

Evidence for the Dissolution of Thorney Abbey: Recent Excavations and Landscape Analysis at Thorney, Cambridgeshire

By JOHN THOMAS

with contributions from STEFFANI BECKER-HOUNSLOW, JENNIFER BROWNING, NICHOLAS COOPER, PAUL COURTNEY, ANTHONY GNANARATNAM, ANGELA MONCKTON, GRAHAM MORGAN, DEBBIE SAWDAY *and* SALLY-ANN SMITH

THE FIRST significant archaeological excavation within the village of Thorney, Cambridgeshire, has revealed a sequence of occupation deposits associated with the former Benedictine abbey and reflecting some 600 years of use. Thorney Abbey was surrendered at the Dissolution of the Greater Monasteries in 1539 and over successive years many of the buildings were demolished and the stone removed for re-use elsewhere. As a consequence very little is known of the abbey's layout and organisation. In the Middle Ages Thorney was surrounded by fen wetland and the excavations reported on here were located near the northern edge of the former island, slightly to the north of the abbey church and suspected location of the main abbey precinct. The long sequence of deposits offered an important insight into the changing character of fen-edge life on Thorney from the 11th century onwards. Occupation remains and a sequence of contemporary structures indicated that despite the apparently peripheral location of the site in relation to the main abbey complex, life was rarely static on the island's northern edge. It is suggested that the structures and related remains were once part of the abbey's outer court. Dissolution deposits reflected the dismantling of windows and the salvage and recycling of lead came. A re-used architectural fragment, possibly a pillar base, had been converted into a lead recycling hearth and the immediately surrounding area was covered with the remains of the leadworking as well as a large assemblage of broken, high-quality painted window glass, the end result of the lead removal. Late 16th-century structural evidence on the site has also shed light on some of the earliest secular occupation on the island following the Dissolution. A combination of the finds assemblages recovered during the work and documentary research has enabled a picture of life at medieval Thorney to be drawn for the first time. Documentary and cartographic work has also helped to understand the wider fenland context.

The village of Thorney lies approximately 20 km east of Peterborough on the crossroads of the A47 and the B1040 Whittlesey to Crowland road, in Cambridgeshire (NGR TF 2827 0429; Fig. 1). In the Middle Ages, before

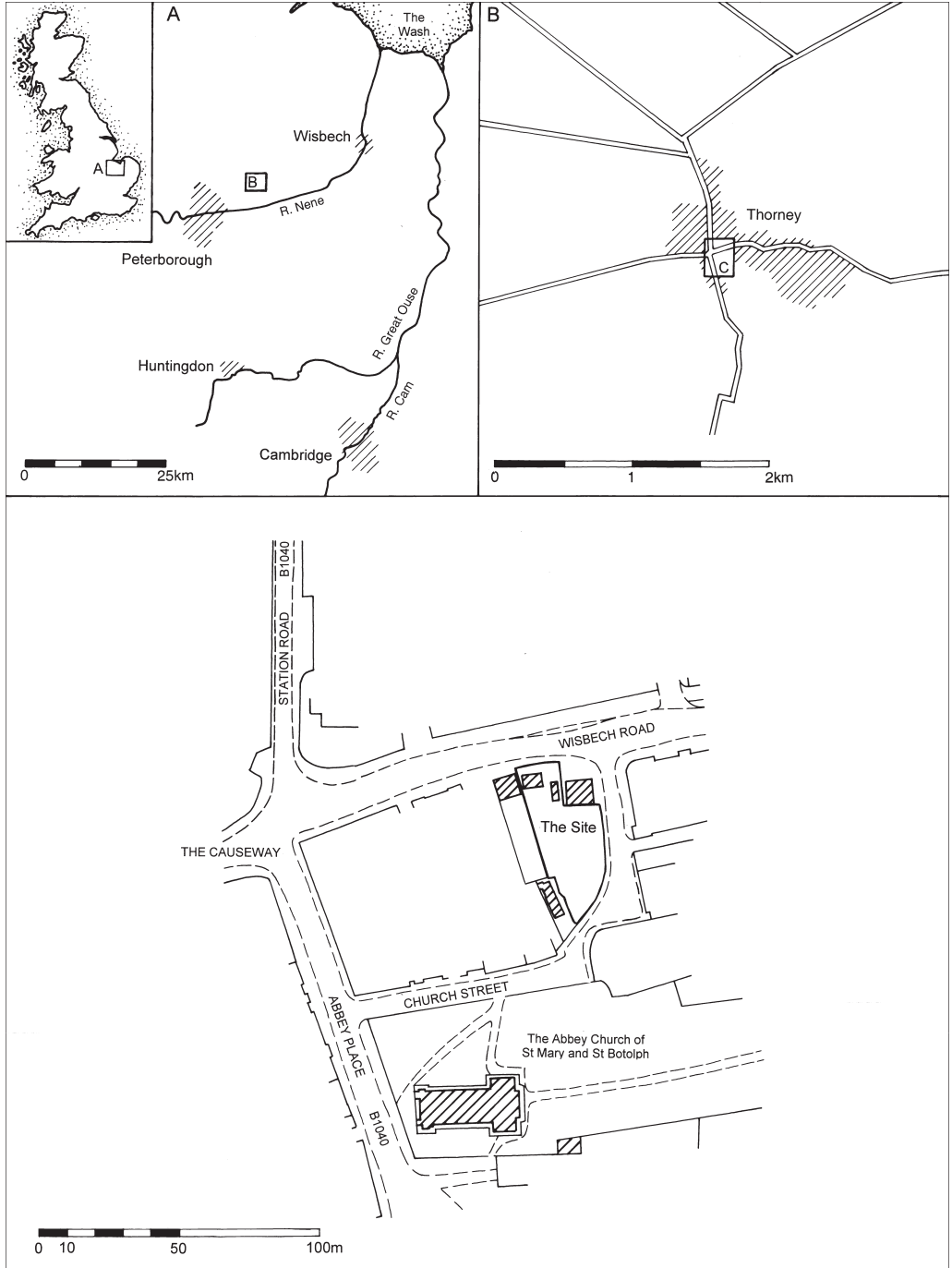


FIG. 1

The location of Thorney. *Drawn by Michael Hawkes.*

large-scale fen drainage, Thorney was a low island surrounded by marshland upon which a Late Saxon hermitage existed. Following the demise of the hermitage, a Benedictine monastery was founded on the island by Æthelwold, as part of the monastic reform movement of the 10th century.¹ The abbey became famous as one of the great 'Fen Five' monasteries alongside those at Peterborough, Ramsey, Ely and Crowland, and flourished until it was surrendered in 1539 (Fig. 4). Little archaeological work has taken place in Thorney and the surviving documentary evidence provides a relatively patchy account of the monastery, and of life on the island, particularly in the periods leading up to and immediately after the Dissolution. Recent development proposals for a small plot of land close to the centre of the village, however, prompted a programme of archaeological work resulting in the first significant excavation within Thorney's historic core.

The site is located off Church Street, a lane that runs alongside the northern edge of the present churchyard, and lies some 75 m north-east of the abbey church remains, incorporated into the present parish church (Fig. 2). The plot, until recently an orchard, covers an area of approximately 0.07 ha. and lies at a height of c. 4 m O.D. The ground slopes gently from south to north towards the former fen edge. Observation of the developer's geotechnical test pits by Ben Robinson, the Peterborough City Council Archaeological Officer, indicated the presence of well-preserved archaeological remains and this was confirmed by a trial-trench evaluation undertaken by University of Leicester Archaeological Services [ULAS] in 2001 (Fig. 3).² Despite efforts to enable the preservation of the site's archaeology *in situ* through a re-design of the proposed foundations, this proved unfeasible due to the shallowness of the covering deposits in the area of highest potential. Instead, a programme of work was implemented that involved full excavation and recording of those deposits that were considered to be most vulnerable to damage from the development. In practice this focussed excavations on the southern half of the area, at the top of the slope, where archaeological remains existed only 0.4 m beneath the modern ground surface. Subsequent to the excavation, in response to further development proposals, a second phase of evaluation was undertaken comprising two trenches on the northern edge of the development area.³

This report presents the main results of the excavation. Specialist finds information has been integrated into the main descriptive text in an attempt to provide a more contextualised account of the excavation findings. The bulk of the evidence reflected a sequence of occupation on the northern fen edge of the island of Thorney spanning some 600–700 years, from the Late Saxon Period through to the 19th century. A scatter of residual Roman material was recovered during the work, suggesting the nearby presence of settlement from this period.

¹ A. Prescott, 'Introduction', 1–8 in A. Prescott, *The Benedictinal of St. Aethelwold* (Cambridge, 2003).

² J. Thomas, An Archaeological Evaluation on Land at Church Street, Thorney, Cambridgeshire (unpubl. rep. no. 2001/99, ULAS, 2001).

³ A. Hyam, A Further Phase of Archaeological Evaluation on Land at Church Street, Thorney, Cambridgeshire (unpubl. rep. no. 2004-030, ULAS, 2004).

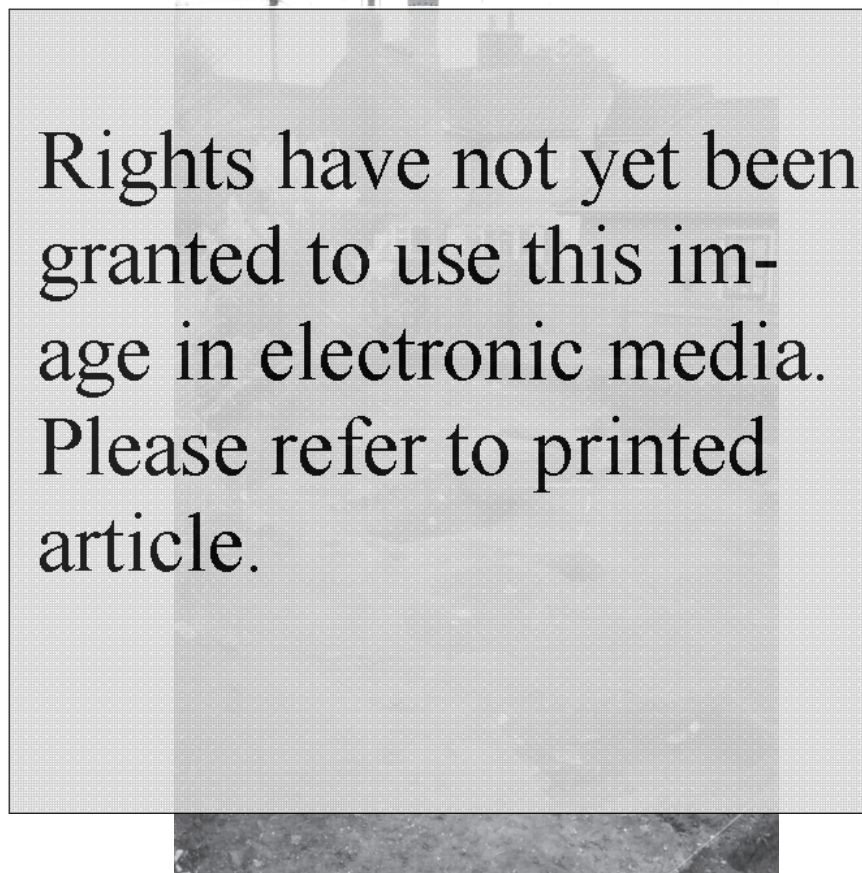


FIG. 2

General view of the site, facing west. Part of the parish church can be seen above the roofline of the house in the background. Copyright University of Leicester Archaeological Services.

DOCUMENTS, MAPS, HISTORY AND TOPOGRAPHY

THE MAIN DOCUMENTARY AND CARTOGRAPHIC SOURCES

The main manuscript source for the history of Thorney Abbey and its estates is the two volume cartulary, compiled around 1325, known as the Red Book of Thorney. It has been utilised by the main secondary sources: Warner's history of the abbey, the Victoria County History, *Monasticon Anglicanum* and Raban's comparative study of the Crowland and Thorney estates.⁴

⁴ Cambridge University Library [hereafter CUL], Manuscript 3020-1; R. H. Warner, *The History of Thorney Abbey, Cambridgeshire, from its Foundation to the Dissolution. Together with some notice of the modern parish, and baptismal register of the French colony 1658-1724* (Wisbech, 1879); D. M. B. Ellis and L. F. Salzman, 'Abbey of Thorney', in L. F. Salzman (ed.) *Victoria County History [VCH], Cambridgeshire and the Isle of Ely*, 2 (London, 1948), 210-17; N. E. S. A. Hamilton (ed.), *Willelmesbiriensis Monachi De Gestis Pontificum Anglorum Libri Quinque* (Rolls Ser. 53, London, 1870), Vol. II, 598-613; S. Raban, *The Estates of Thorney and Crowland: A Study in Medieval Monastic Land Tenure* (Cambridge 1977).

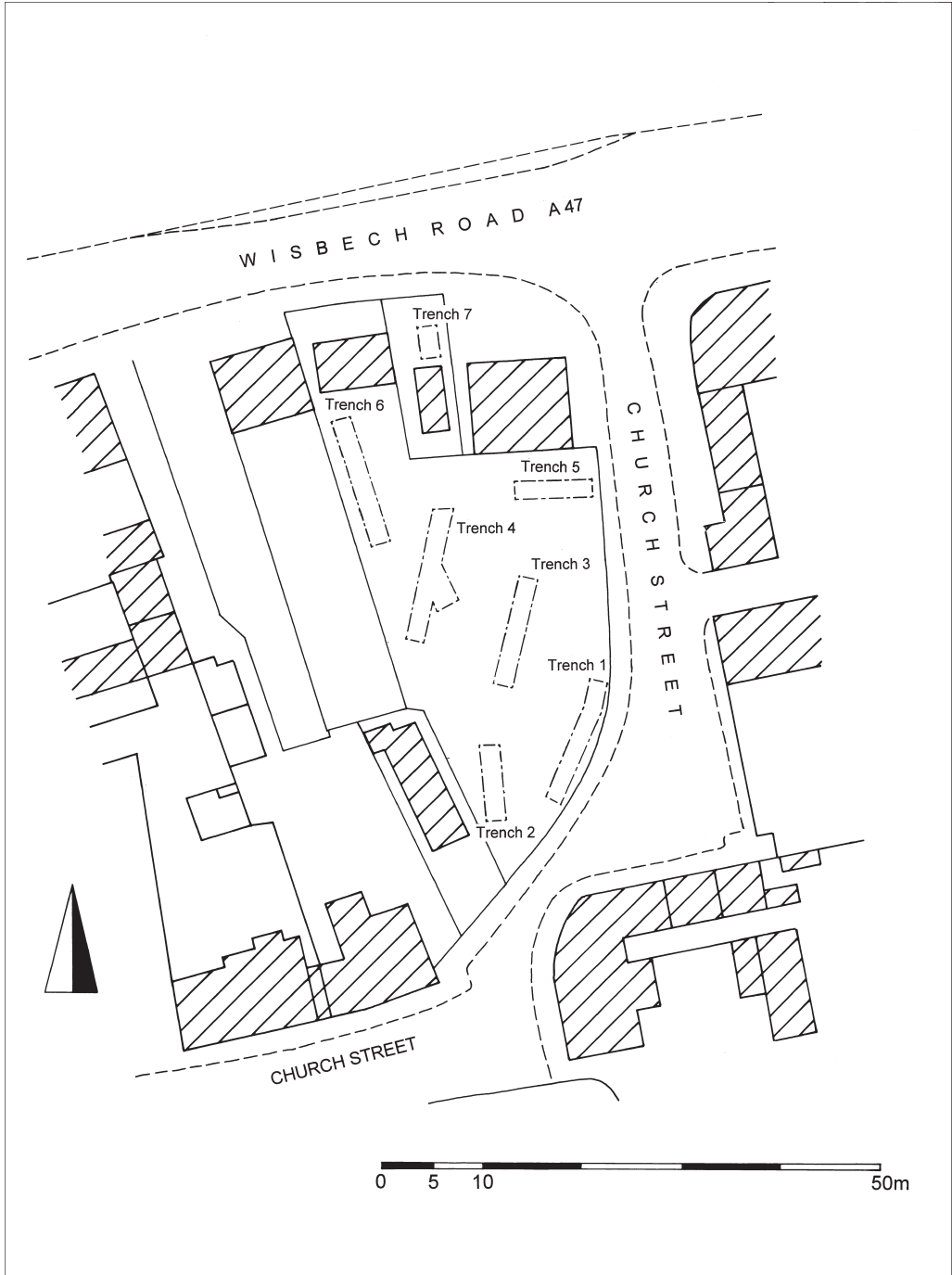


FIG. 3

The site within Thorney showing the location of the trial trenches. *Drawn by Michael Hawkes.*

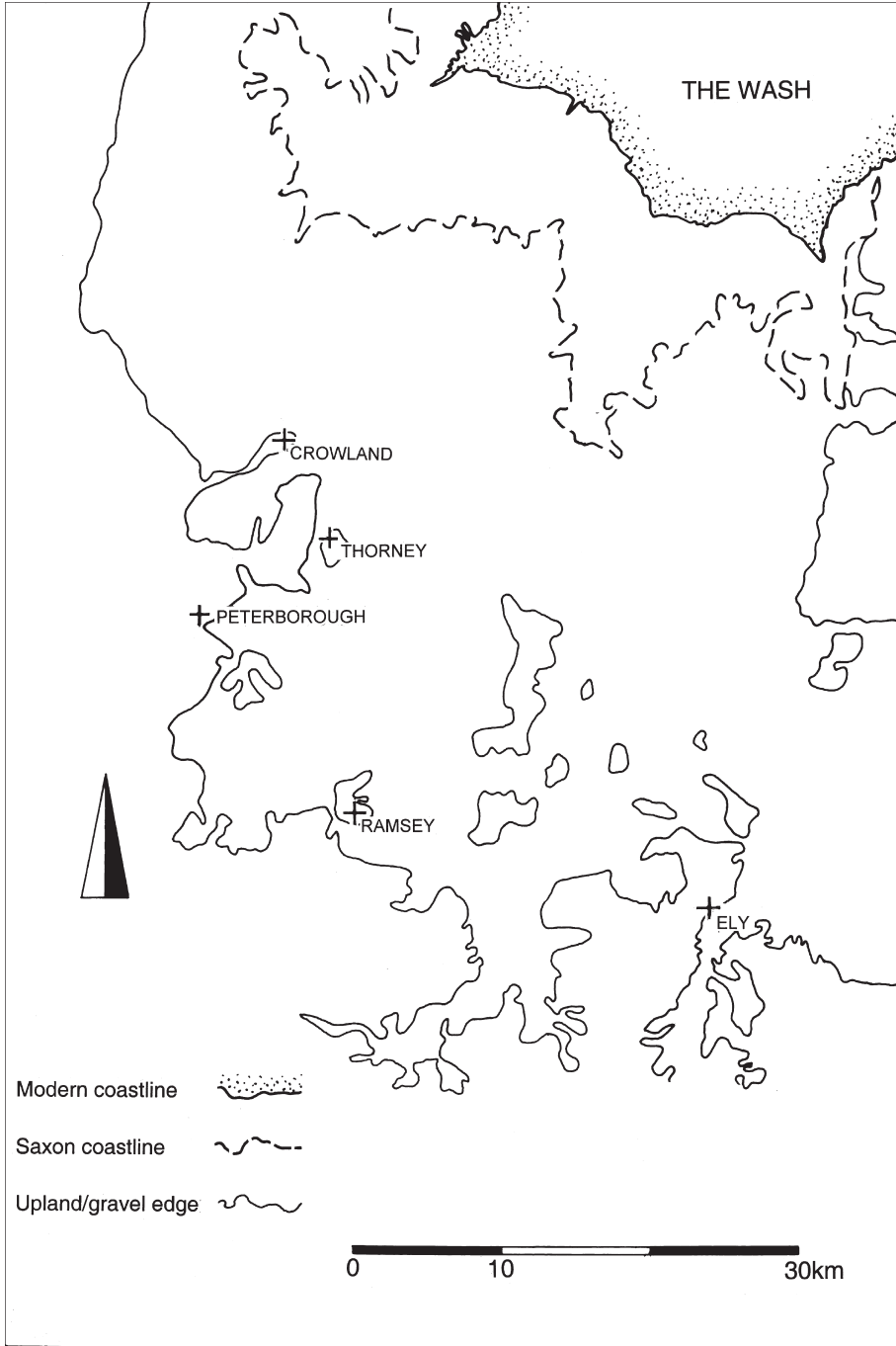


FIG. 4

Thorney Abbey in relation to the 'Fen Five' monasteries.
After M. Aston, *Monasteries in the Landscape* (Stroud, 2000). Drawn by Michael Hawkes.

An account roll for 1441–2, when the abbey was leasing its demesnes, survives in the Westmoreland of Apethorpe (Northants) collection.⁵ Dissolution accounts for the abbey estate and some leases from the last years of the monastery survive in the National Archives at Kew.⁶ Unfortunately, however, no structural survey survives from the Dissolution. An undated survey of Thorney manor, then held by the Russell family, exists amongst the state papers for 1574.⁷ It is endorsed in the hand of Lord Cecil, who was appointed Lord High Treasurer and Chief Minister in 1572 and whose chief dwelling was nearby at Burghley House, near Stamford. The survey's origin and purpose remain a mystery, though it may be a record of an aborted purchase by Burghley who was extending his estate during this period. After 1550 the main source for Thorney is the estate collection of the Russell family now housed in the Bedfordshire Records Office [BRO], though survival of these records is very patchy before the mid-18th century when the archive becomes voluminous. The Russell household records at Woburn were not examined but were extensively used by Thomson, in her studies of the family.⁸

The earliest map of the Cambridgeshire fen dates from the late 14th century.⁹ This map shows several building locations in the fen, indicating settlement on slightly higher ground in the fen surrounding the island of Thorney, well before general drainage in the 17th century. For this study, the so-called 'Wisbech Hundred' map was particularly useful.¹⁰ Its annotation indicates that it was renewed (*renovata*) twice in 1597 and 1657, but it appears to depict the Cambridgeshire fen landscape in the decades around 1500: it illustrates monastic chapelries such as Throchenholt and Singersole as still standing near Thorney, but post-dates the construction in 1478 by Bishop Morton of the drain known as the New, or 'Morton's', Leam.

Useful catalogues exist of large-scale fenland maps, and Cambridgeshire estate maps.¹¹ The earliest Thorney estate map dates from the early 17th century. Unfortunately it is damaged. It appears to show the pre-Vermuyden drainage system and the limits of Thorney Island. Few buildings are depicted on either the island or fen but this may be a reflection of its small scale (1:61,350) and purpose. It appears undated although the Huntingdonshire Records Office

⁵ Northamptonshire Records Office [NRO], W (A) 5/II/5.

⁶ National Archives, Kew Gardens [NA], e.g. SC6/HenVIII/7287; *ibid.*, Land Revenue Records.

⁷ NA SP12/99/38; *CSPD 1547–80, Calendar of State Papers Domestic* (London, 1856), 491.

