

RECONSTRUCTING THE IMPACT OF 14TH-CENTURY DEMOGRAPHIC DISASTERS ON LATE MEDIEVAL RURAL COMMUNITIES IN ENGLAND

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The ‘calamitous’ 14th century saw the reversal of centuries of demographic growth as a series of disasters including famines and epidemics caused population levels to plummet across Europe. In places such as England, recovery did not take place for more than 200 years. This might be expected to have had a substantial effect on rural settlements where the vast majority of the medieval population lived, but with the exception of the 10% of settlements which are today almost or completely deserted, evidence for change in this period has been difficult to detect. Consequently, the impact of late-medieval population decline has often been downplayed. Evidence is now emerging to challenge this view, derived from new approaches which enable change in rural settlements to be reconstructed. This chapter explores how this informs our understanding of the impact of the 14th-century demographic collapse in England, bearing in mind that similar effects were felt across much of Europe and beyond.

THE IMPACT OF 14TH-CENTURY DEMOGRAPHIC TURBULENCE ON MEDIEVAL SOCIETY

AU: Please provide references for the citation ‘Razi 1980; Hatcher 2003; Turner and Webster 2012; Turner et al 2013; Fernandez Mier et al 2014; Oosthuizen 2012; Roberts 1987’ in the list or delete the citation from the text.

Scholarly opinion about the ‘calamitous’ 14th century (Tuchman 1978), and its climactic ‘Black Death’ epidemic of plague, has varied considerably over time. 19th-century historians saw the Black Death as a cataclysm with profound and long-reaching demographic, economic and social effects (James 1999, 12–15; Aberth 2010). A century later, scholars regarded it as an insignificant Malthusian purgative which had acted as a corrective to previous demographic over-expansion (eg Power 1918; Bridbury 1973; Postan 1973). More recently, opinion has swung back again as syntheses of mounting volumes of research have challenged the ‘low-energy’ view (Platt 1997; Benedictow 2004; Aberth 2010; Sloane 2011; Campbell 2016; Lagerås 2016). Much of this debate has revolved around mortality levels for which, with notable exceptions (eg Razi 1980), there is very little information available in contemporary records. In England, scholarly estimates of the impact of the 1348–49 Black Death epidemic alone have risen

from as low as 23% (Ziegler 1969, 185) to as high as 62.5% (Benedictow 2004, 377). Whatever their level, these mortalities affected populations which had already been reduced by perhaps 10% by famines in the 1310s, caused in significant part by climatic deterioration (Jordan 1996; De Witte and Slavin 2013), which may have exacerbated the impact of the 1348–49 outbreak (DeWitte and Wood 2008). Notwithstanding the precise mechanics, by the end of the 14th century, a remorseless interaction of biological, environmental, economic and social factors had reduced the population of Europe to probably around half the size it had been at the beginning of the century (Campbell 2016). In England, it took more than two centuries for sustained recovery to begin, for reasons which are not well understood (Nightingale 2005). Some scholars have favoured ‘high pressure’ scenarios in which persistently recurring epidemics of disease (Hatcher 1994; 2003) delivered ‘savage levels of mortality’ (Bailey 1996, 1) in a ‘golden age of bacteria’ (Thrupp 1965, 118). Others prefer ‘low-pressure’ explanations foregrounding reduced birth rates consequent on changes in female employment and raised marriage age in the later medieval period (Dyer 1980; Smith 1992). Overall, however, the broad consensus is that by the end of the 14th century, the population of England was barely half the size that it had been a hundred years earlier and that it remained at this reduced level for the next two centuries. This disaster might be presumed to have had a significant impact on the places that people inhabited, and settlement studies might thus be expected to lie at the heart of any enquiry into the impact of the late medieval demographic collapse on contemporary society.

EVIDENCE FROM DESERTED AND SHRUNKEN MEDIEVAL SETTLEMENTS IN ENGLAND

Much archaeological research has been carried out within medieval settlements in England, ranging from excavation and field-walking programmes lasting for years (or even decades) (eg Beresford and Hurst 1990; Vyner 1990; Mynard 1994; Parry 2006) to more rapid non-destructive analysis using earthwork survey (eg RCHME 1975–85; Everson *et al* 1991). Such programmes have recorded thousands of settlements which were in existence in the medieval period but are now deserted or severely shrunken (Beresford and Hurst 1989; Hooke 1985; Aston *et al* 1989; Christie and Stamper 2012). Excavation at settlements such as Riseholme in Lincolnshire (Thompson 1960) and Gomeldon in Wiltshire (Musty and Algar 1986) revealed habitation dating to the 13th and early 14th centuries which appeared to cease abruptly around the middle of the 14th century. In such cases, it is reasonable to infer the direct and immediate impact of demographic collapse.

Examples of 14th-century desertion have however actually been shown to be relatively rare. Only around 10% of medieval settlements were permanently deserted—considerably fewer than would be expected were a population decline approaching 50% to have had a direct and immediate effect. Furthermore, decline in deserted settlements appears to be highly attenuated in most cases, with final abandonment typically occurring not in the 14th century but later. This is evident in excavated settlements the length and breadth of England, as far apart as Thrislington in County Durham (Austin 1989), Wharram Percy in Yorkshire (Wrathmell 2013), Goltho in Lincolnshire (Beresford 1973), Westbury in Buckinghamshire (Ivens *et al* 1995) and Hatch Warren

in Hampshire (Fasham and Keevil 1995). In all these places, and many more, it is observed that while some plots were abandoned in the 14th century, neighbouring ones continued in use into the 15th century or later. Historical analysis at places such as Clopton, Cambridgeshire, was in some cases able to show how this process had proceeded (Palmer 1933). Analysis of shrunken settlements, where areas of abandoned habitation lie adjacent to current settlements, has often suggested that these result from settlement shift, or very localised movement of people, rather than depopulation (eg RCHME 1975, xl; 1979 liii; 1981, xlv).

This archaeological evidence echoes the observations of historians such as William Hoskins, as early as 1946, that only eight out of 62 village desertions in Leicestershire could be directly ascribed to the Black Death (Hoskins 1946). Maurice Beresford, writing a little later in 1968, suggested this number to be as low as three (Beresford 1989, 9). The picture gained from deserted rural settlements suggests most were abandoned not as an immediate result of reduced population *per se*, but that this was one of many factors, including climate change and economic restructuring. A move towards sheep farming in the 15th century, in particular, gradually impelled successive generations of economic migrants to relocate away from failing settlements and (by inference) into more fortunate communities (eg Hoskins 1955; Muir 1982; Taylor 1983).

A range of evidence indicates that deserted sites, as well as being a minority, were also atypical. Beresford's 1968 synthesis of historical research showed that well before the 14th century, deserted settlements were on average smaller and poorer than non-deserted settlements (Beresford 1989, 20–29). Also by 1968, archaeological field-work was already showing that the distribution of deserted sites was biased, heavily concentrated in central England where as many as a quarter of known medieval settlements became permanently deserted, but almost entirely absent from other areas such as south-east and north-west England where almost none did so (Sheail 1989). Subsequent research across England, in counties as far apart as Somerset (Ellison 1983), Suffolk (Martin 1999), Lincolnshire (Everson *et al* 1991) and Yorkshire (Moorhouse 2003), while adding to the number of known deserted settlements, has not substantially altered this overall picture. It thus seems reasonable to infer that the trajectory of deserted sites cannot be assumed to be representative of the majority, as the impact of the 14th-century demographic collapse may have been more severe on now-deserted sites than elsewhere.

IDENTIFYING CHANGE IN NON-DESERTED RURAL SETTLEMENTS

As a consequence, in those settlements with no visible signs of contraction, it is often suspected that whatever short-term damage was wrought by demographic catastrophes, such as the Black Death, this was of little long-term significance. In these places, it is presumed that their intrinsic strengths (economic or geographical) enabled them to replace any lost population rapidly through reproduction, relocation or both (eg Taylor 1983, 169–174, 196–200). Contraction has thus tended to be viewed as a phenomenon largely restricted to an atypical minority of settlements (those which became permanently or entirely deserted), while non-deserted ones are typically considered to have recovered quickly from the 'purgative' effects of 14th-century famine and disease. As a result, the possibility that the late medieval population collapse had a significant

impact on surviving rural settlements has tended to be downplayed. An example which demonstrates this is Cottenham. With more than 60 households in Domesday Book (Williams and Martin 2003, 525, 527, 547) and taxed at £15 10s in 1334 (Glasscock 1975, 25), this was one of the largest villages in medieval Cambridgeshire. It remains so today, with a population of more than 6,000 recorded in the 2011 census, and with no visible earthwork evidence for medieval settlement contraction. Analysis of later medieval documentary records (Wright and Lewis 1989, 64–67) has shown that ‘In the early 14th century there were ruinous houses in Cottenham, due to depopulation’ and ‘some empty tofts were recorded in the 16th century’ but the conclusion was drawn that ‘the village probably suffered no overall shrinkage’. This is in spite of manorial records showing that ‘the holders of at least 33 of the 58 holdings on Crowlands manor died during the Black Death’ and that ‘land prices fell sharply in 1349 and remained low. The opportunities for peasants to buy land led to larger holdings: in the 15th and 16th centuries many consisted of full yardlands’.

AU: Please specify a/b for the reference citation Wright and Lewis 1989.

Until recently, however, the assumption that late medieval population contraction had an insignificant long-term impact on non-deserted settlements such as Cottenham remained largely untested. This was partly due to the difficulty of conducting fieldwork in places already occupied by existing houses, gardens, roads and other amenities. Earthwork survey, aerial photography and geophysical survey are of no use in such places, and excavation is typically restricted to relatively small areas within or (more often) on settlement margins (eg Cessford and Dickens 2005; Clelland and Mephram 2014). However, as non-deserted settlements are numerically dominant and occur across the country rather than only in certain areas, more information about their development is essential if an understanding of the impact of the 14th-century demographic decline is to be based on a representative sample of settlements.

