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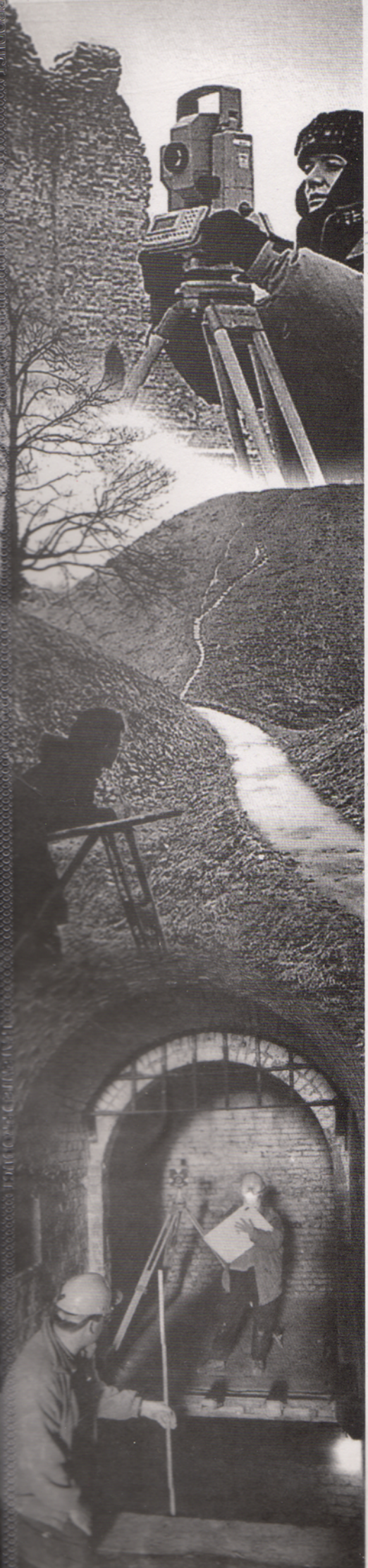

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Alastair Oswald

SURVEY REPORT

Archaeological Investigation Report Series AI/19/2004

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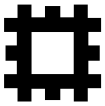

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WHARRAM PERCY

DESERTED MEDIEVAL VILLAGE,

NORTH YORKSHIRE:

ARCHAEOLOGICAL INVESTIGATION AND SURVEY

ISSN 1478-7008
Archaeological Investigation Report Series AI/19/2004

County:	North Yorkshire
District:	Ryedale
Parish:	Wharram
NGR:	SE 8583 6436
NMR No:	SE 86 SE 4
SAM/ RSM No:	13302
SMR No:	SE 86 SE 4
Date of survey:	January - November 2002
Surveyed by:	Alastair Oswald, Trevor Pearson, Stewart Ainsworth, Abby Hunt and Ian Goodall
Report author:	Alastair Oswald, with a contribution by Ian Goodall
Illustrations by:	Philip Sinton and Alastair Oswald

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World Wide Web: http//www.english-heritage.org.uk

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1. INTRODUCTION

Over the course of 2002, English Heritage carried out an archaeological investigation and survey of the earthworks of Wharram Percy in North Yorkshire, unquestionably the best known deserted medieval village in England. Deserted villages are not rare: about 130 sites survive to some degree in eastern Yorkshire alone and there are an estimated 3,000 in the country as a whole. Wharram Percy is certainly among the most extensive and best preserved of these, but it really owes its exceptional fame, especially within the archaeological community, to the Wharram Research Project, a programme of survey, excavation and historical research undertaken over the course of forty years between 1950 and 1990. From its outset, the findings of the project proved of key importance to the study of medieval rural settlement in England and they are set to remain so for some considerable time to come. Through the project, the site has also been used as a testing-ground for archaeological field techniques, such as 'landscape archaeology', 'open-area excavation' and the investigation of churches through excavation. For all these reasons, Wharram Percy was among the first deserted medieval villages to be recommended for statutory protection; though the land remains part of the Birdsall Estates, the site has been managed in Guardianship by English Heritage and its predecessors since 1974 and is open to the public all year round.

The deserted village lies in farmland towards the north-western edge of the Yorkshire Wolds, 1km south-west of the 'shrunken village' of Wharram le Street and in the civil parish of Wharram, centred at National Grid Reference SE 8583 6436. It is set on the western edge of Deep Dale, a narrow valley typical of this part of the Wolds, through which a minor unnamed stream flows northwards to join the River Derwent. The medieval village primarily comprises the earthwork remains of 'tofts' (house plots, made up of houses or small

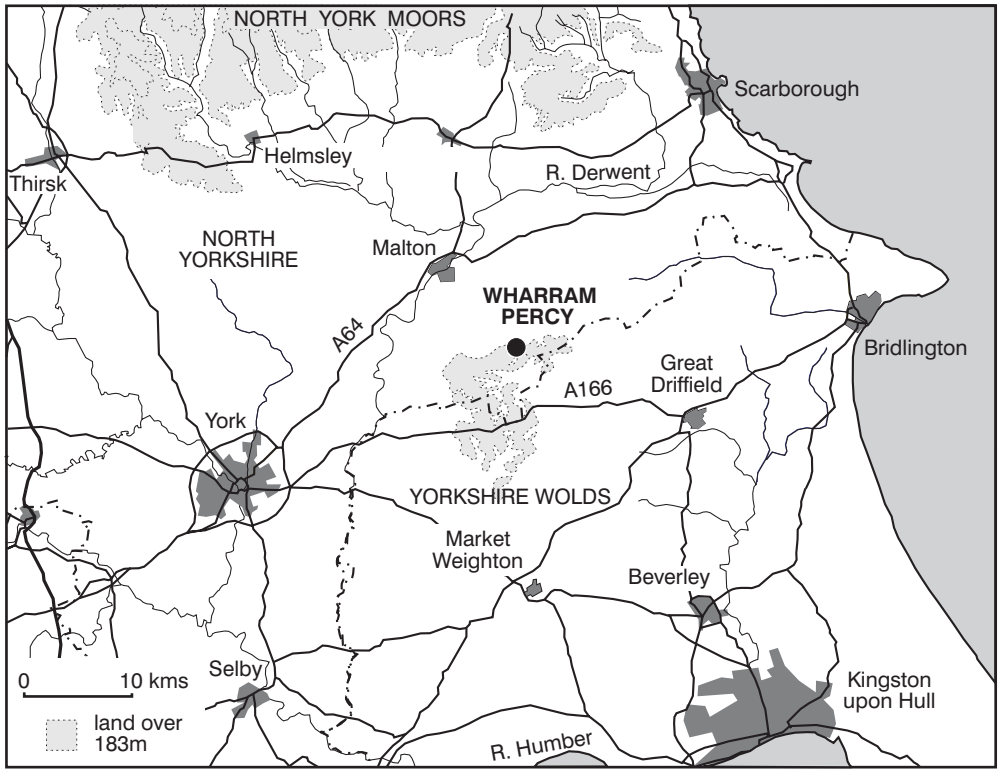


Figure 1
Location map

farmsteads with their associated enclosed yards or gardens, known as 'garths') and adjacent 'crofts' (enclosed strips of arable land). The plots are arranged in three or four rows fronting onto several streets, and the consistent size of the plots together with the regularity of the overall pattern suggests that the layout of the village was deliberately planned, though not necessarily in a single episode. There are two main streets: one obliquely ascending the western side of the valley and another running along the edge of the adjacent plateau. Between these two, the steep scarp of the valley side effectively forms a triangular green. Wharram Percy Cottages, a row of three 19th-century labourers' cottages which lies near the ruined church, was occupied until the mid-1950s, but by 2002 was unoccupied and falling into disrepair. The closest permanently occupied buildings are Wharram Percy Farm and Bella Farm, each of which lies nearly a kilometre from the centre of the village. The tranquil and picturesque setting of the deserted village lend the site an aesthetic quality which, together with the fact that it lies on the route of the Wolds Way long distance footpath, make it a popular visitor attraction.

In the wake of the Wharram Research Project, a consensus was reached that it was appropriate to produce a synthesis of all the research as the final volume in the series of published reports. The plan of the earthworks available while the project was under way was surveyed by a number of individuals, at various scales, intermittently over the course of twenty-five years. Since most of the survey work coincided with the summer campaigns of excavation, vegetation conditions were seldom ideal for the recognition and interpretation of slight earthworks. Furthermore, as the excavations progressed and it became apparent that the sub-surface remains were more complex than had at first been anticipated, the questions posed with regard to the earthworks became increasingly sophisticated, demanding re-appraisal of the earlier observations. As a result, while the excavations were in progress, the potential offered by the earthworks for understanding the context of the excavated samples could not be fully realised. Therefore, in January 1998, Dr Stuart Wrathmell, responsible for co-ordinating the publication programme, proposed that a fresh analytical earthwork survey and investigation, coupled with comprehensive geophysical and aerial surveys, should be undertaken to accompany the synthesis of the excavated evidence. Fortuitously, in 2001, English Heritage's Yorkshire Region team began the preparation of Conservation Statements to lay the foundations for detailed Conservation Plans for each monument in Guardianship within its area of responsibility. This study also concluded that the earthworks would benefit from re-examination, especially with a view to producing a range of new plans from a metric digital base for visitor interpretation boards on the site (English Heritage 2002). These two needs culminated in the investigation undertaken in 2002, which was partly funded by English Heritage through the Wharram Research Project.

The deserted village is protected as a Scheduled Ancient Monument (RSM 13302) and is managed by English Heritage as a Guardianship site, whose extent corresponds for the most part to the present limit of the pasture. The village's ruined church, St Martin's, is also a Grade I Listed Building. The deserted village is recorded in the Sites and Monuments Record (SMR) for North Yorkshire and in the National Monuments Record (NMR) as SE 86

SE 4. The English Heritage field investigation, which covered an area of 31.5 hectares (78.0 acres), was carried out in detail, at Level 3 standard (as defined in RCHME 1999, 3-4), and produced, in addition to this report, a plan of the village and its immediate environs at a scale of 1:1 000.

2. GEOLOGY, TOPOGRAPHY AND MODERN LAND USE

The Yorkshire Wolds, which rise to between 150m and 230m above mean sea level, are made up of cretaceous chalk and the appearance of the landscape owes much to this geological background, being intensively farmed and sparsely wooded (Allison 1976, 22). Since the upper layer of the chalk contains almost no flints and erratic boulders deposited by glacial action are also rare, there is no local building stone apart from the chalk itself, and this is reflected in the local architecture. Deep Dale, which Wharram Percy overlooks, follows a serpentine course from south to north through the chalk uplands, joining the broader valley of the Settrington Beck some 3kms west-north-west of the village. For much of its length, Deep Dale is a narrow, steep-sided dry valley like many others in the area, its sharply incised channel cut into the frozen land surface during the last Ice Age by a sub-glacial stream. The deserted village lies mid-way along the valley, on its western side, just north of its confluence with the shorter but equally dramatic tributary valley now called Drue Dale. In this area, bands of cretaceous chalk of various formations overlie a band of impermeable Jurassic Clay, which has been erroneously called Kimmeridge Clay on early Geological Survey maps (Ordnance Survey 1966; British Geological Survey 1993). These geological conditions have given rise to a number of springs at the bottoms of the valley sides. Three of the strongest of these, which lie on opposite sides of the mouth of Drue Dale, are collectively the source of a small un-named stream. Augmented by six other minor springs in the vicinity of the village, the stream flows northwards to join the Settrington Beck and eventually the River Derwent. Springs are rare across the Wolds as a whole and proximity to a fresh water supply may have been a factor in the distribution of settlements, but they are relatively numerous in the environs of Wharram Percy. The proximity of the water table to the surface has also led to rapid soil creep on the valley sides and a number of major landslips, on both sides of Deep Dale and along the southern side of Drue Dale. One such slip, which must have occurred prior to the Iron Age, since features of that date have been discovered there, seems to have been responsible for creating the broad terrace occupied by the village church. Similar geological circumstances on the western escarpment of the Lincolnshire Wolds have produced an almost identical pattern of distortion on a larger scale (Everson *et al* 1991, 3 and fig 6).

In terms of land-use, the gently undulating ground on the tops of the Wolds, with its thin but light chalky soil, is well suited to arable cultivation. It is clear from the pattern of later prehistoric and Roman settlement and land divisions that agriculture must have been quite extensive from an early date (Stoertz 1997). Documentary evidence shows that by the late 13th century, if not before, the whole region was farmed intensively for wheat and especially barley, both through monastic granges and by the lay community, and the volume of production was apparently well above a subsistence level (Waites 1968, 140-2). Sheep and cattle continued to play an important role in the rural economy and a variety of other crops including rye, oats, peas, flax and hemp were grown. From the beginning of the 16th century, the sharp increase in sheep farming which accompanied the growth of the wool industry was responsible both for the final desertion of many villages like Wharram Percy and for

their fossilisation in earthwork form. Yet with the gradual demise of the wool industry between the mid-18th century and the early 19th century, much of the grazing land in which the medieval earthworks had been left undisturbed was once again ploughed up (Harris 1996). This process accelerated after the Second World War, to the point where steep-sided valleys such as Deep Dale became some of the last surviving islands of pasture in a sea of arable.

Undoubtedly in part because of the archaeological interest shown in Wharram Percy throughout the post-war period, most of the site was preserved intact under pasture. This area is referred to below as the 'Guardianship Area'. A few isolated ash and hawthorn trees still stand on the courses of post-medieval hedgelines, while around the fringes of the site, several small plantations of ash, hornbeam, and lime were planted in the 1980s. On the slope east of Wharram Percy Cottages, a scatter of fruit trees was planted to replace those once cultivated by the occupants. These, together with various unfenced pockets of scrub, particularly around the church and adjacent pond, contribute to the ecological diversity and general air of picturesque abandonment. As part of the Birdsall Estates owned by Lord Middleton, the pasture is regularly grazed by cattle, although fences keep the stock away from the buildings and the pond in the valley bottom. The eastern side of the valley (where much of the ground is permanently boggy) and the northern part of the valley floor has been occupied by Nut Wood since at least 1836. Shown as a mixture of deciduous and coniferous trees on an estate map of that date and similarly but in greater detail on the First Edition 6-inch scale Ordnance Survey map surveyed in 1851, the area was replanted in about 1948 and now comprises a block of Norwegian Spruce and another of beech (Dykes 1836; Ordnance Survey 1854; St Joseph 1948). Scrub, principally comprising hawthorn and blackthorn, has taken hold over much of the rest of the slope. However, there are very few archaeological remains recognisable on the surface in these areas. Tunnel Plantation, a beech wood which adjoins the eastern edge of Nut Wood, was probably planted very soon after the completion of the Burdale railway tunnel in 1853.

Other than the planting mentioned above, the village's treatment as a visitor attraction by the Wharram Research Project and by English Heritage has had relatively little impact on the appearance of the site. The nearest car parking is provided 600m to the east and most visitors arrive via the Wolds Way long distance footpath, which was diverted to pass through the valley with the approval of Lord Middleton. The pond adjacent to the church was cleaned out and replanted as an ornamental feature in the wake of excavations carried out between 1972 and 1981. However, due to the destruction of a timber sluice, it had once again become severely silted by the time of the investigation in 2002. Although the wall-lines of several of the excavated structures around the village were marked out with gravel, interpretation boards have been kept to a minimum and those that existed at the time of the investigation in 2002 were due for review.

3. HISTORY OF RESEARCH

The notion of deserted medieval villages was generally regarded with great scepticism by academics until the late 1940s, when the production of a number of regional studies began to provide evidence for their widespread existence. Professor Maurice Beresford of Leeds University, the economic historian whose seminal book *The Lost Villages of England* was first published in 1954, has rightly been credited with the promotion of the topic as a matter of serious research. Nevertheless, it is clear that amongst the wider populace, some memory of the former existence of such villages persisted in many instances, their desertion often attributed to fire, plague or divine wrath (Beresford and Hurst 1990, 15; Wrathmell 1996, 7). In the case of Wharram Percy, the evidence for such a popular memory is not clear cut: the only name to appear on early maps is that of Wharram le Street. On John Speede's 1610 maps of Yorkshire and the North and East Ridings of the county, a church was depicted, annotated respectively 'Wharum in y^{e} Stret' and 'Wharum'. Moll's 1720 map of the county applies the latter name, while Bowen's 1750 map does not depict even the church. However, beginning with the publication in 1771 of Thomas Jefferys' map of the county, surveyed between 1767 and 1770, a series of maps also record the name Wharram Percy (in various forms). This may indicate that the name had remained attached to the church and the adjacent farmstead and perhaps that some knowledge of the former existence of the village had lingered on.

As the large-scale mapping of Britain progressed in the first half of the 19th century, Ordnance Survey officers would inevitably have become acquainted with such local lore in the course of their protracted campaigns of fieldwork. Captain John Bayly, who was responsible for overseeing the survey of many of the map sheets covering the Wolds, ordered the depiction of the earthworks of Wharram Percy in some detail on the First Edition map at 6-inch scale (1:10 560), surveyed in 1850-1 (Ordnance Survey 1854 and Figure 2). He also correctly identified them, presumably partly on the basis of information gained from local informants and the earlier maps mentioned above, as the 'Site of the Village of Wharram Percy'. Beresford and Hurst (1990, 18) have regarded this as something of an anomaly, attributable to Captain Bayly's personal interest, but his working practice would in fact have been fairly strictly governed by military procedure. Detailed rules for recording archaeological remains were not actually written down until 1884, but as early as 1816, Major-General Mudge, then Superintendent of the Ordnance Survey, had issued a memorandum that included the instruction

...that the remains of ancient Fortifications, Druidical Monuments, vitrified Forts and all Tumuli and Barrows shall be noted in the Plans whenever they occur (Seymour 1980, 63).

The mapping of prehistoric and Roman monuments was standard practice thereafter. Beresford and Hurst have pointed out that the earthworks of other equally well-preserved villages in Yorkshire and beyond were not mapped, while Captain Bayly's map sheet records 'sites of buildings' and 'old foundations' at Towthorpe, Duggleby, Low Mowthorpe and Kirby

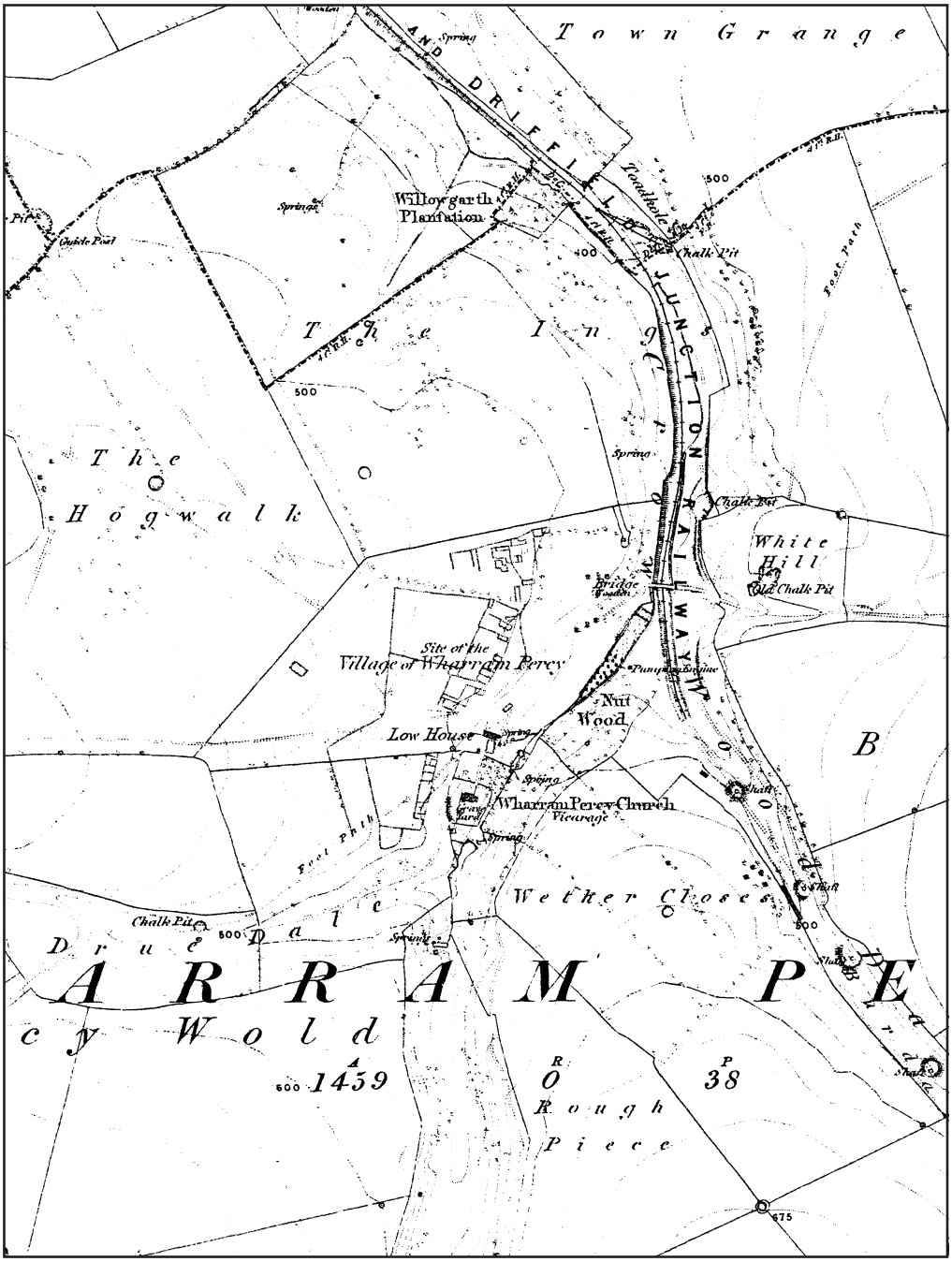


Figure 2
Ordnance Survey plan of the village, surveyed 1850-1 (reproduced from the 1854 6-inch scale Ordnance Survey map)

Grindalythe. At Croome House, north of Sledmere, a series of 'old banks' clearly represent a tract of well-developed ridge and furrow cultivation, but elsewhere prehistoric boundary earthworks, which were almost certainly equally prominent as earthworks, are omitted. Bayly's apparent inconsistency can perhaps be attributed partly to the changeable (though unrecorded) official instructions as to precisely what types of remains should be mapped. These instructions were generally biased towards prehistoric and Roman monuments and settlement remains, so the omission of medieval earthworks by other commanding officers need not imply that there was widespread ignorance of their significance. In passing, it could be pointed out that by the time of the First Edition 25-inch scale map, the rules had clearly changed again, for while houses and property boundaries were depicted, disused field boundaries were not, even though some of these were more prominent earthworks and

had been previously mapped by Captain Bayly (Ordnance Survey 1890). Nevertheless, the standard of depiction of such remains certainly varied according to the interest and ability of the individual officer concerned. Captain Bayly clearly had a talent with regard to civil matters, for, having been promoted to Lieutenant Colonel, he headed the Ordnance Survey's Boundary Office from 1864 to 1873 (Seymour 1980, 159). Beresford and Hurst (1990, 18) have expressed puzzlement as to how he arrived at the correct interpretation of the remains at Wharram Percy as the site of a village, in the absence at that date of any popular or academic works on the subject. This perhaps underestimates the value of the breadth of experience in fieldwork that would have been gained by supervising officers of the Ordnance Survey in dealing with earthworks of many different types and dates. Even as early as 1816, the interpretation of a monument as being prehistoric or Roman would necessarily have demanded some understanding of the forms of the field remains of later periods. By the mid-19th century, local societies and amateurs with an interest in antiquities assisted in the process of identification and interpretation, and medieval ruins were routinely recorded, together with any associated earthworks (Seymour 1980, 174). By the time the First Edition 25-inch survey of Wharram Percy was undertaken in 1888, it was standard practice to record medieval earthworks such as moats, fishponds and park pales, regardless of whether any ruins or other traces of buildings were present. Having said this, the plan of the village surveyed at larger scale in 1888 does not represent any great improvement on Captain Bayly's work in terms of the interpretation of the earthworks (Ordnance Survey 1890 and Figure 3). Arguably, Bayly's direct experience of analysing so many different monuments in the field would have stood him in better stead in interpreting the earthworks than Beresford himself on his first visit, since at the time neither Beresford nor many other academics would have had the benefit of such wide field experience.

In short, research into Wharram Percy and medieval villages more generally was unquestionably dormant prior to Beresford's visit in 1948, and that visit set in train the current programme of research which has made the site famous. However, the Ordnance Survey's work nearly a century earlier could justifiably be regarded as the first episode of modern archaeological investigation and one that - had the intellectual climate of the day been more favourable - could have been equally influential. A series of oblique aerial photographs dated 3 March 1925 show the well-preserved deserted village of Gainsthorpe in Lincolnshire, which had also been mapped as such by the Ordnance Survey in the 19th century (NMRa). The photographs, which form part of the collection amassed by the Ordnance Survey's first field archaeologist, OGS Crawford, but which were not necessarily taken by him, seem to indicate that the Ordnance Survey's work had already sparked some interest (albeit casual) in deserted villages. It does not seem that Crawford himself was greatly concerned with medieval settlement, although he was intrigued by field systems, park pales and other medieval earthworks. Only one deserted medieval village, that at Barbury Farm in Wiltshire, was included in his pioneering publication with Alexander Keiller on *Wessex from the Air* (Crawford and Keiller 1928, plate XLVI).

Beresford's first visit to Wharram Percy on 26 June 1948 immediately followed a seminar on the subject of deserted medieval villages held at Cambridge University (Beresford and Hurst

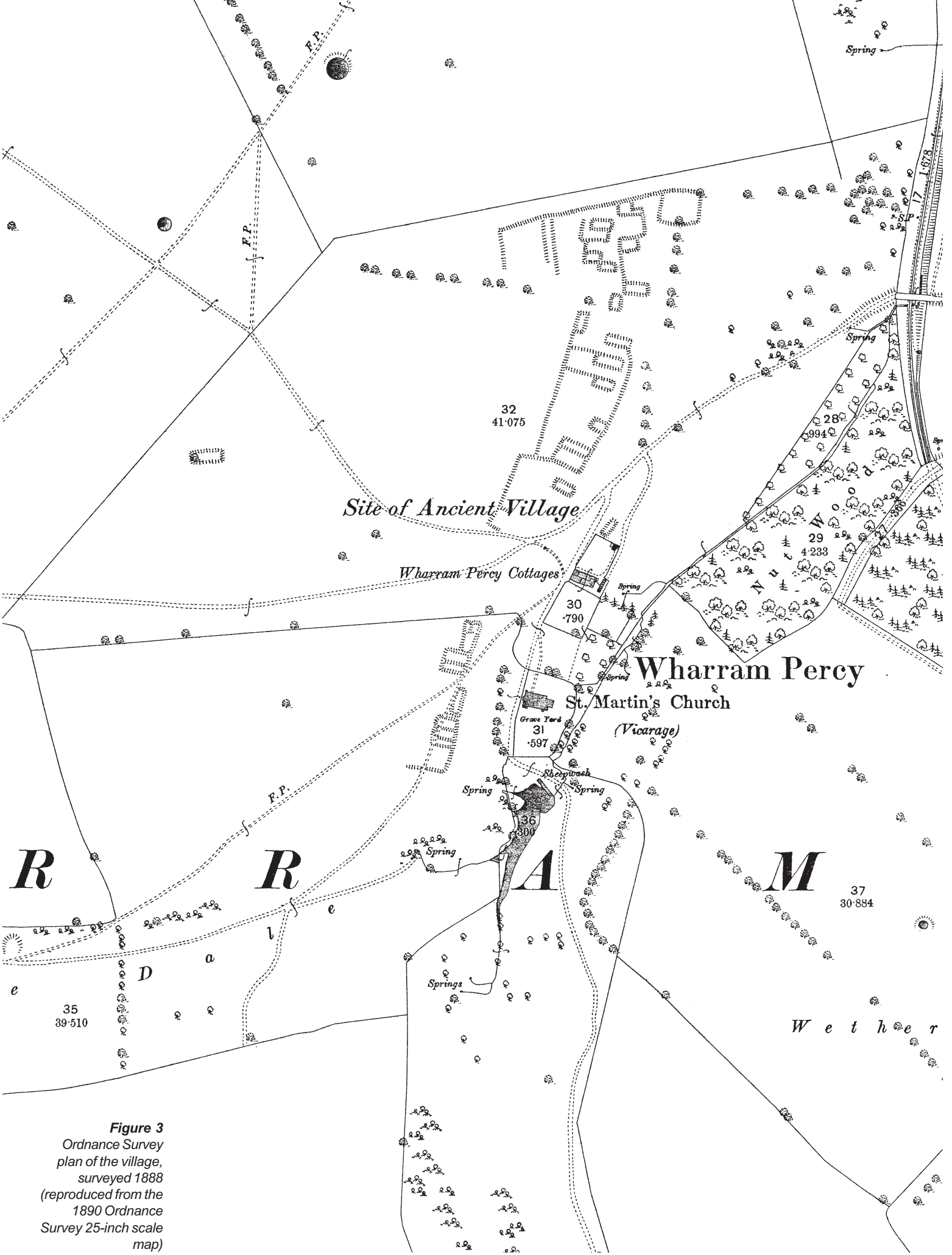


Figure 3
Ordnance Survey plan of the village, surveyed 1888 (reproduced from the 1890 Ordnance Survey 25-inch scale map)

1990, 20). He was immediately struck by how easily the chalk-built foundations allowed the outlines of individual buildings to be traced, in contrast to the much more equivocal evidence on the Midlands sites with which he was more familiar, where buildings had generally been constructed of timber, daub and thatch. It was therefore left to the Cambridge-based aerial archaeologist JK St Joseph to capture the first aerial images of Wharram Percy immediately after the seminar (Figure 4). Contrary to the information presented on current interpretation boards at the site (and notwithstanding the re-appraisal above of the Ordnance Survey's contribution), St Joseph cannot be credited with the discovery of the site, since his sortie was flown almost a month after Beresford's visit, on 22 July 1948 (St Joseph 1948).

Figure 4
Aerial photograph of the village by JK St Joseph, taken 1948 (reproduced by permission of the Cambridge University Committee for Aerial Photography)

The decision to begin the investigation of Wharram Percy owed more to a few lucky coincidences than to judgement. By his own admission, the excavations undertaken over the course of a few summer weekends in 1950, 1951 and 1952 by Beresford and a small team made up of students and local volunteers were limited in their aims and crude in their techniques (Beresford and Hurst 1990, 27-30). The primary goals – beyond the sheer fun of archaeological exploration - were to prove that the earthworks genuinely represented wall-lines and to obtain finds with which the settlement could be dated. The technique mostly employed was that of 'wall-chasing', which left the interiors of the buildings more-or-less intact; Buildings 5, 12, 15, 17, 18, 20 and Building D of the North Manor (see Figure 5),

subsequently interpreted as its buttery/pantry, were wholly or partially examined in this way. No detailed plans or drawings were made, but in places the limits of the trenches can still be identified as earthworks, despite the fact that, at the request of the tenant farmer, backfilling was always undertaken carefully. A number of small trenches, apparently of similar form, have been identified during the English Heritage investigation; these may represent some of those dug '…at several points in the complex where much more substantial walls gave credence to the idea of a manor house'.

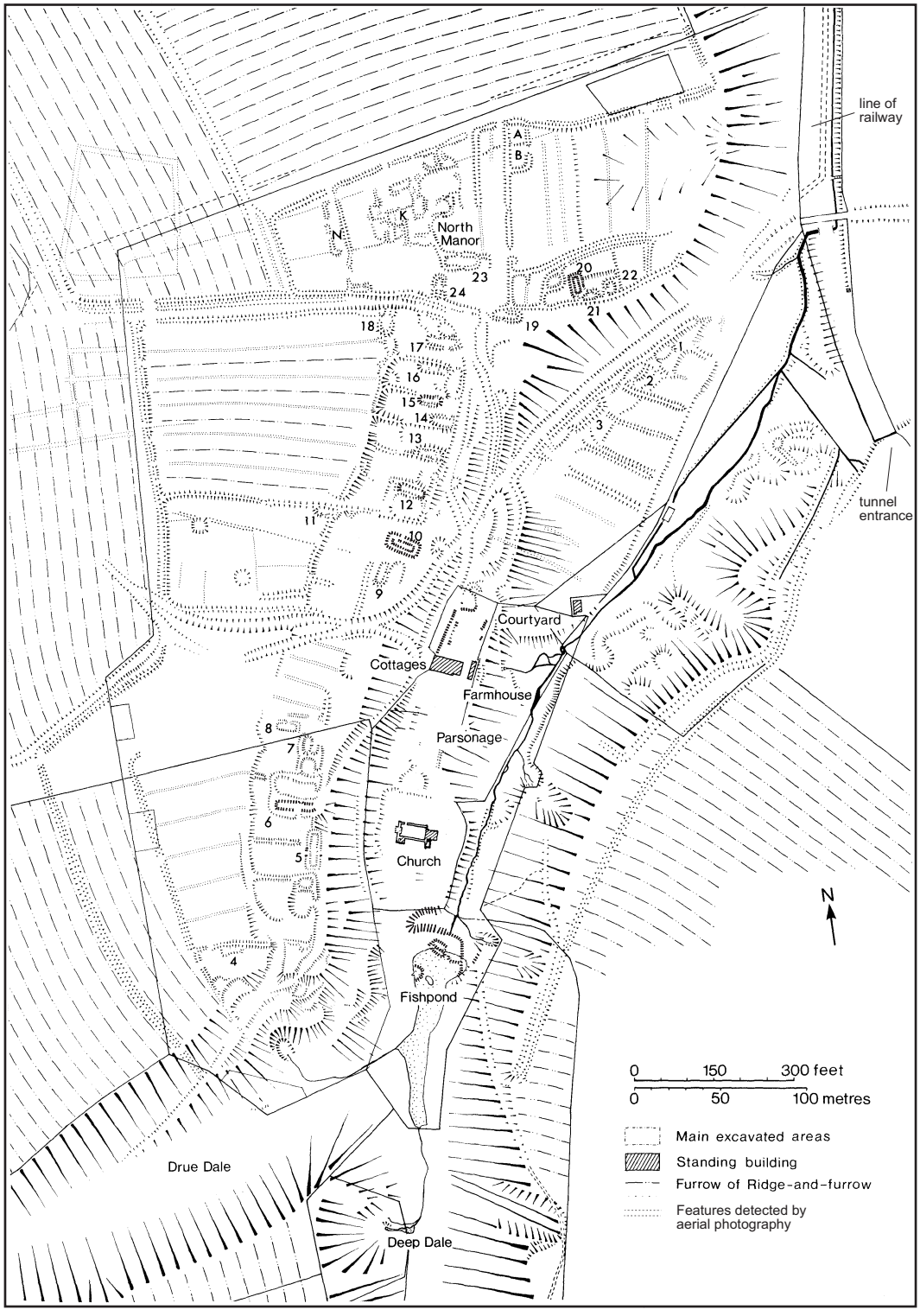


Figure 5
Plan of the earthworks surveyed by RT Porter, GL Worsley and WJ Hopkins (reduced from original at 1:600 scale)

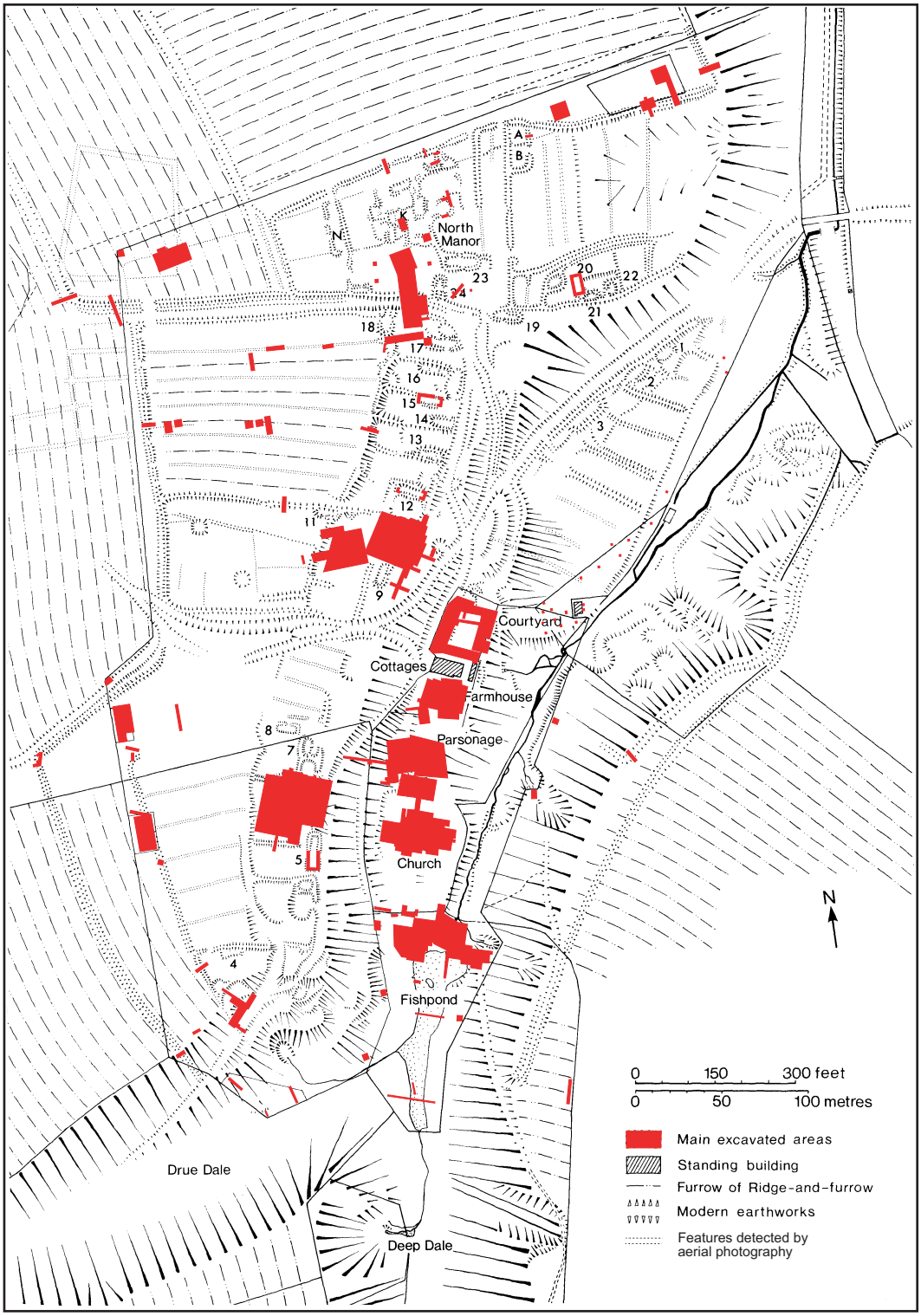


Figure 6
Plan of all excavations carried out 1950 to 1990

Having visited briefly in 1952, John Hurst, then studying for his doctorate in Archaeology and Anthropology at Cambridge University, joined Beresford as co-director on the excavation undertaken in the summer of 1953. His involvement led rapidly to the foundation of the Deserted Medieval Village Research Group and the Wharram Research Project, as a more professional undertaking. As the goals of the excavations and the scope of the research became more ambitious, the techniques employed became more diverse and sophisticated. Although the medieval village remained the focus of the research, a keen interest in the concept of continuity led to the investigation of pre- and post-medieval features. Between

1950 and 1990, just under 10% of the overall area of the site was excavated, including major open-area excavations at the church, the post-medieval farm buildings, two of the medieval house sites (Buildings 6 and 10) and elements of the South Manor (Figure 6). The excavations became a multi-disciplinary project with the introduction of geophysical and aerial survey work and environmental sampling. Documentary research was also undertaken, although this unsurprisingly shed more light on the history of the post-medieval farms and parsonages than on the deserted village. Neighbouring parishes were investigated, the results helping to place the discoveries at Wharram Percy into a wider context (Hayfield 1987). The findings of the project, the most relevant aspects of which are summarised in Section 4, are being published in a series of site reports and interim syntheses (most notably in the context of this report: Beresford 1971; 1979; Hurst 1971; 1979; 1984; 1985; Wrathmell 1989; Beresford and Hurst 1990; Stamper *et al* 2000). The description that accompanied the revision of the entry in the Schedule of Ancient Monuments in 1993 presents a comprehensive summary of the earlier findings (English Heritage 1993).