⁸ G. S. Thomson, *Life in a Noble House* (London, 1937); *ibid.*, *Family Background* (London, 1949).

⁹ [NA] MPC 45; A. E. B. Owen, 'Isle of Ely, Cambridgeshire and Holland Lincolnshire: Late 14th century', 89–98 in R. A. Skelton and P. D. A. Harvey (eds.), *Local Maps and Plans from Medieval England* (Oxford, 1986).

¹⁰ Map held at the Wisbech and Fenland Museum [WFM]; A. E. B. Owen, 'A fenland frontier: the establishment of the boundary between Cambridgeshire and Lincolnshire', *Landscape Hist.*, 4 (1982), 41–6, and *ibid.*, *op. cit.* in note 9.

¹¹ E. Lynam, 'Maps of the Fenland', in W. Page, G. Proby and S. Inskip Ladds (eds.) *VCH Huntingdonshire*, III (London, 1936), 291–306; A. S. Bendall, *Maps, Land and Society: A History, with a Carto-Bibliography of Cambridgeshire Estate Maps c. 1600–1836* (Cambridge, 1992).

catalogue dates it to 1609 on unspecified grounds. It has been mounted on linen (obscuring the back) and was formerly part of the collection of the Montagu family, Dukes of Manchester.¹² Other significant estate maps of Thorney in the Bedfordshire Records Office date to 1652, 1731–2 and 1756.

THE FOUNDATION AND EARLY DEVELOPMENT OF THORNEY ABBEY

During the Middle Ages, development of the fen wetland created the island of Thorney, upon which early records detail the presence of a small hermitage in the mid-7th century.¹³ The presence of this community, founded by Saxulf, the first abbot of Peterborough, gave the island its earlier name, Ancarig, ‘hermit island’, after the Old English *ancor* for anchorite. Later tradition has it that the anchorite community did not survive Danish incursions of c. A.D. 870, after which the deserted island became infested with thorn bushes and acquired its present name, *Thornige*, ‘thorn island’.¹⁴ The spiritual importance of the site had, however, been retained by virtue of the posthumous celebrity bestowed upon three members of the anchorite community, Tancred, Torhtred and their sister Tona, for the sanctity of their lives in face of the Danes. In particular, Torhtred was regarded as a martyr, further enhancing the religious standing of Thorney.¹⁵

In A.D. 972 Thorney was purchased by St Æthelwold, the Bishop of Winchester, who founded a Benedictine monastery on the island as part of the great round of monastic reform that swept through the country during the later 10th century (Fig. 4). The continued significance of Thorney is reflected in the interest shown in the house by King Cnut. The family of Cnut and Danish leaders who were his close associates, including Cnut’s appointee as Archbishop of Canterbury, Ægelnoth, are all named as some of the earliest persons having privileges of confraternity in Thorney abbey.¹⁶ At its foundation Thorney consisted of a church and buildings for twelve monks. Æthelwold retained the nominal abbacy of Thorney and probably intended to take advantage of the island’s seclusion as a place for prayer and meditation during Lent. His nominee as his immediate successor was Godeman, a monk of Winchester and writer of the famous Benedictional of St Æthelwold. The bishop also gave the monastery its famous collection of saint’s relics, the most famous being the body of Benedict Biscop, the tutor of Bede and founder of the monasteries of Wearmouth and Jarrow. Major refurbishments to the abbey complex were undertaken by Abbot Gunther (1085–1112) following the Norman Conquest. He oversaw the rebuilding of the church, completing the chancel, tower and transept. Some indication of the transformation of the island from its former thorn-infested state is

¹² Cambridgeshire Records Office, Huntingdon branch [CROH], LR24/370.

¹³ C. R. Hart, *The Early Charters of Eastern England* (Leicester, 1966), 165–86.

¹⁴ P. H. Reaney, *The Place-Names of Cambridgeshire and the Isle of Ely* (English Place Name Soc. 19, Cambridge, 1943), 250.

¹⁵ D. M. B. Ellis and L. F. Salzman, op. cit in note 4, 210. Originally cited in ‘The Red Book of Thorney.’ University Library, Cambridge.

¹⁶ *Ibid.*, 210–11. Originally cited in the ‘Thorney Gospel Book’, Add. MS. 40000: see *Cat. Of Adds. To MSS. In Brit. Mus.* 1916–20, 276–9.

provided in the early 12th century, by William of Malmesbury, who described Thorney as an image of paradise with lofty trees, orchards and vineyards.¹⁷

As the abbey developed, various abbots undertook programmes of building and rebuilding within the abbey complex. The Red Book of Thorney records the various episodes of growth and alteration. These include the work of Abbot Robert (1217–37) who built the Lady Chapel; Abbot David (1238–54) who built the great gatehouse, a great granary, a thatched bakehouse, and a chamber added to the north end of the guest hall; Abbot Yaxley (1261–93) who was responsible for the abbot's 'chamber' by the cemetery at the west front of the church as well as a new refectory, brewery and malthouse; and Abbot Odo (1293–1305) who added a chamber with chimneys and two chapels (one above the other) to the guest quarters, rebuilt the refectory and started to rebuild the chapter house.¹⁸

Abbot Clopton (1305–23) undertook a major rebuilding campaign and provided many new vestments and fittings.¹⁹ He finished the rebuilding of the chapter house and refurbished the Lady Chapel with new window glass and a painted sculpture (presumably in wood) of the Tree of Jesse. New buildings during this period included a noble chamber and attached chapel for the use of the abbot. It was located over the cloister and next to the church and decorated with carving, paving (*pavuris*) and painting. The abbot also raised the walls and enlarged the windows and chimney of the abbot's hall and decorated it with carving, painting and wooden panelling. He built a new hall in the guest complex and a long granary (with solar and cellar) for corn and other foodstuffs, rebuilt the old dormitory with higher walls, a new roof and larger windows, and added a new dormitory between the old one and the infirmary gable. A passage (*tresentia* or *deambulatoria*) was added to the side of the old dormitory towards the garderobe in order to exclude the fetid air. Elsewhere, an unlocated deambulatory (?gallery or arcade) was extended towards a courtyard. Old and ruined chambers, and an adjoined great chamber (unlocated) were renovated and a new garderobe constructed. New outbuildings included a horse-mill, brewery and malthouse. Two great bronze cauldrons were provided for the

¹⁷ Hamilton (ed.), op. cit. in note 4, 326.

¹⁸ J. Caley, H. Ellis and B. Bandinell (eds.), *Monasticon Anglicanum*, II (London, 1817–30), 595; Warner, op. cit. in note 4.

¹⁹ Abbot Clopton also undertook various building works on Thorney's outlying manors and on various properties in Thorney Fen including Planter, Wryde and Bar. These last three properties may be regarded as granges though never described as such in the abbey records. At Planter, he oversaw the completion of previous building-work including a hall with chambers and an oratory (attached to a chamber at the head of the hall). It was farmed for £10 6s. 10d. in 1441–2 (NRO W(A)5/II/5). At Wryde, the abbot built a hall, chambers and kitchen, with an oratory and chimney attached to the superior chamber, and all enclosed by a great ditch. Other closes and a *vaccaria* (cattle farm) were also created and enclosed by ditches. He also established a *bercaria* (sheep farm) in the marsh, possibly at Knarr Fen, and enclosed a great area of fen there in the hope it might become through time arable or meadow. At Barr he built diverse buildings including a hall, chambers and an oratory. A special chamber was given a lead roof and a chimney. The abbey's post-Conquest estates included Thorney peat fen and various Midland manors but with a core group (Whittlesey, Waternewton, Stanground, Woodston, Farcet and Yaxley) concentrated on the western fen edge. Thorney also had important fishing rights on Whittlesey Mere, and had five fishing 'cotes' located on its banks in the time of abbot Clapton, 1305–23 (Warner, op. cit. in note 4, 193–4). It is possible that some abbey servants or leasees of the demesne dwelt on the island but there seems to be no evidence of there ever having any customary tenants or a sizeable secular settlement.

brewery, one cast at the abbey and the other brought from London, to replace the former lead vessels. A great pond was also constructed in a wood at a place called 'Asschele', which is unlocated but possibly on the island.²⁰

THE DISSOLUTION AND AFTER

The abbey was dissolved in December 1539, the community pensioned off and the site of the abbey and its manor were leased for 80 years to Walter Williams or Crumwell of Chatteris, a nephew of Thomas Cromwell.²¹ In 1539–40 the abbey and manor of Thorney were valued at £34 13s. 4d. comprising £28 13s. 4d. rent from Crumwell and £6 from Simon Hacke for Thorney Bar (Bar Pastures). The total monastic estate was valued at £542 13s. 7d.²² In 1541 the crown reduced Williams' lease to a 21-year term,²³ and in 1550, his lands were granted in perpetuity by the crown to John Russell, first Earl of Bedford, along with Thorney Bar, formerly held in lease by Simon Hacke.²⁴ None of the abbey's granges in Thorney Fen can be traced after the Dissolution and they may have all been abandoned, perhaps because of worsening drainage.

A survey of 1574 describes the Thorney mansion house, presumably built after 1550, as being made of stone, measuring 60 × 20 feet with a slate roof and lying 'upon a faire draine' extending east and west.²⁵ The house still stands, and was formerly owned by the National Trust,²⁶ although it is now in private ownership. Its mullioned and hooded windows appear post-monastic in date but it may have incorporated remains of the medieval abbot's lodging, which was sited in its vicinity.²⁷ A small amount of manorial documentation survives for the late 16th and 17th centuries, mainly rentals and court rolls, in the Russell archives.²⁸ Unfortunately, these shed little light on the settlement or exploitation of the Thorney upland at this time. It is far from clear, for example, how many tenants lived within the wider manor rather than just leasing summer pasture or fishing rights.

The church, to the east of the mansion, is described as roofless and with half a steeple but the rest of the abbey ruins are not described in detail. The upland ground was said to have a thousand oaks covering 160 acres and worth £500, with 80 acres described as being very good pasture (6s. 8d. per acre), well fenced with ancient quickset hedges. Further good pasture brought the total upland to 600 acres valued at £1,000 in total, including £200 for the stone. The 16,000 acres of Thorney Fen with its sedge, flag and reed beds, willow and alder woods of five years' growth was worth £200, while the land

²⁰ CUL, Add. 3021, fos. 459–61.

²¹ NA LR 14/892/4; Thomson (1949), op. cit. in note 8, 157–61.

²² NA SC6/HenVIII/7287.

²³ J. S. Brewer, J. Gairdner and R. H. Brodie (eds.), *Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII*, xvi (London, 1898), 725.

²⁴ Calendar of Patent Rolls [CPR] 1549–51 (London, 1925), 43.

²⁵ Thomson (1949), op. cit. in note 8, 180.

²⁶ N. Pevsner, *The Buildings of England: Bedfordshire and the County of Huntingdon and Peterborough* (London, 1968), 352–3.

²⁷ D. M. B. Ellis and L. F. Salzman, op. cit. in note 4, 214.

²⁸ Bedfordshire Records Office [BRO], Russell Collection, Box 277.

was valued additionally at 6d. per acre or £400: 'which in memory having been dry and firm lye now surrounded (for the most part) in water, by reason of the drains . . . Yet in summer, except very seldom, they are dry of themselves'.²⁹

The post-medieval 'island' road layout, based on a crossroads, was already apparent on the large-scale map attributed to 1609.³⁰ It remains unclear how the roads relate to relict medieval features such as precinct walls. A survey and map of 1652 (Fig. 5) enables the first detailed reconstruction of settlement on the high ground of Thorney.³¹ At the southern end of the upland in 1652 lay two farms (both shown on Fig. 6), Toonams (114 acres) and that now known as Hill Farm (98 acres). Only the latter is illustrated on the ?1609 map but a *vacaria* (cow farm) de 'Tornam' was farmed for 49s. 6d. in 1441–2.³² Three other farmhouses lay near the church (140 acres, 109 and 81 acres respectively), clearly of post-Dissolution origin. Otherwise, the antiquity of these farms is undetermined. Minor holdings on the high ground included two further houses. All the upland

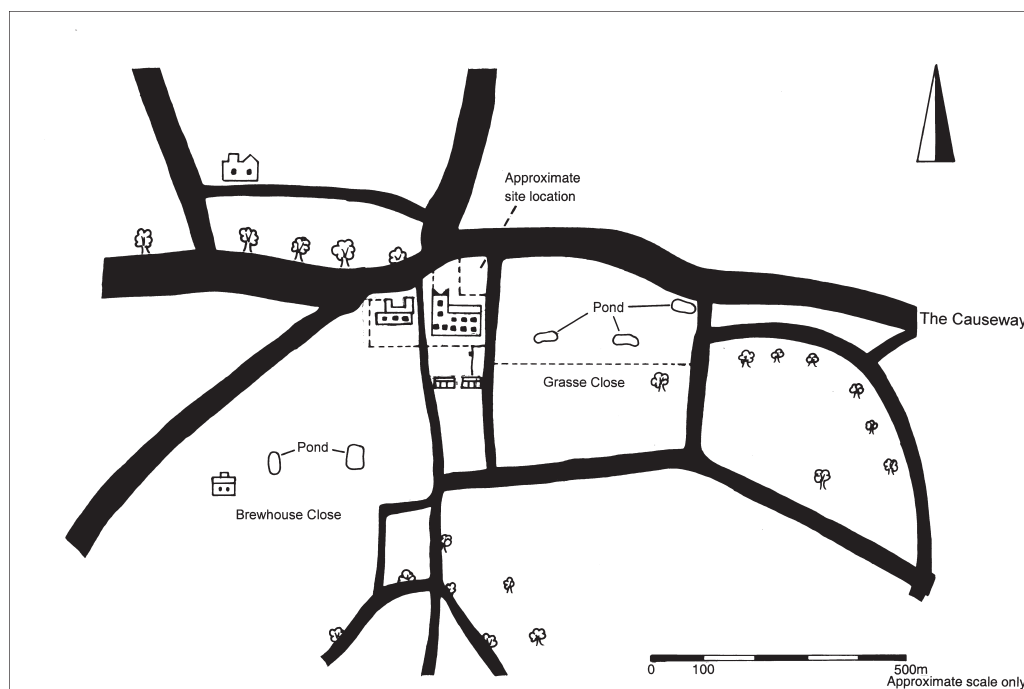


FIG. 5

Extract from Benjamin Hare's 1652 map of Thorney (N. to the top) showing approximate location of the site. Drawn by Michael Hawkes. Reproduced by kind permission of the Marquess of Tavistock and the Trustees of the Bedford Estates.

²⁹ NA SP12/99/38.

³⁰ BRO Russell Collection, Box 277: survey and R1/144A.

³¹ CROH LR24/370.

³² NRO W(A) 5/II/5.

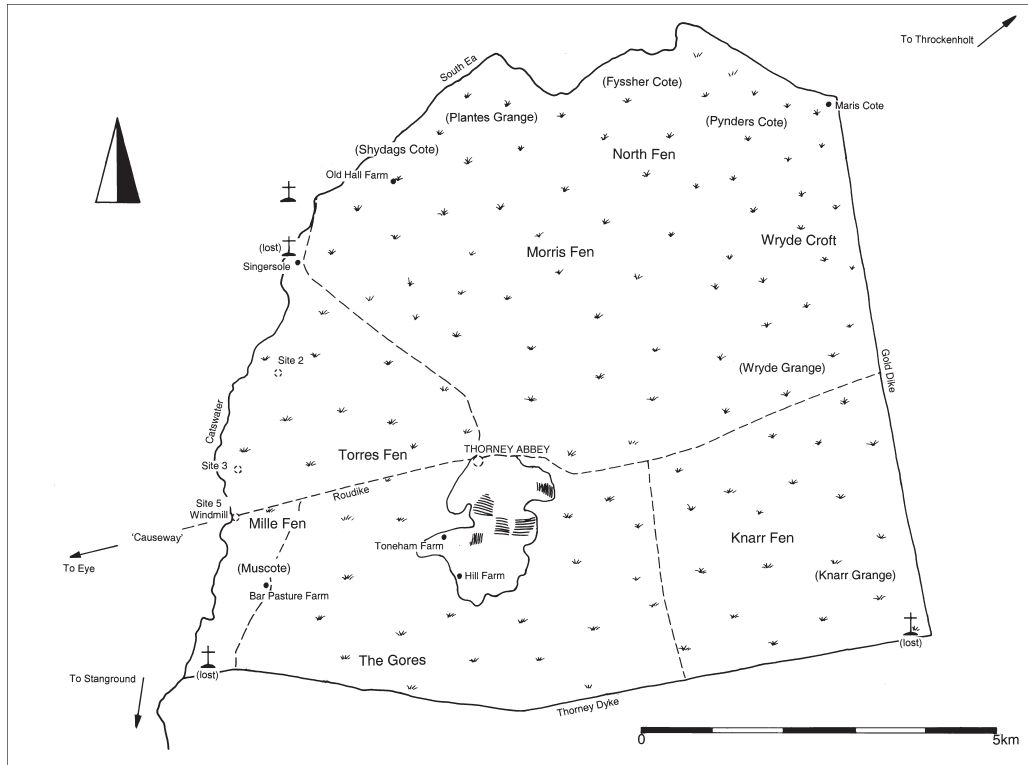


FIG. 6

The medieval parish of Thorney and Thorney Fen: a reconstruction based on early documentary and cartographic sources. *Drawn by Michael Hawkes.*

surnames appear to be of English origin with the Protestant immigrants farming the reclaimed lands out in the fen. The excavated area was part of a small enclosure north of the restored church. It may have been part of Francis Selby's 81-acre farm which included a pightle (small close) at the rear, and two adjoining closes called 'Grasse Close', which are identified on the map.

THE TOPOGRAPHY OF THE ABBEY COMPLEX AND THE ISLAND

In the late 16th century, much of the upstanding remains of the former abbey buildings at Thorney were quarried for building stone and with the exception of part of the original nave, now incorporated into the parish church, all surviving traces were removed.³³ The modern topography of the village holds a number of clues to the layout of Thorney Abbey which it is reasonably safe to suggest, would have been influenced by the standard Benedictine plan adopted by many post-Conquest monasteries.

³³ Thomson (1949), *op. cit.* in note 8, 176.

According to this plan, the arrangement of buildings around the central 'cloister' was fairly uniform.³⁴ The cloister was essentially an open space around which, flanking walkways provided access to the surrounding ranges. The monastic church, oriented E.-W., normally formed the northern range of the cloister. The position of the cloister was dependent upon adequate drainage, although the preferred location was to the south of the church from which it could gain shelter and light could be provided, for many tasks were undertaken in this part of the abbey complex. Opposite the church the southern cloistral range consisted of the monks' refectory, whilst the western and eastern ranges were usually used for abbot's lodgings and the monks' dormitories respectively. The main abbey kitchen was separate from the main cloister, but generally adjacent to the refectory. Also beyond the main cloistral formation, the infirmary would have been located in a subsidiary enclosure. The main non-religious area of the abbey precinct made up the outer court and comprised a variety of domestic and industrial buildings such as guesthouses, stables, brewhouses, bakeries and craft-workshops.

At Thorney, topographical evidence, supported by the results of several archaeological observations, has hinted at the general location of elements of the abbey complex. The surviving remains of the former abbey church nave, now incorporated into the current parish church, provide a useful starting point here, as the location of the cloister in relation to the abbey church was evidently an important aspect of the site's architecture. The modern topography to the south of the church involves an arrangement of buildings around a square green, suggestive of a semi-fossilisation of the cloistral layout. This suggestion is supported by surviving medieval structural remains, evident in 17th-century buildings to the south of the church, perhaps indicators of the southern and eastern ranges of the former cloister.³⁵ Observation of drainage trenches to the south of the church also revealed remains interpreted as those of the cloister walk.³⁶ Separate observation during the laying of a gas pipe in Church Street revealed twelve disarticulated medieval burials demonstrating that the abbey cemetery extended beyond the current 19th-century boundary wall.³⁷ A recent trial-pit evaluation on the side of Church Street opposite to the current site revealed evidence of possibly medieval demolition layers suggesting the former presence of buildings in the vicinity.³⁸ It is clear from the documentary sources, that much building work was undertaken as the abbey developed; however the location of much of the abbey layout is not specified. One relatively well-placed building may be the abbot's lodging, located slightly to the west of the church.

³⁴ R. Gilchrist, *Monasteries for Men (Post Conquest)*. Monument Protection Programme, Monument Class Description (English Heritage, 1989): <http://www.eng-h.gov.uk/mpp/mcd/postmon.htm>

³⁵ G. M. G. Woodgate, 'Thorney', in R. B. Pugh (ed.), *VCH Cambridge and the Isle of Ely*, 4 (London, 1953), 219–24.

³⁶ I. Meadows, Nene Valley Research Committee [NVRC] Annual Report 1991–1992 (Peterborough, 1993).

³⁷ Peterborough City Council, Sites and Monuments Record [SMR], Rec/No 03053a.

³⁸ Land to R/O 8 & 9 Church Street, Thorney, Peterborough: An Archaeological Investigation (unpubl. rep., Archaeological Solutions Ltd., Hertford, 2004).

It may also be reasonable to predict the position of the great gatehouse, which was presumably associated with the main thoroughfare on to the island from the mainland. A mid-12th-century Peterborough monk included Thorney in a list of fenland monasteries accessible only by water.³⁹ Thorney's access to the west was seriously restricted by its lack of rights of way across the lands of Peterborough Abbey. By the 13th century, the main access to the abbey was by water, notably from the abbot's manor at Stanground. A number of unfree tenants at this manor, as well as at Water Newton, owed water carriage to Thorney amongst their manorial services. Amongst these were five cottagers with a boat at Stanground who were obliged to carry guests to the abbey at the will of the lord.⁴⁰ According to Peterborough sources, the abbey found that Stanground was increasingly crowded with visitors and repaired the 'Roudike', which ran westward from the abbey to the Catswater. Unfortunately this event is undated but was perhaps around 1300 as a series of failed agreements and disputes between Thorney and Peterborough can be dated from 1306 onward. These relate to Thorney's rights of access to and from Peterborough's manor of Eye and beyond to Peterborough. They were not finally settled until 1348 when an agreement with Peterborough was confirmed by the crown. This gave Thorney right of access along a causeway 15 feet wide to Eye but obliged them to keep the way in repair with materials from their own lands.⁴¹

The abbey had also relocated its windmill by 1306 to the westernmost end of the dyke at a crossing of the Catswater called 'Harlottisforth' leading Peterborough to forbid its use by its own tenants on the west bank.⁴² As a 1307 dispute indicates, Thorney had developed a land causeway across the fens running from the abbey to Eye and then Peterborough. Thorney was said to send corn to its manors (presumably for milling) and receive purveyances via this highway.⁴³ This causeway is still used by the modern A47 road. The easternmost stretch of causeway probably took the form of the bank-top along the 'Roudike' watercourse.

