further north into the Anglo-Saxon areas of the Lothians. However, the comparative absence of metal-detecting evidence in the North-East means that ancient Bernicia is under-represented.<sup>44</sup> Similarly, West Yorkshire and the Pennines have seen less detecting, constrained respectively by urban development and altitude, although again the place-name and sculptural evidence indicates Anglo-Scandinavian settlement. The wider traces of the Viking Great Army across northern and eastern England are discussed in another paper,<sup>45</sup> but the focus here is on Deira, where the quality of evidence allows us to compare the balance of settlement disruption vs continuity in some detail. Nonetheless, we believe that there was an equivalent impact throughout Northumbria, although we do not claim this was a single geographic entity, and accept that the strength of the Viking impact may have weakened away from the more immediate environs of York.

For Deira we have endeavored to achieve comprehensive coverage. Our dataset includes a number of so-called “productive” sites, known only from metal-detecting, where the assemblages can be catalogued from information on the PAS, or from personal contact with the finder, supplemented by information from regional Finds Liaison Officers, as well as a smaller number of sites that have been excavated, although generally only on a small scale. Many of these sites were catalogued in the *VASLE* report, but the number of known finds may

subsequently have grown.<sup>46</sup> The authors believe that a high level of reliability can be attached to the study data by virtue of the fact that Haldenby was heavily involved in five of the long-term site surveys and received information from close contacts regarding a further six, i.e. 11 out of the 17 sites. Twelve of the sites are recorded on the PAS and two are the result of excavation.

Thirteen sites are included that are predominately Middle Anglo-Saxon sites, compared with four that either continue into the Anglo-Scandinavian period, or start then. The sites included are briefly described here, including information about the known archaeology and metal-detected finds (Table 1).

*Bainton* (East Yorkshire), a recently discovered site, is 9 km south-west of Drifffield. The PAS has information, verified with the finder by the authors, for 31 Middle Anglo-Saxon artefacts tightly clustered east of the modern village. There is a large cropmark complex consisting of trackways and/or old roads, a number of enclosures and many field ditches generally thought to be prehistoric or Roman but these are north of the modern village and no features have been observed to the east where the Middle Anglo-Saxon finds are clustered. Only five Viking or Anglo-Scandinavian finds are known from the same area.

*Cottam A* (East Yorkshire) is situated high on the Wolds, c 20 km from the North Sea coast. It comprises crop-mark enclosures of a Romano-British ladder settlement. Metal-detecting by Haldenby and associates over several years has revealed some 90 Middle Anglo-Saxon finds, and excavation by the University of York has demonstrated that the Romano-British site was re-used in the 8th and 9th centuries, apparently for animal husbandry.<sup>47</sup> It is clear, however, that this area was not utilized in the later 9th and 10th centuries, as only one Anglo-Scandinavian find has been recovered.

*Cottam B* (south) is located about 1 km north/north-west of Cottam A, to which it is connected by an ancient north-south trackway. The site has undergone intensive metal-detecting by Haldenby and associates over several years. Aerial photography and geophysics have revealed the presence of a 'Butterwick-type' enclosure. Excavations by the University of York in 1993 yielded a range of Middle Anglo-Saxon finds and traces of three timber buildings and associated gullies/pits.<sup>48</sup> As noted above, re-analysis of the distribution of the metal-detected finds shows that the 8th-century settlement gained a market function to the

north in the 9th century.<sup>49</sup> Over 150 finds from the settlement area are now thought to date to this phase, with only six Viking or Anglo-Scandinavian finds.

*Cowlam* (East Yorkshire) lies 1 km west of Cottam A. Metal-detecting by Haldenby and associates has revealed c 80 Middle Anglo-Saxon finds adjacent to the medieval village, compared with only six Anglo-Scandinavian artefacts. Excavations by the University of York in 2002-3 revealed a number of gullies and structures, including an SFB.<sup>50</sup>

*Kilham* (East Yorkshire) is situated in the Yorkshire Wolds, 5 km north of Great Driffield. Metal-detecting over a number of years has led to several clusters of finds being recorded close to the village on the PAS database, and geophysical survey and field-walking in 1999 has identified a settlement on the west side of Lowthorpe Beck, 1 km south of the modern village. Excavations from 2000-02 revealed late Roman and Anglo-Saxon features and finds, including up to four SFBs, although most of the features appeared to be of late Roman or early Anglo-Saxon date, unlike the c 50 Middle Anglo-Saxon finds recorded by the PAS.<sup>51</sup> Only six Viking or Anglo-Scandinavian finds have been recovered, including three gaming pieces.

*'Near Market Weighton'* (East Yorkshire) is a metal-detected site known to the authors, from which c 35 Middle Anglo-Saxon finds, including sceats and stycas, as well as pins and strap ends have been recovered but from which no Viking or Anglo-Scandinavian finds have been recorded.<sup>52</sup>

*'Near Pocklington'* (East Yorkshire) is a second metal-detected site known to the authors, with almost 100 Middle Anglo-Saxon finds, but only two lead gaming pieces datable to the Viking Great Army phase.<sup>53</sup>

*South Newbald* (East Yorkshire) is located on the western edge of the Wolds, c 100 m east of the Roman road that runs north from the Humber, and which branches 800 m south of the detected area. Metal-detecting by Haldenby and associates since 1979 over 30,000 m has produced large numbers of coins dated c AD 740-855 and large amounts of copper-alloy metalwork, but no domestic material. Prior to the involvement of Haldenby many coins from the site were originally published as coming from Sancton.<sup>54</sup> Around 430 Middle Anglo-Saxon finds are now known, but only ten Viking or Anglo-Scandinavian finds (including four

lead gaming pieces) although there is documentary evidence for an Anglo-Scandinavian royal estate in Newbald, and the current parish boundary bisects the site, supporting the idea that it held some central market function.<sup>55</sup>

*Stamford Bridge 1* (East Yorkshire) is an unpublished site known to the authors and from the PAS; the finds have been plotted by the finder, allowing us to distinguish a Middle Anglo-Saxon focus with 80 Middle Anglo-Saxon artefacts compared with just six Viking or Anglo-Scandinavian finds, and a separate focus of Anglo-Scandinavian activity a little to the north, known as *Stamford Bridge 2* (see below).

*Thwing* (East Yorkshire) is known for the excavated but unpublished Middle Anglo-Saxon cemetery at Paddock Hill.<sup>56</sup> Over 130 Middle Anglo-Saxon finds were catalogued for the *VASLE* project by Naylor, but this includes a high proportion of iron objects.<sup>57</sup> Some 30 Middle Anglo-Saxon non-ferrous artefacts have been included in the present study; there are very few Viking or Anglo-Scandinavian finds, although cessation of all activity prior to the arrival of the Viking Great Army is unlikely in view of a recent find of a Viking penny.<sup>58</sup>

*Welton* (East Yorkshire) is known in the PAS database as Elloughton, although the focus of Middle Anglo-Saxon finds lies within Welton parish, on the north shore of the Humber Estuary. Over 50 artefacts have been recorded by the PAS, with only three Viking or Anglo-Scandinavian finds.