The earthworks were recognised as an important source of information at an early date and in 1954 GL Worsley of the Ordnance Survey was commissioned to make a plan at 1:600 scale. This was extensively amended by RT Porter from 1955 onwards. Five separate plans of key areas were made at scales of 1:600 and larger by WJ Hopkins of the Ordnance Survey during his summer holidays and C Mahany surveyed the earthworks in Nut Wood. All these surveys, together with transcriptions of ridge and furrow cultivation and other earthworks visible on vertical aerial photographs taken by the RAF in 1946, were amalgamated into a single plan by Porter (Figure 5). Once redrawn, this final product appeared consistent and comprehensive, but it had in reality developed organically and was a composite of differing theoretical expectations, observational skills and survey methods. For example, a sortie flown on 21 August 1979, at a time when the plan of the village was felt to be tolerably well understood, unexpectedly revealed evidence for croft boundaries on the valley side north of Wharram Percy Cottages (RCHME 1979). This at once prompted a re-appraisal of the overall plan of the village (Beresford and Hurst 1990, 79-80). In the following year, Hopkins undertook a re-examination of the area on the ground, but did not detect the features, although all do survive as vestigial earthworks. There was little confidence in interpreting or depicting stratigraphic relationships between earthworks. Therefore, it was not until a relatively late stage in the research project that the sophistication of the questions directed at the earthworks began to match that of the questions being asked of the sub-surface remains (Wrathmell 1989, 41-5; Beresford and Hurst 1990, figs 34 and 60). With this, it became apparent that fresh and more detailed analysis of the earthworks was desirable.

In November 2001, the same English Heritage field survey team responsible for the investigation in 2002 carried out a rapid examination of the site (at Level 1 standard, as defined in RCHME 1999, 3-4) to inform its conservation and presentation to visitors (English Heritage 2002). This assessment noted several potentially important features not recorded by the earlier survey, as well as a number of fundamental issues that could be addressed through a more analytical approach to the overall plan and specifically to areas where stratigraphic relationships could potentially be detected. Much of the plan produced by the

investigation in 2002 differs little from that produced by Porter and others in terms of metrical accuracy, but it has recorded many more features for the first time and has led to a thorough re-appraisal of all the earthwork evidence. In addition to a plan of the village and its immediate environs at a scale of 1:1 000 and of the North Manor at 1:500, it produced a digital ground model of the natural topography. In view of the intensive research that had already been carried out, the documentary research undertaken in support of the fieldwork was limited to a review of the secondary sources and readily available primary sources, particularly maps and plans.

4. HISTORY OF THE VILLAGE

Settlement prior to documentary evidence

Aerial survey, fieldwalking and excavation have provided widespread and variable evidence of settlement in the environs of Wharram Percy from the late Iron Age onwards. At the time when the publication of the early excavations was being prepared in the later 1970s, archaeological theory was generally determinist in its outlook. In keeping with this trend, the evidence for pre-medieval activity was at first widely interpreted as indicating a significant degree of direct continuity of occupation, which almost implied an evolutionary progression towards the nucleated medieval village (Roberts 1987, 18; Stamper *et al* 2000, 18). The following summary is derived almost exclusively from the published accounts (the most important listed in Section 3). Yet it inevitably reflects a changed theoretical stand-point: from the current perspective on the development of landscape, which implicitly underpins the interpretations of this report, the tone of earlier interpretations would seem to overemphasise the degree of continuity and the importance of earlier land-use in determining its subsequent development. Rather, the pattern of the landscape's development now seems more complex: at least as much the product of change, on occasions of a sudden and unpredictable nature, often instigated by individuals for idiosyncratic reasons (Roberts 1987, 18; Everson *et al* 1991, 6-9; Hodder 1992).

Mesolithic, Neolithic and Bronze Age artefacts have been found around Wharram Percy, but the earliest evidence of actual settlement so far discovered dates to the Iron Age. A late Iron Age high-status burial, dating to the 1st century BC, was discovered on the natural terrace occupied by the medieval church. Near the edge of the western plateau just to the north of the village, aerial survey has identified a series of square barrows, probably dating to the 4th to 1st centuries BC, suggesting that activity was widespread across the site, though no domestic features have been identified. The focus for late Iron Age activity seems to have been a complex of enclosures and trackways on the high ground to the north-west of the site, possibly representing two small farms (Beresford and Hurst 1990, 69-72).

Elements of the late Iron Age agricultural landscape continued in use into the Roman period and excavation of the quadrangular enclosure to the north-west of the village demonstrated that modifications there continued into the 4th century. The increased capacity of a grain-drying kiln set into the side of the trackway south of the North Manor suggests that the area did not experience the supposed widespread crisis of the late Roman economy (Beresford and Hurst 1990, 71). On the other hand, the re-use in the walls of the kiln of large, tooled sandstone blocks, presumably taken from a villa or similar high-status building in the vicinity which has not yet been pin-pointed, may point to some measure of decline at the upper end of the social spectrum.

Two Anglo-Saxon *Grubenhäuser* or 'sunken-featured buildings', dating from the 6th century, were built into the base of the same trackway (Beresford and Hurst 1990, 71-5; Milne and Richards 1992). This has been described as 'paradoxical' in that it suggests both continuity

of occupation and the disruption of the established pattern of movement. However, given that the sunken trackway may have been singled out for nothing more than the shelter that it offers, arguably the disuse of the route, with all that implies, may be regarded as the more significant indicator. Excavation revealed evidence of settlement in as many as six different areas in the middle Saxon period, from around AD 650 to 850, each of which has been interpreted as a 'focus' in its own right, suggesting a dispersed settlement pattern (Beresford and Hurst 1990, fig 54). However, the high coincidence between the examination of an area and the identification of a settlement focus is perhaps strong enough to suggest that the apparently disparate elements were parts of some more cohesive pattern of which the real focus has not, as yet, been recognised. Evidence for late Saxon and Scandinavian activity was strikingly scarce.

In common with most other deserted medieval villages in England, a truly nucleated village probably did not come into being at Wharram Percy until some point between the 10th and late 12th centuries, but precisely at what point within this span has not been securely established. The regular layout of the village shows clear evidence of what was initially interpreted as a single episode of planning, although more critical analysis has demonstrated that the western row is probably composed of two distinct units (Wrathmell 1989, fig 29). There has also been protracted debate over when this took place. It has generally been concluded, as was initially suggested, that since the pattern of the settlement and its associated fields seems to have derived from the Scandinavian system of land apportionment known as *solskift*, the planning might have been carried out in the Anglo-Scandinavian period, probably the 10th century (Beresford 1979, 22). In other words, the nucleation of the village and its planning may have come about in a single operation. Place names are often regarded as useful indicators of the antiquity of settlements and the name Wharram also probably derives from an Old Scandinavian word meaning 'at the bends' (that is, in the valley).

The documented village

Early reports on documentary research into Wharram contain a number of errors and misinterpretations, which have subsequently been revised. In common with many small rural settlements, the documentary evidence for the history of Wharram Percy is not extensive. In 1086, an entry in Domesday Book records that in the place then known as 'Warron', the king held 8 carucates of land (that is, an area notionally worked by eight plough teams, or sixty-four oxen), forming two 'manors', whose lords, prior to the Conquest, had been Lagmann and Carli. A holding of 1 carucate, which was tenanted by Ketilbjorn, was apparently 'sokeland', that is, land attached to a third manor, probably in Wharram le Street (Beresford 1979, 5-6; Roffe 2000, 2-5).

A document of 1242-3 shows that the Chamberlains were then the most important landowners, their holdings apparently corresponding to the manors earlier held by Lagmann and Carli. In 1176 William de Percy entered into an obligation to pay the king 200 marks 'for having his right at Wharram against Robert de Montford'. This unspecified 'right' may relate to the carucate formerly held by Ketilbjorn. In any case, the dispute seems to indicate an increase

in the interest of the Percy family in their holdings in Wharram Percy. The so-called South Manor, revealed in part by excavation, was built at about this time and was initially equated with the manor house of the Chamberlain family (Hurst 1979, 138-9). However, more recently, it has been concluded that without better understanding of the development of the North Manor, it would remain unclear whether the South Manor was built by the Chamberlain family to oversee their residual holding, or by the Percy family to service their newly-expanded estate (Roffe 2000, 3). In 1254, Henry the Chamberlain quitclaimed to Peter de Percy the rights that he had possessed over two-thirds of his own holdings in what was then called 'West Wharram', together with his rights in the remaining third which was held by Peter's mother Aubrey. The Percy family thus acquired both manors, but thereafter the village was still usually called 'South Wharram'; the name Wharram Percy was first applied in 1292 and did not become commonly used until considerably later. Excavated evidence suggests that the destruction of the South Manor occurred in the mid-13th century and it has been supposed that the North Manor outlived it, or was perhaps built at this time to replace it, and became the manor house of the Percy family. After 1254, the descent of the manor through the Percy family is relatively well documented. In 1321, Henry de Percy was instrumental in obtaining the king's permission to give the 'advowson', that is, the right to nominate the vicar, to Haltemprice Priory (near Hull), together with the millpond and land. At some point between 1394 and 1402, the Percy family of Spofforth, to whom the manor had descended, exchanged the manor with the Hilton family of Hylton Castle near Sunderland in return for a manor at Shilbottle in Northumberland, closer to the Percy family's main seats in Alnwick and Warkworth.

A series of fifteen *inquisitiones post mortem*, made following the deaths of members of the Percy and Hilton families, survive from the period between 1267 and 1543. Of these, five include valuations accompanied by written surveys giving useful topographical information concerning the holdings, which throw important light on the rest of the village. That of 1267 shows that the extent of the farmed land had remained fairly constant since Domesday. Yet a valuation of 1323, if compared at face value with the earlier one, seems to point to a severe economic downturn in the intervening decades, with two-thirds of the village's land then uncultivated and some holdings apparently empty. There were two water mills, each of which had probably been associated with one of the two manors, but these were apparently disused. The grant of 1320 also refers to a 'park' lying adjacent to an 'acre enclosed with a ditch', although this has been dismissed as probably being nothing more than a small paddock, not large enough to hold deer (Neave 1991, 57). The condition of the manor primarily reflects the fortunes of its owners, rather than the state of the wider economy, but it is perhaps significant that it was given a positive value for the last time in 1323. By 1368, following the Black Death, although the manor house was still standing, it was in need of extensive repairs which made it worthless and the surveys of 1435 and 1458 refer only to the *site* of the manor. Nevertheless, in 1323, the village still comprised at least eighteen households including the manor and the parsonage. In a tax assessment of 1334, Wharram Percy ranked thirty-third of the fifty villages in Buckrose Wapentake, its valuation of 18 shillings not much more than half the average of 33 shillings.

The onset of the Black Death in 1349 brought about the death of Eustachia de Percy's husband Walter de Heslerton and probably the vicar, Peter Lyelff. It has been estimated that the plague led to a decrease in the population from around sixty-seven to forty-five and this was severe enough to prompt a remission of nearly one third in the tax collection of 1352. Despite this, thirty houses were occupied in 1368 and one of the mills was working profitably, while both the millponds generated an income from fishing. The operation of the mill, together with the fact that all the arable land left uncultivated in 1323 was once more in use, indicate a degree of economic recovery. The worth of the mill remained little changed in 1435 and 1458, and at least sixteen houses remained occupied at those dates.

After 1458, there seems to have been a sharp decrease in the population, coinciding with a widespread trend amongst landlords of increasing pasture at the expense of arable land, and perhaps resulting from evictions which went undocumented. Material presented to Commissions of Enquiry in May 1517, in the wake of the anti-enclosure Acts of 1489 and 1515, provides evidence for the eviction of four families and the deliberate destruction of their houses, probably at the instigation of Baron Hilton at some point between 1488 and 1506 (Beresford 1979, 7). However, the discovery of two early 16th-century jettons and stoneware imported from Cologne, along with a significant quantity of other post-medieval material, may indicate that the final desertion actually occurred after the end of the date range suggested by the documentary evidence (information from Ann Clark). There is also evidence that the population was sparse throughout the township by the early 16th century and that most use of the church was made by the villagers of Thixendale and Towthorpe. In lawsuits of 1555-6 relating to the rebuilding of the parsonage after fire damage, none of the witnesses gave Wharram Percy as their place of residence. In his evidence, the former vicar, Marmaduke Atkinson, stated that over the preceding sixteen years '...there had not been growne upon the two oxganges of lande [that is, the glebe land held by the parish church]... above two or three load of corne in one yere', indicating that arable agriculture had been reduced almost to the point of extinction (Borthwick Institute: Cause Papers CP.G 917).

Post-medieval land-use

In 1573, Sir William Hilton sold the manor of Wharram Percy to Matthew Hutton, then Dean of York and later Archbishop. By 1584, the whole township was required to provide only four armed men, compared with the sixteen from Wharram le Street, and this in part reflects the change to an economy based on sheep. Leases dating to the early 17th century testify to the enclosure of former arable land, referring to 'hedges and ditches sett with quickwood' (that is, hawthorn). The fact that some of these are described as 'nowe decayed' suggests that they may have been planted soon after the final evictions. In 1634, Matthew Hutton's nephew, also called Matthew, sold the manor to Sir John Buck of Filey. Apart from a brief interlude during the Civil War when it was confiscated by the Parliamentarians, the manor remained with the descendants of the Buck family until Henry Lord Middleton of Birdsall purchased it in 1833. In 1670-4, the collectors of the Hearth Tax recorded only two houses at Wharram: the parsonage and a farmhouse nearby, of which Mr Bacon was then the tenant. An inventory dated March 1699 of the possessions of the recently deceased tenant William Botterell valued the flock at £257 and wool at £51, indicating that sheep were still

the mainstay of the economy, but there was also wheat and oats totalling £30, showing that limited arable agriculture had returned. The inventory also gives a clear picture of the use of the farmhouse, complementing the evidence revealed by the excavation of the building's foundations in 1989. By 1716, the location of the glebe land belonging to the church had been forgotten, suggesting that this small pocket of arable land had entirely reverted to rough pasture.

In August 1773, Sir Charles Buck had a meeting with the mason who was to oversee the 'Improvement' of his estate. This was to entail the conversion of the pasture back to arable, the rebuilding of the farmstead on a grander scale, and the construction of two new farms at some distance from the deserted village: Bella Farm and Wharram Percy Farm. Accounts show that between December 1775 and May 1776, post-and-rail fences were erected and planted at intervals with ash seedlings; a Terrier of 1825 mentions the existence of those around the churchyard (Borthwick Institute: PR WP 9/1a) and a few mature trees still stand. Work on the Improvement farm at Wharram Percy seems to have been completed by 1779 and on all the other farm buildings by October 1780. The new Improvement farm near the church comprised ranges of byres surrounding a courtyard, with a separate farmhouse on the same site as its predecessor a short distance to the south. The buildings are shown on an estate map of 1836 surveyed by William Dykes (Dykes 1836 and Figure 7). The foundations were completely excavated and subsequently laid out for display. The farmhouse was built in chalk and sandstone, with fashionable brick façades on the more visible south and west walls. The byre range on the western side of the courtyard was modified and rebuilt three times during the seventy-five years of its existence. The inventory made in 1786 following the death of William Monkman, whose father John had been tenant at the farm

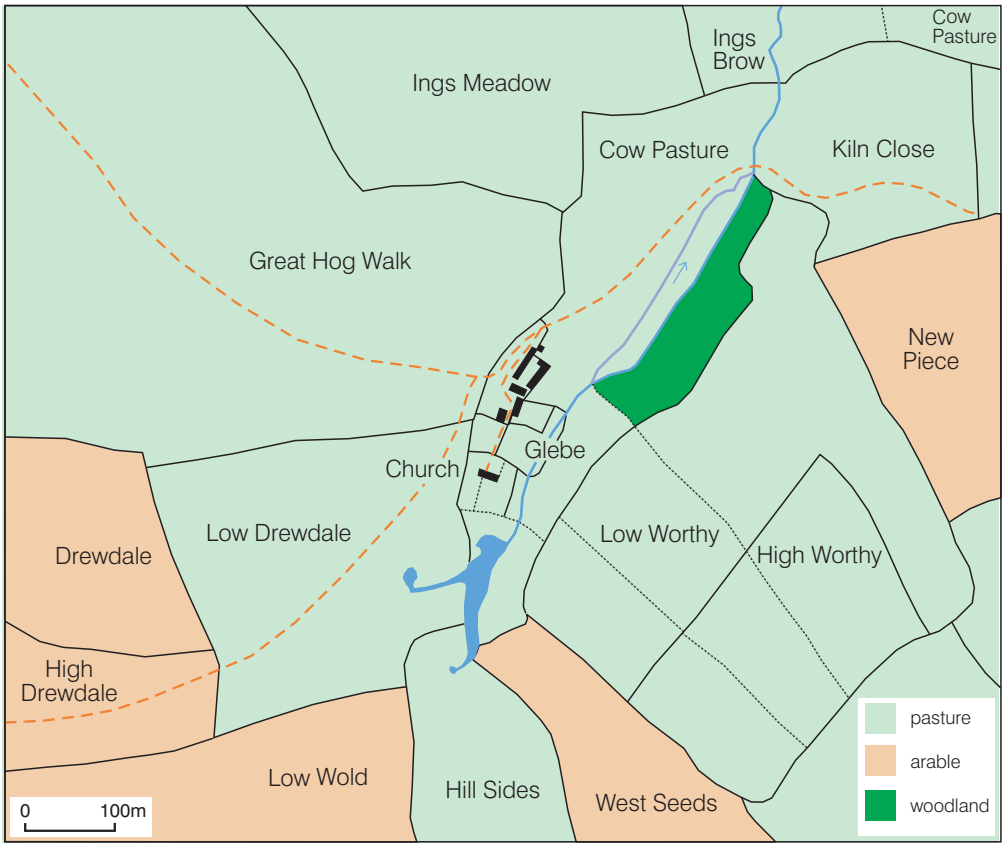


Figure 7
Fair copy of part of William Dyke's 1836 estate map of Wharram Percy (based on Borthwick Institute: PR WP 9/5)

since at least 1746, adds little to the understanding of the buildings, but shows that at that date, a flock of 1,310 sheep still dominated the farming regime. Most of the buildings were demolished at some point between 1836 and 1851, but the lower courses of the range on the southern side of the courtyard were incorporated into a row of three cottages, preserving evidence for the form of the earlier building which is discussed in Section 5.11. The subdivision into cottages, which census returns from 1851 onwards show were occupied by agricultural labourers, is dealt with in Section 5.12. With the departure in the mid-1950s of the Milner family, who still lived in the cottages when Maurice Beresford first visited in 1948 and assisted with the early excavations, the last permanent occupation of the site (at least, at time of writing) came to an end.

With the final desertion of the medieval village, the days of the parish church of St Martin's were numbered. Analysis of the fabric of the church shows that it was reduced in size in the mid-16th century and again in the early 17th. In 1743, the vicar, William Mills, reported that, with the exception of a single family (that is, the occupants of Wharram Percy farm), all his parishioners lived in Thixendale. The construction of a church in that village in 1870 hastened the disuse of the parish church: the last burial was in 1906, the last marriage in 1923 and the last service in 1949. No major repair work was carried out after 1923 and by 1948, when Maurice Beresford first visited, the interior was in an state of advanced disrepair. The roof, bells and furnishing were removed in 1954 (Borthwick Institute: Fac 1954/1/1). The pulpit and one of the pews were salvaged and are now stored in the nearby Cottages. The western side of the tower collapsed as a result of subsidence following a storm in December 1959.

In contrast to the gradual demise of the church, the parsonage was rebuilt at least three times in the post-medieval period. The first rebuilding followed the fire in 1553, as mentioned above, and the vicar responsible for this work claimed that although its proportions differed, the new parsonage was just as large as its predecessor and more elegant. By 1604, however, the building had been let to tenants who had allowed it to fall into 'ruins and decaie', prompting a second remodelling. The cold store of this building, which lay below ground and as a result was the only element that remained well preserved, was excavated and laid out for display. Perhaps due to subsidence, a new building was constructed in the 18th century, located a little distance to the north-east. This too has been excavated and laid out for display. Although evidently rather grander than its predecessors, it was described contemptuously in 1853 as '...a mere Cottage with a stable adjoining, both covered with thatch'; it was demolished at some point between 1834 and 1836. By 1809, the agricultural rights of the vicar had been reduced to tethering cattle in the three fields that contained the village site, named Water Lane, Towngate and Town Street.

5. DESCRIPTION AND INTERPRETATION OF THE EARTHWORKS

5.1 Summary (see Figures 8, 9 and 10)

This report has attempted wherever possible to use the same terms applied in the course of the Wharram Research Project to describe the various elements of the village. For convenience, however, the different rows of tofts identified previously have here been termed West Row (south), West Row (north), North Row and East Row. The buildings initially recognised as earthworks were numbered 1 to 22 and the excavation trenches, termed 'Areas', took their numbers from those buildings. Occasionally, the same numbers were used to denote the tofts in which the buildings were thought to lie. The identification of additional buildings now renders the previously-used sequence intermittent in relation to the remains on the ground, but the introduction of a wholly new numbering system for these would be untimely. Therefore, the numbers used previously have been retained with reference to the buildings originally recognised, and the tofts have been allocated a new series of numbers. Throughout this report, the newly recognised buildings are specified in relation to the numbered tofts in which they lie. The re-interpretation of some trackways and the recognition of others that have previously been overlooked have made it necessary to revise the earlier sequence.

Figure 8
Aerial photograph of the village by RCHME, taken 1997. NMR ref: 17066/12, ©Crown

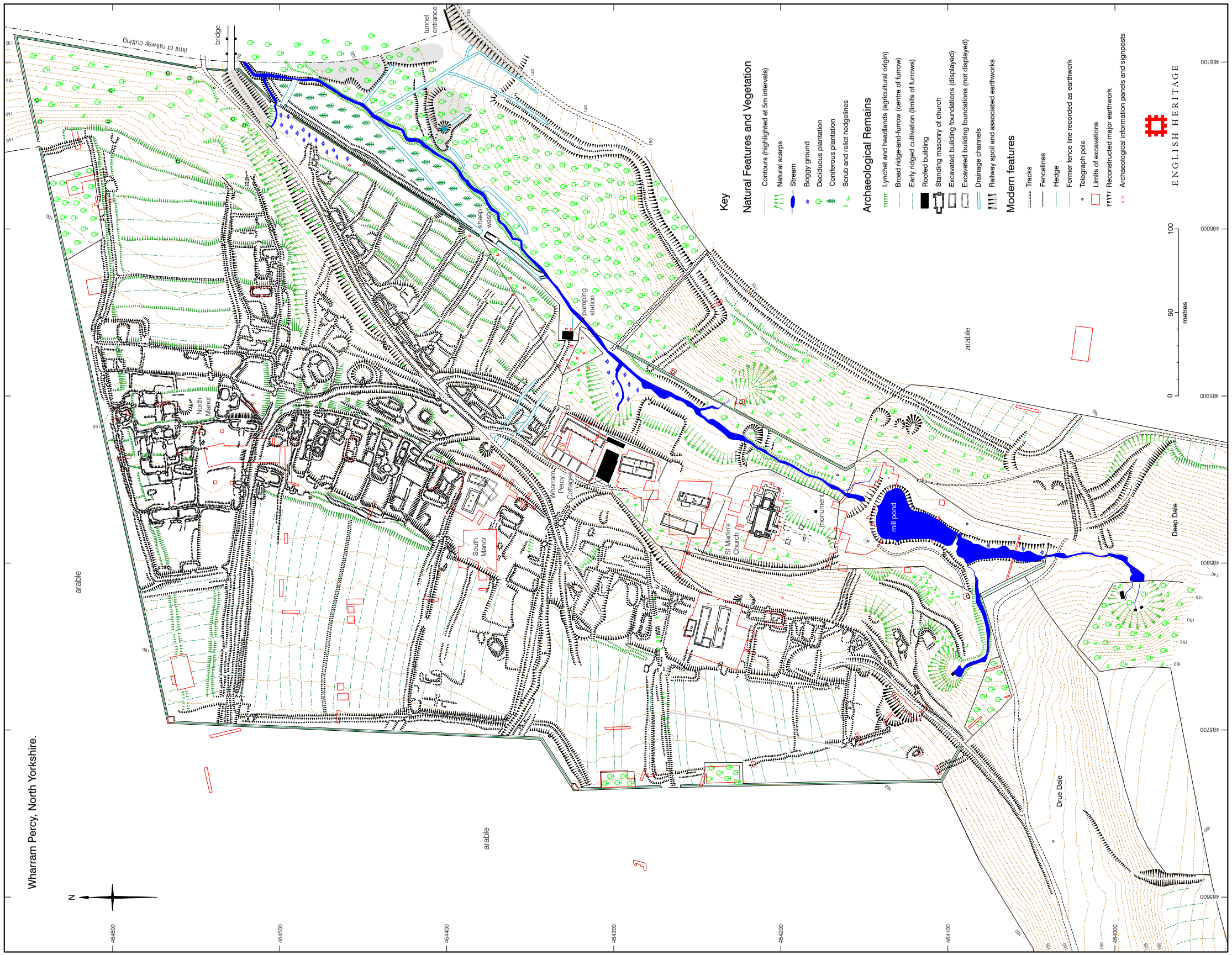


Figure 9
English Heritage plan of the village (reduced from original at 1:1 000 scale to 1:2 500)

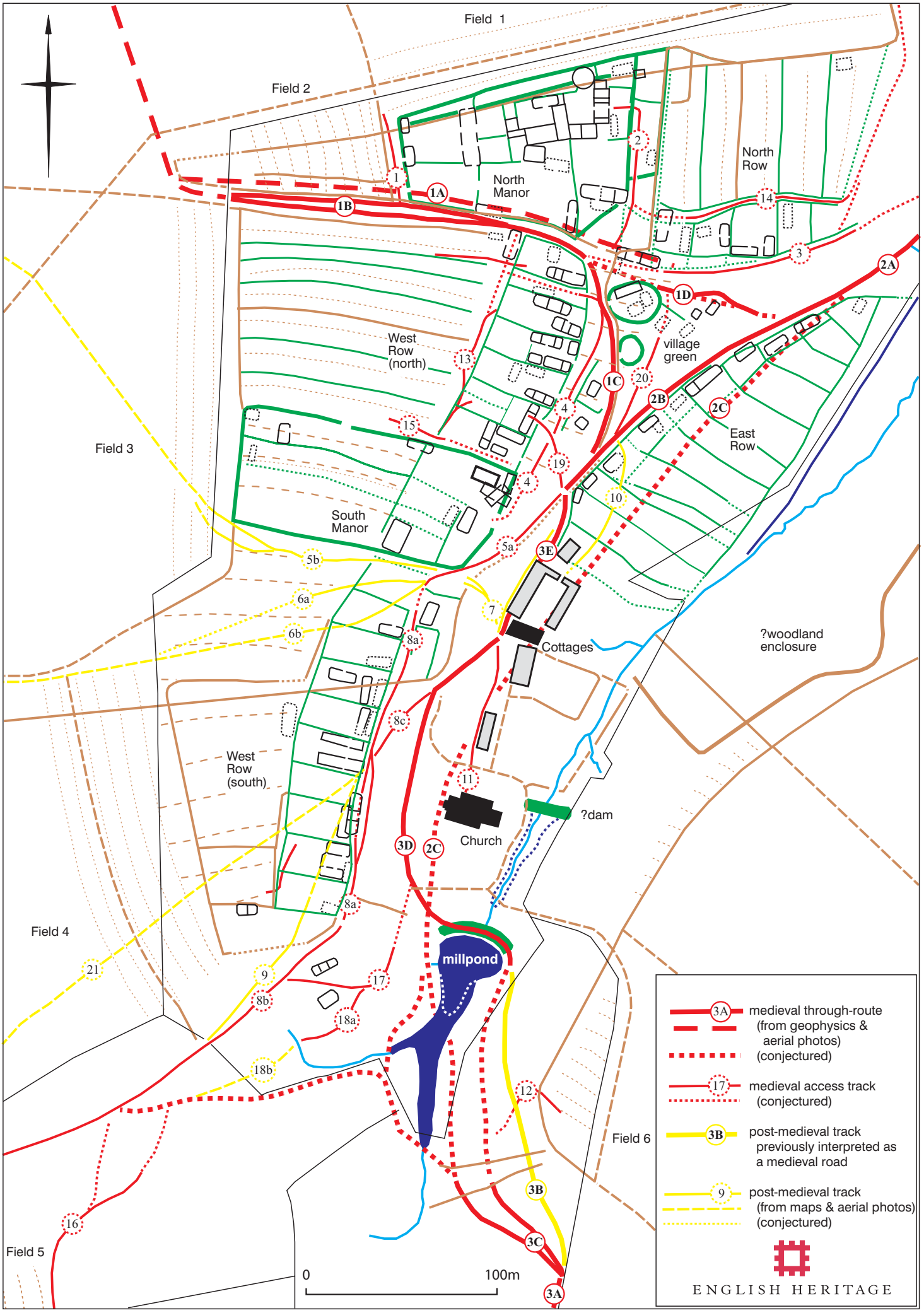


Figure 10 *English Heritage schematic plan of the network of roads and tracks*

The form of the medieval nucleated village (Figures 8 and 9), which Beresford initially anticipated might have remained virtually static from the time it was first laid out, is perhaps better understood almost as a living organism. While it was appreciated very quickly that the settlement showed evidence of planning, it was several decades before it was first suggested that in addition to more than one episode of planned expansion, some evidence for more piecemeal changes could be detected from the earthworks (Wrathmell 1989, 41-5). Changing patterns of access through the village seem to have been closely linked to, if not directly responsible for, major changes in the settlement pattern and these routes are therefore discussed at the outset, in Section 5.2. The village lies at what is effectively a T-junction of three principal through routes, previously called Roads 1 to 3 (Beresford and Hurst 1990, fig 55). Road 1, which both aerial survey and excavation have shown to be of Romano-British origin, enters the northern end of the village from the west. The English Heritage investigation suggests that Road 2, which heads eastwards, was once a continuation of Road 1, and the suspicion remains that Road 3, which heads southwards, may be of similarly early origin. A number of the access routes within the village, originally called Tracks 1 to 12 and now increased to twenty in number, can be shown to relate to the various episodes of planning evident in the plan of the settlement. In several places, medieval buildings encroach onto these tracks, while a few tracks can be shown to be of post-medieval origin.

Changing patterns of access may also contribute to the understanding of what has often been regarded as one of Wharram's most intractable puzzles. It is common for medieval churches to stand next to manor houses and for the remainder of the village to huddle around this focus, but this is conspicuously not the case at Wharram Percy. Although the English Heritage survey carried out no further analysis of the architecture, a few observations in Section 5.3 concerning the setting of the church may help to advance the debate, though not to resolve it.

The so-called South Manor, discussed in Section 5.4, was first identified as a result of the excavation of an overlying peasant house surviving as an earthwork (Building 10), beneath which was revealed an ornate stone-built *camera*, or undercroft. However, the existence of the manor is clearly indicated by the existence of a well-defined *curia*, or enclosure surrounding the manorial complex, which contains several unusual features including a large building platform, which has not previously been explicitly recognised.

The earthworks of the so-called North Manor on the northern edge of the village, discussed in Section 5.5, are equally distinctive, including structures that have been interpreted, almost certainly correctly, as a hall house, a dovecote and a large barn. A bold attempt at reconstructing of the lay-out of the complex was made on the basis of a survey of the earthworks made by WJ Hopkins in 1976 (see Figure 13). The English Heritage investigation suggests that despite the large scale (1:20) of the earlier survey, the plan of the complex is actually simpler in some respects than has previously been thought. However, the previous reconstruction did not allow for any change over time in the form of the complex; the new survey suggests that the manor underwent a major phase of expansion and that a number

of structures previously thought to be contemporary with the manorial complex are more likely to post-date its disuse.

The domestic settlement itself, described in Section 5.6, comprises the earthwork remains of as many as seventy-two buildings, the majority lying within a maximum of thirty-seven rectangular plots (tofts) of regular size and layout. Enclosed strips of agricultural land (crofts) back directly onto the tofts, probably in some cases with a narrow footpath, or 'back lane', running along the boundary between them. The plots are arranged in rows fronting onto access tracks. Two rows, here distinguished as West Row (north) and (south), join each other end-to-end to form a continuous line, interrupted only by the South Manor, stretching for 380m from north to south and set back slightly from the edge of the western plateau. Another row, here termed East Row, occupies the lower slope of the western side of the valley, fronting onto Road 2B, which ascends the slope obliquely from the north. The row seems to have extended at least as far south as the northern side of the 18th-century Improvement farm, although excavations have demonstrated that there were other buildings between there and the church. A shorter row, technically known as a 'headrow' but here termed North Row, extends from west to east across the northern end of the village, the three northern rows thus defining what has previously been interpreted as a triangular green. The new survey indicates that while the area probably was a green, containing two approximately circular stock pounds, a fair number of small buildings were also present. Whether these are earlier than the planned village or represent later encroachment onto the green remains uncertain. There is considerable evidence for different types of houses, and some stratigraphic evidence to support the theory that the latest settlement comprised a small number of courtyard farms. This change may have been associated with the amalgamation of crofts to form larger plots (Wrathmell 1989, 44-5).

Section 5.7 singles out for discussion an earthwork whose interpretation has long lain at the heart of the understanding of the origin, form and development of the settlement: the so-called 'lynchet bank'. This is a pronounced scarp which runs the length of the village, dividing the tofts of West Row (south) and (north) from their adjacent crofts. The new evidence brought to light by the English Heritage investigation does not categorically support any single one of the theories previously proposed as to its origin. Rather, it seems likely that the earthwork did not originate as a single entity and that its present form is the result of differential modification.

Section 5.8 is concerned with the agricultural landscape, or at least, with what little of this can be identified through earthwork as opposed to aerial survey. The remains of medieval ridge and furrow cultivation survive beyond the limit of modern ploughing above the east side of the valley, in the north-west corner of the site and, most extensively, on the south side of Drue Dale. These remains were widespread until the Second World War and are still not particularly rare, either in a regional or national context, but at Wharram Percy they are of some importance in understanding the village remains. For example, part of the North Manor seems to have been laid out over ridge and furrow, while the latest episode of ploughing in the north-western corner of the Guardianship Area respected the boundary of the former

manor, but encroached into Road 1B. One of the most important observations arising from the English Heritage investigation is that a form of ridged cultivation characterised by unusually broad furrows predates the typical ridge and furrow mentioned above, as well as the establishment of the South Manor and West Row (north) and (south). Therefore, this episode of cultivation may be associated with the earliest incarnation of the village, perhaps before the Norman Conquest.

Section 5.9 deals with aspects of the southern millpond, which was enlarged to form a fishpond in the later 13th or 14th centuries. Although the pond was cleaned and the dam was reconstructed following excavation, a number of observations can still be made. The evidence for a second mill known to have existed on the northern side of the village is also discussed.

Section 5.10 covers a number of miscellaneous remains thought to be of medieval or earlier origin, including a possible woodland enclosure on the eastern side of the valley.

Sections 5.11 and 5.12 cover the post-medieval remains. Section 5.11 deals with the evidence for the changes that accompanied the construction of the 18th-century Improvement farm and the architectural evidence for the last standing building of that date. Excavation has shown that the farmyard and farmhouse constructed in the late 1770s were buildings of some size and architectural pretension, but it is easy to overlook the effects of the farming regime on the wider landscape. Yet in addition to the imposition of several field boundaries, the intensive grazing that took place throughout the post-medieval period is largely responsible for the preservation of the remains in the excellent condition in which they survive today. Section 5.12 deals with the minor changes that took place subsequently, mostly associated with the construction of the Malton and Driffield Junction Railway, and specifically the Burdale Tunnel between 1847 and 1853.