It is unclear to what extent the abbey precincts were enclosed other than by water. The great gatehouse, built by Abbot David (1238–54), is likely to be located on the western side of the island, but the site of the ferry landing is not known. A source of uncertain reliability (citing the early 18th-century Peterborough Abbey cleric and author, Rev. Joseph Sparke) refers to a moat 20 feet broad and a mile in length as defining the precinct.⁴⁴ Recent archaeological work by the Cambridgeshire Archaeological Field Unit has suggested that an angled linear anomaly revealed on aerial photographs south-west of the church

³⁹ H. C. Darby, *The Medieval Fenland* (Cambridge, 1940), 113.

⁴⁰ W. Illingworth (ed.), *Rotuli hundredorum temp. Hen. III & Edw. I in turr' Lond' et in curia receptae scaccarij Westm. Asseruatii*, II (London, 1818), 655–7.

⁴¹ Calendar of Charter Rolls [CChR], v (London, 1916), 82.

⁴² S. Raban (ed.), *The White Book of Peterborough* (Northampton, 2001), 206–7; W. T. M. Mellows (ed.), *Henry Pytchley's Book of Fees* (Northampton, 1927), 2–4.

⁴³ CPR 1301–7 (London, 1898), 196 and 357.

⁴⁴ British Library, Add. MS 5805, f. 119.

might be part of the precinct boundary.⁴⁵ Surviving ridge and furrow indicates former medieval arable on the central parts of the island.⁴⁶

Owing to the general uncertainty of the abbey's topography, quite how the excavation site related to the abbey layout is unclear but it might be suggested that the area, although close to the church, was once part of the outer court of the abbey complex.

THORNEY ISLAND IN THE WIDER FENLAND LANDSCAPE (Fig. 6)

Despite the apparent isolation of Thorney, the documentary sources reveal that the island and its inhabitants were at the centre of an estate that made full use of the wider fenland landscape by which it was surrounded. Figure 6 has been compiled using topographical information from the Wisbech Hundred and ?1609 maps and Hall's reconstruction of the medieval fen landscape surrounding Thorney.⁴⁷

The eastern boundary of Thorney parish, Gold Dike, was formerly known as *abbotesdik* in the 13th century, referring to the Abbot of Ely whose territory was located to the east of the dike.⁴⁸ In the north-east of the parish the dominant name of Wryde Croft occurs from c. 1250 (*le wryde*) and refers to a nearby winding stream.⁴⁹ Knarr (*cnor* in the 12th century) Fen, to the south-east, most likely refers to a gnarled tree, perhaps important as a boundary-marker. The Gores, south-west of Thorney, was formerly known as *le gorehirne* and possibly refers to a triangular shaped area of fen. Bar Pasture Farm, formerly known as *barram* or *Thorney barr*, most likely refers to a bar or weir on the Catswater, the main drainage channel in the Middle Ages.

The Wisbech Hundred map shows two buildings to the east of the abbey in Knarr and Wryde Fens respectively, both surrounded by woodland (possibly the willow and alder woods documented in the 1574 survey). The northernmost is presumably Wryde grange while the southern one might be Abbot Clopton's new *bercaria*, unless they were once part of the same grange with a single centre. The late 14th-century fenland map shows a building on an island in Knarr Fen, but, inexplicably not Wryde.⁵⁰ Unknown persons were excommunicated for damage to the 'Knarediche' in 1486 which caused flooding and loss of crops.⁵¹ In 1537 the abbot of Thorney leased the farm or grounds called Wryde Croft by Golddyke to Richard Everard of Water Newton for 40 years.⁵²

The Wisbech Hundred map also shows a few settled islands or reclaimed platforms along the western and northern edges of Thorney Fen including

⁴⁵ S. Macauley, Abbey Fields, Thorney, Peterborough: Archaeological Site and Desk-Based Survey and Conservation Restoration Plan — Interim Report (unpubl. Archaeol. Field Unit Rep. 776, Cambridge, 2004).

⁴⁶ D. Hall, *The Fenland Project, Number 2: Cambridgeshire Survey, Peterborough to March* (East Anglian Archaeol. 35, Scole, 1987), 52 and fig. 35.

⁴⁷ Hall, *op. cit.* in note 46.

⁴⁸ Reaney, *op. cit.* in note 14, 280.

⁴⁹ Hall, *op. cit.* in note 46, 53.

⁵⁰ PRO MPC 45; Owen, *op. cit.* in note 9, 92.

⁵¹ W. H. Hart and P. A. Lyons (eds.), *Cartularium Monasterii de Rameseia* (Rolls Ser. 79, ii (London, 1886), 167–70.

⁵² NA LR 14/892/21.

'Barre' (Bar Pastures Farm) and 'Muscote' (lost) along the Catswater, which marked the western edge of Thorney fen. Muscote is documented in bounds of Thorney Fen given by commissions of sewers in 1436-7, 1438 and 1469.⁵³ Reaney suggests it gave its name to the Musthea stream (later the Thorney Dyke), the southern bound of Thorney Fen.⁵⁴ To the north of Thorney Fen the Hundred map shows more island 'cote' settlements, on the southern side of the Southea stream: Shydags Cote, Fysshier Cote, Pynders Cote and Maris Cote.⁵⁵ These cottages were probably seasonal settlements used for summer pasturing.

Three small artificial islands along the Catswater have produced post-Conquest pottery.⁵⁶ The southernmost of these, Site 5 (TL 248 035), is almost certainly the site of Thorney Mill. Crucially for access it is adjacent to the presumed route of the medieval causeway, the modern A47. The two more northerly sites are perhaps more likely to be summer-cotes rather than additional mill-sites as suggested by Hall. Indications of a former island at Old Hall Farm (TL 271 082) in the north-west of Thorney Fen have also been noted.⁵⁷ It is a possible candidate for either Shydags Cote or 'Plantes' grange, given the inaccuracy of the Wisbech Hundred map. Documentary evidence and field-shape topography also indicates small-scale reclamation by Thorney's tenants on the western and southern fen edges.⁵⁸ The Hundred map also locates Thorney Abbey's island chapel of Throckenholt, north-east of Thorney Fen and 'Plantes' grange, north of the abbey.⁵⁹

Several of these chapels have heremitic connections.⁶⁰ On an island on the western margin of Thorney fen lay Peterborough Abbey's hermitage Singersole, first recorded in 1227. A chapel and grange were also built there between 1299-1321.⁶¹ In addition to their religious functions these chapels probably reinforced the abbey's claims to its outlying lands and bounds, as did the fen crosses and

⁵³ S. Wells, *The History of the Drainage of the Great Level of the Fens, called the Bedford Level, with the Constitution and Laws of the Bedford Level Corporation*, 2 (London, 1830), 12; W. Dugdale, *The History of Imbanking and Drayning of Divers Fens and Marshes* (London, 1662), 317-18; CPR 1467-77, 170.

⁵⁴ Op. cit. in note 48, 7-8.

⁵⁵ The last is named in the 1438 sewer bounds situated between the South Eu stream and 'Setting Lake' in Wisbech and then Wryde (Dugdale, loc. cit. in note 53). It was leased with pasture rights to Thomas Parkyn of Gedney Fen for 11 years in 1533 (NA LR 14/892/26). It can be identified with the 'Parkyns Cote' of a 1563 commission of sewers boundary and 'Perkins Cote' which is located in the area now called Lordship End (NGR TL 330094) on Hayward's 1604 map of the fens. However, the lack of an illustrated cot, as elsewhere on the same map, may indicate its demise: A. M. Kirkus (ed.), *The Records of the Commissions of Sewers in the Parts of Holland 1547-1603, Vol 1* (Lincoln 1959); CROC R59/31/40/1: 1727 copy of lost original.

⁵⁶ Hall, op. cit. in note 46, 53-4: sites 2, 3 and 5.

⁵⁷ *Ibid.*, 54.

⁵⁸ Raban, op. cit. in note 4, 52-3 and 55-7.

⁵⁹ Throckenholt was granted by Ely to Thorney (1154-69) to serve as a cemetery for the latter's inhabitants and tenants (Caley et al., op. cit. in note 18, 594). A third chapel on the former island of Eldernall in Whittlesey was rebuilt in stone by Abbot Clopton in honour of the Blessed Virgin Mary, 1305-22 (CUL Add 3021, fol. 60).

⁶⁰ Caley et al., op. cit. in note 18, 620-1; D. M. B. Ellis and L. F. Salzman, op. cit. in note 4, 210-7; CChR, I (London, 1903), 19.

⁶¹ W. T. M. Mellows, 'The granges of the abbey of Peterborough', *Peterborough Nat. Hist. Archaeol. Soc.*, 52-3 (1925), 55-66; J. Greatex (ed.), *Account Rolls of the Obedientaries of Peterborough* (Northampton, 1984), 91-107.

two isolated fen trees (the Hardknot and Midfen trees) illustrated in the 1597 map along the southern limit of Thorney Fen.⁶²

THE EXCAVATIONS

The recent land-use history of the site has resulted in little modern disruption to the archaeological horizon apart from a handful of refuse pits. Constant reworking in antiquity however, had led to a high degree of redeposition of material, particularly evident in the later archaeological layers and features. In spite of this, a small group of key contexts offered sealed and well-dated pottery assemblages which, when combined with stratigraphic information gathered from targeted excavation, resulted in a good understanding of the site's development. The history of occupation is detailed below in chronological sequence from the earliest known deposits. Archaeological features and deposits are identified by square and rounded brackets respectively e.g. Pit [70], Layer (77). Description and illustration of associated finds have been integrated into the deposit descriptions for each phase.

PHASE A: LATE 11TH/EARLY-MID-12TH CENTURY (Fig. 7)

The earliest evidence for activity was characterised, in several areas of the site, by features cutting into the natural gravely-clay. The depth at which these features survived was such that they were not under immediate threat from the development proposals and they were therefore only partially investigated. Pottery retrieved from sample excavation of the features indicated a late 11th- or early-mid-12th-century date for their infilling.

Ditches

Towards the northern end of the site two linear features were revealed in separate evaluation trenches. A shallow, NE.-SW. ditch [33] was recorded in Trench 4, approximately 2 m wide and up to 0.3 m in depth. Its fill consisted of charcoal-rich, friable silty clay and it also contained quantities of pottery and bone including an unusual pair of bone ice skates (see below, Small Finds 43 and 44 and Fig. 8). Thirty-two sherds from a broken Thetford-ware storage jar provided a date of the 11th century, the large and unabraded nature of the sherds suggesting near primary deposition. Several other sherds of St Neots Ware and Shelly Ware represented the remains of two cooking pots. A small assemblage of animal bone contained representative fragments of the main domesticated species cattle, sheep, goat and pig as well as fish and bird remains.

Abraded grains of free-threshing wheat (*Triticum* sp.) and a fragment of wheat chaff (rachis) provided some evidence for arable practices. Unfortunately the samples were too poorly preserved to enable further identification to species. Slight evidence was also

⁶² The latter tree is mentioned in fen bounds of 1133-69 and 1248: Caley et al., op. cit. in note 18, 609; G. M. G. Woodgate, op. cit. in note 35, 221. There were numerous disputes over boundaries and inter-commoning rights in the Middle Ages involving the fenland monasteries and their tenants: H. C. Darby, 'The middle level of the Fens and its reclamation', 263-6 in W. Page, G. Proby and S. Inskip Ladds (eds.) VCH Huntingdonshire, III (London, 1936).

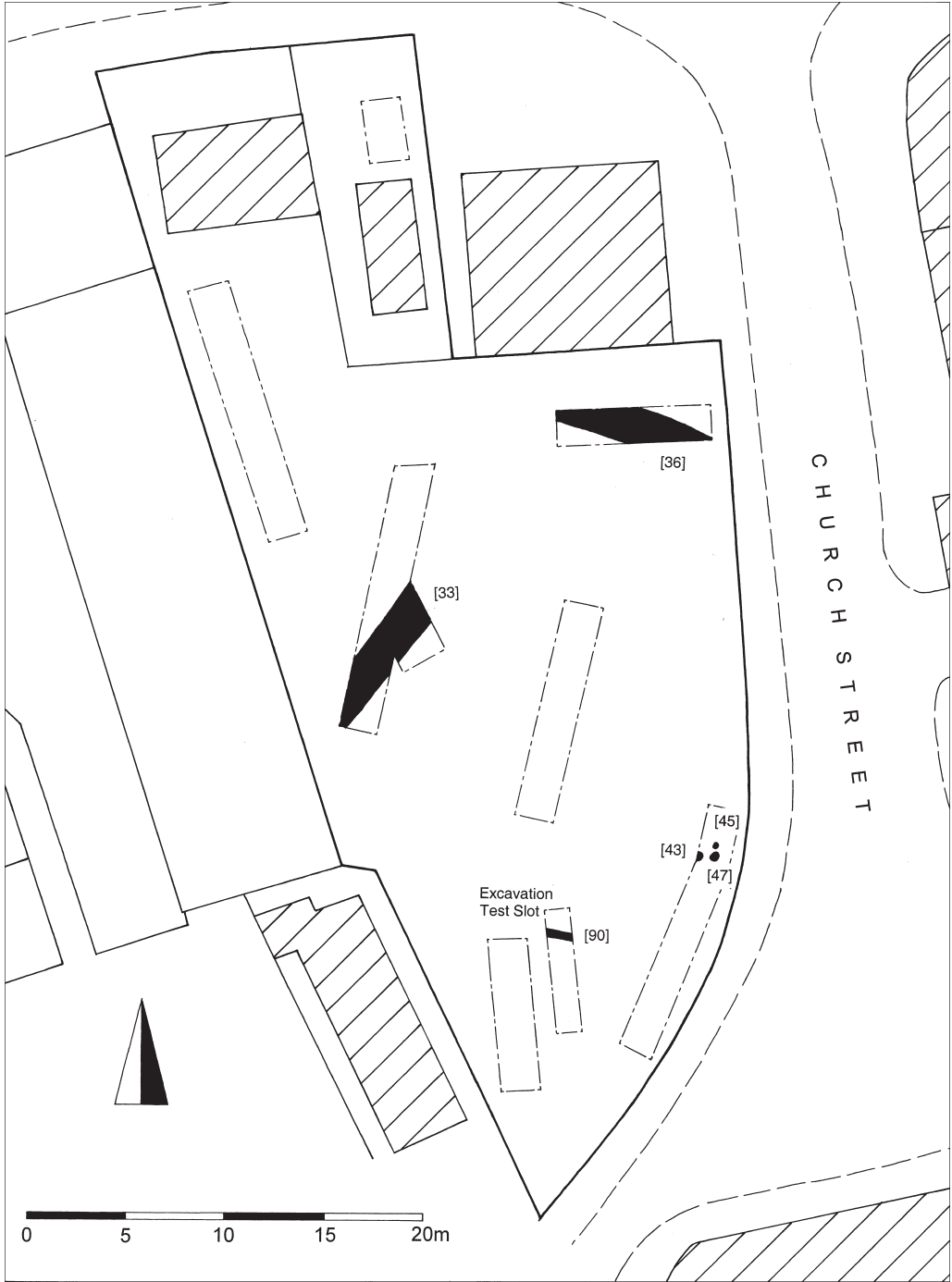


FIG. 7

The Phase A features (late 11th–early/mid-12th centuries). *Drawn by Michael Hawkes.*

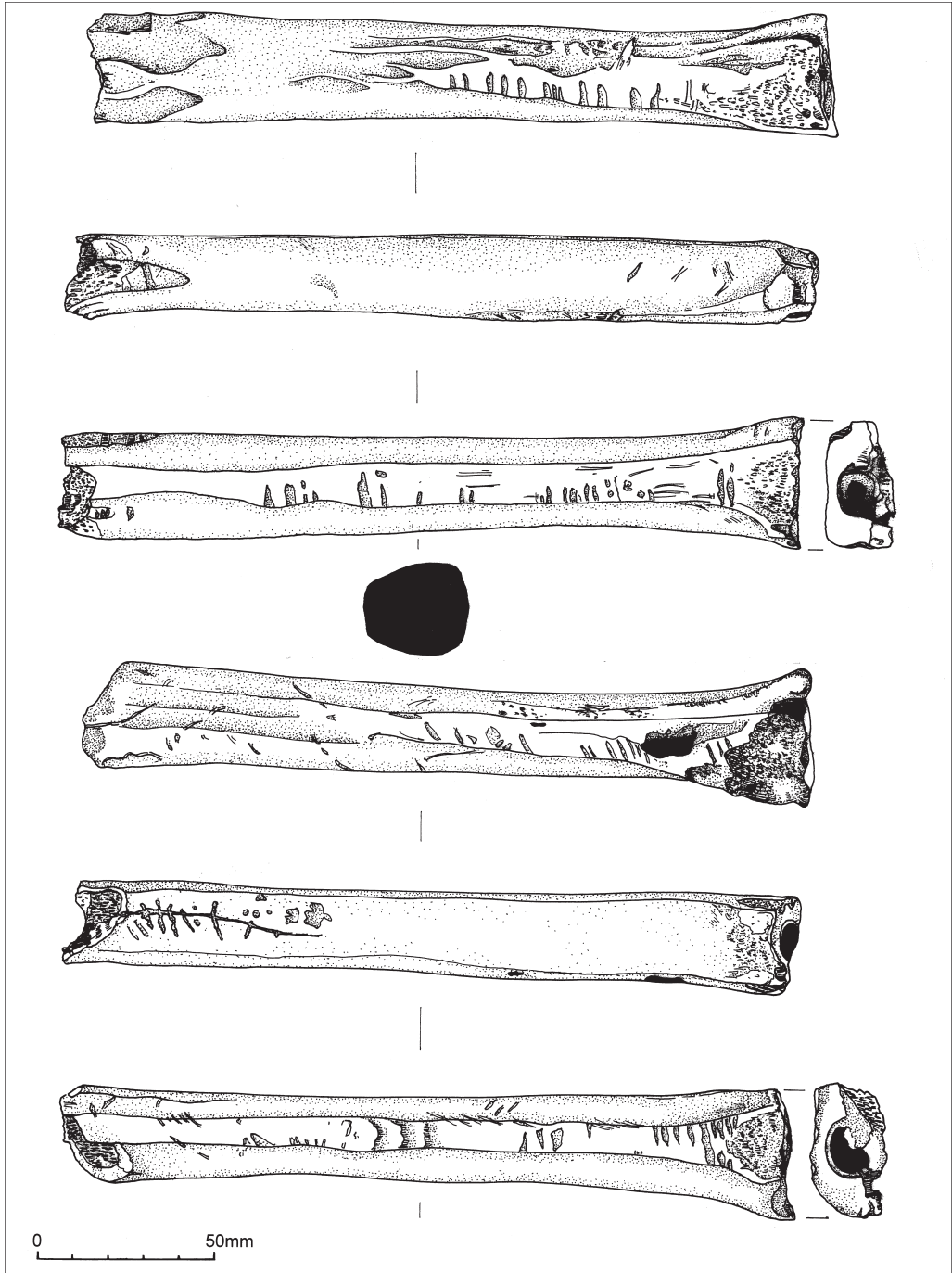


FIG. 8

The bone skates (Small Finds 43 top, and 44, bottom). Scale 1:2. *Drawn by Debbie Miles-Williams.*

recovered for the site's immediate surroundings. Arable weed seeds of docks (*Rumex* sp.) and clover-type plants (*Trifolium* type) were found alongside a few seeds of elder (*Sambucus nigra*) indicative of disturbed ground, near to habitation. Uncharred seeds, also present in small numbers included fruit pips of elder (*Sambucus nigra*), bramble (*Rubus fruticosus* agg.) and apple (*Malus* sp. indet.) which may have been from deposits of latrine waste but may also have been from surrounding vegetation. Seeds of duckweed (*Lemna* sp.) were also found and indicate that there was nearby standing water in the past as this plant only sets seed in these conditions. The lack of other seeds and organic remains indicated that the deposit had not been permanently waterlogged and had little potential for the preservation of pollen or other evidence.

A ditch [36] about a metre wide, aligned NW.–SE., was located in Trench 5, on the eastern edge of the site. The fill of [36] consisted of charcoal rich, friable silty clay, similar to that of [33]. Unfortunately this feature remained unexcavated as it was constantly under water.

Further activity from this period was suggested in two partially excavated areas in the southern part of the site including pits and possible structural evidence, although the nature of the activities was never fully characterised.

Pits

On the eastern side of the area a small group of shallow pits [43], [45] and [47] was revealed at the northern end of evaluation trench 1. These were typically less than 0.1 m deep, and filled with friable dark silty clay. Of the three, only [47] revealed dating evidence: twelve sherds of fine Stamford-ware pottery from a spouted pitcher dating from the early to mid-12th century.

Structural evidence

On the western side of the site, structural evidence was revealed in the form of a beam slot [90] incorporating a stone-packed post-hole [113]. The beam slot was vertically sided, flat bottomed and aligned E.–W. Datable finds from the feature included part of a cooking pot or jar in St Neots Ware and a single sherd of fine Stamford Ware. At the western end of the exposed slot segment a sub-circular post-hole [113] had steep edges and contained stone packing.

It is likely that these features represent a building constructed using the post-in-trench method. A clear distinction between clay layers to either side of the slot may hint at internal/external surfaces related to the structure. On the northern side was a layer of clean yellowish clay (91) whilst the southern layer (28) was dark reddish brown. Unfortunately little more of this area could be legitimately examined within the excavation brief.

Bone skates (Fig. 8)

Two worked horse bones, both metatarsals, were recovered from the fill of Ditch [33]. Most previous examples of this type of artefact have been interpreted as skates.⁶³ On both of the Thorney examples, a narrow, highly polished band (a little over 1 mm in width) ran down the centre of the dorsal face, possibly from contact with the ice. The plantar surface of the bone also showed evidence of working: bone had been 'shaved'

⁶³ A. MacGregor, *Bone, Antler, Ivory and Horn: The Technology of Skeletal Materials since the Roman Period* (London, 1985), 141–4.

away to create a flat plane upon which, perhaps, the feet were placed. There are no obvious strap-holes but there is a deliberate hole created in the centre of the proximal articulation. The distal end of each has been removed, and this may have been the location of the missing strap holes, as in the example from Empingham (Leics),⁶⁴ where two are drilled transversely on a cattle tibia. One of the objects was found in a test pit excavated prior to the evaluation; however it was later established that this was in fact from the same deposit as the second — ditch fill (32) [33]. It is therefore tempting to regard these as a pair. Known examples of bone skates from Britain range in date from the 8th to the 13th centuries and their distribution is wide, with examples from Aberdeen, Bedford, Oxford and Surrey. More local examples to Thorney include a recently found horse metapodial skate from Whissendine, and another from Empingham, both in the historical county of Rutland, made from a cattle tibia.⁶⁵

Discussion

Although exiguous, the discovery of Saxo-Norman remains on the site represents the first archaeological evidence of occupation at Thorney during the period of monastic reform. The evidence of structural activity and the presence of an assemblage of large, unabraded Thetford-ware sherds, would suggest that the site lay in close proximity to a focus of settlement. Although small, the domestic nature of the pottery assemblage appears to support this view. The assemblage is similar to that found in the earliest phases at the Still, Peterborough, where Stamford and Shelly Wares were the most common types present, and St Neots Ware was also part of the assemblage.⁶⁶

The charcoal-rich fill of Ditch [33] appears to contain a scatter of material, probably raked from hearths, which was dumped in the nearby features on the site. Occasional cereal grains of free-threshing wheat, barley and possibly rye, and remarkably few charred arable weed seeds, were included with the charcoal. The cereals may have originated from thatch or straw, but a scatter of fish remains was also present suggesting occupation or domestic waste. The deposits seem to have included some elements of latrine waste; apples, blackberries and elderberries may all have been consumed and were probably growing in the vicinity.