NEW EVIDENCE FROM CURRENTLY OCCUPIED RURAL SETTLEMENTS IN EASTERN ENGLAND

A solution to this problem has now come in the form of ‘test-pit’ excavation. The excavation of small (typically 1 m square) archaeological trenches termed ‘test-pits’ has been an established archaeological sampling technique since the 1970s (Coles 1972, 138–140; Barker 1986, 69–70) on open land (Hodges 1991) or in woodland (Hayes 1985), but the pioneering work by Mick Aston, Michael Costen, Chris Gerrard and Teresa Hall at Shapwick, Somerset, in the 1990s (Gerrard and Aston 2007, 244–261) showed this method to be effective within currently occupied rural settlements (CORS). Since then it has been deployed elsewhere in England (eg Jones and Page 2006; Lewis 2007a; Denison-Edson and Mills 2014; Hurst 2014; Lewis 2014a; Johnson and Howard Davis 2016) and beyond (Turner and Webster 2012; Turner *et al* 2013; Fernandez Mier *et al* 2014). The advantage of test-pit excavation for an enquiry exploring change in medieval settlements is that data recovery is not restricted to limited areas but can be gained from almost any part of an inhabited settlement.

The 14th century is a watershed in pottery production and use in England, with few of the wares in production at the beginning of the century still being made by its end, by which time many new wares had come into production (McCarthy and Brooks

1988). The impact of the 14th-century demographic downturn on CORS can thus be explored by comparing which test-pits yield potentially habitative amounts of pottery before and after the 14th century. The *number* of potentially habitative sites before and after the 14th century can be compared in order to infer changes in population levels, while the *location* of potentially habitative sites at different dates can be compared in order to reconstruct changes in settlement location and layout.

The largest project using this approach has involved the excavation of more than 2,000 new test-pits in more than 60 CORS in eastern England (Lewis 2005; 2006; 2007b; 2008; 2009; 2011; 2012; 2013; 2014b; 2015; 2016; 2017), an area of diversely varying settlement and landscape type (Rippon 2008; Williamson 2003). Excluding two settlements (Chediston in Suffolk, and Riseley in Bedfordshire) where late medieval pottery manufacture within the settlement may bias the data, the analysis below will encompass 41 settlements (Figure 16.1) where more than 20 test-pits have been excavated to date (May 2017). All the test-pits have been excavated using standardised methods (Lewis 2007a, 137–140; Lewis 2016, 778–787) so the amounts of pottery can be compared. Correlation with field-walking data (Haselgrove *et al* 1985; Davison 1990; Parker Pearson and Schadla-Hall 1994; Jones 2004) suggests that for the medieval period, sites where test-pits produced two or more sherds of pottery (more than might be expected from non-intensive use such as arable manuring) *may* have been

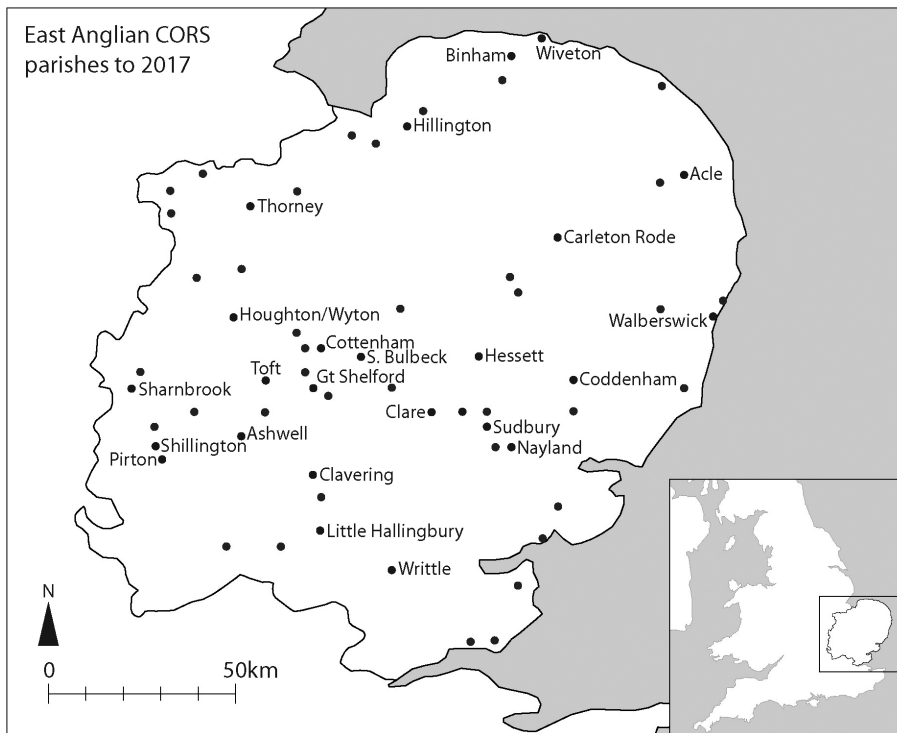


Figure 16.1 Test-pits in currently occupied rural settlements (CORS) in eastern England (UK)

inhabited, while those producing five or more are very likely to have been so; this analysis has been discussed in detail elsewhere (Lewis 2016).

The data from these excavations are reviewed below to explore what they reveal about the impact of the 14th-century demographic collapse on settlements.

Desertion

Although now repopulated, a small minority of the CORS in this study appear to have been almost or entirely deserted for a while, producing little or no pottery dating to the period between the later 14th century and the mid 16th. Most convincingly, at Hillington (Norfolk), the number of test-pits with more than a single sherd drops from 46% of the total number excavated (12 out of 26) to zero (Figures 16.2 and 16.3). Hillington was a large holding in the 11th century, divided between three lords in Domesday Book, but by 1334 it was assessed at £7 10s (Glasscock 1975, 197), placing it merely 17th out of 34 assessments in the hundred of Freebridge. The possibility that it was hit hard by the Black Death is hinted at in the loss of two rectors in 1349 (Blomefield 1808a, 460–468). The excavation of 26 test-pits showed a 100% decline in the number of potentially habitative sites. Mapping the finds showed a small village which appears to have been arranged in two separate foci north of the church since at least the 10th century. These both appear to have been almost completely depopulated during the 14th century: 12 of the pits (46% of those excavated) yielded pottery of 12th–14th-century date, but none produced more than a single sherd of 14th–16th-century pottery. In total, the 26 excavated test-pits yielded just four sherds of this date, two of which weighed less than 5 g.

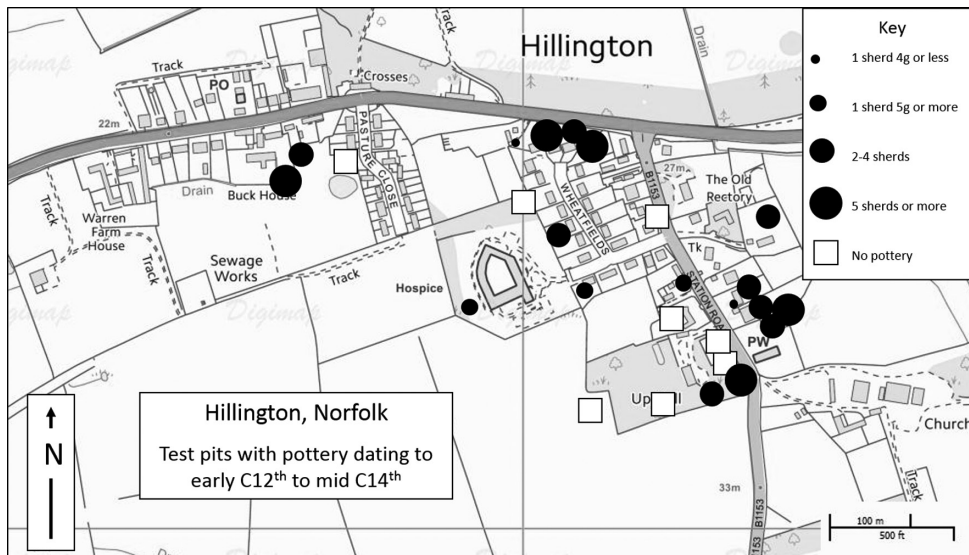


Figure 16.2 Hillington, Norfolk (UK): Test-pits with pottery dating from the early 12th to mid-14th centuries

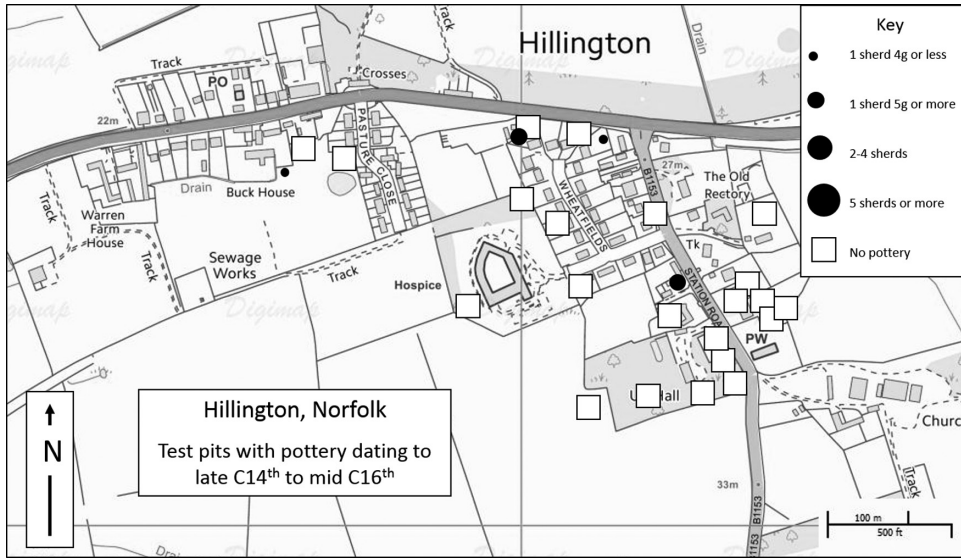


Figure 16.3 Hillington, Norfolk (UK): Test-pits with pottery dating from the late 14th to mid-16th centuries

Desertion at CORS such as Hillington (if this is indeed what happened) can be characterised as temporary, in order to contrast it with those settlements whose population levels never recovered and which thus became permanently deserted. It is important to remember, however, that this ‘temporary’ abandonment may have lasted for more than a century and may not have been perceived as temporary by contemporaries.

