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A probable medieval manorial complex at Boltby, North Yorkshire

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SURVEY REPORT

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A PROBABLE MEDIEVAL MANORIAL COMPLEX AT BOLTBY, NORTH YORKSHIRE

Archaeological Investigation Report Series AI/19/2002

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1. INTRODUCTION

In April 2002, English Heritage collaborated with the Boltby Millenium Group to carry out an analytical field survey of a probable medieval manorial complex surviving as earthworks on the edge of the village of Boltby in North Yorkshire. The investigation formed part of a broader project, initiated and coordinated by the Boltby Millennium Group and funded by the Heritage Lottery Fund through the Local Heritage Initiative scheme, which aimed to advance understanding of the history of the village and its environs. English Heritage agreed to support the project through the survey of the earthworks because of the potential importance of the archaeological remains, which had not previously been the subject of any intensive study. In addition, since the completion of a detailed earthwork survey had not been envisaged at the outset of the project, the investigation offered an opportunity to encourage best practice in archaeological research, through the provision of training to the Boltby Millennium Group. Over the course of two days, thirty members of the Group actively participated in the field survey, under the supervision of three staff from English Heritage's Archaeological Investigation section.

The probable manorial complex stretches across several paddocks on the northern edge of Boltby, a small village in the parish of the same name in the Hambleton district of the county, centred at National Grid Reference SE 4892 8673. Situated amongst the foothills beneath the western escarpment of the Hambleton Hills, the village lies within the bounds of the North York Moors National Park and the archaeological remains are therefore afforded some statutory protection. Although recorded in the Sites and Monuments Record (SMR) maintained by the National Park as a possible medieval complex (SMR number: 147.10), they were not protected in their own right as a Scheduled Ancient Monument at the time of the field survey, nor recorded in the database maintained by English Heritage's public archive, the National Monuments Record (NMR). On the basis of the fresh evidence brought to light by the investigation carried out in 2002, the site was recorded in both databases as a probable medieval moat and manorial complex (NMR number: SE 48 NE 31).

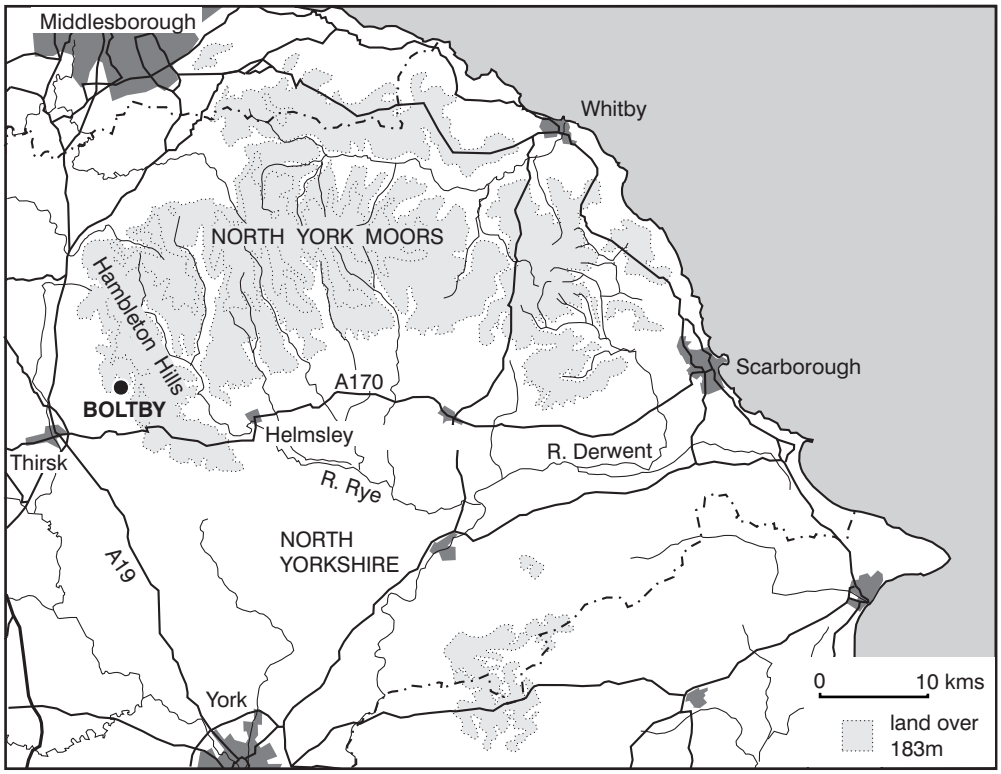

Figure 1. Location map

2. TOPOGRAPHY, GEOLOGY AND LAND USE

Boltby occupies a fairly gentle south-facing slope at a height of about 140m above sea level, overlooked on the east by the main western escarpment of the Hambleton Hills and sheltered on all other sides by the foothills of the range. Immediately to the south of the village, the valley of the Gurtof Beck, a small stream which flows southwards through the village, opens out into a broad low-lying plain which remains boggy and unsuitable for arable cultivation. The village lies close to the point at which the heavy clays of the valley bottom give way to the lighter gravelly soils overlying the limestone and sandstone hillsides. This geological context probably accounts for the existence of a spring lying within the area examined during the field survey. As described in Section 4, historic maps suggest that the spring is almost certainly the source of the water that currently issues through a spout into a basin sited in the village's main street. The spring is one of several around the foot of Boltby Moor, 1.6km (1 mile) to the north-west of the village, which feed minor tributaries of the Gurtof Beck.