*Whitby Abbey* (North Yorkshire) was subject to large-scale but poorly recorded excavations north of the later medieval abbey church from 1920-25.<sup>59</sup> These identified the possible plans of seven buildings with stone foundations. Four were interpreted as cells, one as a refectory, storehouse or guesthouse, and another as a smithy. A wide range of finds were discovered: sculptured stone; metalwork, including strap-ends, book mounts, personal items – such as rings and brooches, pins, and styli; bone objects, including combs and pins; glass objects, including vessels and beads; a variety of pottery, both local and imported; coinage; and a small amount of textile. In more recent excavations probable occupation layers and some pottery were also uncovered north of the medieval abbey.<sup>60</sup> Evaluation trenches opened in 1989 west of the abbey revealed a shallow midden of Saxon date, and from 1999-2000 excavations to the south of the abbey revealed a cemetery containing over 1000 8th- and 9th-century inhumations. Recent excavations have revealed that the abbey had a coastal trading

site associated with it.<sup>61</sup> The dataset used here is derived from the 1946 report, as re-examined by Cramp,<sup>62</sup> and does not include these more recent excavations. Over 300 Middle Anglo-Saxon finds are known, but despite a known Viking raid, there are no Viking or Anglo-Scandinavian finds.

*Yapham 1* (East Yorkshire) lies about 5km north of Pocklington. The metal-detected assemblage recorded on the PAS database comprises c 40 Middle Anglo-Saxon finds in a cluster south of the village, compared with just two pieces of bullion dateable to the Viking Great Army phase. A related cluster of predominately Anglo-Scandinavian finds (*Yapham 2*) is described below.

In addition four sites where Anglo-Scandinavian finds dominate have been included in the sample, in some cases reflecting a settlement shift and relocation away from a nearby Middle Anglo-Saxon focus. Without these sites our use of negative evidence to infer site abandonment from abundant Middle Anglo-Saxon and few Viking finds could be seen as questionable, but the fact that there are several sites where an abundance of later finds is the norm demonstrates that where such finds are absent it is surely relevant. Between them these sites comprise the majority of known sites in the study area with concentrations of Anglo-Scandinavian finds. Indeed, of all known Anglo-Scandinavian finds from the East Riding recorded on the PAS, the majority – around two-thirds – are from the sites included in our study. The remainder are isolated finds unconnected with known sites.

*Cottam B* (north), also metal-detected by Haldenby and associates, denotes the Anglo-Scandinavian settlement to the north of the Middle Anglo-Saxon activity described above. Excavations in 1995, 100 m north of the Middle Anglo-Saxon enclosure, revealed sub-rectangular enclosures, with evidence for a substantial bank and ditch and gateway structure, with post-built structures in the interior.<sup>63</sup> Although there are Middle Anglo-Saxon finds in this area they have been interpreted as reflecting market activity rather than settlement and, as noted above, recent re-analysis has associated the late 9th/10th-century finds with an initial phase of activity associated with an offshoot of the Viking Great Army, succeeded by an Anglo-Scandinavian farmstead.<sup>64</sup>

*Ryther* (North Yorkshire) is a small village on the River Wharfe, 10 km from Tadcaster. There are a number of crop-mark enclosures and ditch systems within the parish,

of unknown date, and some evidence of Roman settlement. The church of All Saints has Late Anglo-Saxon architectural features. Naylor has suggested that the number of Middle Anglo-Saxon coins recovered makes it likely that Ryther was one of a number of stops for ships moving up the Humber and which acted as periodic markets and/or toll stops.<sup>65</sup> The presence of Anglo-Scandinavian finds may reflect Viking activity on the Wharfe in the 9th-10th centuries. It is uncertain as to how widely the Anglo-Scandinavian finds were spread over this riverine settlement and whether the spatial relationship between the Middle Anglo-Saxon and later material means they are from the same site. Therefore the total figures known to us and recorded by the PAS may mask separate Middle Anglo-Saxon and Anglo-Scandinavian foci, which in the case of excavated sites with plotting of finds it has been possible to separate. In addition, many of the metal-detected finds were recovered 20-30 years ago when Viking lead weights and spindle whorls may well not have been recognised as such and therefore may be under-represented in our figures.

*Stamford Bridge 2* (East Yorkshire) lies a little way along the Derwent, north east from Stamford Bridge 1, and has been surveyed by the same metal detectorist who again has recorded all finds with the PAS. As well as some late 10th/ 11th-century finds, the site has produced very similar early Anglo-Scandinavian finds to Cottam B, numbering over 50 in total, although it differs in being further from the forerunner Middle Anglo-Saxon settlement, and having produced only two finds of that period. In this it demonstrates that at least on one Viking site which began early in the settlement period there was no significant pre-existing Anglo-Saxon activity.

*Yapham 2* (East Yorkshire) is the name given to a second cluster of finds, north of Yapham 1. Unlike Yapham 1, in this case the PAS database lists roughly a third of finds as Anglo-Saxon and two-thirds as Viking/Anglo-Scandinavian, as in the case of Cottam B (north).

There are other Northumbrian Middle Anglo-Saxon sites, including the excavated sites at Burdale, West Heselton and Wharram Percy, which have not been included in the present study. Burdale is excluded because although it is clearly a Middle Anglo-Saxon site with a small short-lived Scandinavian phase (represented by a fragmentary dirham), it has been extensively night-hawked and we lack any reliable figures for the overall numbers of finds.<sup>66</sup> Similarly, West Heselton was extensively looted by night-hawks and only a small

proportion of Middle Anglo-Saxon metalwork was recovered from the extensive settlement excavation, although it is rumoured that the assemblages known as ‘Near Malton 1’ and ‘Near Malton 2’ may derive from this site.<sup>67</sup> Wharram Percy is not included as the absence of detecting on the scheduled ancient monument means that the published Middle Anglo-Saxon metalwork assemblage is actually very small. Nonetheless the study sample above is sufficient to clearly indicate a common pattern.

Our analysis reflected in Table 1 and Figure 2 is based upon numbers of non-ferrous finds from the early medieval period and in several cases this is supported by evidence from excavation and/or accompanying non-ferrous finds, such as the recovery of metamorphic hones supporting Anglo-Scandinavian settlement at Cottam B (north). The Middle Anglo-Saxon finds have been grouped into five broad categories comprising sceats, stycas, 8<sup>th</sup>-century chip-carved gilt metalwork (often pins); collared pins and the main strap end series (Thomas class A), which includes over 60% of all Middle Anglo-Saxon and Anglo-Scandinavian strap ends. Hooked tags, ansate brooches, and other non-ferrous metalwork have been excluded since Middle Anglo-Saxon and later forms cannot be readily distinguished. However, in numeric terms the object groups we have used comprise the great majority of finds from the Middle Anglo-Saxon period. The finds categories making up the Anglo-Scandinavian component will be discussed in more detail below.