5.2 Roads and trackways

The network of tracks at Wharram Percy potentially covers a longer date range than any other category of remains surviving as earthworks. The tracks are important for understanding the internal chronology of the settlement, since some are pre-medieval in origin, and some clearly overlie, or are overlain by, other earthworks. They also demonstrate the articulation between the different parts of the village, and between the village and its environs. The routes have previously been subdivided into through-routes, termed ‘roads’ and numbered 1 to 3, and trackways and paths providing access around the village, termed ‘tracks’ and numbered 1 to 12 (Beresford and Hurst 1990, fig 55). This report retains the earlier categories and numbering, but the road numbers are sub-divided in order to pinpoint specific sections, while the sequence of track numbers is both sub-divided and extended (see Figure 10).

Road 1 enters the northern end of the village from the west. Its relationship to the pattern of field boundaries and settlements detected by aerial and geophysical survey to the north-west indicates that the route originated in the late Iron Age or earlier (Beresford and Hurst 1990, fig 67; Stoertz 1997, map 1). Earlier analysis of the road pattern has concentrated on the final incarnation of the route, here termed Road 1B, of which a stretch *c* 200m in length

is preserved in earthwork form. This seems likely to have come into existence in the Romano-British period, for excavation revealed two Anglo-Saxon *Grubenhäuser* or 'sunken-featured buildings', dating from the 6th century, built into its base immediately to the south of the North Manor (Beresford and Hurst 1990, 71-5; Milne and Richards 1992). It can presumably be inferred from their presence that at that date, Road 1B was used irregularly, if at all, though it has not been proved that this is symptomatic of any more widespread deterioration.

Geophysical survey indicates that the earliest recognisable course of the road, here termed Road 1A, ran about 15m to the north of the track surviving as an earthwork (see Figure 10). There is no hint of this on the surface; Boundary 2, a slight bank which apparently served at some stage as a headland for Field 2, but was eventually ploughed over, actually runs along almost the same line as the earlier road. Road 1A was slightly broader than its successor, with a series of rectangular enclosures adjoining its sides, including the large enclosure to the north-west of the Guardianship Area (Beresford and Hurst 1990, fig 52; Linford and Linford 2003). Trackways similar to Road 1A, with embankments on either side that were presumably originally augmented by hedges or fences, were a common feature of the late Iron Age and Roman periods. They are generally thought to have acted as droveways for moving livestock through arable areas (for example, see Gates 1982, 30).

Approaching initially from the north-west, Road 1A turns sharply just outside the Guardianship Area and heads due east (Beresford and Hurst 1990, figs 55 and 67; Stoertz 1997, map 1). Geophysical survey demonstrates that Road 1A did not bend southwards to become Road 1C, as its successor Road 1B did, but continued eastwards. The same conclusion can also be reached on the basis of the earthwork evidence alone, for the abrupt and awkward change of alignment from Road 1A to 1C, which influences the whole structure of the village, would otherwise beg the question as to why the route was not originally aligned on a point further to the south, where the slope of the valley side is gentler. Geophysical survey hints that Road 1A may have continued eastward along the route later followed by Track 3, which provides a fairly gentle descent at least as far as the eastern end of North Row. An early episode of cultivation, discussed further in Sections 5.6 and 5.8, extended as far as the edge of the escarpment south of the frontage of North Row. If the road was still in use at the date when the cultivation commenced, the ploughing may have put an end to the use of the route and also erased any earthwork traces. On the steeper slope east of the end of North Row, severe slumping, partly associated with the nearby spring at the foot of the slope, suggests that any trace of the route here would probably have been removed by erosion. However, the geophysical evidence is not conclusive as to whether the road did indeed follow the same route as Track 3. Nearby earthworks which have previously been overlooked suggest another possible route, although it is of course possible that two routes were in use at the same time. A branch of the road (here termed Road 1D), continued the line of Road 1A almost straight to the east, making good use of a natural indentation to descend the valley side and so avoid the need for any deviation to the south. Road 1D was cut away and eventually made impassable by the prolonged use of Road 2B, which links Road 2A with Road 3E and forms the eastern street of the village. The depth to which Road 2B developed, in part apparently by the time East Row was laid out, suggests that Road 1D must be

relatively early. However, it would be unwise to leap to the conclusion that the route represents an intact element of the original late Iron Age or Romano-British road, for it seems to have given access to a number of previously unidentified buildings which had evidently encroached onto the village green. In this early form, the alignment of Road 1B, and its eastward extension, whether Track 3 or Road 1D would have been continued by that of Road 2A, which heads eastwards from the village. The alignment of Road 1B can therefore be seen as significant because it supports the suggestion made previously that the east to west route was initially the more important (Beresford and Hurst 1990, 69). By the medieval period, Road 1D was redundant as a major through-route apparently due to the increased importance of Road 3, and Roads 1B/1C and 2B were dominant. As a result, travellers passing through the village from east to west or *vice versa* would have been forced to deviate to the south though the heart of the village before resuming their original course.

Road 1B is hollowed to an average depth of 0.5m, with embankments on both sides standing to an average height of 0.2m. However, the earthworks were almost certainly redefined to some extent in the medieval period. The bank along the northern side was probably also built up further when a hedge was planted along it in the post-medieval period (see Section 5.11). Two shallower hollow ways, presumably the product of the later episodes of use, are discernible in the base of the broader track and these converge immediately to the south of the North Manor. The latest episode of ploughing in Field 2 encroached southwards across almost the whole width of the road, indicating that this section of the route was disused by the end of the medieval period.

Road 2A, which heads eastwards from the village, climbs a side valley and reaches the top of the Wolds again on the south side of the modern visitor car park, 600m to the east. At this point, it intersected with, and probably continued beyond, a major route running north to south, which has been mapped by aerial survey (Stoertz 1997, map 1). As described above, it seems to represent a continuation of Road 1B, and must therefore be of late Iron Age or Romano-British origin, as previously suspected (Beresford and Hurst 1990, fig 67). Historic maps, starting with that surveyed by Jefferys between 1767 and 1770, indicate that the route has remained in use for much of the post-Medieval period (Jefferys 1771). Indeed, it was the route followed by Beresford on his first visit to Wharram Percy in 1948. A detailed large-scale survey made prior to the construction of the railway indicates that this had little effect on the route, the timber bridge across the cutting lying immediately to the south of the point where the road had formerly crossed the valley floor (Birkinshaw and Dickens 1845). Road 2B, like Road 1C, evidently developed to avoid the unnecessary ascent or descent of the steepest part of the slope when travelling to and from the south via Road 3E. It was clearly established at or before the time house plots of East Row were laid out fronting onto it, probably at some point between the 10th and 12th centuries. It has apparently remained in use ever since, providing access to the various post-medieval farms and, eventually, access westwards to Wharram Percy Farm via Track 6a (see below).

There is circumstantial evidence in the alignment of the lynchets underlying East Row (see Section 5.8) and in the fact that Road 2B ascends the slope, only to descend it again via

Road 3E, that a precursor of the route may have ascended the slope at a shallower angle. This putative route, here termed Road 2C, may have followed the uppermost of the lynchets, which, like the so-called 'lynchet bank' described in Section 5.7, was apparently used to define the boundaries between the tofts and crofts that make up the row. If so, Road 3E could effectively be seen as a continuation of Road 1C, and the intersection of all three roads would have lain considerably further to the south, possibly not far north of the church. This may have implications for the understanding of the siting of the church, which has generally been regarded as puzzling for its isolation (see Section 5.3) and for the dating of the origins of East Row.

Road 3 approaches the village from the south, that is, from the direction of Thixendale. On the southern outskirts of the village, and beyond the area surveyed in detail by English Heritage, the route most clearly evident as an earthwork, here termed Road 3A, follows the crest of the eastern side of the valley, occupying the narrow strip between the edge of the steep slope and the western limit of the medieval open fields. A massive positive lynchet, up to 1.6m high, has developed along the western edge of the fields, suggesting that the route originated at an early date and remained in use over a considerable period.

The section of the floor of Deep Dale immediately south of the intersection with Drue Dale is boggy today due to the nearby spring, but for the rest of its length the valley floor is dry. There is circumstantial evidence that some traffic, at a relatively late date possibly in the post-medieval period, may have followed this more sheltered route. Although there is no recognisable sign of a track in the final approach to the village, a hollow way descends the eastern side of the valley *c* 1.1kms to the south, centred at SE 8557 6300, descending obliquely from south to north. Its alignment and depth suggest that it was used fairly intensively by traffic travelling to and from the direction of Wharram Percy. The upper end of the hollow way joins the course of Track 3A, but physically cuts into it, suggesting that it is of later date, and potentially of post-medieval origin. The earthwork has previously been interpreted as a Bronze Age land boundary or 'linear earthwork' (Beresford and Hurst 1990, fig 63). However, its relationship to Track 3A, together with the existence of a second trackway descending the slope on the opposite alignment, indicate that this interpretation is incorrect.

Road 3B obliquely descends the eastern side of the valley, running almost straight from the crest of the escarpment to the eastern end of the dam of the millpond/fishpond, at which point it makes use of the top of the dam to cross to the other side of the valley. This has been interpreted as the principal approach of Road 3 into the village in the medieval period and, today, the Wolds Way long distance footpath follows its course. The track was marked on the Ordnance Survey First Edition 6-inch scale map (Ordnance Survey 1854). It is not shown on the 1836 estate map, but is probably the route shown on Greenwood's map surveyed between 1815 and 1817, although his depiction is necessarily more schematic (Dykes 1836; Greenwood 1818). Clearly, then, the route was in use in the 19th century. However, the use of the route has produced only negligible earthworks, indicating that it was not used either intensively or for a prolonged period. It seems unlikely to have been used until after the creation in the 1320s of the larger dam that retained the fishpond. Indeed,

some doubt must hang over whether it was used at all in the medieval period, for allowing traffic to pass across the top of the dam would inevitably have led to the erosion of the earthwork.

Road 3C is far better defined as an earthwork than Road 3B: two deeply hollowed and terraced tracks make use of a natural coomb to descend the slope in a sharper curve. The greater size of these earthworks compared to Road 3B suggests that this was a much more intensively used route in the medieval period. Although part of the upper track has been lost through quarrying and erosion, the curve of the lower suggests that both would have reached the level ground of the valley floor near the former southern end of the fishpond. Prior to the enlargement of the pond in the 1320s, the route may well have crossed the stream nearer the point at which the watercourses from the two major springs intersect, that is, near the modern timber sluice. Once the extension of the pond made this route impassable, the route might have been forced to follow the level ground along the water's edge for some 100m to reach the eastern end of the dam, where, like Road 3B, it could have passed across the top of the dam. However, the same doubt applies as to whether the earthwork of the dam could have coped with regular use as a thoroughfare, especially in view of the massive erosion at the point where the road descends the slope. It is not impossible that after the 1320s, travellers were forced to ford the stream at the extreme southern end of the extended pond, near the site of the modern ford, and then to reach the village via a track which no longer survives as an earthwork, or even by means of Drue Dale and Track 8.

Road 3D skirted the western edge of the churchyard, climbing half way up the western side of the valley and then descending again onto the relatively level ground occupied by Wharram Percy Cottages and the post-medieval parsonages. To the west of the churchyard, it survives as a narrow terrace in the natural slope, which has been utilised by the modern fenceline. Thereafter, Road 3E resumes a gentle ascent following an oblique course to the point where Roads 1C, 2B and Track 5 intersect. Road 3D deviates so far from the most physically practical route up the slope, which is essentially that followed by Track 11, that its course seems very likely to reflect the modification of an earlier route (Beresford and Hurst 1990, 103-4). In plan, the relationship of the route to Track 8c suggests that the access track is the earlier and that the lower part of its course was subsequently borrowed by Road 3D. The possible original course of Road 3 is discussed further in Section 6, but it seems likely that the creation of the fishpond and probably the enlargement of the graveyard resulted in the diversion of what may have originally been a fairly straight course obliquely across the valley.

Track 1 evidently provided access from Road 1B to the south-western corner of Field 1; it could have been created when the North Manor was laid out, since this may have encroached upon the former extent of the open field and would otherwise have blocked access to it. The track is embanked on both sides to an average height of 0.2m. The latest episode of ploughing in Field 2 encroached onto the track, partially levelling the western embankment to form a narrow cultivation ridge.

Track 2, as defined previously, ran northwards from the northern edge of the village green along the eastern side of the North Manor to the southern edge of Field 1. There is scant earthwork evidence to support the existence of an actual track, but this does seem to have been the enclosure through which the North Manor was approached in its final form. Its existence was perhaps suggested by the sharp change of angle from Road 1B to 1C and by the gap in the bank enclosing the manorial *curia*. It seems more likely that the track did not extend so far northwards and essentially served to give access into the manorial complex and perhaps initially to the western end of Track 14 (see Figure 15).

Track 3 follows the narrow strip of land between the southern frontage of North Row and the crest of the steep slope of the western side of the valley. Its eastern end is indeterminate, apparently due to the effects of land slippage, which become increasingly severe to the north. The eastern boundary of Field 1 lies just short of the crest of the valley side, hinting that the route may have continued northwards. Its western end may have been slightly re-aligned when the frontage of North Row was adjusted, and was perhaps eventually blocked by Building 19.

Track 4, as previously defined, comprises two parts: a route along the frontage of West Row (north), and a hollow way that obliquely descends the western side of the valley to the intersection of Roads 1C, 2B and 3E. Only the first part of the track is referred to here as Track 4; this must have given access to the medieval tofts and almost certainly extended along the whole frontage of West Row (north), that is, further southwards than has previously been recognised. The other part, the hollow way, is described below as Track 19; it is likely to be of later origin, or if of medieval origin, continued in use to a much later date.

Track 5, as it has been defined previously, can be divided into two elements: one stretch (here termed Track 5a) climbs obliquely south-westwards up the western side of the valley from the intersection of Roads 1C, 2B and 3E. Track 5b then turns westwards along the southern edge of the bank that defines the boundary of the *curia* enclosure of the South Manor before curving gently to north-westwards. Although the hollow way becomes increasingly shallow to the west, the deepest stretches have been worn by use to a maximum depth of 1.0m. The date of the track has not been established by excavation but has been interpreted on the basis of geophysical results as being of Iron Age or Romano-British origin (Beresford and Hurst 1990, figs 52 and 53). It has been thought that it continued in use as an important route out into the open fields west of the village into the medieval period. However, the English Heritage investigation suggests that the two elements of the track may have originated at different dates. The First Edition of the 6-inch scale Ordnance Survey map and subsequent editions indicate that both sections have certainly remained in use since 1851, and probably somewhat earlier, since they approximately correspond to a route marked on Thomas Jefferys' map (Ordnance Survey 1854; Jefferys 1771). The origins of Track 5a may well be medieval, if not earlier, for it smoothly continues the line of Road 2B onto the western plateau, giving access to the South Manor and Tracks 4 and 8a, which run along the frontages of West Row (north) and (south) respectively.

On the other hand, several stratigraphic relationships run contrary to the suggestion that Track 5b is even of medieval origin, let alone of Romano-British or late Iron Age. Firstly, the track cuts through the lynchet bank, although the date of that feature has yet to be securely established. The argument that the lynchet bank is of 10th-century origin, which has been put forward previously, would certainly make an Iron Age origin for the track untenable. Secondly, the track also seems to cut through the frontage of West Row (south), which was first identified as an earthwork by Stuart Wrathmell (1989, 4). Thirdly, the track cuts both the south-east and south-west corners of the bank and ditch that define the southern boundary of the *curia* enclosure of the South Manor and diverges by up to 5m from the straight southern side (see Section 5.4). Lastly, the earlier survey of the earthworks, historic maps and aerial photographs all concur that the course of the track to the west cut obliquely across Field 3, both its alignment and its stratigraphic relationship to the cultivation ridges indicating that its origin post-dates their disuse (Ordnance Survey 1854; 1890). Given that ploughing in Field 2 and elsewhere appears to have continued to a late stage, we may assume that Field 3 may have been ploughed until the latest occupation of the village, that is, around the beginning of the 16th century. In other words, Track 5b originated after that date; in the context of the documented history of Wharram Percy, this probably points to a date in the late 18th century.

Track 6a, like Track 5 from which it diverges, has not been sampled by excavation, but has also been interpreted as giving access to the open fields in the medieval period (Beresford and Hurst 1990, fig 55). There is some evidence to support this, in that the line of the track follows the southern edge of Field 3, hinting that the two may have been in contemporary use. Again like Track 5, Track 6a is fairly deeply worn and cuts through the lynchet bank, but it also appears to cut through the boundaries of Tofts 9 and 10. These were evidently in a degraded condition by the time they were cut by the track, but whether this points to a medieval or later origin is uncertain. Track 6b, a more southerly branch of the same route, is not evident as an earthwork, but is depicted on the First Edition 25-inch scale map surveyed in 1888 (Ordnance Survey 1890). The breadth of the track as depicted suggests that it was the principal route to the west at that date, effectively continuing the course of Road 2A and 2B towards Wharram Percy Farm.

Track 7 provided more direct access between the junction of Track 5a/b and 6, and Track 11 to the south. The depth to which the hollow way developed suggests that the route was much less intensively used than Track 5a, which makes the corresponding link to the north. It is not depicted at all on the First Edition 6-inch scale map and only as a minor path on the later 25-inch scale map (Ordnance Survey 1854; 1890). A medieval origin is possible, but it may have experienced its most intensive use from the late 18th century onwards.

Track 8, like Track 4, appears to conflate two elements as defined previously, but in this case it is quite possible that both elements are of medieval origin. What is here termed Track 8a runs along the narrow strip of level ground between the frontage of West Row (south) and the crest of the western side of the valley, apparently serving the whole row and thus extending further northwards than has been recognised previously. The southern end

of Track 8a, contrary to the interpretation reached previously, does not seem to have turned sharply westwards but rather to have followed a more gentle curve that gradually converged with the line of Track 9. Most of Track 9, as defined previously, is probably of post-medieval origin, while its antecedent is here referred to as Track 8b. Track 8c obliquely climbs the slope of the western side of the valley from north-east to south-west, giving access between the mid-point of Track 8a and Road 3D. In plan, the relationship of the two routes to each other suggests that Track 8c is the earlier and that its course was subsequently borrowed by Road 3D.

Track 9 was interpreted on the evidence of the earlier survey as a straightforward continuation of Track 8. However, while the lower section of Track 9, as defined in this report, follows the line of the medieval Track 8b, its northern end diverges and cuts straight through the southern boundary of Toft 1, which appears to have remained in use to a relatively late date, indicating that Track 9 is almost certainly of post-medieval date. Historic Ordnance Survey maps (1854; 1890) indicate that the route passed northwards obliquely across the southern half of West Row (south) and joined Track 21 close to Area 6, where excavation revealed cart ruts (Milne 1979b, fig 17).

Track 10 can be dated with some precision, for it was clearly constructed to give access from Road 2B to the gateway into the courtyard of the Improvement farm, which was built between 1775 and 1779. Although most of the farmstead was demolished at some point between 1846 and 1851, the track evidently continued in use, for it is shown on both the First Edition 6-inch scale map surveyed in 1851 and the First Edition 25-inch scale map surveyed in 1888 (Ordnance Survey 1854; 1890). The track cannot strictly be termed a hollow way, although it is similar in form, for it must have been deliberately cut through the higher ground on the south side of Road 2B, rather than gradually eroded through use. The earlier plan erroneously shows a toft boundary continuing across the track; the only earthwork in this vicinity that demonstrably post-dates the track is a pipe trench, apparently leading to the water pumping station built in 1935.

Track 11, at least in its latest form, provided access from the north to the church and post-medieval parsonages. Yet, as described above, it also follows the most direct and topographically straightforward continuation of Road 3C into the village, and may represent an antecedent of the awkward Road 3D, which climbs the valley side to the west. The existence of such a route, which cannot be proven from the earthwork evidence, might go some way to explaining the siting of the church (see Section 5.3).

Track 12 gave access from Road 3B to the western end of Field 6. It does not appear to have been used intensively; what has previously been identified as a hollow way is a field boundary ditch, probably of post-medieval origin (Boundary 8 in section 5.8).

Track 13, which has not been explicitly identified before, can only intermittently be distinguished as an earthwork in its own right, but seems in essence to have followed the headland running along the top of the lynchet bank, effectively forming a back lane along the rear of West Row (north). Those sections that can be identified as slight hollow ways and

ramps seem to have provided access into the individual tofts and perhaps represent piecemeal use at a relatively late date. The existence of the route at an earlier date in a more planned form can be inferred from the fact that the headland provides the only means of access to the crofts (Wrathmell 1989). On plan evidence, it seems likely that the northern end of the route originally continued as far as Road 1B. Following the construction of Building 18 on the projected line of the track, it is possible that access to it was gained through Toft 19.

Track 14 has previously been recorded as earthworks but not interpreted as a track, although its embanked form is essentially similar to that of Track 1 and Road 1B. The route is the clearest example at Wharram Percy of a 'back lane', running between the rear of the tofts of North Row and the adjacent crofts. The western end of the route abruptly becomes indistinct, possibly due to later dumping or disturbance, but may at some stage have continued as far as the open area at the south-eastern corner of the North Manor. The eastern end is equally difficult to trace, but may have intersected with Track 3, or turned northwards along the edge of the escarpment.

Track 15 is a short hollow way that evidently allowed access into the crofts of West Row (north), possibly at a relatively late date when the village had been reduced to a small number of courtyard farms. The hollow way cuts through the lynchet bank and the ditch of the northern boundary of the *curia* enclosure surrounding the South Manor. The separation between the ditch that forms part of the northern boundary of the *curia* enclosure and the buildings in Toft 14 would suggest that they were sited to allow the track to pass through, which would imply that the track was already in existence.

Track 16 is a deeply worn hollow way that utilises a natural indentation in the crest of the southern side of Drue Dale to ascend the steep slope, thus providing access to Field 5. The lower section of the track has been rendered difficult to trace by the severe soil creep in this part of the valley. The Ordnance Survey First Edition 25-inch scale map surveyed in 1888 shows it heading almost straight down the slope to the point where Track 8b/9 begins to ascend the northern side of Drue Dale, but this is no longer clear from the surface traces (Ordnance Survey 1890). Rather, the earthworks seem to suggest that it may have continued obliquely across the contours to join Track 18b. It is of course possible that the course of the track changed over time or that both routes were in concurrent use at some time prior to 1888.

Track 17 has previously been recorded in part as an earthwork, but not interpreted as a track. It loops eastwards from Track 8b, giving access to two previously unidentified medieval buildings on the slope and intersecting with Track 18, and then continues northwards obliquely down the slope towards the church. At this point, its course has been erased or masked by a landslip.

Track 18a branches off from Track 17 and descends the slope to the main spring. Although a connection between the village and the water source has previously been assumed, this track is the only clear-cut physical manifestation of that link. This section is not depicted on historic maps, but the Ordnance Survey First Edition 25-inch scale map surveyed in 1888

depicts a continuation of the route to the south of the Wharram stream, Track 18b, which is no longer identifiable as an earthwork (Ordnance Survey 1890). Although it must have been in use at that date, it is not unreasonable to suppose the existence of a medieval antecedent.

Track 19, previously described as an element of Track 4, is demonstrably of later date than that route or continued in use for longer: as the earlier survey actually shows, it cuts through Track 4, through Toft 15 and so gives access to the crofts to the west. It seems likely that Track 19 is either broadly contemporary with the small number of later medieval courtyard farms or that it is of 18th-century origin. On balance, the evidence that Toft 15 did not develop to the extent as the other tofts in the row seems to point to its abandonment, and the subsequent use of Track 19, towards the end of the life of the village.

Track 20 climbs the western side of the valley, running approximately parallel to Road 1C. It is not heavily eroded, indicating that it was not intensively used. Its northern end seems to have provided access to the scatter of buildings that encroach onto the village green, but there are hints that one of the buildings may overlie the trackway.

Track 21 was depicted on historic maps, as a 'footpath' which continued the line of Track 8c south-westwards (Ordnance Survey 1854; 1890). Excavation on the line of the route in Area 6 revealed cart ruts (Milne 1979b, fig 17). The only section of this that can now be traced as an earthwork obliquely descends the northern side of Drue Dale, descending the steep slope from east to west. The route cuts obliquely across Field 4, suggesting that, like Track 5b, it post-dates the end of arable cultivation, presumably around the early 16th century. Since the footpath follows the most direct route from the site of Wharram Percy Cottages to Wharram Percy Farm, it is reasonably safe to infer that this stretch originated in the late 18th century or later.

5.3 St Martin's Church

As a standing structure, Wharram Percy's church is fairly typical of small village parish churches in the Yorkshire Wolds, consisting of a nave and chancel with a tower at the west end. The building was at its largest and most elaborate between the early 13th and early 15th centuries, reflecting the fortunes of the parish and the village itself. The walls are built of well-coursed stonework, mostly using sandstone, and incorporate many segments of high-status medieval grave slabs. Twelve phases of construction have been detected, initially through analysis of the standing fabric and subsequently by total excavation between 1962 and 1974 (Bell and Beresford 1987). Following the consolidation of the tower, whose western half collapsed in December 1959, the fabric has remained in good repair and the interior of the building is open to public access. The nave has not had a roof since the early 1970s, while the chancel was re-roofed in slate in the mid-1980s. No further examination of the building was carried out by English Heritage in 2002 and the survey has contributed nothing further to the existing understanding of the sequence of parsonages that lie nearby. The visible extent of the churchyard lies immediately to the south of the church; it contains thirty-one headstones dating from the late 18th century onwards and was not subjected to excavation. Limited excavation to the north, where burial ceased when the village was

deserted, suggested that the ground had been used for at least four cycles of burial. In all, around 600 burials comprising about 1,000 individuals were removed for study. The new investigation suggests that the expansion of the churchyard would have blocked the earliest route of Road 3, forcing its diversion up the slope of the western side of the valley (referred to as Road 3D). This development may have occurred when Haltemprice Priory acquired the advowson in the 1320s, but radiocarbon dating of skeletons seems to indicate that the graveyard reached its maximum extent before the Norman Conquest (information from Stuart Wrathmell).

Excavation has revealed that the earliest structure, built in timber, was a small, single-cell chapel, possibly constructed in the mid-10th century; this building evidently influenced the siting of its stone-built successors. In his study of medieval villages, BK Roberts (1987, 100) has commented that the location of St Martin's, well below the highest ground and at a considerable distance from what seems to have been the heart of the village, is 'a most curious siting, which raises many unanswerable questions!' While several theories have been proposed, it is true that no entirely convincing answer to this fundamental question has yet been found (Hurst 1985, 90). The earliest church has been interpreted as a proprietary chapel, that is one attached to a manor house, an origin common amongst rural churches in England (Rodwell 1981, 140-5). However, though the presence of a third Anglo-Saxon manor on the terrace occupied by the church has been suggested, no support for this theory has been forthcoming. The suggestion that the churchyard may have effectively defined the southern end of East Row (Beresford and Hurst 1990, fig 60), which would mean that the site of the church was not entirely excluded from the village plan, is questionable, as discussed in Section 5.6. In any case, it has not yet been proven that the foundation of the church does not predate the planning of a nucleated village by as much as two centuries. On the north side of the church the excavations found an Iron Age burial of the 1st century BC, leading to suggestions that the church might occupy a site of prehistoric ritual importance, perhaps associated with a water cult, given the proximity of the stream (Wrathmell 1996, 15). The putative water cult might arguably be expected to arise in closer proximity to one of the springs and to be reflected in a more apposite dedication than St Martin. Furthermore, the single burial does not constitute strong evidence for the existence of a cult, especially in the context of the apparent string of graves of similar date along the crest of the western plateau. Given this and the passage of more than a thousand years, the idea of any direct continuity of ritual significance can probably be dismissed. However, it is not inconceivable that the Iron Age burial was originally marked by a square barrow, which would have been detectable as an earthwork a millennium later, and might have prompted the construction of a church in an attempt to sanctify the pagan monument. Comparison has been made with the treatment of the late Neolithic standing stone in the churchyard at Rudston, though this monument is arguably in a different league from an Iron Age square barrow. Yet this again begs the question as to why this particular burial might have been singled out, of the string of square barrows recorded by aerial photography along the edge of the western plateau. One explanation might be the siting of the other barrows in relation to later ploughing, which was probably intensive during the late Iron Age and Romano-British periods, for these

earthworks might have been erased long before the mid-10th century. By contrast, a barrow lying within the uncultivated public space around the church might well survive intact.

Another possibility arising directly from the English Heritage investigation is that the siting of the church related to the pattern of principal through routes in the late Saxon period. As described in Section 5.2, it is possible that Road 2B, which formed one of the most obvious principal axes of the medieval village, may have replaced an earlier route, referred to as Road 2C, which climbed the valley side at a more gentle angle. If so, at some point prior to the laying out of East Row the intersection of Roads 1, 2 and 3 may have lain at least as far south as Wharram Percy Cottages and perhaps closer still to the location of the church. If the church was originally located next to a road junction, its siting might be regarded as much less unusual, if not typical. In any event, it seems very likely that the main north to south route passed immediately to the west of the site of the late Saxon chapel. The site of a church with pre-Conquest origins at North Burcombe in Wiltshire seems to owe much to the early road pattern and it too lies at a considerable remove from the main village earthworks (Aston 1989, 121). Given that radiocarbon dating suggests that the churchyard reached its greatest extent before the Conquest, it is possible that the route was diverted in the same period. The evidence presented in Section 5.2 suggests that the north to south route increased in importance at some point between the Romano-British and early medieval periods.

At a more fundamental level, it is worth observing that BK Roberts' view of the siting of the church as entirely inexplicable is based on the conventional model of the church standing cheek-by-jowl with the manor. Analysis of village plans in Lincolnshire has revealed that a significant proportion of churches there were founded by the free peasantry on sokeland and that this origin is regularly reflected in a separation between church and manor (Everson, P and Stocker, D in perparation). The single carucate of sokeland referred to in Domesday Book has traditionally been equated with land towards the south of the village, but it may be necessary to reconsider the evidence.

5.4 The South Manor

In 1955, excavation of Area 10 (centred on Building 10) revealed a sequence of peasant houses, beneath which lay the top of a major stone wall, which a trial trench proved to be sunk 3m into the ground. Further excavation in 1956 and 1957 showed that the wall was part of an elaborate rectangular stone-built undercroft, built *c* 1180 on an east – west alignment. This was interpreted as part of the solar block, or *camera*, of a manor house and its outline was eventually laid out for display to visitors. Apart from various dressed stone blocks in the demolition rubble used to backfill the undercroft early in the second half of the 13th century, there was scant evidence for the form of the upper storey and none at all for the remainder of the building, perhaps due to later disturbance. It has been speculated that the hall may have extended at right angles to the south, and was perhaps built primarily in timber (Beresford and Hurst 1990, plate 9). Documentary evidence indicates that the Percy family acquired the rights of both manors in 1254 and since the *camera* had been demolished at about this date, the South Manor was initially linked to the Chamberlain family (Hurst 1979, 138-9). However, it was concluded that without better understanding of the dating of the North

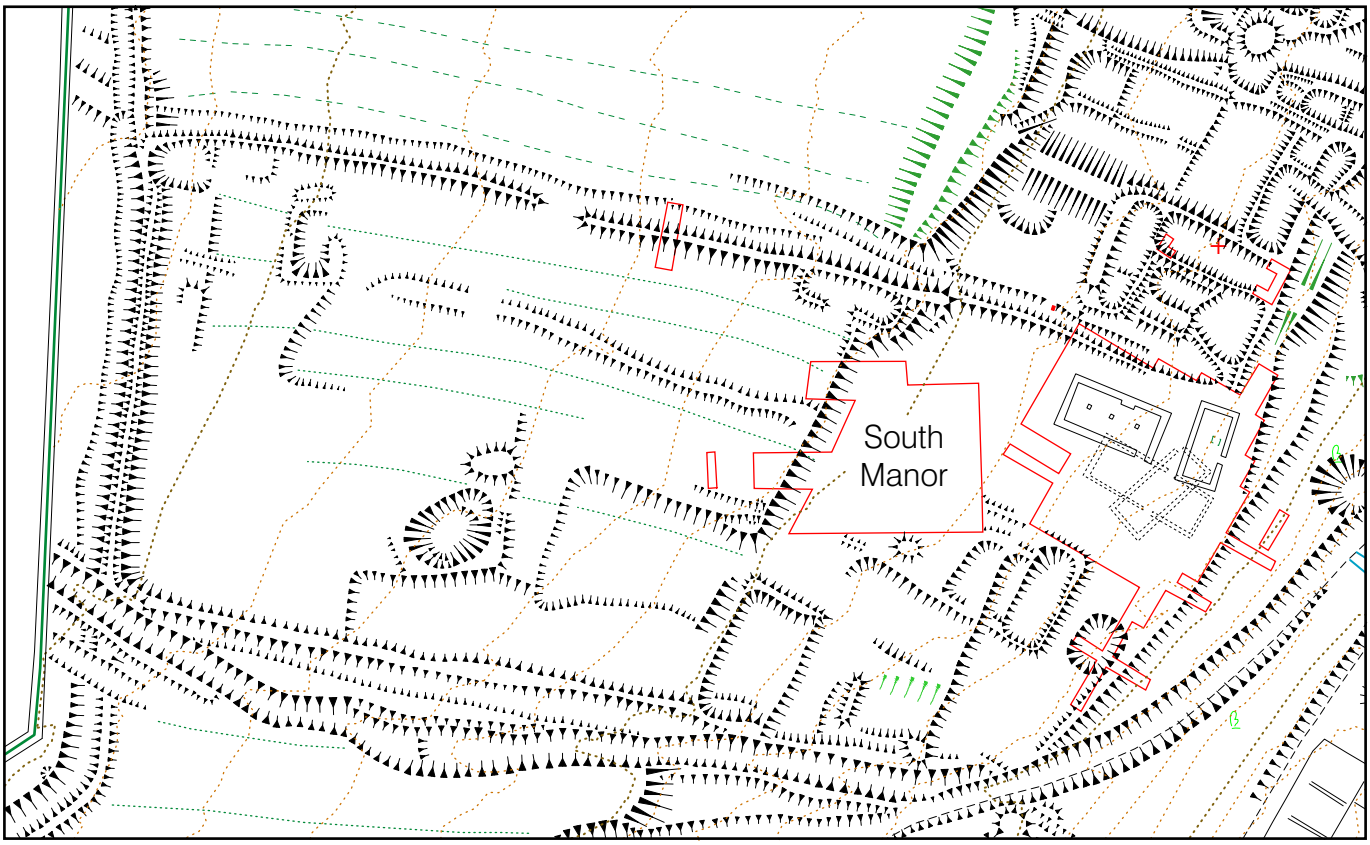


Figure 11
English Heritage plan of the South Manor (1:1 000 scale)

Manor, it would remain unclear whether the South Manor was built by the Chamberlain family to oversee their residual holding, or by the Percy family to service their new estate (Roffe 2000, 3).

With hindsight, the existence of the manorial complex might have been suspected prior to the 1955 excavation on the basis of the earthwork remains, although nothing of the backfilled undercroft itself could have been detected. The building lies within a rectangular enclosure, or *curia*, which is itself anomalous and encompasses a number of other unusual features (Figures 11 and 12). The enclosure is defined on south, west and north sides by a substantial bank up to 0.7m high, possibly representing a tumbled wall. This is accompanied by an external ditch, now of negligible depth, which has previously only been traced as a discontinuous geophysical anomaly (Beresford and Hurst 1990, fig 52). The ditch appears to form an integral part of the *curia* boundary, which contradicts the earlier interpretation of the ditch on the northern side as an element of the late Iron Age or Romano-British field system. The same conclusion has also been reached on the evidence of the more recent geophysical survey (Linford and Linford 2003, fig 8). A less cursory examination of the four datable sherds recovered from the primary silt of the ditch has also indicated that while three of the sherds are Roman, one is 12th-century 'pimply ware' (information supplied by Ann Clark). If this single sherd can be taken as an indicator, the boundary of the *curia* would seem to have been built at about the same time as the excavated *camera*. At the western end, however, the *curia* bank directly overlies Boundary 3, part of a more extensive field boundary that may be of Romano-British or late Iron Age origin (see Section 5.10). The eastern end of the *curia* seems to have been defined by a ditch, the northern section of which was revealed by excavation in Area 10, continuing the line of the frontage of West

Figure 12
English Heritage interpretative plan of the South Manor

Row (north). Although this was augmented by a wall after the demise of the manor, the excavation provided no evidence as to whether any wall existed while the manor still stood. A slight bank, obliquely sectioned by a trial trench extending southwards from the excavations in Area 10, probably represents the continuation of the later wall rather than part of the original boundary. Interpretation of this bank is further complicated by the existence, apparently on a similar line, of a field boundary shown on the 1836 estate map and therefore probably laid out in the late 18th century (Dykes 1836). Nonetheless, given the lack of other possibilities, the point of entry into the manorial complex may have lain at the southern end of Track 4, roughly mid-way along the eastern end of the *curia*. A broad gap in the northern side of the *curia* boundary is also apparently an original opening, for the terminals of the bank on either side are slightly off-set from each other, but this seems unlikely to have been a main entrance given its position. The *curia* as a whole would have measured 142m from west to east by 62m wide, with an internal area of 0.83 ha (2.05 acres).

The *curia* enclosure overlies the lynchet bank, which in turn post-dates ridged cultivation of unusual form, as described in Section 5.7. Within the *curia* of the South manor, the traces of this cultivation are even less clear than elsewhere, especially in the southern half. However, the broad, low ridges are similar to those in the area south of Track 5b, where they survive in better condition. This episode of cultivation is of uncertain date and is discussed more fully in section 5.8.