Modern land-use in the locality comprises a mixture of pasture and arable agriculture, with small patches of deciduous woodland on the steeper slopes. A tract of well-preserved cultivation terraces, whose form is typical of the medieval period, survives in a field of pasture on the south-western edge of the village, centred at National Grid Reference SE 4880 8656. The distinctive pattern of long, narrow fields evident to the west of the village on the Tithe Map of 1847 is indicative of the fossilisation of unenclosed medieval strip fields in later field boundaries (CRO 1847). These two strands of evidence suggest that the extent of arable agriculture was equal or greater in the medieval period. The field survey detected vestigial traces of narrow ridge-and-furrow cultivation within the western part of the supposed manorial enclosure. However, it seems likely that this may have been a fairly brief episode at some point after the abandonment of the site as a high-status residence (see Section 5.2). The Tithe Map surveyed in 1847 indicates that by that date a number of small cottages and their gardens had encroached upon the interior of the supposed manorial enclosure. In the Apportionment document that accompanies the Tithe Map, much of the farmland surrounding the enclosure was described as 'pasture', while the three main fields that make up the interior of the enclosure were 'meadow' (see Figure 3). The preservation of the earlier earthwork remains suggests that the land may have remained as such for most of the post-medieval period. According to local residents, however, the western paddock was ploughed again in the Second World War, and this recollection is borne out by the condition of the earlier earthworks in this field, which have a degraded appearance.

At the time of the field survey carried out in 2002, all three paddocks were still under pasture and there was no suggestion that this form of land-use, which is entirely conducive to the continued preservation of the archaeological remains, was likely to change in the foreseeable future. The tiny trickle of water issuing from the boggy ground surrounding the spring (which according to the local residents is a recent phenomenon) was making the central part of the enclosure increasingly water-logged, but this in itself is unlikely to constitute a threat to the conservation of any remains surviving below ground.

3. HISTORY OF RESEARCH

As described in Sections 4 and 5, the course of the stream as depicted on historic maps indicates that the moat and several other features must have been deliberately modified at least once before 1817 (Jefferys 1771; Tuke 1787; Greenwood 1817). From this, it can be inferred that local people have long been aware of the existence of the earthworks, though not necessarily of their true nature. Although not all the relevant maps are available through the County Record Office, the earthworks were not depicted on either the First Edition of the Ordnance Survey 6-inch scale map, surveyed in 1853, or the Third Edition of the 25-inch scale map, revised in 1914, which strongly suggests that by that date the remains were already too indistinct to be interpreted with confidence (Ordnance Survey 1856c; d; 1914a; b).

The site was first photographed from the air in January 1973 by the pioneering aerial archaeologist JK St Joseph (St Joseph 1973). However, it seems that he did not reach any firm interpretation of the traces that he recorded, for the photograph is indexed non-committally in the archives of the Cambridge University Committee for Aerial Photography as 'earthworks north of Boltby'. Examination of the photograph prompted an inspection of the site in July 1992 by Graham Lee, the National Park's Archaeological Conservation Officer. The identification of a possible fishpond within the oval enclosure led to the inclusion of the site in the Sites and Monuments Record maintained by the National Park Authority as a possible medieval complex.

The formation of the Boltby Millennium Group led to a second examination by Graham Lee in November 2000 and to further specialist oblique aerial photography by Blaise Vyner in January 2001, when the larger earthworks were highlighted by a light covering of snow (Vyner 2001 and Figure 2). These conditions enabled Vyner to identify a number of possible building platforms within the enclosure, as well as a moat-like earthwork. A small number of sherds of pottery had been recovered by local residents from rabbit burrows and molehills in the vicinity of the site and Vyner's examination of these indicated that the earlier examples spanned the later medieval period, from the 12th to the 16th centuries. Documentary research by

Figure 2. Blaise Vyner's aerial photograph of the site from the west, taken 24 Feb 2001 (ref: BV01/02/frames 30-36). Reproduced by permission of B. Vyner

Elizabeth Sanderson of the Boltby Millennium Group suggested that the influential de Boltby family and their descendants may have held a manor in the village over broadly the same time-span (Sanderson in preparation; see also Section 4).

The logical supposition that the oval enclosure might represent the site of a manorial complex was the starting point for the detailed investigation of the earthworks in April 2002. The fieldwork, which covered an area of 2.5 hectares (6.2 acres), was carried out in detail (at Level 3 standard as defined in RCHME 1999, 3-4). However, no use was made of aerial photography other than a few specialist oblique images already obtained by the Boltby Millennium Group. While it is possible that examination of vertical non-specialist photographs taken by the RAF and Ordnance Survey might reveal further information about land-use in the second half of the 20th century, the likelihood of this was considered too slim in this particular instance to warrant the additional expenditure of time. Research into historic maps was confined to those available through the County Record Office (CRO), which include the Tithe Map of 1847, but not the First Edition of the Ordnance Survey 25-inch scale map surveyed in 1853 or the Second Edition revised in 1891 (Ordnance Survey 1856a; b; 1893a; b). However, comparison of the Tithe Map with the First Edition 6-inch scale map depiction (Ordnance Survey 1856c; d), which was distilled from the 25-inch scale map, and with the Third Edition of the 25-inch scale map revised in 1912 (Ordnance Survey 1914a; b), suggested that it would not be worth obtaining copies of the missing map sheets from the British Library. The fieldwork resulted in an analytical plan of the earthworks at a scale of 1:1,000, which was intended to provide a foundation for subsequent investigation by geophysical techniques (GeoQuest Associates 2002). Production of the English Heritage report was postponed to allow consideration of the results of the geophysical survey. However, in the event, this technique was less useful than had been hoped, and the conclusions stemming from the surface investigation of the earthworks remain more-or-less unamended.

4. DOCUMENTARY EVIDENCE

There has been very little research into the history of Boltby; this summary draws almost exclusively on the work carried out by Elizabeth Sanderson of the Boltby Millennium Group (Sanderson in preparation). Documentary evidence is scarce and there are no explicit references to the existence of any moat or manor house in Boltby. However, the existence of a manor house may be inferred from the standing of the local landlords, the de Boltby family. It would appear that between the 12th and the 14th centuries, they were the most powerful landowners in the area, with holdings in Boltby, Ravensthorpe, Thirlby and further afield. The manor of Boltby is mentioned specifically in 1279, 1354, 1399 and 1602. The earliest references to the family relate to gifts of land made by them. Odo de Boltby gave land at Hesketh to Rievaulx Abbey at some point between 1131 and 1145. Savarico de Boltby gave the village of Murton, just east of York, to the Abbey in about 1170. In 1221, Jordan de Boltby gave land in Nunnington and Fadmoor to Keldholm Priory. In the early 13th century, Nicholas de Boltby married into the de Tindale family and so inherited the land of the Barony of Langley in Northumberland. On the death of Nicholas' son Adam in 1282, the de Boltby estates were divided between Adam's two daughters: the land in Northumberland was given to the elder daughter Isabel, while the holdings in Yorkshire went to Eva.