As the totals demonstrate, the majority of Northumbrian Anglo-Saxon sites cease occupation in the late 9<sup>th</sup> century. In each case there is a very small proportion of Anglo-Scandinavian finds, representing just 3% of the assemblage, or 48 out of a total of 1532 artefacts. On these sites the average number of Anglo-Scandinavian finds is just four. By contrast there is a much smaller number of sites where larger numbers of Anglo-Scandinavian artefacts have been found. Stamford Bridge 2 is exceptional as only two earlier finds were recorded in this location, but the more common pattern is that now well known at Cottam B (north), and apparently echoed at Ryther and Yapham 2, with some settlement shift and re-location of activity, adjacent to the Middle Anglo-Saxon activity, leading to finds of both periods. Overall for these sites the proportion of Anglo-Scandinavian objects is 33%, or 172 out of 519 artefacts, or an average of 43 per site.

Given the documentary and place-name evidence, the disruption of Middle Anglo-Saxon settlement patterns at the end of the 9th century might be expected, but the scale of

settlement abandonment evidenced in the new corpus of metal-detected sites is overwhelming, and provides stark impact for the evidence of Viking land partitions, and the extent of settlement abandonment. What is of particular interest on the majority of the Middle Anglo-Saxon sites, however, is also the presence of a small quantity of Scandinavian-influenced material culture, equivalent to what we have christened the Viking Great Army phase at Cottam B, and reflecting the metalwork signature of the Army as seen at Aldwark and Torksey. Although none of these sites has the refined horizontal stratigraphy or fieldwork that allows us to demonstrate the story of looting and abandonment at Cottam, their metalwork signature confirms that they follow the same pattern. In the next section we will discuss these finds in more detail.

## PART 2: IDENTIFYING THE SCANDINAVIAN PRESENCE

Having identified the presence of a small Scandinavian component of the metalwork assemblage on many abandoned Middle Anglo-Saxon sites, in this section we will look at this element in more detail. In the light of the analysis of the winter camp assemblages at Aldwark and Torksey, and reassessment of that at Cottam, it is possible to identify a number of distinctive artifact categories which can be associated with Viking and Anglo-Scandinavian activity – here we include types which indicate offshoots of the Viking Great Army, and domestic types which reflect subsequent settlement. These objects were chosen as they are well-known and distinct types, each of which usually appears on several of the sites studied.

In total we have identified 27 classes of object that we associate with Viking or Anglo-Scandinavian activity. The number of these finds at our sample sites is given in Table 2 (Groups 1-27), whilst Figure 3 illustrates representative finds from each group. Many of the selected finds are typical of the group (such as Group 13 - the Anglo-Scandinavian bells), but others (such as Group 18 - mounts and other artefacts with Viking decorative styles) are illustrative of groups which exhibit wider variation in decoration and sometimes form. Some of these types are diagnostically Scandinavian (Groups 5, 22-26 for instance); others including Winchester-style strap-ends (Group 3) and lead disc brooches (Group 11) are not; for other groups (such as Groups 14 and 15), the evidence is ambiguous. However, for each of these categories there is still a non-random association with diagnostically Scandinavian artefact types. It is notable that in general searches of the PAS database, the majority of these

categories of object are found exclusively in the area of Eastern England under Scandinavian control which later became known as the Danelaw, whilst only Groups 3, 6, 7, 18 and 19 are found in any quantities in southern England. Most of the selected objects appear in the late 9th/early 10th century but some are developments of the later 10th and 11th centuries, including Groups 9, 17 and 20. We have included later Scandinavian material as whilst items in the Urnes and Ringerike styles are likely to be introductions under Cnut and relate to a later settlement context, one aspect of the Anglo-Scandinavian settlement is the length of time the new sites were occupied.

Table 2 is divided between those sites considered to be Middle Anglo-Saxon sites abandoned c AD 870-80, and Anglo-Scandinavian sites which appear or continue. In addition to the sites already considered in Part 1, as control samples we include the urban groups from the well-dated sites of Fishergate and Coppergate in York. Fishergate may also fall into the category of sites where there is a brief Viking presence, given the discovery of a number of diagnostic finds, including Thomas B4 & B5 strap ends, a buckle with a Borre animal head, an Irish penannular brooch terminal, and a penny of Æthelberht of Wessex (AD 858-865/6) which may have accompanied the Vikings, and is the same type of coin to that found at Cottam B (south).<sup>68</sup> Indeed, Scandinavian aggression was given as one of the possible reasons for the demise of Fishergate in the late 860s or 870s.<sup>69</sup> Other sites from Table 1 where no Anglo-Scandinavian artefacts were found, namely 'near Market Weighton' and Whitby, have now been excluded.

Strap ends of Thomas Class A and B1-3 go out of use in the late 9th century and are replaced by strap ends of Thomas Class B4 (Group 1) and B5 (Group 2) and E1-E6 (Groups 3-7). Generally speaking, Class B4 and B5 strap ends have the same narrow form and split butt ends as their Class A Anglo-Saxon forerunners, whereas those in Class E are broader and often have no split butt end. Class B4, with Borre-style animal heads, and Class B5 with Borre-style interlace, are believed by Thomas to date from the late 9th into the 10th century. He divides the B4s into four sub-groups. Class B4a, with three well-formed animal heads, is the most common and cohesive, and hence is the group used in this study. He dates Class E1 and E2 to the 10th and 11th centuries whilst he considers that Class E3 (with characteristic central rib and ring-and-dot decoration to each side) and Class E4 originated in the late 9th century and remained popular through the 10th century. Finally, Thomas considers that Class

E5 strap ends appear in the 10th century but that the majority fall in the 11th century, and that Class E6 was in use from the late 9th to the 10th century.<sup>70</sup>

It can also be noted that whereas Middle Anglo-Saxon Class A strap ends are invariably devoid of any form of decoration to their rear surface, a simple peripheral groove is present on at least six of the latter strap ends. One of these is from Thomas Class B4a (Group 1) and five are Thomas Class B5 (Group 2). Three of these Class B5 strap ends, from Cottam B (north), Stamford Bridge 2 and Fishergate are almost identical to one from Aggersborg (Denmark), which also has the peripheral groove and is dated to the late 9th/10th century. Graham-Campbell notes that this is entirely Anglo-Saxon in form and size but that the zoomorphic interlace is of Anglo-Scandinavian inspiration.<sup>71</sup> Neither of the Class E4 strap ends (Group 5) has reverse grooving but that from Bishophill Senior (York) has, confirming a degree of contemporaneity with Class B4a and B5 strap ends (Groups 1 and 2).