What appears to be a large rectangular building platform, is set into the corner formed by the lynchet bank and the southern side of the *curia* boundary (see Figure 12). This has not previously been interpreted as the site of a building, possibly because this was the area used for the main spoil dump from the excavations in the 1950s (Beresford and Hurst 1990, 76). The proportions and large size of the platform are unusual, measuring 17m long from north to south by 10m wide. The sharpness of the scarp along the western side of the platform, where it cuts into the foot of the lynchet bank, suggests that it may represent the line of a chalk wall. However, the slight scarp along the eastern side does not immediately suggest the existence of any stone walling on this side, which may indicate that the building was a free-standing timber structure, or perhaps one largely open on one side. In either case, the unusually large size of the building hints that it may have been part of the South Manor. Alternatively, given the thorough eradication of the *camera* in contrast to the apparently well-preserved condition of this building and its proximity to a number of late medieval or post-medieval routes, it may have been associated with one of the late courtyard farm complexes or with post-medieval livestock management.

Also within the *curia* boundary are two depressions which have previously been interpreted as livestock ponds of post-medieval origin (Stamper *et al* 2000, 19). The more easterly of the depressions (**a** on Figure 12) is approximately circular in plan, *c* 10m in diameter and up to 0.7m deep, with an amorphous low mound, perhaps representing spoil dug out of the depression, adjoining on the north-east. The depression is cut into the gentle slope and is completed on the south by an embankment. The form of the earthwork is somewhat reminiscent of a small stock pond, as has previously been suggested. However, the early ridged cultivation, which predates the *curia* enclosure as mentioned above, seems to respect the depression, implying that it is of early date. It may have originated as a quarry, perhaps in the Romano-British period and been converted to form a pond at some later date, not necessarily in the post-medieval period.

The more westerly depression (**b** on Figure 12), previously depicted as square in plan, is actually rectangular, measuring 9.0m by 4.5m with a maximum depth of 0.3m. Thus, its plan and dimensions are not dissimilar to some of the smaller medieval buildings. In addition, the sharpness of the sides of the depression and the presence of a bank of minimal height around most of the exterior suggests that chalk walling may be present. In other words, the feature is more likely to represent a small medieval building than a stock pond, although it may well post-date the demise of the South Manor. There are slight suggestions of other structures in the vicinity including a small platform cut into the north-western corner of the *curia* enclosure. These may be outbuildings associated with Building 11, or perhaps the

components of a farmstead of relatively late date, described below as part of Toft 13 (see Section 5.6).

5.5 The North Manor

At the northern end of the village, a distinctive cluster of mostly rectangular buildings of varying sizes has been interpreted, almost certainly correctly, as the site of the second of the village's two documented manors. None of the principal buildings of the complex has been fully excavated, but trenches to the south recovered no pottery later than the 12th and 13th centuries. Despite the paucity of direct evidence, a bold and detailed attempt was made to interpret the disposition of specific rooms by John Hurst and Jean le Patourel, based on a plan of the earthworks surveyed at a scale of 1:20 by WJ Hopkins (Figure 13; Hurst 1985, fig 4). In metrical terms, the new plan surveyed at 1:500 scale does not differ greatly from its predecessor, although there are a few important differences (Figure 14). Perhaps the most significant difference is the addition of chronological depth to the previous interpretation, which treated the complex as a single, static entity (Figure 15). The new survey suggests it underwent at least one major phase of expansion and that several of the buildings which might previously have been interpreted as part of the complex are more likely to represent later encroachment onto the site. The irregular trapezoid plan of the *curia*, which makes a striking contrast with the almost perfect rectangle of the South Manor, suggests that it was initially fitted into existing boundaries, specifically Road 1B and Boundary 1. Within the manor *curia*, a series of slight scarps on a north to south alignment may represent the vestiges of slight positive lynchets on the eastern (downslope) side of cultivation ridges, hinting that the complex may also have been laid out over what was once arable land. This theory is supported by the observation that the alignment of many of the principal buildings and boundaries echoes that of the cultivation ridges in Field 2, which in turn replicate the north-north-west to south-south-east stretch of Road 1A/1B beyond the Guardianship Area. The origins of this ploughing may be of considerably earlier date, like the early ridged cultivation detected elsewhere, which apparently underlies the lynchet bank (see Sections 5.7 and 5.8). However, there is no trace of these or later cultivation remains where they might be expected to survive best, in the large yards associated with the barn and immediately to the south of the manor house. This observation is also relevant in understanding the use of the *curia* after the demise of the actual manor house. As described in Section 5.2, the provision of access to Field 1 via Track 1 may be contemporary with the initial imposition of the manor.

In both phases of its existence, the plan of the manorial buildings seems to have been more organised and regular in layout than has previously been appreciated. Initially, the *curia* enclosure seems to have been a quadrangular area of about 0.47ha (1.16 acres), that is, somewhat smaller than that of the South Manor. At this stage, the main east to west range of the manor house, which has previously been interpreted as a solar, hall and buttery/pantry, seems to have formed part of an L-shaped building of modest size, with a major wing projecting to the north of the eastern end. A separate small building to the north of the western end of the east to west range, was perhaps only connected by a broad corridor to the main L-shaped building; this has been interpreted as the private rooms of a solar block.

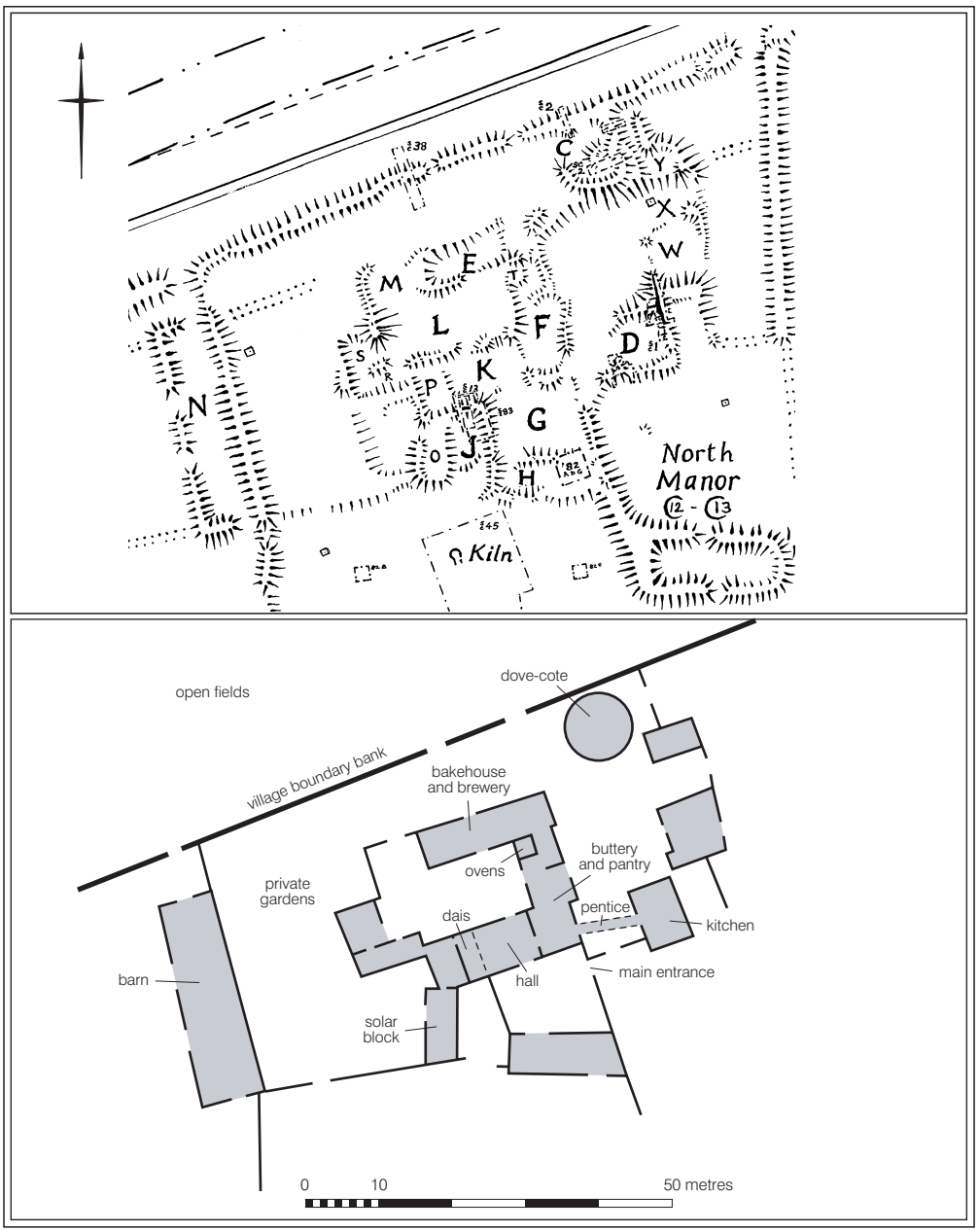


Figure 13
Plan of the North Manor by WJ Hopkins surveyed 1976 (reduced from original at 1:20 scale), with interpretation

These three arms defined three sides of a possible courtyard or enclosed garden of up to *c* 300m^2. A building on the northern side of this has previously been interpreted as a bakehouse and brewery, partly because it shares the same east – west alignment of the manorial buildings. This structure is similar in size and form to the peasant houses found in other parts of the village. There is no clear-cut stratigraphic indication that the building is of different date from the manor, nor any reason why the cruck-beam construction technique employed by many of the peasant houses should not also have been used at the higher-status complex. However, the possibility that it represents encroachment by peasant houses onto the former site of the manorial complex after its destruction cannot be dismissed. The interior of the main east – west range was evidently divided into three parts, suggestive in essence of a typical division into solar, open hall and service end, but the interpretation of the function of individual rooms is problematic. In its eventual form, the manor appears to have been approached from the east, and this would support the earlier theory that the private chambers of the solar block were towards the west, in the most private part of the

Figure 14
English Heritage plan of the North Manor (reduced from original at 1:500 scale to 1:1 000 scale), with schematic plan, without phasing

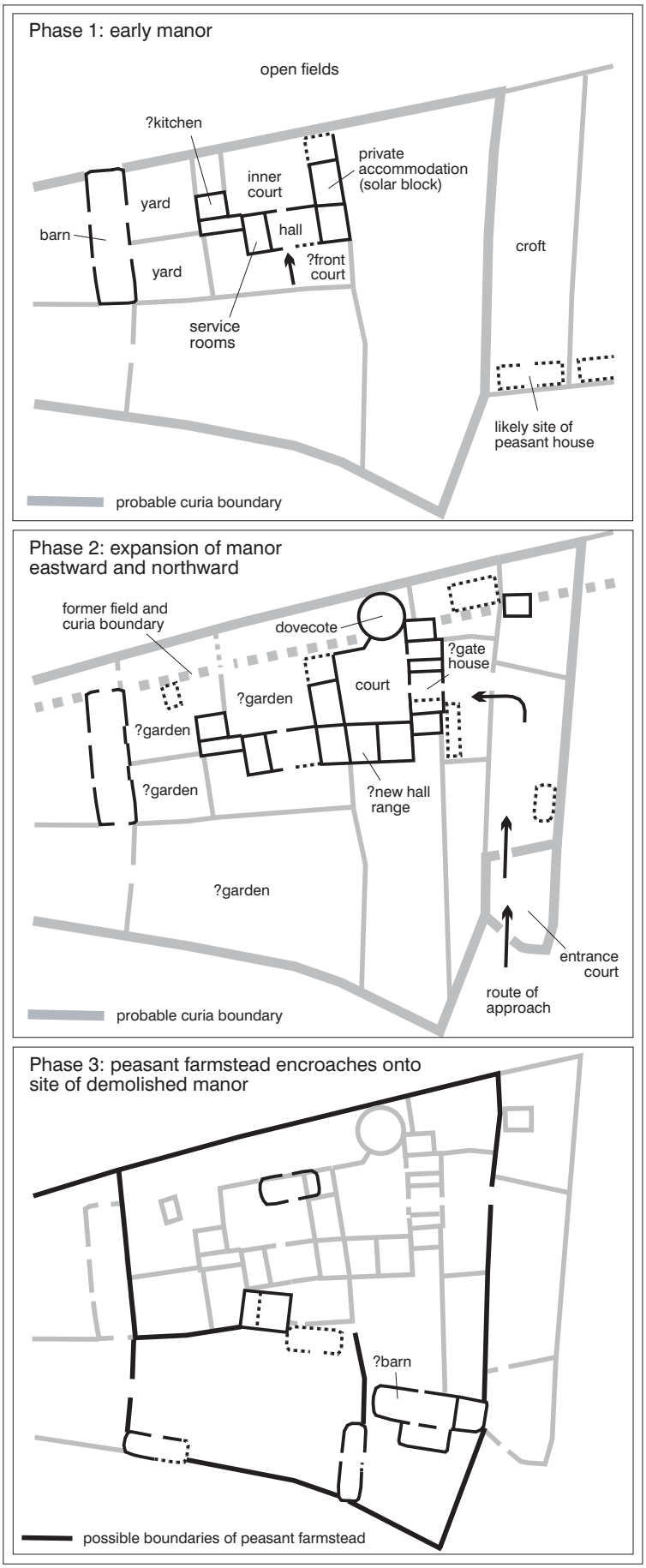


Figure 15
English Heritage interpretative phase plan of the North Manor

complex. However, it is less clear how access was gained in the earlier phase - possibly from the west via the yards as concluded on the evidence of the earlier survey. A pronounced step within the range has previously been interpreted as the edge of a dais, whose identification seems optimistic. If proven, this would also support the identification of the western end of the building as its 'high' end. The new survey suggests that the step corresponds to the line of an underlying lynchet, although this observation in itself need not invalidate the previous interpretation. The proximity of the barn (described below) to what has been seen as the private high-status solar block was regarded as somewhat awkward, but was justified by the apparent absence of doorways in the eastern side of the barn. The identification by the new survey of two doorways on this side, apparently blocked at some stage, again call this theory into question. Access from such a utilitarian building to yards overlooked by service rooms seems more plausible. In this scenario, the building previously interpreted as a solar block might be a kitchen connected by a covered corridor or 'pentice'. The wing extending northwards from the main range might represent the private rooms of a larger solar range. Although it might be assumed that a solar block should project southwards, ranges extending northwards were far from exceptional (see, for example, Pearson *et al* 1994). In this form, the long south side of the main range might be said to have faced towards the church and the rest of the village, although how access was gained is unclear.

In the second major constructional phase identifiable from the earthworks, the *curia* seems to have been enlarged eastward and northward to encompass an overall area of 0.90ha (2.22 acres). To the east, this expansion demanded the reclamation of the westernmost toft and croft of the North Row (Toft 21), whose western boundary can still be discerned. To the north, it involved taking in a 10m wide strip of Field 2, so that the *curia* encroached beyond the former southern edge of the field (Boundary 1). The narrowness of the additional strip of land claimed on the north is perhaps significant. If the cultivation ridges in Field 2 were aligned north to south at the time when the expansion took place, as they may have been at some stage (see Section 5.8), it may have been the former headland of the field that was taken in. Alternatively, if the change to the eventual east to west alignment had already occurred, a single ridge may have been taken, but there is no surface trace of any continuation of either feature to the east of the *curia*.

In the same phase, the main east to west range of the building seems to have been extended eastwards to an overall length of 37m, encompassing what has previously been interpreted as a detached kitchen. This expansion is suggested in part by the fact that the eastern end of the range is on a fractionally different alignment from the wings that form the L-shaped portion. The addition may have created what might be interpreted as an outer courtyard, its eastern side formed by a range extending northwards, comprising what appears to be a large gatehouse with adjoining rooms. An alternative interpretation might be that the extension was essentially the addition of a whole new manor, which replicated the rooms of the earlier manor, but in a location shifted to the east so as stand more centrally within the extended *curia*. In this scenario, the outer court would be the main courtyard, and the south frontage of the hall range would have retained an unimpeded aspect. The rooms in the Phase 1 building may have become more utilitarian in function and the surrounding compartments

may have been converted to gardens at this stage. The dovecote (as previously interpreted, almost certainly correctly) overlooks the northern end of the new courtyard, an arrangement found widely in post-medieval manors. Despite damage done by stone-robbing, the structure remains one of the best preserved components of the manorial complex, with walls surviving to at least 0.5m high. East of the gatehouse lay a small forecourt, with an opening in its eastern side opposite that in the gatehouse. The northern and southern sides of the forecourt continue the alignment of the rest of the main ranges to the west, while the eastern side follows the western boundary of the former Toft 21. East of the forecourt lies a larger enclosure whose eastern side follows the eastern boundary of the former toft, an area effectively corresponding to the course of Track 2 as interpreted previously. The southern end of this outermost enclosure is formed by a broad bank up to 0.4m high, with an original opening which would have given access on to the village green. Thus, while the focus and orientation of the complex as a whole had apparently shifted eastwards, the outermost entrance remained oriented towards the church and the heart of the village.

On the exterior of the bank that appears to have defined the western edge of the *curia* enclosure are the remains of a rectangular building with internal dimensions of 28m long by 7.5m wide, aligned from north to south. This was apparently one of three buildings standing within a yard, one of two such enclosures accessed from Track 1. The largest of the three buildings has been interpreted, entirely plausibly, as the barn mentioned in a valuation of 1368 (Beresford 1979, 12). The northern end of the building initially seems to have lain against Boundary 1, which may have been the headland of Field 2 when the North Manor was first laid out and thus presumably allowed access to the barn from the cultivated land. Access from this direction was apparently blocked by the northward expansion of the manorial complex beyond Boundary 1. In the west side of the building are gaps which must represent broad doorways (as concluded previously), since both have slight traces of wear outside them. While the evidence for the doorway located centrally in the northern end is also secure, the gap in the southern end is not central and may be the product of later stone-robbing. Arguably of greater importance is the identification by the new survey of two possible doorways in the eastern wall of the barn, opposite those in the western wall. The gaps are much less clearly defined than those identified previously, possibly because they were deliberately blocked, perhaps as part of the wider changes described above. In each case, the blocking wall lies just inside the line of the rest of the wall, a misalignment reminiscent of the construction of the walls of cruck-framed buildings excavated elsewhere around the site. The pattern of opposing doorways, designed to funnel wind through the building to assist threshing, is almost universal amongst medieval and later barns. As mentioned above, the identification of possible points of access into the main part of the manorial complex would tend to suggest that the area to the east is unlikely to have been used as a private garden, at least while the opposed doorways were in use. The function of the building after the probable blocking of the eastern doorways is uncertain, but it has been pointed out that doors are commonly located in the end of sheephouses in Yorkshire (Hurst 1984, fig 4; Beresford and Hurst 1990, 47). It could be that doors were inserted into the north and south ends of the building at the time that the eastern doorways were blocked.

A large, square building lies adjacent to the south frontage of the western end of the main range of the manor house and has previously been interpreted as a 'solar block'. Yet its alignment is slightly at odds with the other components of the manorial complex, suggesting that it may belong to a later phase. The alignment echoes that of Road 1B and the southern boundary of the *curia*. It also corresponds to that of a shallow sub-rectangular hollow immediately to the west of the building. Geophysical survey shows that this alignment replicates that of an adjacent late Iron Age or Romano-British plot boundary running at right angles to Road 1A (Linford and Linford 2003, fig 11). Indeed, it is not impossible that the anomalous hollow is actually part of that boundary.

At the south-east corner of the extended *curia* enclosure lies Building 23, another large and well-preserved rectangular building, apparently constructed in at least two phases, which may also be plausibly interpreted as a barn. In its initial phase, the building seems to have been 24m long by 7m wide, while the second phase is suggestive of a porch-like annexe. Building 23 and Building 24, a second well-preserved building lying at right angles, share the same alignment as the alleged solar block and may also belong to this phase. It has previously been suggested that the tenants of a 'demesne farm', its centre identified as the courtyard farm in Tofts 23/24, may have been responsible for managing the manorial lands after the departure of the Percy family (Hurst 1985, 97). It could be that these two buildings within the *curia* defined two sides of another late courtyard farm, similar to that previously identified in Tofts 2/3 and 23/24, with nearby Building 19 providing a plausible candidate for an associated farmhouse. The isolated position of this building within the overall pattern, together with its well-preserved condition and the fact that it blocks the line of Track 3, all suggest that it is of relatively late origin and its proximity to the buildings within the former *curia* is suggestive. The ditch of Boundary 12, which forms part of one of the post-medieval field boundaries described in Section 5.11, cuts obliquely through the middle of the building from west to east. This relationship indicates that the building had already been reduced to an earthwork by the time the ditch was dug, perhaps in the late 1770s. There is clear evidence of a door in the south side, but the evidence for an opposing doorway may have been erased by the digging of the ditch, which cuts through the northern wall at this point. The re-use of the former manorial *curia* in this way could explain why the latest episode of ploughing in Field 2, which encroached onto Road 1B and Track 1, conspicuously did not encroach within the *curia*.

A series of grants in the 1320s mention the existence of a 'park', but do not specify its size or location. On the assumption that it would have been directly accessible from the North Manor, apparently the only manor in existence at that date, the extent of the park has been equated with that of the North Row, which, it has been deduced, must have been entirely cleared away in 1254 (Beresford and Hurst 1990, 47). The precise meaning of the term 'park' is variable in the medieval period and it has been suggested that the enclosure was no more than a small paddock, which perhaps did not even hold deer (Neave 1991, 57). Certainly, it is well documented that from the mid-14th century, it was increasingly common for Lords of the Manor to keep their cattle and pigs in parkland, or to allow villagers to pasture their animals there, as at Beverley in the summer and autumn of 1388 (Stamper 1988, 145-7).

None of the enclosures recorded by the English Heritage investigation can be securely interpreted as a park. However, it is worth noting that the bank which defines the northern sides of the extended manorial *curia* and North Row is accompanied on the north by a slight and poorly preserved ditch, though there are hints that this may have been recut in the post-medieval period. An equally slight ditch runs along the western edge of the lynchet that defines the eastern side of Field 1. In both cases, the placement of the ditch in relation to the bank could be compared to a conventional park pale, if the park occupied approximately the same area as Field 1.

What seems to have been an enclosure some 30m square straddles the eastern boundary of the extended *curia* enclosure at its north-eastern corner, extending well into the croft adjoining Toft 22. In its eventual form, this appears to post-date the manorial complex and is described in Section 5.11.

5.6 Domestic settlement and the village green

At an early stage in the Wharram Percy Research Project, it was recognised that the plan of the village as a whole, together with the regular size and shape of the individual tofts constituted strong evidence that the settlement had been deliberately planned at some stage. Initially, it was assumed that there would have been a single episode of planning and there has been prolonged, but ultimately inconclusive, debate over when this might have taken place. At first, it was thought that since the pattern of the settlement and its associated fields results from the Scandinavian system of land apportionment known as *solskift*, the planning must have been carried out in the Anglo-Scandinavian period, probably the 10th century (Beresford 1979, 22). Other possibilities were subsequently considered: that the planning might have taken place either in the middle or late Saxon periods, in the 8th or 9th centuries, or in the late 11th or 12th centuries, perhaps in the wake of the devastation caused by William the Conqueror's 'Harrying of the North' (Hurst 1984, 85-7). However, the evidence for settlement in the 8th and 9th centuries seemed to imply a population too small to warrant the laying out of a planned village of at least thirty plots. The absence of documentary evidence and the complexity of later land ownership also seemed to rule out a date after the 10th century. Although it has been concluded that the question remains unresolved, the circumstantial evidence in support of the 10th century option has generally been accepted as relatively convincing (Beresford and Hurst 1990, 99; Richards 2000, 197-8). However, more critical analysis of the plan of the settlement has demonstrated that the western row is probably composed of two distinct units (Wrathmell 1989, fig 29). This opens the door to the possibility that two or more episodes of planning took place. In addition, Stuart Wrathmell (1989, 42-5) has argued for a more piecemeal development of different types and alignment of buildings within each individual plot. Dimensions of individual peasant buildings are compared graphically in Figure 17. It seems over-optimistic to try to distinguish the end of the longhouse that would have been occupied by humans on the evidence of a concentration of nettles (Beresford and Hurst 1990, 24). While it is true that nettles and thistles can thrive on the high nutrient levels caused by burning, higher levels of nitrates are left by animal dung, so it could be argued that the pattern of use was the opposite of what has previously been suspected. However, nettles are also attracted to

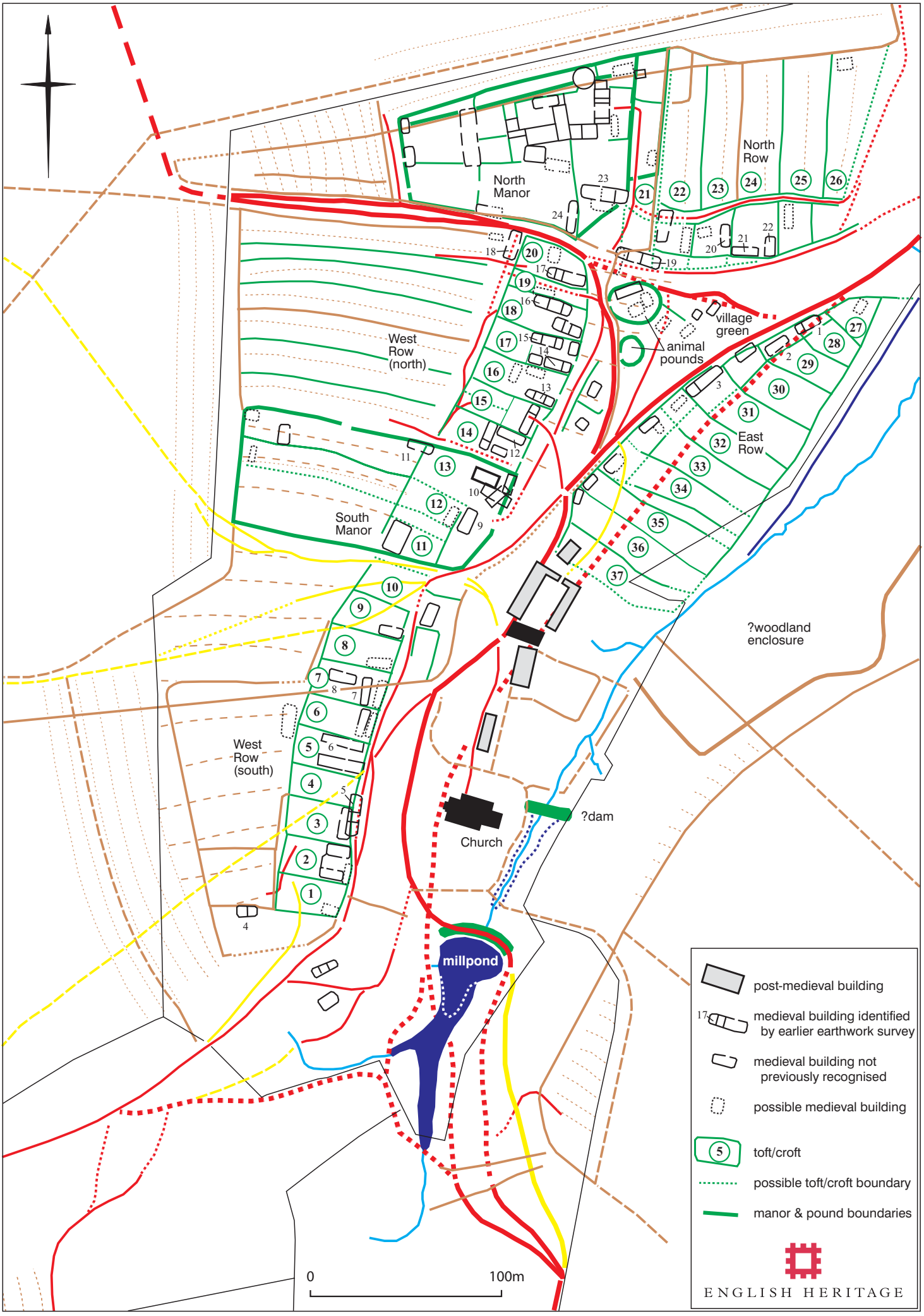


Figure 16 *English Heritage schematic plan of the village*

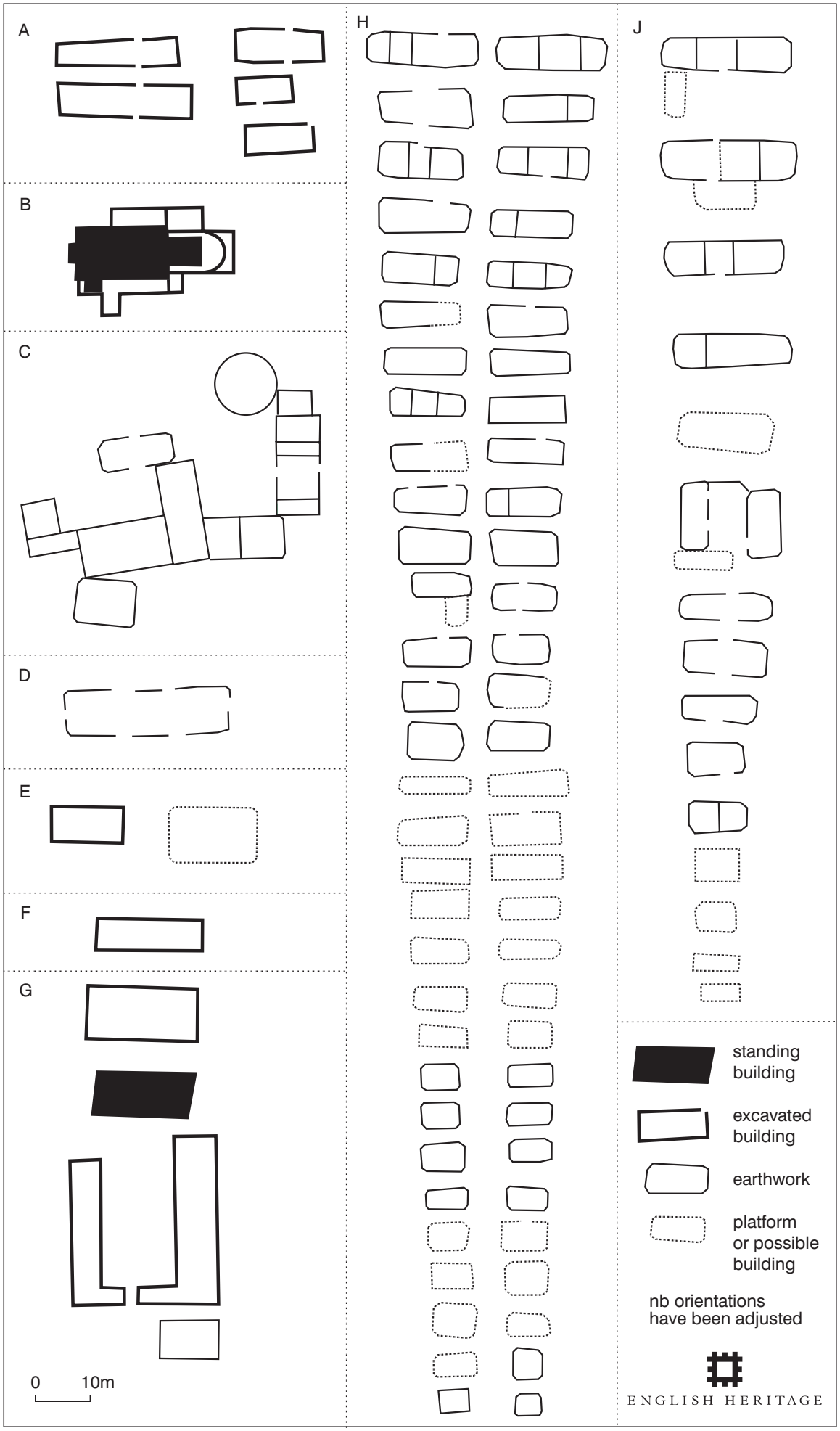


Figure 17
Comparative plan of the plans of peasant buildings surviving as earthworks

A = excavated longhouses

B= St Martin's Church

C = the North Manor

D = the barn at the North Manor

E = the South Manor

F = the Vicarage

G = the post-medieval farmstead

H = buildings surviving as earthworks

J = buildings surviving as earthworks, apparently of later origin

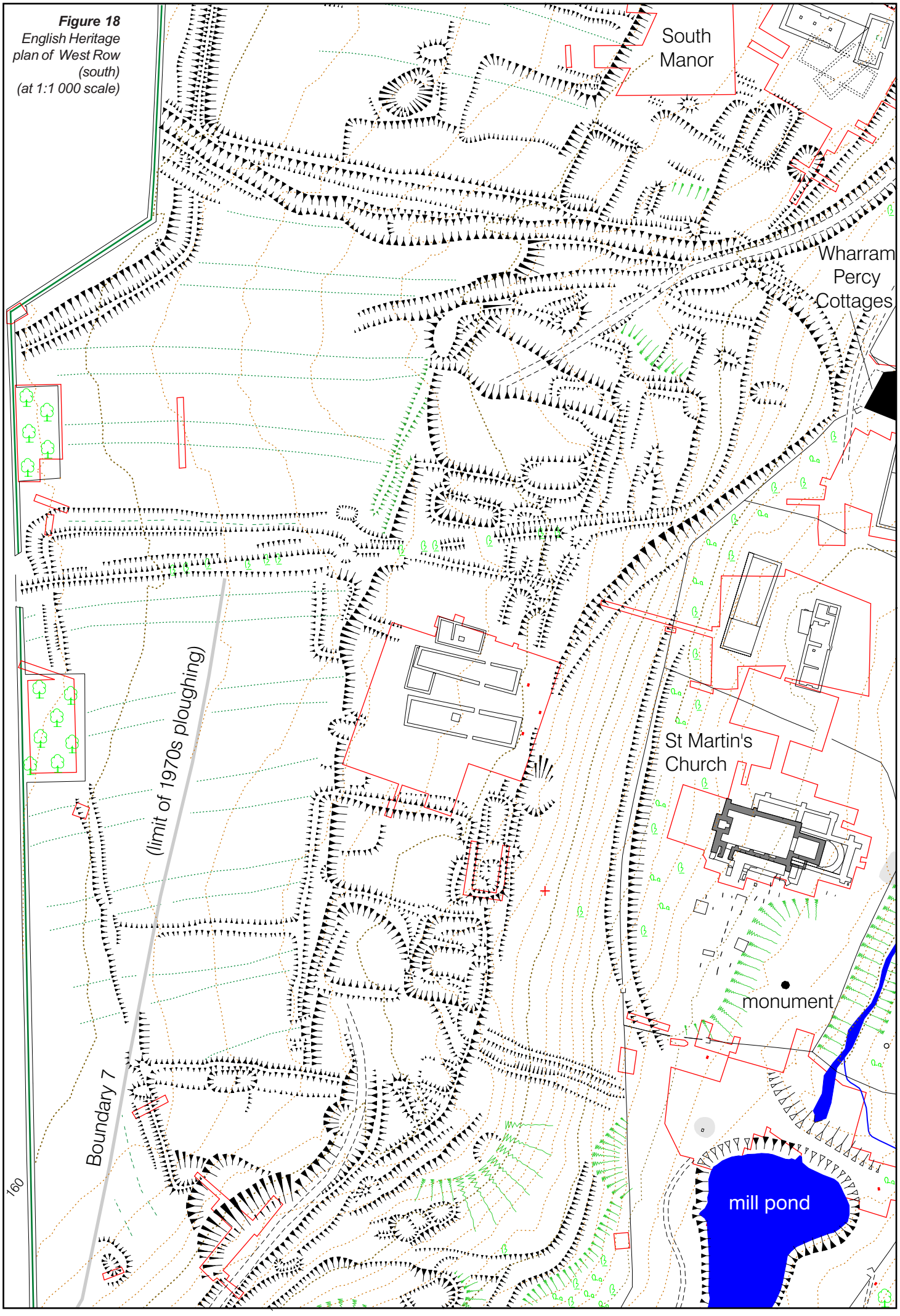
disturbed ground and clumps are scattered across the whole site. The more severe disturbance caused to the steep-sided earthworks of the buildings by the cattle that graze the site today (as opposed to sheep for most of the post-medieval period) may be a factor in the localised growth of nettles. In general, the ends of the building used as a byre might be expected to lie downslope, to allow the livestock's excreta to flow away freely.

West Row (south)

Stuart Wrathmell (1989, fig 29) has pointed out that what was initially interpreted as a single row of tofts along the crest of the western plateau shows evidence of being the outcome of the amalgamation of two distinct units, in this report termed West Row (south) and (north). Arguably, however, the character of these two parts of the settlement is so different that it is misleading even to term the southern part a 'row'. The two units appear to have overlapped in Tofts 11 and 12, which are crossed by two separate boundary banks, presumably defining the frontages of the plots at different dates. Wrathmell (1989, 41) interprets the change in alignment of successive peasant houses excavated in Toft 13 (Area 10), from north – south to north-east – south-west and finally to east – west, as a reaction to the misalignment of the frontages. However, in view of the complexity of the settlement record as a whole, he stops short of drawing any conclusion as to which is the earlier of the two units. The fact that Tofts 11 and 12 lie within the *curia* of the South Manor implies further chronological depth. The relationship between the earthworks at the point where the frontage of West Row (south) and the *curia* boundary intersect at first sight suggests that the frontage of the row cuts through the manorial boundary and is therefore later. However, closer inspection reveals that both earthworks have been dug away, the edge of this operation coinciding with the line of the frontage, so that the crucial relationship is unintelligible from the surface traces. Given the duration and complexity of the settlement as demonstrated by excavation, all the earthwork evidence must be treated with caution, but there are slight suggestions in the overall plan that West Row (south) existed first and that the South Manor and West Row (north) were laid out in a single episode, the *curia* of the South Manor encroaching onto the northern end of West Row (south). West Row (south) comprised as many as twelve toft-like enclosures fronting onto Track 8a. While their lengths from west to east range from 34m to 42m, their widths are fairly regular, varying only a metre or two on either side of 20m. The excavation of Area 6, thought at the time to have examined a single toft, may in fact have uncovered parts of three, as discussed below.