The date of birth of Eva de Boltby is unknown, but, as a wealthy heiress, she would probably have married as a teenager. By 1274, she had married Alan de Walkingham, from the Knaresborough area, who was a prominent member of society and a significant landowner as a result of purchases made throughout England in the 1270s. It is very likely that by 1281, the couple were living in a large manor house at Ravensthorpe, about 1.6km (1 mile) south of Boltby, for in that year Archbishop William Wickwane stayed there for two days as their guest. The site of the large moated manor house at Ravensthorpe survives as earthworks, but the house itself no longer stands. Following the death of Alan de Walkingham in 1283, Eva married twice more, the second time to William de Cantelupe, a powerful landowner and associate of both Edward I and Edward II. Throughout this period, Eva and her successive husbands lived at Ravensthorpe Manor, which would seem to imply that by 1281 at the latest, the direct contact of the main de Boltby line with their holdings in Boltby had effectively come to an end. This date seems to offer a *terminus ante quem* for the construction and initial habitation of whatever house the de Boltby family may originally have held in Boltby itself. It may also provide an approximate indication of the date when such a house may have first begun to fall into disuse, although it is certainly possible that it was occupied by officials or less important members of the family.

The first useful cartographic source is the map of Yorkshire surveyed at a scale of 1 inch to the mile between 1767 and 1770 by Thomas Jefferys, a facsimile of which is held in the County Record Office (Jefferys 1771). The map is necessarily schematic in the portrayal of detail due to the scale at which Jefferys was working. However, it clearly shows a stream originating to the west of the church and a considerable distance to the north of the main road through Boltby, flowing southwards and eventually joining the Gurtof Beck. The point at which the stream originates coincides reasonably closely with the location of the spring recorded during the field survey in 2002 and there are certainly no other streams with which that depicted by Jefferys could be confused. John Tuke's map of 1787 appears to show the same stream, but his depiction draws upon Jefferys' work and could be regarded as unreliable since he does not show the Gurtof Beck extending any further northwards

than the village street (Tuke 1787). The next available source, the 1-inch scale map by C Greenwood surveyed between 1815 and 1817, does not show the stream (Greenwood 1817). Therefore, it can reasonably be inferred that at some point certainly after 1770 and perhaps after 1787, but before 1817, the watercourse was piped underground to reach the spout that presently exists is the main street.

The Tithe Map surveyed in 1847, along with the accompanying Apportionment document, sheds important light on land-use at that period (CRO 1847 and Figure 3). The field names listed in the Apportionment document confirm that at some point the three main paddocks which are surrounded by the earthwork of the supposed manorial enclosure had been a single unit of land, for all three fields are called 'Todd Garth'. 'Garth' usually means an enclosed parcel of land, in this case presumably a reference to the earthwork that forms the boundary of the supposed manorial enclosure. In addition, all three fields were owned by the same landlord, the Rev

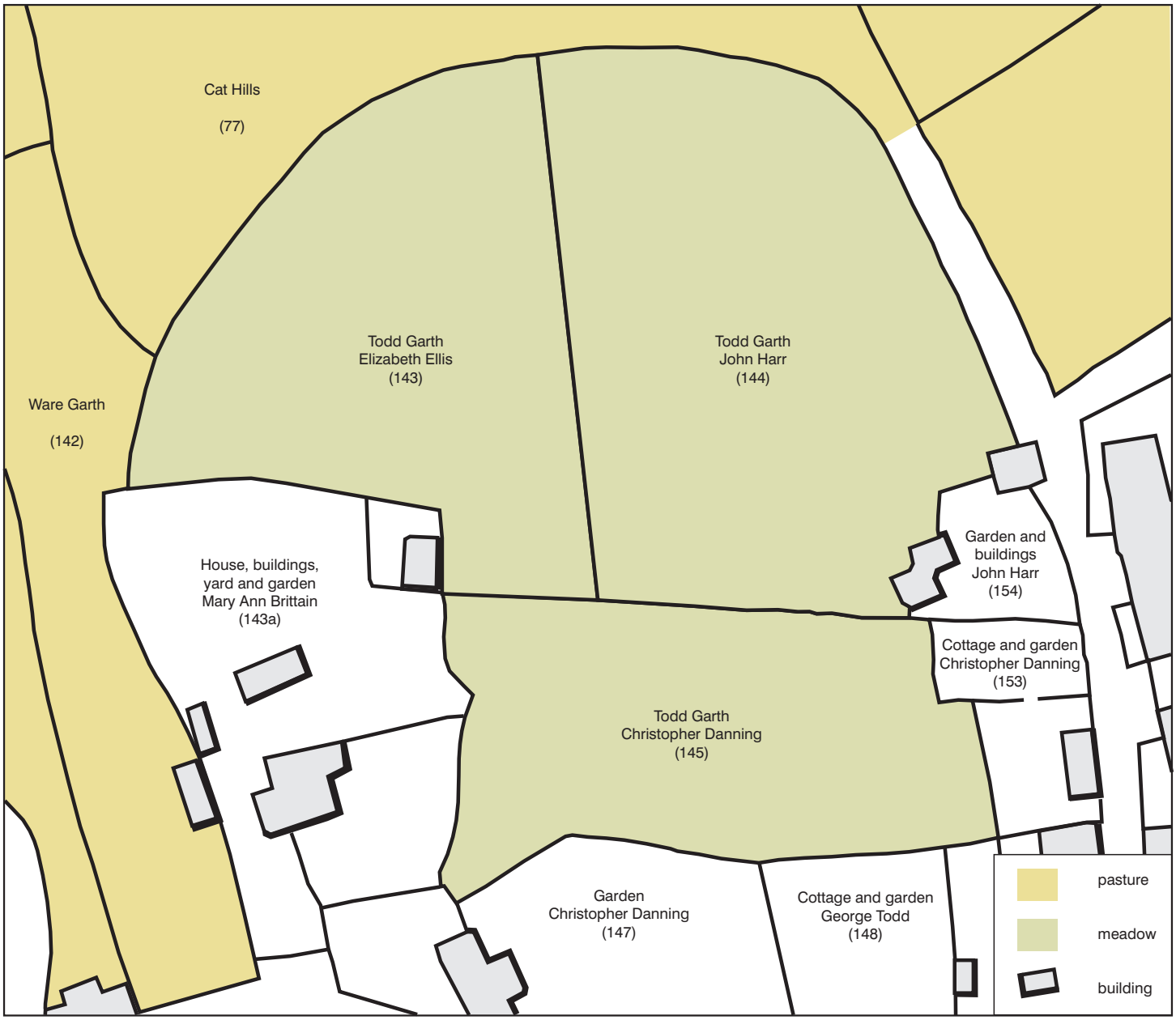

Figure 3. Copy of the Tithe Map of 1847 (with additional inforamation, enlarged to same scale as Figure 4)