The ditches probably functioned as both boundaries and drainage features given their location on the very northern edge of the island. The environmental evidence suggests that they contained, or were situated close to, standing water, perhaps present on a seasonal basis. This is not altogether surprising given the low-lying nature of the site and its fen-edge location but it does provide further indication of the relatively peripheral location of the site in the 11th–12th centuries. Quite how this early evidence fits with the layout of the contemporary abbey must remain a question for future research.

⁶⁴ S. M. Fraser, 'The small finds', 105–22, in N. Cooper, *The Archaeology of Rutland Water* (Leicester, 2000), at p. 112, fig. 52.30.

⁶⁵ MacGregor, *op. cit.* in note 63, 144; J. Browning, *Excavations at Stapleford Road, Whissendine, Rutland* (forthcoming); Fraser, as note 64.

⁶⁶ P. Spoerry and M. Hinman, *The Still, Peterborough: Medieval Remains Between Cumbergate and Westgate* (Cambridge, 1988).

PHASE B: LATE 12TH/EARLY 13TH CENTURY

Following the disuse and infilling of the Saxo-Norman features the site apparently witnessed a hiatus in activity during which a dark soil layer (20 = 54) developed. The formation of this deposit is likely to have arisen as a result of several factors. Initially, it seems that occupation may have been forced southwards by fen-encroachment, an idea supported by environmental evidence recovered from the layer. The snail evidence in particular is indicative of open, seasonally wet conditions typical of the site's fen-edge location. Frequent dumps of pottery, roofing tile and animal bone from within the layer indicate that the area also became a repository for refuse from nearby activities on the slightly higher ground to the south.

The pottery assemblage from this phase, although relatively small, comprised a wide range of post-Conquest wares as well as intrusive post-medieval sherds. The material was very fragmentary: few joins were noted between sherds — perhaps the result of so much activity on the site over a long period of time. The two most common types present, Stamford and Shelly Ware, may indicate that activity was at its most intense during the mid- or later 12th and 13th centuries. Most of the Stamford Ware was in a very fine glazed fabric, probably dating towards the end of the industry, in the first half of the 13th century. Whilst the Shelly Ware is not closely dated, at least two of the identifiable vessels in this fabric may date to the 13th century. Several ridge tiles occurred in Bourne and Stanion Lyveden Ware, although the relative lack of pottery in the glazed medieval Bourne B Ware and Bourne-type Wares and of the glazed Stanion Lyveden-type Wares, all of which commonly occurred in quantities in archaeological levels dated from the 13th to the mid-14th centuries at the Still in Peterborough, may support the slightly earlier date suggested for this phase.

Some 377 animal-bone fragments were also recovered from Phase B. The bulk of the assemblage represented the main domesticates: cattle, sheep/goat and pig with a small number of goose and domestic fowl bones. A single stoat bone was the only evidence recovered for wild species. As with the pottery from the layer, assigning the bone assemblage to specifically dated activities is problematic due to the evident residuality. During excavation, however, it was felt that at least some of the bone assemblage had retained depositional characteristics that were worthy of further analysis, particularly in terms of butchery techniques and their potential to inform on diet and subsistence. Much of the assemblage derived from the main meat-bearing bones of the individual species, implying that beef was the main meat dietary contributor. Evidence of butchery was recorded on much of the bone and there were several discrete concentrations within the layer indicating separate episodes of refuse disposal.

A total of 2.5 kg of ironworking waste as well as fragments of fired clay-hearth lining were also recovered, representing just under half of the entire assemblage, the remainder coming from Phase G and later. The group may therefore represent a residual assemblage that had accumulated over time through varied rubbish disposal activities. The waste comprises examples of tap and furnace slag, hearth slag and hearth bottoms, appearing to derive

from ironsmelting (tap and furnace slag) and smithing (hearth slag and hearth bottoms). The presence of hearth bottoms would suggest continuous working with the re-use of hearths located in the vicinity of the excavation.

Discussion

The evidence from Phase B provides an insight into the changing nature of land-use on the fen edge. The second phase of evaluation on the southern side of the site (Trenches 6 and 7: Fig. 2) revealed just how close the excavated area was to the edge of the former island. Deposits similar to those of Phase B were located in both trenches and were seen to get progressively deeper to the south. A similar range of debris was also recovered, and in Trench 7 waterlogged deposits were encountered which included preserved wood, straw and part of a leather belt alongside part of a suspected stone coffin fragment.⁶⁷

From the Phase B deposits there are good environmental indicators of the encroachment of the fen on to the northern edges of the island hinting at a subsequent shift in occupation on to drier land, to the south of the excavated area. The range and quantity of the artefacts retrieved from the layer also indicate that this part of the island's edge became a dumping ground for refuse. By and large the range of pottery represented indicates domestic waste, supported by the recurrence of butchered animal bone suggesting the nearby presence of kitchens or dwellings. The ironworking material also hints at the possibility of nearby craft-workshops.

PHASE C: 13TH/14TH CENTURY (Fig. 9)

Reclamation of land on the fen edge is indicated by the deliberate laying of clay-surface deposits on the southern part of the site, directly above the Phase B soil layer, in the 13th or 14th century. The clay areas apparently served to consolidate the soft underlying soil, and at the southern end of the site a spread of post-holes suggested the presence of at least one structure.

The earliest evidence for deliberate surface laying in this phase was represented by layer (174), a compact olive-brown clay partially revealed in several excavated sections. No associated features or datable artefacts were revealed.

Overlying (174), layer (7) was recorded over much of the southern half of the site. This layer consisted of a thick spread of compact yellowish brown clay and contained a small assemblage of, mostly residual, pottery including examples of Medieval Ely Ware, St Neots Ware, Stamford Ware and Bourne B-type Ware indicating a general 13th- or 14th-century date for its deposition.

Activity associated with layer (7) was indicated by a small collection of post-holes and other features cutting into it, the majority of which also produced 13th-/14th-century dating evidence based on the presence of Medieval Ely

⁶⁷ Hyam, *op. cit.* in note 3.

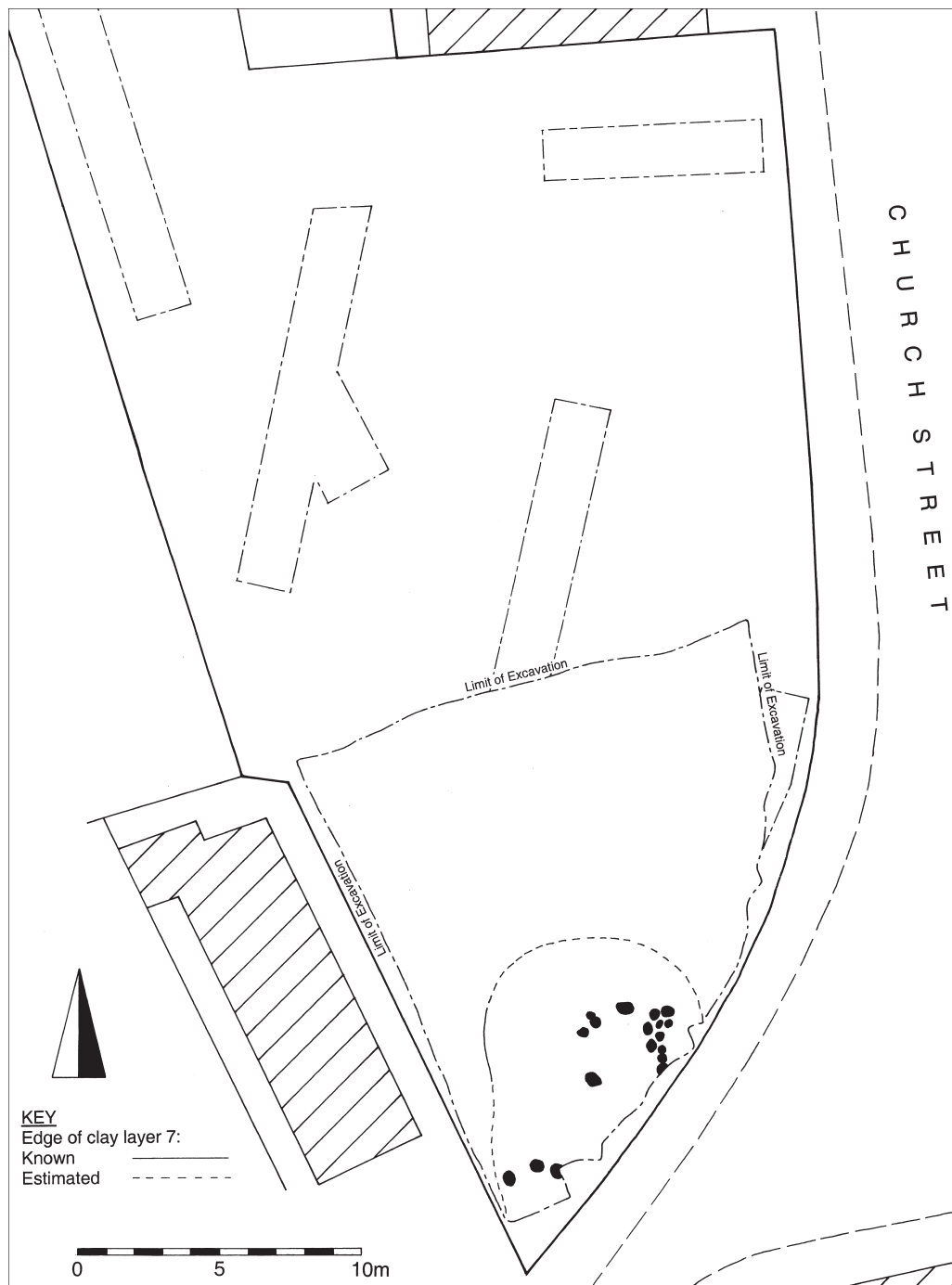


FIG. 9

The Phase-C features (13th/14th centuries). *Drawn by Michael Hawkes.*

Ware thought to date to before the mid-14th century.⁶⁸ A linear arrangement of post-holes on the south-eastern edge of the site indicated a timber-founded structure: [4], [9], [101], [103], [147], [153], [155], [157] and [205]. There was some indication of phases of rebuild or repair to the associated structure, but the general lack of evidence precludes further interpretation. Other isolated post-holes cutting layer (7) on the opposite side of the area hinted at the existence of further structures, perhaps more fully represented beyond the site boundaries.

The 13th- and 14th-century pottery assemblages in phase C were dominated by both the Northamptonshire shelly Wares, probably from the Rockingham Forest, and Bourne B Ware and -type Wares. Other local and regional imports also occurred, including two sherds which may be a Fenland sandy Ware possibly from near Ramsey, and six more which have been provisionally identified as Essex Wares, possibly Middleborough Ware. Ely, Nottingham Ware and Stanion Lyveden Wares were also present. The identifiable vessel-forms were primarily domestic and included three jugs and two jars.

Discussion

The presence of domestic refuse associated with inferred timber buildings suggests that the excavation revealed the very edge of an area of habitation, although there is little evidence to indicate status or the nature of the occupants' activities. Interestingly the position of the putative structure(s) and associated layers, apparently on the northern fringes of the island, suggests expansion of occupation on to areas that had previously been unavailable. Further work in Thorney may reveal the reasons for such expansion. However it may tentatively be suggested that this apparent growth in the settlement was linked to the documented period of abbey refurbishment during this time discussed above. The insubstantial nature of the buildings, and their peripheral location, supports the suggestion that the excavated area is situated within the outer limits of the abbey.

PHASE D: 15TH/16TH CENTURY (Fig. 10)

Further expansion of activities on to the fen edge during the late 15th/early 16th centuries was indicated by the construction of a building slightly north of the Phase C clay layers (Structure 1). Part of this structure was observed protruding into the western side of the site. This was characterised by an 'L'-shaped section of gravel-packed wall footing [74] (Fig. 11). The southern wall had been removed by later activity: however, it seems likely that the surviving footing represents the E. gable end of a building approximately 6 m wide and aligned roughly E.-W.

Several excavated sections through [74] revealed that the footing had near vertical edges and a flat base, 0.7 m in width and 0.3 m deep. The footing was

⁶⁸ Paul Spoerry, pers. comm.

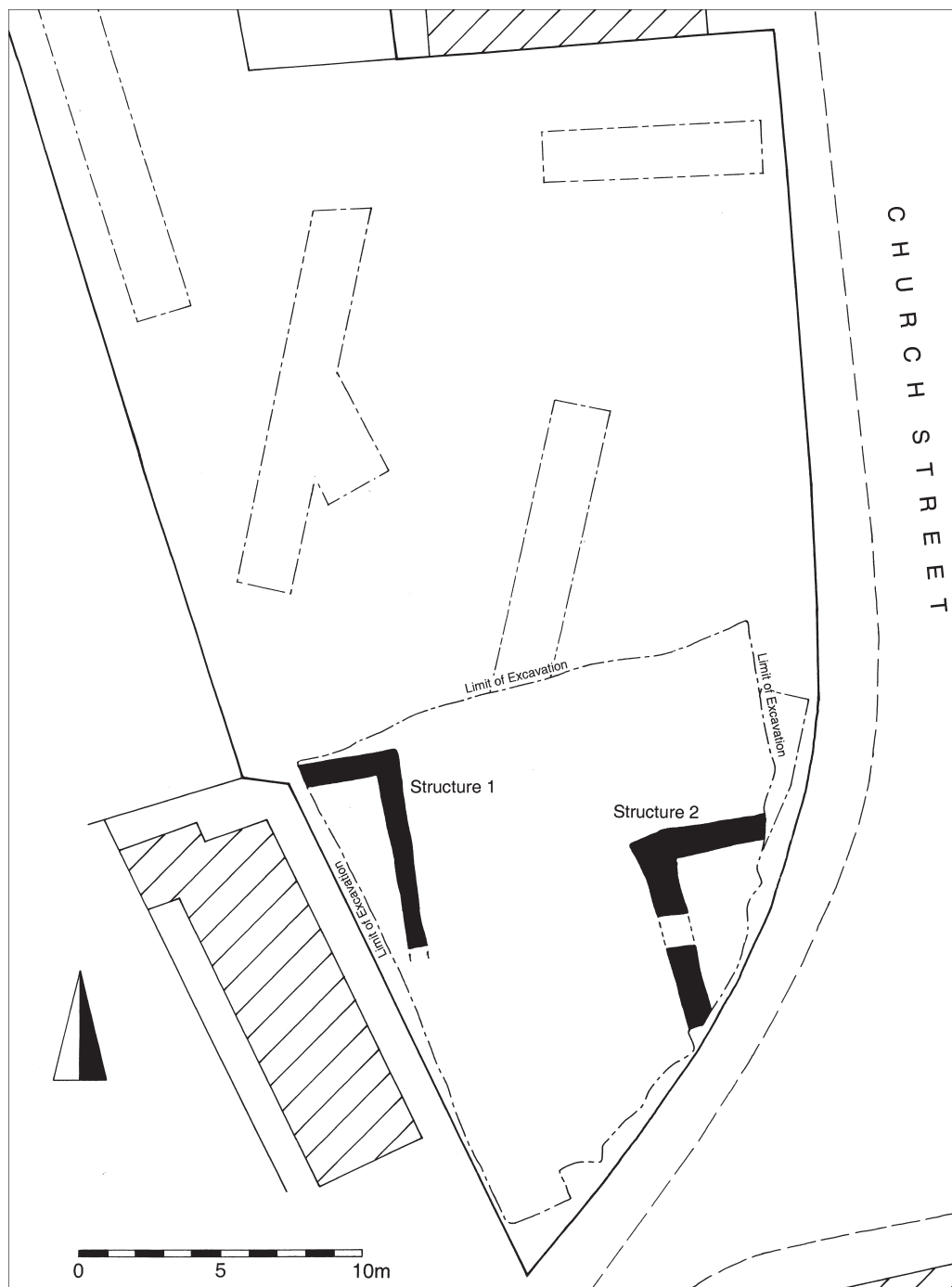


FIG. 10

The Phase-D features: Structures 1 and 2 (15th/16th centuries). *Drawn by Michael Hawkes.*

solidly packed with a gravel and clay mix and contained areas of larger stones, particularly along the base of the slot and in the exposed corner. The irregular spacing of these stones does not suggest they ever related to post-holes but may rather have served to consolidate areas of softer ground prior to infilling with the gravel. A single sherd of late 15th-/early 16th-century Toynton/Bolingbroke, or Mill Green, Ware and a two fragments of ridge tile in Bourne B Ware, provided the only dating evidence for the building's construction.

Discussion

The restricted evidence for Structure 1 limits meaningful interpretation of either its plan form or function. The choice of location for the building, however, may suggest that more land was available on the edge of the island in the late 15th/early 16th century and represent additional expansion activities to those revealed in Phase C. Alternatively it may be that space had become at a premium, necessitating the occupation of less suitable areas.

Supporting evidence for encroachment on to previously unavailable land was revealed on the eastern side of the site where the location of another medieval building (Structure 2) was suggested. The remains of Structure 2 had been removed during a period of stone robbing in the 17th century (see below, Phase G); however, a right-angled robber trench indicated the NW. corner of a substantial, presumably stone-built, structure projecting eastwards beneath Church Street. Dating the construction and use of this building is difficult due to the later disturbance. The spatial organisation between Structures 1 and 2, however, may indicate some contemporaneity and it is possible they were once part of a right-angled arrangement near the northern limit of occupation on the island.

PHASE E: THE DISSOLUTION, DECEMBER 1539 (Fig. 12)

Scattered spreads of roofing tile and broken lead window came were evident across the site providing evidence of the asset-stripping of abbey buildings at the time of the Dissolution. A leadworking assemblage, weighing 4.2 kg, and comprising casting waste, solidified droplets and several fragments of hearth lining, was recovered from a range of contexts related to this phase. A concentration of these deposits alongside dumps of broken painted window glass was recorded in the southern part of the excavated area, overlying the clay surfaces of Phase C. The coincidence of broken and melted window comes and broken window glass in this phase indicates that windows were being dismantled on the site for the reworking of the lead. Chemical analysis by Dr G. C. Morgan revealed that Item 02/7 (hearth lining) contained lead residues and a lead droplet, which suggests the scraping out of lead dross from the melting hearth and adds further to the picture of lead recycling.

Cupellation hearth and associated features (Figs. 13–14)

The focus of activities from this phase was a re-used limestone architectural fragment, possibly a pillar base [104], that had been converted for use in leadworking activities, most likely cupellation (extracting silver from lead). The

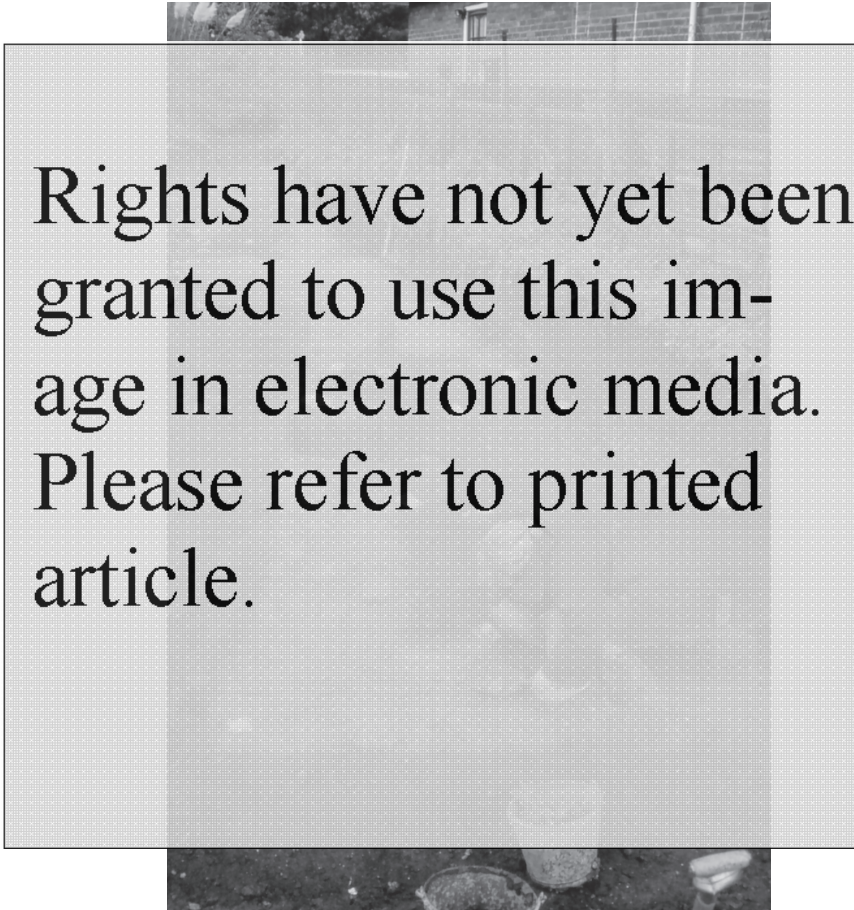


FIG. 11

The footings of Structure 1 under excavation. *Copyright University of Leicester Archaeological Services.*

block had originally been worked into an octagonal shape and was quite plain apart from residual tool marks. A circular basin some 0.7 m in diameter and 0.2 m deep had been carved into the top of the stone, which had then been placed into a pit [173] so that the basin was flush with the ground surface. On the southern side of the block a flat, semi-circular stone fragment had been placed, creating a lip on the edge of the circular basin. It is likely that this was used as a support for bellows that would have been essential in the cupellation process for creating the draught to maintain the high temperatures needed in the process. The upper 0.10–0.12 m of the block were heat-reddened, as was the surrounding clay into which it had been set. Several large cracks running through the entire thickness of the block must reflect the eventual disintegration of the stone as a result of its subjection to intense heat. Molten lead had seeped