There is no convincing evidence for crofts adjoining West Row (south), nor for conventional ridge and furrow cultivation in the area where they would normally be expected. Under optimal conditions, a series of broad ridges can be traced on the ground to the west of the lynchet bank (differing slightly in length, breadth and alignment from those plotted from aerial photographs for the earlier survey). However, these are unusually broad and do not generally coincide precisely with the adjacent toft boundaries or share the same alignment. All are cut by the lynchet bank, suggesting that they pre-date the laying out of this part of the settlement, at least in its eventual fairly regular form. Their survival also seems to confirm that the area was subject to little or no conventional ploughing, either contemporary with the occupation of the adjoining tofts or later.

Figure 18
English Heritage plan of West Row (south) (at 1:1 000 scale)



Toft 1, the southernmost in West Row (south), contains vestigial traces of a possible small building in its south-east corner. A ramp-like track which ascends the lynchet bank at the rear of the toft seems to relate to the relatively late courtyard farm in Toft 2.

Toft 2 contains the remains of two, or possibly three, fairly small buildings set around a rectangular sunken yard 1.5m deep. East of Toft 4, a small quarry cuts into the crest of the escarpment; it is possible that the hollow which contains the yard of Toft 2 originated as another such quarry. The earthworks were apparently not interpreted as buildings by the earlier large-scale survey carried out in the course of the Wharram Research Project, although they had been depicted as such on the First Edition 25-inch scale map (Ordnance Survey 1890). It seems likely that the complex in Toft 2, which is similar in overall layout to that in Tofts 23/24, may represent a farmyard associated with a larger domestic building in Toft 3 (Building 5). The paddocks to the south and west of Toft 1 may be parts of the same farm, and the paddock to the south of Toft 1 encloses Building 4, which may be an agricultural outbuilding. Building 5 is the latest constructional episode in Toft 3 in the sequence identifiable through the earthworks and encroaches onto Track 8a, which seems to point to the whole farm complex belonging to the latest phase of the village's existence. A ledge in the scarp that forms the western end of the sunken yard seems to represent a minor track, perhaps an alternative course of Track 9, a footpath shown on the First Edition 25-inch scale map (Ordnance Survey 1890).

Toft 3 contains one of the most remarkable pieces of earthwork stratigraphy at Wharram Percy. One of the buildings first depicted on the Ordnance Survey (1890) 25-inch scale map, later identified as Building 5, is relatively large and well preserved, with opposed doorways and a clear tri-partite division in its interior. The southern end of the building was excavated through a series of trenches in 1952; the results were evaluated subsequently (Wrathmell 1989, 33-5). It was the first building where evidence of more than phase of construction was recognised in the course of the excavation, but both phases can actually be recognised in the form of the surface traces. The earthwork evidence indicates that Building 5 falls very late in the sequence, for it not only encroaches northwards into Toft 4, but also eastwards beyond the original frontage of the row, impeding, if not preventing altogether, the passage of traffic along Track 8a. As mentioned above, it is possible to interpret Building 5 as a domestic farmhouse associated with a farmyard in Toft 2, for all these elements are relatively late and lie in close proximity to each other. Intriguingly, however, all the pottery recovered by the 1952 excavation dates to the 14th and 15th centuries, providing no confirmation that the building was inhabited up to the start of the 16th century, as might reasonably be supposed.

The 1952 excavation unearthed the eastern wall of an earlier building on roughly the same site as Building 5, but the vestigial earthworks of both this wall and the other three walls of the building were not surveyed until the 2002 investigation. The earlier building lies on the same north to south alignment as Building 5, filling almost the full width of Toft 3 and adjoining the frontage. Remarkably, the eastern wall of this building, or perhaps the wall or bank that originally defined the frontage of the row, if this was a separate structure, can still be traced within the southern half of the interior of Building 5. This cannot be attributed

entirely to the effects of the 1952 excavation, so may indicate that the feature was retained within the later building, perhaps providing the footings for a wall that divided the southern end into two rooms, for it is otherwise difficult to account for its continued survival as an earthwork within the later house. At face value, however, the somewhat schematic record of the section across the building would not support this theory (Wrathmell 1989, fig 25).

The excavation trench known as Area 6 (centred on a well-preserved longhouse initially identified from the earthworks and called Building 6) interpreted the entire area it examined as a single toft. The earliest stone buildings encountered, dating to the late 13th to late 14th centuries, were described as being '… clearly grouped around a courtyard', while the latest longhouse was said to have been '… built in the centre of the site' (Milne 1979b, 48 and 51). The earthwork investigation undertaken by English Heritage in 2002 suggests that parts of three tofts may actually have been examined and that several of the excavated buildings may have lain outside the toft occupied by the well-preserved longhouses. The overall pattern of toft boundaries identified by the new earthwork survey strongly suggests that two boundaries might be expected within the area of excavation. Immediately to the west of the excavation trench, in the predictable positions, are what appear to be the stubs of two slight banks, running eastwards from the lynchet bank. Only the more northerly of these stubs was recorded by the earlier survey and neither was recorded as an earthwork within the excavated area. The levels survey undertaken prior to the excavations employed enhanced contours at 0.15m intervals and is therefore insufficient to determine in hindsight whether the earthworks actually continued further eastwards in a slighter form (Milne 1979b, fig 12). Perhaps more surprisingly, no continuation of the stubs was detected during the excavations, except that the line of the more southerly one corresponds to that of an earthen bank, whose interpretation was left open, running along the southern side of the latest longhouse.

The western end of what is here interpreted as Toft 4 was extensively excavated, revealing a small square structure with a fenceline extending to its west. This was then interpreted as being the southern boundary of a large toft at a relatively early date, but could now be seen as a medial sub-division of the interior of Toft 4. Only a small part of the building that lay along the eastern frontage was examined, so its form was not established, but it was interpreted as an outbuilding. The presence of Cistercian ware in the occupation layers was taken as evidence that the building was inhabited in the late 15th or early 16th centuries, and thus that it was broadly contemporary with the latest longhouse in Toft 5.

Toft 5 was almost completely excavated, revealing two well-preserved longhouses on an east – west alignment, the later and better preserved (that initially recognised as Building 6) dating to between the early 15th and early 16th centuries. The more northerly of the two, which might also have been recognised as an earthwork with hindsight, was built slightly earlier and was converted to form a courtyard for its successor. An earthen bank whose function was not fully understood, but which was thought to have accumulated after the construction of the wall of the later longhouse, seems to correspond to the southern boundary of Toft 5. The narrow gap between the northern wall of the more northerly longhouse and two

smaller buildings lying immediately to the north corresponds to the line of the stub of bank to the west and may therefore represent the northern boundary of the toft.

On the top of the lynchet bank, what may be the degraded remains of a building span the boundary between Tofts 5 and 6. The siting of the possible building in relation to the lynchet bank is comparable to Buildings 11 and 18. If it is genuinely a building, it may well be a barn relating to the latest occupation of the village, but its poor preservation sets it apart from the other buildings in this category. It may therefore have been a livestock pen, similar to several others identified around the fringes of the village and provisionally interpreted as being post-medieval in date (see Section 5.11).

Toft 6, in the light of the revised interpretation of the toft boundaries presented above, may have contained two of the earliest stone buildings excavated in Area 6, dating to between the late 13th and late 14th centuries. Towards the front of the toft, a building on a north – south alignment was left untouched by the excavation of Area 6, so its relationship to the small stone buildings mentioned above cannot be established. This, like the building on the same alignment in Toft 7, lies several metres back from the frontage and it is not impossible that the intervening rectangular depression, which apparently acted as a courtyard in its eventual form, represents the site of an earlier house adjoining the frontage.

Toft 7 is traversed by Boundary 6, a probable late 18th-century field boundary formed by a bank surmounted by a relict hedgeline (probably of 19th-century date), with a shallow ditch along its northern side. Despite this disturbance, two buildings have been identified in the past (numbered 7 and 8). The earlier earthwork survey, like the First Edition 25-inch map (Ordnance Survey 1890), failed to recognise that the more easterly building extends beyond the field boundary, its northern end level with the northern side of the westerly building. This L-shaped arrangement might suggest an enclosed yard, but the only entrance identifiable in the more westerly building lies in its northern side, that is, facing away from the more obvious enclosed space. This may indicate that the two buildings are not contemporary, but their earthworks are equally crisp. The more easterly of the two buildings, like the adjoining building on the same north – south alignment in Toft 6, is set back from the frontage of the row and here, too, it is possible that the intervening rectangular 'forecourt' represents the site of an earlier building.

Toft 8 contains, in its south-east corner, an earthwork which almost certainly represents a building, but which lacks the crisp definition of many of the other examples. It may therefore have been similar in construction to Building 10 (that is, the latest building to be excavated in Area 10), which reportedly comprised a broad rubble bank without facing stones. This may have served as a foundation for a sleeper beam, but whatever its function, it appears to have been a relatively late style of construction, dating to the late 15th or early 16th centuries.

Toft 9 contains the remains of a probable building in its south-east corner, but all the earthworks in this area seem degraded and disturbed. A scarp which divides the toft into two, lengthwise, may represent some form of boundary or terracing designed to counteract the natural slope of the ground.

Toft 10 cannot be interpreted with confidence as a toft; none of the boundaries is distinct, in part due to the disturbance caused by the establishment of Tracks 5b and 6. If the pattern of tofts *c* 20m wide detected to the south continued further northwards, the bank that runs along the southern edge of Track 5b east of the lynchet bank might represent a toft boundary. However, its alignment is closer to that of the track, so it may be that it is a post-medieval feature, at least in the form in which it now survives on the surface.

The scarp convincingly identified by Stuart Wrathmell as a continuation of the frontage of West Row (south) extends well within the manorial compound, which would imply the existence of more tofts prior to the imposition of the South Manor. The bank that defines the northern side of the large building platform set against the foot of the lynchet bank might represent the modification of the northern boundary of an earlier croft (numbered 11). This lies almost precisely 20m north of the predicted position of the northern boundary of Toft 10 and there are hints that an earthwork may at one stage have extended eastwards from the building platform as far as the supposed frontage. Toft 12 may have been re-occupied and redefined after the demise of the South Manor, as described below. However, the southern boundary of Toft 13 would also fall neatly into the 20m pattern, and may represent the northern limit of Toft 12, perhaps the northernmost in the original layout of West Row (south). This interpretation might help to explain the slight mismatch of orientations discussed below.

Toft 12 contains only one rectangular building that can be interpreted with confidence as relating to peasant settlement, that formerly identified as Building 9. This is aligned north – south, an alignment perhaps shared by most of the earlier buildings in West Row (north). However, its well-preserved condition, together with the fact that it lies east of, or outside, the frontage of West Row (south) but not against the frontage of West Row (north), suggests that it may be a later encroachment. It may be broadly contemporary with the establishment of Toft 13, which seems to have lain beyond the original end of West Row (south). The anomalous siting of the building in relation to the frontages may be connected with the smoothing of the misalignment between the two phases, reflected in the adjusted orientation of the houses in the adjacent Toft 13. The construction of Building 9 presumably predates a 1.4m deep oval pit, interpreted as a quarry, which lies immediately outside the doorway mid-way along its eastern side and would have made access extremely awkward. What appears to be a large building platform in the south-west corner of the toft, which has not previously been recognised, is unlike any other peasant building and is tentatively interpreted as part of the South Manor complex described in Section 5.4.

West Row (north)

Toft 13, as far as can be discerned and assuming it existed at all, would have been at odds with the patterns of toft boundaries in both West Row (south) and (north) and may have not have been planned as part of either. In other words, the establishment of the *curia* of the South Manor may have involved the reclamation of the two northernmost tofts of West Row (south) and also a portion of unoccupied ground, this corresponding to the area where Toft 13 was established after the demise of the manor. Building 10, which lay within Toft 13, and

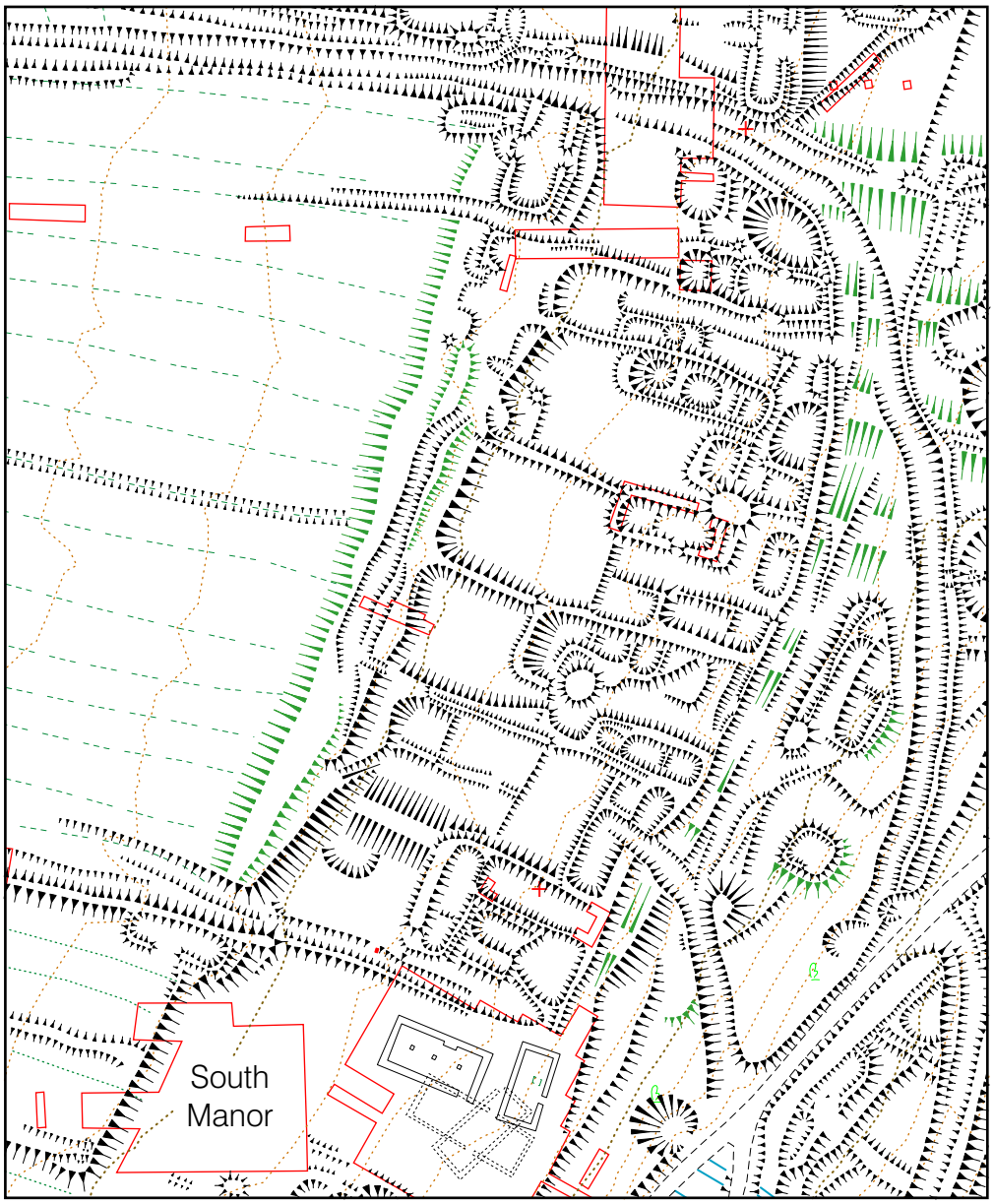


Figure 19
English Heritage plan of West Row (north) (at 1:1 000 scale)

its environs were extensively excavated: the edges of the trench themselves are still recognisable as earthworks, but these and the slight earthworks within the excavated areas have been omitted from Figure 9. The earthworks of Building 10, the latest in the sequence of peasant houses in the toft, were contoured at 6 inch (0.15m) intervals prior to excavation, but the earlier hachured survey is arguably a more useful interpretation and a more intelligible record (see Figure 5). Excavation indicated that unlike earlier buildings on the site, the 'walls' of the latest building, that is, the one surviving as an earthwork, was simply a bank of chalk rubble without any trace of facing stones. Although at first no firm conclusion was reached as to the nature of this earthwork, it could now perhaps be interpreted as a 'sleeper wall', that is, the foundation for a timber wall plate.

The earliest peasant house excavated in Area 10, which Stuart Wrathmell (1989, 41) has suggested may have shared its north to south alignment with early buildings in the West Row (north), was judged to date to the early part of the 14th century (Milne 1979a, 37). However, this cannot be taken as a foundation date for the whole of West Row (north) if Toft

13 was indeed a later encroachment within the boundary of the *curia* enclosure of the South Manor. Toft 12 may also have been re-established at this point, its southern boundary lying a few metres north of where it had possibly lain prior to the imposition of the South Manor. Perhaps reflecting the earlier alignment of the northernmost tofts of West Row (south) or the frontage of West Row (north), the sides of the two encroaching tofts and crofts were laid out at a slight angle to the northern and southern boundaries of the manorial enclosure. This resulted in a significant diminution of the area of the croft of Toft 13, for the South Manor was evidently laid out slightly askew to the pre-existing toft boundaries, apparently favouring the alignment of the early, broad-ridged cultivation.

Toft 13 may have become the site of a farmstead similar to those in Tofts 2/3 and 23/24, perhaps associated with the final stages of the occupation of the village. It is the only instance, apart from the East Row, where the croft is definitely defined by a deliberately constructed bank (presumably a former hedgeline or fence). As described in Section 5.4, a number of buildings may have stood at the western end of the croft, including one previously interpreted as a pond. In addition to the latest of the buildings excavated in Area 10, Building 11 may also have been part of the putative farm complex. Aligned east to west, the building is similar in size and form to other buildings interpreted as being domestic in function, but apparently had only a single door, on the south side. This, together with its location at the corner of a croft and on top of the lynchet bank, suggests that it may have been a small barn or similar agricultural outbuilding, like Building 18. It is cut slightly into the former northern boundary of the *curia* enclosure and its eastern end overlies the lynchet bank, so that it would have blocked any access along the ends of the crofts (see Track 13). Both these stratigraphic relationships, along with the crisp condition of the earthworks, suggest a relatively late date of origin.

West Row (north), excluding the later encroachments into the *curia* of the South Manor, comprises six tofts of regular size and one of half-width (Toft 19), all fronting onto Track 4. The tofts are generally about 1.5m narrower than those in West Row (south), measuring on average 18.5m wide; as a whole, the settlement unit gives the impression of more regular planning than any other element of the village. What may be the fragmentary remains of earlier broad cultivation ridges have been identified east of the frontage of the row, and the toft boundaries seem generally to coincide with these, both in spacing and alignment. The alignment and spacing of the earlier ridges seems therefore to have been sufficiently convenient to influence the later village planning, but it is not clear whether this necessarily implies any direct continuity of ownership. If so, the sequence proposed above, that West Row (south) is the earlier element of the settlement, might need revision. Apart from the half-width example, the size and layout of the tofts appears to be somewhat more regular than those of West Row (south). The form of this section of the lynchet bank is also straight and regular, supporting the interpretation (at least of this section and in its initial form) as a deliberately constructed boundary, contemporary with the laying-out of this part of the planned settlement. Six buildings have previously been identified within the tofts (numbered 12, 13, 14, 15, 16 and 17), with another (18) lying on top of the lynchet bank immediately west of the northernmost toft. The addition of the newly recognised buildings to those identified

previously suggests that there was a common pattern in the layout of each toft. Buildings and/or boundaries were placed so as to enclose a central courtyard in the front half of each toft, with a more open half to the rear (presumably the garden or 'garth'). There is a reasonable suspicion, based on the presence of Building 18 and the late sub-division between the former crofts of Tofts 16 and 17 (comparable to that between Tofts 23 and 24), that at least one of these tofts may have continued in use as a late farm complex. However, it is difficult to pin-point the location.

On the ground, the shallow furrow-like depressions that represent the croft boundaries can be identified primarily by their coincidence with the adjacent toft boundaries; in form, they are virtually impossible to distinguish from the intervening furrows. Seen under optimum conditions from the air, however, the croft boundaries can be seen to be slightly more pronounced linear depressions, suggesting that they represent the over-ploughed remains of former ditches; it is not impossible that all trace of accompanying banks has been ploughed away (St Joseph 1970; Figure 21). Each croft seems to have been sub-divided into two virtually flat cultivation ridges approximately 8m wide, while the half-width Toft 19 comprised a single ridge. However, this pattern of each croft comprising two ridges may well reflect the ploughing regime at the very end of the village's existence, rather than the original use of the crofts, as Wrathmell has suggested (Wrathmell 1989, fig 29). Since all the crofts

Figure 20
Aerial photograph of the village by JK Joseph, taken 1970 (reproduced by permission of Cambridge University Committee for Aerial Photography)

of West Row (north) were separated from the open fields by Boundary 3, it is possible that there were no hedges between the individual holdings, a pattern observed elsewhere (Roberts 1987, 3.7). Only in one instance – the boundary between Crofts 16 and 17 - does a furrow appear much more pronounced on the ground, to the point where it might more accurately be termed a shallow ditch. This seems likely to be a late development, probably associated with the establishment of a late medieval or early post-medieval farm complex within the row, as suggested above and as Stuart Wrathmell has observed (1989, fig 29). This seems to imply that the latest episode of ploughing in this area is similarly late. If so, it may be of less chronological significance that this fairly conventional ridge and furrow seems to have erased traces of the broader cultivation ridges, comparable to those recorded west of West Row (south) and within the *curia* enclosure of the South Manor. In other words, the crofts may not have been subdivided into two ridges until after the occupation of the row was effectively finished.

The relationship of the tofts in West Row (north) to the northern boundary of the *curia* enclosure of the South Manor suggests that the remainder of this sector of the settlement is likely to have been laid out at the same time as, or later than, the manorial compound. The width of the frontage of Toft 14, and consequently those of the tofts to its north, was evidently measured out with respect to the line of the north boundary of the manorial *curia*, for the only tofts whose frontages are of irregular size are the two northernmost in the row, Tofts 19 and 20. The sides of the tofts, on the other hand, were apparently set out at right angles to the frontage rather than parallel to the northern boundary of the *curia*. As a result, the width of Toft 14 was distorted and markedly broader at its western end. This too supports the argument that it was originally the southernmost in the row. It therefore appears that the north boundary of the manorial enclosure was deliberately singled out as the starting point for the demarcation of the property boundaries. From this, it can be inferred either that the row post-dates the establishment of the manorial complex, or that the two were laid out at the same time. This might suggest a date for the planning and construction of West Row (north) in the late 12th century, since the date of the construction of the *camera* was established as *c* 1180. There is also a single sherd from the primary silts of the ditch of the curia boundary to suggest that this was laid out at about the same date (see Section 5.4). However, it is not impossible that there was an earlier manor house on the site and that the foundation of the row was contemporary with this as yet unrecognised building. Alternatively, the row may have been laid out later to fill in the space between the South Manor and the North Manor, if the North was built after the demise of the South.

Toft 14 seems to have contained, in addition to Building 12, two other buildings sited so as to enclose a yard at the front of the toft. A separation between the northern boundary of the *curia* enclosure and the southern sides of the southernmost buildings suggests that Track 15 may have passed between the toft and the curia enclosure, though there is no clear indication of the point where this joined Track 4. It is also possible that Track 15 is of relatively late origin, since it cuts through the ditch of the *curia* boundary, in which case the siting of the buildings would suggest that they too are of relatively late date.

Toft 15 apparently contains a single major building aligned along the front of the toft. Track 19, which could conceivably be of post-medieval date, cuts through the building. A narrow trench, perhaps representing stone robbing rather than archaeological excavation, has removed part of the wall along the frontage. This mutilation probably accounts for why the earthworks have not previously been interpreted as building remains. In the garth that forms the rear half of the toft, a vestigial bank running precisely along the central axis of the plot hints that it may have been subdivided at some point. There are hints of another structure in the north-west corner of the toft.

Toft 16 contains the building formerly identified as Building 13, which has clear evidence of a tripartite division of its interior. It also includes an area of very slight and evidently disturbed earthworks which may represent the remains of two or more other structures, not necessarily all contemporary, but apparently enclosing a small central courtyard. The nature of the later disturbance is unclear, but one circular mound is reminiscent of a small spoil heap. Whether this is the result of stone robbing or unrecorded excavation is uncertain.

Figure 21
View of Building 13 from the east

Toft 17 contains two principal buildings, both of which have been identified previously (14 and 15). Building 15 was the first house at Wharram to be excavated by Beresford, in 1950 (Beresford and Hurst 1990, fig 15). However, parts of the building seem to have gone unrecognised: there seems to have been a westerly extension to Building 14 and perhaps a smaller structure in the north-east corner of the toft, effectively continuing the range formed by Building 15. A scarp, which seems to indicate a less substantial boundary joining the western ends of the two long ranges, suggests that the buildings were grouped around a central yard.

Toft 18 contains a building identified previously as Building 16, which has clear evidence for a tripartite division of its interior. A second smaller building on the same axis occupies the

south-east corner of the toft, creating a narrow passage between the two buildings with a small courtyard adjoining the frontage in the north-east corner.

Toft 19 is anomalous in that it is precisely half the width of the other tofts in West Row (north) as mentioned above, but clearly an integral part of the row as a whole. It is possible that it was initially left as a through-route to the lynchet bank, which evidently served as a 'back lane' running behind the row (see Track 13) and there are certainly signs that the opening onto the frontage (Track 4) was fairly intensively used. However, use of this route may have been a reaction to the blocking by Building 18 of the more natural point of entry onto Track 13, at its intersection with Road 1B. On balance, it seems more likely that the toft was deliberately laid out as a half-width plot, as a consequence of the use of the northern boundary of the *curia* enclosure of the South Manor as the starting-point for the laying-out of the row. Despite its narrow width, the toft may have included at least one large building.

Toft 20, whose plan is the most irregular in the row, contains one large building that has been identified previously (17), though it may have extended further to the west than previously recognised. A second structure, whose existence was hinted at by the earlier survey, may have lain at right angles to this, defining a sunken yard in the north-east corner of the toft. This layout seems in part to have been intended to make the best possible use of the irregular plan of that sector of the toft.

Building 18 is comparable to Building 11 in its siting overlying the lynchet bank and in the north-eastern corner of the crofts enclosed by the southern embankment of Road 1B and the late boundary between Crofts 16 and 17. This stratigraphic relationship, together with the fresh condition of the earthworks, suggests that it may belong to the latest phase of the village's existence. In plan, it is shorter and broader than other buildings, with wide opposed doorways. This form, together with its siting in relation to the crofts, suggests that it may have been a barn or similar agricultural outbuilding. There are slight hints of a smaller structure aligned at right angles to the west of the main building.

North Row

It is has been suggested that the North Row originally comprised six tofts in a row aligned from west to east, but that all these were cleared away when the two manors were amalgamated in 1254, the land eventually becoming the holding of a courtyard farm, which is now the most easily recognisable feature (Hurst 1984, fig 4; Beresford and Hurst 1990, 47 and 80). The earthwork investigation undertaken by English Heritage in 2002 supports the first and last of these observations, but also suggests that only the westernmost of the tofts may have been cleared away in about 1254 and that the buildings that formed the courtyard farm may have been converted from surviving earlier buildings. There is further evidence that the sequence as a whole is likely to have been more complex.

In the first place, it is possible that the ridged cultivation hinted at by possible positive lynchets underlying the North Manor may have extended eastwards to the edge of the western plateau. What may be the southern terminals of these ridges are preserved as

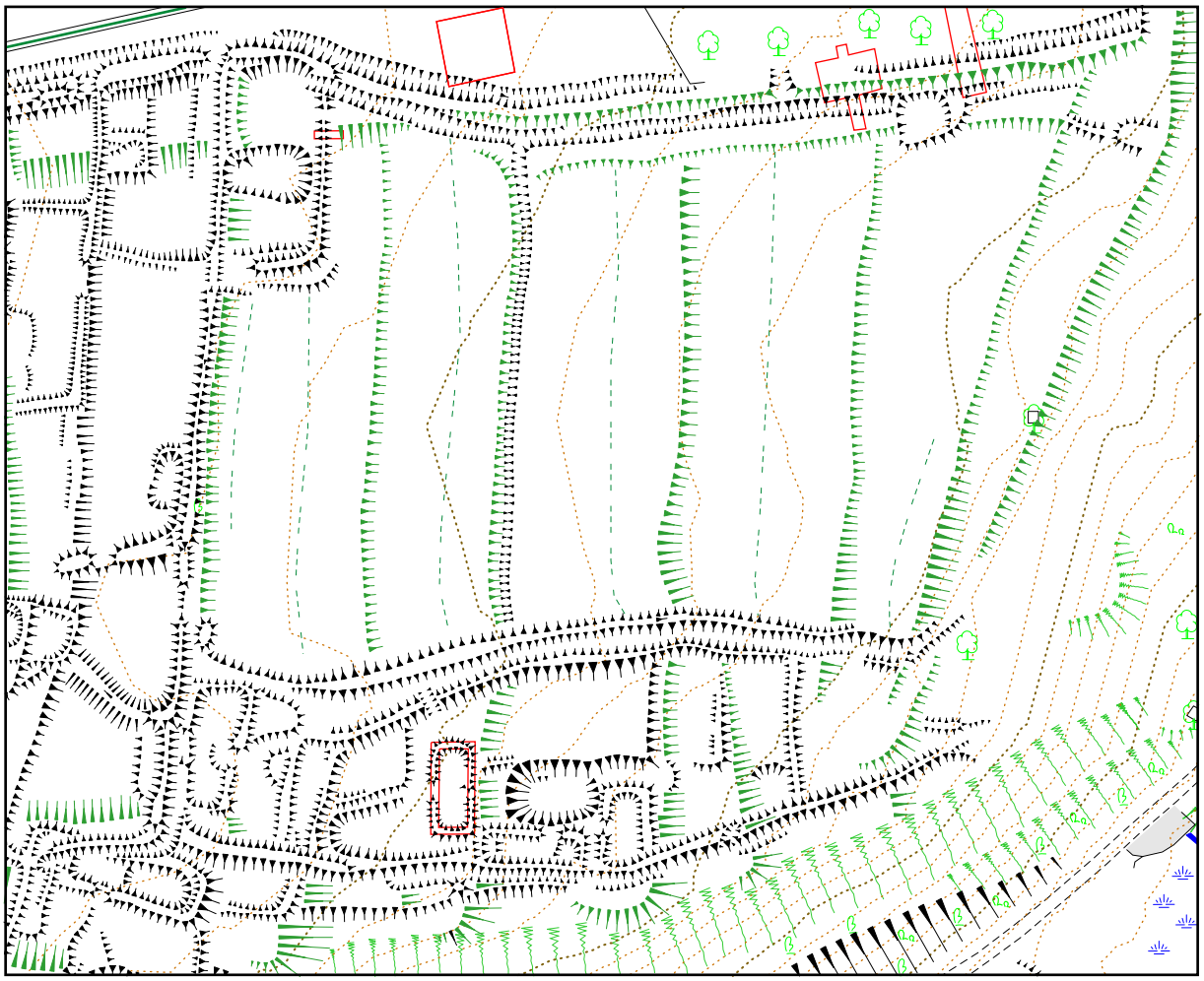


Figure 22
English Heritage plan of North Row (at 1:1 000 scale)

positive lynchets on the very limit of the escarpment, to the south of the frontage of the row. In several cases, these more or less coincide with the more prominent positive lynchets that mark the divisions between the crofts of the row, hinting that earlier agriculture may have influenced the plan of the row. However, earlier ploughing might be expected to run perpendicular to the early Boundary 1, or parallel to the crest of the western plateau. The alignment of the croft boundaries does not correspond precisely to either of these predictable alignments, so it could be inferred that they were set out with little regard to any pre-existing earthworks.

Secondly, the line of the western section of the frontage of the row may have been pushed back by up to 7m from the edge of the escarpment. This modification is suggested by a distinct change of angle towards the eastern edge of Toft 24 and a slight scarp which seems to represent a remnant of the earlier boundary. This apparent retraction from the edge of the escarpment may represent a reaction to the natural slumping that has evidently occurred in the locality. However, the survival of what seem to be the terminals of early cultivation ridges, mentioned above, would tend to suggest that slumping was not a problem at this point (unless the bulges interpreted as ridge terminals are, in fact, themselves the product of natural slumping). Therefore, it is possible that the re-alignment reflects the incorporation of the westernmost toft in the row, Toft 21, into the expanded *curia* enclosure of the North Manor. This change, which has already been described in Section 5.5 represents another

major change to the layout of the row. The amalgamation of at least two of the peasant tofts to form a courtyard farm, in the very late medieval or early post-medieval period, is perhaps the latest of the significant developments. It is notable that at no point is there any sign of an entrance into any of the tofts from Track 3; this apparent absence is almost certainly due to the reconstruction of the frontage, with the addition of a shallow ditch along its outer edge, to form a continuous boundary around the late courtyard farm.

The dimensions of the tofts do not appear to have been as strictly laid out as those in West Row (north), their widths, ranging *c* 2m on either side of 20m. There is similar variation in the width of the adjoining crofts, whose boundaries are easier to distinguish than those of West Row (south) and (north) because the divisions are marked by positive lynchets. These boundary lynchets are slightly more pronounced than those associated solely with the cultivation ridges, two of which make up each croft. The lynchet that forms the boundary between Crofts 23 and 24 is accompanied by a shallow ditch, apparently a late subdivision of the land, like the bank between Crofts 16 and 17. This variation cannot be entirely accounted for by the constraints of the natural topography. Any variation in the length of the tofts is more difficult to detect, due partly to the putative re-alignment of the frontage and partly to the existence of Track 14, which seems, at least in the form that can now be seen on the surface, to be a relatively late development, although presumably the approximate line of an earlier back lane.

Toft 21, formerly interpreted as the course of a track leading out into Field 2 (Track 2), is primarily identifiable from the pattern of boundaries that define it, for there are no certain traces of buildings likely to be contemporary with its occupation. The relation of Track 14 to the rear of the toft, assuming it once continued further westwards, is also uncertain. The width of the plot may have been narrowed slightly by the modification of the eastern boundary when the toft was taken into the expanded *curia* of the North Manor and by the subsequent superimposition of an embankment for a hedgeline in the late 18th century.

Toft 22 contains one building, not previously identified as such, which like Building 18, is slightly shorter and broader than most other buildings interpreted as peasant houses, with wide opposed doorways. The location of the building is also comparable in that it lies at the corner of the crofts enclosed by the eastern boundary of the *curia* enclosure and the late boundary between Crofts 23 and 24. In addition, the building partially blocks Track 14, suggesting that it is one of the latest features and therefore quite probably an outlying component of the farmyard in Tofts 23/24. A second possible building, less clearly defined, lies against the eastern boundary of the toft and this may conceivably be of earlier date. The pen at the rear of the adjoining croft seems to be later still and is discussed in Section 5.11.

Toft 23 contains a single small building (20) whose earthworks remain fairly well-preserved despite excavation of all the wall lines in the early years of the Wharram Research Project. Pottery from the early excavation was lost, but is remembered as being of 15th-century date (Hurst 1984, 97). There is little to distinguish it from many of the other buildings that make up the village, but a relatively late date is also suggested by its position in relation to the boundaries of the toft, for it does not abut the frontage, as is common elsewhere, but is

instead sited so as to enclose, in conjunction with Building 21, the western end of the sunken courtyard in the adjacent Toft 24. This would seem to confirm, as proposed previously, that Tofts 23 and 24 had been amalgamated into a single unit. The interpretation of the complex as the 'demesne farm' of the North Manor is less convincing in the light of the presence within the *curia* of other buildings which perhaps post-date the manor (Hurst 1984, 97 and fig 4; Beresford and Hurst 1990, 51). On the other hand, it might be supposed that the eventual form of Building 20 results from the modification of an earlier building which related solely to the occupation of Toft 23. In the north-west corner of the toft, a roughly square platform, with vestigial traces of an enclosing bank, may be a pen as suggested by the previous survey. However, it is also possible that it represents a building platform.

Toft 24, as indicated by the earlier survey, contains two well-preserved buildings (21 and 22), which, together with Building 20 in Toft 23, enclose a sunken rectangular area that can be interpreted with confidence as a farmyard. Like Building 20, however, it is conceivable, if not likely, that both buildings, in their original form, were components of the earlier arrangement contained within Toft 24, which presumably combined domestic and farming functions. The form of the whole arrangement is very similar to that of the sunken farmyard in Toft 2. In this instance, however, there is no readily identifiable farmhouse in the immediate vicinity: Buildings 19 and 23 are the most likely candidates, although Building 3, which lies somewhat further away down the steep valley side, is an outside possibility. Another difference is that in this case, the 1.4m deep rectangular depression that forms the farmyard seems unlikely to have originated as a casual quarry, since it is not driven into the slope from the edge of the escarpment, but rather dug as a discrete pit. The sides of the depression were evidently not just left as raw chalk, but carefully walled, for a short length of the upper courses of the walling is exposed on the northern side. Entry into the yard was evidently gained from the east via a narrow passage immediately north of Building 22.

Toft 25 has traces of two possible buildings which may relate to the occupation of this toft prior to the formation of the late courtyard farm.

Toft 26 retains few earthworks which may relate to buildings and these are difficult to distinguish from a pattern of angular earthworks apparently created by modern disturbance, in part caused by farm vehicles. The eastern boundary of the adjoining croft is also difficult to distinguish, although a positive lynchet along the very edge of the western escarpment indicates that at some point arable cultivation extended this far. Consequently, the eastern end of Track 3, if indeed it did not continue northwards along the edge of the escarpment, is difficult to identify. What may be a building platform set against the northern boundary of the croft may relate to the late farmstead in Tofts 23/24. It lies near the corner of the field defined on the west by the ditched boundary between Crofts 23 and 24, which makes it comparable to other buildings identified as possible barns, such as Buildings 11 and 18.