Group 8 buckles have a distinctive Borre style animal head at their leading edge and two pierced projections to the pin bar. An example from Fishergate was dated to the 9th century, and another close parallel from Meols was broadly dated to the late Saxon period.<sup>72</sup> The discovery in Lincolnshire of an example of a Group 8 buckle still attached to its buckle plate (Group 10), and with both parts decorated with Borre-style animal ornament, indicates that when such buckle plates are found separately they are of roughly the same date.<sup>73</sup> Furthermore, the striking similarity of the multiple animal head ornament on the buckle plates to that on Thomas B4a (Group 1) strap ends indicates that they too were contemporaneous and that the three artefacts were at times used in conjunction, from the late 9th century. Group 9 buckles have vestigial animal heads biting each end of the pin bar. Examples from Meols are dated broadly to the late Saxon period, a date supported by those recorded by the PAS, the majority of which are dated from c 1000.<sup>74</sup>

Lead disc brooches (Group 11) are frequently decorated with simple raised linear and curvilinear motifs and pellets, as with examples from Coppergate, where two examples with Viking style interlace were also found. Evidence for manufacture of simple lead-alloy dress accessories, such as these brooches and lead pendants (see below) has been found at Coppergate.<sup>75</sup> An example from Ryther, with openwork cross motif is also included and has close continental parallels, including Kaupang and Ribe.<sup>76</sup>

Interestingly, copper-alloy disc brooches (Group 12), decorated with single quadrupeds or with Borre or Jellinge interlace, are numerous south of the Humber, and particularly so in East Anglia, but are represented on our rural sites by just two examples, one from Cottam B (north), decorated in the Jellinge style, and the other from Stamford Bridge 2 with Borre interlace.<sup>77</sup> Coppergate has produced several examples, as well as the aforementioned lead brooches with Viking style interlace. Two further copper-alloy disc brooches have been included in Group 12: an example with ring-and-dot decoration from the exclusively Anglo-Scandinavian site of Stamford Bridge 2 and a second with a cross motif from Coppergate.

A link has also been observed between Thomas B4a strap ends and Anglo-Scandinavian bells (Group 13), with hexagonal pyramidal form, often decorated with ring-and-dot, which have been interpreted as hybrid colonial artefacts originating in the early 10th century.<sup>78</sup> The bells are later introductions - they are not found on the winter camps and are present at Coppergate, but not Fishergate.

Lead pendants (Group 14) and copper-alloy finger rings decorated with ring-and-dot ornament (Group 15), are also seen as Scandinavian introductions. Most of the pendants are small and discoidal, but others are axe- or cross-shaped. The discoid variety have simple geometric raised decoration, akin to that seen on the lead disc brooches, often with a central boss. Several of these have been recorded from a 10<sup>th</sup>-century context from Coppergate, York, with parallels noted from Birka, Sweden, where they are sometimes found accompanying glass beads in necklaces.<sup>79</sup> As already noted, it is believed that these and other lead-alloy dress accessories, including the lead disc brooches (Group 11), were manufactured in York. The copper-alloy rings (Group 15) are of sheet copper, with ring-and-dot decoration, with the band being simply closed at the rear by overlapping the arms or twisting them around each other. The Coppergate examples are dated to the late 9<sup>th</sup> and early 10<sup>th</sup> centuries.<sup>80</sup>

As the Stamford Bridge 2 site indicates, Anglo-Saxon collared pins are not present on Anglo-Scandinavian sites and are eventually replaced by far less common ring-headed (Group 16) and lozenge-headed pins, with corner ornamental knobs (Group 17). At Coppergate ringed pins are dated to the 10<sup>th</sup> and lozenge-head types to the 11<sup>th</sup> century.<sup>81</sup> A pin from Stamford Bridge 2 is also included in Group 16 as it has a small ring piercing the flat rectangular head. Mounts and other artefact types with Viking style decoration (Group 18),

not represented by the other groups in this study are, of course, also indicative of Viking activity.

Strap slides (Group 19) are another new introduction, thought to have been used in conjunction with spur buckles, with notable examples from Kaupang (Norway) where they are attributed to Frankish visitors in the 9th century.<sup>82</sup> They do not appear in Anglo-Saxon England prior to the arrival of the Vikings. Their function was to secure a strap firmly in a buckle and their decoration varies but two in our study sample have a medial rib, with ring-and-dot decoration to either side, a decorative combination closely paralleled on Thomas Class E3 strap ends. As with those from Kaupang, examples in iron from Coppergate are also associated with spur attachments.<sup>83</sup> Stirrup mounts (Group 20) are often seen as another Scandinavian introduction, also reflecting equestrian status as their purpose was to give protection to the stirrup strap.<sup>84</sup> They emerged in the 11<sup>th</sup> century and some are decorated in the Ringerike style.

Lead spindle whorls (Group 21) are found on many Viking sites, including Torksey, and all of those in this study. Thirteen lead spindle whorls were found on the Coppergate site, 11 described as of Anglo-Scandinavian form, and it is believed that they were manufactured in York.<sup>85</sup> Such spindle whorls are frequently crudely finished and are conical or domed, usually with a flat top. They are not found on the exclusively Middle Anglo-Saxon sites in this study, but they are often reported from Anglo-Scandinavian sites. Perhaps the strongest indication that they were an Anglo-Scandinavian introduction is the fact that five were recovered from Cottam B, but only from the Anglo-Scandinavian north area, and not the intensively occupied exclusively Anglo-Saxon area to the south. Of those recorded by the PAS most come from the Danelaw region. They are also common in Viking Age Scandinavia, representing 30% of spindle whorls from Kaupang for instance.<sup>86</sup>

Lead gaming pieces (Group 22) are especially diagnostic of a Viking presence. They were first recognised at the Viking winter camp at Torksey where over 300 have now been identified, and this may well have been their point of origin.<sup>87</sup> They have subsequently been recognised amongst new excavation finds at Repton, where the Army over-wintered the following year.<sup>88</sup> They were previously often undated on the PAS database, but have now been identified at six of the Northumbrian sites in our study, and at a number of sites in Lincolnshire.<sup>89</sup> The category includes hollowed cones and domes in lead, although ceramic

and stone gaming pieces have been excluded as they are also known from Roman and Anglo-Saxon contexts. The fact that the fashion for making gaming pieces in lead seems to have waned by the time of the Viking activity on Coppergate in the early 10<sup>th</sup> century makes them particularly important as a dating indicator. They have not been found in Scandinavia or the Continent, apart from four examples from Föising and three from Hedeby, which Dobat interprets as objects imported by returning members of the Great Army employed to garrison the Danevirke region.<sup>90</sup>

That no trefoil brooches have been found in this sample of sites is at first sight surprising, particularly given the evidence for their manufacture recovered from Blake Street in York.<sup>91</sup> However, as Kershaw notes, the ornament for the Blake Street mould is in the English Winchester style, and the object is thus Anglo-Scandinavian rather than Viking.<sup>92</sup> The absence of Scandinavian trefoils is therefore in line with what Kershaw has observed, with these being far more plentiful south of the Humber, particularly in East Anglia, where they may be associated with the Viking winter camp recorded at Thetford in 870.<sup>93</sup> Other iconic Viking artefacts, including disc and oval brooches, and Thor's hammer pendants are also almost absent from our sample sites, as they are for the PAS records for East Yorkshire in general. Equal-armed 'ansate' brooches and hooked tags occur on some of the sample sites but have not been included here since they are both long-lived groups, which occur in Middle Anglo-Saxon and Anglo-Scandinavian contexts, and so do not provide any dating resolution.

