Research Department Report Series 94 2009

CROXDEN ABBEY
STAFFORDSHIRE

CROXDEN ABBEY AND ITS ENVIRONS

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NGR: SK 0655 3971

ISSN 1749-8775

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SUMMARY

The archaeological remains within the precinct of Croxden Abbey were the focus of an analytical earthwork survey and investigation by English Heritage in 2008. The fieldwork confirmed the extent of the precinct and several features within it, which date to the medieval and post-medieval periods. These features include the water management to the monastery, which was carried along a contour leat from which the water was directed to various places within the precinct. Following the abbey's suppression in 1538 the landscape was adapted to a new secular use and the survey has revealed a period when the abbey became a grand residence with a designed landscape garden. As well as the detailed survey, an investigation in the wider landscape has identified the probable location of a sheep-fold, and a 'small' park and rabbit warrens.

Buildings investigation and analysis was undertaken by the English Heritage Architectural Investigation team on three buildings, a former water-mill and two barns, within the precinct. These buildings had previously been largely overlooked since research was targeted on the church and conventual buildings. However, the fieldwork indicates that, although regarded as the poor relations of the more impressive monastic ruins, they probably date to the late medieval period and as such contributed to the economy of the monastery.

CONTRIBUTORS

Graham Brown, Elaine Jamieson, Barry Jones

ACKNOWLEDGEMENTS

The authors would like to express their gratitude to the landowners at Croxden: Kisane Prutton, Mrs Lucinda Bolton, and the Trustees of the Bolton Estate. In addition, Mr Warboys from the Shirburn Castle Estate arranged permission for the use of the 1722 estate map. Photography of the map was undertaken by James Davies. Matthew Blake of Staffordshire Record Office provided useful notes on previous research, and the Trustees of the William Salt Library, Stafford, kindly gave permission to reproduce figures 5 and 6. The archaeological fieldwork was undertaken by Graham Brown and Elaine Jamieson, while the architectural fieldwork was carried out by Barry Jones. Deborah Cunliffe re-drew the earthwork plan for publication. Trevor Pearson drew figures 2 and 16. The report was edited by Elaine Jamieson and Mark Bowden.

ARCHIVE LOCATION

NMRC Swindon

DATE OF SURVEY AND INVESTIGATION

August - December 2008

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1. INTRODUCTION

During a three-week period in August and December 2008, two members of English Heritage's (EH) Archaeological Survey and Investigation team based at Swindon and Exeter undertook an analytical survey and investigation of the earthworks at Croxden Abbey in Staffordshire. The survey was carried out as a Level 3 survey at the request of EH's West Midlands regional office and focussed primarily on the abbey's precinct in order to better inform the management of the site and put it in its wider landscape setting (EH 2007, 23; Bowden 2008). In addition to the archaeological survey, a Level 2 architectural investigation was undertaken by the English Heritage Architectural Investigation team, based at the NMRC in Swindon, during a two-day period in December 2008. Three buildings within the precinct were examined, only one of which is listed, and is identified as 'former barn approximately 150 yards east of Croxden Abbey'.

The abbey (centred at SK 0655 3971), was initially founded in 1176 when Bertram de Verdun gave the monks from the former Savignac monastery at Aunay-sur-Odon in Normandy land at *Chotes*; however, this was a temporary site and three years later the White Monks moved about 5km south to Croxden. Here they built their monastery and dominated the area for the next 360 years, not only spiritually, but also in the way they farmed their land from a network of granges. However, in the mid-16th century the monastery suffered the fate of others when it was suppressed by Henry VIII's commissioners in 1538. Following its suppression most of the conventual buildings were destroyed and the surrounding area transformed when it was acquired by a new, secular, lord and the tapestry of the landscape changed as the newly rich adapted it for their own needs.

Croxden Abbey is one of four Cistercian monasteries in Staffordshire, and the one with the most impressive standing remains. Research at Croxden has been sporadic and largely confined to the buildings, most recently by Jackie Hall who undertook an analysis of the fabric of the monastery for her PhD thesis, and subsequently of the monastic church and the abbey's patronage (Hall 2003; 2007). In contrast, little archaeological investigation has been carried out apart from the excavation and later consolidation of the remains of the standing fabric and an evaluation in advance of an extension to the churchyard. In common with many monastic sites throughout the country, even less analysis has been undertaken of the precinct or its environs. It is against this backdrop of research that the EH fieldwork is set.

The EH analysis of the precinct has identified several features from the medieval period that give a greater understanding of the monastic landscape. This includes the extent of the precinct and the probable site of part of the home grange. The Cistercians, along with other monastic orders, were renowned for their water management and here at Croxden our analysis has identified how they harnessed the hydraulics of the area to provide water to the monastic complex, its mill and fishponds. In addition, it is clear from our fieldwork that following the suppression, there were radical changes when part of the abbey was adapted as a secular residence with gardens and parkland. Later, the area was converted to farmland. Three buildings were investigated: a late medieval barn to the east of the conventual buildings, the remains of a water corn mill, and another barn to the west of the conventual buildings. All three, although subject to later changes

and modifications, nevertheless incorporate earlier features and their analysis has aided our understanding of the precinct.

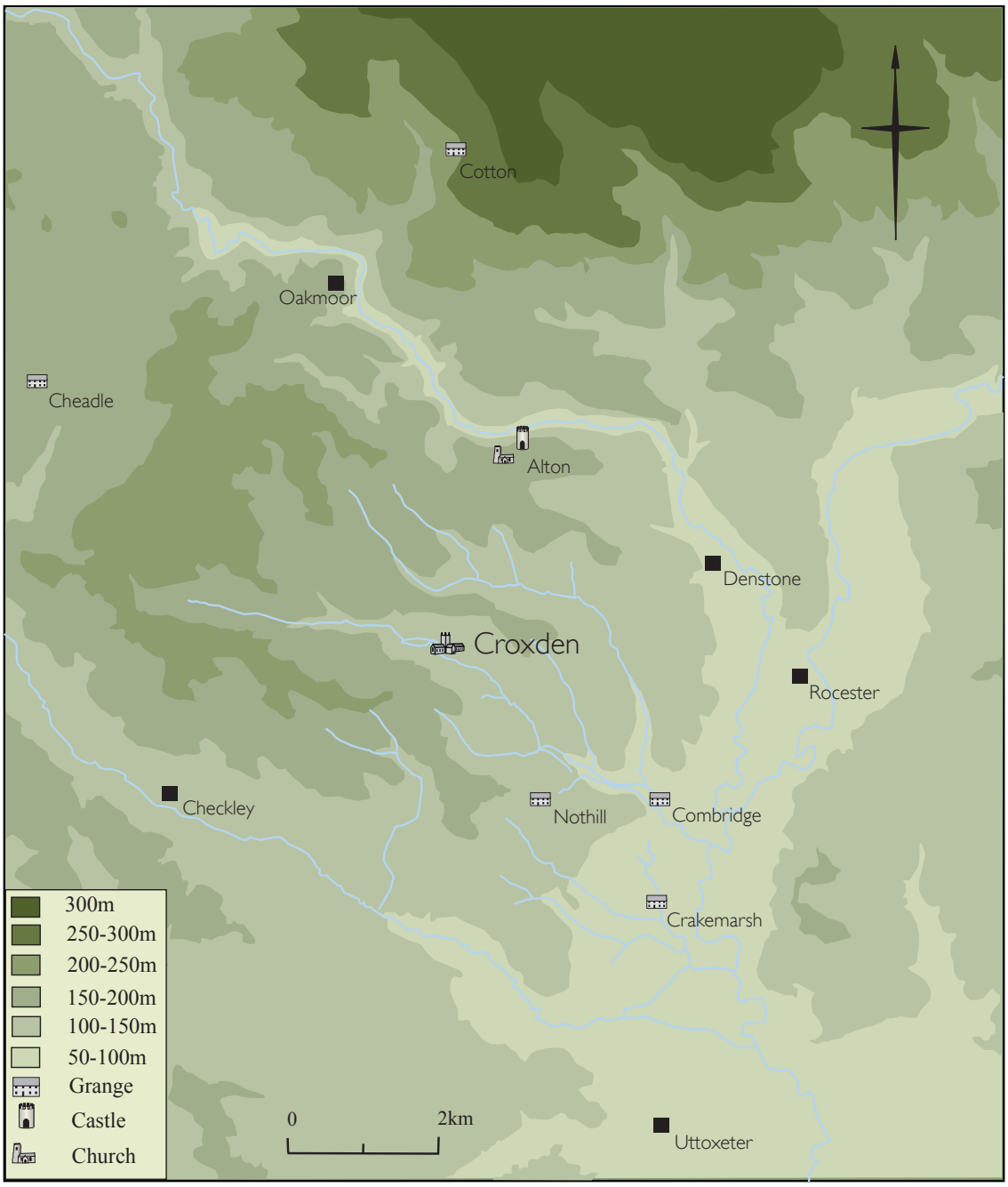

Figure 1. Location diagram

Topography, Geology and Land-use

The remains of the abbey lie in the valley of the Croxden Brook 6km north of Uttoxter and 4.5km west of Rocester (Fig 1). The brook rises about 3.5km west of the abbey, at Winnothdale, and flows in an easterly direction to the confluence with Nothill Brook (where Croxden had a grange) and ultimately emptying into the River Dove

near Combridge. The precinct straddles the brook with the ruins of the church and conventual buildings on the northern bank at 125m OD (Fig 2). On the southern side the ground rises relatively steeply from the brook to the precinct boundary, and beyond to an altitude of 165m OD. Elsewhere within the precinct there are two former farmsteads and a mill while on the eastern side several houses and farm buildings border the road that slices through the conventual church. A former cheese factory, which is now a private residence, was in operation from 1885 – 1928, and is situated on the south-western corner of the road opposite the grade II listed barn (Stuart 1984, 48). Most of the other buildings on the eastern side of the abbey were built during the 20th century. The present parish church, dedicated to St Giles, is a 19th-century building which lies on the north-western corner of the precinct and near the site of the former monastic gate-house chapel.

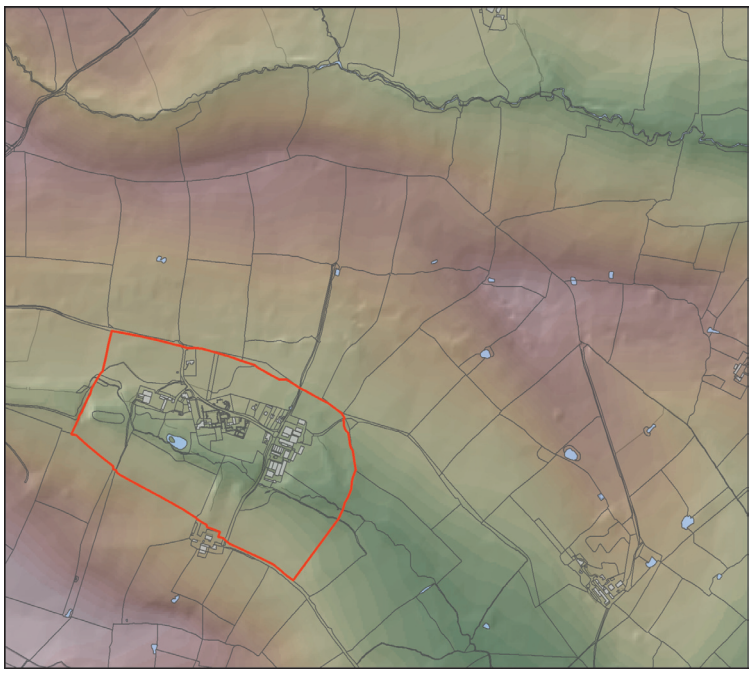

Figure 2. Land-form at Croxden. Green areas are low-lying ground.

The solid geology of the Croxden area is composed of rocks from the Triassic age and comprises three distinct zones. In the east the rocks are of Keuper Marl which is underlain by Keuper Waterstones, while to the north-west, on Croxden Common, it is of Bunter Pebble Beds overlain by sandy, gravelly soils. These were regarded as marginal for cultivation and left as common pasture or woodland. Separating these two geological zones is a narrow band of Keuper Sandstone that extends north/south along the Bradley parish boundary, through Great Gate to Hollington. This sandstone outcrop is particularly suitable for building stone and has been quarried at Great Gate and Hollington. Keuper Marl is more suited for cultivation and many of the fields surrounding the precinct are down to crop; however, to the west of the precinct it is mainly improved pasture. Along the valley bottom there is a band of alluvium along the river terrace. The alluvium is broader on the west side of the precinct and narrows appreciably on the east side.