Hillington is, however, the only CORS within East Anglia where such extreme contraction can be inferred. Other settlements where post-14th-century pottery is entirely lacking, such as Girton (Cambridgeshire), Mount Bures (Essex), Rudham (Norfolk) and Wendens Ambo (Essex), have only had very small numbers of pits excavated to date; thus evidence may have been missed. Other settlements, such as Daws Heath (Essex) and Great Amwell (Hertfordshire), produced only very small amounts of 12th–14th-century pottery and thus appear to have been largely uninhabited before the 14th century as well as afterwards. It should be noted that north Norfolk, the area in which Hillington (and indeed, Rudham) lies, is relatively rich in medieval settlements which did become *permanently* deserted (Sheail 1989). That CORS appear to have rarely experienced complete abandonment suggests that this, when it did occur, usually represented a point of no return for declining settlements, with Hillington perhaps being a lucky exception to this pattern.

Severe contraction

While complete desertion may have been relatively rarely experienced by CORS, the test-pit data show how commonly settlements contracted in size. Overall, contraction

in the number of potentially habitative sites was apparent in 90% of the East Anglian settlements in this study (37 out of 41). More than half of these settlements show a reduction of 50% or more. Binham (Norfolk), for example, where finds of several bracteates suggest the presence of an early Anglo-Saxon central place (Behr and Pestell 2014), was an important medieval holding, with six carucates in demesne in 1086 as well as eight horses at the 'lords hall' (Blomefield 1808b, 209–212), a Benedictine priory founded in the late 11th century and a market from 1201 as well as several guilds. In 1334, Binham was assessed at £4 18s (Glasscock 1975, 200). Binham, like Hillington, lost two vicars in 1349 (Blomefield 1808b, 209–212). Test-pit excavation revealed a 71% decrease in the number of habitative sites, with the number falling from 24 to 7 (Figures 16.4 and 16.5). The formerly elongated linear settlement, which had extended for c800m either side of the priory gate complemented by an apparently new hamlet along Langham Road east of the priory precinct boundary, was reduced in the 14th–16th centuries to an intermittent straggle of small nodes north-west of the church and an apparently solitary site in the Langham Road hamlet.

Several other CORS contracted by more than 75%, including Paston and Hindringham in north Norfolk and Cottenham which, as noted above, was presumed

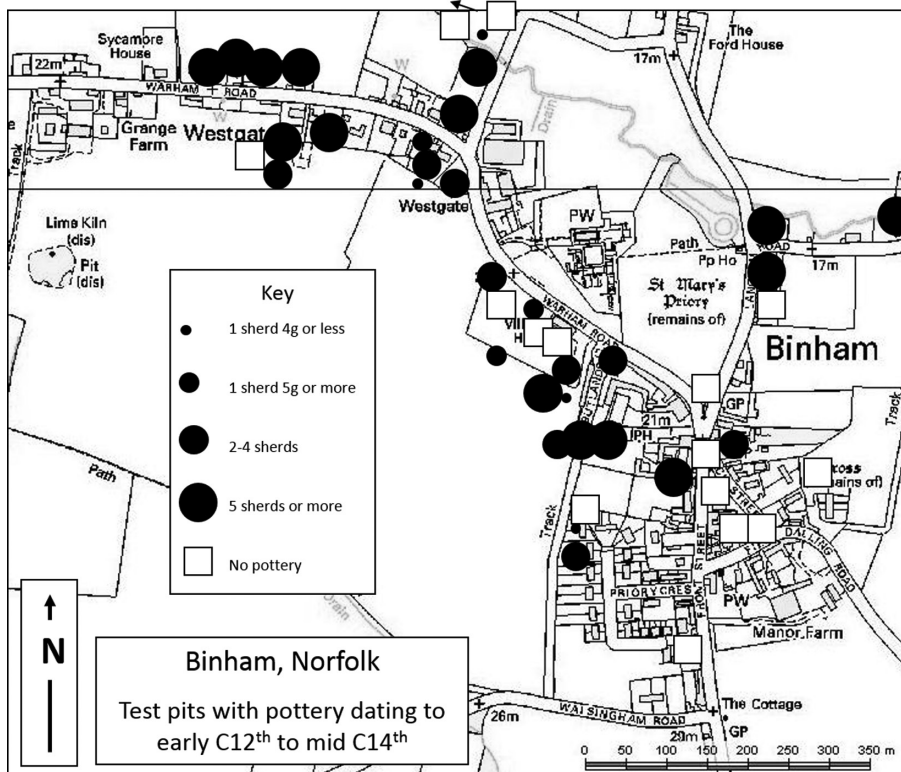


Figure 16.4 Binham, Norfolk (UK): Test-pits with pottery dating from the early 12th to mid-14th centuries

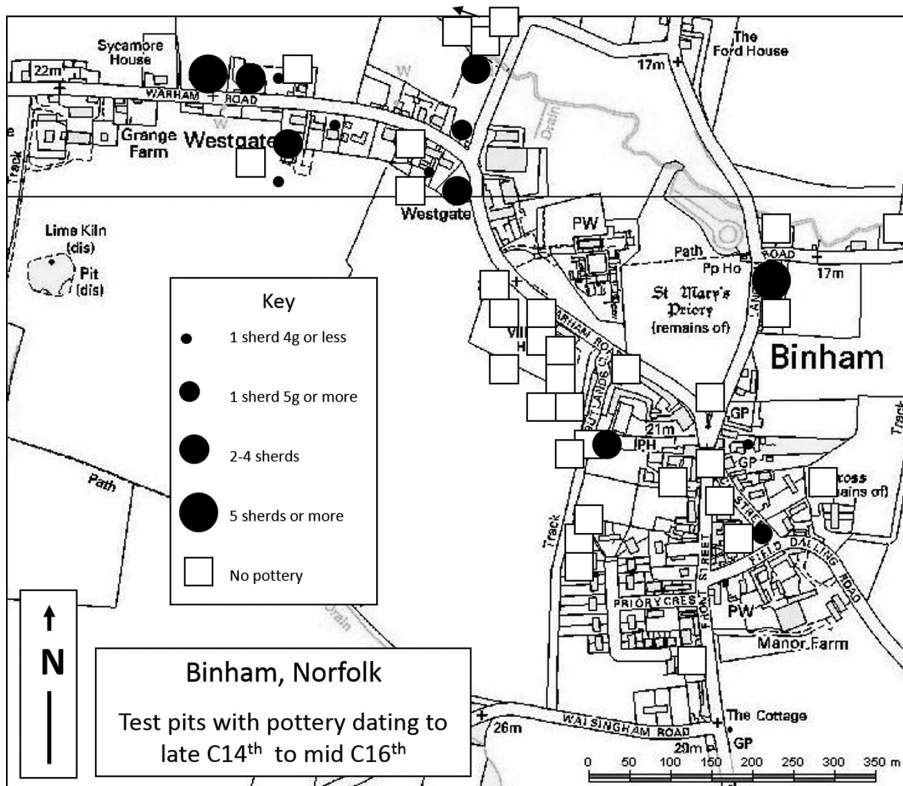


Figure 16.5 Binham, Norfolk (UK). Test-pits with pottery dating from the late 14th to mid-16th centuries

to have suffered ‘no overall shrinkage’ (Wright and Lewis 1989, 64–67), but where the number of habitative sites indicated by test-pits drops by 79%. Settlements like these appear to have suffered from depopulation as severe as that experienced by most settlements which ultimately became permanently deserted, but unlike the latter, places such as Binham, Cottenham, Hillington, Hindringham and Paston eventually reversed this downward trajectory.

While no individual test-pit can be guaranteed to be representative, the large number of such excavations included in this study, along with the consistent pattern which emerges, constitute compelling evidence that contraction in the period after the 14th century was a phenomenon experienced by the vast majority of medieval settlements, not just those which ended up being almost, or completely, permanently deserted. This clearly refutes any assumption that sustained contraction was not a significant factor in late medieval settlement development: in the 15th and 16th centuries, almost every settlement appears likely to have been a shadow of its pre-14th-century predecessor.

Mapping the settlements included in this study and comparing this with other data reveals a strong tendency for the settlements most severely affected by contraction to

be located in ‘champion’ areas, dominated throughout most of the medieval period by arable production within regular open fields (Martin and Satchell 2008) and by mixed sheep and corn regimes in the early-modern period (Thirsk 1967). These are also broadly the same areas which had lesser extents of woodland and meadow at Domesday and later (Darby 1972; Roberts and Wrathmell 2000; Williamson 2003, 167) and greatest excesses of landless peasants in the earlier 14th century (Campbell 2005). For example, settlements located in areas dominated by Martin’s type 1 and 2a open fields (closest to the classic midland-type field systems) show an average 58% post-14th-century decrease in the number of habitative sites, while those in areas dominated by less regular and enclosed field systems show an average drop of just 21%. These correlations suggest that one of the major factors determining the fate of settlements in the post-14th-century era relates to their economic base, with settlements in regions more heavily reliant on open-field arable cultivation being particularly vulnerable.