Finds related to bullion transactions are also diagnostic of Viking activity. Weights (Group 23) are found in small numbers on a few of the Middle Anglo-Saxon sites, and are more numerous on the Anglo-Scandinavian sites. They are usually of lead, in a standard range of shapes, with copper-alloy cubo-octahedral types and truncated spheroids being less common.<sup>94</sup> Whilst plain lead weights are difficult to date, those with insets, including stycas (such as those from South Newbald and Stamford Bridge 2) can reasonably be given an early date. Similarly, parts of weighing balances (Group 24), as well as fragmented jewellery and ingots in precious metals, silver melts and 9<sup>th</sup>-10<sup>th</sup> century coinage foreign to Northumbria (Group 25) generally reflect re-processing and exchange of precious metals by weight.<sup>95</sup> Group 26 includes cut-up pieces of jewellery in base metal, presumably for re-processing for example as insets into the tops of lead weights, as seen at Torksey. This group also includes Irish and Pictish penannular brooch terminals which occur on four of the sample sites, two Middle Anglo-Saxon and two Anglo-Scandinavian. One came from Coppergate and the

excavation report considers such finds to date from early in the Viking settlement of England and to have been carried eastwards due to the links between the Viking Kingdom of York and Viking activity in Ireland and Scotland.<sup>96</sup> That the former Northumbrian styca-based currency was abandoned also receives support from the absence of such coins from Stamford Bridge 2.

Group 27 comprises Viking coin issues and contemporary Anglo-Saxon coins, all of which are rare by comparison with Middle Anglo-Saxon coinage, which is found in significantly greater numbers. None of these coins have been found on the Middle Anglo-Saxon sites, which is consistent with their abandonment in the late 9<sup>th</sup> century, whereas four coins come from three of the four Anglo-Scandinavian sites, and they each post-date the mid-10<sup>th</sup> century. Coppergate has produced 14 coins, eight of which pre-date the mid-10<sup>th</sup> century.<sup>97</sup> The PAS database records a further 16 for East Yorkshire, only one of which pre-dates the mid-10<sup>th</sup> century. Taken together, this is in keeping with the argument advanced by Kershaw that, to facilitate taxation, the urban power base encouraged transactions in coin only, whereas until the mid-10<sup>th</sup> century bullion exchange appears to have been preferred in the countryside.<sup>98</sup> A comparative dearth of lead weights and a complete absence of some common types from Coppergate fits this scenario, especially when set against their abundance on the rural sites.

Although overall numbers of Anglo-Scandinavian dress accessories can be seen to decline, the range of types in common use appears to have expanded, for instance, through the introduction of novel forms such as the Anglo-Scandinavian bells, strap guides, lead disc brooches and pendants. This widened repertoire is represented on many of the Anglo-Scandinavian sites. Furthermore, sites such as Stamford Bridge 2, established early in the Anglo-Scandinavian period, point to the abandonment of collared pins and the replacement of Thomas class A strap ends by new forms (Thomas class B4a and B5), still of generally the same size and form but with less intricate decoration, either based on knotwork or multiple animal heads in the Borre style. There also appears to have been an abandonment of Trewhiddle ornamentation, which frequently adorned the preceding Thomas Class A strap ends, and an initial preference for simpler Borre-derived decoration, along with the appearance of peripheral grooves on the reverse sides of strap ends, and a noticeable increase in use of ring-and-dot decoration, as observed on the Anglo-Scandinavian area of Cottam B.<sup>99</sup>

## CONCLUSION

Our research has adopted a novel method of both inter- and intra-site comparison, based on accumulated site assemblages of metal-detector finds, gathered both from personal contacts and the PAS. This approach has great potential to make headway in addressing a question previously only approached by the place-name and sculptural evidence. Following the identification of the archaeological signature of the Viking Great Army at the winter camp at Torksey, we have been able to return to our earlier work at Cottam and to distinguish a brief phase of raiding, followed by the establishment of an Anglo-Scandinavian farmstead. We cannot be certain that it was the same group that looted the Middle Anglo-Saxon settlement, forcing its abandonment, that subsequently claimed the settlement. Nonetheless this is the most obvious conclusion, although it does not necessarily mean that they took up the plough themselves. As Hadley notes: “it seems likely that in most cases Halfdan’s leading followers took over such multi-vill estates and supported themselves from the income of such estates, rather than taking up the plough themselves, which may have been left to humbler warriors and other followers, and doubtless also the pre-existing tenants of these estates”.<sup>100</sup>

Extending our study from Cottam, in this paper we have identified a large number of Middle Anglo-Saxon sites in southern Northumbria, often known only from metal-detecting, which were also abandoned, and the majority do not appear to have been re-occupied. Even if there are other sites under modern settlements, which therefore cannot be metal-detected or excavated, and which reflect continuity of occupation, this still leaves us with a large number of abandoned sites. This is not to deny the importance of wider processes of change in settlement patterns and land-ownership underway in 9th- and 10th-century England. Nonetheless, by the late 9th-century most Anglo-Saxon sites in Deira had been in existence for 100-150 years and, as reflected by the introduction of the styca coinage, the Northumbrian economy was thriving. It cannot be coincidence that the abandonment of each site is associated with the appearance of objects which can be linked to the Viking Great Army.

We have identified some 27 categories of metal artefacts and coins, which are diagnostic of Scandinavian activity as a whole. Taken together, the introduction of new forms of dress accessory, decoration and trading arrangements, can be seen as an intention on behalf of the newcomers to disregard indigenous fashions and means of exchange, and to assert a Scandinavian and eventually new Anglo-Scandinavian colonial identity. However, of our

sample of 17 Middle Anglo-Saxon rural settlements, at only four (roughly a quarter) is there a sufficient number of Anglo-Scandinavian artefacts to represent a settlement phase. At all the other sites there are only very small numbers of Anglo-Scandinavian objects, and the categories tend to reflect looting and bullion and metalwork processing rather than settlement activity.

This demonstrates the major impact of the land partitions by leaders of the Great Army, and the consequent disruption of Anglo-Saxon settlement patterns. It is clear that the Viking winter camps led to the spread of individual landed takeovers after 876. Throughout southern Northumbria the new evidence tells a story of looting and the abandonment of farmsteads, traditional market places, and estate centres. Following Sawyer, there was a tendency to dismiss the place-name evidence, and to attribute the fact that almost half of place-names in the former East Riding of Yorkshire are Scandinavian-influenced to linguistic fashion and later changes in naming habits, continuing up to the Norman Conquest. The metal-detecting evidence now supports a re-appraisal of this view and suggests that a radical renaming may have followed Halfdan's land seizure. We should also note the destabilising effect on the Northumbrian economy of such extensive Viking raiding activity, far beyond any records that have survived, but as is reflected in the drastic debasement of the Northumbrian silver currency.<sup>101</sup> The results of the present study suggest that this impact was profound and that the sharing out of the land by Halfdan left little room for coexistence with the indigenous Northumbrians whose settlements were abandoned, and in all probability ransacked and plundered for items of value, as was observed at Cottam B. Their land and settlements gone, the actual fate of the Northumbrians remains a matter of conjecture although many must have fled, been killed or enslaved. Such extensive dislocation argues against the minimalist position adopted by Sawyer and reinforces the scale of the Great Army, and its impact.

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This paper arose out of the work of Dawn Hadley and Julian Richards on the winter camp at Torksey, and a fresh study of the Northumbrian metal-detected assemblages by Dave Haldenby. The authors would like to thank Christian Whitehead for information about the metal-detected finds from Stamford Bridge and Yapham; Stan Raymond for 'Near Market Weighton'; and Barry Freeman for 'Near Pockington'. Dawn Hadley kindly commented on an earlier draft of the text; Helen Goodchild created Figure 1. We would also like to thank our two anonymous reviewers whose comments have allowed us to make a number of clarifications and improvements to our text.