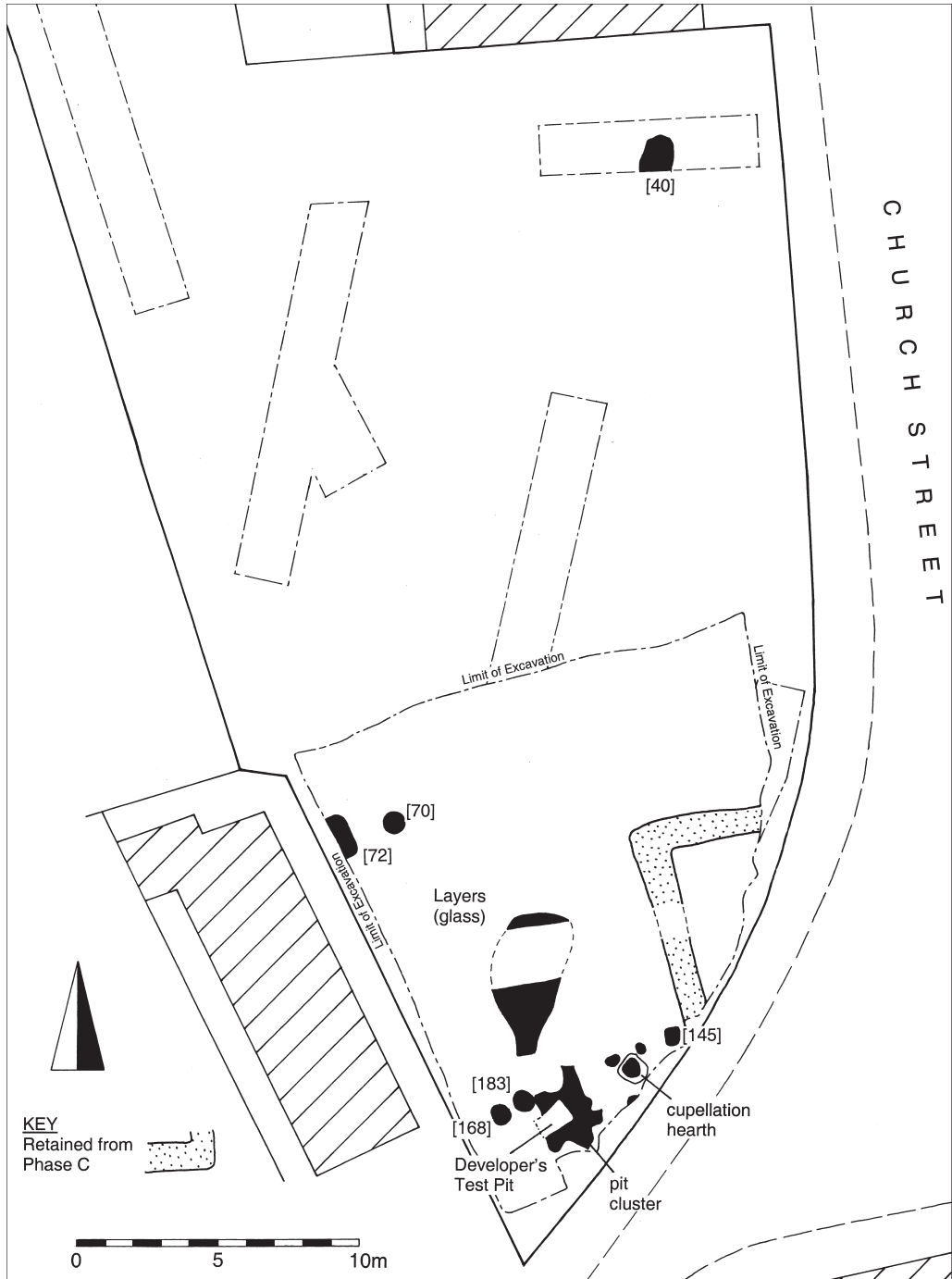


FIG. 12

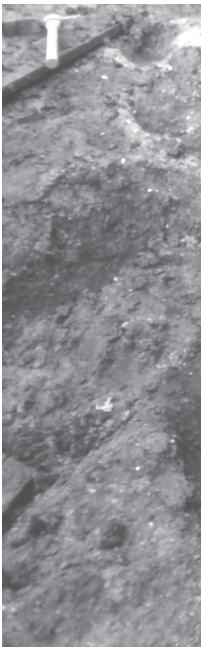
The Dissolution features (Phase E: 16th century). *Drawn by Michael Hawkes.*



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FIG. 13

The cupellation hearth under excavation. Note the area of scorching surrounding the hearth (the lighter area), and the stone 'lip' at the rear of the feature, on the right. *Copyright University of Leicester Archaeological Services.*



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FIG. 14

The cupellation hearth, fully excavated. *Copyright University of Leicester Archaeological Services.*

into the cracks created when the hearth split, and was observed beneath the base where it had solidified. A 16th-century date for this activity is suggested by the several pieces of Bourne D-ware pottery recovered from the backfilled bowl of the hearth. Environmental evidence from the fill of the hearth included uncharred seeds of plants reflecting areas of disturbed ground and damp conditions.

The stone sat at odds with a 'made to measure' pit [173], cut to the exact shape and dimensions of the block, into which it had been placed, perhaps indicating an accident during the placing of the stone in the ground. Consequently, however, the open gaps where the pit edges and the stone did not correspond accumulated waste from the associated industrial processes including ash, molten lead waste and lead oxide (litharge), providing a clear picture of the hearth's function. The carbonised core of the sharpened end of an ashwood stick encased in a lead skeuomorph of the original point was also recovered from the fill of [173].

A group of three similar post-holes, [141], [143] and [194], was located around the edge of the hearth, all of which were stone-packed and had accumulated lead waste and litharge in their fills. They may indicate the remains of a raised cover, protecting the hearth from wind or rain: not improbable since the hearth would have been in use during winter. The provision of a cover over the hearth may also have created favourable conditions to maintain the draught needed to aid the cupellation process. Alternatively they may represent the remnants of a hoist, originally erected to lift and position the stone into the pit.

A small pit [145] adjacent to the cupellation hearth on its eastern side also held bent, broken and partially melted window-came fragments and residual medieval pottery.

To the west of the hearth a concentrated spread of litharge and lead waste contained many fragments of broken and cut window came and pieces of lead flashing removed from buildings. Part of this spread comprised the upper fills of a concentration of pits. Unfortunately full excavation of the pits could not be undertaken, although re-excavation of one of the developer's test pits (situated in the centre of the cluster) provided some insight into their complexity and the concentration of activities that they represented. Sample excavation beneath the Structure 3 hearth (see Phase F below) enabled recovery of stratified artefacts from one of the pits [188], which included lead waste, painted window-glass fragments and residual pottery dating from the 12th to 14th centuries.

Another possible hearth feature was represented by a shallow circular pit [168], to the west of [104]. This was 0.66 m in circumference and 0.13 m deep. A thin layer of yellow/orange clay lined the base. This was in turn, covered by a fill of burnt, pinkish clay containing charcoal and two fragments of painted glass. Finally a thin layer of sand overlay the burnt clay. A concentration of Late-medieval Bourne D-ware ridge-tile fragments [183] to the east of the pit may have been associated with its function. The purpose of this feature is not immediately obvious although in the light of surrounding evidence it seems likely to have related to the Dissolution activities.

Window glass layers

Some 3 m to the north of the hearth, a dense spread of broken window glass (77) was located. This layer contained 631 fragments of painted window glass, dated on stylistic grounds to the 13th/14th century, as well as similarly dated fragments of Saintonge, Mill Green, Grimston and Scarborough-ware pottery, and 16th-century Bourne and Cistercian Black-ware pottery and roof tile. A separate concentration of window glass comprising 220 fragments (165) very probably represents the northern limit of spread (77). The two deposits had become separated by later intrusions. However localised concentrations of glass sherds recovered from both wall footing [51] (224 fragments), and ditch [53] (190 fragments), (Phases F and G: see below) lend support to the idea that layers 77 and 165 were once part of the same deposit.

Pits

A spread of pits across the site, [70], [72], [88], [96] and [118], all contained quantities of broken window glass and debris.

On the eastern edge of the site, within the ground plan of Structure 2, a large circular pit [96] remained unexcavated although a quantity of residual medieval pottery, and brick- and leadworking remains including part of a hearth lining, previously used for melting lead, were recovered from the surface.

In the centre of the excavated area, north of the cupellation hearth, pits [88] and [118] both contained small quantities of painted window glass and residual medieval pottery in association with Late-medieval Bourne D roofing-tile fragments. Of particular note is pit [118], located beneath the glass layer (77), which yielded a tapered copper-alloy spike with traces of lead grouting around the thick end (Small Find 6: Fig. 15). This is likely to have originally been part of a decorative fitting, once cemented into masonry with a lead plug and mortar. Presumably this had been removed from its original position during the Dissolution activities.

A pit [70] cutting through the footings of the earlier Structure 1 (Phase D), contained a further assemblage of 177 painted glass fragments. This feature was small and irregularly shaped, approximately 0.55 m in diameter and 0.17 m deep. Despite the small size of the feature a large and varied find-assemblage was recovered including large sherds of painted glass, lead window came, 16th-century Toynton/Bolingbroke and Bourne D-ware pottery, roof tile, several iron objects and a bone collection representing of cattle, cat, mole, rat, domestic fowl, frog/toad, pig and fish. Seeds of elder and alder were also present.

Pit [73] was partially revealed on the western edge of the site and contained a small group of painted glass as well as an abundant assemblage of oyster shells. Evidence indicating that the pit was backfilled in the 16th century was provided by a small assemblage of Late-medieval pottery which included broken jug fragments in Bourne B- and D-type Wares. A collection of roofing tile from the pit included fragments of ridge tile and examples of both nib and peg flat tiles. A floor tile with brown glaze and coarse building materials were also found. Scant

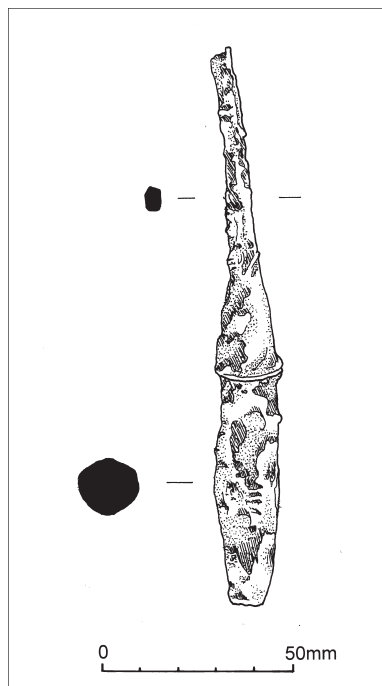


FIG. 15
Small Find 6: copper-alloy spike. Scale 1:2. Drawn by Debbie Miles-Williams.

environmental evidence included several abraded cereal fragments and seeds of elder and alder. A small group of animal bones included the remains of wild bird as well as mouse, vole and shrew. Pit [40], partially revealed in Trench 5 in the north-eastern part of the site, also contained Bourne D-ware pottery and flat roofing tiles indicative of a Late-medieval date.

Discussion

The Phase E deposits provide a clear insight into the events at Thorney Abbey during the Dissolution. In particular the evidence indicates a phase of asset stripping focusing on the removal of roofs, window lead and fixtures from abbey buildings.

Evidence for the processing of lead by cupellation has been recovered during excavation of Dissolution deposits at several monastic sites including Tintern Abbey (Gwent) and Carmarthen Greyfriars (Carmarthenshire).⁶⁹ During this process the lead would have been heated in shallow, open hearths and the high temperature maintained by draught from a bellows. Eventually

⁶⁹ P. Courtney, 'Excavations in the outer precinct of Tintern Abbey', *Medieval Archaeol.*, 33 (1989), 99–143; P. Courtney, 'The metal working features', 184–6, in T. James, 'Excavations at Carmarthen Greyfriars, 1983–1990', *Medieval Archaeol.*, 41 (1997), 100–95.

the lead would have become oxidised producing litharge, which was ladled off to leave a pellet of silver. The choice of hearth lining was important to ensure satisfactory results from cupellation. At Tintern the cupellation hearths were lined with lime and bone ash, which would have had the property of not reacting with the fuel and lead to form slag.⁷⁰

The painted glass assemblage is datable on stylistic grounds from the second half of the 13th century to the first half of the 14th. However, the majority of pieces are of late 13th- and early 14th-century date, as indicated by the colour palette, the types of design and painting techniques, and the thickness of the glass fragments. Fragments of architectural detail, heraldry, part of a head and hair, and some lettering were recovered, as well as many examples of Geometric grisaille (geometric or foliate designs). Similar motifs occur in the excavated assemblage from the Benedictine Abbey at Battle,⁷¹ but the Thorney window glass seems to have followed the near contemporary and prestigious designs at York Minster closely, and would perhaps have shared motifs with Ely Cathedral too. The Thorney finds should have belonged to a building or buildings with significant and high-status glazing.

The relationship between the Dissolution deposits and other near contemporary evidence on the site, particularly for Structure 2, is unclear. The relative lack of glass and leadworking debris within the bounds of Structure 2, to the east of the hearth, indicates that this building was upstanding, and remained so for some time after the Dissolution (see Phase F below).

PHASE F: POST-DISSOLUTION, LATE 16TH CENTURY (Fig. 16)

Structure 3

A short time after the Dissolution a third building (Structure 3) was constructed on the southern side of the site, the remains of which represent the most complete structural plan from the excavation.

The remains of Structure 3 consisted of two substantial gravel-packed wall footings, approximately 6.5 m apart, on an E.-W. alignment with associated internal features. The northern wall footing [51] stopped short of the western side of Structure 2, clearly respecting what must have been an upstanding wall. This suggests that Structure 2 had survived the Dissolution relatively intact and was in a fit enough state of repair to become incorporated into this new phase of the site's occupation. On the southern side of the building, owing to the constrictions of the excavated area at this point, a shorter length of external wall footing [179] was recorded. Above the clay and gravel footings on this side, a concentration of stones within a gravelly-clay matrix may have been the surviving remnants of the building's superstructure (Fig. 17). Pottery recovered from the wall footings included two sherds in an unclassified later medieval or early post-medieval Orange Sandy Ware, possibly originating from Essex, Norfolk, or Pond Hill, Ely. A group of residual worked stone architectural fragments were also found within the gravel fill of the Structure 3 walls. These were fairly randomly positioned and did not appear to have had any structural function, but provide an indication of the type of

⁷⁰ Courtney (1989), op. cit. in note 69, 115.

⁷¹ J. Kerr, 'The window glass', 127-38 in J. N. Hare, *Battle Abbey — The Eastern Range and Excavations of 1978-80* (London, 1985).

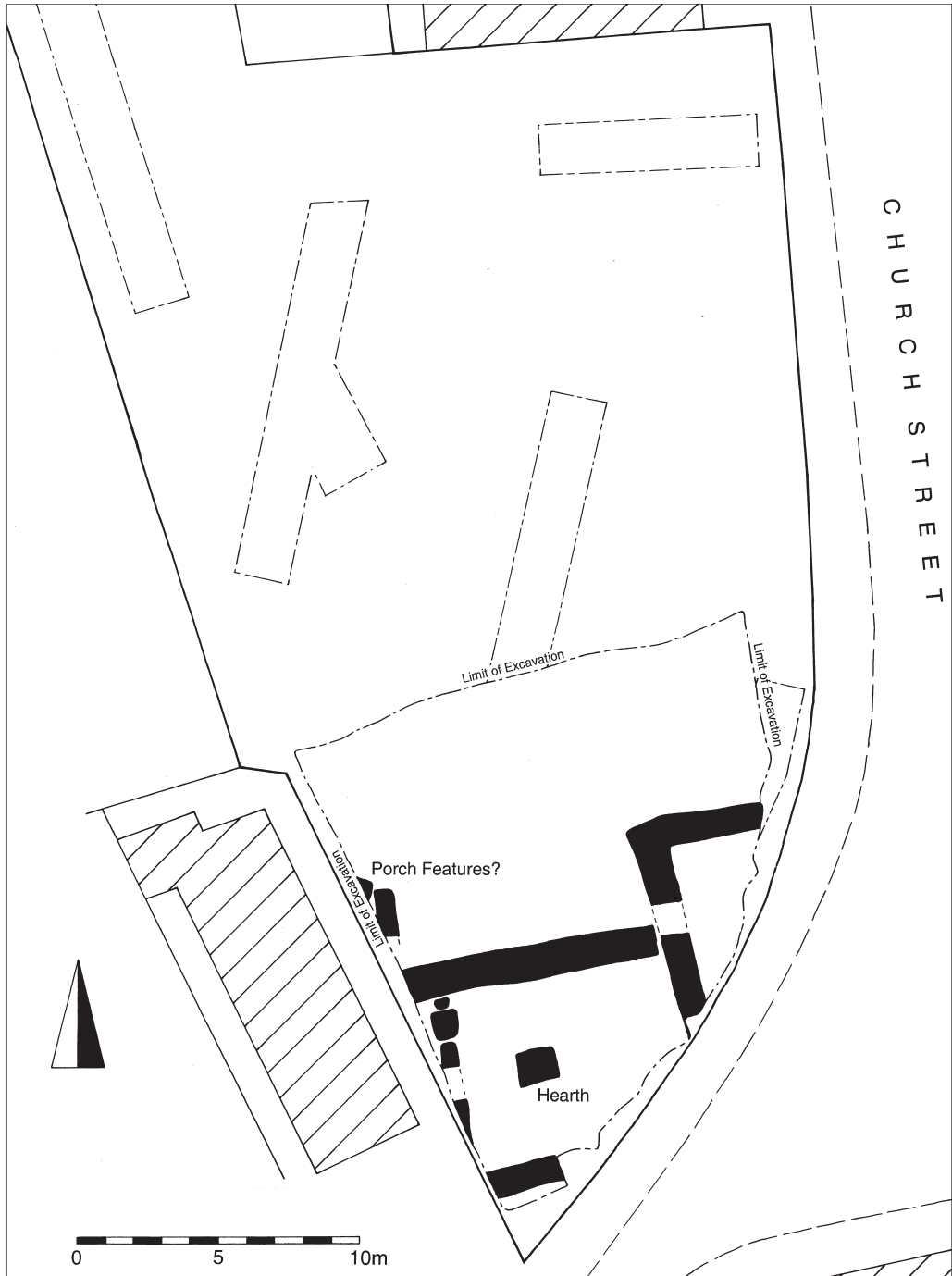


FIG. 16

Structure 3 (Phase F: late 16th century). *Drawn by Michael Hawkes.*

material that was lying around in the vicinity prior to the demolition of the remaining abbey buildings and the removal of stone from the island in the 16th century (see Phase G below).

Although part of Structure 3 lay to the west of the excavation, a short length of compacted gravel wall footing [207] revealed at right angles between the external walls provided some indication of the internal division of space. This partition would have defined a room some 6.5 m wide and 8 m long, with the re-used wall of Structure 2 forming the eastern side. An entrance was indicated in the NW. corner of the room where a gap of just over a metre lay between the terminal of wall [207] and the internal edge of wall [51]. On the northern side of the entrance a sub-circular pit [81], some 0.5 m in diameter, probably supported a door jamb. A larger squared feature [84], also packed with gravel above a layer of flat stones, lay in the centre of the entrance and may have supported a threshold stone (Fig. 18).

Placed slightly west of the room's centre was a square hearth [55] (Fig. 19). Half of this feature had been removed by a later pit; however, enough survived to determine that it had been approximately 1.2 m square. It consisted of a central core of bricks surrounded by kerbstones, set into a mortar base. A small sub-circular hollow, chiselled

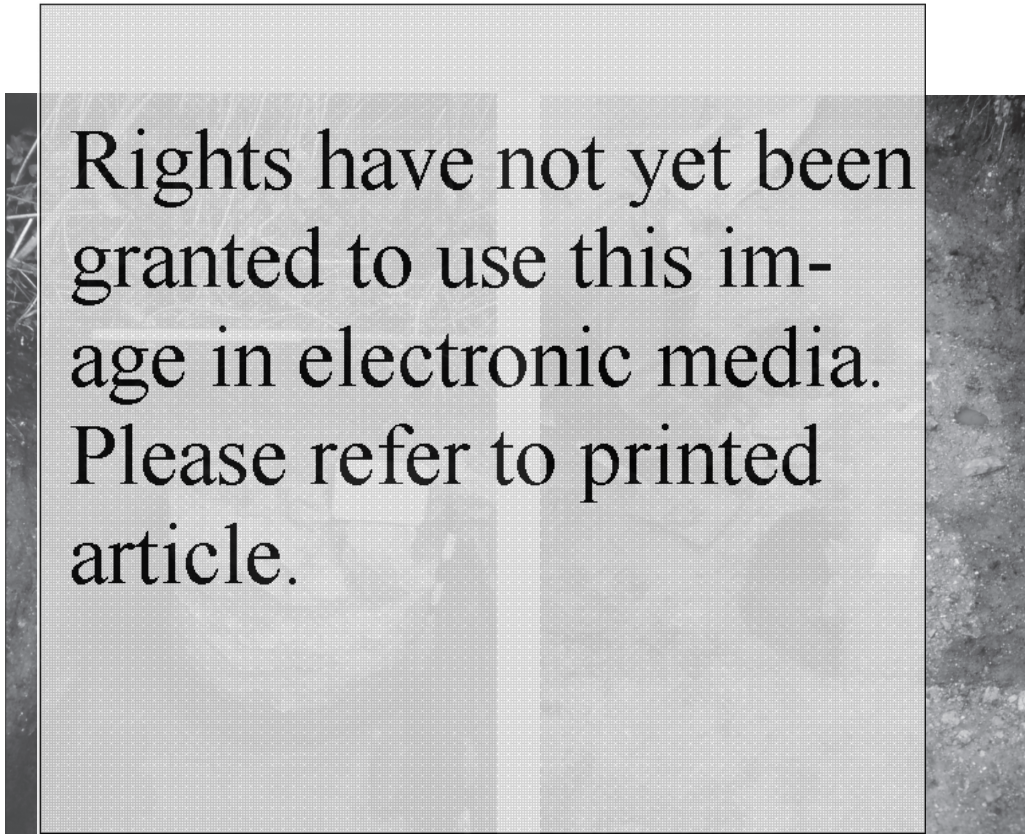


FIG. 17

The wall footings of Structure 3 with possible surviving superstructural remains. *Copyright University of Leicester Archaeological Services.*

FIG. 18

Threshold features of Structure 3 under excavation. *Copyright University of Leicester Archaeological Services.*

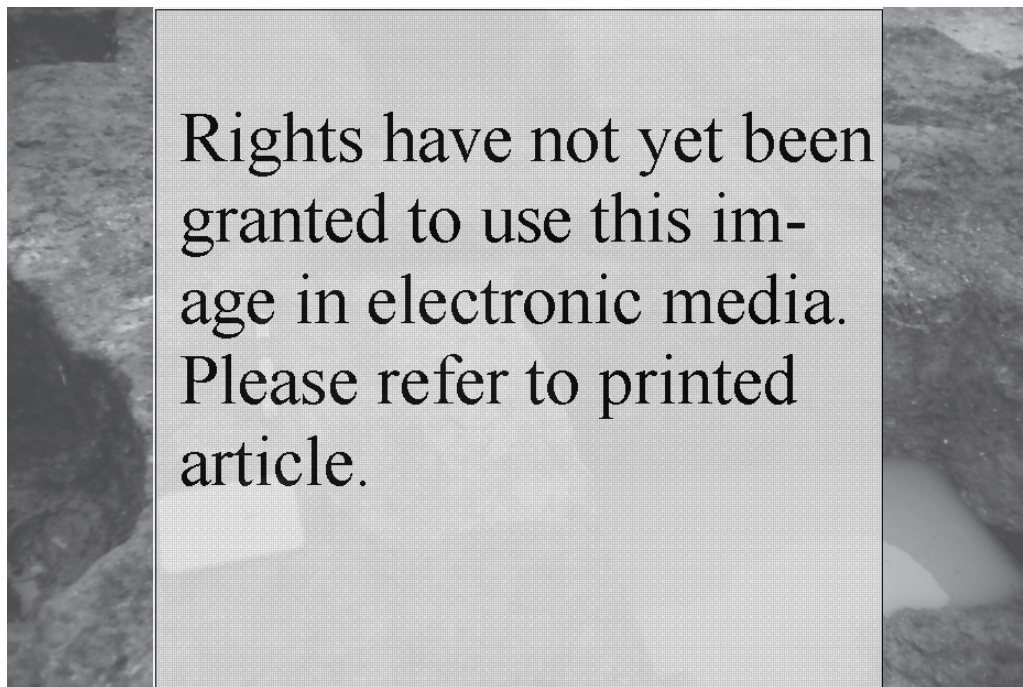


FIG. 19

The central hearth of Structure 3 partially excavated, showing previous phases of burning. *Copyright University of Leicester Archaeological Services.*

into the top of the hearth contained lead casting waste and dross. Excavation revealed at least two earlier phases of burning below [55] suggestive of a simpler type of hearth, perhaps just fires within a pit.