Expansion

While the vast majority of settlements do demonstrate substantial contraction in the period after the mid-14th century, a small minority, *c*10%, defy this trend exhibiting a clear *increase* in the number of habitative sites in this period. At Nayland, with 50 pits excavated in total, there was a 17% increase in the number producing pottery from 29/50 to 34/50, while at Walberswick there was a 32% increase (from 22/42 to 29/42), and Long Melford showed a 92% increase (from 12/74 to 23/74). Wisbech St Mary showed a rise of 50% (although with only a few pits excavated), and Thorney a 233% increase (from 6/33 to 20/33). Notably, these settlements are all located either in the Cambridgeshire Fenland or in Suffolk. The former is an area where wetland resources and access to waterborne trading routes were important elements of a rural economy diversified beyond agriculture (Oosthuizen 2012), while Suffolk was a county with a large number of markets (Bailey 2007, 118) and a greater than average range of employment opportunities (Bailey 2007, 155), including marine fishing (important at Walberswick, Southwold and Reydon) and textile production (at Long Melford and Nayland). There thus appears to be a clear inverse correlation between contraction and diversified economies offering a range of non-agricultural by-employment.

Stasis

Strikingly few settlements exhibited no change at all in the number of habitative sites when the periods before and after the mid-14th century are compared. In Southwold and neighbouring Reydon, there was no change, while at Writtle there is a relatively insignificant drop of just 8%, and the 17% increase at Nayland could perhaps also be viewed as relatively minor (although here a steep increase in the amount of late-14th–mid-16th century pottery suggests the intensity of activity increased, even if the footprint of the settlement did not). At all other places, however, the number of habitative sites rises or falls by 25% or more. Even where there is minimal change in the overall number of habitative sites, the precise location of this habitation may shift. At Writtle,

the area east of St John's Green sees a marked decline in the number of habitative sites as the settlement overall seems to coalesce around the larger triangular Writtle Green.

PATTERNS OF CHANGE WITHIN SETTLEMENTS

Mapping the distribution of pottery within CORS shows that the decline in the number of habitative sites rarely simply shows a general thinning out. Instead, pottery disappears from some zones while it continues to be found in others. This allows us to infer something about how later medieval communities responded to the demographic disaster of the 14th century and its aftermath. Analysis reveals five trends which are seen sufficiently frequently to suggest they represent meaningful phenomena: withdrawal from nucleated settlement margins; abandonment of 'greens' and 'ends'; withdrawal from recently inhabited plots; atomisation; and church-ward gravitation.

Withdrawal from settlement margins

In a range of nucleated settlements across the region, a pattern of withdrawal from settlement margins is evident. Ashwell (Hertfordshire) was a large nucleated village recorded as a borough in Domesday Book and renowned for the graffiti in its church tower which include text dated to 1349 and 1350 bemoaning the impact of the 'pestilence' the previous year (Hertfordshire HER 4296) and inferring that only a very small number of people remained (Muir 1982). Mapping the finds from a total of 50 test-pits excavated in Ashwell shows that locations producing large numbers of sherds of 12th–14th-century date are found across the entire footprint of the present settlement, from Ashwell Street along its south side to Fordham Close on the north (Figures 16.6 and 16.7). Pottery dating from the 14th to the early 16th century is

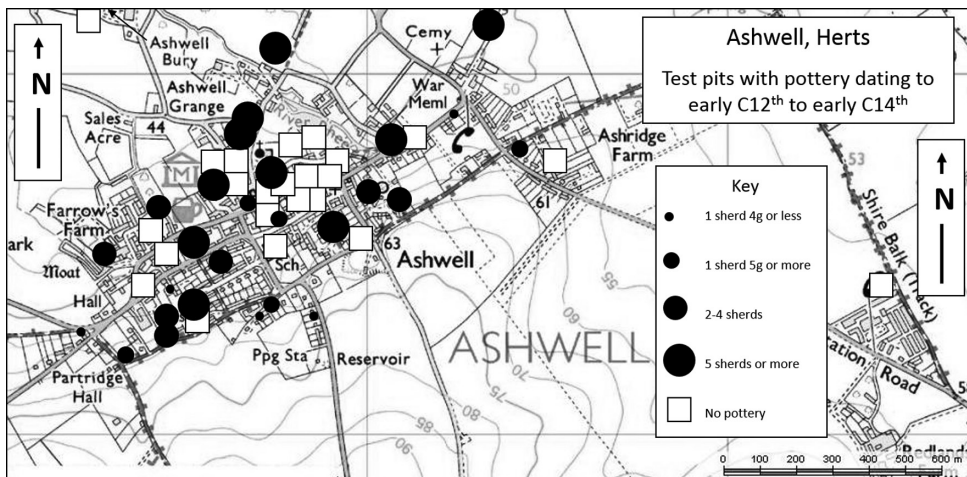


Figure 16.6 Ashwell, Hertfordshire (UK). Test-pits with pottery dating from the early 12th to mid-14th centuries

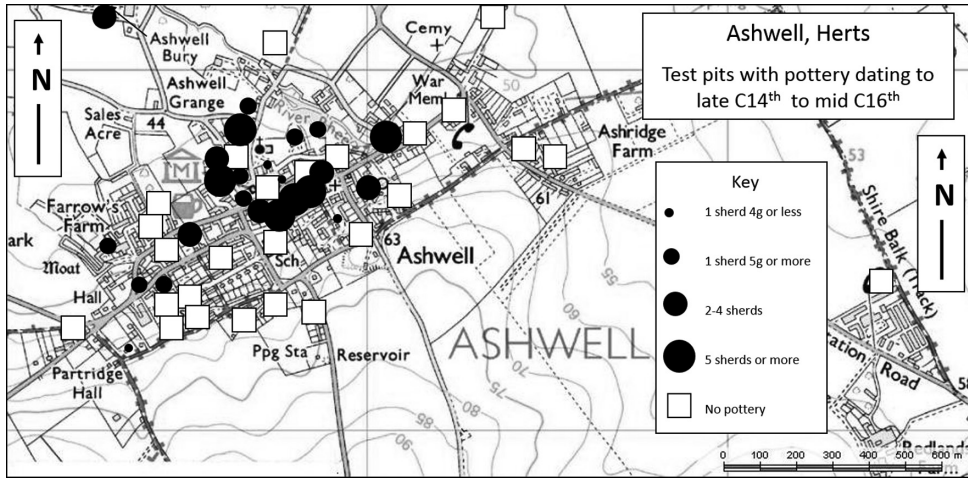


Figure 16.7 Ashwell, Hertfordshire (UK). Test-pits with pottery dating from the late 14th to mid-16th centuries

however largely absent from these zones, suggesting that they were abandoned as the continuing population became more compactly nucleated. A similar pattern is apparent at Acle (Norfolk), where half the 22 pits on the southern, north-eastern and north-western margins of the present settlement produced potentially habitative amounts of pre-14th-century pottery, but only two did so for the later period. At places such as Ashwell and Acle, which were large nucleated villages before the 14th century, the formerly sprawling settlements appear to collapse like dying stars into dense nuclei a fraction of their former size.

Abandonment of dispersed 'greens' and 'ends'

Abandonment of 'greens' and 'ends' is apparent in many dispersed or polyfocal settlements where test-pit excavations were carried out. Hessett (Suffolk) provides one example of this. Here 36 test-pits have been excavated in a parish where 12th–14th-century settlement included a small hamlet around the church, a green to its south and several moated farmsteads dispersed further away. Six of the excavated test-pits were sited in Hessett Green, 50% of which produced potentially habitative amounts of 12th–14th-century pottery but none did so for the 14th–16th centuries. A similar pattern is observable at Coddensham Green (Suffolk) and also at Clavering (Essex), where test-pits have been excavated on 16 sites in greens and farmsteads beyond the main valley-bottom settlement adjacent to the parish church and adjacent motte and bailey castle. Six of these outlying test-pits (38%) produced pre-14th-century pottery and only one (6%) did so afterwards, with sites in Hill Green and Stickling Green both containing pits with more than five sherds predating the 14th century but none post-dating it. The wide distribution across the region of settlements with abandoned greens shows how extensively this phenomenon was experienced. In regions where

greens are less common, the same process appears to affect ‘ends’, which were, like greens, detached irregular dispersed settlements, but arranged along lanes rather than the margins of communal grazing. In the sprawling polyfocal settlement of Shillington in Bedfordshire (Page 1908), 32 test-pits were excavated in 2013–14, 20 of which were sited in four main ‘ends’: Bury End, Hillfoot End, Upton End and Apsley End. 75% of these (15 pits) produced habitative amounts of 12th–14th-century pottery but only 25% (5 pits) did so for the 14th–16th centuries (Figures 16.8 and 16.9). Four of these five were located in Apsley End, which seems to have been less badly affected,

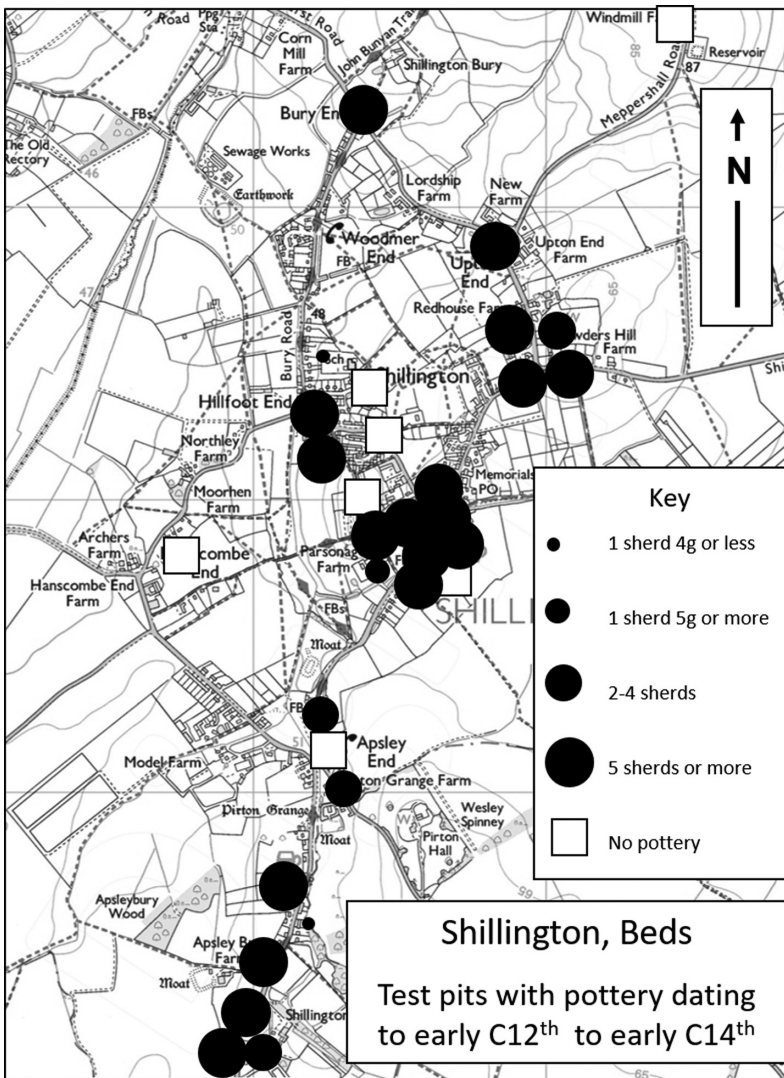


Figure 16.8 Shillington, Bedfordshire (UK). Test-pits with pottery dating from the early 12th to mid-14th centuries