### **List of figure captions**

FIG 1

Map showing location of sites referred to in the text<sup>102</sup>

FIG 2

Graph comparing proportions of specific categories of finds at a range of Northumbrian Middle Anglo-Saxon and Anglo-Scandinavian / Viking sites

FIG 3

Artefact categories which are diagnostic of Viking and Anglo-Scandinavian activity (Images courtesy of Portable Antiquities Scheme)

### **List of table captions**

Table 1 Numbers of Middle Anglo-Saxon and Anglo-Scandinavian / Viking finds on a sample of Northumbrian sites

Table 2 Numbers of diagnostic Anglo-Scandinavian and Viking finds on Northumbrian sites

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<sup>3</sup> Sawyer 1958

<sup>4</sup> Stenton 1943

<sup>5</sup> Sawyer 1971

<sup>6</sup> Sawyer 1971, 123-6

<sup>7</sup> Sawyer 1971, 154-71

<sup>8</sup> Clark 1966

<sup>9</sup> Richards 2000a; 2000b

<sup>10</sup> Hadley 1997

<sup>11</sup> Hadley and Richards 2000; the term 'Anglo-Scandinavian' is used in this paper to refer to the settlement phase when there is clear cultural admixture and the development of hybrid cultural forms, whereas the terms 'Viking' and 'Scandinavian' are used to refer to the period of raids and Viking armies, and to unambiguously Scandinavian activity.

<sup>12</sup> Abrams and Parsons 2004, 398-400

<sup>13</sup> eg Hadley 2017, 67-77

<sup>14</sup> Leslie et al 2015, 313

<sup>15</sup> Kershaw and Røyrvik 2016, 1679

<sup>16</sup> Buckberry et al 2014

<sup>17</sup> Halsall 2000, 259-76; Richards 2000, 189-212

<sup>18</sup> Buckberry et al 2014, 430

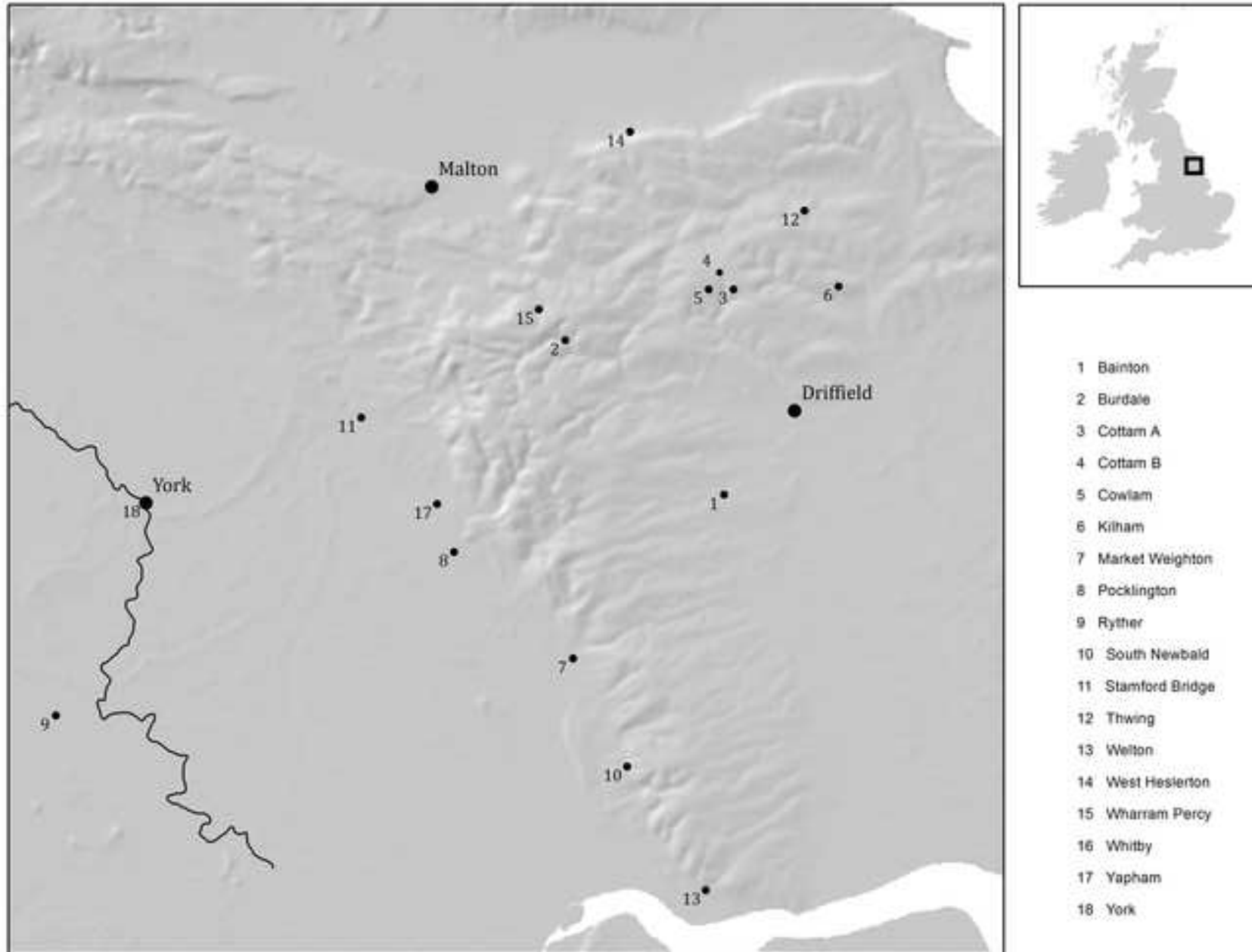
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- <sup>19</sup> Richards et al 2009; Richards and Naylor 2012
- <sup>20</sup> Kershaw 2013, 216
- <sup>21</sup> Pestell 2013; Kershaw 2017
- <sup>22</sup> Biddle, M and Kjølbye-Biddle, B 1992; 2001
- <sup>23</sup> Biddle and Kjølbye-Biddle 1992, 40, and 2001, 59, give an internal area of 1.46ha but see Hadley and Richards 2016, 26, n.17
- <sup>24</sup> Halsall 2000, 269
- <sup>25</sup> Indeed, subsequent excavation at Repton in 2017 has demonstrated that Viking activity, including metal-working, extends beyond the ditched enclosure (Jarman 2018)
- <sup>26</sup> Hadley and Richards 2016, 26; Williams 2015, 99; Stein 2015, 61. Aldwark was formerly known by the portmanteau name of Ainsbrook (from the surnames of the metal detectorists who identified the site) and more recently as ‘A riverine site in north Yorkshire’ or ‘A riverine site north of York’ (ARSNY)
- <sup>27</sup> Hadley and Richards 2016, 59
- <sup>28</sup> Hadley and Richards 2016; Richards and Hadley 2016; Woods forthcoming
- <sup>29</sup> Hadley and Richards forthcoming for Lincolnshire and the wider picture
- <sup>30</sup> Haldenby and Richards 2016
- <sup>31</sup> Haldenby and Richards 2016, section 4.4.1; the sword guard is a more recent find
- <sup>32</sup> Williams 2015
- <sup>33</sup> Haldenby and Richards 2016, section 4.4.2
- <sup>34</sup> Haldenby and Richards 2016, section 6
- <sup>35</sup> Whitelock 1961, 48
- <sup>36</sup> Fellows-Jensen 1972, 169
- <sup>37</sup> Morris 1977; 1984; Binns 1963
- <sup>38</sup> Townend 2014, 95-112
- <sup>39</sup> Cullen et al 2011
- <sup>40</sup> Richards 2000c, 195-8
- <sup>41</sup> Stocker 2007, 2
- <sup>42</sup> Powlesland 1998
- <sup>43</sup> Richards et al 2013; Richards and Roskams 2012
- <sup>44</sup> Richards and Naylor 2012, 135-9; Richards et al 2009, section 2.4.2.1
- <sup>45</sup> Hadley and Richards forthcoming
- <sup>46</sup> Richards et al 2009, section 4.4