East Row

The row consists of as many as eleven tofts and crofts fronting onto the eastern side of Road 2B and stretching down to the foot of the western side of the valley. Earthwork traces

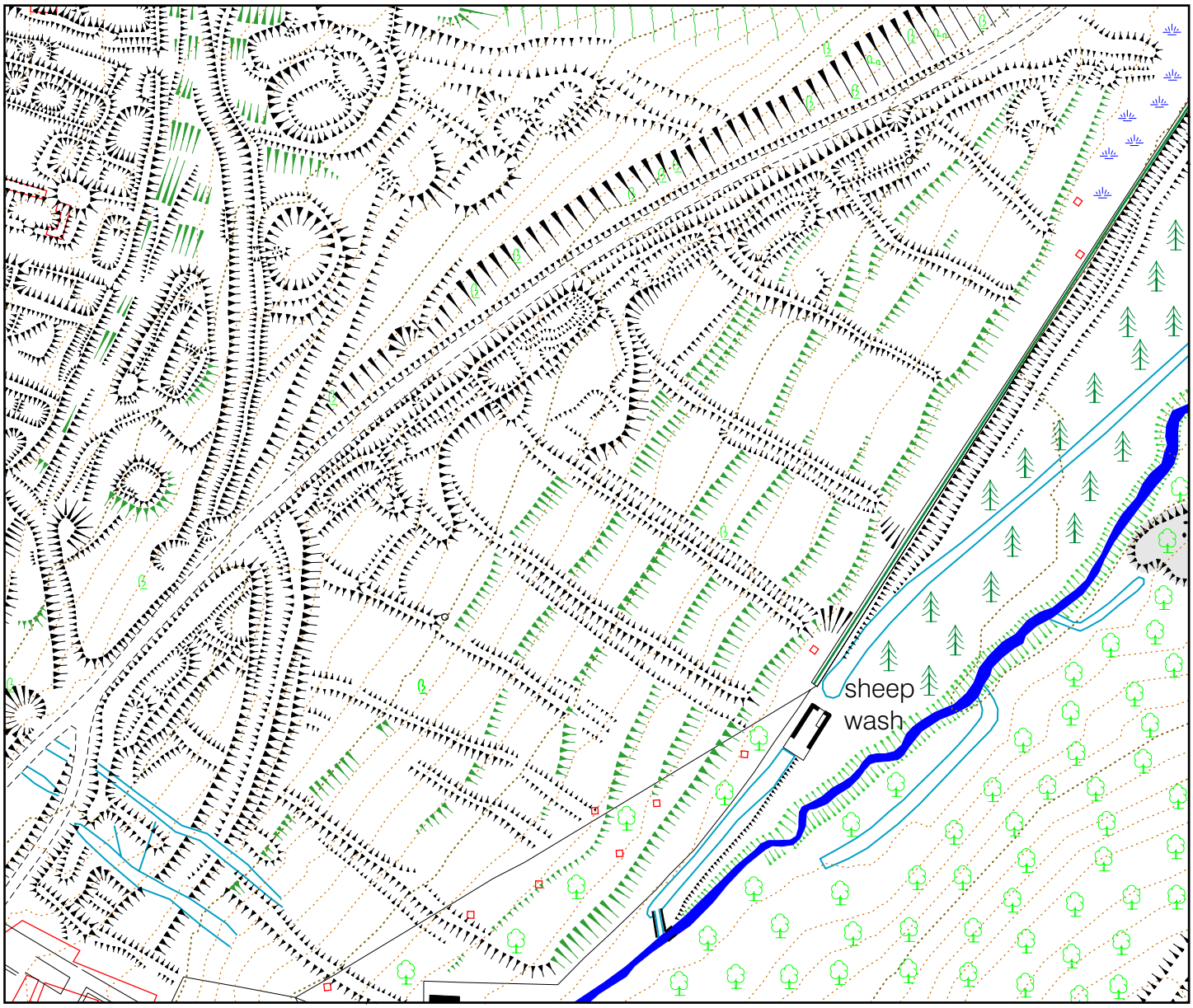


Figure 23
English Heritage plan of East Row (at 1:1 000 scale)

of three buildings, numbered 1 to 3, have been recognised in the past. Apart from buildings recognised in excavation beneath the Improvement farm, which may lie at or beyond its southernmost end, this row has not been excavated. It was first subjected to geophysical survey in 2002, with good results (Linford and Linford 2003, figs 3 and 6). The sloping ground of the valley side has experienced considerable soil creep, but a series of more pronounced positive lynchets up to 0.3m high can be distinguished from these natural terracettes, as described in Section 5.8. These cannot be dated with any precision, except in so far as they predate the establishment of the croft boundaries.

The plan of the southern end of the row has been reconstructed conjecturally as a rectangle whose southern end coincides with the boundary of the plots enclosing the parsonage and the church itself (Beresford and Hurst 1990, fig 60). On paper, this gives a pleasing appearance of regularity comparable to the pattern of the other rows, but it ignores the form of the natural topography. The steep-sided, scallop-shaped depression eroded into the valley side by the

spring below Wharram Percy Cottages makes the achievement of such regularity impractical. The plan is more likely to have been confined within the triangular space formed by Road 2B on the west, the foot of the slope of the western side of the valley on the east, and the northern edge of the scallop-shaped depression on the south. Although the more southerly of the identifiable plots in this area are fairly long, regular rectangles aligned end-on to Road 2B, they become increasingly irregular in shape towards the northern apex of the triangle. While the tofts are still set out at right angles to the road, the crofts are laid out perpendicular to the foot of the slope, creating a change of alignment at the junction of the tofts and crofts. From this pattern, it seems likely that Road 2B was established at the same time that East Row was laid out. It is not impossible that the route of the road had already been established, but it is not easy to explain the abandonment of the putative earlier and more straightforward route, Road 2C, except by the imposition of the row. It was also evidently considered desirable, presumably for practical reasons to do with the cultivation of the ground, that the crofts should not be aligned obliquely to the contours. The eastern boundary of the crofts is marked by a continuous scarp up to 0.7m high, which presumably carried a hedge or fence. Its form is essentially that of a substantial lynchet; indeed, it probably originated as the lowermost of the lynchets produced by earlier cultivation on this slope (see Section 5.8). Its much greater size seems to indicate that it built up further during the lifetime of the row, which would suggest that the interiors of all the crofts were worked to some degree. There may well have been a 'back lane', but the existence of what would probably have been little more than a footpath, if it existed at all, does not fully account for the broad interval between the ends of the crofts and the edge of the Wharram stream. Today, this part of the valley floor is dry and level and would apparently make useful cultivable land. The complete avoidance of the valley floor hints that it may once have been much more boggy (see Section 5.9). The bank that defines the frontage of the row continues beyond its junction with the scarp that defines the eastern side. This may have had the effect of blocking any back lane; there are other stratigraphic hints that the bank may have been rebuilt at some relatively late date, perhaps to carry a hedgeline in the late 18th century, although no such boundary is depicted on historic maps.

All the peasant houses that can be detected are aligned side-on to Road 2B, in striking contrast to the eventual form of West Row (north) in particular. Whether this alignment simply respects the natural lie of the contours is doubtful, for a number of the tofts at the southern end of the row are sufficiently level to accommodate buildings aligned end-on to the road. It is tempting to draw a parallel with West Row (north) in its early phase, where Stuart Wrathmell (1989, 44) has suggested that most of the buildings may have been aligned side-on to Track 4. The side-on alignment may be a common feature of a single phase of planning, a distinctive characteristic of the blue-print for a standard two-row plan comprising the whole north end of the village. If so, it may follow that East Row did not experience any subsequent modification, as West Row (north) clearly did, from which it may be inferred that much of East Row may have been abandoned at a relatively early date.

The tofts are of more variable breadth than anywhere else around the village, ranging from 16m to 22m, but there is no sign that this was done deliberately in an attempt to maintain

a constant area in the face of the unequal length of the plots. Towards the northern apex of the row, the alignment of the long boundaries, which are more or less parallel towards to the south, becomes less regular. This can only partly be accounted for by the nature of the natural topography, so it is tempting to infer that the 'planning' of this part of the village was genuinely more piecemeal than elsewhere and perhaps not contemporary with West Row (north) and North Row, which define the other two sides of the village green.

Toft 27, despite its small size and irregular plan (and later damage caused by slumping and erosion by livestock), contains at least one rectangular earthwork that could be interpreted as a building platform.

Toft 28 contains Building 1, which shows some evidence of an internal division. Its north-western wall contains no trace of any doorway, which may support the theory that the frontage was overlaid by a field boundary bank in the post-medieval period. The southern boundary of the toft changes angle sharply where it becomes the boundary of the croft, and this change of angle is echoed to a lesser degree by the next four boundaries to the south.

Toft 29 contains Building 2, which seems to have had two doorways spaced symmetrically along its south-eastern side. This may indicate that the building was not domestic in function.

Toft 30 contains vestigial traces of what can probably be interpreted as a building, which has not previously been recognised as such. Its north-western side is indistinguishable from the frontage, possibly because, as suggested above, the frontage was overlain by a post-medieval field boundary.

Toft 31 contains Building 3, which clearly differs in size and form from the other buildings in the row; it also seems to be of relatively late origin. In size, the building is comparable to other stratigraphically late buildings, notably Building 5 and Building 19. The north-eastern end of the building seems to have been overlain by a series of slight earthworks which may be interpreted as the wall-lines of a smaller, less substantial structure sited to make use of the level platform created by Building 3. Despite this disturbance, there are also signs that Building 3 may have had a tripartite division of its interior. Downslope from the building, a large terraced platform has been created, also unlike anything else along the length of the row. There are slight hints of another, smaller structure on this platform. Both banks that bound the adjoining croft are ditched along their inner edges. At the foot of the slope, there are also slight hints that activity may, at some point, have extended beyond the lynchet that elsewhere defines the eastern edge of the row. Unlike Building 5, Building 3 does not lie in close association with a farmyard. It is tempting, therefore, to interpret it as an isolated house and garden. Alternatively, it is possible to link its occupation (assuming it was domestic in function) to the farmyard in Tofts 23/24, which lacks evidence for an associated farmhouse. However, the intervening distance and steep slope perhaps make it more likely that one of the other buildings on the plateau was the farmhouse in question.

Toft 32 contains possible, though indistinct, traces of what may be interpreted as a building. Both banks that bound the adjoining croft are ditched along their outside edges. In addition,

the pre-existing lynchets within this croft are unusually prominent, as though either less degraded by whatever land-use was being practised in the other crofts, or emphasised by what was being done in this one. These distinctive characteristics hint that the croft may have eventually become associated with the occupation of Building 3, perhaps as a garden.

Toft 33 contains a single building, with an amorphous mound extending at right angles from its northern end, which may represent the tumbled or disturbed remains of another structure. A small kiosk was sited at this point in the early 1990s, but it seems unlikely that this did any significant damage to the earthworks or accounts for the existence of the mound.

Toft 34 contains part of a building which has presumably escaped recognition before because it has been partly cut away by the course of Track 10, whose origin can be dated with confidence to about 1777 (see Section 5.2). Two very slight banks, which apparently converge at their western (upslope) ends, seem to have defined the southern boundary of the adjoining croft, presumably defining its limits at different dates. Only the more southerly of the two, which corresponds more closely to the pattern evident further north along the row, is revealed clearly by the most recent geophysical survey (Linford and Linford 2003, fig 3).

Toft 35 contains vestigial traces which probably represent the remains of a building. The southern boundary of the adjoining croft, which comprises a very slight bank and ditch, can be traced all the way through the modern plantation as far as the lynchet which defines the eastern perimeter of the row further north. This is a good indicator that the plan of the row continued in a fairly regular form at least as far south as this point. The boundary is certainly cut by Track 10 and does not continue across it, as depicted on the earlier survey, which relied on transcription of oblique aerial photographs.

Toft 36 contains what may represent only part of a building whose western side has been obscured by Road 3E, or by material cast up from the hollow way. The line of the bank that defines the southern boundary of the adjoining croft is continued by a narrow depression which cuts through Track 10. This is interpreted as a modern drainage channel, rather than an earlier ditch accompanying the bank. A similar channel lies a few metres to the south. At its eastern end, the bank appears to curve gently northwards, before it has been erased as an earthwork by the disturbance caused by the construction of the pumping station in 1935. This may be deceptive, but it is possible that it reflects the changing form of the topographic background, and indicates that this, or an adjacent toft and croft to the south, were the southernmost in the row.

Toft 37 is in part conjectural, based to some extent on the potential of the natural topography to contain another croft of similar width to those identified further north in the row. A bank which would fit well with the pattern of croft boundaries identified further north can be traced running parallel to, and a few metres north of, the north-eastern frontage of the post-medieval courtyard farm. However, its proximity to the courtyard farm, its identical alignment and, most crucially, the fact that it overlies the course of Track 5, strongly suggest that what can be seen on the surface is not medieval, although perhaps the line of the boundary is.

The village green

The triangle of the steep valley side enclosed by East Row, North Row and West Row (north), an area of about 1ha (2.47 acres), has been interpreted as a village green. The earlier survey depicted this steep ground as essentially an open area, though traversed by a number of trackways. While there is no reason to dispute the interpretation of the area as a green, the field investigation undertaken by English Heritage in 2002 has identified a number of important earthwork remains scattered across the area, which collectively give the impression of more intensive activity. The southern extent of the green is open to question. Unsurprisingly, the steep section of the valley side east of West Row (south) was evidently not settled (apart from the toft-like enclosures east of Tofts 8, 9 and 10), so it could be inferred that this formed part of the green. On the other hand, consideration of the overall plan suggests that the green proper would have extended no further south than Track 5a, allowing access from both manors and all three northern rows.

Pounds

Two circular enclosures, defined by what must formerly have been quite massive embankments (presumably originally supplemented by some form of stockade), are typical in size and plan of common livestock pounds. Their existence was hinted at by the previous survey, but not made explicit. Why two should have existed is unclear; it may be that they were of different dates, or related in some way to the early division of the village between two manors. Alternatively, it is possible that one (or both) served a function other than a pound, for example as an arena for bear-baiting, bull-baiting or cock-fighting, or as a small show-ring. On Ham Hill in Somerset, a circular pit of similar size, enclosed by a penannular bank, appears to have served similar functions during fairs held on the hilltop in the post-medieval period, although the fairs originated early in the 12th century (RCHME 1997, 29-30). At Wharram Percy, both enclosures seem to have been sited adjacent to Road 1B and to have faced on to it, though the entrance into the more northerly one is not easy to discern. Both were evidently created by scooping into the natural slope to a maximum depth of 0.4m and using the resulting material to augment the height of the surrounding bank.

The more southerly enclosure, with an internal area of 120m^2, is more clearly defined, but it is uncertain whether this is because it was constructed at a later date or simply because it was less affected by later activity.

The internal area of the more northerly of the two enclosures, at 240m^2, is about twice that of the southern one. A slight kink in the course of Road 1B, which is otherwise a smooth curve, suggests that the construction of the pound may post-date the establishment of the route, forcing traffic to divert slightly to avoid its entrance. There is evidence for a fairly large rectangular building, apparently a later superimposition, occupying its northern side, with vestigial traces of what may be two more structures to its south, sharing a similar alignment. This hints that the pound enclosure may have eventually been converted into a toft-like unit. There is no way of telling whether this modification caused the construction of the second pound, or whether it was merely a piece of opportunism after the enclosure had already fallen into disuse. Either way, it is tempting to infer that the building which re-used what had

previously been a communal space might have retained some communal function, such as a smithy.

Settlement remains on the village green and elsewhere

On the steep slope to the east and south of the pounds is a scatter of newly identified earthworks which probably represent the sites of small buildings. The clearest of these are approximately rectangular platforms, occasionally accompanied by slight suggestions of wall-lines, generally aligned along the contours. The largest are only slightly smaller than the houses and other buildings that comprise the rest of the domestic settlement. The earthworks are far slighter and much less crisply defined than the remains of the buildings on the western plateau, but it could not be ascertained whether this difference reflects the effects of soil-creep on the sloping ground, or a genuine difference in the age, function or form of the buildings. Indeed, some of the apparent platforms may be merely the products of small-scale quarrying. At least one, however, appears to have had access onto Road 1D. This may point to a relatively early date, but it is perhaps more likely that the early route remained in use as an access track long into the medieval period. At any rate, the fact that a number of the platforms appear to make use of the terminals of the early cultivation ridges seems firmly to rule out a pre-medieval origin.

One building within a rectangular enclosure can be distinguished on the opposite side of Track 4 from Tofts 16 and 17. The construction of a boundary bank overlying the embankment that defines the eastern side of Track 4 seems to point to a relatively late origin for the unit. Indeed, the apparent encroachment of a private building onto what had formerly been public space seems in itself to suggest a late context. The building may have been an outlying component of a late farmstead centred in one of the tofts in West Row (north).

A building in a similar position can be identified on the relatively level area on the opposite side of Track 8a from Tofts 8 and 9. There are two possible enclosures with which it might have been associated, one to the north, within which it lies, and one to the south, which it adjoins. The limits of both are uncertain, and it is possible that their eastern sides may have been distorted by the superimposition of Boundary 13, probably in the late-18th century. Again, these may have been outlying components of a late farmstead on the opposite side of the track.

Building 4, whose interior was apparently divided into two halves, also lies within its own quadrangular embanked enclosure. This enclosure appears to have been added onto the southern end of West Row (south) and it adjoins the paddock-like enclosure to the rear of Tofts 1 and 2, so that its western boundary continues the alignment of Boundary 5. It is therefore most plausibly interpreted as a component of the farmstead in Tofts 2/3. This, together with the atypical siting of the building in relation to the frontage of the plot, suggests that the building may have been an agricultural outbuilding.

At the extreme southern end of the village, terraced into the steep slope overlooking one of the two major springs that feeds the Wharram stream and served by Track 17, are two probable buildings whose existence was hinted at by the earlier survey. The more northerly

of the two appears to be a longhouse with a tripartite division of its interior, but its appearance is confused by a large pit, mid-way along the building, produced either by stone robbing or small-scale quarrying, or both. The more southerly building is shorter and broader in plan and may not have been domestic in function.

5.7 The 'lynchet bank'

The main body of this earthwork appears to be a terrace-like accumulation of soil created by repeated ploughing (technically termed a 'positive lynchet'), which extends southwards for some 380m from the southern edge of Road 1B. It parallels the edge of the western plateau, following a sinuous curve that is reminiscent of the so-called 'reverse-S' pattern created by the use of oxen to draw a plough. The steep face of the lynchet stands to a maximum height of 1.6m, even though the natural slope is not pronounced, and the sheer size of the earthwork has led to consideration of the possibility that it is actually a deliberate construction contemporary with the construction of the toft boundaries, perhaps a 'wall' made of turf stripped from the rear of the tofts (Beresford and Hurst 1990, 78). The size of the scarp does appear to have been enhanced in places by other features and by erosion within the tofts. For parts of its length, a broad bank, 0.2m high on average, runs along the top of the lynchet. This seems to have originated in the medieval period as a plough 'headland' and may well have served as a path along the rear of the house plots (see Section 5.2: Track 13). The earthwork as a whole, presumably surmounted by a hedge or fence, clearly served to divide the ends of the tofts from the adjacent crofts.

Although it was initially assumed that all the village earthworks were of broadly the same date, the so-called 'lynchet bank' was soon recognised as being an anomaly of considerable importance to the understanding of the plan of the medieval village and potentially of earlier origin (Beresford 1979, 23). Following a visit to Wharram Percy in 1978 by Peter Fowler, then Secretary of the Royal Commission on the Historical Monuments of England, it was interpreted as a possible Bronze Age 'linear earthwork' boundary (information from Chris Dunn, English Heritage; Hurst 1984, 84-85 and fig1; Beresford and Hurst 1990, 78). Excavations that were intended to settle the question produced only a single sherd of pottery, which, although not strictly diagnostic, has been interpreted as pointing to a 12th-century date. However, the excavation seemed to show that the lynchet bank was stratigraphically later than features of late Saxon date. Most recently, this evidence has also been questioned and it has been concluded that the origin of the earthwork remains uncertain: whether earlier than, contemporary with, or later than the toft boundaries that adjoin it (Stamper *et al* 2000, 19).

It is easy to understand the deductive process by which Beresford and Fowler reached the conclusion that the earthwork predates the medieval village, for most of the observations are sound and are correctly depicted on the plan produced by the earlier survey. Firstly, the lynchet bank is clearly cut into by Tracks 5b and 6 (the former previously thought to be of Iron Age or Roman origin), as well as by several minor hollows which apparently gave access to the headland from the rear of the tofts. One particular section is not adequately depicted on the earlier survey: the short surviving length of the lynchet bank between Tracks

5b and 6 maintains the same alignment as the rest of the earthwork, which would be almost inconceivable were the tracks earlier than the lynchet. However, since the English Heritage investigation also suggests that Tracks 5b and 6 are not likely to be of medieval origin, as has been assumed in the past, but more probably of 18th-century date, this stratigraphic relationship does not in itself rule out a medieval origin for the lynchet bank. Secondly, notwithstanding the most recent inconclusive appraisal of the evidence, in almost every instance the banks that form the medieval toft boundaries can be seen to ride over the lynchet bank. In the other instances, the relationship of one earthwork to the other is merely uncertain; none suggests that the lynchet bank is later. On the other hand, it could be argued that what is visible on the surface represents only the latest phase of the earthwork and that the toft boundaries were probably redefined many times, disguising or reversing the original stratigraphic relationship. Yet it may be significant that the boundary of the *curia* enclosure of the South Manor, which seems less likely to have been redefined after the *camera* of the South Manor was demolished, also rides over the lynchet bank. Similarly, a large platform that may well be the site of one of the manorial buildings, which has previously gone unrecognised, is cut into the foot of the lynchet bank. In short, were it not for the excavated evidence which apparently shows the contrary, there would be little hesitation in inferring that the lynchet bank is of earlier origin than the foundation of the manorial enclosure and the contemporary episode of planning.

However, it has been inherent in this and previous interpretations of the earthwork that the lynchet bank can be treated as a single feature. Although it describes a sinuous curve overall, close consideration reveals that there are slight differences in its form. Where it runs behind West Row (north), the scarp is higher and sharper, running very straight and parallel to the frontage of the row. By contrast, where it runs behind West Row (south), it is generally lower, making several minor changes of course and not running precisely parallel to the frontage, giving the impression of a more organic development. This perception is sustained by the apparent existence of a series of very slight cultivation ridges of unusual form, which are discussed more fully in Section 5.8. To summarise, along the length of West Row (south), these ridges are cut by the lynchet bank, but cannot be traced further east, suggesting that they may, in essence, be the manifestation of the ploughing responsible for creating the lynchet, though truncated by later activity within the tofts. If so, they may be contemporary in origin with the establishment of this part of the village though not necessarily the planned row. On the other hand, for the length of West Row (north) the ridges seem to have extended beyond the lynchet bank and beyond the earthworks of the tofts themselves. Alternatively, it may be that the survival of the ridges beyond the frontage of West Row (north) is a freak and that the whole settlement was laid out over the ridged cultivation. However, the more obvious inference, although the evidence is far from clear-cut, is that the southern half of the lynchet bank is in essence a genuine lynchet, though undoubtedly modified by the laying out of West Row (south), while the northern half is a deliberately built boundary bank. It is difficult to pin-point precisely where these two putative features join, but the line of the earthwork kicks westwards by some 7m at or near the northern side of the *curia* of the South Manor. As discussed in Section 5.6, Stuart Wrathmell has proposed convincingly that West Row (south) and (north) joined at about the same place.

Peter Fowler's early suggestion that the lynchet bank might follow the line of a Bronze Age linear earthwork can be firmly ruled out. There are many examples of such boundary earthworks on the Yorkshire Wolds, including one 900m south of Wharram Percy. Of this, a short stretch on the steep valley side survives well in earthwork form as a typical double bank with a medial ditch, while the remainder can be traced as a cropmark (Stoertz 1997, map 1). Fowler suggested a Bronze Age date, in line with examples known at that date on the chalk uplands of Wessex. However, it now seems likely that the earliest examples in Yorkshire, and perhaps beyond, date to the late Neolithic, while in the Yorkshire region the tradition certainly continued well into the Iron Age (Vyner 1994,). However, the relationships of such boundaries to the natural topography are distinctive, most running across relatively narrow necks of land, usually at right angles to the contours and often between the heads or junctions of valleys. The lynchet bank has none of these characteristics and its stratigraphic relationship to the early ridged cultivation renders a prehistoric date implausible.

5.8 The agricultural landscape

As already touched upon repeatedly, the field investigation in 2002 identified an episode of ridged cultivation significantly different in form from the majority of conventional 'ridge and furrow' recorded around the fringes of the site, and apparently predating the establishment of much, and perhaps even all, of the medieval village. It survives best in the area to the south of the north boundary of the *curia* enclosure of the South Manor, including within the bounds of the *curia*. The ridges are of greater than normal width, up to 20m wide and are very low, barely higher than 0.1m, and gently cambered so that the intervening furrows appear extraordinarily broad, on average 6m wide. This appearance may be the result of the deliberate levelling of more typical ridge and furrow, or the product of intensive activity of a different nature in the crofts associated with West Row (south), but there is no proof for either possibility. Indeed, their consistent appearance across a large area argues against any piecemeal modification of individual crofts. The fact that the ridges are similarly slight both within the *curia* and to the south of it suggests that they were already in that condition when the South Manor was laid out, that is, probably by the later 12th century. Boundary 3, which was established before the *curia* boundary of the South Manor was laid out, appears to impinge on the ridges, again pointing to an early date for the cultivation.

In the crofts adjoining West Row (south), traces of the cultivation remains were recorded from the 1946 RAF aerial photographs for the earlier survey, on which they are clearly visible (RAF 1946). However, detailed examination on the ground under optimal conditions allows the alignment and extent of the furrows to be more accurately plotted. It is difficult now to gauge how far west the ridges extended, not least because a strip of land east of the current boundary of the Guardianship Area, whose eastern limit is defined by Boundary 7, was ploughed for a few years in the early 1970s (see, for example, RCHME 1971). However, they do seem to extend at least as far as the present limit of arable cultivation, that is, beyond Boundary 5, which is the limit suggested by the earlier survey (see Figures 5 and 25). Given the very degraded condition of all the earthworks by the time of the survey in 2002, this observation may be incorrect. Boundary 4, of which only a short length now survives as an earthwork within the Guardianship Area, seems to post-date the ridge and

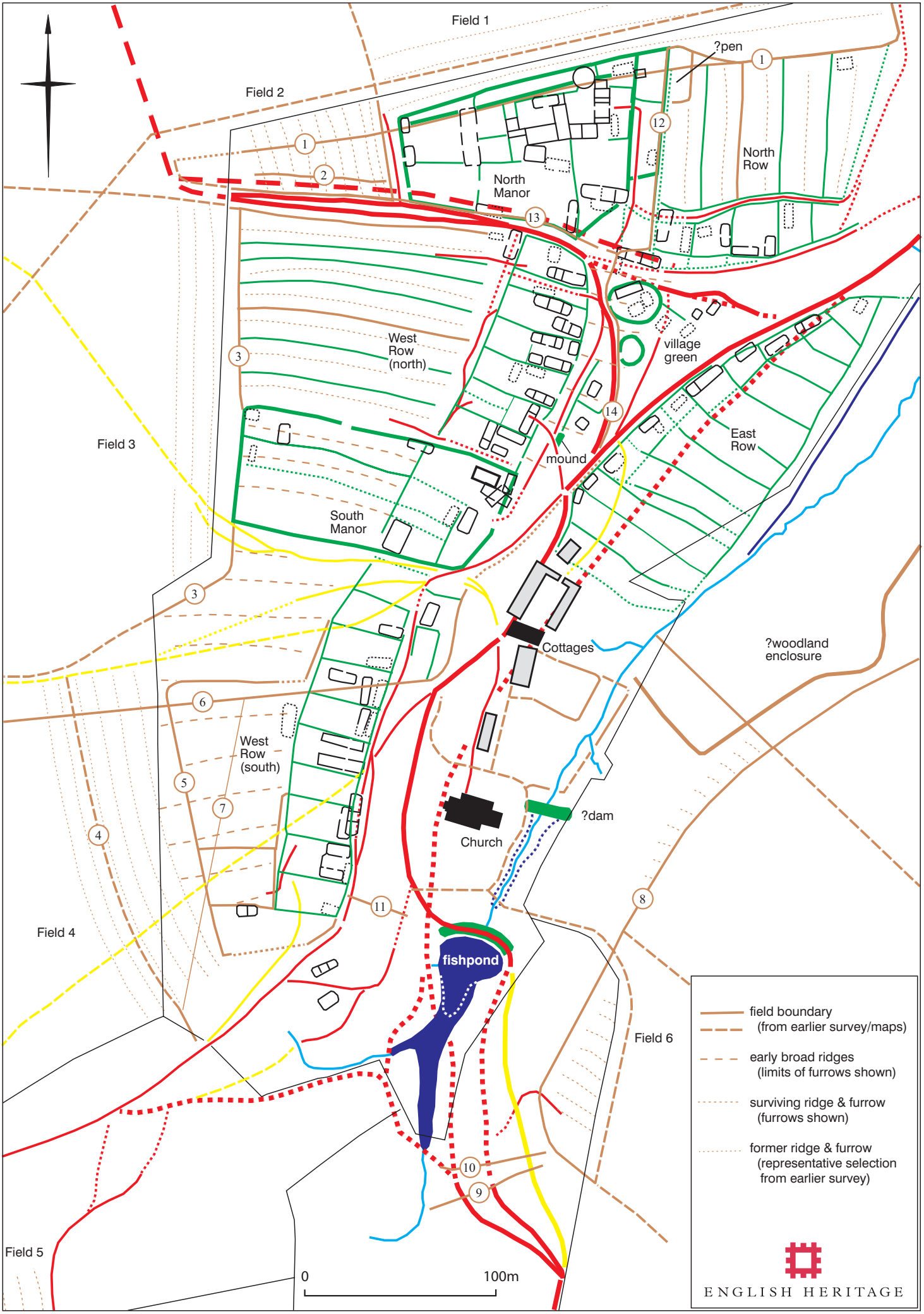


Figure 24 *Schematic plan of the agricultural landscape*

furrow in Field 4, so seems unlikely to have defined the earlier cultivation. Perhaps the simplest conclusion is that the ridges never extended any further west than the easternmost furrow of Field 4.

In relation to the layout of West Row (south), two key points emerge. Firstly, at no point do the lines of the broad furrows coincide perfectly with the lines of the proposed toft boundaries, nor do they share the same alignment. Secondly, although the lynchet bank cuts through the ridges, at no point can any of the ridges be traced east of the lynchet bank. In other words, this section of the lynchet bank could conceivably be the headland associated with the ploughing, although truncated to some degree, presumably by the laying out of the row. If so, the ploughing would have appeared to have ended well short of the edge of the western plateau, as though respecting something in that area. It would be logical to infer that the cultivation might have originated at the same time as the early settlement in the vicinity of West Row (south) – though not necessarily the planned row itself.

This is not the case in West Row (north). Although all trace of the type of cultivation has been erased by conventional ridge and furrow within the area of the crofts adjoining the row, what appear to be the fragmentary remains of a series of ridges of comparable form can be traced to the east of the frontage, extending right to the edge of the western plateau. There, the ridges seem to end in pronounced terminals, rather than on a conventional headland bank. Notably, several of the buildings on the village green and both livestock pounds seem to have made use of the relatively level platforms on the edge of the escarpment offered by the terminals of the ridges. The ridges are also apparently visible as a series of undulations in the narrow interval between the frontage of the row and the course of Track 4. Significantly, unlike West Row (south), the lines of the supposed ridges appear to coincide closely with the lateral boundaries of the tofts. Furthermore, Road 1C cuts through several of the ridges, suggesting that it is unlikely to have been part of the Romano-British route, but instead developed within the medieval period. The northernmost ridge seems to lie close against the side of Road 1B, which is known to have developed to a hollow way of considerable depth by the 6th century AD.

The cultivation ridges underlying North Row, mentioned in Section 5.6, may have been aligned at approximately 90 degrees to those already described, but the surviving terminals suggest that they were of comparable width. They seem to predate the sub-division of the crofts into pairs of conventional ridges, and in some cases to have influenced the placement of the toft boundaries. They too seem to have extended to the edge of the escarpment, their terminals creating a series of broad swells in the ground to the south of the frontage of the row. It has been suggested that Road 1D was a continuation of Road 1A, although geophysical survey hints that a route following the same line as Track 3 may have been another important route. Track 3 cannot have been intensively used, if at all, while ploughing was extending as far as the edge of the escarpment, so it is possible that this episode of cultivation was responsible for erasing the earthworks of Road 1A and causing the shift to the line of Road 1B and 1D. Although at face value the conclusion seems unpalatable, given the intensity of later medieval activity elsewhere, the available earthwork evidence hints that this unusual

form of cultivation may be of early medieval date; that is, Anglo-Saxon or Anglo-Scandinavian. An earlier date can be ruled out: geophysical survey indicates that the pattern of Romano-British enclosures did not extend this far south of Road 1A and 1B and no other early features have been identified on the plateau that might have caused the ploughing to stop short of the edge.

Another area of cultivation remains, already mentioned in Section 5.6, is defined by the series of slight lynchets on a north to south alignment underlying the crofts of East Row. These lynchets, apart from the larger one that defines the eastern ends of the crofts, do not appear on the existing survey plan. The stratigraphic evidence suggests that these could conceivably be pre-medieval in date, but the form of the lynchets is more reminiscent of ridge and furrow, where the direction of ploughing has followed the contours, that is, in effect strip lynchets, but only developed to a slight degree. This would then point to East Row having been laid out at a relatively late date, as already observed.

Beyond the fringes of the village, the agricultural landscape does not survive well in earthwork form and is for the most part better understood through analysis of the aerial photographic record. The only extensive tracts of well-preserved ridge and furrow lie on the southern side of Drue Dale (Field 5). However, the pattern of the fields in relation to the settlement remains is significant in that it raises questions concerning the development of the village as a whole.

Field 1, except for its southernmost edge, lies beyond the northern boundary of the Guardianship Area. RAF aerial photographs taken in 1946 when the land was still under pasture, clearly show ridge and furrow surviving in earthwork form on approximately an east – west alignment, as depicted on the earlier survey (RAF 1946; Figure 5). This must represent the latest phase of ancient ploughing in the field. The 1836 estate map shows that the field was under pasture at that date and contained within the land parcel called ‘Ings Meadow’ (Dykes 1836). None of this ridge and furrow now survives in earthwork form, although modern ploughing has not extended right up to the northern boundary of the North Manor *curia*. The extent of modern ploughing has been constrained by the fact that the field boundary laid out between 1836 and 1851, later followed by the boundary of the Guardianship Area, ran some 8m north of Boundary 1, though on exactly the same alignment (Dykes 1836; Ordnance Survey 1854). The eastern edge of Field 1 ends a few metres short of the crest of the western plateau, defined by a lynchet surmounted by a low bank which may have supported a hedgeline or fence, with a ditch of negligible depth on its western side (upslope). The interval between the field boundary and the edge of the escarpment hints that Track 3 may have made use of the narrow space along the crest like Road 3A.

On its southern side, Field 1 appears to have been initially defined by Boundary 1, a lynchet up to 1.0m high surmounted by a low bank. This boundary has previously been interpreted as being of prehistoric origin on the evidence of its superficial similarity to the lynchet bank and the inference, not supported by the new survey, that at its western end it turned southwards and so continued the line of Boundary 3 (Hurst 1984, fig 1). The earthwork evidently defined

the northern boundary of the North Manor in its earlier phase; the expansion of the *curia* onto Field 1, leaving most of Boundary 1 fossilised within the manor complex, has been discussed at some length in Section 5.5. Boundary 1 can also be traced beyond the western edge of Field 1, as a broad, degraded bank suggestive of a headland. It is uncertain whether it turned southwards on the line of the eastern boundary of Field 3, as suggested by the earlier survey, or continued straight on to the side of Road 1B, as the vestigial earthworks recorded by the new survey suggest. The alignment of Boundary 1 at first appears curiously at odds with Road 1B, for it lies at an oblique angle to it which would have made the achievement of a typical pattern of quadrangular fields awkward. The geophysical survey undertaken in 2002 may provide some context for this anomaly (Linford and Linford 2003, figs 3 and 5). Both the fluxgate and the magnetometer survey clearly show that a series of other linear features in this area radiate in a web-like pattern from a curving boundary, each at a similar oblique angle to its neighbours and to Boundary 1. The curving boundary may have formed part of a curvilinear enclosure enclosing the quadrangular Iron Age/Romano-British enclosure in the north-western corner of the Guardianship Area, which has been sampled by excavation, but this is not entirely clear from the geophysical survey. However, the geophysics also show that at least one of the radiating features extends westward beyond the line of the curving boundary and continues across the Iron Age/Romano-British enclosure, suggesting that it is of later date, possibly medieval. Boundary 1 accords well with this broader pattern, and seems to confirm that the radiating linear features detected by geophysical survey are not of natural origin. It therefore seems likely that the 'striations' recorded between the radiating boundaries, which radiate in a similar fashion, genuinely represent traces of ploughing rather than features of natural geological origin, as previously concluded (Linford and Linford 2003, 9-10). In short, the striations detected by geophysical survey may represent an early episode of ploughing associated with field boundaries which were subsequently, with the exception of Boundary 1, entirely ploughed away.

Returning to Boundary 1, the form of the lynchet, and of the headland where it exists in that form, may also indicate that the ploughing within the field was at some stage oriented at right angles to the ridge and furrow evident on the 1946 aerial photographs. In other words, the direction of ploughing may formerly have been on the same alignment as the ridge and furrow in the adjacent Field 2. Such an alignment might be closer to the early ridged cultivation identified under North Row. If cultivation ridges on this alignment once extended as far as the northern side of Road 1B, prior to the establishment of the North Manor, it may be that the terminals of the ridges identified south of the frontage of North Row relate to this episode of ploughing, rather than the putative early cultivation. Alternatively, the appearance of the earthwork may result from it having originated not simply as a lynchet but as a deliberately constructed field boundary. In this scenario, the radiating pattern revealed by the geophysical survey may have been superseded by the east – west alignment visible on the 1946 aerial photographs. In either case, perhaps the most plausible context for this re-alignment, and perhaps the eradication of the ploughing identified by geophysical survey, is the imposition of the North Manor complex. The irregular quadrangle of the early *curia* boundary may reflect the fact that it was initially fitted into the area between Boundary 1 and Road 1B,

conforming to the pre-existing pattern of land-use. Track 1 seems to have been provided to allow access to the newly-created headland of Field 1.