2. PREVIOUS ARCHAEOLOGICAL AND ARCHITECTURAL RESEARCH

In 1719, Edward Arblaster, 'a young gent' from Longdon near Lichfield, visited Croxden; his comments, recorded in his notebook, provide the earliest published account of the state of the abbey (Barns 1911-12, 146-7). Arblaster's remarks are largely confined to the ruined conventual church although he also mentions the conventual buildings, the gate-house and gate-house chapel. The west front of the church was described as 'exceedingly high' with three narrow windows, while the south wall was still standing along its entire length (Fig: 3). A mound of masonry was noted on the north side of the church which he interpreted as the belfry. Beyond the mound was the wall of what he termed the chancel [the presbytery] and 'where now stands the altar-place'. There were two 'tall windows' in the south transept. To the south of the church, Albaster noted two cloisters; presumably these were the conventual cloister and infirmary cloister, which were set about 32m apart. Some of the claustral buildings were being used as agricultural outbuildings. Surrounding the abbey Arblaster also noted the precinct wall with the gate-house which was '... almost intire, on the North West side of the Abbey. It is very large and strong, built of Stone. On the left hand side [east] of it stands the present Chapell, one side of which is part of the Abbey Wall' (ibid 146). The visit was three years before the commissioning of an estate map by Lord Macclesfield which shows these buildings and the wider landscape setting (below).

Figure 3. The imposing west front of the monastic church can be seen in the distance. In the foreground are the fragmentary remains of an apsidal chapel in the east end of the church

During his travels throughout the country in 1751, Dr Richard Pococke, who later became Bishop of Ossory, Elphin and Meath, visited Croxden Abbey having come from Alton. The abbey church clearly impressed him, describing it as 'a grand building'; he also noted the apsidal chapels where a stone coffin was revealed. However, this was the only building he commented on (Cartwright 1888, 217-8).

During the 18th century several illustrations were drawn of Croxden, many of which are held at the William Salt Library at Stafford. In 1731 the Buck brothers made the first known engraving of the abbey ruins although their interpretation, in the light of other evidence, should be treated with caution (Hall 2003, 15; Fig 4). This was followed in 1772 by an illustration by Bentley, and an un-dated water-colour of the west door of the conventual church. Further illustrations followed in the 19th century, including two in 1805 by an un-named artist; as well as showing the church, one of them also shows a track through the church ruins which was presumably the forerunner of the present road.

Figure 4. The Buck brothers engraving of Croxden Abbey, which shows the prominent west end of the church in the centre with the south transept to the left.

All the illustrations had, until 1830, been of the monastic church and some of the conventual buildings and it was not until Edward Duncan illustrated the gatehouse chapel that this was rectified. Seven years later Thomas Flower drew illustrations of the abbey and the gatehouse (Fig 5). The Buckler brothers made three drawings of the church and gate-house chapel. The latter drawing also shows a building, presumably part of the gate-house complex, on the west side of the chapel. It has a two-centred arch window, or door, with a square window to the north at ground floor level, with two windows at first-floor level. The southern window appears to be a single light. This building could either be former guest accommodation or perhaps stabling at ground floor level with guest accommodation above (Fig: 6).

In 1834, William West visited the abbey and noted that 'several old walls and gateways are still standing' and that the chancel formed part of an out-building of the farm. He goes on to say that, although it was originally a 'very extensive building', it had been destroyed by Cromwell in the mid 17th century during the English Civil Wars (West

1834, 81). However, although there may have been some destruction at this time, much of it had clearly occurred soon after the Suppression. What damage was incurred was presumably to the principal secular residence. Two cannon balls dating to the Civil Wars that were apparently found at Croxden give tangible evidence to the event (William Salt Library: 72.090.0001 and 72.090.0002).

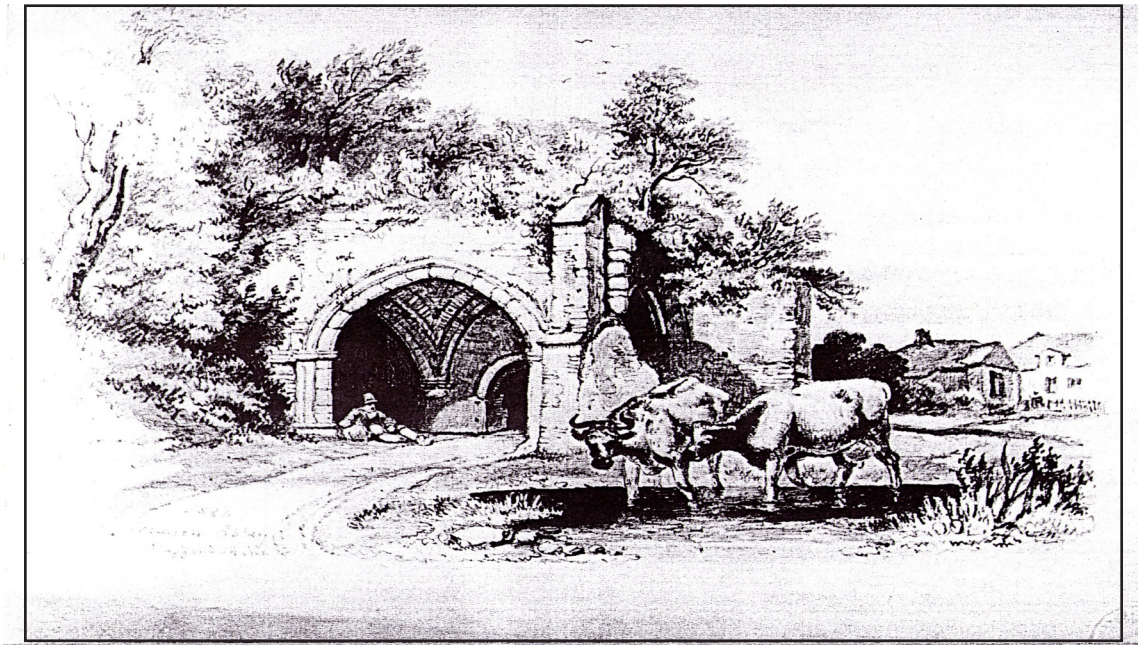

Figure 5. The illustration of the gatehouse at Croxden by T Flower in 1836 (Trustees of William Salt Library, Stafford).

Thirty-one years later, in 1865, Gordon Hills published a paper on Croxden and its Chronicle (Hills 1865, 294-315). As well as charting the history of the abbey from its foundation until 1374, he also made a detailed description of the abbey remains and a colleague produced a conjectural plan of the church and conventual buildings. This was presumably based on a survey of the building remains and plans of other Cistercian monasteries. The road through the conventual church was in existence by this date. Beyond the conventual buildings he appears to have been rather selective in the buildings he describes, confining his remarks only to the mill, which lay on the west side of the abbey. The gate-house chapel which was still in existence at this time is not mentioned, nor is the late medieval barn on the eastern side of the abbey. The mill, he suggests, was not monastic but nevertheless occupied the site of the monastic mill and was made from stonework from the abbey. He also suggests that the mill-race was made in 1373 when a ditch 280 perches [c1400m] long was dug; the following year another ditch measuring 125 perches was cut (ibid, 303-5; Discussion).

In 1886, George Wardle published the results of his architectural analysis of the gate-house chapel that had been demolished in the summer of 1884 (Wardle 1886, 434-38; Fig 6). The chapel was a single cell building comprising an aisless nave measuring 54ft (16.5m) in length on the south side and 50ft 6in (15.4m) on the north side. It was 18ft 6in (5.6m) wide and had two doors, one on the west wall, which was blocked-up, and one on the south side. There were three windows in the south wall and two in the

north, one of which was blocked. On the east wall was a single window. It is unclear if a piscine was present, but the aumbry lay beneath a thick layer of plaster. Elsewhere, the plaster, which was white-washed, had typical post-Reformation texts such as the Lord's Prayer and Apostle's Creed. There was also a figure of Death standing on a grave and holding a spade – a clear symbol of the influence of the cult of the dead in later medieval England (Duffy 1992, 302). Under the plaster there were fragments of medieval wall paintings; on the south wall there was a picture of the Virgin Mary with Child. There were signs of re-building on the north wall.

Figure 6. The gate-house chapel, which also shows a buiilding to the east that may have been guest accommodation and stabling (Trustees of the William Salt Library, Stafford).

The earliest systematic investigation of the abbey ruins was undertaken by Charles Lynam at the beginning of the 20th century (Lynam 1911). The work is, however, primarily architectural although he does include a phased plan of the abbey that also shows what he found of the monastic water supply, the foundations of a wall projecting about 30m from the west end of the church, and a plan of the precinct boundary. He also produced sketches of the principal stonework. The excavations (or at least the report, since the methodology is unclear) could best be described as cursory, and would seem to involve the uncovering of stonework but with no levels or measurements. There is also no discussion of any post-Suppression activity despite it appearing on his plan by way of a single wall in the refectory. There was also little reporting in the way of finds.

During the early 1950s, Sister Laurence published notes on the Croxden chronicle and

other documents relating to the abbey (Laurence 1951-54). More recent research into the landscape history of the parish has been undertaken by Keele University Department for Continuing Education, which covered the monastic period and also discussed the develoment of the agrarian landscape during the post-medieval period (Stuart 1984). Ten years later, a report on excavations that had taken place in 1956-7 and 1975-6 was edited by Peter Ellis (Ellis 1994-95, 29-51). The earlier excavations had concentrated on the monastic church's apse, north transept and abbot's chamber, while the 1975-76 excavations concentrated on the area to the east of the east range, the latrine block, monk's infirmary and abbot's chamber.

3. CARTOGRAPHIC EVIDENCE

The earliest surviving estate map of Croxden dates to 1722; it was commissioned by the land-owner at the time, Lord Macclesfield, and was surveyed by Thomas Burton (Fig 7 and 8 (A3 insert, p52). The map is particularly important since it shows the post-medieval and early-modern period landscape with field names and the location of buildings, tracks, and the water supply to the abbey and perpetuates, in part, the medieval landscape.

The outline of the abbey is shown with two dwellings in the south-west corner in the area between the west and south ranges. Further buildings are shown to the west of the west range including a mill. To the north-west of the abbey is the gate-house chapel, the gate itself and a building on the west side of the road. No road cuts through the monastic church at this time; however, one is shown further to the north of the church but on a similar course as the modern road. Whether this is a true reflection of the road at this time is unclear.

A building is shown on the south-east side of the abbey beside the foundations of what was the infirmary and abbot's chamber. It is not entirely clear what this building was since its depiction is unlike residential buildings or barns elsewhere in the parish. In a monastic context, however, it is likely that it was either a dovecote or the infirmary chapel. Examples of dovecots on the east side of the conventual buildings, and near the infirmary, have been suggested at Tintern and Stanley (Brakspear 1908, 576; Robinson 2002). However, the depiction of the building is very similar to that of the gatehouse chapel and it is likely that it was the former infirmary chapel.

Field names close to the abbey such as Coney Greaves and Old Gardens indicate a relict landscape park. Further north, beyond the precinct boundary, the curving nature of some fields together with field names such as Headlands, provide evidence for the extent of the former open field cultivation. To the south, the field pattern is more irregular and names such as Butterley and High Wood suggest assarting from former woodland.

The map also shows the communication pattern in the parish. Two roads are shown approaching the abbey, one from Great Gate and the other, a through-road, leading past the barn in the east and skirting the precinct boundary in the north. Near Croxden's northern boundary is a curving road that leads from Great Gate, avoiding the abbey. This road went out of use some time during the 19th century (Stuart 1984, figs 11&12). A small park covering an area of 10 acres is shown to the west of Great Gate with a small circular enclosure on the eastern side. There are also two 'coney' fields to the south of the park.