A short length of wall footing [121] lay at right angles to the northern side of Structure 3. This feature was filled with deposits similar to wall [51] and also contained dating evidence for the 16th century including Bourne D-ware ridge tile. It may once have been part of an external porch. Another feature [133], partially revealed in the eastern edge of the area, adjacent to [121], contained a large square stone, potentially a post-footing. The feature's position on the very edge of the site makes interpretation difficult; however, it may have been part of the putative porch structure.

Discussion

Structure 3 provides important evidence for continuity of occupation on Thorney in the decades immediately after the abbey was dissolved. Of particular interest is the re-use of a former abbey building to form the eastern side of the structure, demonstrating that at least some elements of the monastic complex had survived. This may indicate that the effects of the Dissolution at Thorney did not extend to full demolition of all buildings, and that buildings outside the cloister, given their relatively secular nature, were left fairly intact.

The incomplete plan of the building precludes further detailed interpretation. However the presence of a central hearth, presumably indicating domestic use, suggests a single storey structure, possibly a small hall, open to the rafters. The few finds associated with Structure 3 provide little evidence of the status of the building although it is clear that, despite being contemporary, it is not the site of the manor house which documentary sources place west of the church. Several early maps of Thorney depict the manor house and church but fail to record any building on this part of the island. This omission may be an indication of the low status of Structure 3; alternatively the lifespan of the building may not have coincided with the available maps. Given the apparent lack of evidence for secular settlement on the island at the time the manor was introduced, it is possible that Structure 3 relates to the latter in some way, perhaps providing dwelling for servants. Documentary evidence also indicates the presence of various farms on the island in the later post-Dissolution period and the possibility remains that Structure 3 was used as a farmhouse.

PHASE G: LATE 16TH/EARLY 17TH CENTURY

During the late 16th or early 17th century Structure 2 was apparently demolished and the stone removed. The evidence from the excavation indicates that the extent of the stone robbing included the building's foundations, for which there were no extant remains.

The base of the robber trench [19] was filled with a compacted layer of limestone rubble. This was overlaid with a deposit of loose, mortar rich soil. Both fills contained 16th-/17th-century Bourne, Cistercian and BlackWare pottery, clay-pipe and glass bottle fragments and residual painted window glass. An accompanying spread of limestone rubble (16) to the east of the robber trench contained similarly dated roofing tile and clay-pipe fragments and further emphasised this phase of demolition.

Similar deposits were located in evaluation Trench 5 on the SE. edge of the site. A linear rubble-filled feature (62) was partially revealed suggesting the possibility of further robbed wall footings. This was also associated with a covering layer of mortar and rubble rich soil (Layer 41). Although (62) was only recorded in plan both this and layer 41 contained 16th-/17th-century Cistercian/Blackware pottery, roof-tile and clay-pipe fragments.

Discussion

This period of activity is characterised by the demolition of Structure 3, apparently with the purpose of removing stone. The extent of the robbing suggests that the former Structure 2 had stone foundations that were considered to be of equal importance to the above-ground structural remains. Interestingly, the late 16th- or early 17th-century date indicated for this phase accords with documentary evidence indicating the wholesale demolition of remaining abbey buildings on the site (above). The removal of the Structure 2 walls would effectively have taken away the eastern side of Structure 3, making it unusable. No evidence was present to suggest the re-instatement of the eastern side of the building and it must be assumed that it went out of use at this time.

PHASE H: 17TH/18TH CENTURY (Fig. 20)

Following the removal of Structure 3 from the site a phase of land allotment is indicated by the presence of ditch [53], aligned E.-W. across the centre of the site.

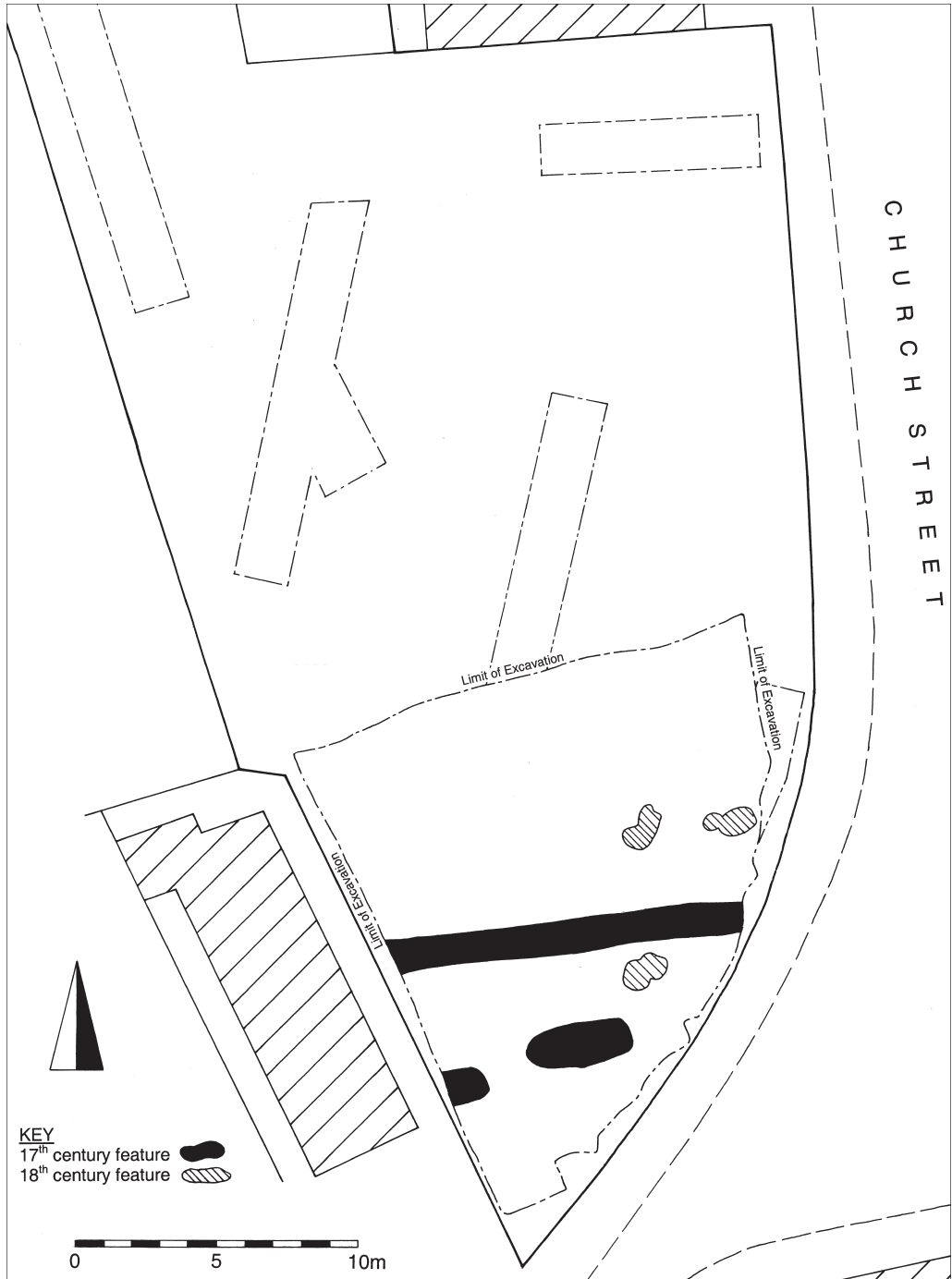


FIG. 20

The Phase-H features (17th/18th centuries). *Drawn by Michael Hawkes.*

As well as much re-deposited material from the earlier layers, a range of 17th or early 18th-century Earthenware and Stoneware pottery, including Westervald, and clay-pipe fragments were recovered from the fill of the ditch during excavation. The 1652 Hare map of Thorney illustrates an enclosed area north of the church, in the approximate location of the site (Fig. 5). It is possible that [53] relates to this phase of enclosure in some way.

Slightly to the south, two oval pits [114] and [136] were aligned approximately on ditch [53]. Both were steep sided with slightly rounded bases and both were filled with loose, humic soil containing a wide variety of 17th- or early 18th-century pottery as well as residual finds. It is probable that they represent some form of horticultural bedding trenches.

PHASE I: 18TH/19TH CENTURY

A scatter of refuse pits located across the site was attributable to 18th- and 19th-century activities. It seems likely they were connected with backyards or gardens of properties fronting on to Church Street following the instatement of the road in the 18th century.

CONCLUSION

As the first open-area excavation within the village of Thorney this project has provided valuable evidence as to the nature and state of preservation of archaeological remains near to the site of the former abbey. Importantly the excavation findings have revealed, for the first time, archaeological evidence with which to illustrate the ebb and flow of life on the northern edge of Thorney.

The earliest phases have shed light on the changing nature of occupation on the fen edge during the early post-Conquest period. Indications are that in the 11th/12th century a focus of settlement, likely to have been part of the early abbey complex, was situated close to the northern limit of Thorney Island, where it met the fen. Limited excavations of these deposits suggested some structural activity associated with pits and boundary ditches. By the 13th century however this occupation had ceased and its remains had become covered with a thick, dark soil layer. Environmental evidence indicates that this layer was part of an open, seasonally wet area suggestive of fen encroachment at this time. Additional artefactual evidence from the layer has shown how this part of the island edge became a focus for refuse disposal with frequent dumps of broken pottery and domestic butchery waste encountered. The density of debris within the layer suggests that habitation had not moved too far away, most probably only slightly further away, to the south of the excavation site. Several clay layers laid down in the 13th/14th centuries provided a solid base for the construction of at least two timber structures and demonstrated re-occupation on the site at this time.

The Late-medieval and early post-medieval periods witnessed increased structural activity on the site illustrated by the partially revealed ground plans of three separate buildings. The inter-relationships between the three buildings provide an interesting insight into the later history of occupation and illustrate changing land-use in the periods before, during and after the Dissolution.

It seems likely that Structures 1 and 2 co-existed and were perhaps occupied during the earlier 16th century, towards the end of the abbey's life. Their position on the northern edge of the former island may indicate they formed part of the abbey's outer court complex. From the evidence it is clear that Structure 2 was the more substantial of the two buildings and probably entirely stone-built.

Most of the pottery recovered from the medieval phases of the site was very fragmentary and clearly residual, the result both of redeposition from elsewhere in the abbey complex and of many phases of activity on the site itself. The assemblage is important, however, in that it is the first to be examined from Thorney, and whilst no detailed analysis of the vessel-types was possible, a fabric series has been established for the site. The range of wares, more especially the major pottery-types, seem to be very similar to those found at the Still in Peterborough, with Stamford, Thetford, and St Neots-type Ware dominating the Norman assemblages — though the precise sources of the two latter wares are not known — and the shelly wares, probably, like the glazed shelly wares, from Stanion and Lyveden in the Rockingham Forest area in northern Northamptonshire, together with Bourne wares from Lincolnshire, were the most common in the medieval period. Of note also is the presence of Medieval Ely Ware and other local and non-local Wares, including Grimston Ware, possible Toynton Ware and, from further afield, Mill Green and Middleborough Wares from Essex, Nottingham Splashed and Green Glazed Ware, Scarborough Ware from Yorkshire and Tudor Green and Coarse Border Ware from the Surrey Hampshire borders (see Fig. 21). Continental imports included Rhenish stonewares and a piece of Saintonge Ware from south-western France. Clearly the major wares had been traded, possibly via Peterborough. A more finely tuned understanding of the relationship and scale of local and regional trade requires a larger assemblage for analysis.

By the Dissolution, Structure 1 had been demolished, yet Structure 2 remained and was clearly respected by those involved in the asset-stripping and leadworking on the site. In fact the proximity of the cupellation hearth to the western wall of Structure 2 might suggest it was partly used as shelter for these activities. Quite how the building relates to the Dissolution activities is unclear; however the possibility remains that at least some of the glass and lead represented were removed from Structure 2. It is equally possible that glass from surrounding abbey buildings was brought to the area of the site, which may have served as a central processing location for the window lead.

The recovery of the glass assemblage is extremely important in terms of understanding the status, aspirations and outward appearance of Thorney Abbey, as well as providing valuable information into the processes involved in its eventual demolition.

The existence of architectural fragments within the glass designs provides an important clue not only for dating part of the collection of the Thorney glass but also as to how the windows might have looked. From the end of the 13th century, glaziers began to arrange coloured figures in architectural niches in horizontal strips across the windows, often separated by horizontal grisaille bands (so-called band window). This answered the demands for more



FIG. 21

Known sources of the English pottery and ridge tile found in the excavations. *Drawn by Michael Hawkes.*

illumination inside the buildings, where the walls were enlivened more and more with sculptures and ornament.⁷² A greater translucency had also been achieved in window design, where bar tracery windows created an increased glazing space from the last quarter of the 13th century.⁷³ The surviving architectural fragments from Thorney are too fragmented to discern whether they showed an attempt at perspective, which had developed by the late 1330s.⁷⁴

The most prominent find of the Thorney collection, the stylised roundel (Fig. 23 Nos. 585–7), is painted on flashed ruby glass, indicating a late 13th-century date. Backgrounds of cross-hatching were abandoned in favour of clear grounds, also creating a greater translucency, from the last quarter of the 13th century.⁷⁵ The existence of only a few examples of cross-hatched glass at Thorney would indicate a later date for the assemblage. The use of geometrical shapes in grisaille and an abandonment of cross-hatching are well illustrated in window glass of the Decorated Style of the late 13th century: at Chetwode in Buckinghamshire, for instance, the grisaille is also enlivened by coloured border strips, bosses and foliate fillings (c. 1270 and 1280).⁷⁶ The surviving fragments at Thorney indicate that similar designs could have formed part of the original glazing scheme.

From the documentary sources we know that intermittent building work was being undertaken at Thorney Abbey from the second quarter of the 13th century onwards. However, the most extensive building works were carried out under the abbacy of William Clopton (1293–1305), during the period implied by the glass designs. In particular, Clopton was responsible for the insertion of stained glass windows in the Lady Chapel during his abbacy.

Although attempts to reconstruct the original programme of the Thorney window glass found during the excavation work have to remain speculative because of its fragmented state, the finds would suit the decorative glazing scheme of a chapter house or Lady Chapel in the first half of the 14th century. Indeed, band windows, architectural canopies, an increased range of colours, and — as mentioned above — the use of naturalistic foliage were, amongst other elements, innovations made in the glazing of another chapter house, and its vestibule, namely York Minster Chapter House.⁷⁷ Grotesques also appear in the York Chapter House, providing amusing enlivenment of borders and grisaille. At least three of these elements, naturalistic foliage, architectural niches, and a range of colours, have been found in the Thorney assemblage. Possibly, there

⁷² Michael Archer, Sarah Crewe and Peter Cormack, *English Heritage in Stained Glass* (Oxford, 1988), 12.

⁷³ Richard Marks, *Stained Glass in England during the Middle Ages* (London, 1993), 142.

⁷⁴ For instance, St Gregory and St George in the choir clerestory of Wells Cathedral, illustrated in John Baker, *English Stained Glass* (London, 1960), pls. 45–6. Baker dates the panels to 1325–33. Marks, *op. cit.* in note 73, 151, dates the St Gregory c. 1338–45.

⁷⁵ Marks, *op. cit.* in note 73, 142.

⁷⁶ *Ibid.*, 141.

⁷⁷ Marks, *op. cit.* in note 73, 143–50. English central chapter houses often carried influential innovations in architectural designs: Steffani Becker, *Die zentralen Kapitelhäuser Englands* (unpubl. M.A. thesis, Frankfurt/Main, 1992).

also remains part of a grotesque. Without doubt, Clopton's remodelling of the abbey's buildings at Thorney would have been of ambitious nature. It would not come as a surprise if he would have turned for inspiration to the latest and prestigious designs offered at York.⁷⁸ Unfortunately, nothing of the period is preserved at nearby Peterborough, but the 14th-century finds from Battle Abbey have, like the Thorney glass, naturalistic foliage, inscription, and a heraldic lion 'Passant Guardant' (Fig. 23 No. 542). There, the glass is associated with the chapter house, and further finds were excavated in the reredorter area.

The surviving window glass in the slightly later Ely Lady Chapel may provide some clues to the glass embellishments at Thorney. No conclusive evidence exists to allow the glass finds to be traced to one particular building, or to distinguish between different sources of the pieces at Thorney. Nearly all contexts have fine examples of foliate designs, border pieces or pictorial designs. The glass could have been collected from windows throughout the abbey complex and could have been mixed during demolition (the older fragments could have been either re-used in 14th-century buildings, or gathered from earlier buildings). However, the finds do suggest that they came from a building (or buildings) adorned with significant and high-status glazing, such as a chapter house or a Lady Chapel. The fact that no fragment with use of yellow stain has been found, which made its appearance in England in the first decade of the 14th century,⁷⁹ and was particularly popular for the 'fig and canopy' formula, reminds us that the window glass found at Thorney is only a small sample of a fully glazed Abbey, and that the majority of the glass is now lost.

The discovery of deposits reflecting Dissolution activities from Thorney is highly important and, in the general context of monastic excavations, quite unusual. Earlier excavations on similar sites have concentrated on the recovery of structural evidence for abbey remains, often at the expense of 16th-century deposits, which were removed without being fully recorded. Given that little documentary evidence survives for this period of Thorney's history, the recovery of archaeological information from the Dissolution is of high significance. It seems likely that windows were being transported from other areas of the abbey to this particular location to be dismantled. Quite why this should have been the case is unclear from the present evidence, as is the original location of the architectural fragment re-used for the cupellation hearth. What this does show, however, is that although those involved in the asset-stripping of the monasteries had a clear remit, they were clearly adaptable to particular circumstances and available materials in order to carry out their work. Given the relatively inaccessible nature of Thorney during the winter months, such flexibility would have been essential.

Although this work represents only a keyhole view into the archaeology of Thorney, it has provided valuable evidence for fairly intensive activity on the northern edge of the island. The information recovered has helped reveal some

⁷⁸ Other early examples can be found at Merton and Selling: Marks, *op. cit.* in note 73, 147.

⁷⁹ The 'yellow stain' technique is found in the 'Heraldic Window' in York Minster, c. 1307-12.

of the first archaeological evidence for life on the island during the High and Late Middle Ages and has indicated the fluidity and changing nature of occupation over time. Documentary and artefactual evidence has helped flesh out the picture of life on Thorney and puts the island into a broader context. Historical sources have also revealed the local context of interaction between the island and the various farms and settlements within Thorney Fen. The range of pottery indicates that, although somewhat isolated geographically, Thorney was part of a wider network of trade and exchange involving many of the regional production centres. In contrast to the relatively mundane ceramic evidence the finely crafted and decorated glass assemblage reminds us of the richness of life at Thorney Abbey during its heyday and yet the context of the glass deposits also tells of how the life at the abbey came to an end.

THE WINDOW GLASS

QUANTIFICATION AND CONDITION

Most of the 1,680 fragments retain grozed edges, having been trimmed into shape with a 'grozing iron', leaving a characteristic 'nibbled edge'.⁸⁰ Some pieces have all edges grozed, indicating that they are complete fragments.

Out of 37 contexts, the deteriorated state of the fragments in 15 meant that neither colour nor paint could be determined any longer. However, the condition of the glass is generally good: only 452 fragments have suffered surface loss, or have undergone a complete loss of glassy state. More densely corroded and weathered fragments would indicate the use of less durable glass.

Many pieces are still translucent: the colours represented are white (103), and many ranges of brown and green (355). There are 16 examples of undecorated blue, 5 fragments of decorated translucent blue, 14 pot-metal green pieces, 6 fragments of amber, and 5 of murrey, as well as possibly 2 pot-yellows.⁸¹

This selection of colours would indicate an early 14th-century date for the Thorney glass, as murrey and earth browns were added to the palette only around that time. Sixteen pieces of undecorated streaky red survive, in comparison with 29 fragments of flashed ruby (red). Streaky red, having interspersed lines of red and clear was used in the 12th and 13th centuries, and was abandoned by the 14th century after the introduction of flashed glass.⁸² Blues and reds were generally reserved for backgrounds, and were unpainted until the late 13th century.⁸³ The use of both streaky reds and flashed red, as well as undecorated and decorated reds and blues indicate slightly different dates for some of the Thorney window glass.

⁸⁰ S. Brown, *Stained Glass, An Illustrated History* (London, 1995), 24.

⁸¹ The yellow colour could also be the result of burial.

⁸² V. C. Ragiun, *The History of Stained Glass* (London, 2003), 38.

⁸³ Baker, *op. cit.* in note 74, 43.

Degrees of translucency have been accounted for in the catalogue. A high degree is indicated when mentioned at the beginning of a description. The condition of the glass fragments supplies a further indication.

Unless otherwise stated, the pieces are now opaque with corrosion. Although the majority of the now opaque, painted fragments would have been grisailles, the term grisaille has only been used for foliate designs, and has been omitted for other designs. The term white glass means clear glass only.

The forms of painted designs identified are Geometric grisaille, i.e. panels of 'leaded and/or painted white glass with little or no pot-metal',⁸⁴ forming geometric or foliate designs; border fragments; as well as pictorial designs, incorporating 13 architectural pieces, 5 of inscription, a head (and possibly a fragment of a grotesque), and various fabric and background designs. The glass paint is predominantly red-brown and applied in the form of trace lines. There is some evidence for sophisticated manipulation of paint, i.e. scratched-out designs (mainly border designs) and some smear-shading (thin washes of paint) as well as stickwork (details picked out of the matt wash with the tip of the brush handle [= a stick]). Often the paint has been applied with a decisive brush stroke, and in competent manner, indicating a high quality effect of the designs. There are 11 examples of paint applied to the exterior surface of the glass, called 'back-painting'. This technique was used to reinforce the paint on the interior face, or to create particular effects, like shading.