Field 2, except for its south-eastern corner, also lies beyond the boundary of the Guardianship Area. Aerial photographs taken when the land was still under pasture clearly show the ridge and furrow surviving in earthwork form on approximately a north-south alignment, as depicted on the earlier survey (Figure 5). If Boundary 1 indeed acted as a headland at some point, Field 2 may also initially have extended only as far as Boundary 1 and could at that stage have been part of the same field. If so, it is unclear how the small irregular quadrangle of land between Road 1B, Track 1 and Boundary 1 was used - perhaps simply as a small paddock. It is clear that the form of the field did not remain static. Its most logical southerly extent is the northern side of Road 1B and Boundary 2, a headland which survives for a distance of some 65m west of the North Manor complex and immediately north of Road 1B, proves that ploughing extended this far at some point. Boundary 2 cannot be traced within the manorial compound, although this area should, in theory, have been less degraded, suggesting that it may have been the product of ploughing the extent of the field as depicted on Porter's earlier survey. On the other hand, it is possible that some form of activity within the western compartments of the manorial complex erased all trace of a continuation of the headland. The slight lynchets on a north to south alignment tentatively identified within the North Manor complex might support this theory. Subsequently, Boundary 2 was also overploughed, the ploughing encroaching onto Road 1B, cutting across it at least as far as the ridge that divides the two hollow ways that make up the Road. In several cases, there are slight hints that the furrows may have cut all the way across the Road to the bank that defines the northern boundary of the crofts of West Row (north). The discovery of numerous horseshoes in the excavation trench that sections the Road south of the North Manor indicates that the route was definitely in use well into the medieval period (information from Ann Clark). From this, it may be inferred that the encroachment onto the line of the road came very late in the life of the village, or after its desertion.

Field 3, except for its easternmost edge, lies beyond the western boundary of the Guardianship Area. Aerial photographs taken when the land was still under pasture clearly show the ridge and furrow surviving in earthwork form on approximately a north to south alignment, as depicted on the earlier survey (Figure 5). All trace on the ground has since been ploughed away. Boundary 3, which defines the eastern edge of Field 3 and the rear of the crofts of West Row (north), predates the laying out of the *curia* boundary of the South Manor, as described in Section 5.4. Where it extends to the south of the *curia* boundary, it comprises a low bank with a ditch on its western side. The western side of the ditch has been enlarged to a height of 0.6m by what seems to be a fairly massive lynchet, presumably the product of the ploughing in Field 3, so that this is the most imposing element of the earthwork. The boundary has been interpreted as being of medieval origin on the basis of the geophysical survey undertaken in 2002, but its line continues that of one of the late Iron Age/Romano-British boundaries that define the enclosures to the south of Road 1A (Linford and Linford 2003, fig 9). The north-east to south-west alignment of the stretch south of the South Manor is certainly at odds with most of the pre-medieval land divisions. From the overall field

pattern, the whole of the stretch to the south of the north-west corner of the *curia* could be said to impinge upon the early, broad cultivation ridges discussed above. It is therefore possible that the boundary comprises two elements: the stretch north of the South Manor may be of late Iron Age or Romano-British origin, while the southerly stretch may be a medieval extension, post-dating the establishment of the broad cultivation ridges, but pre-dating the establishment of the *curia* boundary. Immediately north of the South Manor, the vestigial earthwork traces hint that a bank may have kicked back to the north-west, mirroring the turn further south. However, geophysical survey offers no support whatsoever for this observation, so it can probably be dismissed.

Field 4, as recorded by Porter's survey, comprised well-developed ridge and furrow on approximately a north to south alignment, extending well within the present Guardianship Area, but only just beyond Boundary 7, the former fenceline that marked the limit of ploughing for a brief spell in the early 1970s. As a result, with the exception of the southernmost terminals of two furrows surviving in the narrow triangle of ground defined by Boundary 7, the boundary of the quadrangular paddock south of West Row (south) and the edge of the western plateau, the ridge and furrow cannot be traced with confidence on the ground. Boundary 4, a bank and ditch on a north to south alignment which repilcates the curve of the cultivation ridges, was recorded as an earthwork by both Porter's survey and the Ordnance Survey First Edition 6-inch scale map (Ordnance Survey 1854). It is now under intensive arable cultivation and has been totally erased, apart from a short stretch at its southernmost end, which lies on the steep slope within the Guardianship Area and south of Boundary 7. Boundary 5 is visible on early aerial photographs and was also recorded by the Ordnance Survey First Edition map and Porter's survey (RAF 1946; Ordnance Survey 1854). Its plan relationship to the paddock enclosing Building 4, and the paddock to the west of Tofts 1 and 2, as well as its proximity to the courtyard farm in Tofts 2/3, strongly suggests it to be part of that late medieval complex. Although only ploughed for a few years in the early 1970s, the size of the earthwork was evidently greatly reduced by that process. The stretch south of Boundary 6 can now be traced only as slight and intermittent scarps, but the stretch to the north, which was overlooked by the earlier survey, remains reasonably prominent, the ditch more easily traceable as a slightly deeper depression on the same line as one of the earlier furrows. Porter's observation, apparently based primarily on the 1946 RAF aerial photographs, that the cultivation ridges in Field 4 extended east of Boundary 4, and almost as far east as Boundary 5, is correct (RAF 1946). However, to judge from the degraded condition of Boundary 4 as it appears on the 1946 images, it may have been ploughed over. This suggests that the cultivation to the east of Boundary 4 may be a later transgression – presumably not a long-lasting one, since the bank was not entirely levelled - beyond the bank that originally defined the boundary of Field 4 (as reconstructed in Beresford and Hurst 1990, fig 34). This encroachment also seems to have truncated the early broad ridges, short stetches of which are visible immediately west of Boundary 5, despite a subsequent brief episode of over-ploughing in the 1970s. Their survival indicates that the ridges of Field 4 that encroached beyond Boundary 4 did not extend right up to Boundary 5, but no firm conclusion can be reached as to whether Boundary 5 or the supposed episode of encroachment was earlier. A parallel can perhaps be drawn with the transgression of Field 2, again apparently of brief

duration, beyond its original limit, Boundary 2, and onto the line of Road 1B. Both trangressions beyond the original field boundaries may have occurred in the latest stages of the village's life.

In summary, the following likely sequence emerges: Boundary 4 initially marked the eastern edge of Field 4. It perhaps also marked the western ends of the early cultivation ridges west of West Row (south), although it is doubtful, given the intensity of modern cultivation, whether this relationship could now be tested even by excavation. Boundary 5 was laid out as part of the complex associated with the late courtyard farm. Perhaps at roughly the same date, Field 4 was extended beyond Boundary 4 and the boundary bank was overploughed. Ploughing of this area apparently did not continue for long before the field became pasture. Boundary 6 almost certainly originated as part of the division of the pastoral landscape around the 18th-century Improvement farm and is described in Section 5.11. Boundary 7 is the slight scarp (schematised for the purposes of the 2002 survey), which marks the edge of the brief episode of ploughing that occurred in the early 1970s, prior to the imposition of the current fenceline around the Guardianship Area.

Field 5 comprises ridge and furrow extending on a north to south alignment on the south side of Drue Dale, the northernmost ends of the ridges surviving well in earthwork form. The rest of the field, called Low Wold in 1836, was already under arable cultivation by that date, and has probably remained so ever since (Dyke 1836; RAF 1946). Though now under pasture, the western end of the Dale was also under the plough in 1836 (the field called High Drewdale), and this almost certainly accounts for the more degraded condition of the ridge and furrow in that area. The eastern boundary of High Drewdale can still be identified as a bank and ditch overlying the ridge and furrow, the bank surmounted by an ancient ash tree which is possibly one of those planted in 1775-6 (see section 5.11). The condition of the headland defining the northern limit of the ploughing, which appears to have been narrowed where it survives at all, gives some idea of the severity of the erosion that has occurred since the medieval period. Medieval agriculture would almost certainly have exacerbated such erosion, and may have been directly responsible for a large landslip towards the western end of the valley. Numerous minor slips along the slope, some of which obscure the lower part of Track 16, also seem to indicate that erosion was active while the fields were under cultivation. The floor of Drue Dale may, therefore, have been buried in a deep layer of colluvial silt, which could have preserved environmental and other evidence.

Field 6 comprises ridge and furrow on a north-west to south-east alignment which survived in earthwork form until after 1956; it is particularly clear on the 1946 RAF aerial photographs and was transcribed from these images for the earlier survey (RAF 1946; see Figure 5). Only the western ends of the ridge and furrow in the south-western corner of the fields now survives in an area of rough pasture. As the previous survey has recorded, Boundary 8 cuts through the ends of the ridges and seems likely to be associated with the 18th-century Improvement farm, discussed in Section 5.11. The ridges can be traced beyond this, almost to the edge of the steep valley side, which is surmounted by a headland not previously recorded. The headland appears to have been cut away in part by the ditch of the possible

woodland boundary, but the existence of a pronounced positive lynchet along the eastern side of the ditch suggests that ploughing continued (see Section 5.10). Elsewhere, like the headland of Field 5, in places the bank does not survive at all, pointing to the severity of the erosion along this slope. However, even where it does survive in its entirety, it lies right on the edge of the escarpment and is a maximum of 6m wide: rather narrow by comparison with examples in the classic Midlands field systems. This may reflect the use of horses, rather than oxen, to draw the plough, as attested by the excavated faunal remains (Beresford and Hurst 1990, 44).

Boundaries 9 and 10, neither of which have been identified before on the ground, seem to be different phases of the same boundary. Boundary 9 was evidently once the more massive earthwork, but is now very degraded. It is cut by the lower branch of Road 3C and by Boundary 10. This latter relationship may be the more reliable chronological indicator, given that the route from Thixendale may have been used occasionally until the late 19th century, but Boundary 10 also overlies both branches of Road 3C. William Dykes' estate map of 1836 shows a boundary defining the northern end of the field called West Seeds (Dykes 1836). Taking the map at face value, this would appear to correspond more closely to Boundary 9, but closer consideration suggests that it was Boundary 10 that was depicted. The First Edition 6-inch scale map surveyed in 1850-1 depicts Boundary 10 (Ordnance Survey 1854). The First Edition 25-inch scale map surveyed in 1888 depicts the same boundary, like most of the boundaries shown on Dykes' map, as a relict hedgeline; that is, as a discontinuous line of trees (Ordnance Survey 1890). There are slight inaccuracies elsewhere in Dykes' map and any survey error may have been accentuated by the very steep ground at this point. Rather than inferring that the alignment of the boundary was changed between 1836 and 1851, it therefore seems more reasonable to conclude that Boundary 10 was already in existence in 1836. The relative condition of Boundary 9 suggests that it may be considerably older and the relationship with Road 3C hints that it may be medieval in origin.

Boundary 11, which has not been identified previously, is very degraded as an earthwork, partly as a result of natural slippage on the steep slope and partly due to continuing trampling by cattle descending that slope to reach the spring. Its form - a central ditch with a slight bank on both sides - has been noted in Section 5.7 as a characteristic of Bronze Age 'linear ditches' and its location within what was effectively part of the village's public space might seem a favourable context for the survival of a very early boundary. However, the earthwork actually appears to be of relatively late origin, for while its relationship with the Track 8a is unclear, there are slight hints on the western side of the track that it turned to meet the southern boundary of Toft 2. It is possible that it was associated with the late medieval courtyard farm complex that seems to have developed in Tofts 2/3 and thus represents another example of encroachment onto the former public space, late in the life of the village.

5.9 The water mills

Excavations carried out between 1972 and 1981 have indicated that the upper stretch of the Wharram stream was initially dammed in the late Saxon period to create a small pond to

the south of the church, which powered a waterwheel whose pit and padstone survived (Beresford and Hurst 1990, 66-7). The wheel is now believed to have been vertical, rather than horizontal, as widely reported (information from S Wrathmell). This was the precursor of one of the two watermills mentioned in 14th-century documents as lying within the township. A document of 1368 refers to a pond called '*Milndam*' on the north side of the town, which has not previously been securely located, and profits from another pond on the south, which undoubtedly equates to the excavated one. Since the pond on the south was not called a millpond or milldam in 1368, it has been concluded that milling there had ceased by that time, but continued at the northern site, since a single mill was referred to in 15th century documents. The excavations showed that at some stage the dam had been raised by 1.2m in height to form a fishpond, which is essentially the pond that can be seen today. It has been suggested in the past that this modification may have been made under the influence of Haltemprice Priory, which acquired the advowson of the church in the 1320s (Beresford and Hurst 1990, 67). More recently, Stuart Wrathmell has argued that since the pond acquired by Haltemprice was called the 'pool of the mill' in 1322, it may have been the northern one that they acquired. The fishpond may therefore have been created in the later 12th century, possibly when the Chamberlains surrendered their interests to the Percy family *c* 1175. A 'sheepwash', set into the dam at some point between 1850 and 1888 and subsequently modified, is discussed in more detail in Section 5.12. Following excavation, the pond was cleaned and the dam (minus the sheepwash) was reconstructed for display, creating an ornamental feature and wildlife habitat. Although the modern dam approximately replicates the earlier earthwork, the survey undertaken of the earthwork prior to the excavation indicates that the two differ slightly in shape and extent (see Figure 5). The cleaning of the pond undertaken in the 1980s did not significantly alter its outline, but since the destruction of a timber sluice designed to trap silt flowing into the pond from the springs, silting has considerably reduced the depth of the water. In summary, analysis of the present earthworks can contribute relatively little to the understanding of the remains.

It is worth noting that the sinuous and irregular plan of the pond, in common with most millponds and many fishponds of vernacular origin, never seems to have owed a great deal to formal design, but much to the natural topography. William Dykes' estate map of 1836, the First Edition 6-inch scale map surveyed in 1850-1, the First Edition 25-inch scale map surveyed in 1888 (after the addition of the sheepwash) and the Second Edition revised in 1909 (after the extension of the sheepwash) all depict the pond (Dykes 1836; Ordnance Survey 1854; 1890; 1910). The maps concur that it was formerly more than twice the present length of the main body of standing water, extending back to within 50m of the southernmost springs. At this southernmost point, the deliberate tipping of rubble currently allows modern farm vehicles to ford the stream and Road 3C may also have crossed the valley floor here. The precise extent of the pond can be accurately determined from the contour model of the terrain and from this it can also be calculated that the water level would have come nearly to the top of the modern reconstructed dam, or nearly a metre higher than at present. The earlier mill dams, being 1.2m lower, must have retained a pond that stretched no further south than the modern sluice. This earlier phase may account for the bulbous northern end of the pond, the greater width compensating to some degree for the shallower

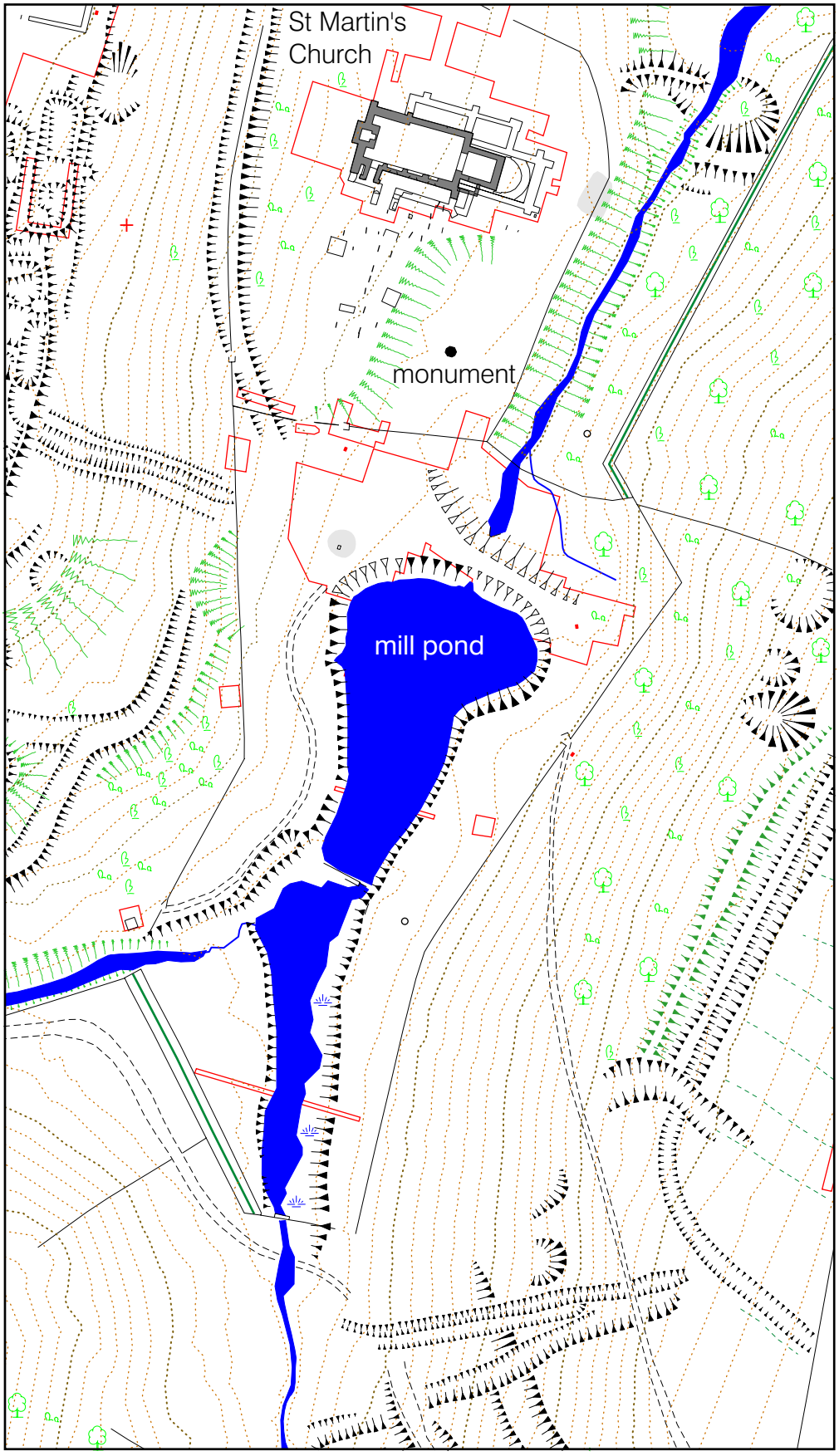


Figure 25
English Heritage plan of the millpond and probable mill dam (at 1:1 000 scale)

depth. All the historic maps also concur in showing that the overflow channel was sited, quite typically, at the end of the dam (in this case the east end), rather than at its centre where the modern concrete culvert is now sited. There is nothing to indicate that the 19th-century arrangement did not replicate the medieval. However, the excavations demonstrated that the dam was faced with sandstone blocks in the late 18th century and the survival of the pond throughout the post-medieval period suggests that it may have been subject to many similar episodes of minor repair and refurbishment.

In 1368, the northern pond, at that time apparently the site of the village's sole mill, was described as lying 'on the northern side of the town' (although 'township' could be an alternative translation of the Latin '*villa*'). The mill's apparent physical proximity to the North Manor seemed to sit happily with the early idea that it was one of the assets of that manor, a theory which Stuart Wrathmell now disputes. The documentary reference has been taken to imply that the mill may have been entirely destroyed by the construction of the railway cutting (Beresford and Hurst 1990, 67). This is a superficially attractive argument, but one that is difficult to prove either way; a few relevant observations arise from the English Heritage investigation, although these may ultimately prove inconclusive.

The identification of any possible earthwork evidence for a dam in this area is hampered not only by the railway cutting itself, which affects the natural course of the Wharram stream for *c* 300m, but also by associated earth-moving. North of the timber railway bridge, the original ground surface of the valley floor eastwards from the edge of the cutting has been concealed by the dumping of spoil, apparently from the Burdale Tunnel, in a series of long 'finger dumps' up to *c* 1.5m deep. To the west of the cutting, dense scrub obscures the valley side. However, large-scale surveys of the proposed route of the railway made in 1845 give no hint of the existence of any earthwork, though they record other minor details of potential importance to the construction of the railway (Bampton and Dykes 1845, plan 5; Birkinshaw and Dickens 1845).

Despite the effects of the railway, it is still possible to gain a fair impression of the earlier lie of the natural land-surface. The clay dams that retained the southern millpond were admittedly much smaller than the massive earthwork that was eventually built in the 1320s to form the fishpond. This, together with the fact that the Wharram stream provides a fairly constant flow of water, suggests that the regulation of the pressure onto the wheel would have been a more important consideration than the creation of a large pond to act as a reservoir for the summer months. All the same, the volume of the stream channel itself, as it approaches the railway cutting, is very small, for it is at most 5m wide and no more than 1m deep. If anything, it has only become more deeply incised since the medieval period. The contour model of the terrain in the vicinity of the intersection of the railway cutting and the stream demonstrates that the rest of the valley floor is relatively level and broad by comparison with the location of the southern dam. Therefore, the creation of a body of water of a suitable size in such a location would have required a relatively long earthwork, though perhaps one of no great height, which would have resulted in the flooding of a broad expanse of the valley floor. There is indeed some evidence to support the theory that a large area of the part of this

section of the valley floor was formerly more boggy than it is today. The eastern boundaries of the crofts of the East Row terminate on the line of a scarp which probably supported a hedge or fenceline, but which seems to have originated as the lowermost of a series of lynchets produced by earlier cultivation on this slope. This earthwork may also mark the western edge of a 'back lane' serving the East Row, although there is nothing conclusive in the form of the earthworks to indicate that this existed. Whether or not this is the case, the interval of up to 35m between the ends of the crofts and the Wharram stream, especially in the context of the evident lack of space to accommodate regular crofts, hints that the valley floor might have been deliberately avoided. Although the valley floor is now dry, support for the idea that the ground was once much wetter is also provided by the maps made in the 19th century (Dykes 1836; Bampton and Dykes 1845, plan 5; Birkinshaw and Dickens 1845; Ordnance Survey 1854; 1890). All these, surveyed before the construction of the extant concrete sheep dip *c* 1927, depict the ditch that follows the western boundary of Nut Wood as what appears to be a major drainage channel rather than just a field boundary. Although the broad, shallow channel was evidently recut and diverted when the sheepdip was constructed *c* 1927, it still retains a body of gently flowing water. Its straight, regular course suggests that it may have been constructed in the late 18th century, when Nut Wood and the adjacent field boundary were also perhaps created. Its existence may well reflect the fact that the valley floor was previously boggy and in need of 'improvement'. Nevertheless, this does not constitute strong evidence that the valley floor was actually flooded at any stage.

The maps made prior to the construction of the railway cutting indicate that until that time, Road 2A crossed the stream immediately north of the timber railway bridge, on the line of the present footpath. The identification of Road 1D adds weight to the theory that there was a route that directly crossed the valley at this point long before, perhaps as early as the late Iron Age. If the putative millpond was indeed a very small body of water entirely confined within the narrow channel of the stream, which seems unlikely, it could easily have been crossed via a bridge. If, however, a larger earthwork were necessary, as proposed above, the area occupied by the pond may well have been large enough to influence the course of the route, as was evidently the case with the southern pond, but there is no sign that this was the case. The contrary argument, that a dam was sited on the line of a pre-existing route in order to allow its continued use, cannot be dismissed out of hand, but runs contrary to what slight hints are offered by the surviving earthworks of the road.

Furthermore, the English Heritage investigation has identified what appears to be a fairly well-preserved remnant of a small earthen dam 240m downstream of the railway bridge, beyond both the area affected by the railway cutting and the limits of the area surveyed in detail, at SE 8616 6477. This could plausibly be equated with the northern dam recorded in 1368 as lying on the northern side of the village. The probable dam comprises a bank *c* 1m high projecting from the western side of the stream channel, with possible traces of an overflow channel at its western end. Most importantly, the probable dam is sited at a natural 'pinch-point' in the topography of the valley sides, so that with a length of no more than *c* 8m, it could have retained a significant body of water, of similar proportions to that created

by the early phases of the southern dam. This would suggest that the topography was, perhaps predictably, an important influence on the choice of location for dams. Even taking into account the effects of the railway cutting and associated spoil dumping, there is no evidence that there were ever any similar pinch-points in the stretch of the valley immediately to the north. In short, most of what circumstantial evidence can be gleaned argues against the theory that the railway was responsible for the destruction of the site of the northern mill.

The English Heritage investigation has identified another possible dam, which would also have been well placed in relation to the natural topography, but for which there is no supporting documentary evidence, and which must also be regarded as less convincing on the field evidence. At the northern end of the deep, steep-sided section of the stream channel immediately to the east of the churchyard, only 80m north of the reconstructed fishpond dam, is an earthwork which might be interpreted as the eroded stump of an earthen dam. A bank, some 8m long, 3m wide and up to 1.5m above the present height of the stream at its highest point, projects from the eastern side of the valley at right angles to the stream. The height of the earthwork diminishes sharply as it approaches the stream and there is only the slightest possible trace of a corresponding stump on the opposite bank, but none of this is inconsistent with the effects of water erosion. The contour model of the terrain indicates that a dam sited at this point could have retained a pond extending almost to the foot of the dam of the fishpond, representing a considerable volume of water, despite the relatively small size of the earthwork. However, the western bank of the stream upstream from the possible dam appears to be overlain by a series of small-scale tips, of unknown depth, but of relatively modern date to judge from the condition of the earthworks. This material, whose source is unknown, masks the rear of the bank and makes it difficult to judge whether the earthwork is genuinely a dam and, if so, precisely how much water it could have retained. On the eastern side of the stream, immediately downstream of the bank, an irregular platform roughly 4m square is cut into the slope to a maximum depth of 0.6m. This probably represents small-scale quarrying to provide material for the construction of the bank, but it is not inconceivable that it subsequently served as the site of a mill building.

The pinch-point in the valley sides adjacent to the pumping station built in 1935 is an equally suitable location for a dam from a topographic point of view. At this point, the northern end of the scallop eroded deep into the western valley side by the spring below Wharram Percy Cottages coincides with the tip of a low spur formed by natural slumping on the eastern side of the valley. The contour model of the terrain indicates that the construction of a barrier only a few metres long could have created a sizeable pond in the level area scoured out by the spring. Although there is no visible trace of any actual earthwork, the effects of water erosion on dams are often severe and the absence of evidence cannot be taken as conclusive evidence of absence.

5.10 Miscellaneous features

Possible woodland boundary

Previous surveys have recorded a boundary earthwork that closely follows the crest of the eastern side of Deep Dale (see Figure 24). The boundary comprises a broad ditch with a

bank running along its western edge, that is, along the very lip of the steep valley side. The earthwork was examined through the excavation of a trial trench (referred to in the Wharram Research Project archives as 'Site 42'), which recovered two small abraded fragments of pottery, one of Romano-British date and the other possibly Iron Age or Romano-British. However, given their condition these may well have been deposited in the ditch through the action of ploughing in the neighbouring field, so cannot be taken as useful dating evidence for the origin of the boundary. Indeed, the southern end of this stretch of the ditch appears to cut into the headland of Field 6, indicating that it was dug when the field pattern was long-established, that is, relatively late in the medieval period or later still. For much of its length, the depth of the ditch has been reduced by silting to no more than 0.2m deep and in places it is little more than a level terrace, apparently having been used at some point as a trackway, most obviously towards its southern end. Its eastern side is accentuated by what appears to be a substantial positive lynchet *c* 0.5m high, apparently resulting from continued ploughing on the level ground to the east, in Field 6. This would seem to indicate that the ditch was dug or recut within the period that the ridge and furrow fields were being cultivated, that is, within the medieval period. The bank is quite pronounced where the boundary diverges slightly from the crest, standing up to 0.4m high, but is virtually indistinguishable from the natural lip where it lies right on the very edge. At its southern end, the boundary turns through a right angle and descends the steep slope of the valley side. Previous survey work has not traced the earthwork further than the foot of the slope. It is certainly much diminished beyond this point and the ditch cannot be traced at all, presumably due to the effects of soil creep, which are likely to be severe at the foot of such a steep slope, especially given the geological conditions. However, a slight remnant of the bank can be traced onwards to the eastern edge of the Wharram stream, where it appears to bend very slightly northwards before fading away altogether. In plan, the scarp that marks the lower limit of the crofts of East Row seems to represent a reasonable continuation of the boundary, but it is equally possible that the Wharram stream continued its course beyond this point.

At the northern end of the boundary earthwork, the previous survey has suggested that the ditch merges with the line of one of the drainage channels cut in the 19th century. The drainage channel certainly follows and recuts part of the ditch, but the boundary does not continue on the same line all the way to the foot of the slope. To the east of the 19th-century track that passes above the entrance to the Burdale Tunnel (that is, beyond the area surveyed in detail by English Heritage and perhaps beyond the area perambulated in the course of the earlier survey), the earthwork resumes. Having apparently turned through an acute angle near the point at which the stretch recorded previously becomes indistinct, it runs south-eastwards, here lying a few metres below the crest of the south-western side of the tributary valley covered by Tunnel Plantation. The first section of the ditch has again been recut as a drainage channel and has also been overlain by upcast from a small quarry hollow which appears to have provided the material for building up the embankment of the 19th-century track. Beyond this, both bank and ditch are relatively well preserved. Where the natural slope is too gentle to greatly accentuate the downslope face of the bank, the earthwork is more massive, the bank standing to a maximum height of 1.2m on its downslope side. Its course is fairly straight, leading gently downslope at an oblique angle, although at

one point it seems to follow a dog-leg for no apparent reason. Some 150m from the track, at SE 8619 6425, it turns a right angle down slope and cannot be traced beyond the valley floor. The north-eastern crest of the valley, which the edge of Tunnel Plantation follows, is marked by a succession of positive lynchets. One of these might equate to the boundary earthwork, or the later build-up of material might have totally obscured it, but there is no firm evidence that allows its course to be traced further.

The angular course of the boundary defines an area of at least approximately 4ha (10 acres) of difficult terrain, which would have been unsuitable for either arable agriculture or settlement, due to the steep slopes and the boggy and unstable condition of the ground. The nature of the enclosed ground, together with the form of the boundary, is suggestive of an enclosure of managed woodland. It is suggested in section 5.11 that the current boundaries of Nut Wood may be of 18th-century origin, but it is conceivable that a similar area might have been used for woodland in the medieval period, presumably for similar reasons. If this extended to the west of the Wharram stream as far as the eastern limit of the crofts of East Row, this might offer an explanation for the curious avoidance of the valley floor by the croft tails.

Mound

On the crest of the western escarpment, next to the intersection of Track 19 with Track 4 (see Figure 24), is a mound, some 8m wide by 10m long and a maximum of 0.6m high on the downslope side. The northern side of Track 19 seems to have slightly truncated the north-west corner of the mound, so that it may originally have been a more regular rectangle in plan than it first appears. The fact that the mound pre-dates Track 19 is unhelpful in dating it, given that this track may have continued in use into, or more probably originated in, the post-medieval period.

The interpretation of the earthwork is left open, but its form is unique in the context of Wharram Percy and as such it is worth drawing attention to it. Given the size and shape of the mound, it is tempting to draw a comparison with Iron Age square barrows, which are a common feature of the region, although relatively few survive as earthworks (Stead 1991; Stoertz 1997, fig 15). In Field 2 to the north, centred around SE 8595 6467, the cropmarks of three small, square ditched enclosures in similar positions close to the edge of the western plateau probably represent a cluster of ploughed-out barrows of similar date. It has also been suggested that the Iron Age burial revealed by excavation north of the church may originally have been marked by a barrow. In the context of the 'public space' of the village green and the land around the church, the survival of early monuments is not out of the question; Bronze Age barrows apparently survived as earthworks throughout the occupation of Normanby le Wold, in Lincolnshire (Everson *et al* 1991, 135). However, the mound seems to lie just within the area affected by the early broad-ridged cultivation described in sections 5.6 and 5.8, if indeed the identification of a series of ridge terminals along this slope is correct. Beresford and Hurst (1990, 44) have suggested the existence of large communal middens somewhere around the village, but the regularity of the mound, together with its very prominent position and distance from the cultivated land where most midden material would have been spread, make that interpretation improbable.

Quarrying

Several small quarries are visible as earthworks on both sides of Deep Dale, mostly biting into the crest of the escarpments. That to the east of Toft 4 seems to predate the establishment of the frontage of West Row (south) and, as mentioned in Section 5.6, the hollow within which the late farmyard in Toft 2 was constructed may also have originated as a quarry hollow. As described in Section 5.4, the oval pit towards the centre of the *curia* of the South Manor may predate the ridged cultivation in that area, which in turn predates the establishment of the manorial complex. Excavation of the quarry south of Building 4, at the southernmost end of West Row (south), yielded evidence which was taken to indicate that the quarry might have Roman origins. The upper part of the quarry, however, appears to be post-medieval, for it cuts into the line of the enclosure surrounding Building 4, which can be associated with the late farm complex centred in Tofts 2/3. Other small quarries were encountered during the excavations and it seems likely that most were dug in the medieval period to provide building material.

Two much larger quarries lie on the northern side of Drue Dale and are more likely to be of post-medieval date. Both are shown on the First Edition map surveyed in 1850-1, one annotated as a 'Chalk Pit' which implies that it was in active use at that date (Ordnance Survey 1854).

5.11 The Improvement farm and its landscape

The history of Wharram Farm, built in the period between 1775 and 1779 and demolished, apart from the south range, in stages between 1836 and 1851, has been summarised in Section 4. The courtyard farm is depicted in its entirety on William Dykes' estate map of 1836, but the large-scale plan made in 1845 in advance of the construction of the railway shows that the west range of the courtyard had been demolished by that date (Dykes 1836; Birkinshaw and Dickens 1845). By 1851, all that remained was the south range, which had been incorporated into Wharram Percy Cottages (Ordnance Survey 1854). The fact that the 18th-century farmhouse, demolished less than six years earlier, was recorded as an earthwork by the Ordnance Survey, reflects the parameters of Captain Bayly's orders and the strictness with which he followed them, as discussed in Section 3. Immediately to the north-west of the farmyard, a building shown on the 1836 map was also recorded as an earthwork by the Ordnance Survey; this lies beyond the excavated area and consequently still survives as a well-defined earthwork. By 1888, this building alone was depicted as an earthwork, implying that the wall-lines of the farmhouse had been deliberately cleared in the interim (Ordnance Survey 1890). There is no need in this report for detailed description of the other buildings, which have been fully excavated and analysed.

The remnant of the range incorporated into Wharram Percy Cottages was examined briefly in the course of the English Heritage investigation. It is worth observing at the outset that the rhomboid plan of the 18th-century range incorporated into the Cottages makes a striking contrast with the typical symmetrical and rectangular plan of the other ranges around the courtyard. It could be inferred from this awkwardness that the south range may have occupied the footprint of an earlier building; indeed, this possibility was the starting point for the re-

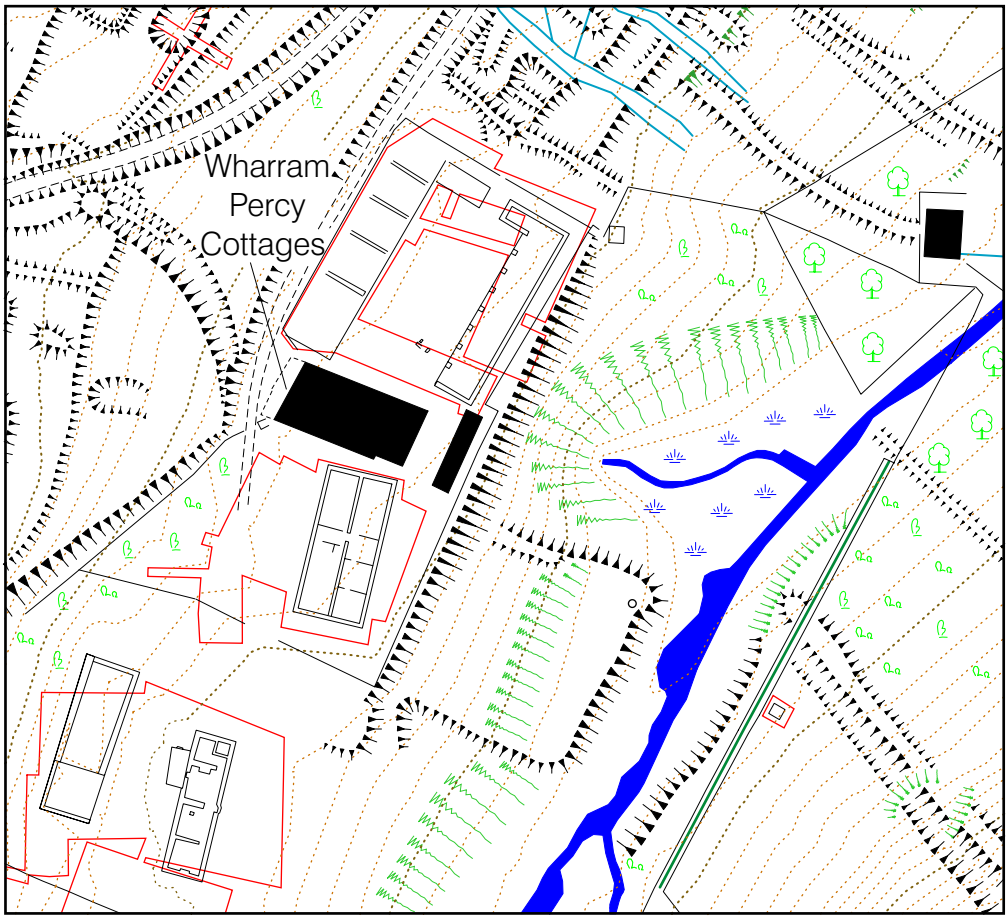


Figure 26
English Heritage plan of Wharram Percy cottages and environs (at 1:1 000 scale)

examination of the extant remains in 2002. However, this argument is severely weakened by the fact that it is not possible to point to any example of any earlier building at Wharram Percy whose plan is not rectangular. It must therefore be concluded that the rhomboid plan of the south range reflects the offset in the south ends of the ranges flanking the courtyard and masks the different alignment of the free-standing farmhouse to the south, though this still falls some way short of a full explanation.