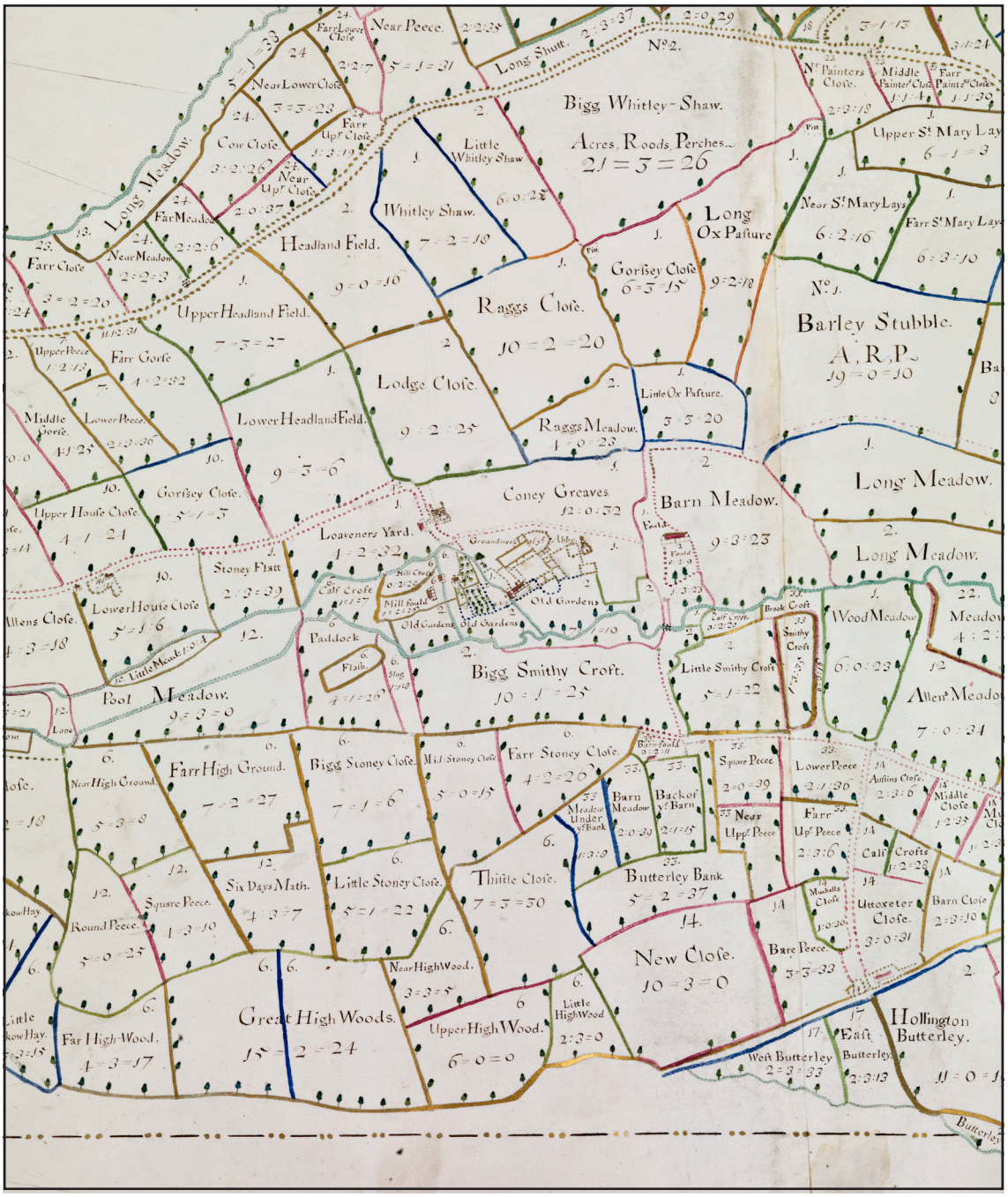

Figure 7. Part of the 1722 estate map of Croxden commissioned by Lord Macclesfield showing the area of the precinct, which extended east from Loavener's Yard and Paddock to Barn Meadow and Smithy Croft (Shirburn Castle archive).

4. BRIEF HISTORICAL BACKGROUND

Land at Croxden was under cultivation at the time of the Domesday Survey when it was held by a freeman, Alfwold, by at least 1066. He had half a virgate of land that was sufficient for two ploughs with half a plough in demesne. There were also four smallholders who, between them, had one plough (Morris 1976, 17).

In 1176, Bertrum de Verdun, who was lord of the manor of Alton, granted land at *Chotes* to the Cistercian monastery at Aunay-sur-Odon in Normandy as the site for a new monastery. Although it is not entirely clear where *Chotes* was located it has generally been interpreted as being Cotton, which lies about 4km to the north of Alton (Fig 1). Three years later, the monks moved to Croxden in a remote, fertile valley straddling a tributary of the river Dove.

Bertrum de Verdun, who had risen to prominence in the court of Henry II and had been appointed sheriff of Warwick and Leicester in 1170, was clearly a wealthy individual. Like many lords of the period he gave grants to ecclesiastical institutions and founded religious houses as an act of piety, 'social convenience', and presumably designed to hasten his time in Purgatory (Duffy 1992, 354-57; Lawrence 2001, 69). De Verdun's choice of Aunay-sur-Odon as the mother house, rather than an English foundation, may have been because the abbey lay close to his Norman lands and it was also a favourite of Richard de Humez, who had raised Bertrum from childhood. Croxden Abbey was therefore founded 'for the souls of Norman de Verdun, my father, and of Lecelina, my mother, and of Richard de Humez who brought me up, and of my predecessors and for my salvation and that of Rohais, my wife, and my successors' (Hagger 2001, 208). The family continued to give land and rents to the abbey; in 1247, for example, Rohais de Verdun gave a rent of 40s from the mill at Alton (ibid, 228). The abbey became a symbol of the family's identity and remained under their patronage. Even when they endowed other monastic houses, they continued to patronise Croxden at the expense of the others (ibid, 230). Several of the de Verdun family were buried within the apse of the abbey church, which effectively became their mausoleum (Hall 2007). In 1332 the patronage passed to Thomas de Furnival who had married one of the de Verdun's heiresses.

The foundation charter lists the lands and gifts to the abbey from Bertrum de Verdun (Stuart 1984, 5-7). Most of the land lay within 30km of the abbey although there were some outlying estates in the neighbouring counties of Leicestershire, Derbyshire and Warwickshire. The grants also included services, mills and churches, which were all initially excluded by the Cistercian General Chapter but, by this time, had been largely ignored (Lekai 1977, 450).

The Croxden Chronicle, which has been examined by Laurence and Hills, gives a reasonably good insight into the history of the abbey until 1337 (Laurence 1951-54; Hills 1865, 294-315). The first abbot was an Englishman, Thomas of Woodstock, and during his 51½ years abbacy there were considerable building works undertaken on the church and conventual buildings.

Prior to the arrival of the monks at Croxden in 1179, certain temporary buildings such as

an oratory, a refectory, a dormitory, a guest-house, and a gate-keeper's cell would have been in place (Lekai 1977, 448). Two years later, in 1181 the church was dedicated but it was seventy-three years later that it was consecrated by the Bishop of Coventry and Lichfield. Building work on the abbey continued into the 13th century, particularly by the fifth abbot, Walter of London, who was elected in 1242 and served for 26 years. During his abbacy construction continued on the buildings around the cloister, the infirmary and the abbey gate as well as half the precinct wall. This wall was completed in 1274-1284. Signs of a change to the previously austere lifestyle appear at this time with the building of a detached two-storey abbot's chamber close to the infirmary. The cloister's west range and a guest chamber were also built.

During the 13th century the abbey's wealth steadily increased, including gifts from King John in 1199 of land in Ireland, which was exchanged the following year for an annuity of £5. Following a couple of further exchanges the monks acquired Cauldon Grange near Croxden from Buildwas Abbey (Duggan and Greenslade 1970, 226). The Cistercian Statutes stipulated the minimum distances between granges of other houses and distances between their monasteries, and this may have been the reason behind several agreements between Croxden and Dieulacres over the proximity of possessions of the two houses. The late 13th and early 14th century was a period of what Laurence terms 'the Golden Age' of Croxden (Laurence 1951-54, B41). This was partly due to its sheep farming which was centred at its granges at Musden, Oaken, Riston, Cauldon, Cheadle, and Croxden. By 1310, for example, Croxden was selling more wool for the foreign market than any of the other Staffordshire Cistercian houses (Hibbert 1917-18, 47). Wool was not the only source of income woodland management was also an important source; in the period 1291-1336 there were eight occasions when their woods were burnt and the charcoal sold. Underwood from the park at Oaken realised £24 in 1329. Other, perhaps less tangible indications of the prosperity of the monastery was the continued building that was being undertaken on the conventual buildings and the purchase of a bible in nine volumes for 50 marks - clearly a high price.

The abbey was not immune to the vagaries of the weather and disease that affected the country. During the early 14th century there was also an acrimonious dispute with the new patron, Thomas de Furnivalle over rights within the abbey which was eventually resolved (Duggan and Greenslade 1970, 227). However, more serious was the abbey's economy, which was affected by greater exactions from the king to fund his campaign against the Scots in 1310, and instances of cattle disease, crop failure, bad weather and the Black Death. In 1229, a 60ft length of walling was blown over and trees in the orchard were destroyed. In 1318, there were outbreaks of disease throughout the country which affected the abbey's cattle. In 1330 there was flooding and on Christmas Eve 'a very strong wind blew up from the west and uncovered the buildings of the abbey and the whole country ...' (Hall 2003, 22). Five years later, the abbot's chamber required extensive repairs adding to the economic plight of the community. In 1368, the abbot of the mother house of Aunay visited with another abbot to investigate Croxden's finances and as a result deposed the abbot and another monk was elected in his place. The new abbot made efforts to improve the abbey's finances including raising 119 marks from the sale of charcoal and recovering Cauldon Grange which had been mortgaged. However, there were further problems such as another outbreak of the plague in 1368 followed

a year later by the collapse of part of the conventual buildings adjoining the church. This was re-built in 1370, as well as the renewal of ditches in the vicinity of the abbey. Further damage occurred in 1372 when barns were damaged at Croxden and Musden Grange and trees in the orchard uprooted. The abbey was again in debt and was sued by several individuals. In 1405, the impoverishment of the abbey was cited as the reason for the appointment of monks as vicars at Alton church, one of their appropriated churches (Duggan and Greenslade 1970, 228).

Although Croxden never recovered its former wealth, there was a modest improvement in the second half of the 15th century when some building work occurred, including the rebuilding of the chancel at Alton church. The community's numbers also increased; in 1377 there was only the abbot and six monks but this number increased to an abbot and twelve monks in 1538.

In 1535, a survey of the ecclesiastical property throughout the country was undertaken, which was published as the *Valor Ecclesiasticus*. Although much of Croxden's lands had been leased by this time, the monks still retained the demesne at Croxden, lands at Musden Grange, and at Cauldon and Oncott (Caley and Hunter 1817, 125).

In 1536, the abbey had an income of less than £200 and should therefore have been dissolved along with the other 'lesser monasteries'; however, a year later, the abbey received a licence to continue having paid a fine of £100 (Hibbert 1910, 225). Its days were nevertheless clearly numbered for on 17th September 1538, two of Cromwell's commissioners, Dr Thomas Legh and William Cavendish, visited the abbey and received its surrender from the abbot and twelve monks. Following the abbey's suppression, the abbot, Thomas Chalner, received an annual pension of £26 13s 4d while the monks received smaller amounts.

Little is known about the subsequent ruination of the abbey buildings and disposal of its fixtures and fittings, but it presumably followed a similar fate as others in the country where, in many cases, local people were quick to take advantage of the abandonment of the monastic houses. Typical examples are the accounts of the pilfering and degradation at Roche Abbey in Yorkshire and Hailes Abbey in Gloucestershire (Sherbrook 1959, 123-5; Shagan 2003, 162-96). At Hailes it was on such a scale that a commission was convened to enquire as to where and by whom the materials had been taken while Michael Sherbrook, writing in his old age in about 1591, described the 'momentous events of his youth' - the dissolution of Roche Abbey. He wrote: '… all things of price were either spoiled, plucked away or defaced to the uttermost …. It seems that every person bent himself to filch or spoil what he could … nothing was spared except the oxhouses and swinecotts' (Sherbrook 1959, 124).

In October 1538, John Scudamore, the king's Receiver-General at the Court of Augmentations, held a sale of what remained of the abbey property. Frances Bassett received: 'a lytle gatehouse on the north side of the comyn way'; 'the loft under the organs'; 'the lytle smythes forge'; and the 'roffe of the dorter'. Of these, Bassett only paid for the roof (Hibbert 1910, 169). Sir Thomas Gilbert and Edmund Wetheryns of Checkley parish bought the church roof for £6 and John Ferne bought all the 'old tymber

in the cloyster' for 6s 8d. Finally, another individual bought the 'bott of an asshe' for 20d (Hibbert 1910, 255, quoting BL: Add mss 11,041). Stuart (1984, 11) suggests that the beams from the abbey's church roof were used in the church at Checkley since the span is the same. A mere £9 9s 8d was raised from the sale of the two roofs, which suggests that much had already been disposed of, or perhaps Scudamore was less than thorough in his accounting. Clearly more was sold at Croxden since, in 1555, Scudamore was being sued for the arrears from the sale of lead from six monastic houses, one of which was Croxden (Hibbert 1910, 199).