Charles Johnstone, although they were rented by separate tenants: Elizabeth Ellis, John Harr and Christopher Danning. Canon Johnstone had been appointed Vicar of Felixkirk in 1827 and had started to buy up land in the locality in the 1840s. One George Todd is recorded as the tenant of the 'Cottage and garden' today called Cherry Tree Cottage, which adjoins the southern side of Todd Garth. This hints that the subdivision of Todd Garth into the three paddocks may have taken place not long before 1847. The character of the field boundaries that divide the interior of the supposed manorial enclosure is consistent with the move to enclose agricultural land in the late-18th and early-19th centuries (land in the adjoining parish of Felixkirk was enclosed in 1795 -6). Taken together with the map evidence for the diversion of the spring presented above, the picture that emerges is one of an attempt by the landowners, perhaps in the late 18th century, to improve and rationalise their property. This may have been either the Duke of Rutland, who died in 1779, or Edward Manners, who was the Duke's 'natural' son. The Tithe Map also testifies to the existence of three buildings with adjoining yards or gardens, parts of which were identified as slight earthworks during the course of the field survey, as well as one that still survives in dilapidated condition and remains in occasional use as a barn (see Section 5.2).

5. DESCRIPTION AND INTERPRETATION OF THE EARTHWORKS

5.1 The probable manorial complex and other medieval remains

The probable manorial enclosure

The enclosure which may have served to define the *'curia'* of the supposed manor (that is, the land and outbuildings directly associated with the manor house) is oval in plan and would have covered an area of approximately 2.0ha (4.9 acres). It is impossible to be certain of its original extent, for the precise line of the perimeter is uncertain on the south and east sides, but the interior measured at least 177m long from west to east by 150m wide. In a number of places, the perimeter of the enclosure is physically overlain by the dilapidated fragments of drystone walls, or by earthen banks associated with hedgelines. These remains, now in most cases replaced by fences, represent the original post-medieval field boundaries shown on the Tithe Map

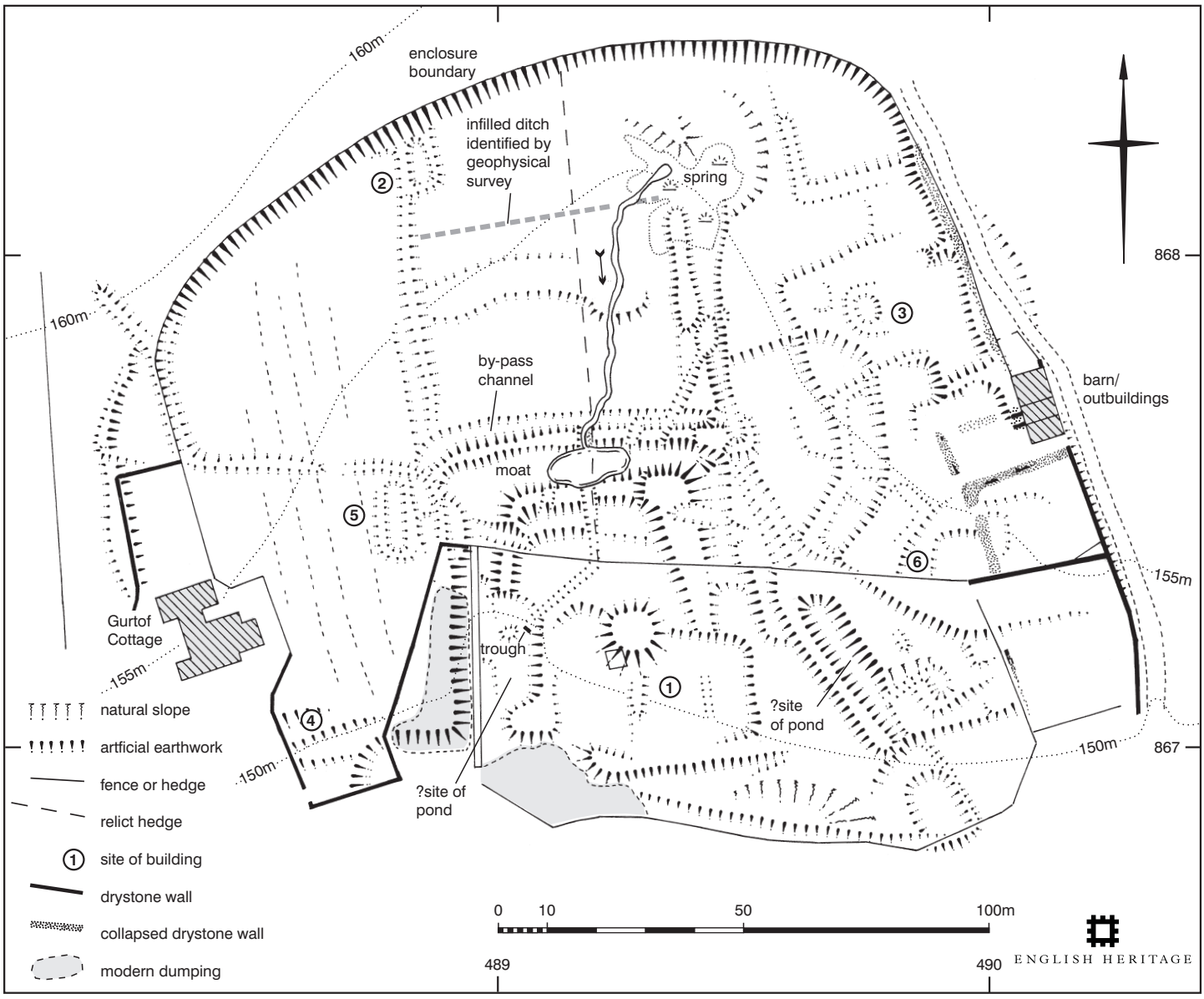

Figure 4. English Heritage plan of the earthworks (reduced from original at 1:1,000 scale)

of 1847, indicating that the enclosure must have originated before that date and that the line of its perimeter subsequently became fossilised in the pattern of later field boundaries. Other than this relationship, more secure dating evidence is lacking.