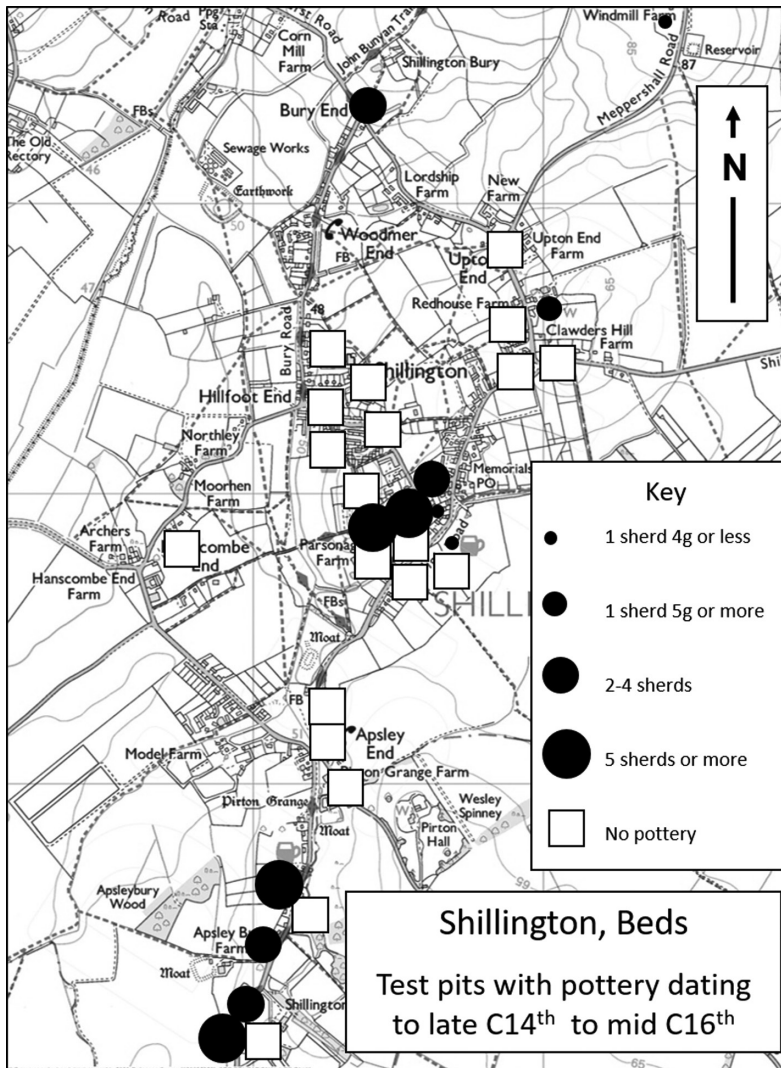


Figure 16.9 Shillington, Bedfordshire (UK). Test-pits with pottery dating from the late 14th to mid-16th centuries

but, as a corollary, Bury End, Hillfoot End and Upton End were almost entirely devoid of post-14th-century pottery, with plots here apparently abandoned in the 14th–16th centuries.

Atomisation

Another frequently observed phenomenon observed in late medieval CORS could be described as ‘atomisation’, in which apparently densely populated 12th–14th-century

settlements develop much more dispersed patterns of habitation in the 14th–16th centuries. The Flaxlands area of Carleton Rode, for example (Blomefield 1806), appears to have been transformed from a densely inhabited linear settlement with adjacent sites producing five or more sherds extending north, south and east of the junction with King Street, to one in which just 4 out of 19 sites produced more than a single sherd of pottery, each separated from its nearest ‘neighbour’ by at least 300 m (Figures 16.10 and 16.11). If the conventional 250 m hailing distance is used to identify separate settlements (Roberts 1987), this is no longer a village but four single homesteads or, possibly, an interrupted row (Dyer 1990). At Gaywood near King’s Lynn, 39 pits showed a 300 m long settlement that had been founded in the 8th or 9th century along the south-eastern bank of the River Gaywood shortly before it joined the River Great Ouse to be reduced by 86% to two tiny nodes separated by more than 0.5 km. At Castor, (Cambridgeshire), where most excavated test-pits across a 400 m square area produced pre-Black Death pottery, only three sites, separated by at least 250 m, did so thereafter. At Sharnbrook, the densely inhabited nucleated settlement which extended for more than 350 m both sides of the eastern end of the High Street before the 14th

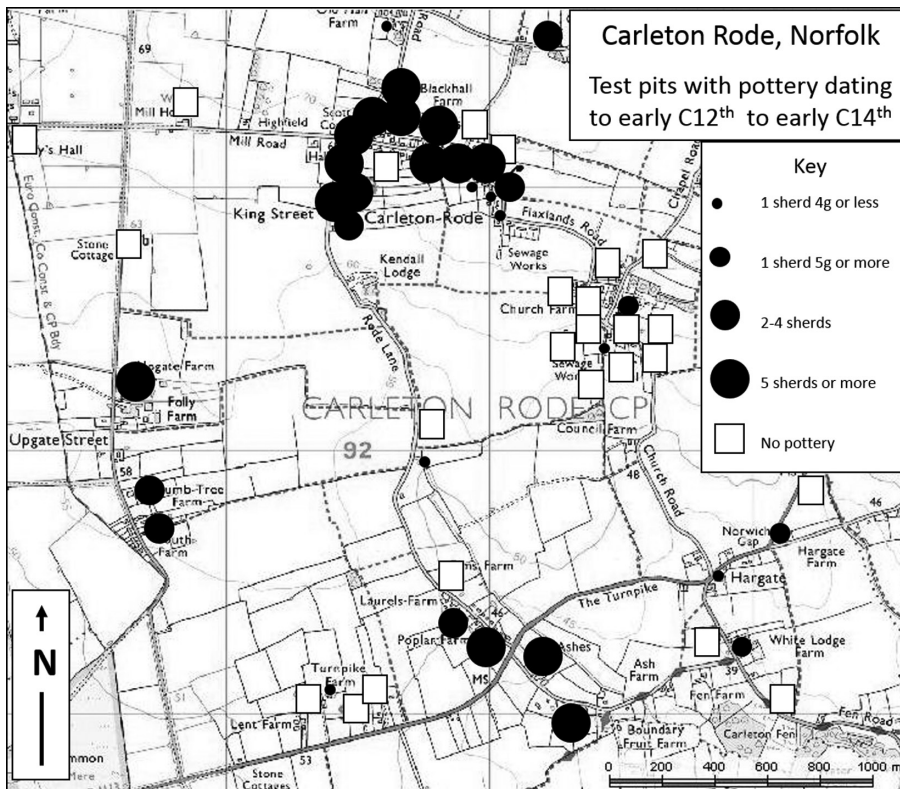


Figure 16.10 Carleton Rode, Norfolk (UK): Test-pits with pottery dating from the early 12th to mid-14th centuries

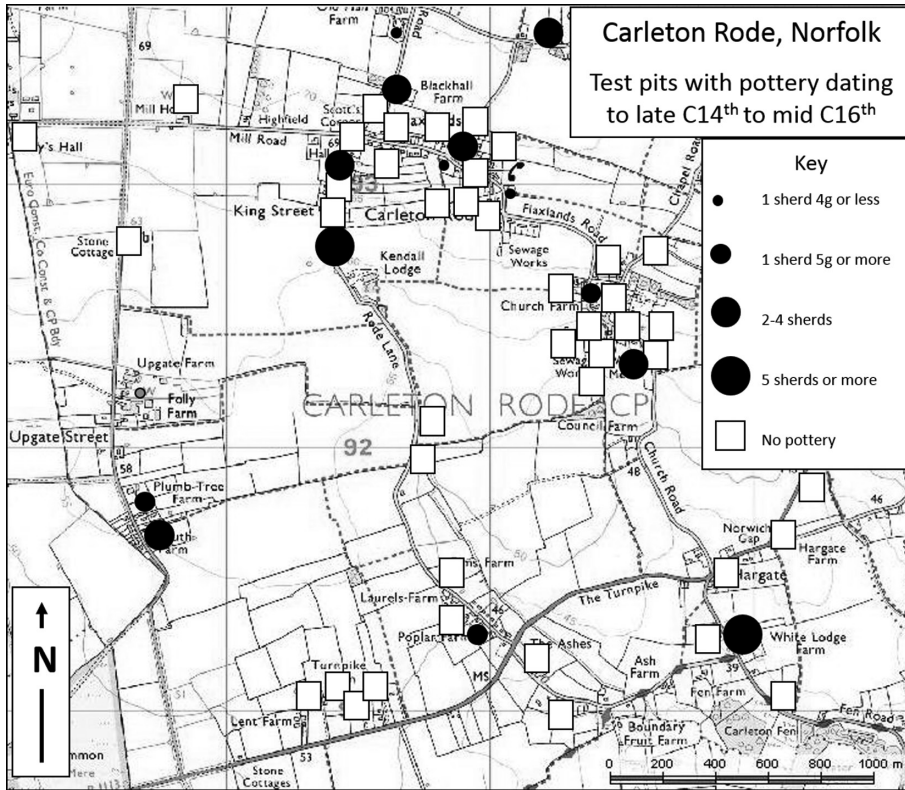


Figure 16.11 Carleton Rode, Norfolk (UK). Test-pits with pottery dating from the late 14th to mid-16th centuries

century subsequently became more intermittent and restricted to only one side of the street. Atomisation is similarly hinted at along Wharham Road at Binham (Norfolk) and in Meldreth (Cambridgeshire) where a continuous spread of pottery-producing pits running for at least 400 m separate out into smaller nodes of habitation strung out as interrupted rows.