On 18th July 1539 the site of the abbey, including its water-mill, lands, and the rectory of Croxden, were leased for 21 years to Frances Bassett, a servant of Archbishop Cranmer. However, 6 years later, Godfrey Foljambe was granted the reversion of the house for £577 2s 8d. The grant also included the water mill, lands, the rectory, the advowson of the vicarage of Croxden, Greatgate, Crakemersh Grange, woods in Croxden, and 'lez Graunge Park' which covered an area of 8a (*L & P Hen VIII*, xx(1), 465.45). This park was probably the one shown on the 1722 map to the west of Great Gate. The Foljambe family were wealthy landowners whose principal seat was at Chesterfield and they held estates in north-east Derbyshire and neighbouring Nottinghamshire, Yorkshire and Lincolnshire. Although Godfrey Foljambe conformed to the new religion at least three relatives, including his grandmother, did not and two were imprisoned for being recusants (Hasler 1981, 144; RCHM 1966, 63-4). It would appear that Godfrey Foljambe may have lived at Croxden on occasions since his will of 1558 refers to him as 'Godfrey Foljambe of Croxden' (Sheffield Archives: SpSt/50/1). Nearly forty years later, in 1596, another Godfrey Foljambe, presumably his son, was similarly referred to as 'Godfrey Foljambe of Croxden' (Nottinghamshire Archives: DD/FJ/182/2). It may have been used for what Paul Everson suggests was a 'secondary or specialist residence' (Everson 2007, 26).

In 1595 the Croxden estate was sold to Edward Bellingham of Newtimber, Sussex. The property was described as the 'manor of Croxden' and comprised: the site of the abbey, a park, formerly demesne, 12 messuages, 6 tofts, one water mill, a dovecot, 400a of land, 150a of meadow, 400a of pasture, 200a of woodland, 300a of heath and furze, and 40s rent in Croxden, Great Gate, Crakemarsh and Combridge, and the advowson of the church of Great Gate (Stuart 1984, 30). Three years later, in 1598, part of the estate was sold and in 1606 Bellingham, who by this time had been knighted, sold the manor to Thomas Harris the younger, his wife and two other individuals.

The estate passed to William Pierrepoint of Thoresby, Nottinghamshire through marriage in 1637 and it remained in the family until 1723 when it was sold to Henry Walker, who was probably the agent of the Earl of Macclesfield. The Macclesfield family had their seat at Shirburn Castle, Oxfordshire, and although not resident at Croxden they were nevertheless 'improving' landlords; they established a number of water meadows on their estate and upgraded and re-built the farm buildings (Stuart 1984, 30). In 1913, the estate was broken up and sold in lots. The Abbey estate comprised 421a 3r 0p and included two 'superior residences, extensive well managed farm buildings, two cottages, cheese factory, water mill and the venerable ruins of the abbey of St Mary of Croxden' (ibid, 32).

By the early 18th century there were three farmsteads within the precinct, Croxden

Abbey, Abbey Farm and Baker's Farm (Stuart 1984, 22). Baker's Farm had its house at the site of the mill. Two families occupied the house at Croxden Abbey. By 1757, Bakers Farm had been incorporated into Croxden Abbey Farm. The listed barn was shared in 1722 between the two farms, Croxden Abbey and Abbey Farm and the tenants continued to share the building until the 20th century (ibid).

5. EARTHWORK SURVEY AND INTERPRETATION

The surveyed earthworks lie in several modern fields and are contained within the circuit of a fragmentary stone wall, the former precinct boundary (Figs 9 (A3 insert p53), 10). Overall the precinct encompasses an area of about 30ha. The field names used in the report are those shown on the Macclesfield 1722 estate map (Fig 16). Three of the fields, Calf Croft, Mill Croft and Mill Fould contain farm outbuildings and a plantation and were not surveyed. Letters in the report relate to those on the plans.

The Precinct Boundary (Fig 10)

The precinct boundary is best preserved on the northern side of Loaveners Yard where the fragmentary remains of a stretch of walling measuring 42m long and up to 1.5m high composed of ashlar blocks can be seen (a; Fig 11). Elsewhere there are more fragmentary remains but the dense hedging makes identification of the extent of the medieval wall difficult; however, the continuity of a hedge-row, banking, or a fence-line from the extant elements reflects the course of the medieval boundary. In places the footings of the wall are revealed, while in others there is clear evidence of a later phase of walling which is less well constructed and single thickness (Fig 12).

Figure 10. Earthwork survey of Croxden Abbey (reduced from original at 1:1000)

On the western side of Loaveners Yard the course of the wall probably respects the line of a hedge-row, although a stone block (Fig 9b) on the western side of the hedge suggests that the hedge does not necessarily overlie the wall. The stone is a single block

with an aperture in the centre. It is positioned c1m west of the hedge at a point where two leats formerly entered the precinct and can therefore be seen as a 'water gate' (Fig 13). The gate measures 1.6m by 1.1m and is 0.3m wide. The size and tooling, from a

Figure 11. Walling at (a) along the northern side of Loaveners Yard

Figure 12. A stretch of re-built walling in Coney Greaves

solid block, appears rather intricate for such an aperture into the precinct.

Further south from (b) a deep cutting slices through the precinct. On the southern side of the cutting the course of the boundary lies along a dam. Here there is evidence of the fragmentary remains of walling. The course of the wall continues south to the field boundary and then turns east-south-east. Thick hedging along the southern side masks the full extent of the wall although in the western corner stonework has been levelled by cattle. In the south-eastern corner there is the remains of stone walling at the field gate. East of this, in Bigg Smithy Croft, a prominent scarp up to 1m high and surmounted by a hedge marks the course of the precinct wall as far as the south-eastern corner of the field. In places a berm separates the scarp from the course of the wall. Further east its course is unclear although it probably continues as a spread scarp to the road (c). On the southern side of Bigg Smithy Croft Lynam's plan shows a track to Hollington which probably also continued to Great Gate (Lynam 1911). The eastern side of the road was not surveyed since it is cultivated and there is no evidence of earthworks. However, the road eastwards is embanked, which again probably marks the course of the precinct. The south-eastern side of the precinct boundary is shown as a linear crop-mark on aerial photographs and extends northwards to Croxden Brook (Fig 14).

Figure 13. The 'water gate'

Figure 14. Aerial photograph of the precinct showing the boundary bank on the eastern (lower right) side (NMR: RAF 1553 dated 1 Sep 54, No 0162. © Crown Copyright NMR).

On the northern side of the brook, in Barn Meadow, the course of the precinct boundary is not entirely clear but it probably lay along the western side of a water channel which, further north, is deeply incised. Lynam's plan of the precinct shows 'fragments of wall' at its southern end and to the west of this channel; however, there is no longer any evidence for this either as an extant feature or as an earthwork (Lynam 1911). Bridges span the channel in two places. The northern bridge (d) is partially collapsed and is of stone construction, while the southern one (e) is of large ashlar blocks, presumably from the abbey. Further west from (d) a broad bank marks the boundary as far as the field corner, beyond which is a track.

On the western side of the track, in Coney Greaves field, the boundary is mainly marked by a fence-line and hedge but in places the wall footings are clearly evident. Fragmentary footings of the medieval wall show that it comprises two facing blocks separated by a

slight gap measuring c 0.6m wide overall (Fig 15). More substantial re-built walling is also evident as far as the junction with the road to the north of St Giles's Church.

Figure 15. Footings of the precinct wall in Coney Greaves Field.

Figure 16. Field names from the 1722 estate map.

Pool Meadow and Stoney Flatt (Fig 17)

In the west of the surveyed area lies Stoney Flatt field and Pool Meadow. Pool Meadow is separated from the Paddock by a substantial dam. The meadow is a wide valley with gently sloping sides that extends from west of Great Gate. Only *c*160m of this field was surveyed since it is largely devoid of earthworks, but its significance is in the contour leats along Stoney Flatt field that have been routed to supply water to the monastery. Only one leat is shown on the 1722 map although two are shown on the First Edition and Second Edition OS maps. Closer to the abbey the sides of the valley become increasingly steep. A stream, the Croxden Brook, has been canalised to flow in an easterly direction along the northern side of the valley bottom. At the eastern end it cuts deeply into the valley side as it dog-legs eastwards around the dam and into the precinct. At this point there is dense vegetation and precipitous sides making a survey of its course impracticable. On the valley bottom, to the south of the brook, are two slight scarps (f), which are probably part of a former braided stream. On the southern side of the valley is a terraced trackway (g), which measures c60m in length and up to 5m wide. Further east, the trackway cuts through the precinct bank but its course beyond is unclear. A slight linear depression on the fence-line (h) to the east marks its course into the Paddock field.

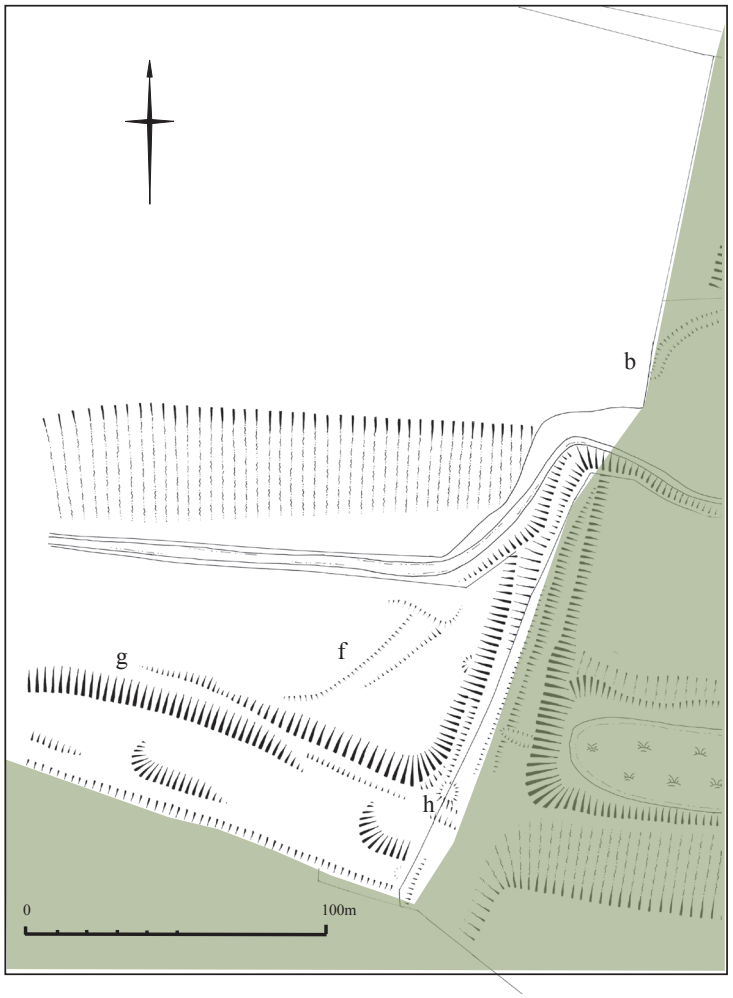

Figure 17. Extract of the earthwork survey showing Stoney Flatt and Pool Meadow (unshaded areas) (reduced from original at 1:1000)

Paddock (Fig 18)

Pool Meadow and the Paddock are separated by a substantial dam (j) which has a basal width of at least 32m that diminishes to c10m at the top. It stands 4m high on both sides, although in the north-east where it is on top of the valley slope it is c1m high. The western side is more precipitous than the east. A slight cut on the eastern side is evident at (k); it is positioned centrally to a marshy pond and may have been a later drain. Beyond the northern end of the dam is the deeply incised stream that cuts into the northern valley side. This is clearly a diversion around the dam, hence its depth.

The most prominent feature in Paddock field is an elongated pond (l). The pond, which is now largely a marshy area, was formerly fed from the Brook in the east; however, the stream now only descends the slope to continue along the valley floor. On the northern and southern sides of the pond are slight terraces that provide access around the upper part of the pond. Beyond the terraces the ground continues to rise.