The boundary is clearest on the upslope side to the north, where it survives as a steep scarp up to 1.8m high. This has apparently been produced partly by terracing the interior of the enclosure into the natural slope. The gradual build-up of ploughsoil (technically termed a 'positive lynchet') against the exterior of the boundary, in the field called Cat Hills on the Apportionment document accompanying the Tithe Map of 1847, is also partly responsible for the size of the earthwork. The depth of this accumulated ploughsoil, which must have been produced over a considerable period, may offer circumstantial evidence for the date of the enclosure. Cat Hills is now under arable cultivation, but the positive lynchet associated with this relatively recent ploughing is identifiable as a separate scarp, lying a few metres upslope from the perimeter of the enclosure (not shown on Figure 4). According to the Apportionment document, Cat Hills was under pasture in 1847, which hints that the ploughing responsible for creating the main positive lynchet took place at some earlier date. Given the widespread evidence for medieval strip fields mentioned in Section 2, it is reasonable to speculate that the earlier episode of arable cultivation may also be medieval, which would imply that the curving boundary of the enclosure was already in place by the medieval period.

However, the evidence is not clear-cut. The pattern of field boundarieson the Tithe Map of 1847 hints that on the west, the curving perimeter of the enclosure may have impinged on the edge of the nearest strip field, called Ware Garth in the apportionment document (see Figure 3). This would suggest that, contrary to the evidence presented above, the supposed manorial enclosure was imposed upon a pre-existing layout of strip fields. On the west, the perimeter earthwork gradually becomes a low bank as it runs at an increasingly perpendicular angle to the natural slope. The bank can be traced to the point where it is overlain by the garden wall of Gurtof Cottage, and for a few metres further before it has been destroyed by a terrace cut into the slope for the extension of the cottage. The course of the field boundary shown on the Tithe Map of 1847, surveyed prior to the extension of the cottage, allows the original line of the enclosure to be traced for a short distance further.

On the eastern side of the enclosure, there is also some doubt as to the original course of the perimeter. The most obvious possibility is that its line is marked by the steep scarp immediately to the west of the track, which seems at face value to be a continuation of the scarp along the northern side. If so, the flattening of the arc of this stretch of the perimeter would suggest that it respects the course of the trackway; in other words, that the enclosure was constructed at a later date than the track. However, it is possible that there is a stratigraphic relationship that is not clear from the surface traces, for a low, curving scarp a few metres to the east of the trackway could represent a smooth continuation of the curve of the northern perimeter. If this possibility is correct, the trackway may post-date the enclosure.

The southern perimeter of the enclosure is the most difficult to trace, for there are no clear indications of its line surviving either as earthworks or as fossilised field boundaries. Perhaps the most likely possibility is that it followed broadly the same course as the present fenceline, which was certainly in place by 1847 and corresponds for much of its length to an abrupt steepening of the natural slope. Equally, there is no clear indication of the position of any entrance into the enclosure. It seems certain that it did not lie on the western or northern sides of the circuit. There are slight hints in

the pattern of later property boundaries shown on the Tithe Map of 1847 that it may have lain in the south-western sector, but this must remain speculative on the evidence of surface survey alone.

The moated enclosure and possible manor house site

At the centre of the enclosure lie a series of earthworks which may be described collectively as a square moated enclosure. Although it is impossible, given the sloping ground, that such a moat could ever have held a continuous body of water on all four sides, parts of the three upslope sides almost certainly did. The southern (downslope) side seems to have been completed by a steep scarp surmounted by a low bank and the moat proper, as far as it can be traced, also seems to have been embanked along its inner edge. The platform surrounded by this perimeter, including the bank around the edge, appears to have been trapezoid rather than perfectly square, measuring between 37m and *c* 42m from west to east by about 58m from north to south, an area of approximately 2,300m^2 (0.23 hectares or 0.57 acres). It is not raised above the level of the surrounding ground surface.

The upslope (northern) arm of the moat is on the whole well-preserved as a broad channel between 5m and 12m wide and 1.2m deep where best preserved, which extends for about 55m along the contours. A shallow pond has been cut, apparently as a sump, near the middle of the original channel, at its lowest point. At each end, the channel turns an approximate right angle downslope to the south, the western arm extending for some 25m before it seems to end abruptly and the eastern arm extending for slightly further, diminishing gradually in depth. Geophysical survey hints that this may be due to deliberate infilling with rubble (Geoquest Associates 2002).

Water seems to have been supplied to the moat along a channel some 45m long, originating at the site of the current spring, which gradually narrows from its northern end, apparently wider at this point in order to collect the outflow from the spring. The channel, which lies slightly to the east of what would have been the natural course of a stream, was augmented by a broad embankment up to 0.7m high along its western side. Both earthworks were mutilated at a later date by the digging of a sump and drainage channel (see Section 5.2). In its original form, the earthwork as a whole seems un-necessarily large and elaborate simply to conduct water downslope and Graham Lee's interpretation of the channel as a fishpond is plausible, despite its tapering plan. At the north-eastern corner of the moat are slight earthworks which may indicate the position of a sluice which could have allowed water to be drawn off into the moat when necessary. From this point, a channel turns a right angle westwards and follows the perimeter of the moat, separated from it by a low bank, as though to by-pass the moat; this stretch is 3m wide and up to 0.2m deep. At the point where the drainage channel leading from the sump mentioned above cuts through this bank, its rubble core has been exposed, the rubble including a section of finely tooled stone guttering. Although the precise course is not clear beyond the north-western corner of the moat, it is logical to assume that it ran southwards. However, the earthworks strongly suggest that this supposed 'by-pass channel' was a modification of an earlier arrangement, in which the moat itself was perhaps re-aligned. This possibility is discussed further below.