Withdrawal from recently inhabited zones

Another commonly observed pattern is a retreat from zones of recent settlement expansion, that is, areas which produced little or no pottery of 9th–11th-century date but did yield sufficient quantities of pottery to indicate habitation dating to the 12th–14th centuries. Such zones appear to have been particularly prone to almost total abandonment after the 14th century. At Great Shelford in Cambridgeshire (Baggs *et al* 1982), for example, such a pattern is evident at opposite ends of the village, at both Maris Green and Kings Mill Lane, but is also apparent to some degree in most settlements where any pre-12th century pottery has been found. At Cottenham, for example, also

in Cambridgeshire, six test-pits were excavated in the area nearest the 12th-century church, which may have been complemented by another now-lost church close to the centre of the present settlement (Wright and Lewis 1989b), where the settlement was laid out over strip fields (Taylor 1983, 156–159). Half of these pits produced habitative amounts of 12th–14th-century pottery but none did so for the periods before or after. Similar patterns are evident in the now-conjoined villages of Houghton and Wyton in the areas north of the market place in Houghton and around the church at Wyton. It can be seen again at Hessett Green in Hesse; along Callis Street in Clare; at Coddensham Green and Hall Farm in Coddensham; along Beulah Street in Gaywood; at Hillfoot End, Upton End, High Road and Apsley End in Shillington; at Barrowcrofts End in Histon; along High Street and Cow Lane in Rampton; and along Chapel Lane in Wiveton.

This pattern is in fact so widely apparent that exceptions to it become noteworthy: Great Green/Bury End in Pirton; Commercial End in Swaffham Bulbeck; High Street and Little St Mary's in Long Melford; and Cross Road and Church Street in Sudbury are some of the few instances where streets which appear as new settlement extensions in the 12th–14th century did *not* exhibit severe post-14th-century depopulation. As a corollary, in most cases, the recovery of habitative amounts of 9th–11th-century pottery is associated with continued use of the site in the 14th–16th centuries. Brookside in Toft (Cambridgeshire) is a rare exception, a zone of late medieval desertion which does appear to have pre-12th-century origins.

Church-ward gravitation

In many of the settlements, the post-14th-century habitative footprint indicated by test-pit data sees a marked trend for surviving settlement to gravitate *towards* the parish church. This is widely evident, including in nucleated settlements such as Ashwell, discussed above, where the formerly sprawling footprint contracted to focus tightly around the parish church after the 14th century. At Wiveton, 23 pits were excavated, indicating that in the 12th–14th centuries, the linear village extended for more than 600 m north of the church along the west bank of the tidal River Glaven, but was reduced in the 14th–16th centuries to a small core extending for barely 200 m beyond the church as the number of pits producing two or more sherds dropped from 11 to just 4, a third of previous levels. This church-ward gravitation is not a phenomenon exclusive to nucleated settlements, as it can also be seen at places such as Clavering, Hessett, Little Hallingbury and Shillington. At Little Hallingbury, for example (Powell 1983), a highly dispersed pattern of 12th–14th-century settlement evident in test-pits in as many as seven different places across the large parish including three greens (Figure 16.12) is very different to the 14th–16th-century pattern (Figure 16.13), in which just two areas produce habitative amounts of pottery, the larger of which is tightly clustered west of the church.

Church-ward gravitation can also be seen at places which do not appear to have suffered from late-medieval contraction, such as Long Melford and Walberswick. At Long Melford, settlement in the high medieval period extended intermittently for nearly 3 km and appears to have been arranged as four discrete rows, the most restricted of which was near the present parish church. After the 14th century, however, when

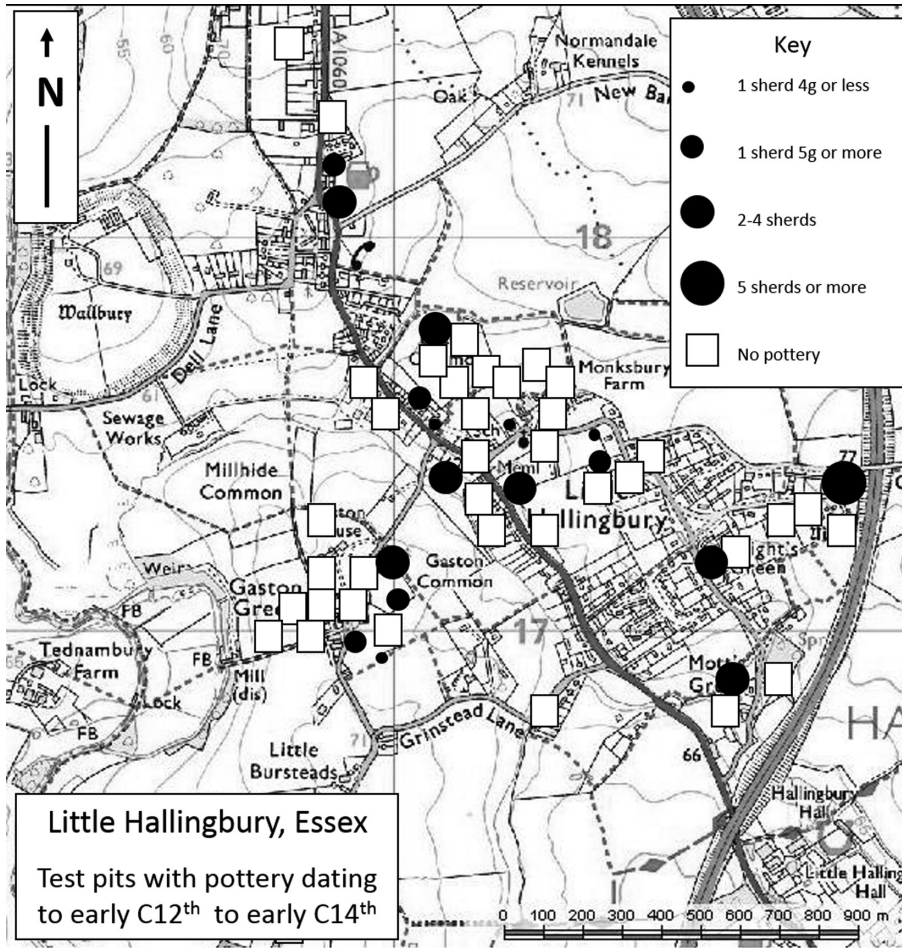


Figure 16.12 Little Hallingbury, Essex (UK): Test-pits with pottery dating from the early 12th to mid-14th centuries

all parts of the settlement expanded, the greatest increase was in the area around the church. In the coastal village of Walberswick, the settlement appears to have extended inland around the time when the extant early 15th-century church was built, possibly replacing an earlier church south of the present village (Suffolk HER WLB 010; WLB12), with test-pits north and west of the church producing little or no pre-14th-century pottery, but substantial quantities of later material.

DISCUSSION

In the two or three centuries before the Black Death, the pattern from the test-pit data seems to be one of almost universal expansion: the number of habitative sites increased

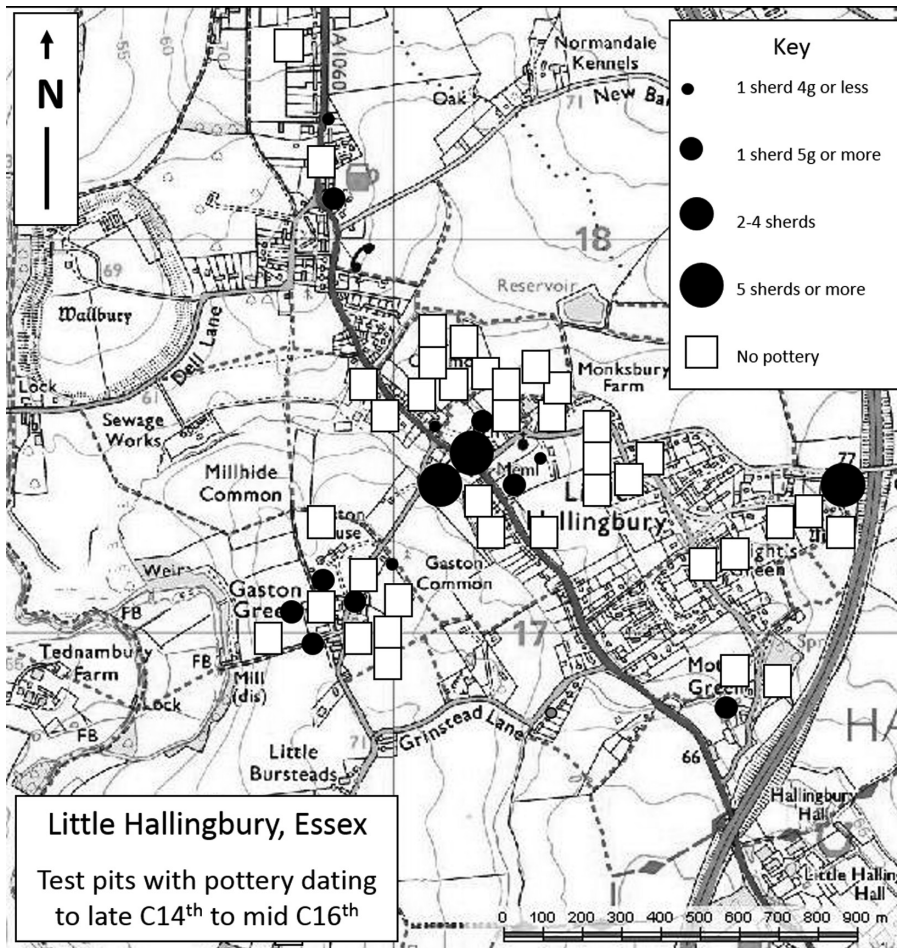


Figure 16.13 Little Hallingbury, Essex (UK): Test-pits with pottery dating from the late 14th to mid-16th centuries