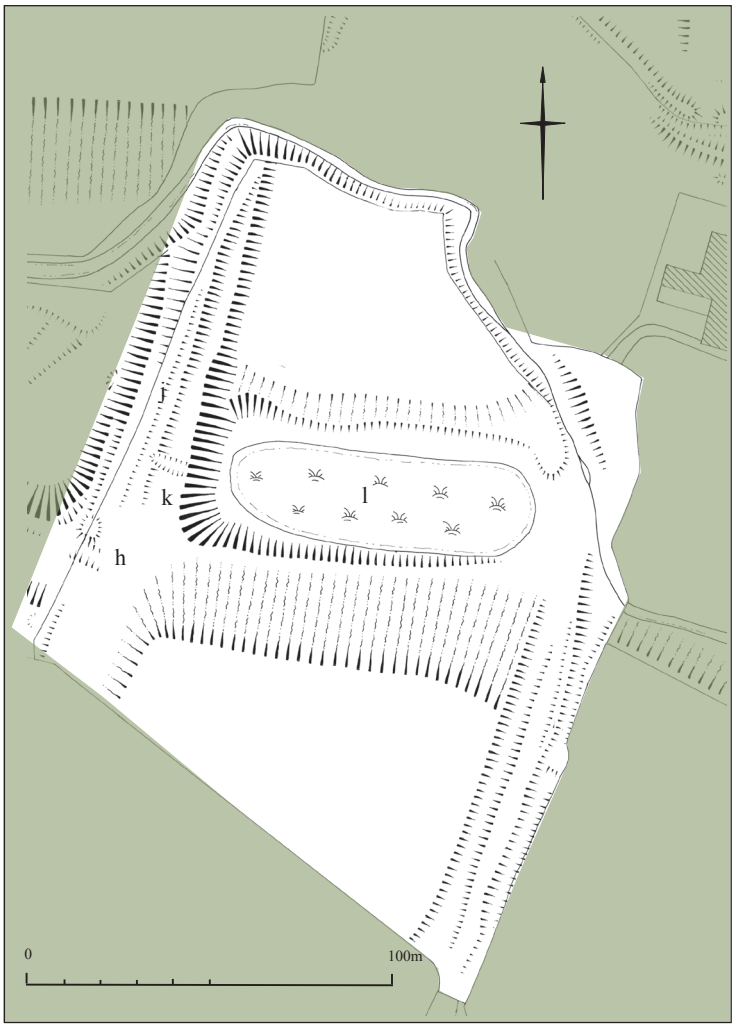

Figure 18. Extract of the earthwork survey of Paddock Field
(reduced from original at 1:1000)

On the eastern side of the field, extending in a north/south direction, are a couple of

trackways measuring up to 6m wide; they lead south from the precinct boundary to the valley bottom. There is no evidence of these tracks on the northern side of the valley although the cutting of the stream may mask the course. On the eastern side of the

tracks is an embanked field boundary, but no evidence of walling; however, the difference in height between this field and Bigg Smithy Croft would suggest that it was a boundary of some considerable antiquity.

Loaveners Yard (Fig 19)

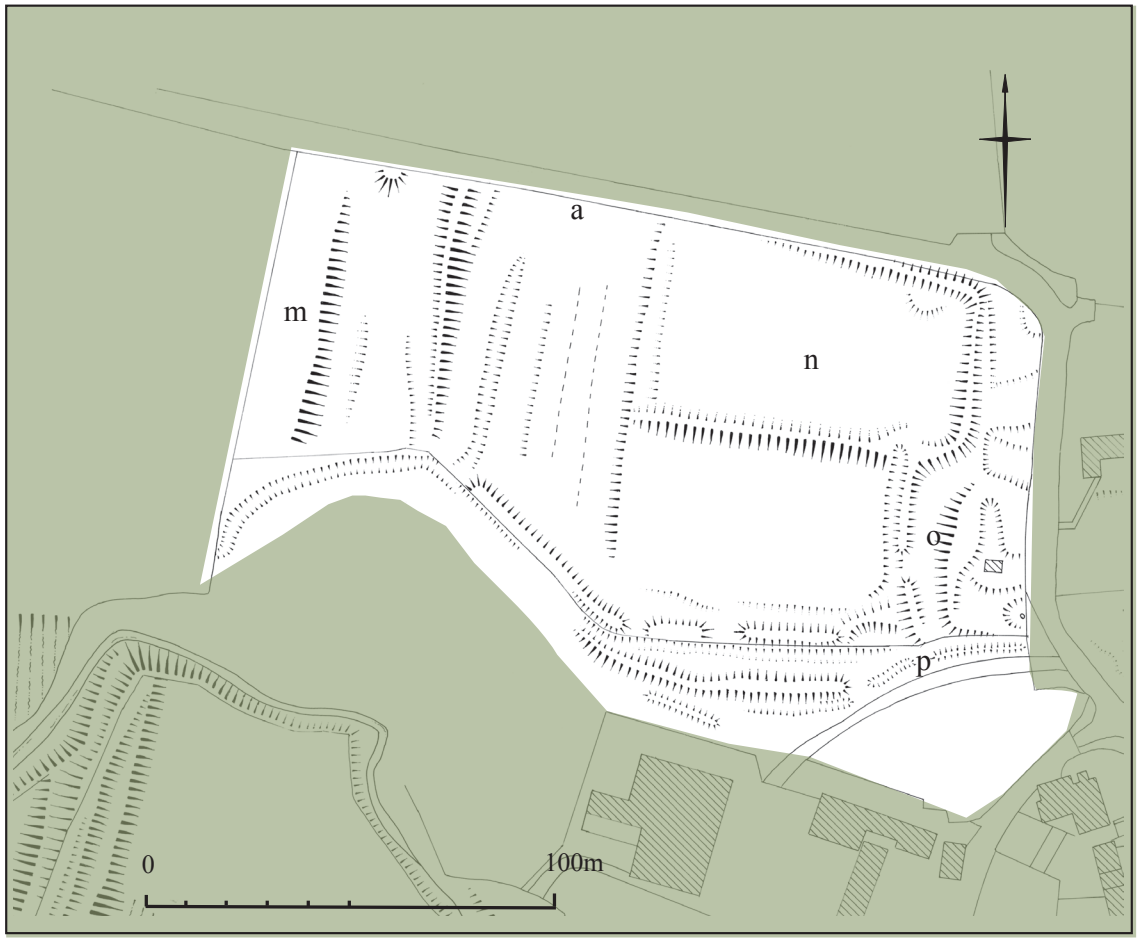

Figure 19. Extract from the earthwork survey of Leoavers Yard (reduced from original at 1:1000)

On the western side of the field there is a prominent scarp (m) near the precinct boundary. Between this scarp and the fragmentary remains of ridge-and-furrow cultivation is a depression extending in a north/south direction. The ridge-and-furrow is to the east of the depression and the ridges are set 6m apart and measure up to 75m long. They extend from near the precinct boundary to a leat. To the east of this furlong are two small rectilinear enclosures or paddocks. The northern one (n) is defined in the west by a scarp 0.6m high and by a bank on the remaining three sides; in the north it merges with the precinct boundary. The enclosure measures 80m by 46m (0.4ha or

1a). A bank and ditch extend in a southerly direction from the south-eastern corner of this enclosure. The ditch has presumably been remodelled at some time since it cuts into the enclosure bank. The ditch extends south as far as a leat and effectively creates another small close measuring 74m by 25m (c0.2ha or 0.5a). A wide curving scarp (o) to the east of the drain extends north towards the eastern side of the enclosure bank, thus forming a long enclosure bounded by the road in the north and east, and by the leat in the south. Within this narrow enclosure are three rectilinear platforms. The northern one lies in the corner of the road and has a slight mound in the corner. To the south of this is a second platform opposite the present parish church; it measures 11m by 13m with a slight scarp near its northern side. South of this is another curving platform with a finger-like projection on its northern side. A concrete building is situated on its northern side. These platforms are probably building stances and presumably associated with the monastic gatehouse complex (Fig 6).

Along the southern edge of the woodland is a partially embanked sinuous leat, although it was formerly much broader. The eastern half is more incised suggesting a re-cut. The northern bank is more fragmentary and stands *c*0.2m high. The bank on the southern side is more substantial than the northern one, measuring up to 1m high and *c*70m long. Beyond the western end dense vegetation masks any earthworks, but it is again evident in the north-west where it is well preserved and measures 4m wide overall. At (p) is a small sluice. In the east the leat continues as far as the road; however, it formerly emptied into the mill pond shown on the First Edition map, which has been in-filled; however, its position can be seen as a large level triangular area to the south, which is defined by a wall in the south.

Coney Greaves (Fig 20)

The sinuous leat identified in Loaveners Yard continues east to (q) where it is culverted under a stone wall. Beyond this point it hugs the higher ground and extends north and then north-east, curving through a terrace scarp, to the precinct boundary at (r).

To the north and west of the leat are a range of earthworks, some of which are on a common alignment. The eastern edge of this complex is defined by a prominent right-angled bank (s), which extends 50m north and then turns east for a further 30m where it has been cut by the leat, and although it is partially obscured by thick vegetation, it appears to continue, mirroring the precinct boundary. To the east of the leat a scarp marks the edge of a broad terrace which extends for 80m.

At (t) is a rectilinear, partially embanked platform that extends in a north/south direction and measures 50m by 19m. A break in the bank on the east side may have been an entrance. Within the enclosure are two low elongated mounds set at right-angles to each other. The southern mound is smaller and measures 7m by 3m and stands 0.4m high, while the northern mound is 13m by 5m, but only 0.2m high. Separating these two mounds, and effectively compartmentalising them, is a cross division. Another cross-division lies on the northern side of the northern mound. This enclosure and the mounds within it are characteristic of a rabbit warren and so-called pillow mounds, which were constructed to house rabbits. It is also possible that the bank surrounding the

enclosure formed additional burrows.

Figure 20. Extract from the earthwork survey plan showing Coney Greaves (reduced from original at 1:1000)

To the south of the enclosed warren is another rectilinear platform on the same alignment as the enclosure. It measures 20m by 15m and is bounded in the south by a ditch which forms a branch of the leat. On the west side of the platform, on high ground, is a larger enclosure bounded in the west by a more recent wall which is ditched on the east side. Within this area are several linear depressions, cuts, and smaller platforms which may have been building stances; the best defined being (u).

On the western side of the fence and wall are further amorphous earthworks. The most prominent is in the north where there is a large platform defined by an L-shaped scarp (v). A platform in the north-east corner may suggest that (v) was formerly rectangular and measured 35m by 30m. On the western side is an elongated north/south platform, which may have been a building stance or garden plots. To the south-west of (v) is a circular mound measuring 15m overall with an inner circular mound which is 7m diameter. This feature resembles a dove-cot and may be associated with a garden and parkland landscape which would include the warren enclosure.

St Giles's churchyard is bounded by a modern stone wall. However, the scarp on the eastern side of the churchyard wall may reflect a probable wall shown on the 1722 map and may be a wide lane between the monastic inner and outer gates (Fig 30).

Cutting into the leat at (w) is a ditch that extends 90m east to a substantial pond (x) which is dammed on its eastern side. The ditch measures 5m wide overall and up to 0.2m deep. On the northern side, near the pond, are two smaller ditches that cut into the main ditch in a herring-bone fashion. On the northern side of these two small ditches, and extending westwards at the base of a scarp and terrace (r), is a slight depression. Approximately 25m to the south of this main ditch (w) is another, more fragmentary ditch which is sinuous. The purpose of these ditches is not entirely clear. They could, for example, be for draining the land, but this seems unlikely since the northern drain cuts into the leat and would be diverting water directly to the pond. An alternative, more likely interpretation, is that the ditches are the fragmentary remains of a bedwork water meadow, similar to those that are so prolific along the Wessex chalkland valleys, but have also been identified further north at places such as Buildwas Abbey in Shropshire (Brown 2003). In a water meadow context, the leat (s) would have been the main carrier which provided water along the northern side of the meadow via the linear depression on the south side of the terrace (r). Between the herring-bone ditches would have been the side carriers which emptied into the side ditches and ultimately into the pond. The side carriers and ditches probably extended further west towards the leat.

To the south of the pond (x) is a linear ditch and small enclosure. The eastern side of the enclosure is defined by a bank and scarp which curves into the pond. Wide ditches lie along the east side of the pond. The pond is dammed on its eastern side and extending from the pond in an easterly direction is a narrow leat, to the north of which is another leat (y). In the north the leat turns at right-angles for 10m to a terminal. At this point a culvert is evident that presumably extends to the other side of the precinct boundary where there is a former water channel. Another small leat lies to the north-east of the pond which probably had another culvert to the ditch (y).

On the northern side of the precinct boundary, in Raggs Close, is a wide depression (z), or ditch, bordered on its northern side by a scarp up to 0.6m high and by the precinct wall in the south. At the eastern end of the scarp are two further ditches. A narrow cut along the northern side was probably associated with the leat within the precinct. To the west of (r) is a cross-division with stonework on the west side. This feature is evident on the First Edition map.

To the east of the monastic church are further earthworks. Those surrounding the exposed stonework are the result of consolidation; however, to the east, on rough grassland, is a bank which appears to be overlain by a rectilinear platform (a1). The bank extends from the field boundary in the south and measures 40m long and 6m wide; it stands 0.5m high. This bank is in line with the exposed stonework of the infirmary on the south side of the road and may either be an extension to it, or more likely a wall, perhaps enclosing the church and infirmary and perhaps the inner court wall. The area to the east of the church was one area usually set aside for burials and this bank may represent a wall defining the eastern edge of a cemetery, but nevertheless within the inner court.

Two further banks, parallel to each other, lie on the northern side of the church and extend in an east/west direction from the leat at (q). The northern bank is overlain

by the leat. The banks are also at right-angles to (a1) and may be associated with it, although their course underlies the build-up around the church.

A prominent platform (b1) lies between the east end of the church and (a1). It measures 8m x 8m and may be a building stance.

Barn Meadow (Fig 21)

The western side of Barn Meadow is dominated by barns, cattle stalls, concrete stands and small paddocks (Fig 19). The buildings were all constructed in the 20th century apart from the grade II listed barn (below). To the south-east of these outbuildings there is a relatively flat spur of pasture. A track from a paddock cuts through the field to the

Figure 21. Extract from the earthwork survey plan of Barn Meadow (reduced from original at 1:1000)

precinct boundary in the north-east.