The 18th-century building was a single-storeyed gabled range, comprising two compartments which were both linked to the farming of livestock. The west and south walls, those seen by anyone visiting the farmhouse or attending St Martin's Church, were faced with brick, considered a more ornamental material at that period, laid in English garden wall bond, whereas the north and east walls were of chalk on both faces, the north wall set on flush brick footings. This approach is identical to that of the free-standing farmhouse to the south, suggesting that the two buildings were closely contemporary in origin. An internal cross wall, which divided the interior into a larger west and smaller east compartment, was also of chalk. The gabled west wall survives virtually untouched, its rounded brick corners a characteristic feature of agricultural buildings of the period. The north and south walls have original opposed doorways into the larger west compartment; that on the north wall was blocked in the 19th century, in part with re-used 18th-century material, while that on the south remains in use. There is also an original doorway, now blocked, at the south-east corner of the east compartment. No original window openings were identified, but both walls were cut into when windows were inserted during the conversion of the building into cottages.

This conversion led to the loss of more of the upper courses of chalk blocks which faced the north wall, than of the courses of brick in the south wall. The extent of the survival of the original east wall is unknown, since it was subsequently built against and plastered. The larger west compartment of the building, with its opposed doorways, was probably a byre. The smaller east compartment seems to have been a room in which food was prepared for farm animals on the evidence of a wide, low opening in the centre of the east wall. This is spanned by a pair of timber beams, at least one of which retains some of its bark, and must be a fireplace opening which has lost the walls of its external stack. The two compartments of the building were not originally linked internally, although at some time before the building was converted into cottages a doorway was inserted into the cross wall; it was blocked at the time of conversion.

The north wall of the range extends eastwards beyond the line of the main east gable wall, apparently terminating in line with the west frontage of the range on the east side of the courtyard. This extra length is best interpreted as a boundary wall, which, with a gate spanning the gap between it and the east range, would have closed the south-east corner of the farmyard. This short length of wall appears at a later date to have become part of what may have been either a yard or a covered extension built against the east end of the south range. This addition, not as deep as the main block of the south range, was trapezoidal in shape, and the difference in date is suggested by the fact that the bond of the bricks in its east and south walls differs from that of the main part of the building.

The surviving mature ash trees dotted in and around the village have been said to date to the early 19th century (Beresford and Hurst 1990, 127-8). However, there are documentary references to the planting of 500 ash seedlings along the fenceliness in 1775-6, amongst which are presumably those mentioned in a Terrier of 1825 as standing around the perimeter of the churchyard (Beresford and Hurst 1990, 115; Borthwick Institute PR WP 9/1a). One of the trees, which stands on the southern boundary of the former garden associated with the Improvement period farmhouse, shows evidence of having been pollarded. While the siting of this tree would, at face value, seem to suggest that it may have been planted in the late 18th century, historic maps indicate that the garden outlived the destruction of the farmhouse and came to be used by the Cottages (Dykes 1836; Ordnance Survey 1854).

The estate map of 1836 suggests that part of the glebe land enclosed the garden and a stretch of the Wharram stream (Dykes 1836). The southern boundary of this parcel survives as a slight bank continuing the line of the present fenceline on the north side of the churchyard. The eastern boundary is suggested by a slight sharpening on the eastern side of the natural channel eroded by the stream.

Nut Wood has existed since at least 1836, at which date it was shown (possibly incorrectly) as an informal mixture of deciduous and coniferous trees (Dykes 1836). The First Edition 6-inch scale map surveyed in 1850-1 indicates that by that date, its layout had been formalised into two equal compartments of deciduous and coniferous trees (Ordnance Survey 1854). Its origins may well lie in the late 18th century, when formal hazel plantations were commonly

planted as a source of food and craft materials. The proximity of the garden of the farmhouse on the adjoining slope may support this theory.

The field boundaries associated with the Improvement farm (see Figure 24) can be identified with some confidence from the 1836 estate map and the First Edition 6-inch scale map, which depicts relict hedgelines as discontinuous lines of trees (Dykes 1836; Ordnance Survey 1854). In places, for example in the fields called High Worthy, whose extent more or less corresponds to Field 6, comparison of ridge and furrow visible on aerial photographs with the boundaries shown on historic maps clearly show that the Improvement boundaries followed medieval antecedents. Elsewhere, where stratigraphic relationships are still detectable on the ground, the Improvement boundaries can also be distinguished as being of relatively late origin. Notable examples are Boundary 12, comprising the ditch that cuts through Building 19 and the bank overlying the eastern boundary of the *curia* of the North Manor. The bank is accompanied by an ancient and solitary hawthorn, which is presumably the last remnant of the earlier hedge shown in relict condition on 19th-century maps (Ordnance Survey 1854; 1890). Boundary 13 is not detectable for its whole length as a separate earthwork, but its eastern end can clearly be distinguished as a late superimposition and, again, the whole length is depicted in relict condition on 19th-century Ordnance Survey maps. Together, these boundaries defined the southern edge of the field called Ings Meadow. Boundary 6 divided Great Hog Walk on the north from Low Drewdale on the south. Boundary 14, marking the eastern side of Great Hog Walk, can be traced southwards from its junction with Boundary 12, following the eastern edge of Road 1B as far as the western side of Road 2B, which suggests that Road 1B remained in use well into the post-medieval period. The field boundary was shown as an earthwork on the First Edition 6-inch scale map surveyed in 1850-1 and as a relict hedgeline on First Edition 25-inch map surveyed in 1888 (Ordnance Survey 1854; 1890). However, its continuation as far as the eastern end of Boundary 6 is not at all clearly defined as an earthwork, nor is it depicted on any map other than the 1836 estate map (Dykes 1836).

Boundary 8 is unusual in that it seems to have been laid out without any regard for medieval antecedents, as were the boundaries descending the slope from it (not numbered). Boundary 8 was laid out on a new line a few metres east of the medieval headland of Field 6, which follows the crest of the eastern side of Deep Dale. Boundary 10, which may be interpreted as the northern boundary of West Seeds as shown on the 1836 map, appears to have replicated Boundary 9, whose date is uncertain, but on a slightly different alignment.

Three enclosures, two of which lie beyond the limits of the area surveyed on the ground, are interpreted as possible sheep pens, but it is uncertain whether they were associated with the 18th-century farm or with one of the earlier post-medieval farms. At SE 8557 6439, an enclosure survived as an earthwork in the centre of Great Hog Walk until the onset of modern ploughing in the 1960s. It is depicted on historic Ordnance Survey maps and is clearly visible on earlier aerial photographs, where it can be seen to overlie the ridge and furrow of Field 3 (see, for example, St Joseph 1970). It can still be clearly seen as a soilmark and cropmark on most relevant aerial photographs. The earthwork comprises a

bank enclosing a small rectangular area; while superficially similar in form to the medieval peasant houses, it is crisper as an earthwork, slightly larger than the houses and shows no evidence of doorways.

A square enclosure at approximately SE 8585 6482 (not plotted accurately for this investigation) survived as an earthwork in the centre of Ings Meadow until the onset of modern ploughing in the 1960s. This enclosure, slightly more than twice the area of that already described, was defined by a bank and ditch and had an entrance on the south side. Unlike the pen described above, it is not depicted on historic Ordnance Survey maps, possibly because it obviously did not represent a building, but it is clearly visible on earlier aerial photographs, where it can be seen to overlie the ridge and furrow of Field 1.

The identification of the third possible pen, at the north-eastern corner of the extended *curia* of the North Manor, is more open to question, although it has been identified as such previously (Hurst 1984, fig 4; Beresford and Hurst 1990, 47). Perception of the earthwork is confused somewhat by Boundary 12, the 18th-century field boundary dividing Ings Meadow from Cow Pasture (see Figure 25), which was laid out following the eastern boundary of the manorial *curia*. Within the *curia* lie vestigial traces of a rectangular enclosure or yard. Adjoining this on the east, that is outside the extended *curia* and encroaching well into Toft 22, but of approximately equal length to the 'yard', is the rectangular earthwork previously interpreted as a pen. This interpretation was reached primarily because at 29m long by at least 12m wide, the structure was several metres wider than any other recognised building and seemed too broad to roof. Were it not that it seems to some extent to relate spatially to the 'yard' within the *curia*, it could be added that its siting hints that it could post-date the demise of the North Manor and therefore be part of the late farm complex in Tofts 23/24. As such, although the original observation about the breadth of the building still holds good and points towards the structure being a pen, it would perhaps be unwise categorically to rule it out as an exceptionally large building, such as a stable block associated with the manor or a barn associated with the later farmstead.

5.12 19th-century and later remains

Wharram Percy Cottages

The basic structure of the single-storey south range of the 18th-century courtyard farm (described in Section 5.11) was retained when it was raised in brick and converted to a block of three two-storey cottages at some point between 1845 and 1851, to provide accommodation for farm labourers. The block was initially called Low House, to distinguish it from the High House at Wharram Percy Farm, but had become known as Wharram Percy Cottages by 1888 (Ordnance Survey 1854; 1890). Current Ordnance Survey maps refer to the cottages in the singular, but the earlier name has been retained throughout this report. Doorways were variously retained, blocked or inserted, and windows were inserted, to serve the subdivided interior. Every attempt was made to present a symmetrical and ornate outward appearance, but this was to some extent compromised by the incorporation of the earlier building. The red pantile roof is probably a modification dating to the earlier 20th century. Those internal fittings that predate the use of the building as a 'diggers' hostel' (primarily

cast-iron cooking 'ranges') span the late-19th to earlier 20th centuries. At the time of the fieldwork in 2002, the roof structure and internal plasterwork were deteriorating. There is a single storey outbuilding immediately to the east of the cottages; this presumably housed toilets and wash rooms, but was not examined.

The Malton and Driffield Junction Railway

The history and physical remains of the railway, whose last passenger train ran in 1960, have been thoroughly researched (Burton 1997). Although the line was peripheral to the medieval village, its construction had some impact upon the site. A detailed survey of the proposed course of the line made in 1845 indicates that in the event, the line was constructed only just within the predicted 'limits of deviation', the entrance to Burdale Tunnel lying some 50m west of the point originally envisaged (Bampton and Dykes 1845, plan 5). The tunnel was constructed at great expense between 1847 and 1853; its entrances were bricked up when the track was dismantled. The digging of the cutting that forms the approach to the tunnel necessitated the diversion of the Wharram stream and the destruction of any earlier remains which may have existed on the valley floor, including the northern end of Road 2B. However, as described in Section 5.9, the site of the more northerly watermill was probably not in fact affected, as has been suspected previously (Beresford and Hurst 1990, 67). The 1845 map confirms that what at first might be taken as the last natural section of the channel of the Wharram stream before it reaches the railway cutting is in fact an artificial diversion. A short stretch of the original natural channel was apparently filled in and can now be traced as a slightly sinuous depression no more than 0.2m deep. The addition of a timber bridge over the track also involved the construction of an earthen approach ramp, which encroaches into the Guardianship Area. Only those earthworks to the west of the cutting were recorded in detail by English Heritage and these primarily comprise a series of large dumps of spoil from either the adjacent cutting or the tunnel. To the east of the cutting and to the north of the extant timber bridge, a series of long 'finger dumps' up to *c* 1.5m deep suggest that most of the spoil was removed from the tunnel in hand-pushed or horse-drawn tram trolleys.

As noted by the earlier survey, the First Edition 6-inch scale map surveyed in 1850-1 marks the position of a 'pumping engine' in Nut Wood, close to the eastern side of the stream (Ordnance Survey 1854). Since it is not marked on the 25-inch scale map surveyed in 1888, it was evidently in operation for a fairly brief period, which can probably be equated to the construction of the tunnel (Ordnance Survey 1890). The navvies found that the band of Jurassic clay had turned the overlying layer of chalk, through which the tunnel was dug, into a natural reservoir (as on the south side of Drue Dale). The dumping of spoil from the tunnel in Nut Wood would only have exacerbated the drainage problem and, despite the cutting of a series of narrow drainage channels, the ground on the valley side remains boggy. The pumping engine, which seems to have drawn water both from a deep sump and from one of the surface drainage channels, appears to have been intended as a temporary solution to the problem while construction was under way. Although further documentary research would be necessary to confirm the theory, it is even possible that the planting of Tunnel

Plantation was a response to the problem, for the beech trees, once mature, would have taken up a considerable quantity of ground water.

A broad, circular, water-filled pit is probably the sump from which the pump drew water. Although the current depth of the pit is uncertain, a sizeable dump of spoil a short distance to the north-east seems likely to represent spoil from its excavation, hinting that it may originally have been several metres deep. The construction of a pumping engine would have been expensive and this would seem to imply that there was a considerable volume of water to remove, consistent with what might be generated by such a well. Nothing remains of the machinery of the pumping engine, but a scatter of large, dressed sandstone blocks may represent the disassembled remains of a stone bed supporting the engine. They appear to have been re-used and so perhaps originally formed part of some other major structure.

Sheep washes

At some point between 1851 and 1888, a sheepwash was built into the middle of the medieval fishpond dam (Ordnance Survey 1854; 1890). The sheepwash was extended at some point before 1909, but this did not involved any change to the shape and depth of the pond (Ordnance Survey 1910). The site of the sheepwash was visible as an earthwork in 1954, but it was not reconstructed following the excavation of the dam (see Figure 5).

The 19th-century sheep wash was presumably put out of use by the construction of a concrete sheep-dip on the western edge of Nut Wood, fed by a channel originating at a concrete sluice next to the 1935 pumping station, some 50m upstream, which is now breaking up into pieces. For much of its length, the channel represents a recut of a broader pre-existing ditch, shown as a watercourse on historic maps from the 1836 estate map onwards (Dykes 1836). Although there is nothing strictly diagnostic in either the form or the condition of the earthwork, the fact that the upcast bank on the west side of the shallow ditch carries a hedgeline hints that the feature may have originated as a post-medieval field boundary. As discussed in Section 5.9, it is possible that the valley floor was once boggy and that the ditch represents an 18th-century attempt to improve the land. Beresford and Hurst (1990, 67) have dated the construction of the concrete sheep dip to '*c* 1927', but the evidence for this date is uncertain. Although it was still in regular use in 1953, the rapid growth of the surrounding Norwegian Spruce trees would have made access to the sheep dip progressively more difficult (Beresford and Hurst 1990, fig 19).

The pumping station

In the plantation to the north-east of Wharram Percy Cottages stands the derelict remains of a brick-built shed built by Norton Rural District Council in 1935 to house a pumping station designed to transfer water from the springs to Wharram Percy Farm (Beresford and Hurst 1990, 67). It has lain derelict since the mid-1980s. Water was drawn off from a small cistern sited at the southernmost spring and conducted along a cast iron pipe, via a manhole at the southern end of the pond, to the pumping station, where a water-powered pump moved it onwards (information from P Hoddy, Estate Manager).

6. SUMMARY AND DISCUSSION

A number of very important advances in the understanding of Wharram Percy arise from the English Heritage investigation of the field remains carried out in 2002. This said, major issues remain unresolved and the history of the Wharram Research Project amply demonstrates that many of the 'conclusions' presented in this report will in time come to be recognised as no more than stepping-stones to other, possibly very different, 'conclusions'. Collectively, the results of the new research can be said to introduce a greater degree of dynamic change into the picture of the landscape that can be inferred from the earthwork traces, a characteristic already clearly revealed at a smaller scale by the excavations of the individual elements of the site. Although this 'broad brush' conclusion is perhaps the most important outcome of the research, it is perhaps useful to itemise the key findings:

· The demonstration that many of the remains best preserved as earthworks relate – predictably - to the later stages of the village's existence.

· Recognition of an eventual encroachment onto what had been areas of public space, including tracks and the village green, especially in the latest stages of the village's existence.

· Development of the theory that some, perhaps most, of the village was laid out over earlier arable fields, whose date remains uncertain, but which may be associated with the earliest occupation of the village.

· Detailed re-appraisal of the pattern of roads and tracks and the consequent conclusion that patterns of movement through the village changed significantly over time, both reflecting and helping to shape changes in its form.

· Clarification of the form of the *curia* of the South Manor and recognition of a possible large building platform which may have been a component of the manorial complex, although other possibilities must be considered.

· Addition of chronological depth to the understanding of the development of the North Manor, which seems to support its identification as the property of the Percy family, and re-interpretation of the form of individual buildings.

· Support for Stuart Wrathmell's theory that the planning of the village did not take place in a single episode and the tentative proposal of an overall sequence of development, with West Row (south) perhaps representing the earliest part of the planned village, perhaps on the site of an earlier, less regimented settlement.

· Recognition of what seems to have been a more regular pattern of tofts in West Row (south) than has previously been suspected and the consequent conclusion that the excavation of Area 6 may not have dealt with a single toft, as believed at the time.

· Clarification of the form and extent of East Row, leading to the conclusion that the plots were basically regular but did not continue as far south as the church, as previously suggested.

· Identification of the remains of numerous additional buildings throughout the village, making previous reconstruction paintings appear too sparse.

· Identification of two livestock pounds and numerous buildings on the village green, suggesting that the area was more intensively used than previously recognised.

· Identification of between three and five late courtyard farms, two or three with large farmhouses associated with them, which may collectively be interpreted as the final occupation of the medieval village.

· Revision of the assumption that the 'lynchet bank' can be treated as a single entity and rejection of the theory that any of it is of prehistoric origin.

· Rejection of the theory that the '*milndam*' documented in 1368 must have been destroyed by the railway cutting and the identification of what may be the actual documented dam, along with another possible example, for which there is no documentary evidence.

· The interpretation of the linear earthwork on the eastern side of the Wharram stream as a boundary possibly defining an area of managed woodland.

· The recognition of the physical remains of the field boundaries associated with the 18th-century farm and the explicit confirmation that post-medieval land-use has shaped the form and condition of what can be seen of the medieval village.

· Contribution of new ideas to the debate surrounding the setting of the church.

The theme of continuity has lain at the heart of the understanding of Wharram Percy as presented in most previous discussions of the site. Yet, as stated in Section 4, the current theoretical expectation that a landscape's development will exhibit as much change as continuity has inevitably coloured the interpretations presented in this report. For example, it could now be argued that the evidence points to re-use, rather than continuity of use, of features dating to the late Iron Age and Romano-British landscape – if that can indeed be reduced to a single entity. Several features previously interpreted as being of that date, including Boundary 4, the northern boundary of the *curia* of the South Manor and Track 5b, have been re-assigned to later periods (see Beresford and Hurst 1990, fig 53). It now appears more likely that only part of a single field boundary (the northern part of Boundary 3) and the lines of the major through-routes were retained and so influenced the pattern of the medieval landscape; these may be regarded as exceptions to the rule. The new earthwork survey, coupled with the new geophysical survey, shows that within the early field boundaries (and in some cases transgressing them completely), there were numerous changes to the direction and extent of the ploughing. Parts of the established Romano-British through-routes (Road 1B, 2A 3A) were retained, but most other sections, especially the topographically

awkward Road 3D, represent drastic modifications prompted by new developments. The evidence in support of the existence of Road 2C, prior to the time when East Row was laid out, is far from conclusive, but, if proven, this would represent another major shift away from the Romano-British or early medieval pattern, one that owed nothing to the influence of earlier features in the landscape.

Likewise, the founding of the village itself cannot be seen, on present evidence, as the inevitable consequence of a long-term evolutionary trajectory of land-use, but rather as an abrupt and still essentially unexplained new development. While documentary evidence suggests that the pattern of land holding recorded in Domesday Book remained basically unchanged until both manors were acquired by the Percy family in 1254, there are few clues as to how the pre-Conquest pattern came about. The intensity of the Middle and Late Saxon activity revealed by excavation in Area 10, spanning the period from the mid-7th century into the 10th century, seems to support the theory of an early medieval focus, of high-status, towards the northern end of West Row (south) or towards the southern end of West Row (north), depending on the interpretation of the village's subsequent development, but at any rate within what was to become the *curia* of the South Manor (Beresford and Hurst 1990, 77-78 and fig 54). Similarly, excavation has revealed a concentration of high-status material on what was to become the site of the North Manor, perhaps suggesting that the seeds of nucleation had been sown. Excavation of Area 6 produced insufficient evidence to suggest that there was any direct precursor of West Row (south) as a formally structured settlement at that date, but a few 8th- and 9th-century artefacts, including a fragment of a stone cross, were present. A bank and ditch of similar date was revealed on the line of the frontage of the later row. This was initially interpreted as merely a boundary dividing off the arable fields on the plateau from the pasture in the valley, but was later thought to have defined a second religious enclosure, or perhaps the only one in existence at that date (Milne 1979b, 46; Hurst 1985, 88-89). The many slots and postholes, many of which could potentially have been interpreted as traces of Saxon or Anglo-Scandinavian buildings, were all consigned to the 11th and 12th centuries, but it was acknowledged that few of these features contained datable material.

To this inconclusive picture can be added the evidence from the new survey. It has been suggested in Section 5.6, largely on the evidence of the extent of the early cultivation ridges, that West Row (south) represents the earliest planned element of the village, as first proposed early in the Wharram Research Project (Hurst 1971, fig 25). If the inference discussed in Section 5.6 is correct, that West Row (south) underlies the South Manor, this would seem to offer a *terminus ante quem* of about 1175 for the establishment of West Row (south). Furthermore, the less regular appearance of West Row (south) overall hints at an even earlier, less formal structure and perhaps at organic development, implying that the planned row may have been imposed upon an earlier unplanned (or, at least, less carefully planned) nucleated settlement of broadly similar size. In short, an unplanned but nucleated settlement may have come into existence before the date initially inferred from the excavated evidence, perhaps after all in the late Saxon or Anglo-Scandinavian period, as has long been suspected. In this putative early form, whether or not there was really a religious enclosure

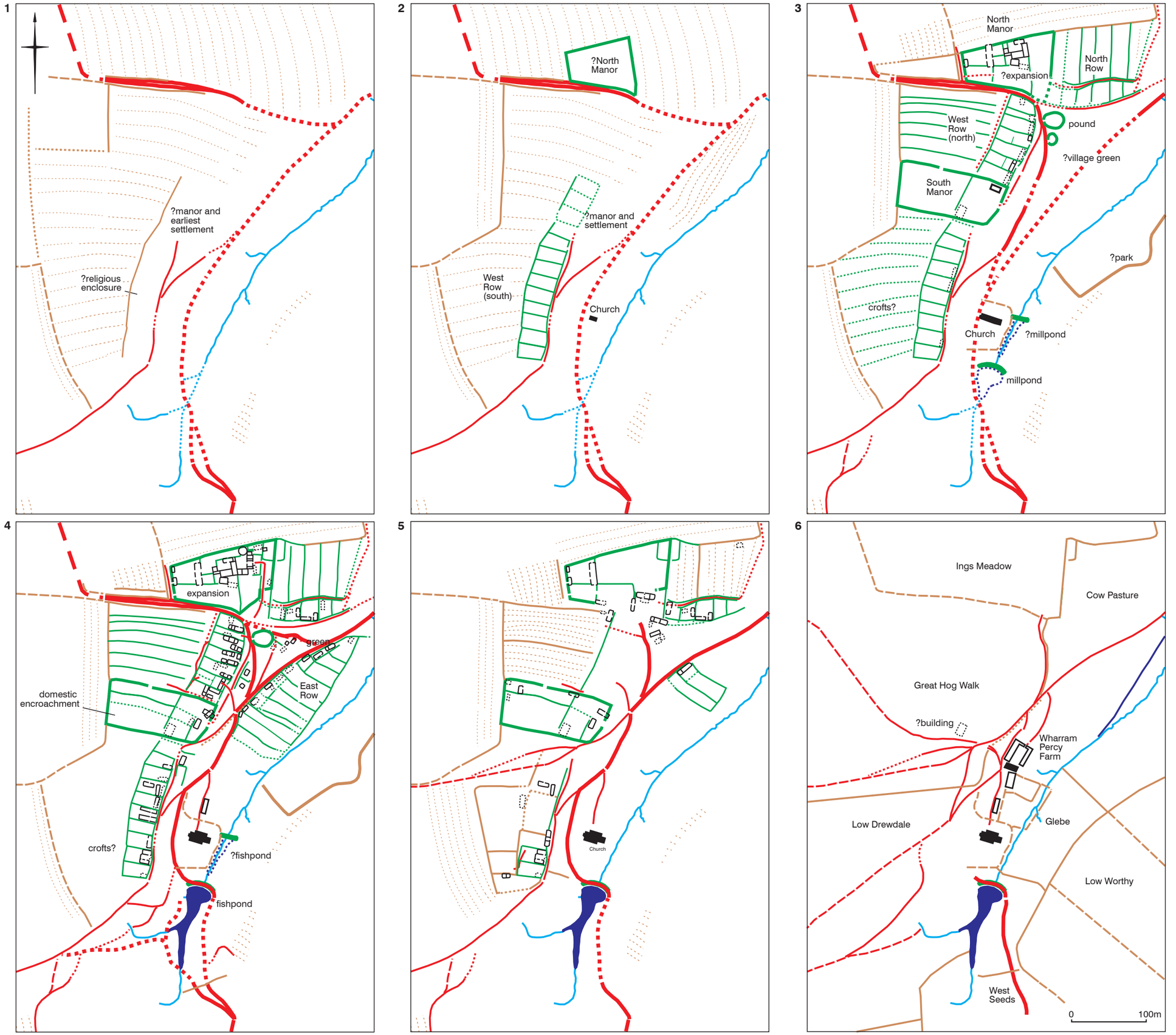


Figure 27.
Schematic plans of the conjectural development of the village

1. Earliest nucleated settlement (?late Saxon period)

2. Establishment of an informal row; North Manor laid out over fields (?late Saxon/ Anglo-Scandinavian period)

3. Creation of formal rows; development of manors (?late 12th century)

4. Addition of East Row (?mid 13th century)

5. Final settlement (late 15th century)

6. The improvement farm (late 18th century)

Figure 27
Schematic plans of the conjectural development of the village

on the plateau, the 10th-century church would seem to have been less remote from the settlement. Furthermore, the choice of location for the village could be described more justifiably as relating closely to the fresh water source.

The findings at Wharram Percy have contributed to a number of important discussions of later medieval domestic architecture and settlement units (Hurst 1971, 104-115; Wrathmell 1989, 41-45; Gardiner 2000). As noted above, the earthwork remains of the buildings in the individual tofts necessarily reflect most clearly their latest disposition prior to abandonment. Figure 17 offers a striking picture of how few of the buildings surviving as earthworks are similar in size to the few excavated examples which have underpinned so many detailed discussions. However, since the desertion of the village was evidently a prolonged and piecemeal process, the earthworks do not offer a straightforward 'snap-shot', so any discussion of the form of individual tofts or buildings runs the risk of not comparing like with like. The exception to this rule is perhaps the small number of courtyard farms which may be equated with those from which the last tenants were forcibly evicted in about 1500, discussed further below, although even these exhibit idiosyncrasies attributable to their differing developments. Generally, as noted previously, there seems to be a pattern on the western plateau of buildings aligned end-on to the frontage, perhaps replacing an earlier norm of buildings placed side-on (Hurst 1971, 122-4; Wrathmell 1989, 41-45). In East Row, this supposed general re-alignment does not appear to have taken place, and since the topography does not constitute an absolute determinant, this may indicate that the row went out of use at a relatively early date. The clearest patterning is to be seen in West Row (north), this regularity apparently in part reflecting the uniformity of their original layout, which perhaps dates to 1175, as discussed below. Toft 15 is the only one in the row that does not have at least one long building aligned at right angles to the frontage, perhaps reflecting its early abandonment and the subsequent development of Track 19. In Tofts 15 and 17, boundaries can be traced dividing the tofts into two equal halves, front and back. This same pattern of division can be inferred from the placement of the westernmost buildings in Tofts 14, 16 and 20, which seem to have either abutted or encroached beyond the boundary. Tripartite internal divisions are detectable in most of the longer buildings, though it seems improbable that all were domestic in function. It seems likely that one of these units, possibly that in Tofts 16 or 17, was occupied right up until the final desertion of the village.

Though the possibility had been raised before (for example, Hurst 1971, fig 25), Stuart Wrathmell's (1989) reasoned argument that the structure of the village as a whole could not represent the outcome of a single episode of planning represents a theoretical shift of considerable importance in understanding the development of the village. Acceptance of this possibility underpins the whole analysis of the settlement structure presented in this report, for it allows the differing characters of individual rows to be appreciated and a dynamic process of development to be inferred. This process is presented graphically in Figure 27, but the straightforward sequence of major changes is undoubtedly misleading, for organic development was almost certainly operating constantly on a smaller scale. Analysis of the plan suggests that West Row (north), the most strictly-planned row, was laid out in relation to the *curia* of the South Manor, therefore perhaps in about 1175, rather than in the 13th

century as suggested previously (Hurst 1971, fig 25). Its regularity appears deliberately to match that of the rectangular manorial *curia*. If, as discussed below, the expansion of the North Manor occurred at about the time that the Percy family effectively acquired control over the village *c* 1254, it can be inferred that North Row was already in existence by that date, for the expansion encroached onto the westernmost toft of the row. The creation of West Row (north) can perhaps be seen as an attempt by the Chamberlain family to use architectural design and civic planning as a vehicle for displaying their power and wealth – essentially showing off to the minor landholder. The expansion of the North Manor may have been the Percy family's eventual riposte. Where East Row fits into this sequence of growth remains uncertain. If the suggestion of the existence of Road 2C is correct, the fact that this was diverted when the row was laid out suggests a considerable amount of will to make the change, although perhaps on the part of the peasants themselves rather than the landlord (Dyer 1985, 32). However, the determination is slightly at odds with the lack of care evident in the planning of the individual plots, which are very irregular in width as well as (more understandably) in length. The row appears to overlie strip fields of conventional ridge and furrow, but these are not developed to any great degree. Few of the plots seem to have seen the intensity of use that the rows on the western plateau experienced, so it seems likely that the row may have been laid out fairly late and gone out of use quite rapidly. It is possible that the whole valley side defined by the churchyard, West Row (north) and North Row was originally treated as a green, making best use of a steep and boggy area that was not well-suited either to agriculture or to settlement. If East Row was a planned encroachment onto the original expanse, this might help to account for the eventual triangular form of the green and the awkwardness of the through-route from north to south. Collectively, later episodes of planning seem to have shifted the focus of the village northwards, away from its early core, but it is evident that some settlement continued in West Row (south) up until the final desertion of the village.

The almost complete disregard for the Wharram stream is a striking aspect of the village's form, the more so in the context of the oft-mentioned rarity of springs on the Wolds. In a local context, a string of medieval villages from Duggleby eastward are typical in straddling the course of the Gypsey Race. By contrast, at Wharram the newly-identified Track 18 provides the only tangible link between the main area of domestic settlement and one of the largest springs, the cleanest source of drinking water. The wide interval between the rear of the crofts of East Row and the watercourse, especially given that space to lay out this row was evidently at a premium, exemplifies the otherwise very curious absence of any obvious relationship between the village and the stream. The large number of water mills along the course of the Wharram stream in Wharram le Street parish seems to confirm that one of the stream's most valued assets may have been the power source it represented (information from Stuart Wrathmell). Nevertheless, this observation does not constitute an explanation for the dislocation between East Row and the Wharram stream, since there is no evidence for a millpond at this point.

Most previous attempts to marry the physical remains with the documentary evidence have concluded that the North Manor must represent that held by the Percy family, but the most

recent discussion has been more cautious, pointing to the poor understanding of the development of the North Manor (Roffe 2000, 3). At face value, the remarkable preservation of the North Manor suggests that it remained in use well after the destruction of the *camera* of the South Manor in the mid-13th century. The newly recognised evidence for the expansion of the complex also seems to fit well with the theory that this was the property of the Percy family. The context for this expansion may well be the period between the mid-13th and the mid-14th centuries, when the family was evidently investing considerably in their holdings at Wharram. The acquisition by Peter de Percy of the lordship of the whole township in 1254 is perhaps the most obvious specific occasion. By 1368, following the Black Death and the consequent death of Walter de Heslerton, although the manor house was still standing, it was in need of extensive repairs which made it worthless and the surveys of 1435 and 1458 refer only to the *site* of the manor. Yet the fact that Field 2 did not impinge on the manorial *curia*, though it encroached onto Road 1B and Track 1, suggests that the former manor retained some spatial integrity after its demise, perhaps through re-occupation by one of the late courtyard farms, as discussed below. It has been suggested that the former barn may have been converted to a sheephouse, following an observation made previously (Beresford and Hurst 1990, 47). If so, this building may have outlived the rest of the manor.

The documentary reference to the eviction of four families at the very end of the 15th century or the start of the 16th has long been regarded as an unimpeachable indication of the size of the village immediately prior to its desertion and the date of that desertion. However, as noted in Section 4, more prolonged and less partial consideration of the artefactual evidence, which includes Cistercian Ware, a jetton and other material of 16th-century date, seems to point to some degree of occupation, rather than mere activity, after the date suggested by the documentary source (information from Ann Clark). On the other hand, while it is notoriously difficult to marry specific items of documentary evidence with physical remains on the ground, the new investigation does suggest the existence of four, or possibly five, distinct late courtyard farms, which it is tempting to equate with the four documented farms. Those that can be identified with some confidence are: the farmyard in Tofts 2 and 3, with Building 5 as the farmhouse; that in the south-east corner of the former *curia* of the North Manor, with Building 19 or Building 23 as the farmhouse; that in Tofts 23/24, with Building 19 (or less probably Building 3) as a farmhouse; that in Toft 31, and perhaps Toft 32, comprising Building 3, but apparently without any other associated buildings. Toft 13 may fall into the same category, but the form of the latest (apparently) domestic structure within the toft (Building 10), as revealed by excavation, had little in common with the other buildings identified as farmhouses. Regardless of precisely when occupation ended, the picture often put across of this final phase of the village's existence seems to imply that the community was on its last legs and that its eventual 'snuffing-out' was almost inevitable. The pattern revealed by the new survey of the latest identifiable arable agriculture – arguably the lifeblood of the medieval village – depicts a very different story. Fields 2 and 4 had both encroached beyond their long-established boundaries, indicating above all the breakdown of the medieval distinction between public and private space, but perhaps also suggesting a more widespread expansion or intensification of agriculture. The various paddocks associated with the courtyard farms had far larger capacities for production than anything available to the inhabitants of

the planned rows. The subdivision of the crofts behind West Row (north) may have served to create two enclosed arable fields. Some of the other paddocks, for example the enclosure associated with Building 4 and that defined by Boundary 5, as well as that within the former *curia* of the North Manor, seem not to have been ploughed and may therefore have held livestock. This would seem to suggest that the tenants of the courtyard farms had diversified the economic base of their farming regimes by comparison with the earlier inhabitants. The form of the farmyards in Tofts 2/3 and 23/24, with buildings surrounding sunken yards, is suggestive of cattle byres, but it is entirely possible that they were for sheep. In the context of the burgeoning wool trade of the 16th century, this would mean that the tenants were keeping up with the times. In other words, had it not been for the evictions believed to have been carried out by Baron Hilton, the village might well have survived, and perhaps even gone on to grow and flourish once more.

Finally, the new survey has highlighted a few earthworks, relating to droveways, former hedgelines and livestock pens, that collectively represent the physical manifestation in the landscape of the five centuries of primarily pastoral activity that followed the desertion of the medieval village. These traces are of little importance in their own right and are easy to overlook, yet serve as a tangible reminder that the economic circumstances that ultimately led to the end of the village as a living community were also responsible for its survival and excellent preservation as an archaeological monument.

7. METHODOLOGY

The field investigation was carried out by Alastair Oswald, Abby Hunt, Trevor Pearson and Stewart Ainsworth, all of English Heritage's Archaeological Investigation team based in York. The analysis of Wharram Percy Cottages was carried out by Dr Ian Goodall of the Architectural Investigation team. A number of digital photographs taken by Alastair Oswald and Trevor Pearson are held on disk as part of the project archive.

A Trimble dual frequency Global Positioning Satellite (GPS) system was used to survey the unwooded parts of the site. The static base receiver was set up outside the western fenceline around the site (beyond the reach of cattle) on a temporary survey station. The co-ordinates of this were then calibrated to the National Grid (OSTN97) using Trimble Geomatics software, based on the position of the station relative to Ordnance Survey active GPS stations at Flamborough, Leeds, Newcastle, Nottingham and Daresbury. This offers accuracy of around 5cms. Two rover receivers (Trimble 4700 and 4800 models), working independently in real-time kinematic mode, were used to record various other data: to tie in to grid markers used by the earlier survey; to map fencelines and other hard detail; to model the natural topography; to record the simple earthworks (especially ridge and furrow); to establish the positions of several hundred temporary survey markers distributed across the site. In wooded parts of the site, where GPS would not function, a 'Total Station' electronic theodolite with integral EDM (Leica TC1610 model) was used to perform the same tasks, and the initial stations were related to the GPS data to ensure consistency. The temporary markers, placed in relation to the earthworks, were then used as the basis for a conventional graphical survey using hand-tapes. This technique, though no more technologically advanced than the methods employed by earlier surveys, was demanded by the complexity and subtlety of the slighter earthworks. The resulting plans were drawn up at scales of 1:500 and 1:1 000 scale as appropriate via Key Terrafirma 5, AutoCAD 2000i and Coreldraw 8 software.

A hand-drawn archive plan and various interpretative drawings were prepared by Alastair Oswald. The main AutoCAD-based plan was by Philip Sinton. The report was researched and written by Alastair Oswald, with a contribution on Wharram Percy Cottages by Dr Ian Goodall. Alison Deegan commented on the aerial photographic evidence and Louise Martin of English Heritage's Archaeometry Team on the geophysical evidence. Stewart Ainsworth, Paul Everson, Stuart Wrathmell and Ann Clark offered their thoughts on various drafts and the final report was edited by Stewart Ainsworth.

The survey archive has been deposited in English Heritage's National Monuments Record, Great Western Village, Kemble Drive, Swindon SN2 2GZ, to where applications for copyright should be made (reference number: SE 86 SE 4).

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