at least three-fold in half the CORS in the East Anglian settlements and more than doubled in most of the remainder (Figure 16.14). New settlements were founded and existing ones expanded or acquired detached satellites in the form of isolated homesteads and hamlets, including many 'ends' and 'greens'. In contrast, in the two centuries after the Black Death, the number of habitative sites dropped by nearly 50%, with 'champion' areas affected particularly badly (Figure 16.15). The patterns shown by the test-pit data are not all amenable to analysis, not least because they are far from complete, but one over-arching trend is clear: settlements experienced profound changes in the wake of the demographic collapse of the 14th century. A number of observations can be made, bearing in mind that the test-pit data reveals patterns resulting from processes enacted by humans deciding where they or others should live and work (Dyer 2010).

THE IMPACT OF DISASTERS ON RURAL ENGLAND

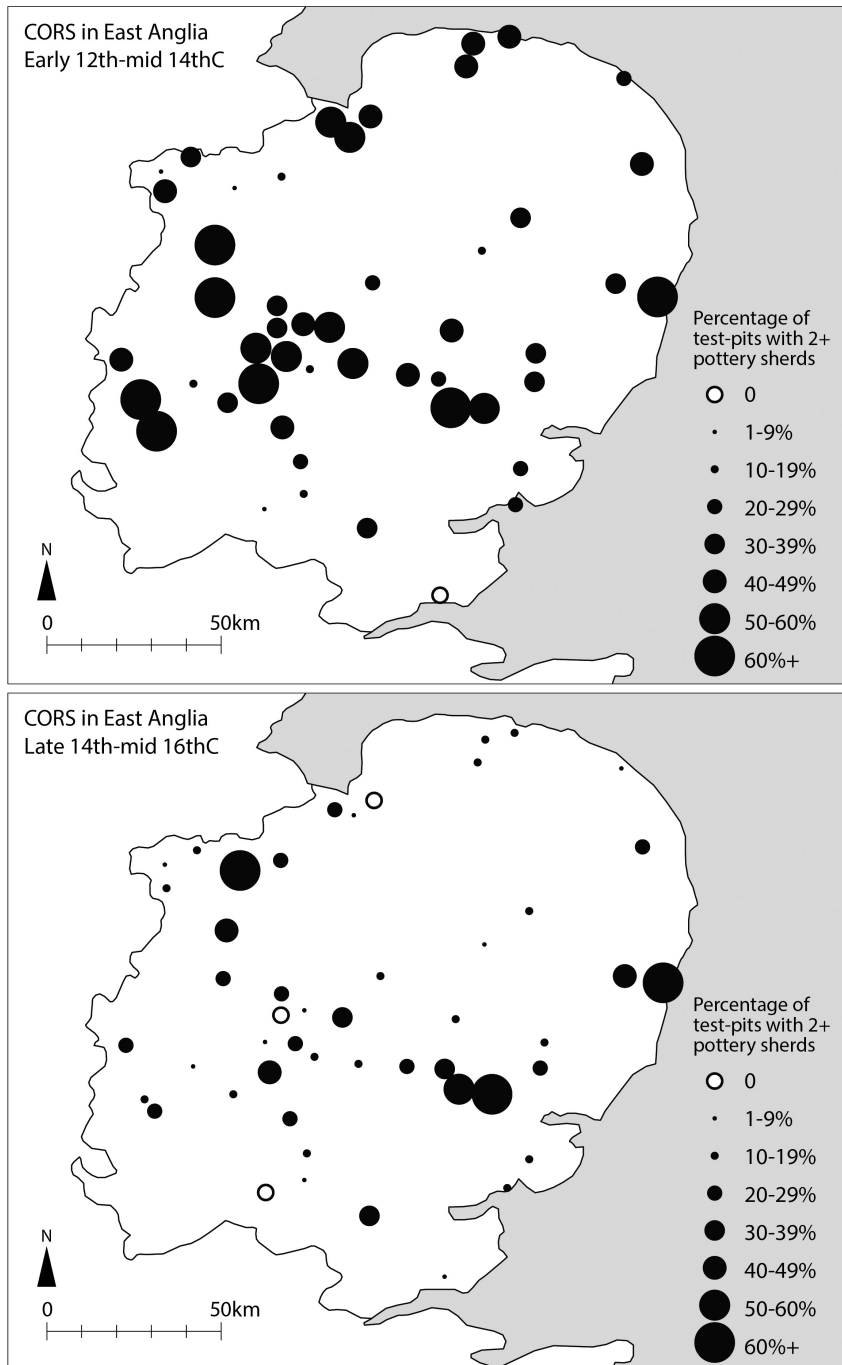


Figure 16.14 Comparative maps of East Anglia (UK) showing CORS results

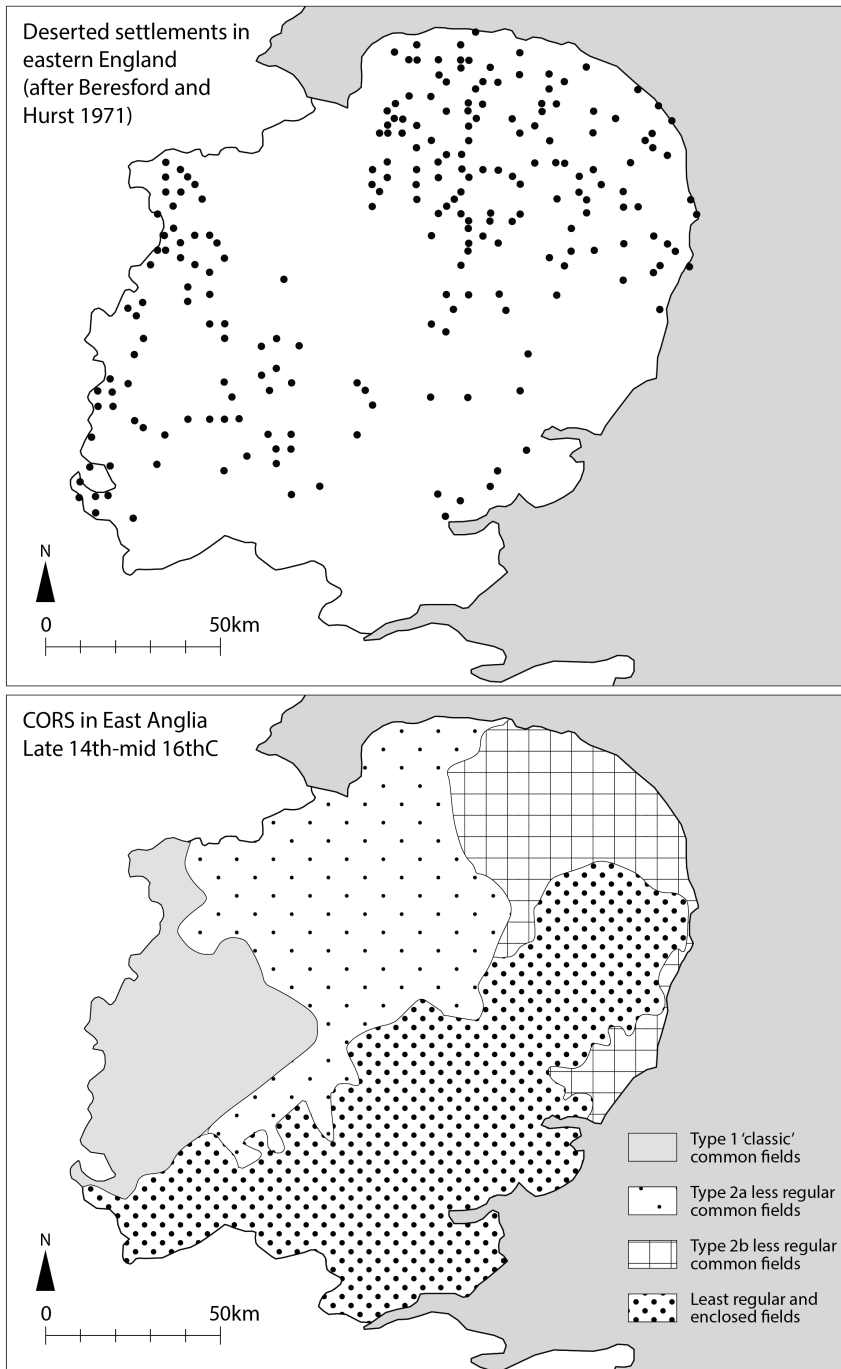


Figure 16.15 Maps of East Anglia (UK) showing the distribution of deserted settlements and medieval farming regions

It might seem that the main trends identified within this overall pattern of contraction (withdrawal from settlement margins; abandonment of 'greens' and 'ends'; withdrawal from recently inhabited plots; atomisation; church-ward gravitation) contradict each other, as withdrawal from settlement margins and atomisation might seem to. But this probably reflects the reality that different settlements responded in different ways: some became more nucleated as outlying sites were abandoned, while others became less nucleated as settlement atomised. In some places, different processes affected different parts of the same settlement; in others they did so at different times. This highlights an important point: that settlement trajectories are very diverse, with different settlements following different paths even when located in the same area. Pirton and Shillington, for example, are adjacent parishes but the settlements developed very differently before and after the 14th century. Clare and Long Melford are less than 10 km apart but appear to have been very differently affected by the demographic turbulence of the 14th and 15th centuries. This individuality in settlement trajectories has been noted in recent research in other areas such as Whittlewood (Jones and Page 2006).