In the valley bottom are the fragmentary remains of a water course (c1). A track appears to overlie part of it, but it is more apparent on the south-eastern side of the farm-track. To the north of (c1) is an amorphous area of earthworks which was probably the result of quarrying. Above the quarrying are several scarps and a broad bank (d1) which continues around the north-eastern side of the field. This bank is possibly the course of the precinct wall. Further east, at (e1) the bank is much narrower.

To the east of this bank is a deeply incised ditch which extends along much of the course of the field boundary. It is up to 3.5m deep and 10m wide at the top, narrowing to 6m at the bottom. Beyond (e1) the ditch progressively diminishes in size to the southern field boundary and confluence with the Croxden Brook.

Old Gardens (Fig 22)

The area to the south of the conventual buildings, as far as the brook, was known as Old Gardens in 1722, they extend across three fields that are separated by leats. Although the leats are no longer visible, their probable course is reflected in more recent field boundaries. The valley bottom is relatively narrow here and is defined by scarps on the northern and southern sides. To the east of the monks' infirmary and abbot's chamber are three slight east/west scarps which appear to be aligned on building features and may therefore be associated with them. One of these, (f1) is aligned on a culvert and may be part of a monastic drain.

To the south of the abbot's chamber are two further scarps forming terraces (g1). The lower terrace has a slight bank on its southern side which curves to the base of the upper terrace. Beyond the terraces, on lower ground is a larger enclosure measuring 40m by 32m bordered in the east by a broad, ploughed down bank. In the south-eastern corner there is a mound (h1) measuring 1m high. Another slight mound is evident on the south-eastern corner of the second terrace. Beyond the enclosure the ground is particularly boggy. On the eastern side of this enclosure are several slight scarps and banks extending in a north/south direction, which were probably orchard banks.

The coherent manner of these terraces, the enclosure, and linear scarps, suggests that it is all part of a garden layout dating to the later 16th century, with the enclosed area forming a garden with a small prospect in the south-eastern corner. The valley of the brook also probably formed part of this garden layout, possibly a 'wilderness' garden (Discussion).

On the north-western side of the garden a rectilinear scarp defines the area of the present tennis court. In a monastic context, however, this would have been the area of the monks' refectory. It is noteworthy that on the west side of the tennis court is a low garden wall (j1) which, if projected further east, would be coincident with one of the abbey's culverts. It is possible, therefore, that this wall overlies a culvert.

Figure 22. Extract from the earthwork survey of Old Gardens (reduced from original at 1:1000)

To the south of the mill (building C, below) are two scarps that extend towards the brook. These may have been the mill's tail race.

The field on southern side of the brook, Bigg Smithy Croft, is under cultivation; in the east is a natural cutting, presumably a former water course that extends south from the modern housing to the valley.

6. ARCHITECTURAL INVESTIGATION AND INTERPRETATION

Three buildings were investigated within the precinct (Fig 23).

Figure 23. Earthwork survey of Croxden showing location of the three buildings that were investigated

Listed barn to east of abbey ruins (A)

This grade-II listed barn (Listed building UID 405526), latterly a cowshed, dairy and hayloft, is situated a short distance to the east of Croxden Abbey, near the edge of the former monastic precinct (Fig 24). The building incorporates a substantial late-medieval barn, possibly of late 15th - or 16th -century date, including five queen-post trusses and most of the associated roof structure. Originally of post and truss construction, the barn was either aisled, with substantial aisle posts, or the posts formed part of a timber-framed wall. There are four complete roof bays, flanked by a fifth, near-complete bay to the west, although the evidence proves that the barn was at least six bays long. The listed building entry notes that the barn is 'Possibly early 16th century in origin, largely rebuilt in [the] mid-19th century', whereas in fact a considerable proportion of the original roof structure survives in relatively unaltered form. The original walls have been replaced, as have most of the main posts, although one post survives embedded in later stonework in the north wall. The list entry goes on to state that 'The size of the building suggests that it may have been attached to Croxden Abbey as a tithe barn', and although not strictly a tithe barn, the attribution as a monastic barn is the preferred interpretation. However,

the possibility of construction by a wealthy post-dissolution landowner such as George Foljambe cannot be ruled out entirely, although this seems unlikely.

Figure 24. The barn viewed from the south-west (NMR: DP085586, © English Heritage)

The barn is aligned approximately east to west, with the earlier part of the building located to the west, nearest the abbey ruins. Neither end of the original barn survives, but its original extent can be surmised from other evidence, and it is likely that the present footprint is close to the original, notwithstanding the possibility that aisles may have been removed. The remains of early, but perhaps not medieval, stonework embedded internally in the east wall, indicates that this is on the alignment of an early if not original east end. Carpenters' marks on the tie-beams and queen struts identify the western truss as 'I', while the surviving original roof bay to its west indicates that this is the first internal truss, positioned one-bay in from the west end wall. This would mean that the present west wall corresponds with the original. Trusses 'I', 'II', 'III' and 'IIII' are marked in sequence from west to east. The fifth truss, to the east, is marked with a 'I' or a half score mark, but this is less readily discernible. This truss has redundant pegs and windbrace seatings for a further bay to the east, therefore denoting that the barn was at least six bays long.

Of the original trusses, only that to the east retains an original timber post, visible at its north end, although other fragments of post may be encased in the later stone walls. Inserted stonework abuts either side of the post in an ad-hoc fashion, leaving the inner face of the post exposed. This has a heavy jowl near the top, and a short, curved, upward brace extending to the tie-beam. The brace is tenoned into a mortice in the post, just below the jowled head. (A truncated transverse timber is tenoned into the lower part of the brace mortice, and may be evidence of an inserted floor, or an original lofted area, replaced by the present floor in a subsequent phase in the mid-to-late 19th century). The brace has a mortice and tenon joint at the tie-beam, pegged three times. All the other original trusses have redundant brace mortices on the tie-beam soffits. The mortices are

pegged three times, and one retains a redundant brace tenon. The head of the post is tenoned into the tie-beam and pegged at least once, though not all the timber surface is visible. The post supports a massive wall plate (or aisle plate) which has been under-built by later stone and brick walls. The post has paired redundant pegs for timbers extending to either side, on the alignment of the later walls. These pegs may be interpreted in two ways: either as evidence for a mid-rail forming part of a timber-framed wall, or as evidence of former up-braces extending to the plate, thereby invoking an aisle on the north side of the barn. An opportunity to examine the associated mortice would easily resolve the issue.

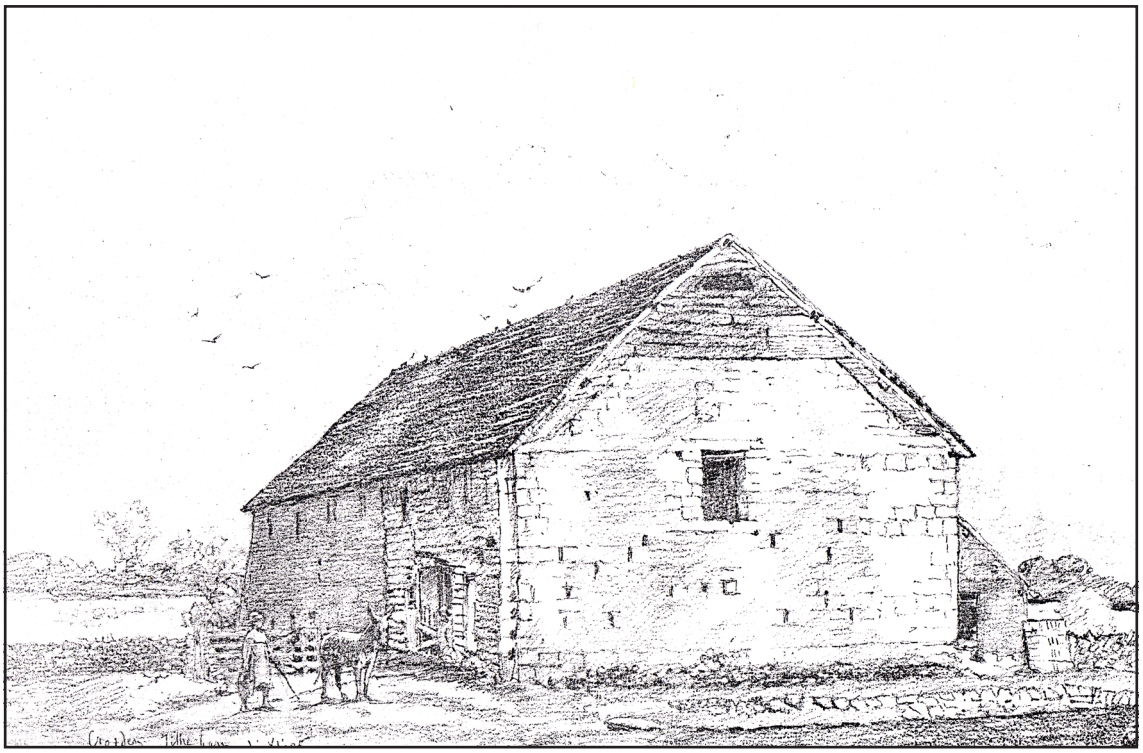

Figure 25. An illustration of the barn (after Lynam 1911)

The tie-beams have a span of 8.6 metres and are of massive scantling, averaging approximately 0.4 by 0.3 metres in section at the greatest thickness, near to centre span. The principal rafters are tenoned into the tie-beams and pegged twice. There are queen struts set beneath a collar. The ends of the queen struts are mortice and tenoned into the tie-beams and the collars, and are single-pegged. The principal rafters are halved and crossed at the apex, where they cradle a substantial diamond-set ridge-piece.

There are long windbraces, some curved and some straight, probably reflecting the nature of the timber available for their construction. These are arranged on a single level on each slope of the roof. The ends of the windbraces are lapped and crossed over the backs of the principal rafters and pegged twice. The purlins have simple splayed scarf joints at the trusses, with each purlin pegged once from the principal rafter soffit.

The origins and significance of the barn have been concealed by extensive remodelling in the mid-late 19th century, when large areas of the walls were replaced and/or refaced in coursed, rock-faced stonework. This may have included the demolition of any remaining aisles. The rock-faced sandstone walling extends round the west end of the building, which is visible from the lane, and where a further truss has been completely removed. An historic drawing of the barn (Fig 25) shows this west elevation prior to the construction of the present stone wall, and depicts elements of the original truss, with timber cladding sealing the apex.

The rock-faced sandstone makes a strong contrast with areas of earlier sandstone ashlar, especially near the centre of the north elevation, some of which may date from the 17th and 18th centuries. It is clear from the occurrence of ragged and straight joints, and areas of brickwork, that replacement of the original posts took place piecemeal, perhaps as areas of the walls failed, or when sections of the aisle plates were under-built at different times. The construction of three pine trusses at the east end of the barn is perhaps further evidence of decay and collapse that was arrested in the mid-to-late 19th century by rebuilding the walls and conversion into a fully two-storeyed form, with cow sheds on the ground floor and hay loft above.

Abbey Farm: barn to west of abbey ruins (B)

This barn forms the principal range of the farmyard to the west of the abbey ruins. It has a long rectangular plan orientated approximately north/south, but is shown with an L-plan on the first and second-edition 25-inch Ordnance Survey maps, where a northern cross-range (demolished) extended to the west. The barn is largely 19th-century in character and has a date-stone '1842' above a lintel on the west wall. However, the south part of the barn incorporates substantial areas of stone walling from an earlier building, the date of which is uncertain, although the stonework would be consistent with the 16th or 17th centuries. The barn walls are all of large ashlar blocks, although the earlier stonework has shorter blocks of slightly contrasting stone colour, used to a greater thickness. The 19th-century stonework is identified by crisp diagonal tooling and thin walls.

The earlier stonework is found in the south, east and west walls, all towards the southern end of the building (excluding an added cart drive abutting the south end), and indicates that three walls of an earlier building were reused in situ. Only the lower sections of the walls survive, except to the south where the earlier end wall is slightly taller. The stonework includes a double plinth with chamfered stone plinth courses, indicative of a substantial building, with high-quality stonework, possibly reused from the abbey ruins in the post-dissolution period. The function of the original building is unclear.

The 19th-century aspects of the barn, including an added east range (now demolished), were beyond the scope of this report.

Figure 26. Barn to the west of the abbey ruins, viewed from the west (NMR: DP085579, © English Heritage)..