At the southern end of the western side of the moat is a rectangular depression some 25m long by 14m wide, of negligible depth, which may represent the site of a pond, though whether its construction was contemporary with the moat or a later

modification remains uncertain. The pond would have been well below the level of the moat proper and, if in contemporary use, must therefore have been separate from it, but aligned so that it effectively formed a continuation of the western arm. At its lower (southern) end, a slight embankment seems to mark the line of a dam, but whatever division may have existed between the pond and the moat is uncertain. Indeed, the condition of the whole earthwork is so slight and degraded, whether through later infilling or levelling, that it is difficult to be confident of any interpretation of its purpose. A stone water trough, formerly fed via a narrow channel originating at the sump mentioned above and evidently a later addition, stands on the slope at the upper end of the depression. This seems to confirm that it did hold water at some point and perhaps hints that it may have continued in use as a stock pond or similar into the post-medieval period.

The southern side of the moated enclosure seems to have been defined by a steep scarp up to 1.3m high, surmounted by a low bank. This earthwork also seems to have marked the southern edge of a level rectangular platform interpreted as the site of a large building (Building 1), which was first noted by Blaise Vyner. The platform is 40m long by 20m wide, with its long axis aligned along the southern edge of the moated platform, and it cuts into the natural slope by up to 0.6m along its northern side. Two vestigial banks running across the width of the platform could conceivably represent features associated with such a building, while a shallow trench on the same alignment might represent a 'robber trench', dug to extract building materials for re-use. Although geophysical survey offers very little evidence that can be used to support the theory that a building ever occupied the platform, the technique did suggest the existence in the vicinity of several deposits of brick, tile or iron debris, which might represent demolition rubble relating to the destruction of a building. One of these deposits is also identifiable as an earthwork: a large, roughly circular mound which evidently overlaps the edge of the platform and therefore post-dates it. However, it is equally likely that these deposits relate to some later episode of dumping, for the chronological relationship between the building platform and the moat is slightly ambiguous. There are hints that the northern edge of the platform cuts into the moat, and therefore post-dates it. On the other hand, the plan and placement of the platform as a whole seem to have been designed to complement the perimeter of the moat, extending across most of the southern side of the moated enclosure. Given the size of the building platform and its association with the moat, it is not unreasonable to interpret it as the site of a large building, perhaps a medieval manor house, notwithstanding the lack of supporting evidence from the geophysical survey. However, it is entirely possible that several buildings occupied the same site and that the platform relates to a post-medieval phase of activity.

Arguably the most significant contribution made by geophysical investigation to the understanding of the complex is the identification of a roughly square enclosure, of similar size and orientation to the moated enclosure, adjoining the northern arm of the moat. The eastern side of this enclosure is formed by the bank along the western edge of the tapering channel leading from the spring to the north-eastern corner of the moat. The western side corresponds fairly closely to the slight bank leading northwards from the north-west corner of the moat, though this earthwork seems to be associated more directly with the later ploughing discussed in Section 5.2. The northern side of the enclosure, recorded by geophysical survey as a probable infilled ditch, is not detectable as an earthwork. It lies several metres to the north of a broad bank which is the only significant earthwork on this alignment (recorded as a stony spread by the geophysical investigation). Taken together, it seems that there may have been a second moat-like enclosure, perhaps a counterpart to the main one.

Other remains

To the east of the moated enclosure lie a series of complex earthwork remains, some of which may medieval in origin, though their precise purpose remains unclear. The earthworks certainly pre-date the imposition of the field boundary in early 19th century. More significantly, certain elements underlie a series of small enclosures in the northern paddock which are not shown on the Tithe Map of 1847 and are therefore probably of earlier date (see Section 5.2). In the southern paddock, a large rectangular depression 34m long 8m wide and up to 0.5m deep is reminiscent of a pond, though the geophysical responses would equally well support its interpretation as a walled structure. The position of the depression in relation to the topography may argue against its interpretation as a pond, but the feature would seem to have been connected, at some point, with the tapering channel that fed water into the north-eastern corner of the moat. It may have formed a continuation of that channel, or even formed part of the moat itself. Whatever its function, the plan hints that the earthwork may relate to an earlier arrangement, perhaps a precursor of the eventual square moated enclosure, or possibly some layout pre-dating the imposition of the supposed manorial complex.

It remains difficult to reach any satisfactory interpretation of the slight remains in the northern paddock, largely due to their poor state of preservation, but they seem to represent several episodes of activity. While the earthworks are not clearly suggestive of buildings, it is possible that some features relate to settlement or the sort of ancillary structures that might be associated with the supposed manor. However, a case could be made for the remains being either earlier or later than the manorial complex.

5.2 Later remains

The remains that post-date the supposed medieval complex can be divided into those for which the Tithe Map of 1847 provides documentary evidence and those for which there is only stratigraphic evidence. The latter are almost certainly of somewhat earlier date and will be dealt with first.

One of the key pieces of evidence for understanding the demise of the moat is the channel apparently dug in an attempt to drain it, which has already been mentioned in Section 5.1. A pit appears to have been dug mid-way along the tapering channel leading from the spring and a section of the adjacent embankment almost completely levelled. There is no trace of the spoil from either operation, so it is possible that the material was deliberately used to infill the channel or the moat. The pit seems to have been intended as a sump, for a channel leads away from it, cutting first into the supposed by-pass channel and then into the moat itself. There, it enters a small pool of standing water, which also appears to have been deliberately dug as a sump, before running along the relict hedgeline and then turning sharply towards a small, stone-built trough, which it presumably supplied with water. As mentioned above, the siting of this trough at the upper end of a rectangular depression suggests that there may have been a pond at this point, though whether of medieval or later origin is uncertain. The coincidence of the channel with the relict hedgeline, which is shown on the Tithe Map of 1847 and was very probably planted in the early 19th century, cannot be taken as proof that the two are of contemporary origin, for the channel could equally be said to be following the most practical course in relation to the topography. Indeed, the channel may well correspond to the watercourse depicted on the map by Thomas Jefferys between 1767 and 1770, since there is little else that could be interpreted as the line of a watercourse (Jefferys 1771). If so, it can be inferred that the moat had been drained by 1770 at the latest.