In some of the East Anglian CORS, the test-pit data give some support for the 'Malthusian' theory that the demographic catastrophes of the 14th century impacted particularly severely on settlements with high population densities. On average, around 40% of excavated pits produce habitative amounts of high medieval pottery, but in some settlements that figure is much higher, indicating particularly high population densities. Such places include Pirton, where 80% of pits produced 12th–14th-century pottery; Houghton (62%); Great Shelford (54%); Gaywood (54%); Rampton, Wiveton and Castor (all 48%); Acle (47%); and Hillington, Hindringham and Shillington (all 42%). All of these places experienced above-average drops in the number of habitative sites after the 14th century. It should be noted that the quantity, range and extent of 12th–14th-century pottery from these settlements suggests that these were not places which had experienced short-lived over-expansion, but had sustained a prolonged period of high population density over several generations in the 12th and 13th centuries.

It is also pertinent to note that the correlation between high population and severe late-medieval contraction does not pertain in all places. 65% of test-pits in Sudbury, for example, produced high-medieval pottery, but as noted above, it experienced a relatively modest post-14th-century decline of just 25%, as did Swaffham Bulbeck, where 50% of pits produced 12th–14th-century pottery. At Nayland and Walberswick (where 58% and 52% of excavated pits produced 12th–14th-century pottery), the number of habitative pits, as noted above, actually rose in the post-Black Death period to 68% and 69% respectively. There is considerable variation in the impact of high population density, which appears to have been very sustainable in places with broad and diverse economies.

The test-pit data also show how people made selective and strategic use of new opportunities after the 14th-century population collapse. Zones which had been newly inhabited in the 12th–14th century seem to have been particularly prone to abandonment after the mid-14th century. These are often on the margins of settlements or in places which were less amenable for settlement, which we can speculate were only used for habitation *in extremis* as population pressure increased, and were abandoned

as soon as the opportunity to take up a more favourable vacant plot presented itself. This phenomenon is commonly used to explain settlement shift. One example of this is Kings Mill Lane in Great Shelford, which occupies low-lying land near the river which is prone to flooding according to Environment Agency maps; eight test-pits in this area produced minimal medieval pottery predating the 12th century, substantial amounts dating to the 12th–14th centuries and almost none dating to the later 14th–16th centuries.

The selective abandonment of greens and ends hints at similar strategies rejecting less-favourable habitative zones, as such locations are both remotely located and latterly adopted. A pattern for common-edges and parish margins to produce little or no pre-12th-century medieval pottery and none for the later 14th–16th centuries has also been noted in field-walking elsewhere in Norfolk (eg Davison 1990), but the test-pit data allow the same pattern to be contextualised against the pattern of occupation within settlements, allowing more informed speculation as to precisely where people were favouring, rather than simply identifying the places they were rejecting.

The observed trend for areas near parish churches to be favoured for habitation in the last centuries of the medieval period may simply reflect the tendency for removal of habitation from outlying sites into settlement centres attracted by the opportunity of living close to the centre of the community. However, it may also hint at a more ideologically driven attraction towards sacred sites. The impact of the mass mortality of the Black Death on attitudes to death and the church has been much debated, with the proliferation of chantry chapels, an increase in death-related memorial imagery and substantial expenditure on ostentatious church building all cited as evidence for a renewed preoccupation with mortality and interest in spiritual investment (eg Bettley 1987; Morris 1989; Platt 1997). It is tempting, therefore, to speculate that the observable pattern of gravitation towards churches observed in the later medieval test-pit data may reflect an increased desire to benefit from the perceived protective power of Christian divinity through greater spatial proximity to church buildings.

Considering the observations above in the wider context of attitudes to hazard and risk which is the subject of this volume, it is possible to speculate that the test-pit data are providing some evidence for the strategies people used to make themselves or their communities more resilient. At one level, the choice of which locations to inhabit—or avoid—may simply reflect pragmatic opportunism, but the data indicating church-ward gravitation hint at other more ideological factors shaping attitudes to risk management. Locations close to the long-established core of the settlement which were also nearer to the church may have offered a double sense of protection derived from the proximity of neighbours as well as that of the church; this may have enhanced contemporary communities' resilience by enabling them to feel better protected.

Looking at this in more detail in the context of the later medieval popularity of St Mary the Virgin (Jones 2007, 84), including in association with disasters, it is interesting to note a slightly higher-than-average number of Marian church dedications amongst settlements exhibiting severe contraction and/or church-ward gravitation. In this study, 45% (9) of the 20 settlements worst affected by post-14th-century contraction have Marian dedications, as do 50% of the settlements exhibiting clear post-14th-century church-ward gravitation; this contrasts with average numbers of Marian dedications in eastern England, ranging from 14% (Huntingdonshire) to 34%

(Hertfordshire) (Bond 1914; Jones 2007, 81). Examining this question in detail is beyond the scope of this chapter, but it should be noted that the correlation between Marian dedications and severe contraction may simply result from antecedent processes, as Mary appears to have been favoured by agrarian communities (Jones 2007, 179–180), and in north Norfolk, Marian dedications were possibly encouraged by the proximity of the shrine at Walsingham. Nonetheless, as the settlements included in this study were all places whose population did ultimately recover, it is possible to speculate that the perceived apotropaic effect of a church, especially one dedicated to Mary the Virgin, may have been one factor affecting people's decisions about where to live—or to whom their church should be dedicated.

Overall, the test-pit data reveal a major shift in population away from the sheep-corn open-field villages in champion regions which appears to have started in the 14th century, with many formerly teeming villages eviscerated. The data suggest that in champion areas, every single settlement contracted, with this contraction averaging over 50%, but it also suggests that other areas saw less extensive negative impact, with perhaps only around half of settlements contracting in regions such as Suffolk and Fenland, and perhaps a quarter actually growing at this time. No single standard trajectory is followed as people made different decisions in different places about how and where they or others should live—in places such as Great Shelford the settlement seems to retreat to its Saxon-Norman footprint, while in others such as Pirton, the post-14th-century settlement layout is very different to that of the 9th–11th centuries. There is, however, evidence to suggest which locations within settlements were frequently preferred, and these tended to include areas of long-standing habitation and those near churches, while outlying remote locations seem often to have been rejected.

CONCLUSION

The famines and epidemics of the 14th century were, by any standards, disasters for those who experienced them, whether they lived or died, cumulatively reducing the population across much of Europe by around half. In England, the lack of 'before and after' documentary records for population numbers, combined with the difficulty of conducting archaeological fieldwork in most of the places where people lived, has made it difficult to ascertain the impact of this demographic turbulence on rural settlements; too many pieces of this jigsaw have been missing. Pottery data from test-pit excavations has put some of those lost jigsaw puzzle pieces into place by reconstructing the development of currently occupied rural settlements.

The excavation of more than 2,000 test-pits in currently occupied rural settlements in East Anglia has indicated that, contrary to previous presumptions, 90% of rural settlements decreased in size or density in the 14th–16th centuries. This suggests that settlement contraction after the 13th century was much more widespread than has previously been evident: it seems that contraction was a near-universal experience, not a phenomenon restricted to the minority of settlements which are today defined as deserted or shrunken. Across swathes of north Norfolk, south Cambridgeshire and north Hertfordshire, every single test-pitted CORS shows a substantial reduction in the number of habitative sites, with some of the most profound drops in size within individual settlements of 70% or above. These are areas which also contain relatively

high densities of deserted medieval settlements. Taken together, this is significant for our understanding of the impact of later medieval demographic crisis because it contradicts the suggestion that settlement contraction was caused by people leaving a minority of failing settlements for more resilient neighbours—because it is now apparent that those neighbouring settlements *also* contracted. *Within* settlements, while many zones were abandoned after the mid-14th century, there are almost none which were added at this time.

The settlements included in the East Anglian test-pit excavation programme represent, of course, only a small percentage of all medieval settlements in just one region; nonetheless 2,000 pits is a statistically useful number, and similar patterns are becoming apparent from test-pit projects in CORS elsewhere where pottery yields pre- and post-dating the 14th century have been compared. In the Whittlewood Forest area, bordering Northamptonshire and Buckinghamshire, for example, Jones and Page (2006, 201–221) noted that fieldwork including test-pit excavation in a dozen parishes showed that contraction after *c*1350 affected *all* the investigated settlements (villages and hamlets, deserted and inhabited). At Kibworth in nearby Leicestershire, the excavation of 43 test-pits showed that the number producing habitative amounts of pottery drops from more than 70% to less than 10% after the 14th century (Lewis 2009). At Market Bosworth, also in Leicestershire, excavation of 25 pits in 2017 produced 8,534 finds and indicated a 44% drop in activity between the 13th and 15th centuries (Morris 2017). At Reeth in north Yorkshire, excavation of 27 pits showed a halving in the number of sites producing pottery (Mills and Denison-Edwards 2014).

At the beginning of this chapter, it was noted that contraction has been widely overlooked as a significant factor in the development of most settlements after the 14th-century demographic disaster. The data from test-pits in CORS in East Anglia contradicts that, indicating that in the aftermath of the 14th-century demographic collapse, nearly all—perhaps around 90%—rural settlements contracted in size, with many places, including those today apparently entirely unscathed, severely depopulated by 70% or more. Champion region areas were particularly badly affected, but mixed-economy places were not unscathed. In terms of the impact on individual settlements, outlying elements of dispersed settlements were some of the most severely affected, as were areas on the edges of nucleated villages and areas which had been newly settled as the population grew over the 12th–14th centuries. Some settlements fragmented while others collapsed in on themselves, with long-established zones and those close to the church and to neighbours particularly attractive as jeopardy stalked opportunity in the wake of the 14th-century demographic disasters.

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