There is a probable an example of the use of a special embellishment, so-called 'annealed jewels', extremely rare even in *in situ* schemes.⁸⁵ No. 297 has four lozenge-shaped white patches with an application of thick brown paint between them, which would indicate that the 'jewels' have become displaced.⁸⁶ Only very few examples of this decorative technique have survived in the Thorney assemblage however their existence provides further indication of the sophistication and expensive nature of the scheme.

There is no fragment of yellow stain in the entire assemblage. Some pieces found retain painted lines at the edges (e.g. Nos. 7, 526, 1208, 1239 and 1335). These would have been covered by the leads when mounted in a window.

The fragments have not been subject to a chemical analysis; hence no comments on possible compositional groups can be made with precision. However, there is a group of fragments with naturalistic leaf designs, and more naturalistic stiff leaf designs, which all retain some translucency and show the same state of deterioration (white concretion and brown weathering). This may indicate a compositional group.

The weathered exterior surfaces of nearly all fragments (pitting, concretion and further corrosion) suggest that the glass was *in situ* prior to the destruction of the windows. Judging from the thickness of the glass, it is clear that the majority of the finds are pre-Dissolution, as post-medieval glass is much thinner. The

⁸⁴ P. A. Newton, *The County of Oxford: A Catalogue of Medieval Stained Glass* (London, 1979), xxi.

⁸⁵ Sarah Brown, pers. comm.

⁸⁶ The fragment is of translucent blue glass. For a description of the process, see Brown, op. cit. in note 80, 27.

thickness of nearly all fragments lies between 2 mm and 3 mm, indicating a 14th-century date. However, 8 pieces survive with a thickness between 4 mm and 6 mm (Nos. 585–7, 834 (undecorated blue), 835 (amber), 844 (amber), 850 (opaque), 866 (white), 879 (white) and 1664 (pale brown translucent)).

The glass was examined by eye, and where necessary with the help of a magnifying glass (x2.5 to x5 magnification).

GRISAILLE

121 examples of stylised leaf (and some stem) designs have survived. The majority belongs to contexts (77) and (165), although these designs are also found in nearly all other contexts. The finds cover different styles of designs, ranging from stylised foliage and geometrical shapes, more naturalistic stiff leaf designs, to depictions of naturalistic foliage. The largest fragment of the Thorney collection is an almost complete roundel with a diameter of 104 mm, and a thickness of 3 mm (Nos. 585–7; Fig. 23). It depicts an intersected quatrefoil design in geometric border, enclosed by a circular border on flashed ruby glass (late 13th-century).

There are only a few fragments having a stiff leaf design with a representation of ribbed stems and lobes or flowers (Nos. 62, 176, 185, 892, 904 and 1223; Fig. 24). No example of fruiting stiff leaf has survived. The majority of designs are on a plain background, and there is only one example where arcs of either a lobe or a petal are on a background of fine cross-hatching (Fig. 22, No. 30). Stylistically, these designs can be dated to the mid-13th century.⁸⁷ However, the Thorney designs are far from complete. It is consequently impossible to reconstruct geometric shapes which would have enclosed the design. They may well be of slightly later date, as the same designs of stylised leaves and stems were still used in the last quarter of the 13th century.⁸⁸ Seven fragments with a trellis design survive (last quarter of the 13th century) (Nos. 34, 299, 480, 519, 546, 549 and 570, see Fig. 23).

Fragments with veined leaves and petals survive in great number. The form of the petals is predominantly oval-shaped (e.g. Nos. 241 and 1195; Figs. 22 and 24); and fine lines are used for the veining. Again, the majority of the designs are set against a plain background, with the outline picked out of a matt wash, and only a few examples can be found on a background of cross-hatching. Some of these are rather cursive and imprecise examples of cross-hatching. An incomplete multiple foil and stem design survives at Thorney (No. 24). There are examples of a central vertically pointed leaf with a smaller leaf on each side (e.g. Nos. 952 and 1209; Fig. 24), and the central vein is often accompanied by two or three thin veins on either side.

The more naturalistic stiff leaf designs are the most outstanding finds from the Thorney grisaille assemblage. The outlines of these lobed and veined designs

⁸⁷ Similar designs were found at Eynsham Abbey: Alan Hardy, Anne Dodd and Graham D. Keevill, *Ælfric's Abbey: Excavations at Eynsham Abbey, Oxfordshire 1989–92* (Oxford, 2003), 330–40.

⁸⁸ For instance at Chetwode, Buckinghamshire (c. 1270 and 1280): Marks, *op. cit.* in note 73, 141.

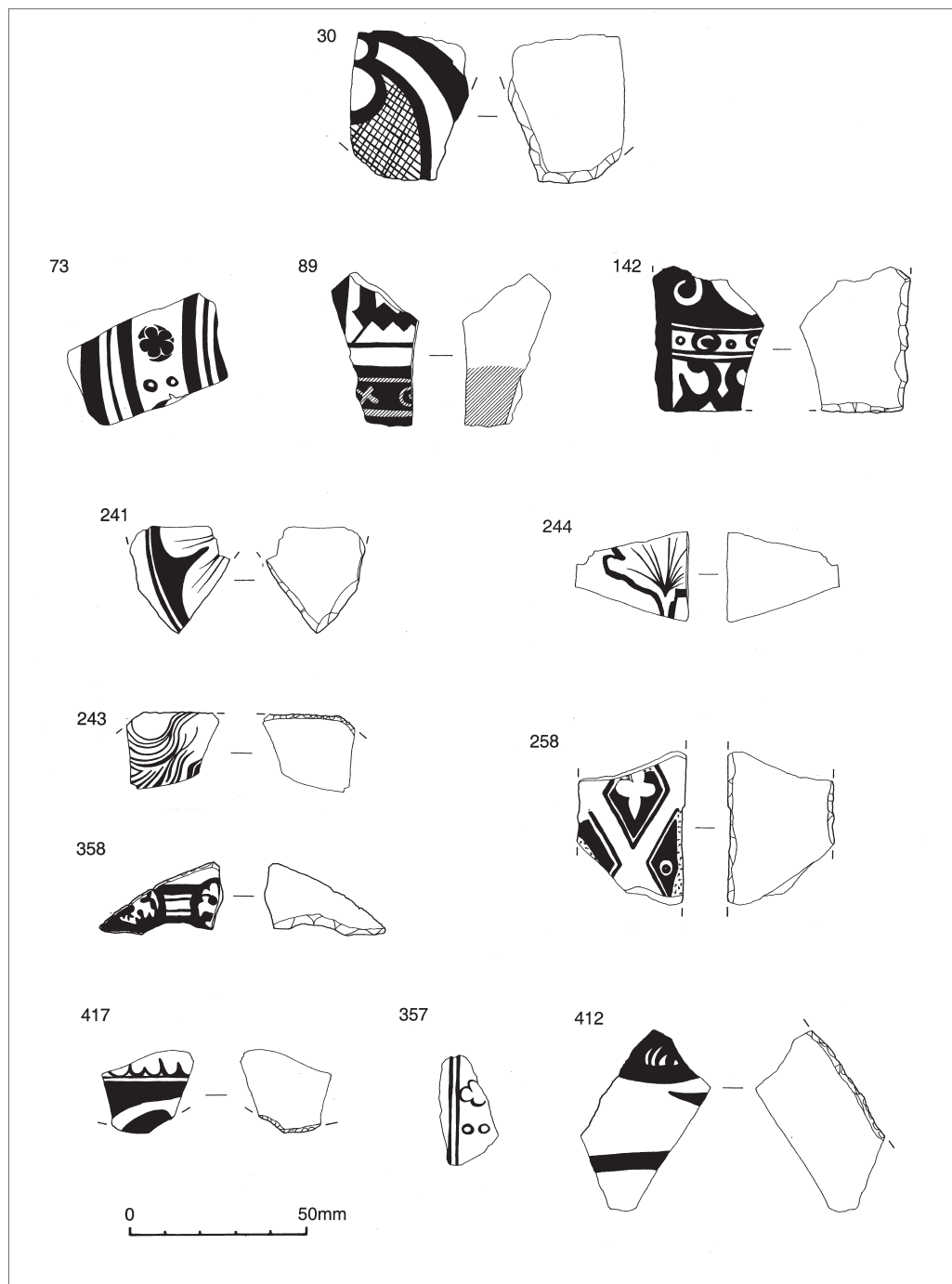


FIG. 22

Painted glass from Contexts 23 (30), 50 (73-258) and 52 (357-417). Scale 1:2. *Drawn by Michael Hawkes.*

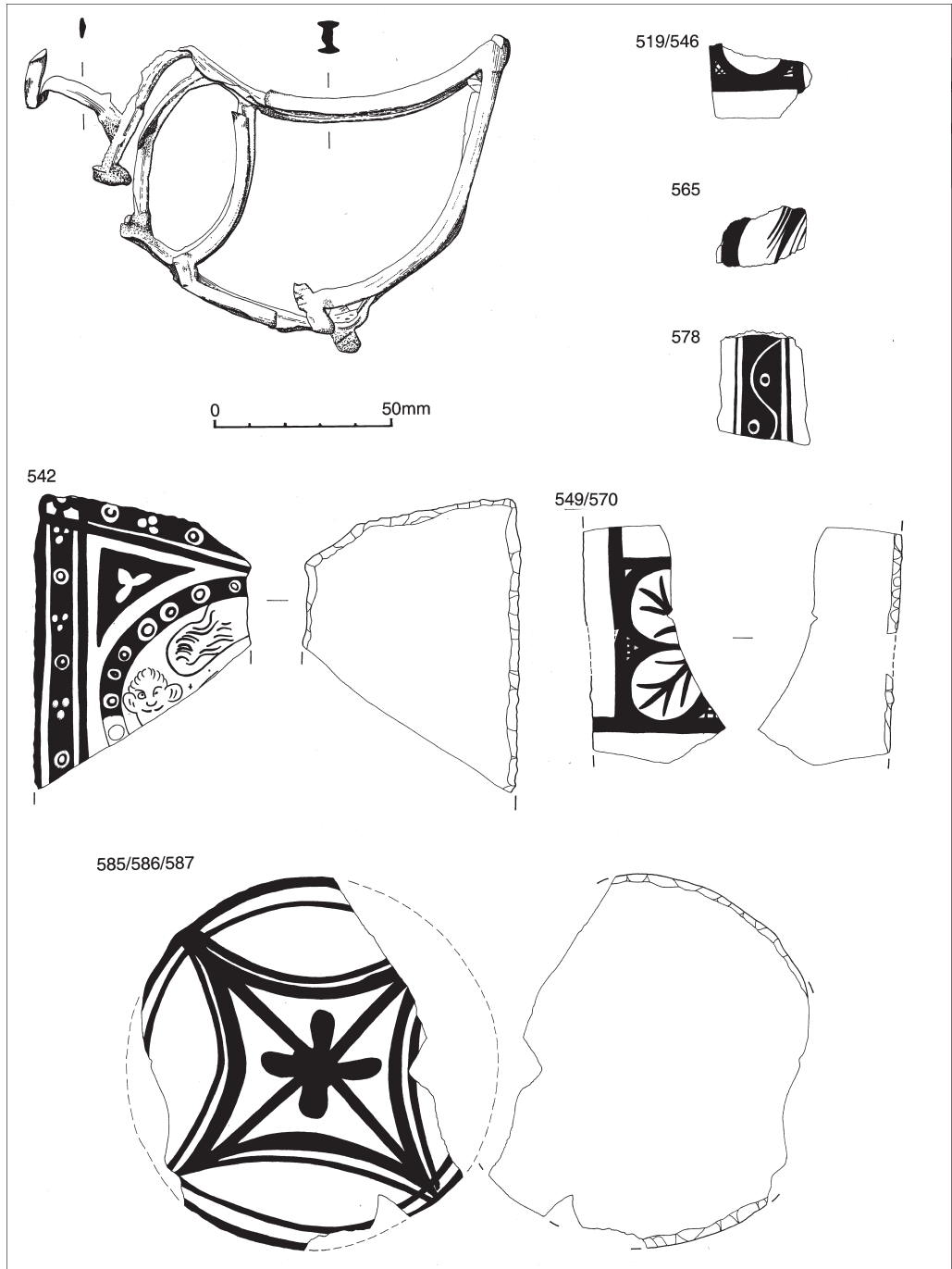


FIG. 23

Painted glass from Context 69. Scale 1:2. *Drawn by Michael Hawkes.*

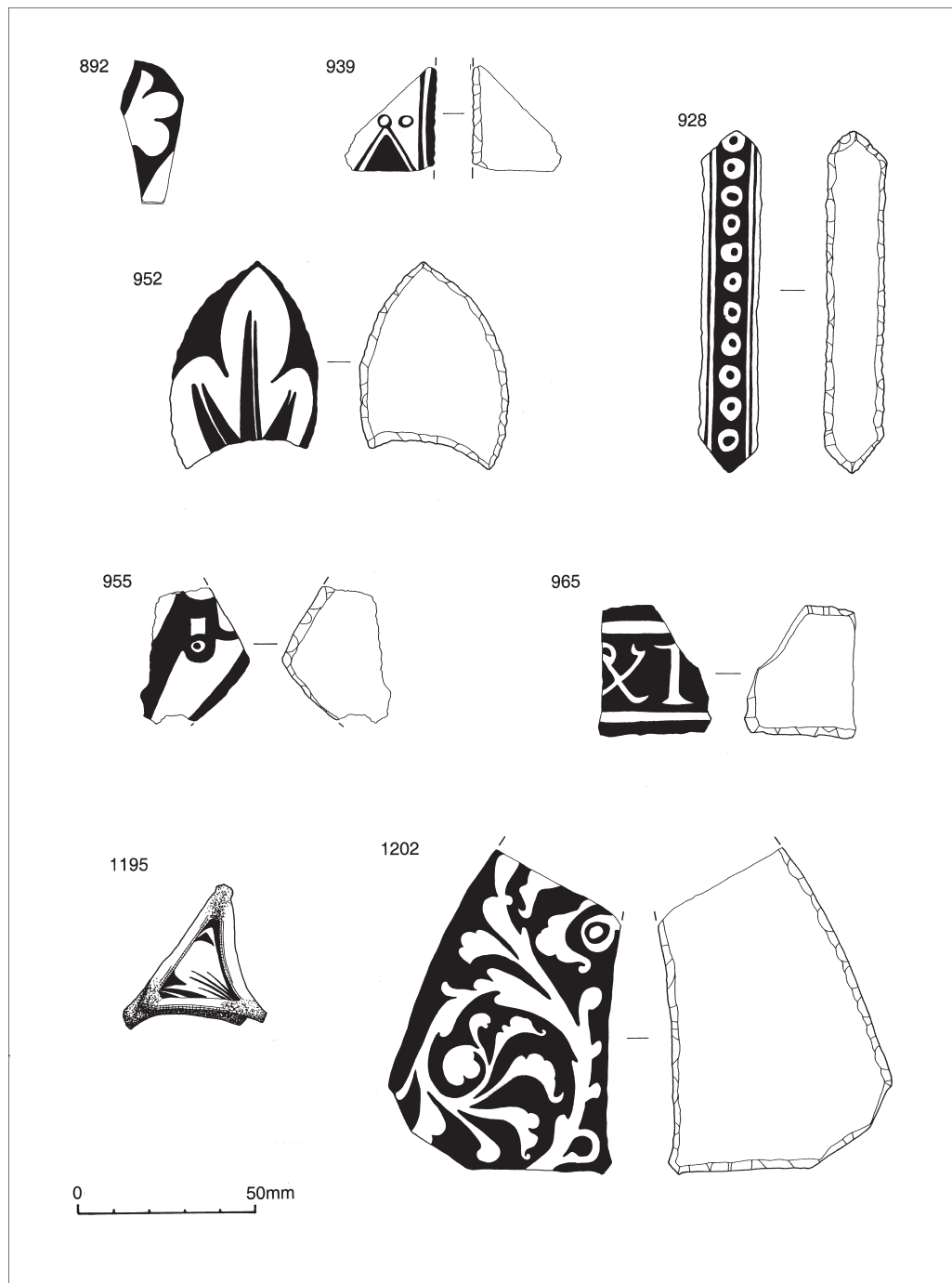


FIG. 24

Painted glass from Context 77. Scale 1:2. *Drawn by Michael Hawkes.*

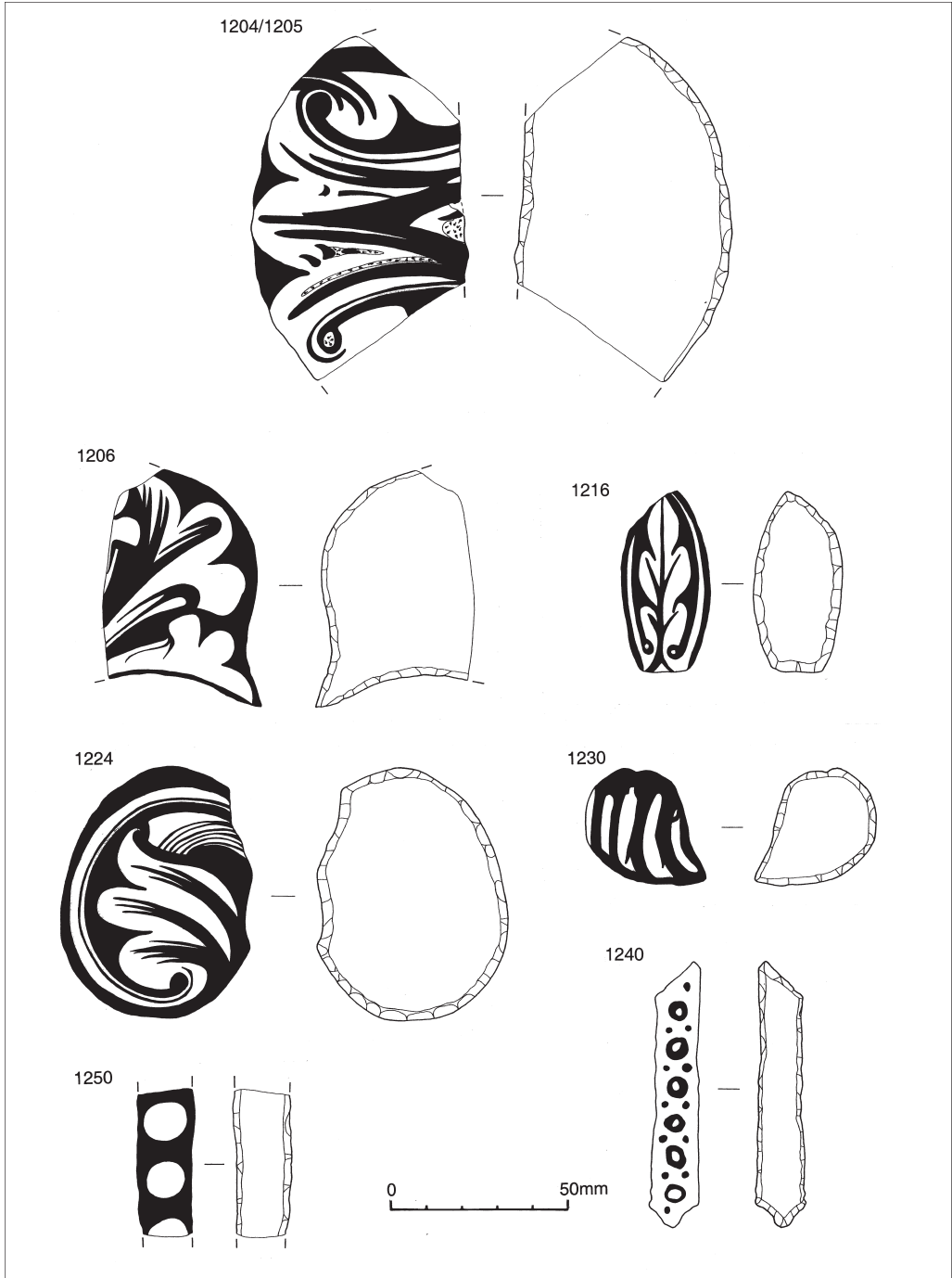


FIG. 25

Painted glass from Context 77. Scale 1:2. *Drawn by Michael Hawkes.*

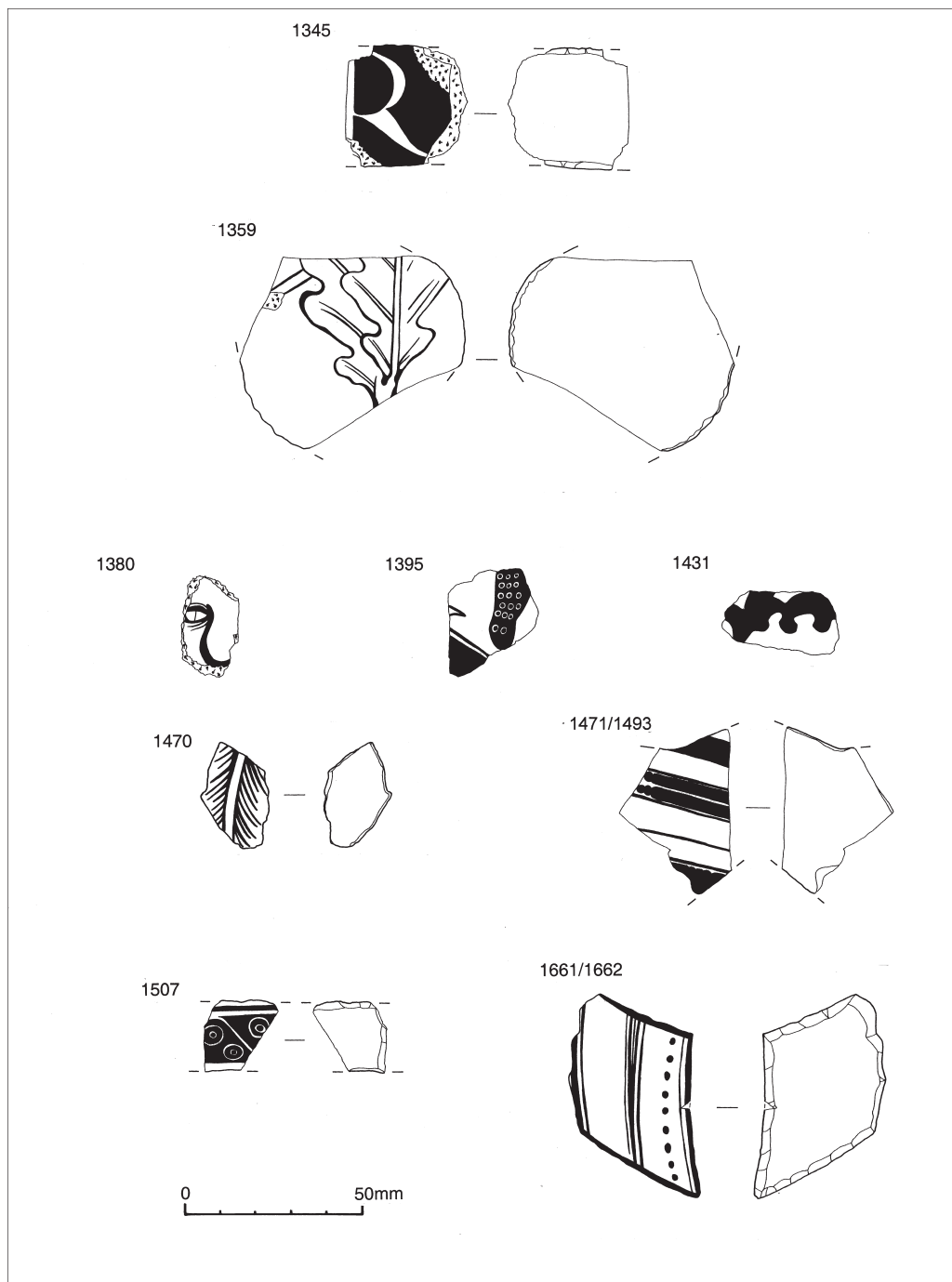


FIG. 26

Painted glass from Contexts 119 (1345), 137 (1359), 165 (1380–1507) and 208 (1661–2). Scale 1:2.
 Drawn by Michael Hawkes.

are picked out of a matt wash, and the detailed veining is exquisitely painted (e.g. Nos. 1204, 1205, 1206 and 1220: Fig. 25). Two complete and correlated fragments of a delicately painted lobed and veined leaf survive (Nos. 1216 and 1218: Fig. 25). There is further an elaborate combination of lobed foliage produced by stickwork, and having also a scratched-out ring design (e.g. Nos. 1202 and 1244: Fig. 24). This 14th-century design would probably have been used as a background (*rinceau*).⁸⁹

Twelve mainly incomplete fragments of naturalistic foliage survive. They are designs based on oak and ivy, some retaining their white translucency despite being marred by weathering and corrosion (e.g. Nos. 243 and 1359: Figs. 22 and 26). These designs are all on a plain background.