At the western end of the interior of the supposed manorial enclosure, slight traces of ridge and furrow ploughing were identified, the individual cultivation ridges between 4m and 6m wide and extending from north to south across the whole width of the enclosure. The fact that this agriculture encroaches within the bounds of the enclosure strongly suggests that it post-dates the use of the site as a high-status residence, but the furrows are clearly overlain by a bank that corresponds to a field boundary shown on the Tithe Map of 1847. The eastern limit of the ploughing seems to have been defined by a low, slightly sinuous bank and ditch which extends northwards from the north-western corner of the moat. The line of this earthwork corresponds fairly closely to the western boundary of the enclosure adjoining the northern side of the moat, which was revealed by geophysical survey. The extent of the ploughing suggests that the western edges of the moat and the adjoining enclosure were respected, which hints that buildings or other elements of the medieval complex may still have been in use when the ploughing was under way. Alternatively, perhaps the moat simply remained too large an earthwork to warrant the effort that would have been needed to plough it away. Traces of a possible rectangular building (Building 2) about 12m long by 7m wide were identified in the corner formed by the northern end of the low bank and the perimeter of the supposed manorial enclosure. This building would appear to be contemporary with the bank, and therefore also probably of post-medieval date.

At the eastern end of the enclosure are a number of small enclosures suggestive of pens, which are defined by low banks. One of these seems to have surrounded a small rectangular building whose wall-lines survive as low banks (Building 3), although geophysical responses did not confirm this interpretation. The fact that some of these overlie the enigmatic traces described in Section 5.1 indicates that they are of relatively late date. Perhaps more tellingly, their proximity and plan relationship to the buildings and enclosures shown on the Tithe Map of 1847 suggests that they are likely to be broadly contemporary in origin, that is, probably of later 18th-century date. Traces of three buildings shown on the Tithe Map can be recognised as earthworks, which suggests that the foundations of all three may be fairly well preserved below ground (Buildings 4 to 6). It is significant in terms of the overall interpretation of the geophysical survey results that these sub-surface remains were not clearly revealed.

6. DISCUSSION

There are four principal elements of the complex that may be interpreted as medieval: the supposed manorial enclosure, the moat, the large building platform (Building 1), and some of the earthworks to the east of the moated enclosure, about which further speculation would be premature without trial excavation.

As described in Section 5.1, the evidence for the chronological relationship of the enclosure to the pattern of medieval cultivation is ambiguous. On one hand, in the field to the north of the enclosure, Cat Hills, there is physical evidence that the effects of relatively early ploughing may in part be responsible for the considerable size of this stretch of the perimeter earthwork. On the other hand, the cartographic evidence hints that the western side of the enclosure may have impinged upon Ware Garth, whose shape is suggestive of a medieval strip field fossilised into the later field pattern. Since ploughing is essentially a continuous, or cyclical, process rather than a truly episodic one, there is perhaps no need to cast this ambiguous evidence in terms of a strict either/or scenario. In other words, it is possible that the construction of the enclosure both post-dates some tracts of medieval cultivation and pre-dates others; in short, that it originated at some point in the middle of the medieval period.

Medieval manorial enclosures are known to have been widespread, yet they are seldom so clearly defined by earthworks as the supposed example at Boltby. A comparable enclosure of approximately oval shape, defined by a substantial bank and ditch, surrounds a moated manor house at Low Dinsdale (NZ 346 110), near Darlington in North Yorkshire (the author is grateful to Blaise Vyner for pointing this out). In that case, although the present manor house was built *c* 1876, encasing elements of probable 16th-century date, excavations in the late 19th century revealed the foundations of a large gatehouse dating to the late 12th century. The manor remained the home of the wealthy Surtees family from the 12th century onwards.