Abbey Farm: farm building, including remains of corn mill (C)

This small rectangular-plan building forms part of Abbey Farm, located to the north west of the abbey ruins (Fig 27). The building is orientated approximately north/south, with the north end abutting the dam of the former mill pond, into which it is set. This modest building is almost certainly part of the 'Corn Mill' marked on the first and second-edition 25-inch Ordnance Survey maps, and possibly incorporates remains of the medieval abbey corn mill. The former mill pond tapers to a point adjacent to the building, invoking the existence of a mill race immediately abutting the building's west wall. The 1881 Ordnance Survey map appears to show the tail race heading south-south-west from the south end of the building. It is highly likely that features such as the mill race, wheel pit and tail race, lie buried beneath the yard to the west of the building. This area is now raised with infill and a concrete surface.

The building has been altered many times and its present form and appearance is the result of a sequence of later phases. However, there is evidence of the building's origins as a water-powered mill, with the earliest phases of uncertain date, but with stonework consistent with the 16th or 17th centuries, if not earlier. The earliest identified phases, characterised by substantial sandstone-ashlar blocks, are visible in two areas of the building, although they appear to have originated as separate structures. The first of these comprises a low-level area of stone walling, incorporated into the north end wall, and which acts as a retaining wall against the former mill-pond dam. This is visible only from within the building and may have been part of an abutment, or an earlier building otherwise obscured. The second (although not necessarily later in date) consists of

a complete gable wall fossilised in the present end wall, to the south, along with the truncated stubs of the former side walls. This formed part of a building extending to the south of the present footprint, and which probably functioned as the main mill building, at least during a substantial period of the building's history. Although these early phases are characterised by the use of sandstone-ashlar blocks, similar stonework has been reused as an external facing to brickwork, including stones bearing radial wear grooves characteristic of rubbing caused by the rotation of a waterwheel.

Figure 27. The remains of the farm building and mill viewed from the north-east (NMR: DP085583 © English Heritage)

The evidence in the north wall is fragmentary and difficult to interpret. However, it comprises two stone-built phases, one above the other (beneath a later brick gable), with a clear horizontal interface between the two. This is marked by a plain stone string course, while the stonework above and below is distinguished by contrasting tooling. The earlier, low-level stonework is distorted and bulging, indicating pressure bearing out from the direction of the dam, whereas that above is straight and vertical, suggesting a rebuild correcting the distortion. The upper area of stonework rises to form a redundant gable, later raised in height using brick. Therefore, the upper area of stonework (at least in the north wall) formed part of an earlier building than the present structure (the result of remodelling and raising, with brick and stone facing, in the 18th or early 19th centuries). This stone building, which includes an external doorway entered from the higher ground of the former dam, is clearly later than the lower, bulging, area of stonework, but the dates of both phases are unclear.

One or both of these earlier structures probably also remains evident in an area of recessed stonework, at low level, toward the north end of the west wall. The stonework

above the recessed walling is corbelled out to achieve the eaves alignment of the later brick building. The reason why this area of stonework is recessed is no longer clear, although it may relate to the inclusion of earlier fabric, and/or respect an earlier feature such as a mill race or a wheel pit for example (Fig 28).

The evidence of phasing at the south end of the building is relatively straight-forward. On the west elevation, at the south-west corner of the building, a vertical straight joint is formed where stonework of two phases abuts, close to the present south gable end. The position of the joint indicates that the gable wall was associated with a building

Figure 28. Remains of the farm building and mill viewed from the south (NMR: DP085578 © English Heritage)

now demolished to the south. The stonework to the north of the joint simply abuts this gable, indicating that it is an addition. This proves that the 'fossilised' stone-built gable embedded in the south-end wall, was originally the north wall of a building extending to the south. The side walls of this south range survive as truncated stubs, protruding from the gable wall, although they are of contrasting thicknesses, with the east wall only a single stone (ashlar) thick. That to the west, nearest the mill race, is thicker on the ground floor, but diminishes to a single ashlar block near the original eaves level.

The associated gable wall presents its original internal face as an external elevation, and reveals evidence of a number of key features, including a tall, cut-stone plinth at high level and a group of four blocked sockets. The plinth is of high quality and is partly chamfered and partly square, the latter at the east end, where a mezzanine-height doorway (blocked) formerly provided access. The plinth gives the impression of having related to a loft-floor structure on the east side of the space and an open, un-floored, area to the centre and west. The latter space corresponds with the four blocked sockets, which are off-set from the building's centreline, and grouped into two pairs, with one pair higher in the gable and positioned closer together. This arrangement invokes a heavy timber

structure integrated into the stonework of the gable wall, and extending the full height of the building, with an off-set arrangement allowing for a partial loft floor with access through a doorway in the gable wall. This assemblage of features is consistent with a building designed to incorporate heavy timbers such as a hurst frame for a mill, and with stonework and timbers configured in a highly distinctive way to accommodate machinery.

In the period between the mid-18th and early 19th centuries, the present building took form, absorbing the earlier fabric in its north end wall, and establishing a largely remodelled range abutting the gable end of the earlier range to the south. The new work of the 18th/19th centuries probably provided an ancillary range (the north range), including a loft for grain or hay, and was executed in brick, although the lower part of the west wall was faced in reused ashlar blocks, as mentioned above. Much of the loft floor has been removed, although there is evidence of redundant joist sockets in the tie-beams and the south wall. A loft is retained at the north end of the building, but this is lower that the main loft floor, the reason for which is uncertain. In this period, the roof height was raised and new roof and loft-floor structures were built employing traditional carpentry techniques. The roof structure has two trusses, with reused timbers. Each truss has a tie-beam, truncated principals, queen struts and higher-level interrupted collars. Externally, the eaves were given dentilled brickwork and the gabled roof has a plain tile covering with ventilation tiles at the ridge. The roof of the main mill building (the south range) appears not to have been raised in height.

In the 20th century, a small structure, now demolished, was added abutting the west wall of the north range, with evidence of a drive transmission passing between these two buildings. It is possible that this evidence represents the conversion from water-power to a portable steam, gas or petrol engine.

During the latter part of the 20th century, the south range (the principal mill building) was demolished, except for the north gable wall that had been encapsulated in the end of the north range. The latter was converted for general farm use, probably serving numerous functions, although with stable-type doors of the late-20th century installed in the east wall.

7. DISCUSSION

The archaeological survey and investigation of the earthworks and the architectural analysis of some of the buildings at Croxden has identified a range of features around the remains of the monastery and in the wider region that point to a diverse land-use, not only from the medieval period but continuing into the post-medieval and early modern periods, that illustrate a complex and ever-changing landscape.

The Monastic Landscape

The Cistercians, or White Monks as they are sometimes known, were quite distinct from many of the other monastic orders. In seeking a place to establish a new monastery they sought largely uncultivated and sparsely populated areas. Their whole ethos was for an austere lifestyle following the precepts of the earliest monks - the desert fathers - and interpreting more strictly than many of the other orders the Rule of St Benedict. Their day was divided between prayer and manual work, the cultivation of land and the raising of livestock. All ostentation of wealth was to be avoided, even in the design and construction of their churches which were initially quite austere. Their earliest statutes, encapsulated in the *Instituta* and *Cartae Caritatis,* forbade the ownership of churches, burial dues, tithes, settlements, serfs, taxes, and the dues from ovens and mills, although this was soon flouted (Lekai 1977, 450). Since the White Monks were prevented from profiting from the labours of others, they managed their estates as far as possible from a network of consolidated granges that were initially manned by lay-brothers.

The first site to be occupied by the monks from their mother house at Aunay-sur-Odon was at Cotton. This was a temporary site since, after only three years, they moved a few miles south to Croxden. The reason for occupying Cotton for such a short period of time is not entirely clear although the occupation of a temporary site was by no means unique. Elsewhere in England and Wales twenty-nine Cistercian abbeys, or 33 per cent of the total, moved location at least once before settling at their permanent locations (Knowles & Hadcock 1971, 110-28). This seems inordinately high, particularly when compared with the Augustinian Canons where only 10.5 per cent changed site (Robinson 1980, 76). However, this may reflect the differences in colonisation rather than any other reason.

Moves from the initial sites have been debated at length (e.g. Aston 1993, 78; Bond 2007; Donkin 1978, 31-6; Robinson 2006, 47; Williams 2001, 9). Aston, for example, cites the need for a better water supply as being the probable reason for the moves for four abbeys (Kingswood, Bindon, Beaulieu and Strata Florida), while the climate and floods are given for several others (Aston 1993, 78). In the border regions along the Marches and Scottish border, conflict and raids appears to have been the cause for the move of Grace Dieu and Diealacres (Donkin 1978, 35-6). One of Byland's temporary sites was at Hood where the monks spent four years but the site was thought 'too restricted for the construction of an abbey' for the growing community (Burton 2006, 11). As for Croxden it was probably always intended that Cotton would be a temporary site until a more suitable one was found and prepared. The first abbot was an Englishman, suggesting perhaps, that the community also had to be assembled.

What effect the monks had on the settlement pattern in the region is unclear. The inhabitants of Croxden may well have been absorbed into the monastic community either as hired labour or perhaps some became lay brothers. Those that inhabited the site of the monastery, if any, would have been re-located, perhaps to Great Gate or Notthill, which became part of the abbey's home grange.

The abbey buildings conform to the basic layout of most Cistercian houses with the church on the north side of the rectangular cloister, which is surrounded on the other three sides by the conventual buildings. The abbot's later chamber and the infirmary were detached and sited to the east of the east range. Of the other buildings there is no clear evidence and it is probable that some underlie the farm buildings to the west of the abbey. For instance, if there had been a detached lay brothers' infirmary it is likely that it lay to the south-west or south of the west range in a similar manner to Fountains, Jervaulx, Roche, Waverley, and Kirkstall. Guest accommodation would also be on the west side, probably somewhere between the church and inner gatehouse, or indeed, later, in the west range itself (Robinson 2006, 161).

During his excavations at Croxden, Lynam recorded the foundations of a wall that extended from the southern buttress of the west front of the church; this wall is shown on two of his plans (Lynam 1911, 3). The wall foundations measure 35m long and *c*0.5m wide (narrower than the buttress on the church). At its west end it turns north for *c*1m where it appears to be overlain by a modern outbuilding. The wall stood 2.5m high, the height being reflected in the stonework on the buttress (Fig 29). A narrow doorway on Lynam's plan is positioned at the wall's mid-point with what appears to be two buttresses on the south side on either side of the doorway thus implying that the 'principal' side was on the north.

Figure 29. West front of the church showing the position of the wall cut into the south buttress.

Walls abutting Cistercian churches or their claustral buildings define small closes and courts. At Byland, for example, a wall extends from the west end of the church in a similar manner to the one at Croxden, but turns south instead of north, and forms what has been interpreted as the Cellarer's yard on the west side of the west range, with a barn within another enclosure to the south (Harrison 1999, 32). At Tintern (where the church is atypical since it lies to the south of the cloister) a wall, dating to the 13th century, extends from the east front of the church and encloses the infirmary, the Abbot's chambers, and the east and south ranges (Robinson 2002, 39). Lynam's plan provides little evidence about the function of the wall at Croxden; however, comparing its position to the foundations of a wall depicted on the 1722 map, it is clear that it dog-legs as far as a leat. It may have continued over the leat to another wall that extends north towards the inner gate and may have defined part of the inner court (Fig 30). The wall also extends south, parallel to the west range in a similar manner to the one at Byland, forming a small close or yard.

Fig 30. Extract of the 1722 estate map showing the position of the foundations of the wall against the west front of the church. To the north is the gatehouse and chapel, while to the east is the probable former infirmary chapel.

The Precinct

The precinct was the physical boundary between the monastery and secular world; it was also a statement of difference, providing a symbolic reminder of the division between the secular and religious communities. A precinct normally comprises three distinct zones: the inner court, the outer court, and the cloister which was enclosed by the church and conventual buildings. The area of the precinct at Croxden is about 30ha (73a), which, although smaller than Rievaulx (37.2ha), Bordesley (36ha), and Meaux (34ha), is slightly larger than both Furness and Fountains (c28.3ha) and considerably larger than some Cistercian abbeys in the south of England: Stanley Abbey was a mere 15.7ha while Cleeve was even smaller at 11.3ha.

The precinct wall at Croxden was built in two stages and completed by 1284, over a hundred years after the move to Croxden. The Cistercian *Instituta* stipulated the minimum requirements before a new monastery was occupied; these included a gatekeeper's cell and a guest house (Lekai 1977, 448). This would imply that the inner court was a defined and possibly enclosed area well before the precinct wall was built showing that the boundary of the monastery was initially much closer to the claustral buildings. The importance of this defined area as opposed to the larger precinct is emphasised in a post-suppression indenture of Hailes Abbey where the precinct is described as covering just 8a, a much smaller area than the overall precinct, and probably equates to the area of the inner court and cloister (GRO: D 2311/T2).

Fig 31. Extract of the 1722 map showing the position of the gate across the road between Lower House Close and Stoney Flatt.