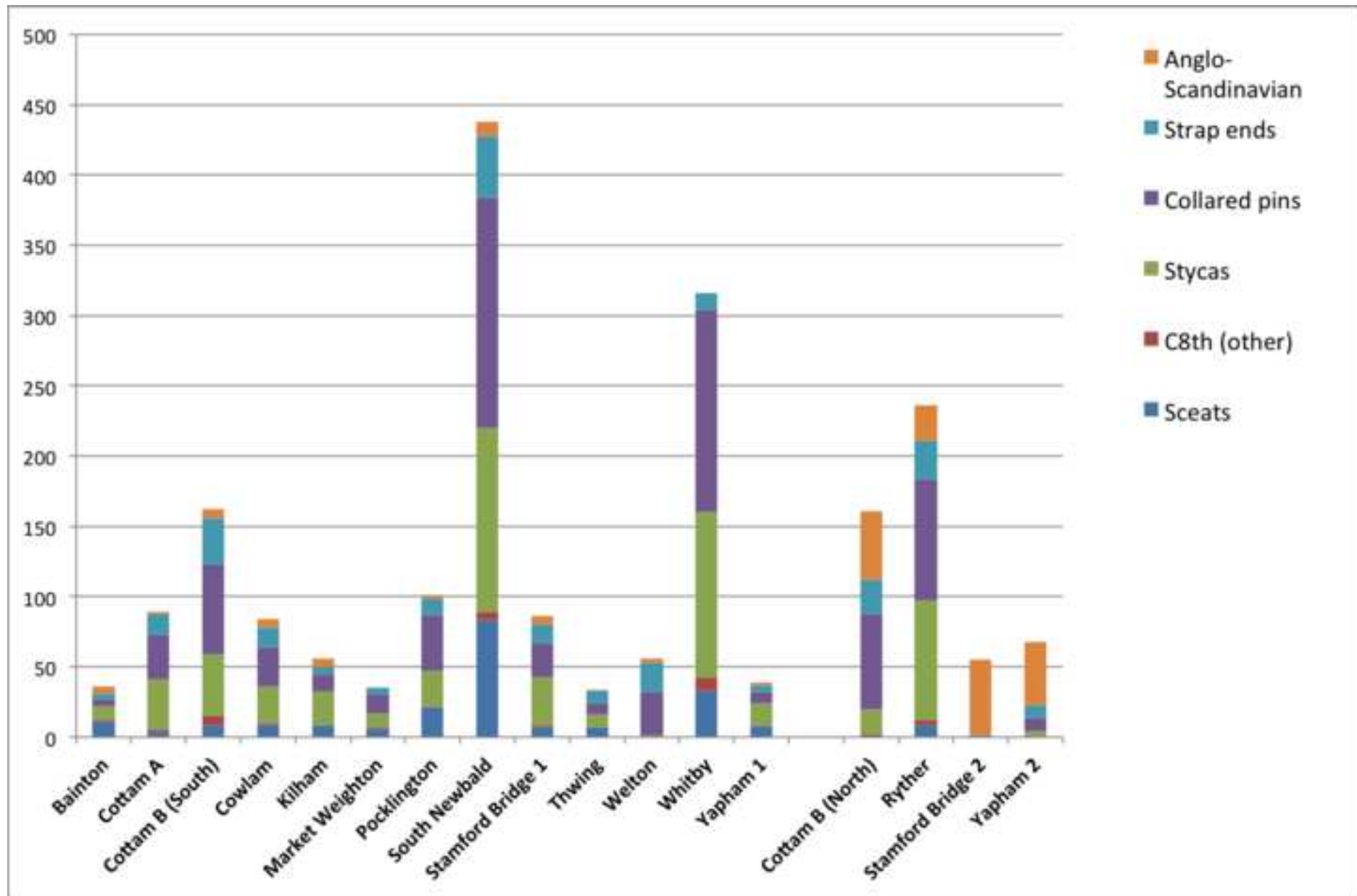
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- <sup>47</sup> Richards 2013, 211-30
- <sup>48</sup> Richards 1999, 25-40
- <sup>49</sup> Haldenby and Richards 2016, section 4.2
- <sup>50</sup> Richards 2013, 230-53
- <sup>51</sup> Hunter-Mann 2000
- <sup>52</sup> Stan Raymond pers comm
- <sup>53</sup> Barry Freeman pers comm
- <sup>54</sup> Booth and Blowers 1983
- <sup>55</sup> Booth 1997; Booth 2000; Leahy 2000
- <sup>56</sup> But see Craig 2010 for analysis of the cemetery
- <sup>57</sup> Naylor 2004; Richards, Naylor and Holas-Clark 2009, section 4.4.57
- <sup>58</sup> Abramson 2016, 249
- <sup>59</sup> Peers and Radford 1943
- <sup>60</sup> Rahtz 1967
- <sup>61</sup> Hinton 2005, 85
- <sup>62</sup> Cramp 1976
- <sup>63</sup> Richards 1999, 40-48
- <sup>64</sup> Haldenby and Richards 2016
- <sup>65</sup> Naylor 2001, 86
- <sup>66</sup> Richards and Roskams 2012
- <sup>67</sup> Abramson 2016, 260-1
- <sup>68</sup> Kemp 1996, 83; Rogers 1993, 1474-6; Abramson 2016, 190 notes that the coin is only the third known specimen of Æthelberht's inscriptional type (N 620) for this moneyer, Winiberht (Naismith 2011, C210a-c), and that the moneyers of both Æthelberht pennies found in Northumbria (at Fishergate and Cottam B), Winiberht and Wulfheard, share the names of moneyers in the late styca series. Driffield too has a single intrusive southern penny - of Eadmund of East Anglia (855-69) - plausibly lost by Viking visitors around the time of the fall of York (Abramson 2016, 239)
- <sup>69</sup> Kemp 1996, 83-4
- <sup>70</sup> Thomas 2003
- <sup>71</sup> Graham-Campbell 1980, 52-3, no.187
- <sup>72</sup> Rogers 1993, 1348; Bu'lock 1960, 22, fig. 7g; Griffiths et al 2007, xx; 2011, n.310, Meols\_174