Naturalistic foliage began to replace stylised leaf forms at the end of the 13th century. One of the earliest examples was in the chapter house at York Minster, where designs of predominantly oak, ivy and maple filled the borders and *grisaille*, springing from a central stem and running vertically from base to top of each light (c. 1285–90).⁹⁰ A late 13th-century to early 14th-century date for the Thorney examples can be suggested, as naturalistic foliage probably supplanted stylised foliage at the beginning of the 14th century.

Because these Thorney designs are too fragmented, none of the examples surviving allows for reconstruction of a window programme. However, it is possible that some lights could have consisted of *grisaille* with stylised foliate forms, whereas other lights already employed naturalistic leaf forms.⁹¹

BORDER DESIGNS AND BOSSES

Quite a few examples of a beading border design, circles picked out of a matt wash of red-brown paint, have survived (e.g. Nos. 534, 566 and 1250–3: Fig. 25).

This design is commonly found in all periods. Similar patterns have been excavated at the Benedictine Abbey at Battle in Sussex.⁹² Variations on this design have rings with a filled-in centre and enclosed by border lines (e.g. Nos. 928 and 964: Fig. 24), or an open centre and alternate with smaller rings (e.g. No. 141). Another type has a circular design alternating with two dots (e.g. Nos. 1231 and 1240, of which the rings of No. 1231 are more elegant: Fig. 25). These designs are painted on.

Wider border pieces survive, having two or three two line borders, and a dot pattern painted on (e.g. Nos. 956, 1661 and 1662: Fig. 26).

⁸⁹ For an example, see the Kneeling Woman, part of a Last Judgement at Tewkesbury Abbey (14th-century), illustrated in Baker, *op. cit.* in note 74, pl. 40.

⁹⁰ Also in the side windows at Merton College, Oxford, of c. 1294, and in the chapter house at Southwell Minster in the 1290s: Marks, *op. cit.* in note 73, 144–6.

⁹¹ The Five Sisters window at York Minster has geometric and naturalistic designs: David O'Connor and J. Haselock, 'The stained and painted glass', 313–93 in G. E. Aylmer and R. Cant (eds.), *A History of York Minster* (Oxford, 1977), at p. 315.

⁹² Kerr, *op. cit.* in note 71, fig. 40.

There are examples of stickwork borders having an undulating line between circles, the latter differing in size and centre (e.g. Nos. 578–83 and 1507: Fig. 26).⁹³ More sophisticated border designs have survived at Thorney: a lozenge enclosed in a border and two rings (e.g. No. 939: Fig. 24), and lozenge-shapes having scratched-out ring designs and a quatrefoil flower picked out (e.g. No. 258: Fig. 22). Another fragment has a quatrefoil flower and two rings with a two line border painted on (No. 357: Fig. 22). Cinquefoil flowers alternating with two rings respectively and enclosed by three border lines of different sizes on each side survive in fragment No. 73 (Fig. 22). The outline of the flowers has been scratched-out of a circular matt wash of paint. Quatrefoil flowers alternating with rings have been picked out with a stick from a red-brown matt wash enclosed by border lines in fragment No. 89 (Fig. 22). An inner border incorporates diamond-shaped designs. A similar quatrefoil design survives in the panels of the angel musicians in the Lady Chapel at Ely Cathedral (c. 1340–9).⁹⁴ There is also an elaborate design of different scroll shapes with picked-out and painted on designs (e.g. No. 142: Fig. 22). An intricate border design of circles, inscribed by four open trefoils each, forming a flower design and connected by border lines also survives (No. 358: Fig. 22). Finally, bosses associated with Geometric Grisaille Designs can be found (Nos. 174 and 550).

Virtually all border pieces are of ubiquitous design and can be found at different periods of glazing. However, a date no earlier than the second half of the 13th century can be suggested for the Thorney glass. Some of the more intricate designs are of 14th-century date. Although the pieces discussed in this section are likely to be border-fragments associated with geometric grisaille glazing, the forms could also have been used for different decorative functions. The wavy line interspersed with circles, for instance, is also found as decoration of the crown of Hilda, the Northumbrian abbess, at Christ Church Cathedral in Oxford (14th century).⁹⁵

PICTORIAL GLASS

The Thorney assemblage offers an interesting and regionally important collection of narrative and some figurative glass. The assemblage overall is fragmentary as a result of the asset stripping undertaken on the site at the time of the Dissolution. A further result of these acts is that the majority of the surviving designs reflect peripheral and border contexts. However, architectural designs, pieces of inscription, a head, background and fabric designs, and possibly a fragment of a grotesque all provide evidence of the 13th-/14th-century figurative scheme that once graced Thorney Abbey.

A heraldic lion 'Passant Guardant' survives from the early 14th century (Nos. 541–2: Fig. 23). The facial features are delicately applied and the mane

⁹³ This border pattern can be compared with excavated glass of Battle Abbey: Kerr, *op. cit.* in note 71, fig. 41; also with the material of the Dominican Priory, Beverley: C.P. Graves, 'The Window Glass', 126–44, Figs. 71, 72 and 74 in M. Foreman, *Further Excavations at the Dominican Priory, Beverley, 1986–89* (Sheffield, 1996).

⁹⁴ Marks, *op. cit.* in note 73, fig. 127.

⁹⁵ Archer, Crewe and Cormack, *op. cit.* in note 72, 15, fig. 5.

is made up of wavy lines. The tail is furred. Similar types can be found at Canterbury Cathedral and a similar fragment was excavated at Battle Abbey.⁹⁶

Part of a 14th-century knight's chain mail is also found amongst the Thorney collection (No. 1395). It would indicate the presence of the figure of a knight or king in the glazing programme (for a nearly life-sized 14th-century figure of a knight with heraldic surcoat see Tewkesbury Abbey; for a king see the so-called 'Heraldic-Window' (1307–10) at York Minster).⁹⁷ However, the Thorney lion was part of a heraldic border which became popular during the first half of the 14th century.⁹⁸

Part of a 14th-century male head can be identified. The eye has a heavy upper lid, and the pupil has been carefully painted. Some traces of smear-shading survive at the top end of the nose, as well as fine lines (No. 1380: Fig. 26).⁹⁹

Five fragments of inscription survive. Apart from one piece with a damaged surface, the letter form of three fragments can be discerned as showing 'Lombardic' style (e.g. Nos. 965 and 1345: Figs. 24 and 26). There is possibly a black-letter type **r** (No. 1428). Other pictorial fragments which could not be diagnosed because of their incompleteness are illustrated to demonstrate the variety of designs amongst the Thorney assemblage (e.g. Nos. 244, 412, 955, 1230 and 1470).

The most eye-catching pieces in this category are the surviving architectural designs, forming part of Decorated canopies. In the late 13th century, medallion windows were abandoned in favour of single figures under architectural canopies. Canopy designs were borrowed from so-called micro-architectural forms used in the buildings themselves, like the canopied niche, having a cusped arch surmounted by a crocketed gable, a finial, pinnaced shafts, and flying buttresses.¹⁰⁰ At Thorney there are numerous incomplete fragments of canopy designs, showing parts of crocketed gables (e.g. No. 1431: Fig. 26), and of a cusped arch (No. 417: Fig. 22). A delicately painted tracery design, remains of a buttressed superstructure, also survives (Nos. 1471 and 1493: Fig. 26). These designs are very close to those employed in the canopies in the Lady Chapel of Ely Cathedral (former Benedictine) of c. 1340–9, where peasant figures populate the architectural niches.

⁹⁶ M. H. Caviness, *The Windows of Christ Church Cathedral Canterbury* (London, 1981), fig. 531; and Kerr, *op. cit.* in note 71, fig. 41.

⁹⁷ Baker, *op. cit.* in note 74, pl. XIV; Brown, *op. cit.* in note 80, 85.

⁹⁸ See, for instance, the border of alternate ruby blocks and golden lions at the church of Eaton Bishop: Baker, *op. cit.* in note 74, pl. 32.

⁹⁹ Similar face painting can be found in the 13th-century glazing of the SW. transept (South Window) at Lincoln Cathedral (Return of the Prodigal Son): Baker, *op. cit.* in note 74, pl. 17; and later at New College Chapel in Oxford: Archer, Crewe and Cormack, *op. cit.* in note 72, 15.

¹⁰⁰ In England, the first appearance of the architectural niche as an element in figural glazing, as well as the use of band windows occurred probably in the Chapter House at York Minster, c. 1285–90: Marks, *op. cit.* in note 73, 51 and 147–8. A splendid example for the 'Fig. and canopy' formula is Henry de Mamesfield in his glazing scheme at Merton College in Oxford (north side of the chapel) (1298–1311).

THORNEY PAINTED GLASS: THE ILLUSTRATED CATALOGUE

(Figs. 22–6)

CONTEXT 23

- 30 Painted grisaille decoration comprises two curved border lines and part of arcs of either lobes or petals, cross-hatching. Paint red-brown. Corrosion pits on reverse. Two grozed edges.

CONTEXT 50

- 73 Painted decoration comprises curved border enclosing cinquefoil flower design and two rings. Concretion on painted surface, pitting on reverse but retaining a pale brown translucency.
- 89 Painted grisaille decoration comprising border design of red-brown lines within which quatrefoil flower and ring with unfilled centre are picked out of a matt background. Also diamond-shaped design. Back-paint comprises block of red-brown paint. Brown weathering but retains a white translucency.
- 142 Painted decoration comprises elaborate border design of a scratched-out scroll-like design, a scroll-like design between small rings, as well as scroll-like designs attached to each other, with thin trace lines between the two latter designs. Paint red-brown. Two grozed edges.
- 241 Painted grisaille decoration comprises remains of a roundel design with two large veined oval petals picked out of a matt background with a border line. Paint dark brown. Concretion on both surfaces, pitting on reverse. Two grozed edges, one curved.
- 243 Painted decoration comprises parallel wavy lines in dark brown paint. One grozed edge. Thin glass.
- 244 Painted grisaille decoration comprises a naturalistic ivy leaf, early 14th-century, in dark red-brown paint. Established pitting on reverse, pitting on painted surface. One grozed edge.
- 258 Painted grisaille decoration comprises geometric border design with quatrefoil picked out of a matt background with border forming a lozenge-shaped design; enclosed by two lozenges with border, one has a ring scratched-out. Paint red-brown. Brown weathering but retains a white translucency. Two grozed edges.

CONTEXT 52

- 357 Painted decoration comprises border design of lines, and quatrefoil flower and two rings in red-brown paint. Established pitting on reverse.
- 358 Architectural. Semi-circle filled with a tracery design of trefoils and a quatrefoil, curved and straight lines, two further quatrefoils. Paint red-brown. Established pitting on reverse but retains a white translucency. All edges grozed.
- 412 Undiagnostic. A thick curved line (of fine thin brush strokes), and curvilinear design, possibly remains of an eye (owl?). Red-brown paint applied in a bold manner. Backpaint comprises indistinct patches of red-brown paint. Oxide stained on painted surface, brown weathering and pitting on reverse, but retains a white translucency. One grozed edge.
- 417 Architectural. Part of a gable from a canopy design (early 14th-century) in red-brown paint. Established pitting on reverse. One curved grozed edge.

CONTEXT 69

- 541/2 Heraldic. One of two fragments. Stickwork border with dot and ring design enclosing heraldic device of the head of a lion passant guardant on a matt background with border of scratched-out rings. Paint red-brown. Back-paint comprises thick line along the long edges. Brown weathering but retains a white translucency. One grozed edge. Two of two fragments. Outer border design as above; also corner-infill, a scratched-out trefoil on a matt triangular background, and the upper part of the lion's tail. Concretion on reverse and brown weathering but retains a white translucency. Three grozed edges (82 mm at longest point, 62 mm at widest point, thickness 3 mm).
- 546/519 Painted decoration comprises curvilinear design and cross-hatching in red-brown paint. Established pitting on reverse. *519, 546, 549 and 570 join.*
- 570/549 Painted grisaille decoration comprises part of a veined leaf or floral design with border. Pitting on reverse. One grozed edge. *519, 546, 549 and 570 join.* Painted decoration comprises trellis design enclosing a veined leaf or floral design, and cross-hatching, in red-brown paint. Established pitting on reverse. One grozed edge. *519, 546, 549 and 570 join.*
- 585-7 Nearly complete roundel (diameter 104 mm, thickness 3 mm) with intersected quatrefoil design in geometric border, enclosed by circular border (last quarter 13th century). White patina on painted surface. Established pitting on reverse. Crack through the centre reveals flashed ruby glass. Grozed all round, complete fragment.

CONTEXT 77

- 892 Pot-metal green decorated with a trefoil lobed terminus picked out of a matt red background.
- 928 Painted grisaille decoration comprises border design of two parallel trace lines within which are eleven rings with a filled-in centre on a matt background. Paint red-brown, some pint loss. Brown weathering but retains a white translucency. All edges grozed.
- 939 Painted decoration comprises border design of two parallel lines, a triangle with border line and two circles in red-brown paint. Pitting on reverse. One grozed edge.
- 952 Painted decoration comprises petal design with two large veined oval petals and a central vertically pointed petal. Concretion on painted surface and brown weathering but retains a brown translucency. All edges grozed. Complete fragment.
- 955 Undiagnostic. Trace lines and a curvilinear design, possibly part of scales of an angel's wing. Paint red-brown. Remaining two edges are grozed.
- 965 Inscription. The Lombardic letters X and I picked out of a matt red-brown background. Corrosion pits on reverse and brown weathering but retains a pale brown translucency. Two grozed edges.
- 1195 Triangular fragment enclosed within its still intact lead came. Painted grisaille decoration comprises a veined oval-shaped petal picked out of a matt background in red-brown paint. Some paint loss. Retains a green translucency.
- 1202 Painted decoration comprises design of lobed foliage picked out of a matt background. Paint medium brown. Concretion on reverse and brown weathering but retains a white translucency. Three grozed edges, one curved.

- 1204/5 Painted grisaille decoration comprises a veined foliage design picked out of a matt background in red-brown paint. The veining, similar to 1201, has been applied in a decisive manner, high quality. The design is more naturalistic. Corrosion on both surfaces. One curved grozed edge. Painted grisaille decoration comprises a veined foliage design in red-brown paint. 1204 and 1205 join.
- 1206 Painted decoration comprises a veined and lobed foliage design picked out of a matt red-brown ground. The veining is applied with a flamboyant brush stroke. Pot-metal green glass. Some concretion on painted surface and brown weathering. Two curved grozed edges.
- 1216 Painted grisaille decoration comprises veined lobed leaf with border line. Paint red-brown. Concretion and pitting on reverse, and brown weathering but retains a white translucency. All edges grozed. Complete fragment.
- 1220 Painted decoration comprises a veined lobed leaf form which is more naturalistic than the formal stiff leaf designs (c.1250–1300). Paint red-brown. Subtle use of brush, delicate design. Corrosion pits on reverse, as well as brown weathering but retains a pale brown translucency. Grozed all round, complete fragment.
- 1230 Undiagnostic. Scalloped design within an all-round edge, possibly part of a wing. Paint red-brown. Concretion on both surfaces and dark brown weathering but retains a brown translucency. Grozed all round, complete fragment.
- 1240 Painted grisaille decoration comprises border design of a ring and dot pattern in dark brown paint. Same design as 911, 954 and 1231. Brown weathering but retains a white translucency. All edges grozed
- 1250 Painted decoration comprises rings picked out from a matt background. Paint red-brown. Concretion on reverse and dark brown weathering but retains a pale brown translucency. Two grozed edges.

CONTEXT 119

- 1345 Inscription. The letter R picked out of a matt background. Paint red-brown. Pitting and concretion on reverse. One grozed edge.

CONTEXT 137

- 1359 Painted grisaille decoration comprises naturalistic oak leaf design. Dark brown weathering but retains a white translucency. Two curved grozed edges. Quarry fragment.

CONTEXT 165

- 1380 Pictorial. Eye and nose of a male face (14th-century), expressively painted, some smear-shading and fine lines at upper part of nose. Paint red-brown.
- 1395 Undiagnostic. Small rings scratched-out from a matt background and trace line in red-brown paint. Possibly part of a knight's mail.
- 1431 Architectural. Crocket, part of the gable of a canopy, as part of an architectural background. Paint red-brown. Pitting on reverse.
- 1470 Fabric design. Painted decoration comprises part of a feather, possibly of an angel. Paint red-brown. Pitting on reverse. All edges grozed.

- 1471/1493 Architectural. Painted decoration comprises remains of a Decorated canopy as part of an architectural background. Established pitting on reverse. One grozed edge. *1471 and 1493 join*. Architectural. Painted decoration comprises remains of a Decorated canopy as part of an architectural background. Established pitting on reverse. *1471 and 1493 join*.
- 1507 Painted grisaille decoration comprises border design of scratched-out ring pattern with unpainted wavy line and border in medium brown paint. Pitting on reverse and dark brown weathering but retains a white translucency. Two grozed edges.

CONTEXT 208

- 1661–2 Painted decoration comprises border design of lines enclosing five trace lines and a dot pattern. Paint medium brown. Translucent blue glass. Three grozed edges. Excellent condition. Same design as 1661, the *fragments join*. Three grozed edges, oxide stained.

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APPENDIX I: THE MEDIEVAL AND POST-MEDIEVAL POTTERY

TABLE I
 THE STRATIFIED POTTERY TOTALS BY FABRIC/WARE GIVEN AS SHERD-COUNTS/WEIGHT
 (IN GRAMMES) AND PHASE

<i>Fabric/Ware*</i>	<i>Phase</i>								<i>Totals</i>	<i>%*</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>		
MEDIEVAL										
NEOT — Saint Neots Ware/-type Ware	3/34	7/198	17/129		34/348		2/5	1/5	64/719	14.8/9.9
THET — Thetford Ware	32/1522							2/73	34/1595	7.8/22.0
STAM — Stamford Ware	13/99	26/310	4/57		22/278	1/5		3/20	69/769	
DEST — Developed Stamford Ware				4/33					4/33	
Stamford Sub-total	13/99	26/310	4/57		26/311	1/5		3/20	73/802	16.9/11.0
Nottingham Splashed Ware									1/5	
BONB — Bourne B Ware		3/78	3/7	2/96	26/154	1/8	3/15	13/85	51/443	
BNBT — Bourne B-type Ware		5/33	5/34		3/13		2/39		15/119	
Bourne B & B-type Sub-total		8/111	8/41	2/96	29/167	1/8	5/54	13/85	66/562	15.3/7.7
SHW — Shelly Ware	2/47	40/619	2/8		14/208	1/7		2/18	61/907	
SSHW — Sandy Shelly Ware			1/12						1/12	
OSHW — Oolitic Shelly Ware		3/87	3/73						6/160	
Shelly Ware Sub-total	2/47	43/706	6/93		14/208	1/7		2/18	68/1079	15.7/14.9
LYST — Stanion		2/22	2/22		3/19		2/21		9/84	

<i>Fabric / Ware*</i> <i>Percentage of</i> <i>medieval totals by</i> <i>sherds numbers / weight</i>	<i>Phase</i>										<i>%*</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>Totals</i>		
Unclassified Late Medieval						2/27		4/46		6/73	
Glazed Orange Sandy Ware								1/32		5/87	
LMR — Late Medieval Reduced		2/52	1/2		1/1						
MEDIEVAL TOTALS	51/1705	110/2040	46/373	3/301	145/1545	9/95	11/247	56/918		431/7224	
POST-MEDIEVAL/ MODERN											
CSTN/PMBL — Cistercian/Blackware		4/19			1/2		2/11	6/25		13/57	
RAER/KOLS/FREC — Rhenish Stoneware		1/6						4/27		5/33	
WEST — Westerwald								6/29		6/29	
Coarse Border Ware						2/10		28/560		2/10	28/560
Unclassified Post-medieval Glazed Red Earthenwares								4/54		4/54	
Post-medieval Earthenwares								1/4		2/22	
ENGS — English Modern Stonewares		1/18									
POST-MEDIEVAL/ MODERN TOTALS	6/43	2/10	2/10	1/2	1/2	2/11	2/11	49/699	60/765		
STRATIFIED SITE TOTALS	51/1705	116/2083	49/383	3/301	146/1547	9/95	13/258	105/1617	492/7989		

APPENDIX 2: ALL OTHER FINDS

Detailed specialist reports for all the finds categories recovered from the excavations exist in the site archive. For the purposes of this report however, the various categories are shown in Table 2 as broad totals according to artefact number and weight.

TABLE 2
ALL OTHER FINDS BY ITEM/FRAGMENT TOTAL AND WEIGHT (IN GRAMMES OR KILOGRAMS)

<i>Finds Category</i>	<i>Number Total</i>	<i>Weight Total (Grammes unless otherwise stated)</i>
Pottery		
Roman	9	139
Middle Anglo-Saxon	1	—
Ceramic Building Material		
Roman	34	4.2 kg
Post-Roman: brick	114	17.723 kg
Post-Roman: chimney-pot fragments	3	172
Ceramic Tile-High-medieval and later		
Floor tile	4	443
Ridge tile	77	6.848 kg
Flat/Peg tile	56	3.956 kg
Clay Pipe	102	—
Vessel Glass	10	—
Industrial Remains		
Lead	—	4.96 kg
Iron	27	3.8 kg
Copper Alloy	12	—
Animal Bone	765	—
Worked Stone		
Architectural fragments	30	—
Roofing material	56	8.675 kg