The principal approach to the abbey was from Great Gate, to the outer gate which, although it no longer survives, would presumably have punctured the precinct wall, probably at the point where the road dog-legs south towards St Giles church (Fig 30). There is little evidence of outer gates in Britain. Even in a recent study of Cistercian monasteries in Yorkshire, Fergusson found no evidence for them; however, at Hailes it would appear that it was a simple field gate (Brown 2006; Fergusson 1990, 55). At Croxden, although an outer gate in the precinct wall is not shown on the 1722 map, there are gates across all the approach roads to the abbey but some distance from the precinct boundary. Elsewhere in the parish there are no such gates. If these are

monastic, it would suggest, perhaps, that there was a much larger 'exclusion' area than the precinct itself (Fig 31).

From the outer gate, the access to the abbey was through the inner gate. The inner gate at Croxden was attached to the gatehouse chapel, and it would appear from the 1722 map that there was a wall leading from the north side of the church, which implies that there was a walled lane between the two gates. The inner gate opens up to the inner court from where a view is afforded to the west end of the conventual church. A building abuts the inner gate, within the inner court, which may have been guest accommodation and possibly stabling.

Although the gatehouse chapel was located beside the inner gate, research by Hall indicates that they were normally positioned between the inner and outer gates, and some were within the inner court close to the gate (Hall 2001, 61-92). Her research shows that these chapels fulfilled a variety of needs, with most having a parish function although some were used by people who were living or staying outside the precinct, and those who were not allowed within the inner court. There is also evidence that some were used as chantries or places of pilgrimage such as Merevale and Furness (Austin 1998, 12; Dickinson 1967, 63). The possibility of additional chapels within, or close to, the circuit of the precinct should not be ignored. At Meaux, for example, there were two such chantry chapels with a further example at Revesby Abbey (Everson 2007).

The larger area of the precinct was the outer court, which contained agricultural buildings, workshops, fields, pasture and meadow. Some of the fields were enclosed into small closes such as in Loaveners Yard, while Barn Meadow, being some distance from the core of the abbey, was probably pasture and meadow. An area of industrial activity is also suggested by the croft names: Smithy Croft, Bigg Smithy Croft and Little Smithy Croft.

There are at least two late medieval buildings, the barn to the east of the conventual buildings and the mill. The 1722 map also shows a couple of buildings near the mill, one of which is a dwelling while the other is a two or three-bay barn. This barn is probably the one at (B, p32), where some of the stonework dates to the 16th or 17th centuries, and may therefore also be monastic in origin. These buildings and fields would have formed part of the home grange, which included the granges close to the abbey.

The Abbey Environs

The 1722 map shows two building complexes on the west and southern sides of the precinct. The buildings to the west are on the south side of the road leading to Great Gate and comprise a dwelling house, which is detached from what appears to be a three-bay barn that is set within a small yard; the complex also lies within a compact block of four closes covering an area of 16a (6.5ha). Although this farmstead no longer survives, a level platform, probably the barn, is evident in a similar position as that shown on the map (Fig 31). This platform is beyond the surveyed area. The other complex comprises a single barn located at the south-eastern corner of the precinct. While these two complexes are undoubtedly part of 18th century farms, they may have earlier,

medieval origins in a similar manner to other buildings within the precinct. Detached and isolated buildings near monasteries, such as these, are relatively common and were used for a variety of purposes such as outlying elements of the home grange; perhaps a horse stud; industrial complexes; a sheep-house (or sheep-cote) or wool-house. In the case of Croxden, there is little evidence of their former use, but it is tempting to see that those to the west of the precinct were a sheep-house and part of a sheep-fold. Demesne sheep-houses were often found set apart from the precinct or main farm complex. On many of the larger monastic and secular estates sheep farming was managed centrally under the direction of a master shepherd or shepherd reeve who would organise, for example, the movement of sheep between manors and granges and the movement from summer grazing to winter pastures. The master shepherd would also supervise the centralised shearing and collection of wool and skins for sale (Dyer 1995, 136-64; Bond 2004, 60). An example of a detached sheep-house is at Hailes, which was about 250m beyond the precinct; at Byland the abbey's wool-house was at Thorpe about three miles from the abbey (Brown 2006, 33; Donkin 1958). That a sheep-house at Croxden lay outside the precinct is evident from the Chronicle which records that in 1300, 1337, and 1346 there were repairs or emptying of a fishpond 'between the abbey and the sheepfold' (Stuart 1984, 16). The pond was referred to as 'the large pond' (Laurence 1951-54, B46) and may well have been the one on the west side of the precinct dam, which is also close to the purported sheep-house.

Water Management

The Cistercians are renowned for their water management and they went to great lengths to divert water to their precincts. A 12th-century description of Clairvaux illustrates well how the White Monks controlled and directed the River Aube through a network of sluices to provide water to the various services within the monastic complex (Braunfels 1972, 245; Matarasso 1993, 287-92). Leats divided orchards and gardens into small compartments, and sluices directed water to the corn mill, fulling mill and tannery as well as the kitchen and latrines. Another leat provided water to the meadows where it '… saturat[ed] the soil that it may germinate. And when, with the coming of the mild spring weather, the pregnant earth gives birth, they keep it watered too lest the spring grasses should wither for lack of moisture' (Matarasso 1993, 289-90) - a unequivocal reference to the artificial irrigation of meadows. This is the earliest description of a Cistercian precinct and, given the central control that the order exercised in the early centuries through visitations and the annual Chapter, it is likely that such technological innovations were implemented elsewhere. In Italy, for example, where the irrigation of grass and arable fields 'was to become, before 1500, the admiration of Europe', water meadows were in use in 1138 at the Cistercian monastery at Chiaravalle near Milan (Jones, 1971, 359; Braudel 1992, 46).

Water Meadows

It has been suggested that there were water meadows at Croxden in 1372 when a leat 180 perches long (about 900m) was constructed from 'the abbey wall to where Croxden Brook crossed the Rocester road' (Stuart 1984, 16-17). However, Hill and Laurence put the length at 280 perches (c1400m) with another being cut the following year measuring

125 perches (about 630m), but neither associates the leat with a water meadow (Hill 1885, 304; Laurence 1951-54, B62). The course of this leat is not at all clear, but the reference to Rocester would suggest that it was to the east of the abbey, possibly near the River Churnet. Water meadows are recorded at this time on the banks of the River Churnet in 1372, not the Croxden Brook (ibid) although given the evidence for water meadows at other monastic sites it is probable that they also existed beside the Croxden Brook (Brown 2003, 84-92). These would probably have been rather rudimentary, unlike those that were later constructed at Croxden in the 19th century. The medieval examples may well have been similar to 'floating upwards' meadows which leave little or no earthwork evidence, whereby a water source was dammed downstream resulting in the flooding of the surrounding flood plain.

Water Management within the Precinct

The source of water for the abbey was the Croxden Brook. Prior to the canalisation of the brook it was probably a braided channel meandering along the valley floor. Later, the water was controlled by two dams; the first was at Great Gate where the present causeway across the valley formed a dam and water was directed along the present course of the brook and also along a contour leat along the northern side of the Croxden valley; this leat provided water to the monastery.

The field on the western side of the precinct dam was known in 1722 as Pool Meadow, and some of this area was clearly a fish pond. The deeply incised leat around the northern side of the dam is monastic in origin and was probably cut as an overflow leat, or to allow the pond to be drained on occasions. This pond burst its banks and was drained on several occasions throughout the medieval period. In 1346, for example, the pond burst its banks and, in the words of Laurence, 'necessitated a skilful system of plumbing' (Laurence 1951-54- B59). Hill is more explicit, describing the work as requiring 'a pipe most fitly strengthened *cum gemellis*' [with hinge] (Hill 1865, 303). On the 1722 map a pond is shown on the east side of the precinct dam, but whether this is monastic is unclear. It was known as 'Flash' on the map and may have been used as a reservoir to prevent the valley flooding further east.

The course of the water within the precinct can be reconstructed from the 1722 estate map (Fig 30). The leat entered the precinct at the 'water gate' from where it flowed along the southern side of Loaveners Yard where it branched south and further east. The southern branch formed the mill race and provided water to the mill before ultimately emptying back into the Brook. The other branch continued east and then south along the west range of the abbey. There are indications that water was diverted west from this leat and provided water to an orchard. Although the detailed water courses within the claustral range is not entirely clear, the map shows that it was also culverted along the south range (where there was the kitchen, refectory and *lavatorium*, and further east to the reredorter, abbot's chamber and infirmary).

The post-Suppression Landscape

The years following the suppression of the monastery in 1538 was a period of great change as the landscape was transformed for a new, secular use, which had little regard for its former sanctity. Although there was clearly much destruction and pilfering with some buildings left to decay or used as a ready quarry, there were also parts of the monastery that were clearly retained and incorporated into a secular house and garden set within a wider parkland. Following the earlier destruction there was a period of consolidation that spanned the later 16th century when the site of the abbey was in the hands of the Foljambe family. This was also a time when the new secular owners of monastic sites could 'mould' the landscape to their own ideals and beliefs and reflect trends elsewhere in the country.

Figure 32. South transept of the monastic church. The cloister is in the foreground with the impressive door into the church in the angle.

Evidence that parts of the abbey were deliberately retained can be seen in the church's west front where the external wall abutting it was dismantled leaving a scar on the front (Fig 29). Elsewhere, the south transept was also retained as well as the south wall of the church and the inner wall of the east range, and possibly the west range (Fig 32). The site of the new secular house was probably in the south range where there is evidence in the stonework of a 16th century conversion to a dwelling and where a later house is shown on the 1722 map (Duggan and Greenslade 1970, 229). The retention of the

infirmary chapel is intriguing, particularly since the *capella anti-portu*s (gatehouse chapel) was also retained as the parish church. It may, however, have been used as a private chapel by the Foljambe family, some of whom retained links with the 'old faith'. Indeed, as noted above, three members were imprisoned for being recusants (Hasler 1981, 144; RCHM 1966, 63-4) .

Tudor landscape gardens of the mid and later 16th century invariably incorporate features such as terraces, mounts, ponds, rabbit warrens, water gardens and wilderness gardens (Henderson 2005, 122-41). At Croxden many of these elements are evident from the earthwork and cartographic evidence. The cloister probably became a privy, or 'ruin' garden with elements of the monastery forming a suitable backdrop. Beyond the cloister there were further gardens to the south, west and north of the conventual buildings. To the south of the cloister and near the former abbot's chamber, in the area noted as 'old gardens' on the 1722 map, there is a terraced garden which overlooks the brook. Below the terraces there is a flat rectangular garden with a small mount, a viewing platform or 'seat', in the south-east corner, while the area further south, on the flood plain probably formed part of the garden landscape. Further west, are the silted remains of a pond with a terrace on the north side; although the pond was referred to as 'flash pond' in 1722, it also probably formed part of the designed landscape (Fig 7).

Access to the northern gardens from the privy garden was through the door on the south wall of the church beside the south transept and then possibly through the impressive west front. This area was known in the 18th century as Coney Greaves, and here there are the familiar elongated mounds of a rabbit warren set within a rectangular enclosure. To the west of the warren, close to the church is a circular bank, which probably represents a dovecot. Also beyond the warren, bordering the northern side of the precinct is a terraced walk-way, which affords views over the warren to the ruins of the abbey. The east end of the church was, as Hall has argued, used as the mausoleum of the earlier medieval patrons (Hall 2007). The juxtaposition of the church, the warren, the monks' cemetery which probably lay to the east and north of the church, and the gatehouse chapel may, as Everson has discussed, have had symbolic meanings beyond the mere convenience of place (Everson 2007, 26-28).

8. CONCLUSION

The main focus of earlier studies of monastic sites has tended to concentrate on the standing remains of the church and conventual buildings, with little regard being paid to the wider landscape. However, the growing number of more detailed analystical surveys of precincts and the wider landscape emphasises the value of such an approach and highlights the complexity and diversity of land-use in such spaces. The research at Croxden adds to our understanding, not only of the monastic landscape, but also of what became of the abbey, its buildings and lands, following its Suppression. Detailed architectural analysis also adds to this synthesis, since it not only provides a date for some of the buildings but also points to their probable use, and thus helps define functions within the precinct.

9. METHODOLOGY

The survey and investigation at Croxden Abbey was undertaken by Graham Brown and Elaine Jamieson as a level 3 survey (EH 2007) using a Trimble 5700 differential GPS and a Trimble 5600 total station electronic distance-measurer (EDM), which were used to pick up much of the archaeological and topographical detail. A network of control points was also established from which taped offsets were measured to features that were not surveyed using either the GPS or the EDM.

The buildings were investigated by Barry Jones of the Architectural Investigation team based in the National Monuments Record Centre at Swindon.

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Figure 8. The 1722 estate map of Croxden (Macclesfield Archive)

Figure 9 Earthwork suvey of Croxden (1:1000 reduced)