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- <sup>73</sup> PAS, NLM730
- <sup>74</sup> Bu'lock 1960; Griffiths et al 2007, xx; 2011, xx
- <sup>75</sup> Mainman and Rogers 2000, 2574
- <sup>76</sup> Wamers 2011, 75
- <sup>77</sup> Kershaw 2013, 103-16
- <sup>78</sup> Schoenfelder and Richards 2011; these were originally termed Norse or Hiberno-Norse bells but it is now clear that the core distribution is in eastern and northern England, and it is the Icelandic, Scottish and Irish examples which are outliers, so propose renaming them Anglo-Scandinavian bells. We are grateful to James Graham-Campbell for this suggestion.
- <sup>79</sup> Mainman and Rogers 2000, 2475, 2588
- <sup>80</sup> Mainman and Rogers 2000, 2585
- <sup>81</sup> Mainman and Rogers 2000, 2580, 2582
- <sup>82</sup> Wamers 2011, 92-3
- <sup>83</sup> Ottaway 1992, 688
- <sup>84</sup> Williams 1988
- <sup>85</sup> Mainman and Rogers 2000, 2530
- <sup>86</sup> Øye 2011, 343
- <sup>87</sup> Hadley and Richards 2016, 54, Fig. 26
- <sup>88</sup> Jarman 2018, 32-3
- <sup>89</sup> Hadley and Richards forthcoming
- <sup>90</sup> Dobat 2017, 602-3
- <sup>91</sup> Macgregor 1978, 42-3, Fig. 24.8
- <sup>92</sup> Kershaw 2008, 263-4
- <sup>93</sup> Kershaw 2013, 79-91, 133-4
- <sup>94</sup> Hadley and Richards 2016, 48-9
- <sup>95</sup> Kruse 1992
- <sup>96</sup> Mainman and Rogers 2000, 2570-1
- <sup>97</sup> Pirie 1986, 25-9
- <sup>98</sup> Kershaw 2017
- <sup>99</sup> Haldenby and Richards 2016, section 4.4.2
- <sup>100</sup> Hadley 2006, 85
- <sup>101</sup> Booth 1987, 75-6

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<sup>102</sup> Illustration by Helen Goodchild; topography derived from USGS (2004), Shuttle Radar Topography Mission, 1 Arc Second scene SRTM\_u03\_n008e004, Unfilled Unfinished 2.0, Global Land Cover Facility, University of Maryland, College Park, Maryland, February 2000; also contains OS data © Crown copyright and database right 2017







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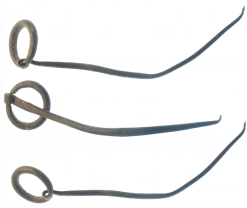
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	Middle Anglo-Saxon finds						Anglo-Scandinavian finds		
	Source	Sceats	C8-9th (other)	Stycas	Collared pins	Strap ends	Totals	Total	Proportion Anglo-Scan
<b>Bainton</b>	PAS	11	1	10	5	4	31	5	48/1532 (3%)
<b>Cottam A</b>	Published	4	2	35	32	15	88	1	
<b>Cottam B (South)</b>	Published	9	6	44	64	33	156	6	
<b>Cowlam</b>	Published	9	1	26	28	14	78	6	
<b>Kilham</b>	PAS	9	0	23	13	5	50	6	
<b>Market Weighton</b>	Pers comm	6	1	10	14	4	35	0	
<b>Pocklington</b>	Pers comm	21	1	25	40	12	99	2	
<b>South Newbald</b>	Publication	83	6	131	164	44	428	10	
<b>Stamford Bridge 1</b>	PAS	7	2	34	24	13	80	6	
<b>Thwing</b>	Pers comm	7	0	9	8	9	33	1	
<b>Welton</b>	PAS	0	0	1	31	21	53	3	
<b>Whitby</b>	Excav	33	10	117	144	12	316	0	
<b>Yapham 1</b>	PAS	8	1	15	8	5	37	2	
<b>Cottam B (North)</b>	Published	0	2	18	68	24	112	49	172/519 (33%)
<b>Ryther</b>	PAS/ Pers	9	3	85	87	26	210	25	
<b>Stamford Bridge 2</b>	PAS	0	1	0	0	1	2	53	
<b>Yapham 2</b>	PAS	0	0	4	10	9	23	45	

Group	Middle Anglo-Saxon											Anglo-Scandinavian					Total number of artefacts	Number of sites where found	
	Bainton	Cottam A	Cottam B (south)	Cowlam	Fisergate	Kilham	Pocklington	South Newbald	Stamford Bridge 1	Thwing	Weiton	Yapham 1	Coppergate	Cottam B (north)	Ryther	Stamford Bridge 2			Yapham 2
<b>Selected Anglo-Scandinavian finds</b>																			
<b>Dress accessories</b>																			
1 Strap end Thomas B4a					1			1			1		3		4	1	11	6	
2 Strap end Thomas B5				1				1				2	2		4		10	5	
3 Strap end Thomas E1/E2							1			1		1		3	1		7	5	
4 Strap end Thomas E3				1									2	2			5	3	
5 Strap end Thomas E4						1								1		1	3	3	
6 Strap end Thomas E5																1	1	1	
7 Strap end Thomas E6												1		1	1		3	3	
8 Buckle, animal mask					1								2				3	2	
9 Buckle, animals bite bar	1					1			1				1	2	6	2	14	7	
10 Buckle plate with animal heads															1		1	1	
11 Brooch - lead alloy (disc mainly)												6	2	3		1	12	4	
12 Brooch - copper alloy												4	1		1		6	3	
13 Anglo-Scandinavian bell			1	1								1	3	1	2	1	10	7	
14 Pendant - lead					1							4	1		2	2	10	5	
15 Ring (finger) - ring-and-dot		1										2	2			1	6	4	
16 Pin - ring headed												7			1		8	2	
17 Pin - lozenge headed					2			1				1				1	5	4	
18 Mount etc with Viking art style									1			4		1	3	1	10	5	
<b>Equestrian</b>																			
19 Strap guide												1	1	1	3	1	7	5	
20 Strirrup mount						1								1			2	2	
<b>Craft / leisure</b>																			
21 Spindle whorl (lead)												11	5	1	3	10	30	5	
22 Gaming piece (lead)				2		3	2	4						6		2	19	6	
<b>Bullion-related</b>																			
23 Weight	3			1				2				6	17		17	12	58	7	
24 Balance parts			1						1			11	1		1		15	5	
25 Bullion - ingots etc (silver/gold)	1		1	1	1			1	2		2	3	5		2	5	24	11	
26 Hacked jewellery (not silver/gold)			3		1						1	1		1		1	8	6	
27 Viking Age coins										1		14	1	1	1	2	20	6	
<b>TOTALS</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>6</b>	<b>2</b>	<b>10</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>80</b>	<b>49</b>	<b>25</b>	<b>53</b>	<b>45</b>	<b>308</b>	