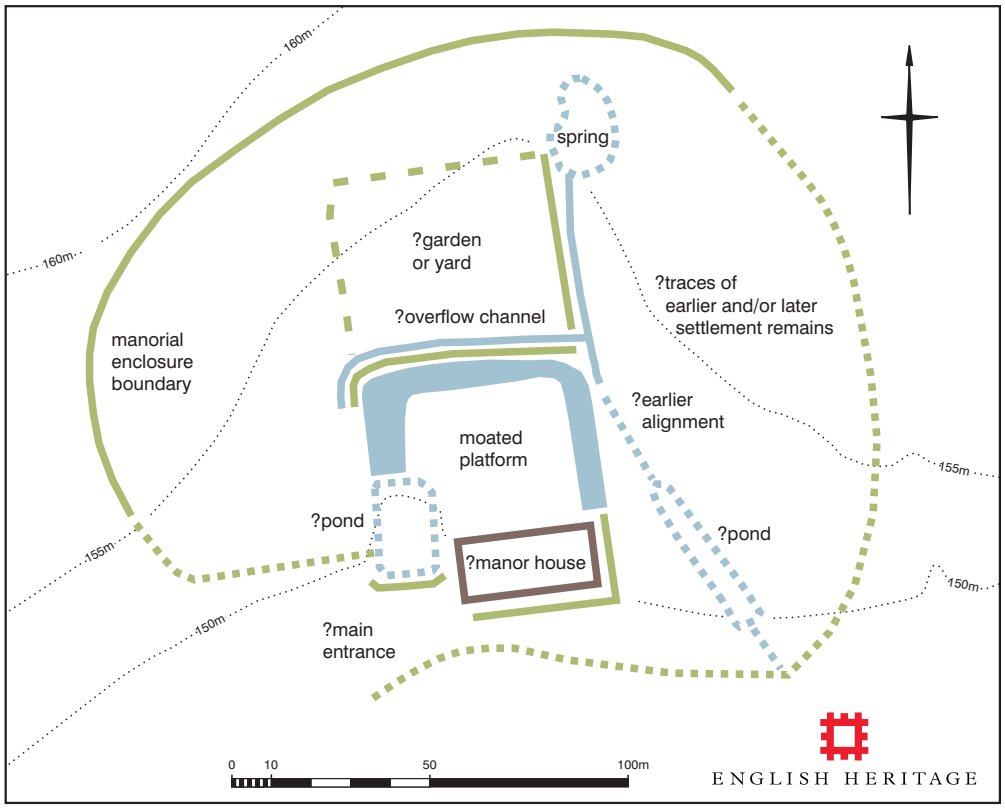

Figure 5. English Heritage interpretative plan of the manorial complex

There are two issues relating to the identification of the moat: first, whether that term is truly appropriate and second, if so, whether the moat is likely to have been associated with a medieval manor house. Although the condition of the supposed moat is such that it is not immediately recognisable, several characteristics of the earthwork strongly suggest that the interpretation is justified. Its siting in relation to geology and a reliable water supply are typical. Its overall plan is typical in being less than perfectly square, since a concern for geometrical accuracy in vernacular architecture is essentially a post-medieval development. The earthworks suggest the possibility that the eastern arm of the moat, and perhaps the moat as a whole, may be a modification of an earlier lay-out, though the nature of that arrangement remains unclear. The platforms enclosed by moats are generally in the region of 4000m^2 (1 acre), although in sparsely settled rural areas, platforms are generally smaller (Le Patourel and Roberts 1978, 48). At 2,300m^2, the area of the platform at Boltby certainly falls towards the smaller end of this range, but Boltby almost certainly was a sparsely populated rural area in the medieval period, as it is today. There is strong evidence that one side of the platform was not defined by water, but in itself this does not cast doubt on the interpretation. Incomplete moats, mostly defined by an earthwork on one side, as at Boltby, make up between 4% and 5% of the Yorkshire total; almost without exception this form has been found to be of medieval origin (Le Patourel 1973, 3). Perhaps more importantly, all these examples were found to have surrounded a manor house (Le Patourel 1973, 15).

The period between 1200 and 1325 is usually regarded as the climax of moat building in England and in Yorkshire this time-span can perhaps be narrowed to between 1250 and 1325 (Le Patourel 1973, 22; Le Patourel and Roberts 1978, 51; Wilson 1985). The stray finds of medieval pottery that have been made in the vicinity of the site clearly do not allow the use of the complex at Boltby to be dated with any precision, but the documentary research by Elizabeth Sanderson summarised in Section 4 suggests that the moat is unlikely to have been built any later than 1281, by which date Eva de Boltby resided at nearby Ravensthorpe Manor.

Geophysical survey has revealed an approximately square enclosure adjoining the northern side of the moated enclosure, apparently of almost equal size and on the same alignment, as though mirroring the moated enclosure. This is an arrangement paralleled at many other moated sites, the second enclosure sometimes defined by a narrower moat, sometimes by earthworks and sometimes suggested by the arrangement of later buildings. It seems unlikely that all such enclosures performed the same function. The geophysical responses at Boltby suggest the existence of buildings or structures within the enclosure and it is possible that it contained ancillary or agricultural outbuildings. On the other hand, it is not impossible, given the symmetry of the plan created by the 'twin' enclosure, that the area was a private garden, perhaps linked to the main moated enclosure by a bridge. Evidence for medieval gardens is notoriously difficult to recognise, and simple symmetrical patterns, especially involving the management of water, may be regarded as one of the few diagnostic signs (Everson 1998).

Geophysical survey has not, as hoped, confirmed the existence of Building 1, let alone clarified its form and extent. However, this disappointment must be seen in the context of the equally poor geophysical responses from the post-medieval buildings, which are documented on the Tithe Map of 1847 and whose wall-lines are recognisable as slight earthworks. The possible 'robber trench' identified in the course of the earthwork survey, together with the deposits of possible demolition rubble which both survey techniques detected, may indicate that Building 1 has been

heavily disturbed and that the sub-surface preservation is too poor to give good geophysical responses. Certainly the size and position of the platform are consistent with a sizeable building, such as a manor house. The inclusion of a section of finely tooled stone guttering within the matrix of one of the earthworks associated with the moat - if indeed it survives *in situ* - also hints at the former existence of a building of some architectural pretension. Yet, as touched on in Section 5.1, there remains some uncertainty as to whether the building platform is contemporary in origin with the moat or post-dates it. In either case, the example of the manor house at Low Dinsdale clearly illustrates that it is quite possible that more than one house occupied the site.

7. METHODOLOGY

The field investigation was carried out by Alastair Oswald, Abby Hunt and Trevor Pearson, from English Heritage's Archaeological Investigation section, and by some thirty members of the Boltby Millennium Group under their supervision. The resulting composite field drawing was revised by Alastair Oswald and Stewart Ainsworth. A number of digital photographs taken by Trevor Pearson are held on disk as part of the project archive.

Since the project was partly intended as a training exercise, the survey was carried out using several different techniques: a Trimble dual frequency Global Positioning Satellite (GPS) system (Trimble 4700 and 4800 receivers); a Leica TC1610 'total station' electronic theodolite with integral electronic distance measurement (EDM); and traditional tape-and-offset graphical techniques. The co-ordinates of the GPS base receiver, to which the rest of the survey was tied, were calibrated to the National Grid (OSGB36) using Trimble Geomatics software, based on the position of the receiver relative to Ordnance Survey active GPS stations at Carlisle, Glasgow, Edinburgh and Newcastle. The digital data was plotted at 1:1,000 scale via Key Terrafirma and AutoCAD software and the graphical survey was carried out at the same scale.

The hand-drawn archive plan and interpretative drawings completed using Coreldraw 8 software were prepared by Alastair Oswald. The report was written by Alastair Oswald, based in part on the research already carried out by Elizabeth Sanderson of the Boltby Millennium Group, and was edited by Stewart Ainsworth.

The site 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 48 NE 31).

8. ACKNOWLEDGEMENTS

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Graham Lee, Archaeological Conservation Officer for the North York Moors National Park Authority, provided background information concerning the site, while local archaeologist Blaise Vyner kindly shared his thoughts on the interpretation of the earthworks and gave permission to reproduce the aerial photograph used in this report. Finally, thanks are due to Mark Noel of GeoQuest Associates for his co-operation.

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